

Page: 1 of 180

## **ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT**

# INTENTIONAL RADIATOR CERTIFICATION TO **FCC PART 15 SUBPART E** REQUIREMENT

OF

Applicant: Alco Electronics Ltd.

11/F Metropole Square, 2 On Yiu Street, Sha Tin, New Territories,

Hong Kong

**Product Name: Tablet** 

**Brand Name:** Venturer, Compaq Model No.: CT9L03W23H1, CT101

**Model Difference:** Different model no. for trading purpose.

FCC ID: A2HCT101

**Report Number:** ER/2018/80011 **FCC Rule Part:** §15.407, Cat:NII **Issue Date:** Sep. 18, 2018

Date of Test: Aug. 01, 2018 ~ Sep. 12, 2018

Date of EUT Received: Aug. 01, 2018

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory 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 tested as described in this report is in compliance with conducted and radiated emission limits.

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

Tested By:

Marcus Tseng / Sr. Engineer

Approved By:

Blue Yang / Supervisor





0513

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,同時此樣品僅保留別天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 2 of 180

# **Revision History**

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
ER/2018/80011	Rev.00	Initial creation of document	All	Sep. 18, 2018	Tiffany Kao

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.

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Personal Results and Results snown in this test report reter only to the sample(s) tested and such sample(s) tested and such sample(s) tested and sample(s) may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. No.134, WuKung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司



Page: 3 of 180

## **Contents**

1	GENERAL INFORMATION	4
2	SYSTEM TEST CONFIGURATION	7
3	SUMMARY OF TEST RESULT	9
4	DESCRIPTION OF TEST MODES	10
5	MEASUREMENT UNCERTAINTY	14
6	CONDUCTED EMISSION TEST	15
7	DUTY CYCLE TEST SIGNAL	19
8	26dB & 6dB EMISSION BANDWIDTH MEASUREMENT	22
9	MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	32
10	MAXIMUM POWER SPECTRAL DENSITY	36
11	UNDESIRABLE RADIATED EMISSION MEASUREMENT	46
12	TRANSMISSION IN THE ABSENCE OF DATA	162
13	FREQUENCY STABILITY	163
11	ANTENNA RECHIREMENT	120

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,同時此樣品僅保留卯天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm.

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 preserved to the fullest extent of the law. may be prosecuted to the fullest extent of the law.



Page: 4 of 180

## **GENERAL INFORMATION**

## 1.1 Product Description

#### General:

ilciai.				
Product Name:	Tablet			
Brand Name:	Venturer, Compaq			
Model No.:	CT9L03W23H1, CT101			
Model Difference:	Different r	Different model no. for trading purpose.		
Product SW/HW Version:	N/A / N/A			
Radio SW/HW Version:	N/A / N/A			
Test SW Version:	N/A			
RF power setting in TEST SW:	N/A			
	3.7Vdc from Rechargeable Li-ion Battery or 5V from AC/DC Adapter.			
Power Supply:	Battery:	Model No.: PT3075110-2P, Supplier: Guangdong		
1 Ower Suppry.		Pow-Tech New Power Co., Ltd.		
	Adapter:	Model No.: APS-H012050200W-G, Supplier:		
		Shenzhen ACT Industrial Co., Ltd.		

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.

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Personal Results and Results snown in this test report reter only to the sample(s) tested and such sample(s) tested and such sample(s) tested and sample(s) may be prosecuted to the fullest extent of the law.



Page: 5 of 180

#### **FCC WLAN 5GHz:**

VEAR COILE.				
Wi-Fi	Frequency Range	Channels	Avg. Power (dBm)	Modulation Technology
	5150~5250	4	11.85	
110 20	5250~5350	4	11.86	OFDM
11a_20	5470~5725	12	11.87	
	5725~5850	5	11.73	
	5150~5250	4	HT: 11.86	
115 UT 20M	5250~5350	4	HT: 11.89	OFDM
11n_HT 20M	5470~5725	12	HT: 11.78	
	5725~5850	5	HT: 11.68	
	5150~5250	2	HT: 11.83	OFDM
11a UT40M	5250~5350	2	HT: 11.75	
11n_HT40M	5470~5725	6	HT:11.89	
	5725~5850	2	HT: 11.87	
Modulation ty	<sub>′</sub> ре	64QAM, 16QAM, QPSK, BPSK for OFDM		
Transition Ra	te:	802.11 a: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 65Mbps 802.11 n_40MHz: 13.5 - 135Mbps		
Antenna Des	ignation:	Inner Antenn 5150~5250M 5250~5350M 5470~5725M		

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

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

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



Page: 6 of 180

## 1.2 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules

KDB 789033 D02 v02r01 General UNII Test Procedures New Rules

ANSI C63.10:2013

Note: All test items have been performed and record as per the above standards.

## 1.3 Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803 (TAF code 0513)

FCC Registration Numbers are: 509634 / TW0001

### 1.4 Special Accessories

There are no special accessories used while test was conducted.

## 1.5 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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對測試之樣品負責,同時此樣品僅保留的天。本根告未起本公司書面하可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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. may be prosecuted to the fullest extent of the law.



Page: 7 of 180

### 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 Emissions**

The EUT is a placed on as turn table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz,. The CISPR Quasi-Peak and Average detector mode is employed according to §15.207. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

#### 2.3.2 **Radiated Emissions**

The EUT is a placed on as turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plan. 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.

## 2.4 Measurement Results Explanation

#### 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.

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are retained for each sample(s) are retai Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 8 of 180

## 2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission & Conducted **Emission (AC Power Line) Configuration** 

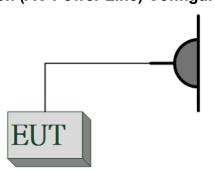


Fig.2-2 Conducted Emission (Antenna Port) Configuration



Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1	WLAN Test Software	N/A	N/A	N/A	N/A	N/A

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

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Personal Results and Results snown in this test report reter only to the sample(s) tested and such sample(s) tested and such sample(s) tested and sample(s) may be prosecuted to the fullest extent of the law.



Page: 9 of 180

## SUMMARY OF TEST RESULT

FCC Rules	Description Of Test	Result
§15.207	AC Power Line Conducted Emission	Compliant
§15.403(i) §15.407(e)	26 dB & 6dB & 99% Emission Bandwidth	Compliant
§15.407(a)	Maximum Conducted Output Power	Compliant
§15.407(a)	Power Spectral Density	Compliant
§15.407(b)	Undesirable Radiated Emissions	Compliant
§15.407(c)	Transmission in case of Absence of Information	Compliant
§15.407(g)	Frequency Stability	Compliant
§15.203 §15.407(a)	Antenna Requirement	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.

