

## ELECTROMAGNETIC EMISSIONS CLASS II PERMISSIVE CHANGE REPORT



**FCC Applicant:** Acer Incorporated  
8F., No. 88, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City  
22181, Taiwan (R.O.C)

**FCC Manufacturer:** Qunata Computer Inc.  
211 Wen Hwa 2nd Rd., Kueishan, Taoyuan 33377, Taiwan

**Product Name:** 2TX 11ax (WiFi6) + BLE Combo Card

**Brand Name:** acer

**Model No.:** MT7921

**Report Number:** E2/2022/10060

**FCC ID** HLZMT7921

**Issue Date:** Apr. 01, 2022

**Date of Test:** Jan. 06, 2022~Feb. 10, 2022

**Date of EUT Received:** Jan. 11, 2022

*Jay Lin*  
Approved By \_\_\_\_\_

Jay Lin

### 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 §15.407.

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 <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.

## Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
E2/2022/10060	00	Original.	Apr. 01, 2022	Yi-Shan Tsai	

**Note:**

- 1、The remark "\*" indicates modification of the report upon requests from certification body.

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.

## Contents

1	GENERAL INFORMATION .....	4
2	SYSTEM TEST CONFIGURATION .....	9
3	SUMMARY OF TEST RESULT .....	12
4	DESCRIPTION OF TEST MODES .....	13
5	MEASUREMENT UNCERTAINTY .....	19
6	MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT .....	20
7	UNDESIRABLE RADIATED EMISSION MEASUREMENT .....	39

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.

## 1 GENERAL INFORMATION

### 1.1 Product Description

Product Name:	2TX 11ax (WiFi6) + BLE Combo Card
Brand Name:	acer
Model No.:	MT7921
EUT Series No.:	N8K0LWW0041510F78D7600
Power Supply:	7.7Vdc from Rechargeable Li-ion Battery Pack 5 / 9 / 12 / 15 / 20Vdc from AC/DC Adapter

### 1.2 Modulation & Data Rate

Modulation type:	64QAM, 16QAM, QPSK, BPSK for OFDM
	256QAM for OFDM in 802.11ac only
	1024QAM for OFDMA in 802.11ax only
Transition Rate:	802.11 a: 6 - 54 Mbps
	802.11 n_20MHz: 6.5 - 144.4 Mbps
	802.11 n_40MHz: 13.5 - 300 Mbps
	802.11 ac_20MHz: 6.5 - 173.4 Mbps
	802.11 ac_80MHz: 29.3 - 866.6 Mbps
	802.11 ax_20MHz: 8.6 - 286.8 Mbps
	802.11 ax_40MHz: 17.2 - 573.6 Mbps
	802.11 ax_80MHz: 36 - 1201 Mbps

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.

### 1.3 Antenna Designation

Antenna Type	Supplier	NB / TB mode	Main / Aux	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)	Direction Gain (dBi)	
PIFA	WNC	NB	Main	81EABS15.G27	5150~5250	2.88	5.89	
					5250~5350	2.88	5.86	
					5470~5725	2.83	5.83	
					5725~5850	2.85	5.85	
			Aux		5150~5250	2.87	5.89	
					5250~5350	2.81	5.86	
					5470~5725	2.81	5.83	
					5725~5850	2.82	5.85	
		TB	Main		5150~5250	2.88	5.83	
					5250~5350	2.88	5.82	
					5470~5725	2.91	5.69	
					5725~5850	2.87	5.53	
			Aux		5150~5250	2.75	5.83	
					5250~5350	2.73	5.82	
					5470~5725	2.44	5.69	
					5725~5850	2.16	5.53	

**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.
2. 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 <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.

## 1.4 FCC

## WLAN for NB

Wi-Fi	Frequency Range	Channels	Rated Power(Avg) (dBm) (Worst Case)	Modulation Technology
a/ n_HT/ ac_VHT/ ax_HE 20M	5180~5240	4	21.44 dBm	OFDM
	5260~5320	4	21.68 dBm	OFDM
	5500~5720	12	21.70 dBm	OFDM
	5745~5825	5	22.68 dBm	OFDM
n_HT ac_VHT/ ax_HE 40M	5190~5230	2	20.44 dBm	OFDMA
	5270~5310	2	20.81 dBm	OFDMA
	5510~5710	6	20.23 dBm	OFDMA
	5755~5795	2	20.56 dBm	OFDMA
ac_VHT/ ax_HE 80M	5210	1	15.97 dBm	OFDM
	5290	1	16.98 dBm	OFDM
	5530~5690	3	19.96 dBm	OFDMA
	5775	1	19.40 dBm	OFDMA

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.

## WLAN for TB

Wi-Fi	Frequency Range	Channels	Rated Power(Avg) (dBm) (Worst Case)	Modulation Technology
a/ n_HT/ ac_VHT/ ax_HE 20M	5180~5240	4	21.44 dBm	OFDM
	5260~5320	4	21.68 dBm	OFDM
	5500~5720	12	21.70 dBm	OFDM
	5745-5825	5	22.68 dBm	OFDM
n_HT ac_VHT/ ax_HE 40M	5190~5230	2	20.44 dBm	OFDMA
	5270~5310	2	20.81 dBm	OFDMA
	5510~5710	6	20.23 dBm	OFDMA
	5755-5795	2	20.56 dBm	OFDMA
ac_VHT/ ax_HE 80M	5210	1	15.97 dBm	OFDM
	5290	1	17.24 dBm	OFDMA
	5530~5690	3	19.96 dBm	OFDMA
	5775	1	19.40 dBm	OFDMA

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.



## 1.5 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10:2013

## 1.6 Test Facility

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

**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.

## 1.7 Special Accessories

There are no special accessories used while test was conducted.

## 1.8 Equipment Modifications

There was no modification incorporated into the EUT.

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.

## 2 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 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 <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.

## 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\*6m\*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:

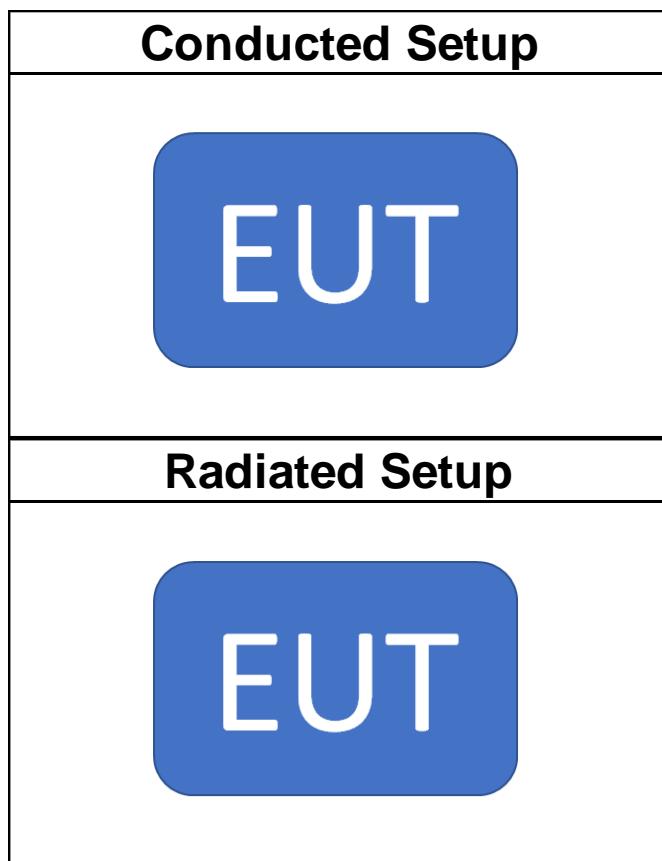
The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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 <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.

## 2.5 Configuration of Tested System



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.