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. 除非另有说明,此概告结果僅對测试之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCS\*\*Canyan\*\* UNIO 134 WWW.mpganed.NewTainsidicty.\*\* Unio 134 WWW.mpganed.NewTainsidicty.\*\* Unio 134 WWW.mpganed.\*\* Unio 134 WW.mpganed.\*\* Unio 134 WW.mp

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

t (886-2) 2299-3279

www.tw.sgs.com



Page: 10 of 180

## **DESCRIPTION OF TEST MODES**

## 4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

802.11a / n HT20 Mode		
Channel	Frequency	
36	5180	
40	5200	
44	5220	
48	5240	

802.11 n HT40 Mode		
channel	Frequency	
38	5190	
46	5230	

Operated band in 5250 MHz ~5350 MHz:

802.11a / n HT20 Mode		
channel	Frequency	
52	5260	
56	5280	
60	5300	
64	5320	

802.11 n HT40 Mode		
channel	Frequency	
54	5270	
62	5310	

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.

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,此概告結果僅對測述之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCST clayara Left\*\*

\*\*INDICATE Material Scale (INVIVI) and Part Withus Dray Withus Dr

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.



Page: 11 of 180

## Operated band in 5470 MHz ~5725 MHz:

Operated band in 0470 iiii		
802.11a / n HT20 Mode		
Channel	Freq (MHz)	
100	5500	
104	5520	
108	5540	
112	5560	
116	5580	
120	5600	
124	5620	
128	5640	
132	5660	
136	5680	
140	5700	

802.11 n HT40 Mode			
Channel	Freq (MHz)		
102	5510		
110	5550		
118	5590		
126	5630		
134	5670		

## Operated band in 5745 MHz ~5850 MHz:

802.11a / n HT20 Mode						
Channel	Freq (MHz)					
149	5745					
153	5765					
157	5785					
161	5805					
165	5825					

802.11 n HT40 Mode						
channel	Freq (MHz)					
151	5755					
159	5795					

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.

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. 除非另有说明,此概告结果僅對测试之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCS\*\*Canyan\*\* UNIO 134 WWW.mpganed.NewTainsidicty.\*\* Unio 134 WWW.mpganed.NewTainsidicty.\*\* Unio 134 WWW.mpganed.\*\* Unio 134 WW.mpganed.\*\* Unio 134 WW.mp

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

f (886-2) 2298-0488



Page: 12 of 180

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

- 1. The EUT has been tested under operating condition.
- 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.

## RADIATED EMISSION TEST

RADIATED EMISSION TEST:									
RADIATED EMISSION TEST (BELOW 1 GHz)									
MODE	FREQUENCY	AVAILABLE	TESTED	MODULATION	DATA RATE	ANTENNA			
WOOL	BAND (MHz)	CHANNEL	CHANNEL	WODULATION	(Mbps)	PORT			
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	Main			
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	Main			
802.11a	5500~5720	100 to 140	100,116,140	OFDM	6	Main			
802.11a	OFDM	6	Main						
	RADI	ATED EMISS	SION TEST (AE	BOVE 1 GHz)					
MODE	<b>FREQUENCY</b>	AVAILABLE	TESTED	MODULATION	DATA RATE	ANTENNA			
MODE	BAND (MHz)	CHANNEL	CHANNEL	WIODULATION	(Mbps)	PORT			
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	Main			
802.11n_HT20	5100~5240	30 10 40	30,44,46	OFDM	MCS0	Main			
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	Main			
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	Main			
802.11n_HT20	3200 3320	32 10 04	32,00,04	OFDM	MCS0	Main			
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	Main			

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.

Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

f (886-2) 2298-0488 www.tw.sgs.com



Page: 13 of 180

MODE	FREQUENCY BAND (MHz)		TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5500~5720	100 to 140	100,116,140	OFDM	6	Main
802.11n_HT20	5500~5720		100,110,140	OFDM	MCS0	Main
802.11n_HT40	5510~5710	102 to 134	102,110,134	OFDM	MCS0	Main
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	Main
802.11n_HT20	0140~0020	149 (0 105	149,137,103	OFDM	MCS0	Main
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	Main

#### Note:

The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11a/n/ac WLAN Transmitter for channel Low, Mid and High, the worst case E2 position was reported.

### ANTENNA PORT CONDUCTED MEASUREMENT:

CONDUCTED TEST									
MODE	FREQUENCY	AVAILABLE	TESTED	MODULATION	DATA RATE	ANTENNA			
IVIODL	BAND (MHz)	CHANNEL	CHANNEL	MODULATION	(Mbps)	PORT			
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	Main			
802.11n_HT20	5160~5240	30 10 40	30,44,40	OFDM	MCS0	Main			
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	Main			
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	Main			
802.11n_HT20	5200~5520	32 10 04	52,00,04	OFDM	MCS0	Main			
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	Main			
802.11a	5500~5720	100 to 140	100,116,140	OFDM	6	Main			
802.11n_HT20	3300~3720	100 to 140	100,110,140	OFDM	MCS0	Main			
802.11n_HT40	5510~5710	102 to 134	102,110,134	OFDM	MCS0	Main			
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	Main			
802.11n_HT20	3745~3625	148 (0 100	149, 137, 103	OFDM	MCS0	Main			
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	Main			

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.

Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

f (886-2) 2298-0488 www.tw.sgs.com



Page: 14 of 180

#### MEASUREMENT UNCERTAINTY

Test Items	Uncertainty
AC Power Line Conducted Emission	+/- 2.586 dB
26dB & 6dB Emission Bandwidth	+/- 123.36 Hz
The Maximum Output Power Measurement	+/- 0.96 dB
Maximum Power Spectral Density Measurement	+/- 1.67 dB
Frequency Stability	+/- 123.36 Hz
Temperature	+/- 0.65 °C
Humidity	+/- 4.6 %
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%

## Radiated Spurious Emission:

	9kHz-30MHz: +/-2.87dB		
	30MHz - 180MHz: +/- 3.37dB		
Measurement uncertainty	180MHz -417MHz: +/- 3.19dB		
(Polarization : <b>Vertical</b> )	0.417GHz-1GHz: +/- 3.19dB		
	1GHz - 18GHz: +/- 4.04dB		
	18GHz - 40GHz: +/- 4.04dB		

	9kHz-30MHz: +/-2.87dB
	30MHz - 167MHz: +/- 4.22dB
Measurement uncertainty	167MHz -500MHz: +/- 3.44dB
(Polarization : <b>Horizontal</b> )	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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.

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,此概告結果僅對測述之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCST clayara Left\*\*

\*\*INDICATE Material Scale (INVIVI) and Part Withus Dray Withus Dr

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號



Page: 15 of 180

## CONDUCTED EMISSION TEST

## 6.1 Standard Applicable

Frequency range within 150 kHz to 30 MHz shall not exceed the Limit table as below.

Frequency range	Limits dB(uV)				
MHz	Quasi-peak	Average			
0.15 to 0.50	66 to 56	56 to 46			
0.50 to 5	56	46			
5 to 30	60	50			

#### Note

## 6.2 Measurement Equipment Used

Conducted Emission Test Site								
EQUIPMENT MFR MODEL SERIAL LAST CAL DU								
TYPE		NUMBER	NUMBER	CAL.				
EMI Test Receiver	R&S	ESCI7	100335	201802/02	2019/02/01			
LISN	SCHWARZ- BECK	NSLK 8127	8127-649	2018/05/18	2019/05/17			

## 6.3 EUT Setup

- 1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
- 2. The AC/DC Power adaptor of EUT was plug-in LISN. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
- 3. The LISN was connected with 120Vac/60Hz power source.

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,同時此樣品僅保留到天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279

台灣檢驗科技股份有限公司

f (886-2) 2298-0488

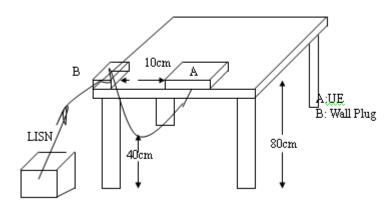
<sup>1.</sup> The lower limit shall apply at the transition frequencies

<sup>2.</sup> The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50



Page: 16 of 180

#### 6.4 Test SET-UP



#### 6.5 Measurement Procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all phases of power being supplied by given UE are completed.

#### 6.6 Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The \* reveals the worst-case results that closet to the limit

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.

Offices other wine stated under the state shown in this seat report reter only to the sample(s) seater and such sample(s) are retained to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample shown in this seat the sample shown in this seat that the sample shown in the sa Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 17 of 180

### AC POWER LINE CONDUCTED EMISSION TEST DATA

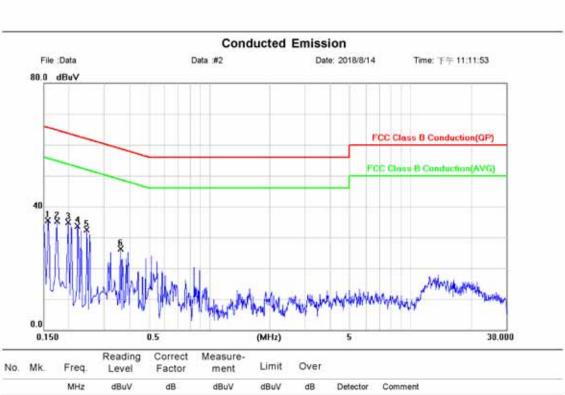
Operation Mode: Operation mode Test By: Tin

Temperature: Site Conduction Room Phase: L1 Power: AC 120V/60Hz Humidity: 85 %

Limit: FCC Class B Conduction(QP)

Mode: Operation

Note: Adapter: APS-H012050200W-G



No.	Mk.	Freq.	Reading Level	Correct	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1		0.1580	35.56	0.04	35.60	65.57	-29.97	peak		
2		0.1740	35.23	0.04	35.27	64.77	-29.50	peak		
3	•	0.1980	34.80	0.04	34.84	63.69	-28.85	peak		
4	g.	0.2220	33,70	0.04	33.74	62.74	-29.00	peak		
5		0.2460	32.53	0.04	32.57	61.89	-29.32	peak		
6	Ģ.	0.3620	26.27	0.04	26.31	58.68	-32.37	peak		

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.

t (886-2) 2299-3279

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,此概告結果僅對測述之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCST clayara Left\*\*

\*\*INDICATE Material Scale (INVIVI) and Part Withus Dray Withus Dr

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

f (886-2) 2298-0488



5

6

0.2580

0.2900

31.44

31.60

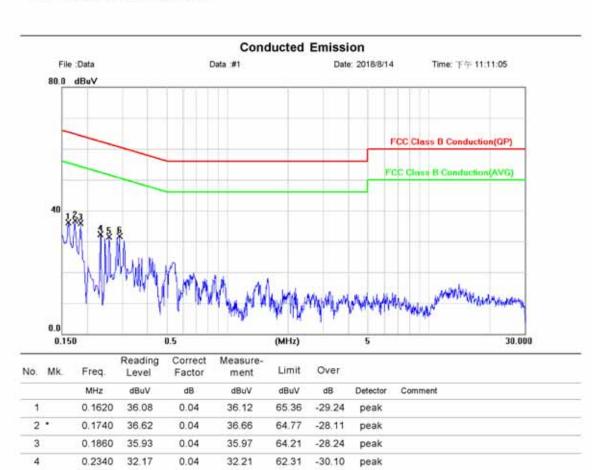
Report No.: ER/2018/80011

Page: 18 of 180

Temperature: 25 ℃ Site Conduction Room Phase: AC 120V/60Hz Limit: FCC Class B Conduction(QP) Humidity: 85 % Power.

Mode: Operation

Note: Adapter: APS-H012050200W-G



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.

0.04

0.04

31.48

31.64

61.50

60.52

-30.02

-28.88

peak

peak

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,此概告結果僅對測述之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCST clayara Left\*\*

\*\*INDICATE Material Scale (INVIVI) and Part Withus Dray Withus Dr

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488



Page: 19 of 180

#### **DUTY CYCLE TEST SIGNAL**

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

#### Formula:

Duty Cycle = Ton / (Ton+Toff)

#### **Measurement Procedure:**

- 1. Set span = Zero
- 2. RBW = 8MHz
- 3. VBW = 8MHz,
- 4. Detector = Peak

## **Duty Cycle:**

Mode	Duty Cycle (%)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
802.11a	100.00	0.00	0.00	0.01
802.11n_20	100.00	0.00	0.00	0.01
802.11n_40	100.00	0.00	0.00	0.01

Duty Cycle Factor:  $10 * \log(1/1) = 0$ Duty Cycle Factor:  $10 * \log(1/1) = 0$ Duty Cycle Factor:  $10 * \log(1/1) = 0$ 

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.

Offices other wine stated under the state shown in this seat report reter only to the sample(s) seater and such sample(s) are retained to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report reter only to the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample(s) are teamed to 90 days only. Per shown in this seat report the sample shown in this seat the sample shown in this seat that the sample shown in the sa Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 f (886-2) 2298-0488

台灣檢驗科技股份有限公司 | t (886-2) 2299-3279

SGS Taiwan Ltd.

www.tw.sgs.com



Page: 20 of 180

## **DUTY CYCLE TEST SIGNAL Measurement Result** 802.11a



## 802.11n HT20



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.

t (886-2) 2299-3279

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,此根告结果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

台灣檢驗科技股份有限公司

f (886-2) 2298-0488



Page: 21 of 180

## 802.11n HT 40



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.