### 3 SUMMARY OF TEST RESULT

FCC Rules	Description Of Test	Result
§15.407(a)	Maximum Conducted Output Power	Compliant
§15.205 §15.209 §15.407(b)	Undesirable Radiated Emissions	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 <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.

## 4 DESCRIPTION OF TEST MODES

### 4.1 Operating Frequencies

Operated band in 5150 MHz ~5250 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

Operated band in 5250 MHz ~5350 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
52	5260				
54	5270				
56	5280				
60	5300				
64	5320				

Operated band in 5470 MHz ~5725 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

Operated band in 5725 MHz ~5850 MHz:

20 M		40 M		80 M	
CH	Freq (MHz)	CH	Freq (MHz)	CH	Freq (MHz)
149	5745				
153	5765				
157	5785				
161	5805				
165	5825				
151	5755				
159	5795				
155	5775				

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.

## 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 mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case. The given UE is pre-scanned among below modes.

Modulation	Transmission Chain					Single Transmission Spatial	Multiple Transmission Spatial
<input checked="" type="checkbox"/> 802.11 a	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input type="checkbox"/> 1TX	<input checked="" type="checkbox"/> 2TX	
<input checked="" type="checkbox"/> 802.11 ac	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input type="checkbox"/> SISO	<input checked="" type="checkbox"/> MIMO	
<input checked="" type="checkbox"/> 802.11 ax	<input checked="" type="checkbox"/> Ch0	<input checked="" type="checkbox"/> Ch1	<input type="checkbox"/> Ch2	<input type="checkbox"/> Ch3	<input type="checkbox"/> SISO	<input checked="" type="checkbox"/> MIMO	

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.



4. Observations have been done for 802.11 ax available RU configurations below and found that the lowest, highest and Full RU results higher emissions.  
Only one RU can be enabled at any given time.

802.11ax		20MHz		802.11ax		40MHz					
RU type		26-tone RU		52-tone RU		RU type		26-tone RU		52-tone RU	
RU index and subcarrier range	RU0	[-121: -96]	RU37	[-121: -70]		RU index and subcarrier range	RU0	[-243: -218]	RU37	[-243: -192]	
	RU1	[-95: -70]	RU38	[-68: -17]			RU1	[-217: -192]	RU38	[-189: -138]	
	RU2	[-68: -43]	RU39	[17: 68]			RU2	[-189: -164]	RU39	[-109: -58]	
	RU3	[-42: -17]	RU40	[70: 121]			RU3	[-163: -138]	RU40	[-55: -4]	
	RU4	[-16: -4, 4: 16]	RU41	N/A			RU4	[-136: -111]	RU41	[4: 55]	
	RU5	[17: 42]	RU42	N/A			RU5	[-109: -84]	RU42	[58: 109]	
	RU6	[43: 68]	RU43	N/A			RU6	[-83: -58]	RU43	[138: 189]	
	RU7	[70: 95]	RU44	N/A			RU7	[-55: -30]	RU44	[192: 243]	
	RU8	[96: 121]	RU45	N/A			RU8	[-29: -4]	RU45	N/A	
	RU9	N/A	RU46	N/A			RU9	[4: 29]	RU46	N/A	
	RU10	N/A	RU47	N/A			RU10	[30: 55]	RU47	N/A	
	RU11	N/A	RU48	N/A			RU11	[58: 83]	RU48	N/A	
	RU12	N/A	RU49	N/A			RU12	[84: 109]	RU49	N/A	
	RU13	N/A	RU50	N/A			RU13	[111: 136]	RU50	N/A	
	RU14	N/A	RU51	N/A			RU14	[138: 163]	RU51	N/A	
	RU15	N/A	RU52	N/A			RU15	[164: 189]	RU52	N/A	
	RU16	N/A					RU16	[192: 217]			
	RU17	N/A	106-tone RU				RU17	[218: 243]	106-tone RU		
	RU18	N/A	RU53	[-122: -17]			RU18	N/A	RU53	[-243: -138]	
	RU19	N/A	RU54	[17: 122]			RU19	N/A	RU54	[-109: -4]	
	RU20	N/A	RU55	N/A			RU20	N/A	RU55	[4: 109]	
	RU21	N/A	RU56	N/A			RU21	N/A	RU56	[138: 243]	
	RU22	N/A	RU57	N/A			RU22	N/A	RU57	N/A	
	RU23	N/A	RU58	N/A			RU23	N/A	RU58	N/A	
	RU24	N/A	RU59	N/A			RU24	N/A	RU59	N/A	
	RU25	N/A	RU60	N/A			RU25	N/A	RU60	N/A	
	RU26	N/A					RU26	N/A			
	RU27	N/A	242-tone RU				RU27	N/A	242-tone RU		
	RU28	N/A	RU61	[-122: -2, 2: 122]			RU28	N/A	RU61	[-244: -3]	
	RU29	N/A	RU62	N/A			RU29	N/A	RU62	[3: 244]	
	RU30	N/A	RU63	N/A			RU30	N/A	RU63	N/A	
	RU31	N/A	RU64	N/A			RU31	N/A	RU64	N/A	
	RU32	N/A					RU32	N/A			
	RU33	N/A					RU33	N/A	484-tone RU		
	RU34	N/A					RU34	N/A	RU65	[-244: -3, 3: 244]	
	RU35	N/A					RU35	N/A	RU66	N/A	
	RU36	N/A					RU36	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 <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.

802.11ax		80MHz		
RU type	26-tone RU	52-tone RU		
RU index and subcarrier range	RU0	[499: -474]	RU37	[499: -448]
	RU1	[473: -448]	RU38	[445: -394]
	RU2	[445: -420]	RU39	[365: -314]
	RU3	[419: -394]	RU40	[311: -260]
	RU4	[392: -367]	RU41	[257: -206]
	RU5	[365: -340]	RU42	[203: -152]
	RU6	[339: -314]	RU43	[123: -72]
	RU7	[311: -286]	RU44	[69: -18]
	RU8	[285: -260]	RU45	[18: 69]
	RU9	[257: -232]	RU46	[72: 123]
	RU10	[231: -206]	RU47	[152: 203]
	RU11	[203: -178]	RU48	[206: 257]
	RU12	[177: -152]	RU49	[260: 311]
	RU13	[150: -125]	RU50	[314: 365]
	RU14	[123: -98]	RU51	[394: 445]
	RU15	[97: -72]	RU52	[448: 499]
	RU16	[69: -44]	106-tone RU	
	RU17	[43: -18]	RU53	[499: -394]
	RU18	[16: -4, 4: 16]	RU54	[365: -260]
	RU19	[18: 43]	RU55	[257: -152]
	RU20	[44: 69]	RU56	[123: -18]
	RU21	[72: 97]	RU57	[18: 123]
	RU22	[98: 123]	RU58	[152: 257]
	RU23	[125: 150]	RU59	[260: 365]
	RU24	[152: 177]	RU60	[394: 499]
	RU25	[178: 203]	242-tone RU	
	RU26	[206: 231]	RU61	[500: -259]
	RU27	[232: 257]	RU62	[258: -17]
	RU28	[260: 285]	RU63	[17: 258]
	RU29	[286: 311]	RU64	[259: 500]
	RU30	[314: 339]	484-tone RU	
	RU31	[340: 365]	RU65	[500: -17]
	RU32	[367: 392]	RU66	[17: 500]
	RU33	[394: 419]	996-tone RU	
	RU34	[420: 445]	RU67	[500: -3, 3: 500]
	RU35	[448: 473]		
	RU36	[474: 499]		

5. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

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.

RADIATED EMISSION TEST (BELOW 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	44	OFDM	6	2TX
	5260~5320	52 to 64	60			
	5500~5720	100 to 144	116			
	5745~5825	149 to 165	157			
RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	2TX
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11ac VHT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	MIMO
	5260~5320	52 to 64	52,60,64			
	5500~5700	100 to 140	100,116,140			
	5745~5825	149 to 165	149,157,165			
802.11ac VHT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MIMO
	5270~5310	54 to 62	54,62			
	5510~5670	102 to 134	102,110,134			
	5755~5795	151 to 159	151,159			
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MIMO
	5290	58	58			
	5530~5610	106 to 138	106,122,138			
	5775	155	155			
RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	RU CONFIGURATIO	DATA RATE (Mbps)
802.11ax_HE20	5180~5240	36 to 48	36,44,48	OFDMA	FULL RU	MCS0
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11ax_HE40	5190~5230	38 to 46	38,46	OFDMA	FULL RU	MCS0
	5270~5310	54 to 62	54,62			
	5510~5670	102 to 142	102,110,134,142			
	5755~5795	151 to 159	151,159			
802.11ax_HE80	5210	42	42	OFDMA	FULL RU	MCS0
	5290	58	58			
	5530~5610	106 to 138	106,122,138			
	5775	155	155			

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.

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	2TX
	5260~5320	52 to 64	52,60,64			
	5500~5720	100 to 144	100,116,140,144			
	5745~5825	149 to 165	149,157,165			
802.11ac VHT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	MIMO
	5260~5320	52 to 64	52,60,64			
	5500~5700	100 to 140	100,116,140			
	5745~5825	149 to 165	149,157,165			
802.11ac VHT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MIMO
	5270~5310	54 to 62	54,62			
	5510~5670	102 to 134	102,110,134			
	5755~5795	151 to 159	151,159			
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MIMO
	5290	58	58			
	5530~5610	106 to 138	106,122,138			
	5775	155	155			

CONDUCTED TEST							
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	RU CONFIGURATIO	DATA RATE (Mbps)	ANTENNA PORT
802.11ax_HE20	5180~5240	36 to 48	36,44,48	OFDMA	FULL RU	MCS0	MIMO
	5260~5320	52 to 64	52,60,64				
	5500~5720	100 to 144	100,116,140,144				
	5745~5825	149 to 165	149,157,165				
802.11ax_HE40	5190~5230	38 to 46	38,46	OFDMA	FULL RU	MCS0	MIMO
	5270~5310	54 to 62	54,62				
	5510~5670	102 to 142	102,110,134,142				
	5755~5795	151 to 159	151,159				
802.11ax_HE80	5210	42	42	OFDMA	FULL RU	MCS0	MIMO
	5290	58	58				
	5530~5610	106 to 138	106,122,138				
	5775	155	155				

**Note: NB**

The field strength of radiation emission was measured as NB Plane for channel Low, Mid and High.

**Note: TB**

The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for channel Low, Mid and High, the worst case E1 position was reported.

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.

## 5 MEASUREMENT UNCERTAINTY

Test Items	Uncertainty		
Output Power measurement	+/-	1	dB
Emission Bandwidth	+/-	1.53	Hz
Undesignable radiated emission measurement	+/-	1.68	dB
Temperature	+/-	0.4	°C
Humidity	+/-	3.5	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty			
<b>Polarization: Vertical</b>	+/-	2.57	dB
	+/-	4.85	dB
	+/-	4.45	dB
	+/-	4.24	dB
<b>Polarization: Horizontal</b>	+/-	2.57	dB
	+/-	4.37	dB
	+/-	4.45	dB
	+/-	4.24	dB

**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 <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.

## 6 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

### 6.1 Standard Applicable

#### 6.1.1 Output Power

Band	EUT CATEGORY	e-CRF Title 47 §15.407			
		Conducted Output Power	EIRP	TPC	Antenna Directional Gain Requirements
U-NII-1	Fixed point-to-point	1 Watt(30dBm)	Not required	Not required	23dBi
	Out door AP	1 Watt(30dBm)	Elevation angle above 30 degrees 125mW (21dBm)	Not required	6dBi
	Indoor AP	1 Watt(30dBm)	Not required	Not required	6dBi
	V Other	250mW(23.98dBm)	Not required	Not required	6dBi
U-NII-2A	V Other	250mW(23.98dBm) or 11dBm+10 log B	Not required	When EIRP >500mW At least 6dB below EIRP 1W (30dBm)	6dBi
U-NII-2C	V Other	250mW(23.98dBm) or 11dBm+10 log B	Not required		6dBi
U-NII-3	V Other	1 Watt(30dBm)	Not required	Not required	6dBi
	Fixed point-to-point	1 Watt(30dBm)	Not required	Not required	Not required

1. If transmitting antennas of directional gain greater than the antenna requirements column, the Maximum transmit power shall be reduced by the amount in dB that the directional gain of the antenna.  
 2. For the 10 log B, B is the 26 dB emission bandwidth.

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.

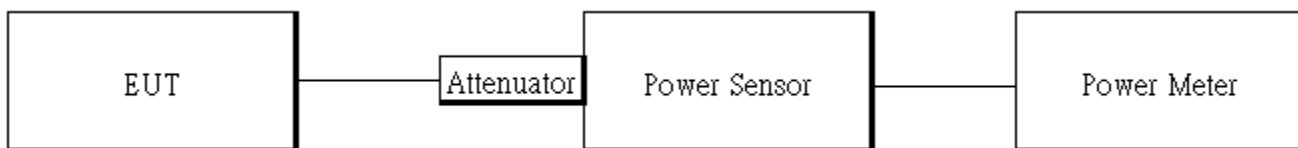
## 6.2 Measurement Equipment Used:

Conducted Emission Test Site: Conducted D					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010B	MY59071574	06/25/2021	06/24/2022
Power Meter	Anritsu	ML2496A	2138002	11/12/2021	11/11/2022
Power Sensor	Anritsu	MA2411B	1911390	09/20/2021	09/19/2022
Power Sensor	Anritsu	MA2411B	1911398	09/22/2021	09/21/2022
Test Software	SGS Taiwan	Radio Test Software	Ver.21	N.C.R	N.C.R
Attenuator	Marvelous	MVE2213-10	RF13	11/18/2021	11/17/2022
Attenuator	Marvelous	WATT-218FS-10	RF15	11/18/2021	11/17/2022
Attenuator	Marvelous	WATT-218FS-10	RF16	11/18/2021	11/17/2022
DC Block	PASTER-NACK	PE8210	RF158	11/18/2021	11/17/2022

**NOTE:** N.C.R refers to Not Calibrated Required.

## 6.3 Test Setup

### 6.3.1 Output Power



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.

## 6.4 Measurement Procedure

### 6.4.1 Output Power Measurements

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
4. Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
5. Record the max. reading and add  $10 \log(1/\text{duty cycle})$ .
6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.
7. MIMO mode: offset is set with “measure and add  $10 \log(N)$ ” to measurement for MIMO mode. Offset = cable loss +  $10 \log(N)$ , where N is number of transmitting antenna, cable loss is specified below.

#### Note:

As per section F. 2). e). (ii) of FCC KDB 662911 D01

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

$$\bullet \quad \text{DirectionalGain} = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

NSS = the number of independent spatial streams of data;

NANT = the total number of antennas

$g_{j,k} = 1/20 \cdot 10 \log G_k$  if the kth antenna is being fed by spatial stream j, or zero if it is not;

$G_k$  is the gain in dBi of the kth antenna.

The antenna gain is not greater than 6 dBi. Therefore, reduction of power is not required.

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.