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,此概告结果僅對測試之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488



Page: 22 of 180

### 26DB & 6DB EMISSION BANDWIDTH MEASUREMENT

## 8.1 Standard Applicable

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

#### 8.2 Measurement Procedure

- 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 spectrum analyzer.
  - a. 26dB Band width Measurement: Set the spectrum analyzer as 1% of emission BW Sweep=auto, Detector = Peak, Trace Mode = Max Hold, Manually readjust RBW until the RBW/EBW ratio is 1% based on EBW as observed on the result of pre-sequence measurement.
  - b. Mark the peak frequency and -26dB (upper and lower) frequency.
- 4. Repeat the procedures as list above until all test default channels (low, middle, and high) are completed.
- 5. Minimum Emission Bandwidth for the band 5.725-5.850GHz.
  - a. Set the spectrum analyzer as RBW = 100 kHz, VBW = 3\*RBW, Span = 30M/50MHz, Detector=Peak,
    - Sweep=auto
  - b. Mark the peak frequency and –6dB (upper and lower) frequency.
- 6. Repeat above procedures until all test default channel measured were complete.

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

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

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 www.tw.sas.com

SGS Taiwan Ltd.

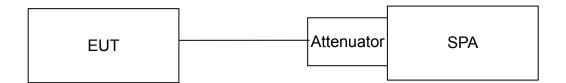


Page: 23 of 180

## 8.3 Measurement Equipment Used

SGS Conducted Room									
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due				
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	2018/05/03	2019/05/02				
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01				
DC Block	Mini-Circuits	BLK-18-S+	1	2018/01/02	2019/01/01				
Coaxial Cables	N/A	WK CE Cable	N/A	2018/01/02	2019/01/01				

## 8.4 Test Set-up



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.

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. 除非另有说明,此概告结果僅對测试之樣品負責,同時此樣品僅保留90天。本概告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

\*\*SCS\*\*Canyan\*\* UNIO 134 WWW.mpganed.NewTainsidicty.\*\* Unio 134 WWW.mpganed.NewTainsidicty.\*\* Unio 134 WWW.mpganed.\*\* Unio 134 WW.mpganed.\*\* Unio 134 WW.mp

SGS Taiwan Ltd.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號



Page: 24 of 180

# 8.5 Measurement Result 26dB and 6dB Bandwidth

802.11a Ch0

002:114_0110						
Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)				
5180	23.21	13.657				
5220	24.61	13.912				
5240	21.00	13.221				
5260	24.55	13.900				
5300	24.49	13.889				
5320	20.23	13.060				
5500	19.99	13.008				
5580	19.50	12.901				
5700	19.75	12.955				

#### 802.11a\_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.61	12.202
5785	16.58	12.195
5825	16.59	12.199

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。本報告未絕本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and 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.

\*\*SGS Taiwan Ltd.\*\* No 134 WulkungRand NewTaipeiIndustrialPark WulkupDistrict. NewTaipeiCity\_Taiwan24803/新北市五股區新北產業園區五工路 134 號

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

f (886-2) 2298-0488



Page: 25 of 180

#### 802.11n\_HT20\_Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	22.50	13.522
5220	20.39	13.093
5240	24.54	13.899
5260	22.23	13.470
5300	22.04	13.433
5320	19.90	12.989
5500	19.82	12.971
5580	19.80	12.966
5700	20.00	13.011

## 802.11n\_HT20\_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.82	12.510
5785	17.85	12.515
5825	17.83	12.512

#### 802.11n \_HT40\_Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	41.43	16.174
5230	46.86	16.708
5270	45.06	16.538
5310	40.03	16.024
5510	40.11	16.033
5550	39.87	16.007
5670	39.92	16.012

#### 802.11n\_HT40\_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	36.50	15.623
5795	36.54	15.628

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

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and 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.

\*\*SGS Taiwan Ltd.\*\* No 134 WulkunRopad NewTaipeiIndustrialPark WulkunDistrict NewTaipeiCityTaiwan 24803/新 北市 五股區新北產業園區五工路 134 號

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

www.tw.sgs.com



Page: 26 of 180

#### 26dB and 6dB Bandwidth

FCC 802.11a 20MHz Main 5180MHz



## FCC 802.11a 20MHz Main 5260MHz



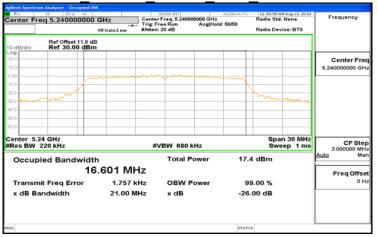
#### FCC 802.11a 20MHz Main 5220MHz



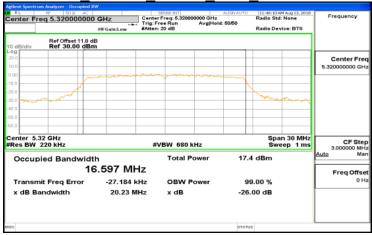
FCC 802.11a 20MHz Main 5300MHz



## FCC 802.11a 20MHz Main 5240MHz



## FCC 802.11a 20MHz Main 5320MHz



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.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

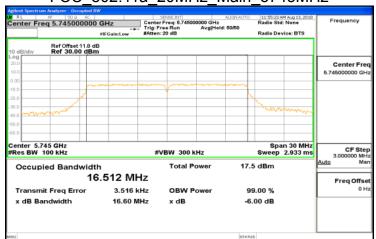


Page: 27 of 180

#### FCC 802.11a 20MHz Main 5500MHz

#### Ref Offset 11.8 dB Ref 30.00 dBm Center Free CF Step 3.000000 MH enter 5.5 GHz Res BW 220 kHz Span 30 MHz Sweep 1 ms #VBW 620 kHz Occupied Bandwidth 17.2 dBm 16.570 MHz Transmit Freg Error -9.245 kHz OBW Power 99.00 % x dB Bandwidth 19.99 MHz x dB -26.00 dB

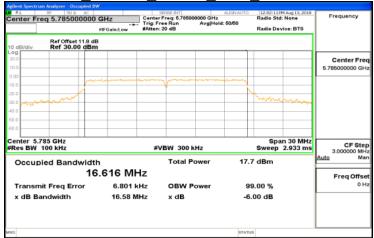
## FCC 802.11a 20MHz Main 5745MHz



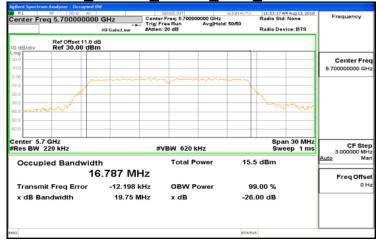
## FCC 802.11a 20MHz Main 5580MHz



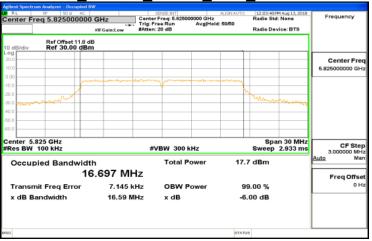
## FCC 802.11a 20MHz Main 5785MHz



## FCC 802.11a 20MHz Main 5700MHz



## FCC 802.11a 20MHz Main 5825MHz



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.