## 6.5 Output Power Measurement Result

### 6.5.1 FCC Output power

#### WLAN for NB

##### 802.11a\_Ch0

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	12	15.60	36.332	23.98	PASS
44	5220	6	13.5	17.27	53.370	23.98	PASS
48	5240	6	15.5	18.78	75.560	23.98	PASS
52	5260	6	15.5	18.84	76.576	23.98	PASS
60	5300	6	15	18.58	72.160	23.98	PASS
64	5320	6	12	15.53	35.751	23.98	PASS
100	5500	6	13	17.09	51.203	23.98	PASS
116	5580	6	15.5	18.85	76.788	23.98	PASS
140	5700	6	14	17.78	60.020	23.98	PASS
144	5720(U-NII 2C)	6	14.5	16.48	44.50	23.46	PASS
144	5720 (U-NII 3)	6	14.5	12.84	19.22	30	PASS
149	5745	6	15.5	19.61	91.473	30	PASS
157	5785	6	15.5	19.63	91.895	30	PASS
165	5825	6	15.5	19.90	97.790	30	PASS

##### 802.11a\_Ch1

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	11.5	15.11	32.456	23.98	PASS
44	5220	6	13.5	17.01	50.268	23.98	PASS
48	5240	6	15.5	18.64	73.163	23.98	PASS
52	5260	6	15.5	18.68	73.840	23.98	PASS
60	5300	6	15	18.41	69.389	23.98	PASS
64	5320	6	12.5	15.92	39.111	23.98	PASS
100	5500	6	11	16.49	44.596	23.98	PASS
116	5580	6	15	15.48	35.342	23.98	PASS
140	5700	6	13.5	17.44	55.500	23.98	PASS
144	5720(U-NII 2C)	6	14.5	16.09	40.63	23.9	PASS
144	5720 (U-NII 3)	6	14.5	12.97	19.80	30	PASS
149	5745	6	15.5	19.44	87.962	30	PASS
157	5785	6	15.5	19.52	89.597	30	PASS
165	5825	6	15.5	19.64	92.107	30	PASS

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.

**802.11a\_2TX**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	6	11	14.2	14.08	18.21	66.222	23.98	PASS
44	5220	6	13.5	15.98	15.83	19.98	99.541	23.98	PASS
48	5240	6	14.5	17.54	17.18	21.44	139.316	23.98	PASS
52	5260	6	14.5	17.51	17.35	21.50	141.254	23.98	PASS
60	5300	6	14.5	17.96	17.22	21.68	147.231	23.98	PASS
64	5320	6	11.5	14.71	14.21	18.54	71.450	23.98	PASS
100	5500	6	11.5	16.01	15.52	19.85	96.605	23.98	PASS
116	5580	6	15.5	17.72	17.54	21.70	147.911	23.98	PASS
140	5700	6	13.5	16.58	16.22	20.48	111.686	23.98	PASS
144	5720(U-NII 2C)	6	14.5	15.39	14.78	19.16	82.499	23.46	PASS
144	5720 (U-NII 3)	6	14.5	11.75	11.65	15.77	37.759	30	PASS
149	5745	6	16	18.81	18.39	22.68	185.353	30	PASS
157	5785	6	16	18.77	18.42	22.67	184.927	30	PASS
165	5825	6	15.5	18.65	18.25	22.53	179.061	30	PASS

**802.11ac\_VHT20\_Ch0**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	13.5	15.81	38.108	23.98	PASS
44	5220	MCS0	15	17.19	52.362	23.98	PASS
48	5240	MCS0	16.5	18.03	63.536	23.98	PASS
52	5260	MCS0	17	18.39	69.027	23.98	PASS
60	5300	MCS0	16	17.89	61.520	23.98	PASS
64	5320	MCS0	13.5	15.57	36.059	23.98	PASS
100	5500	MCS0	14	16.79	47.755	23.98	PASS
116	5580	MCS0	17	18.62	72.781	23.98	PASS
140	5700	MCS0	15	17.52	56.496	23.98	PASS
144	5720(U-NII 2C)	MCS0	16	16.70	46.79	23.98	PASS
144	5720 (U-NII 3)	MCS0	16	13.15	20.67	30	PASS
149	5745	MCS0	16	18.55	71.617	30	PASS
157	5785	MCS0	16	18.51	70.961	30	PASS
165	5825	MCS0	16	18.53	71.288	30	PASS

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.

**802.11ac\_VHT20\_Ch1**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	13	15.39	34.595	23.98	PASS
44	5220	MCS0	14.5	16.76	47.426	23.98	PASS
48	5240	MCS0	16.5	17.89	61.520	23.98	PASS
52	5260	MCS0	17	18.27	67.146	23.98	PASS
60	5300	MCS0	15.5	17.32	53.953	23.98	PASS
64	5320	MCS0	13.5	15.38	34.516	23.98	PASS
100	5500	MCS0	13.5	16.29	42.562	23.98	PASS
116	5580	MCS0	16.5	18.13	65.016	23.98	PASS
140	5700	MCS0	14.5	17.25	53.091	23.98	PASS
144	5720(U-NII 2C)	MCS0	16	16.33	42.95	23.98	PASS
144	5720 (U-NII 3)	MCS0	16	12.72	18.72	30	PASS
149	5745	MCS0	15.5	18.07	64.123	30	PASS
157	5785	MCS0	16	18.28	67.300	30	PASS
165	5825	MCS0	15.5	17.98	62.808	30	PASS

**802.11ac\_VHT20\_MIMO**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	MCS0	13	14.71	14.53	18.77	75.336	23.98	PASS
44	5220	MCS0	14	15.85	15.78	19.97	99.312	23.98	PASS
48	5240	MCS0	15.5	16.72	16.62	20.82	120.781	23.98	PASS
52	5260	MCS0	15.5	17.25	16.58	21.08	128.233	23.98	PASS
60	5300	MCS0	15	16.6	16.07	20.49	111.944	23.98	PASS
64	5320	MCS0	13	14.5	14.05	18.43	69.663	23.98	PASS
100	5500	MCS0	13	15.45	15.03	19.40	87.096	23.98	PASS
116	5580	MCS0	16	16.52	15.97	20.40	109.648	23.98	PASS
140	5700	MCS0	15	16.12	15.88	20.15	103.514	23.98	PASS
144	5720(U-NII 2C)	MCS0	16.5	15.70	15.45	19.73	93.914	23.98	PASS
144	5720 (U-NII 3)	MCS0	16.5	12.15	11.84	16.15	41.212	30	PASS
149	5745	MCS0	16	17.21	16.69	21.11	129.122	30	PASS
157	5785	MCS0	16	17.28	16.77	21.18	131.220	30	PASS
165	5825	MCS0	16	17.53	16.85	21.35	136.458	30	PASS

**802.11ac\_VHT40\_Ch0**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	14	15.07	32.134	23.98	PASS
46	5230	MCS0	17	17.46	55.715	23.98	PASS
54	5270	MCS0	17.5	17.74	59.425	23.98	PASS
62	5310	MCS0	14.5	15.19	33.035	23.98	PASS
102	5510	MCS0	15.5	16.90	48.975	23.98	PASS
110	5550	MCS0	16.5	17.30	53.700	23.98	PASS
134	5670	MCS0	16.5	17.26	53.207	23.98	PASS
142	5710(U-NII 2C)	MCS0	15.5	15.90	38.92	23.98	PASS
142	5710 (U-NII 3)	MCS0	15.5	7.60	5.75	30	PASS
151	5755	MCS0	16	17.28	53.453	30	PASS
159	5795	MCS0	16	17.21	52.598	30	PASS

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.