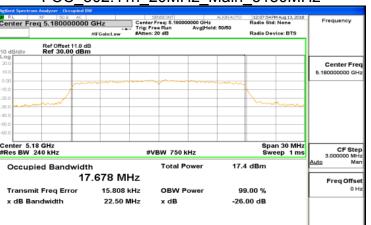
Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny'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.

f (886-2) 2298-0488

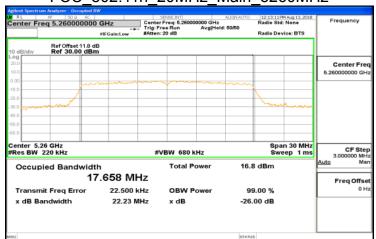


Page: 28 of 180

#### FCC 802.11n 20MHz Main 5180MHz



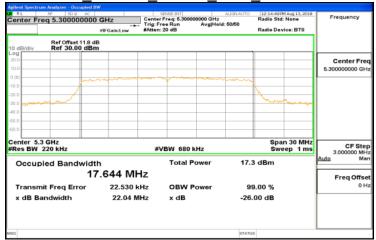
## FCC 802.11n 20MHz Main 5260MHz



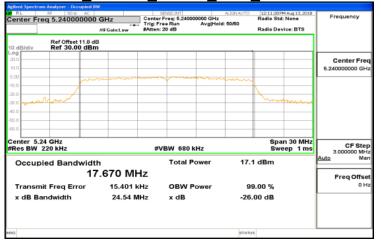
## FCC 802.11n 20MHz Main 5220MHz



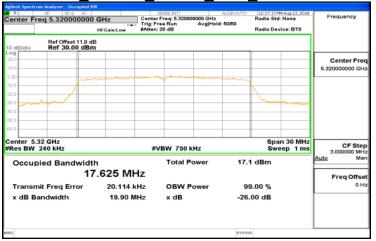
## FCC 802.11n 20MHz Main 5300MHz



## FCC 802.11n 20MHz Main 5240MHz



## FCC 802.11n 20MHz Main 5320MHz



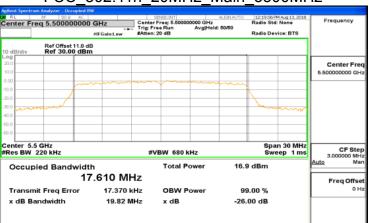
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

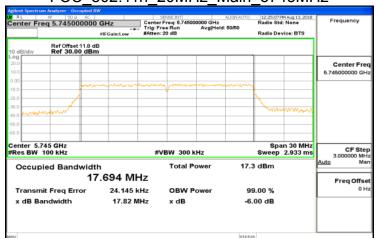


Page: 29 of 180

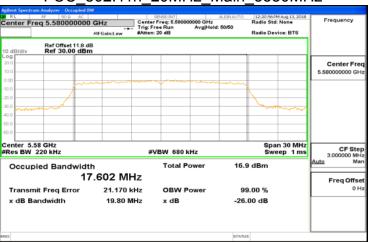
#### FCC 802.11n 20MHz Main 5500MHz



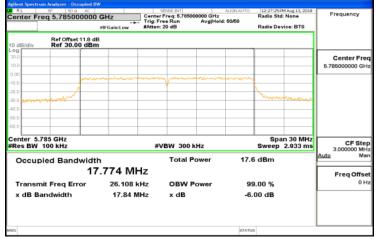
## FCC 802.11n 20MHz Main 5745MHz



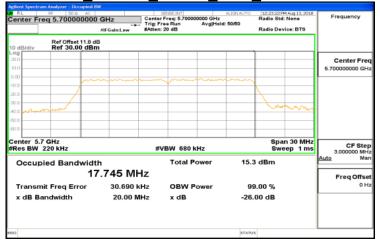
## FCC 802.11n 20MHz Main 5580MHz



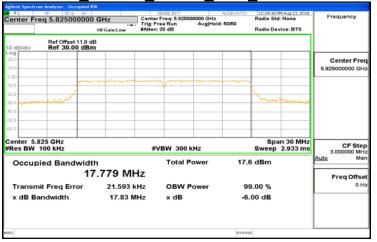
## FCC 802.11n 20MHz Main 5785MHz



## FCC 802.11n 20MHz Main 5700MHz



## FCC 802.11n 20MHz Main 5825MHz



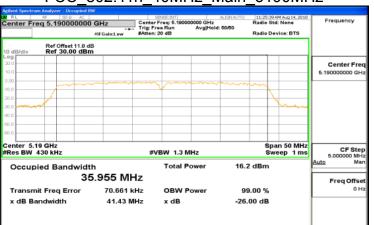
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

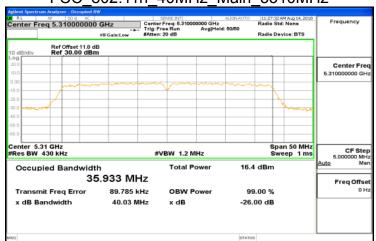


Page: 30 of 180

#### FCC 802.11n 40MHz Main 5190MHz



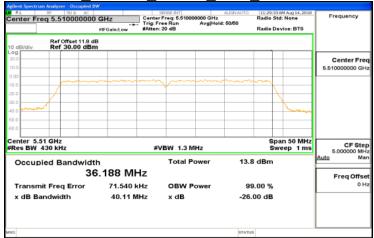
## FCC 802.11n 40MHz Main 5310MHz



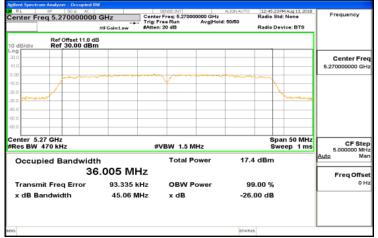
## FCC 802.11n 40MHz Main 5230MHz



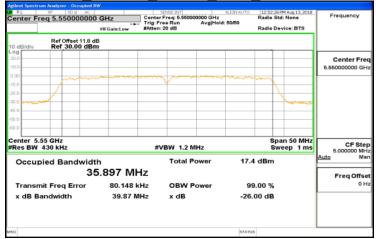
## FCC 802.11n 40MHz Main 5510MHz



## FCC 802.11n 40MHz Main 5270MHz



## FCC 802.11n 40MHz Main 5550MHz



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.

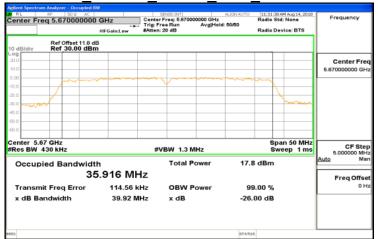
Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny'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.

f (886-2) 2298-0488

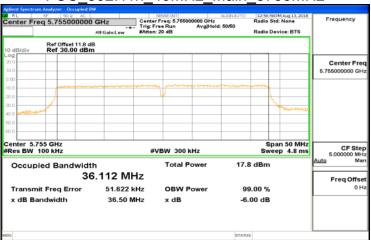


Page: 31 of 180

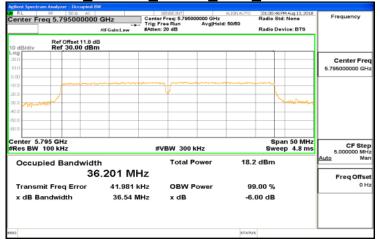
### FCC 802.11n 40MHz Main 5670MHz



## FCC 802.11n 40MHz Main 5755MHz



## FCC 802.11n 40MHz Main 5795MHz



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.

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告妹果僅對測試之樣品負責,同時此樣品僅保留的反。 本粮各未粳本公司書面許可,不可能分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cleint'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 fuller extent of the law. cuted to the fullest extent of the law.

f (886-2) 2298-0488



Page: 32 of 180

## MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

## 9.1 Standard Applicable

#### **FCC**

OPERZTION Band		EUT CATEGORY	LIMIT
U-NII-1		Access Point (Mater device )	1 Watt(30dBm)
		Fixed point-to-point Acess Ponit	1 Watt(30dBm)
	V	Mobile and portable clinet device	250mW(23.98dBm)
U-NII-2A	V		250mW(23.98dBm) or 11dBm+10 log B
U-NII-2C	V		250mW(23.98dBm) or 11dBm+10 log B
U-NII-3	V		1 Watt(30dBm)

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the Maximum Power Spectral Density shall be reduced by the amount in dB that the direction-al gain of the antenna exceeds 6 dBi.

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.

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Personal Results and Results snown in this test report reter only to the sample(s) tested and such sample(s) tested and such sample(s) tested and sample(s) may be prosecuted to the fullest extent of the law.



Page: 33 of 180

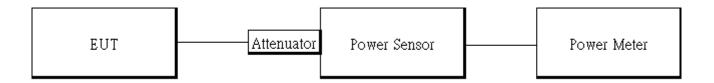
#### 9.2 Measurement Procedure

- 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
- Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
- Record the max. reading and add 10 log(1/duty cycle).
- Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

## 9.3 Measurement Equipment Used

SGS Conducted Room									
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due				
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	2018/05/03	2019/05/02				
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01				
DC Block	Mini-Circuits	BLK-18-S+	1	2018/01/02	2019/01/01				
Coaxial Cables	N/A	WK CE Cable	N/A	2018/01/02	2019/01/01				

#### 9.4 Test Set-up



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,同時此樣品僅保留印天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm.

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. SGS Taiwan Ltd.

| No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號



Page: 34 of 180

#### 9.5 Measurement Result

## Conducted output power

### 802.11a Ch0

002.11a_	<u> </u>				1			•
СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	6	11.81	15.171		23.98		PASS
44	5220	6	11.82	15.205		23.98		PASS
48	5240	6	11.85	15.311		23.98		PASS
52	5260	6	11.77	15.031	23.98	or 11+10log(B) =	24.90	PASS
60	5300	6	11.86	15.346	23.98	or 11+10log(B) =	24.89	PASS
64	5320	6	11.81	15.171	23.98	or 11+10log(B) =	24.06	PASS
100	5500	6	11.84	15.276	23.98	or 11+10log(B) =	24.01	PASS
116	5580	6	11.87	15.382	23.98	or 11+10log(B) =	23.90	PASS
140	5700	6	6.57	4.539	23.98	or 11+10log(B) =	23.95	PASS
149	5745	6	11.65	14.622		30		PASS
157	5785	6	11.73	14.894		30		PASS
165	5825	6	11.68	14.723		30	•	PASS

## 802.11n\_HT20\_Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	MCS0	11.83	15.241		23.98		PASS
44	5220	MCS0	11.86	15.346		23.98		PASS
48	5240	MCS0	11.83	15.241		23.98		PASS
52	5260	MCS0	11.69	14.757	23.98	or 11+10log(B) =	24.47	PASS
60	5300	MCS0	11.89	15.453	23.98	or 11+10log(B) =	24.43	PASS
64	5320	MCS0	11.71	14.825	23.98	or 11+10log(B) =	23.99	PASS
100	5500	MCS0	11.78	15.066	23.98	or 11+10log(B) =	23.97	PASS
116	5580	MCS0	11.76	14.997	23.98	or 11+10log(B) =	23.97	PASS
140	5700	MCS0	7.15	5.188	23.98	or 11+10log(B) =	24.01	PASS
149	5745	MCS0	11.63	14.555		30		PASS
157	5785	MCS0	11.68	14.723		30		PASS
165	5825	MCS0	11.61	14.488		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.

t (886-2) 2299-3279

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Phys A faxing is the state of the sample(s) tested and such sample(s) are retained for 90 days only. 
Phys A faxing is the state of the sample(s) tested and such sample(s) are retained for 90 days only. 
Phys A faxing is the sample state of the sample(s) tested and such sample(s) are retained for 90 days only. 
Phys A faxing is the sample state of 90 days only. 
Phys A faxing is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested is the sample state of 90 days only. 
Phys A tested of 90 days only. 
Phys A teste may be prosecuted to the fullest extent of the law.



Page: 35 of 180

#### 802.11n HT40 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	MCS0	11.70	14.791		23.98		PASS
46	5230	MCS0	11.83	15.241		23.98		PASS
54	5270	MCS0	11.75	14.962	23.98	or 11+10log(B) =	27.54	PASS
62	5310	MCS0	11.68	14.723	23.98	or 11+10log(B) =	27.02	PASS
102	5510	MCS0	11.79	15.101	23.98	or 11+10log(B) =	27.03	PASS
110	5550	MCS0	11.89	15.453	23.98	or 11+10log(B) =	27.01	PASS
134	5670	MCS0	7.75	5.957	23.98	or 11+10log(B) =	27.01	PASS
151	5755	MCS0	11.86	15.346		30		PASS
159	5795	MCS0	11.87	15.382		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.