**802.11ac\_VHT40\_Ch1**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	13.5	14.64	29.105	23.98	PASS
46	5230	MCS0	16.5	16.95	49.542	23.98	PASS
54	5270	MCS0	17	17.30	53.700	23.98	PASS
62	5310	MCS0	14.5	14.91	30.972	23.98	PASS
102	5510	MCS0	15	16.36	43.249	23.98	PASS
110	5550	MCS0	16	16.79	47.750	23.98	PASS
134	5670	MCS0	16.5	17.13	51.638	23.98	PASS
142	5710(U-NII 2C)	MCS0	15.5	15.75	37.62	23.98	PASS
142	5710 (U-NII 3)	MCS0	15.5	7.02	5.04	30	PASS
151	5755	MCS0	16	17.14	51.757	30	PASS
159	5795	MCS0	16	17.05	50.696	30	PASS

**802.11ac\_VHT40\_MIMO**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0				
38	5190	MCS0	14	13.45	12.54	18.05	63.826	23.98
46	5230	MCS0	16.5	15.41	14.77	20.13	103.039	23.98
54	5270	MCS0	16.5	15.86	15.16	20.55	113.501	23.98
62	5310	MCS0	14	13.44	12.58	18.06	63.973	23.98
102	5510	MCS0	14	14.75	14.07	19.45	88.105	23.98
110	5550	MCS0	16	15.33	14.67	20.04	100.925	23.98
134	5670	MCS0	15.5	15.41	14.78	20.14	103.276	23.98
142	5710(U-NII 2C)	MCS0	16	14.34	14.30	19.35	86.162	23.98
142	5710 (U-NII 3)	MCS0	16	6.04	5.57	10.84	12.138	30
151	5755	MCS0	16	15.17	14.97	20.10	102.329	30
159	5795	MCS0	16	15.09	14.84	20.00	100.000	30

**802.11ac\_VHT80\_Ch0**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	13.5	12.81	19.091	23.98	PASS
58	5290	MCS0	14.5	13.99	25.051	23.98	PASS
106	5530	MCS0	15	14.98	31.465	23.98	PASS
122	5610	MCS0	17	16.23	41.959	23.98	PASS
138	5690(U-NII 2C)	MCS0	17.5	16.16	41.31	23.98	PASS
138	5690 (U-NII 3)	MCS0	17.5	4.20	2.63	30	PASS
155	5775	MCS0	16.5	16.47	44.343	30	PASS

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.

**802.11ac\_VHT80\_Ch1**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	13.5	12.68	18.528	23.98	PASS
58	5290	MCS0	14.5	13.87	24.368	23.98	PASS
106	5530	MCS0	14.5	14.40	27.531	23.98	PASS
122	5610	MCS0	17	15.99	39.703	23.98	PASS
138	5690(U-NII 2C)	MCS0	17	15.53	35.72	23.98	PASS
138	5690 (U-NII 3)	MCS0	17	5.58	3.61	30	PASS
155	5775	MCS0	16.5	16.10	40.722	30	PASS

**802.11ac\_VHT80\_MIMO**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0				
42	5210	MCS0	14	9.66	9.54	15.97	39.537	23.98
58	5290	MCS0	14.5	10.81	10.41	16.98	49.888	23.98
106	5530	MCS0	13.5	11.55	10.75	17.54	56.754	23.98
122	5610	MCS0	17	12.97	12.48	19.10	81.283	23.98
138	5690(U-NII 2C)	MCS0	15	11.55	11.21	17.76	59.641	23.98
138	5690 (U-NII 3)	MCS0	15	-0.41	1.26	6.88	4.870	30
155	5775	MCS0	16	12.72	12.38	18.92	77.983	30

**802.11ax\_HE20\_Ch0**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	full	15	14.72	29.642	23.98	PASS
44	5220	MCS0	full	17	17.14	51.750	23.98	PASS
48	5240	MCS0	full	19	18.25	66.821	23.98	PASS
52	5260	MCS0	full	19	18.65	73.267	23.98	PASS
60	5300	MCS0	full	18.5	17.94	62.217	23.98	PASS
64	5320	MCS0	full	16	15.75	37.576	23.98	PASS
100	5500	MCS0	full	16.5	16.95	49.535	23.98	PASS
116	5580	MCS0	full	19	18.69	73.945	23.98	PASS
140	5700	MCS0	full	17.5	17.61	57.665	23.98	PASS
144	5720(U-NII 2C)	MCS0	full	16.5	14.96	31.302	22.93	PASS
144	5720 (U-NII 3)	MCS0	full	16.5	10.51	11.249	30	PASS
149	5745	MCS0	full	19.5	18.81	76.017	30	PASS
157	5785	MCS0	full	19.5	18.71	74.287	30	PASS
165	5825	MCS0	full	20	19.61	91.392	30	PASS

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.

**802.11ax\_HE20\_Ch1**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	full	15	14.53	28.373	23.98	PASS
44	5220	MCS0	full	17	16.94	49.421	23.98	PASS
48	5240	MCS0	full	19	18.05	63.813	23.98	PASS
52	5260	MCS0	full	19	18.42	69.488	23.98	PASS
60	5300	MCS0	full	18.5	17.75	59.554	23.98	PASS
64	5320	MCS0	full	16	15.61	36.384	23.98	PASS
100	5500	MCS0	full	16	16.43	43.945	23.98	PASS
116	5580	MCS0	full	19	18.62	72.763	23.98	PASS
140	5700	MCS0	full	17	17.23	52.834	23.98	PASS
144	5720(U-NII 2C)	MCS0	full	19.5	16.45	44.182	23.77	PASS
144	5720 (U-NII 3)	MCS0	full	19.5	13.18	20.818	30	PASS
149	5745	MCS0	full	19	18.27	67.129	30	PASS
157	5785	MCS0	full	19	18.15	65.300	30	PASS
165	5825	MCS0	full	19	18.41	69.328	30	PASS

**802.11ax\_HE20\_MIMO**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
36	5180	MCS0	full	15.5	14.52	14.34	17.84	60.814	23.98	PASS
44	5220	MCS0	full	17.5	16.83	16.72	20.18	104.232	23.98	PASS
48	5240	MCS0	full	19	17.79	17.49	21.05	127.350	23.98	PASS
52	5260	MCS0	full	19.5	18.35	18.14	21.66	146.555	23.98	PASS
60	5300	MCS0	full	18.5	17.48	17.13	20.72	118.032	23.98	PASS
64	5320	MCS0	full	16	15.34	15.18	18.67	73.621	23.98	PASS
100	5500	MCS0	full	17.5	16.58	16.32	19.86	96.828	23.98	PASS
116	5580	MCS0	full	19	18.32	18.17	21.66	146.555	23.98	PASS
140	5700	MCS0	full	18.5	17.18	16.84	20.42	110.154	23.98	PASS
144	5720(U-NII 2C)	MCS0	full	20	17.10	16.63	20.28	106.695	22.93	PASS
144	5720 (U-NII 3)	MCS0	full	20	12.65	13.37	16.43	43.991	30	PASS
149	5745	MCS0	full	18.5	18.24	17.85	21.46	139.959	30	PASS
157	5785	MCS0	full	18.5	18.17	17.76	21.38	137.404	30	PASS
165	5825	MCS0	full	19.5	18.74	18.59	22.08	161.436	30	PASS

**802.11ax\_HE40\_Ch0**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	full	12.5	11.73	14.891	23.98	PASS
46	5230	MCS0	full	18.5	17.62	57.798	23.98	PASS
54	5270	MCS0	full	19	18.01	63.229	23.98	PASS
62	5310	MCS0	full	14.5	13.42	21.974	23.98	PASS
102	5510	MCS0	full	17.5	17.07	50.923	23.98	PASS
110	5550	MCS0	full	18	17.52	50.923	23.98	PASS
134	5670	MCS0	full	18	17.33	54.065	23.98	PASS
142	5710(U-NII 2C)	MCS0	full	18.5	16.42	43.814	23.98	PASS
142	5710 (U-NII 3)	MCS0	full	18.5	8.59	7.226	30	PASS
151	5755	MCS0	full	18	17.57	57.137	30	PASS
159	5795	MCS0	full	18	17.55	56.874	30	PASS

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.

**802.11ax\_HE40\_Ch1**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	full	12	11.61	14.485	23.98	PASS
46	5230	MCS0	full	18.5	17.39	54.817	23.98	PASS
54	5270	MCS0	full	18.5	17.62	57.798	23.98	PASS
62	5310	MCS0	full	14.5	13.31	21.425	23.98	PASS
102	5510	MCS0	full	17	16.52	44.866	23.98	PASS
110	5550	MCS0	full	17.5	17.05	44.866	23.98	PASS
134	5670	MCS0	full	18	17.15	51.870	23.98	PASS
142	5710(U-NII 2C)	MCS0	full	18.5	16.25	42.146	23.98	PASS
142	5710 (U-NII 3)	MCS0	full	18.5	7.65	5.818	30	PASS
151	5755	MCS0	full	18.5	17.35	54.314	30	PASS
159	5795	MCS0	full	18.5	17.31	53.816	30	PASS

**802.11ax\_HE40\_MIMO**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
38	5190	MCS0	full	12.5	10.98	10.48	14.85	30.549	23.98	PASS
46	5230	MCS0	full	18.5	16.41	16.25	20.44	110.662	23.98	PASS
54	5270	MCS0	full	18.5	16.96	16.43	20.81	120.504	23.98	PASS
62	5310	MCS0	full	14	12.49	12.25	16.48	44.463	23.98	PASS
102	5510	MCS0	full	16	15.84	15.08	19.59	90.991	23.98	PASS
110	5550	MCS0	full	18.5	16.64	15.7	20.30	90.991	23.98	PASS
134	5670	MCS0	full	18.5	16.53	15.66	20.23	105.439	23.98	PASS
142	5710(U-NII 2C)	MCS0	full	13.5	10.82	10.66	14.85	30.540	23.98	PASS
142	5710 (U-NII 3)	MCS0	full	13.5	2.99	2.06	6.66	4.634	30	PASS
151	5755	MCS0	full	18.5	16.45	16.27	20.47	111.429	30	PASS
159	5795	MCS0	full	18.5	16.53	16.37	20.56	113.763	30	PASS

**802.11ax\_HE80\_Ch0**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	full	13.5	11.43	13.906	23.98	PASS
58	5290	MCS0	full	14	12.26	16.835	23.98	PASS
106	5530	MCS0	full	16.5	15.33	34.136	23.98	PASS
122	5610	MCS0	full	18.5	16.64	46.155	23.98	PASS
138	5690(U-NII 2C)	MCS0	full	19	16.16	41.309	23.98	PASS
138	5690 (U-NII 3)	MCS0	full	19	5.16	3.279	30	PASS
155	5775	MCS0	full	17.5	16.46	44.281	30	PASS

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.

## 802.11ax\_HE80\_Ch1

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	full	13.5	11.31	13.527	23.98	PASS
58	5290	MCS0	full	14	12.13	16.339	23.98	PASS
106	5530	MCS0	full	16	14.67	29.323	23.98	PASS
122	5610	MCS0	full	18.5	16.32	42.876	23.98	PASS
138	5690(U-NII 2C)	MCS0	full	19	15.71	37.212	23.98	PASS
138	5690 (U-NII 3)	MCS0	full	19	6.53	4.496	30	PASS
155	5775	MCS0	full	17.5	16.20	41.708	30	PASS

## 802.11ax\_HE80\_MIMO

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
42	5210	MCS0	full	13	10.66	10.48	14.56	28.576	23.98	PASS
58	5290	MCS0	full	13.5	11.47	11.14	15.30	33.884	23.98	PASS
106	5530	MCS0	full	15.5	14.42	13.68	18.06	63.973	23.98	PASS
122	5610	MCS0	full	18.5	15.41	15.08	19.24	83.946	23.98	PASS
138	5690(U-NII 2C)	MCS0	full	19.5	16.14	15.78	19.96	98.977	23.98	PASS
138	5690 (U-NII 3)	MCS0	full	19.5	5.13	6.61	9.92	9.824	30	PASS
155	5775	MCS0	full	18.5	15.59	15.21	19.40	87.096	30	PASS

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.

### WLAN for TB

#### 802.11a\_Ch0

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	12	15.60	36.332	23.98	PASS
44	5220	6	13.5	17.27	53.370	23.98	PASS
48	5240	6	15.5	18.78	75.560	23.98	PASS
52	5260	6	15.5	18.84	76.576	23.98	PASS
60	5300	6	15	18.58	72.160	23.98	PASS
64	5320	6	12	15.53	35.751	23.98	PASS
100	5500	6	13	17.09	51.203	23.98	PASS
116	5580	6	15.5	18.85	76.788	23.98	PASS
140	5700	6	14	17.78	60.020	23.98	PASS
144	5720(U-NII 2C)	6	14.5	16.48	44.50	23.46	PASS
144	5720 (U-NII 3)	6	14.5	12.84	19.22	30	PASS
149	5745	6	15.5	19.61	91.473	30	PASS
157	5785	6	15.5	19.63	91.895	30	PASS
165	5825	6	15.5	19.90	97.790	30	PASS

#### 802.11a\_Ch1

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	11.5	15.11	32.456	23.98	PASS
44	5220	6	13.5	17.01	50.268	23.98	PASS
48	5240	6	15.5	18.64	73.163	23.98	PASS
52	5260	6	15.5	18.68	73.840	23.98	PASS
60	5300	6	15	18.41	69.389	23.98	PASS
64	5320	6	12.5	15.92	39.111	23.98	PASS
100	5500	6	11	16.49	44.596	23.98	PASS
116	5580	6	15	15.48	35.342	23.98	PASS
140	5700	6	13.5	17.44	55.500	23.98	PASS
144	5720(U-NII 2C)	6	14.5	16.09	40.63	23.9	PASS
144	5720 (U-NII 3)	6	14.5	12.97	19.80	30	PASS
149	5745	6	15.5	19.44	87.962	30	PASS
157	5785	6	15.5	19.52	89.597	30	PASS
165	5825	6	15.5	19.64	92.107	30	PASS

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.

**802.11a\_2TX**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	6	11	14.2	14.08	18.21	66.222	23.98	PASS
44	5220	6	13.5	15.98	15.83	19.98	99.541	23.98	PASS
48	5240	6	14.5	17.54	17.18	21.44	139.316	23.98	PASS
52	5260	6	14.5	17.51	17.35	21.50	141.254	23.98	PASS
60	5300	6	14.5	17.96	17.22	21.68	147.231	23.98	PASS
64	5320	6	11.5	14.71	14.21	18.54	71.450	23.98	PASS
100	5500	6	11.5	16.01	15.52	19.85	96.605	23.98	PASS
116	5580	6	15.5	17.72	17.54	21.70	147.911	23.98	PASS
140	5700	6	13.5	16.58	16.22	20.48	111.686	23.98	PASS
144	5720(U-NII 2C)	6	14.5	15.39	14.78	19.16	82.499	23.46	PASS
144	5720 (U-NII 3)	6	14.5	11.75	11.65	15.77	37.759	30	PASS
149	5745	6	16	18.81	18.39	22.68	185.353	30	PASS
157	5785	6	16	18.77	18.42	22.67	184.927	30	PASS
165	5825	6	15.5	18.65	18.25	22.53	179.061	30	PASS

**802.11ac\_VHT20\_Ch0**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	13.5	15.81	38.108	23.98	PASS
44	5220	MCS0	15	17.19	52.362	23.98	PASS
48	5240	MCS0	16.5	18.03	63.536	23.98	PASS
52	5260	MCS0	17	18.39	69.027	23.98	PASS
60	5300	MCS0	16	17.89	61.520	23.98	PASS
64	5320	MCS0	13.5	15.57	36.059	23.98	PASS
100	5500	MCS0	14	16.79	47.755	23.98	PASS
116	5580	MCS0	17	18.62	72.781	23.98	PASS
140	5700	MCS0	15	17.52	56.496	23.98	PASS
144	5720(U-NII 2C)	MCS0	16	16.70	46.79	23.98	PASS
144	5720 (U-NII 3)	MCS0	16	13.15	20.67	30	PASS
149	5745	MCS0	16	18.55	71.617	30	PASS
157	5785	MCS0	16	18.51	70.961	30	PASS
165	5825	MCS0	16	18.53	71.288	30	PASS

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.