Unless otherwise stated the results snown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Personal Results of the Results snown in this test report refer only to the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and sa may be prosecuted to the fullest extent of the law.



Page: 36 of 180

## 10 MAXIMUM POWER SPECTRAL DENSITY

#### 10.1 **Standard Applicable**

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Mater device )	17dBm/ MHz
		Fixed point-to-point Acess Ponit	
	V	Mobile and portable clinet device	11dBm/ MHz
U-NII-2A	V		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the Maximum Power Spectral Density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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.

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Personal Results and Results snown in this test report reter only to the sample(s) tested and such sample(s) tested and such sample(s) tested and sample(s) may be prosecuted to the fullest extent of the law.



Page: 37 of 180

#### 10.2 **Measurement Procedure**

- 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 Spectrum.

# 4. For U-NII1, U-NII-2A, U-NII-2C Band:

Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)

#### For U-NII-3 Band:

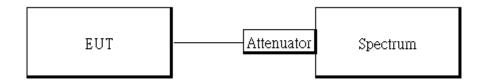
Set RBW=500 kHz, VBW≥ 3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)

- 5. User the cursor on spectrum to peak search the highest level of trace
- 6. Record the max. reading and add 10 log(1/duty cycle).
- 7. Repeat above procedures until all default test channel (low, middle, and high) was complete.

#### **Measurement Equipment Used** 10.3

SGS Conducted Room								
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due			
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	2018/05/03	2019/05/02			
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01			
DC Block	Mini-Circuits	BLK-18-S+	1	2018/01/02	2019/01/01			
Coaxial Cables	N/A	WK CE Cable	N/A	2018/01/02	2019/01/01			

#### 10.4 Test Set-up



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,同時此樣品僅保留別天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm.

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.

SGS Taiwan Ltd. No.134, WuKungRoad, NewTaipeilndustrialPark, WukuDistrict, NewTaipeiCity, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 38 of 180

#### 10.5 **Measurement Result**

POWER DENSITY 802.11a MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)			
5180	-1.19	11.80	0.00	-1.19	11	-12.19			
5220	-1.08	11.80	0.00	-1.08	11	-12.08			
5240	-1.33	11.80	0.00	-1.33	11	-12.33			
5260	-1.06	11.80	0.00	-1.06	11	-12.06			
5300	-0.59	11.80	0.00	-0.59	11	-11.59			
5320	-1.46	11.80	0.00	-1.46	11	-12.46			
5500	-1.39	11.80	0.00	-1.39	11	-12.39			
5580	-1.56	11.80	0.00	-1.56	11	-12.56			
5700	-3.99	11.80	0.00	-3.99	11	-14.99			
5745	4.00	11.80	-	4.00	30	-26.00			
5785	4.57	11.80	-	4.57	30	-25.43			
5825	4.56	11.80	-	4.56	30	-25.44			

POWER DENSITY 802.11n HT20 MODE								
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)		
5180	-2.10	11.80	0.00	-2.10	11	-13.10		
5220	-1.66	11.80	0.00	-1.66	11	-12.66		
5240	-2.00	11.80	0.00	-2.00	11	-13.00		
5260	-2.21	11.80	0.00	-2.21	11	-13.21		
5300	-1.34	11.80	0.00	-1.34	11	-12.34		
5320	-1.55	11.80	0.00	-1.55	11	-12.55		
5500	-1.66	11.80	0.00	-1.66	11	-12.66		
5580	-2.03	11.80	0.00	-2.03	11	-13.03		
5700	-4.68	11.80	0.00	-4.68	11	-15.68		
5745	4.01	11.80	-	4.01	30	-25.99		
5785	4.16	11.80	-	4.16	30	-25.84		
5825	4.52	11.80	-	4.52	30	-25.48		

t (886-2) 2299-3279

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

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

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

SGS Taiwan Ltd. No.134, WuKungRoad, NewTaipeilndustrialPark, WukuDistrict, NewTaipeiCity, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 39 of 180

POWER DENSITY 802.11n HT40 MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)			
5190	-6.26	11.80	0.00	-6.26	11	-17.26			
5230	-4.82	11.80	0.00	-4.82	11	-15.82			
5270	-4.9	11.80	0.00	-4.90	11	-15.90			
5310	-5.88	11.80	0.00	-5.88	11	-16.88			
5510	-9.22	11.80	0.00	-9.22	11	-20.22			
5550	-4.95	11.80	0.00	-4.95	11	-15.95			
5670	-5.01	11.80	0.00	-5.01	11	-16.01			
5755	1.73	11.80	=	1.73	30	-28.27			
5795	1.79	11.80	-	1.79	30	-28.21			

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,同時此樣品僅保留卯天。本報告未經本公司書面許可,不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm.

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 prospected to the fullest extent of the law. may be prosecuted to the fullest extent of the law.

f (886-2) 2298-0488

SGS Taiwan Ltd. No.134, WuKungRoad, NewTaipeilndustrialPark, WukuDistrict, NewTaipeiCity, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

www.tw.sgs.com



Page: 40 of 180

#### 802.11a 20MHz 5180MHz



# 802.11a 20MHz 5260MHz



### 802.11a 20MHz 5220MHz



802.11a 20MHz 5300MHz



#### 802.11a 20MHz 5240MHz



# 802.11a 20MHz 5320MHz



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.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny'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.

SGS Taiwan Ltd.



Page: 41 of 180

#### 802.11a 20MHz 5500MHz



# 802.11a 20MHz\_5745MHz



### 802.11a 20MHz 5580MHz



802.11a 20MHz 5785MHz



#### 802.11a 20MHz 5700MHz



# 802.11a 20MHz 5825MHz



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.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny'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.

SGS Taiwan Ltd.



Page: 42 of 180

#### 802.11n 20MHz 5180MHz



# 802.11n 20MHz 5260MHz



# 802.11n 20MHz 5220MHz



#### 802.11n 20MHz 5300MHz



#### 802.11n 20MHz 5240MHz



# 802.11n 20MHz 5320MHz



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.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny'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.

SGS Taiwan Ltd.



Page: 43 of 180

#### 802.11n 20MHz 5500MHz



# 802.11n 20MHz 5745MHz



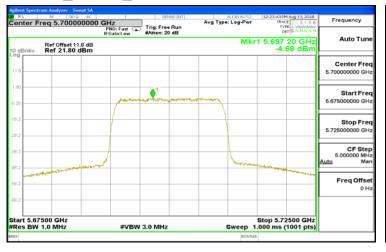
### 802.11n 20MHz 5580MHz



802.11n 20MHz 5785MHz



#### 802.11n 20MHz 5700MHz



# 802.11n 20MHz 5825MHz



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.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny'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.

f (886-2) 2298-0488

SGS Taiwan Ltd.