**802.11ac\_VHT20\_Ch1**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	13	15.39	34.595	23.98	PASS
44	5220	MCS0	14.5	16.76	47.426	23.98	PASS
48	5240	MCS0	16.5	17.89	61.520	23.98	PASS
52	5260	MCS0	17	18.27	67.146	23.98	PASS
60	5300	MCS0	15.5	17.32	53.953	23.98	PASS
64	5320	MCS0	13.5	15.38	34.516	23.98	PASS
100	5500	MCS0	13.5	16.29	42.562	23.98	PASS
116	5580	MCS0	16.5	18.13	65.016	23.98	PASS
140	5700	MCS0	14.5	17.25	53.091	23.98	PASS
144	5720(U-NII 2C)	MCS0	16	16.33	42.95	23.98	PASS
144	5720 (U-NII 3)	MCS0	16	12.72	18.72	30	PASS
149	5745	MCS0	15.5	18.07	64.123	30	PASS
157	5785	MCS0	16	18.28	67.300	30	PASS
165	5825	MCS0	15.5	17.98	62.808	30	PASS

**802.11ac\_VHT20\_MIMO**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0	Ch1				
36	5180	MCS0	13	14.71	14.53	18.77	75.336	23.98	PASS
44	5220	MCS0	14	15.85	15.78	19.97	99.312	23.98	PASS
48	5240	MCS0	15.5	16.72	16.62	20.82	120.781	23.98	PASS
52	5260	MCS0	15.5	17.25	16.58	21.08	128.233	23.98	PASS
60	5300	MCS0	15	16.6	16.07	20.49	111.944	23.98	PASS
64	5320	MCS0	13	14.5	14.05	18.43	69.663	23.98	PASS
100	5500	MCS0	13	15.45	15.03	19.40	87.096	23.98	PASS
116	5580	MCS0	16	16.52	15.97	20.40	109.648	23.98	PASS
140	5700	MCS0	15	16.12	15.88	20.15	103.514	23.98	PASS
144	5720(U-NII 2C)	MCS0	16.5	15.70	15.45	19.73	93.914	23.98	PASS
144	5720 (U-NII 3)	MCS0	16.5	12.15	11.84	16.15	41.212	30	PASS
149	5745	MCS0	16	17.21	16.69	21.11	129.122	30	PASS
157	5785	MCS0	16	17.28	16.77	21.18	131.220	30	PASS
165	5825	MCS0	16	17.53	16.85	21.35	136.458	30	PASS

**802.11ac\_VHT40\_Ch0**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	14	15.07	32.134	23.98	PASS
46	5230	MCS0	17	17.46	55.715	23.98	PASS
54	5270	MCS0	17.5	17.74	59.425	23.98	PASS
62	5310	MCS0	14.5	15.19	33.035	23.98	PASS
102	5510	MCS0	15.5	16.90	48.975	23.98	PASS
110	5550	MCS0	16.5	17.30	53.700	23.98	PASS
134	5670	MCS0	16.5	17.26	53.207	23.98	PASS
142	5710(U-NII 2C)	MCS0	15.5	15.90	38.92	23.98	PASS
142	5710 (U-NII 3)	MCS0	15.5	7.60	5.75	30	PASS
151	5755	MCS0	16	17.28	53.453	30	PASS
159	5795	MCS0	16	17.21	52.598	30	PASS

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.

## 802.11ac\_VHT40\_Ch1

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	13.5	14.64	29.105	23.98	PASS
46	5230	MCS0	16.5	16.95	49.542	23.98	PASS
54	5270	MCS0	17	17.30	53.700	23.98	PASS
62	5310	MCS0	14.5	14.91	30.972	23.98	PASS
102	5510	MCS0	15	16.36	43.249	23.98	PASS
110	5550	MCS0	16	16.79	47.750	23.98	PASS
134	5670	MCS0	16.5	17.13	51.638	23.98	PASS
142	5710(U-NII 2C)	MCS0	15.5	15.75	37.62	23.98	PASS
142	5710 (U-NII 3)	MCS0	15.5	7.02	5.04	30	PASS
151	5755	MCS0	16	17.14	51.757	30	PASS
159	5795	MCS0	16	17.05	50.696	30	PASS

## 802.11ac\_VHT40\_MIMO

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0				
38	5190	MCS0	14	13.45	12.54	18.05	63.826	23.98
46	5230	MCS0	16.5	15.41	14.77	20.13	103.039	23.98
54	5270	MCS0	16.5	15.86	15.16	20.55	113.501	23.98
62	5310	MCS0	14	13.44	12.58	18.06	63.973	23.98
102	5510	MCS0	14	14.75	14.07	19.45	88.105	23.98
110	5550	MCS0	16	15.33	14.67	20.04	100.925	23.98
134	5670	MCS0	15.5	15.41	14.78	20.14	103.276	23.98
142	5710(U-NII 2C)	MCS0	16	14.34	14.30	19.35	86.162	23.98
142	5710 (U-NII 3)	MCS0	16	6.04	5.57	10.84	12.138	30
151	5755	MCS0	16	15.17	14.97	20.10	102.329	30
159	5795	MCS0	16	15.09	14.84	20.00	100.000	30

## 802.11ac\_VHT80\_Ch0

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	13	12.88	19.401	23.98	PASS
58	5290	MCS0	14.5	13.99	25.051	23.98	PASS
106	5530	MCS0	15	14.98	31.465	23.98	PASS
122	5610	MCS0	17	16.23	41.959	23.98	PASS
138	5690(U-NII 2C)	MCS0	17.5	16.16	41.31	23.98	PASS
138	5690 (U-NII 3)	MCS0	17.5	4.20	2.63	30	PASS
155	5775	MCS0	16.5	16.47	44.343	30	PASS

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.

**802.11ac\_VHT80\_Ch1**

CH	Frequency (MHz)	Data Rate	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	13	12.75	18.829	23.98	PASS
58	5290	MCS0	14.5	13.87	24.368	23.98	PASS
106	5530	MCS0	14.5	14.40	27.531	23.98	PASS
122	5610	MCS0	17	15.99	39.703	23.98	PASS
138	5690(U-NII 2C)	MCS0	17	15.53	35.72	23.98	PASS
138	5690 (U-NII 3)	MCS0	17	5.58	3.61	30	PASS
155	5775	MCS0	16.5	16.10	40.722	30	PASS

**802.11ac\_VHT80\_MIMO**

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Ch0				
42	5210	MCS0	14	9.66	9.54	15.97	39.537	23.98
58	5290	MCS0	14.5	10.81	10.41	16.98	49.888	23.98
106	5530	MCS0	13.5	11.55	10.75	17.54	56.754	23.98
122	5610	MCS0	17	12.97	12.48	19.10	81.283	23.98
138	5690(U-NII 2C)	MCS0	16.5	13.60	13.03	19.70	93.250	23.98
138	5690 (U-NII 3)	MCS0	16.5	1.64	3.08	8.79	7.568	30
155	5775	MCS0	16	12.72	12.38	18.92	77.983	30

**802.11ax\_HE20\_Ch0**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	full	16	15.91	38.986	23.98	PASS
44	5220	MCS0	full	17	17.14	51.750	23.98	PASS
48	5240	MCS0	full	19	18.25	66.821	23.98	PASS
52	5260	MCS0	full	19	18.65	73.267	23.98	PASS
60	5300	MCS0	full	18.5	17.94	62.217	23.98	PASS
64	5320	MCS0	full	16	15.75	37.576	23.98	PASS
100	5500	MCS0	full	16.5	16.95	49.535	23.98	PASS
116	5580	MCS0	full	19	18.69	73.945	23.98	PASS
140	5700	MCS0	full	17.5	17.61	57.665	23.98	PASS
144	5720(U-NII 2C)	MCS0	full	19.5	17.11	51.353	22.93	PASS
144	5720 (U-NII 3)	MCS0	full	19.5	12.66	18.456	30	PASS
149	5745	MCS0	full	19.5	18.81	76.017	30	PASS
157	5785	MCS0	full	19.5	18.71	74.287	30	PASS
165	5825	MCS0	full	20	19.61	91.392	30	PASS

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.

**802.11ax\_HE20\_Ch1**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	full	16	15.75	37.576	23.98	PASS
44	5220	MCS0	full	17	16.94	49.421	23.98	PASS
48	5240	MCS0	full	19	18.05	63.813	23.98	PASS
52	5260	MCS0	full	19	18.42	69.488	23.98	PASS
60	5300	MCS0	full	18.5	17.75	59.554	23.98	PASS
64	5320	MCS0	full	16	15.61	36.384	23.98	PASS
100	5500	MCS0	full	16	16.43	43.945	23.98	PASS
116	5580	MCS0	full	19	18.62	72.763	23.98	PASS
140	5700	MCS0	full	17	17.23	52.834	23.98	PASS
144	5720(U-NII 2C)	MCS0	full	19.5	16.45	44.182	23.77	PASS
144	5720 (U-NII 3)	MCS0	full	19.5	13.18	20.818	30	PASS
149	5745	MCS0	full	19	18.27	67.129	30	PASS
157	5785	MCS0	full	19	18.15	65.300	30	PASS
165	5825	MCS0	full	19	18.41	69.328	30	PASS

**802.11ax\_HE20\_MIMO**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
36	5180	MCS0	full	16.5	15.75	15.61	19.09	81.096	23.98	PASS
44	5220	MCS0	full	17.5	16.83	16.72	20.18	104.232	23.98	PASS
48	5240	MCS0	full	19	17.79	17.49	21.05	127.350	23.98	PASS
52	5260	MCS0	full	19.5	18.35	18.14	21.66	146.555	23.98	PASS
60	5300	MCS0	full	18.5	17.48	17.13	20.72	118.032	23.98	PASS
64	5320	MCS0	full	16	15.34	15.18	18.67	73.621	23.98	PASS
100	5500	MCS0	full	17.5	16.58	16.32	19.86	96.828	23.98	PASS
116	5580	MCS0	full	19	18.32	18.17	21.66	146.555	23.98	PASS
140	5700	MCS0	full	18.5	17.18	16.84	20.42	110.154	23.98	PASS
144	5720(U-NII 2C)	MCS0	full	20	17.10	16.63	20.28	106.695	22.93	PASS
144	5720 (U-NII 3)	MCS0	full	20	12.65	13.37	16.43	43.991	30	PASS
149	5745	MCS0	full	18.5	18.24	17.85	21.46	139.959	30	PASS
157	5785	MCS0	full	18.5	18.17	17.76	21.38	137.404	30	PASS
165	5825	MCS0	full	19.5	18.74	18.59	22.08	161.436	30	PASS

**802.11ax\_HE40\_Ch0**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	full	15.5	15.34	34.191	23.98	PASS
46	5230	MCS0	full	18.5	17.62	57.798	23.98	PASS
54	5270	MCS0	full	19	18.01	63.229	23.98	PASS
62	5310	MCS0	full	16	15.46	35.149	23.98	PASS
102	5510	MCS0	full	17.5	17.07	50.923	23.98	PASS
110	5550	MCS0	full	18	17.52	50.923	23.98	PASS
134	5670	MCS0	full	18	17.33	54.065	23.98	PASS
142	5710(U-NII 2C)	MCS0	full	18.5	16.42	43.814	23.98	PASS
142	5710 (U-NII 3)	MCS0	full	18.5	8.59	7.226	30	PASS
151	5755	MCS0	full	18	17.57	57.137	30	PASS
159	5795	MCS0	full	18	17.55	56.874	30	PASS

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.

**802.11ax\_HE40\_Ch1**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	full	15	14.95	31.255	23.98	PASS
46	5230	MCS0	full	18.5	17.39	54.817	23.98	PASS
54	5270	MCS0	full	18.5	17.62	57.798	23.98	PASS
62	5310	MCS0	full	16	15.16	32.803	23.98	PASS
102	5510	MCS0	full	17	16.52	44.866	23.98	PASS
110	5550	MCS0	full	17.5	17.05	44.866	23.98	PASS
134	5670	MCS0	full	18	17.15	51.870	23.98	PASS
142	5710(U-NII 2C)	MCS0	full	18.5	16.25	42.146	23.98	PASS
142	5710 (U-NII 3)	MCS0	full	18.5	7.65	5.818	30	PASS
151	5755	MCS0	full	18.5	17.35	54.314	30	PASS
159	5795	MCS0	full	18.5	17.31	53.816	30	PASS

**802.11ax\_HE40\_MIMO**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
38	5190	MCS0	full	15.5	14.24	13.82	18.14	65.163	23.98	PASS
46	5230	MCS0	full	18.5	16.41	16.25	20.44	110.662	23.98	PASS
54	5270	MCS0	full	18.5	16.96	16.43	20.81	120.504	23.98	PASS
62	5310	MCS0	full	15.5	14.35	13.81	18.20	66.069	23.98	PASS
102	5510	MCS0	full	16	15.84	15.08	19.59	90.991	23.98	PASS
110	5550	MCS0	full	18.5	16.64	15.7	20.30	90.991	23.98	PASS
134	5670	MCS0	full	18.5	16.53	15.66	20.23	105.439	23.98	PASS
142	5710(U-NII 2C)	MCS0	full	18.5	15.96	15.78	19.98	99.516	23.98	PASS
142	5710 (U-NII 3)	MCS0	full	18.5	8.13	7.18	11.79	15.103	30	PASS
151	5755	MCS0	full	18.5	16.45	16.27	20.47	111.429	30	PASS
159	5795	MCS0	full	18.5	16.53	16.37	20.56	113.763	30	PASS

**802.11ax\_HE80\_Ch0**

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	full	12.5	10.95	12.451	23.98	PASS
58	5290	MCS0	full	16	14.34	27.178	23.98	PASS
106	5530	MCS0	full	16.5	15.33	34.136	23.98	PASS
122	5610	MCS0	full	18.5	16.64	46.155	23.98	PASS
138	5690(U-NII 2C)	MCS0	full	19	16.16	41.309	23.98	PASS
138	5690 (U-NII 3)	MCS0	full	19	5.16	3.279	30	PASS
155	5775	MCS0	full	17.5	16.46	44.281	30	PASS

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.

## 802.11ax\_HE80\_Ch1

CH	Frequency (MHz)	Data Rate	RU config.	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	full	12.5	10.83	12.112	23.98	PASS
58	5290	MCS0	full	16	14.09	25.658	23.98	PASS
106	5530	MCS0	full	16	14.67	29.323	23.98	PASS
122	5610	MCS0	full	18.5	16.32	42.876	23.98	PASS
138	5690(U-NII 2C)	MCS0	full	19	15.71	37.212	23.98	PASS
138	5690 (U-NII 3)	MCS0	full	19	6.53	4.496	30	PASS
155	5775	MCS0	full	17.5	16.20	41.708	30	PASS

## 802.11ax\_HE80\_MIMO

CH	Frequency (MHz)	Data Rate	RU config.	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
					Ch0	Ch1				
42	5210	MCS0	full	13	10.72	10.44	14.57	28.642	23.98	PASS
58	5290	MCS0	full	15.5	13.52	12.96	17.24	52.966	23.98	PASS
106	5530	MCS0	full	15.5	14.42	13.68	18.06	63.973	23.98	PASS
122	5610	MCS0	full	18.5	15.41	15.08	19.24	83.946	23.98	PASS
138	5690(U-NII 2C)	MCS0	full	19.5	16.14	15.78	19.96	98.977	23.98	PASS
138	5690 (U-NII 3)	MCS0	full	19.5	5.13	6.61	9.92	9.824	30	PASS
155	5775	MCS0	full	18.5	15.59	15.21	19.40	87.096	30	PASS

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.