Page: 44 of 180

#### 802.11n 40MHz 5190MHz



# 802.11n 40MHz 5310MHz



### 802.11n 40MHz 5230MHz



802.11n 40MHz 5510MHz



#### 802.11n 40MHz 5270MHz



# 802.11n 40MHz 5550MHz



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.

Offices otherwise stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and sample(s) are retained for 90 days only. 
Fix and some stated are results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 
Fix and some stated are results shown. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company is the sample of the results of the sample of the sample of the results of the sample of the sa ny's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Page: 45 of 180

### 802.11n 40MHz 5670MHz



#### 802.11n 40MHz 5755MHz



#### 802.11n 40MHz 5795MHz



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.

Unless otherwise stated the results snown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告妹果僅對測試之樣品負責,同時此樣品僅保留的反。 本粮各未粳本公司書面許可,不可能分複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Cleint'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 fuller extent of the law. cuted to the fullest extent of the law.

f (886-2) 2298-0488



Page: 46 of 180

#### 11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

### 11.1 Standard Applicable

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- 1. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- 2. For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

APPLICABLE TO	LI	MIT	
FCC KDB 789033 D02 General UNII Test Procedures New Rules	FIELD STRENGTH AT 3m		
	PK: 74 (dBμV/m)	AV 54 (dBμV/m)	
APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m	
15.407(b)(1)			
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.3 (dBµV/m)	
15.407(b)(3)			
15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBµV/m) *1 PK:105.2 (dBµV/m) *2 PK: 110.8(dBµV/m) *3 PK:122.2 (dBµV/m) *4	

<sup>\*1</sup> beyond 75 MHz or more above of the bandedge.

EIRP =  $((E*d)^2) / 30$ , where E is the field in V/m, d is the measurement distance (3m), EIRP is the equivalent isotropically radiated power in Watts.

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

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sqs.com/terms">www.sqs.com/terms</a> and conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sqs.com/terms">www.sqs.com/terms</a> e-document.htm. 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.

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

公司 t (886-2) 2299-3279

<sup>\*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

<sup>\*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

<sup>\*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.



Page: 47 of 180

Unwanted spurious emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

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

#### Note:

- 1. The lower limit shall apply at the transition frequencies.
- 2. Emission level  $(dB\mu V/m) = 20 \log Emission level (dB\mu V/m)$

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 48 of 180

# **Measurement Equipment Used**

SGS SAC-III									
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due				
Bi-log Antenna	SCHWAZBECK	VULB9168	378	2017/12/29	2018/12/28				
Horn Antenna	Schwarzbeck	BBHA9120D	1441	2018/08/14	2019/08/13				
Horn Antenna	Schwarzbeck	BBHA9170	184	2017/12/12	2018/12/11				
Loop Antenna	ETS.LINDGREN	6502	148045	2017/09/26	2018/09/25				
3m Site NSA	SGS	966 chamber	N/A	2018/01/02	2019/01/01				
Spectrum Analyzer	Agilent	E4446A	MY51100003	2018/05/15	2019/05/14				
EMI Test Receiver	R&S	ESCI7	100335	2018/02/02	2019/02/01				
Pre-Amplifier	HP	8449B	3008A00578	2018/01/02	2019/01/01				
Pre-Amplifier	HP	8447D	2944A07676	2018/01/02	2019/01/01				
Pre-Amplifier	EMC Instruments	EMC184045B	980135	2017/10/27	2018/10/26				
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01				
2GHz High Pass Filter	Micro-Tronics	HPM50110	36	2018/01/02	2019/01/01				
Filter 5150-5350 MHz	Micro-Tronics	BRM50703	1	2018/01/02	2019/01/01				
Low Loss Cable	Huber Suhner	966_RX	9	2018/01/02	2019/01/01				

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

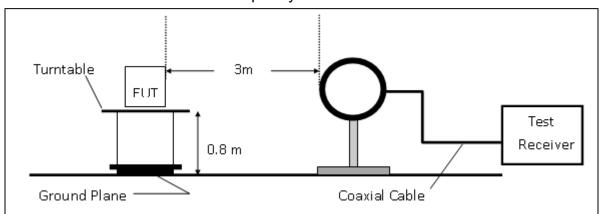
www.tw.sgs.com



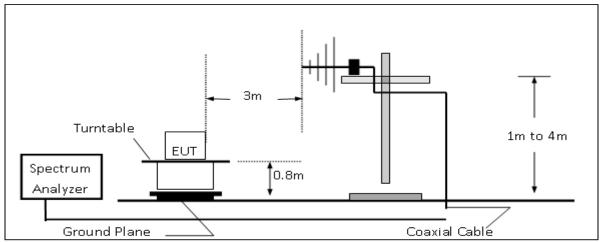
Page: 49 of 180

#### 11.3 **Test SET-UP**

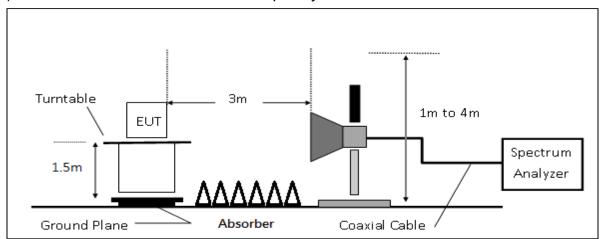
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



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



# (C) Radiated Emission Test Set-UP Frequency Over 1 GHz



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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。同時此樣品僅保留的人。本根各元程命公司者而并可,不可能分檢製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488



Page: 50 of 180

#### 11.4 **Measurement Procedure**

- The EUT was placed on a turn table which is 0.8m above ground plane. 1.
- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules. 2.
- The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 3. 1GHz above ground plane.
- The turn table shall rotate 360 degrees to determine the position of maximum emission 4.
- EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) 6. and Quasi-peak (QP) at frequency below 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency 7. above 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
- Maximum procedure was performed on the six highest emissions to ensure EUT compli-9. ance.
- 10. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 11. Repeat above procedures until all frequency measured were complete.

#### 11.5 Field Strength Calculation

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

FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

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

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

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.

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

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



Page: 51 of 180

#### Test Results of Radiated Spurious Emissions form 9 KHz to 30 MHz

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

#### 11.7 **Measurement Result**

Refer to next page for tabular data sheets.

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

f (886-2) 2298-0488

www.tw.sgs.com



Page: 52 of 180

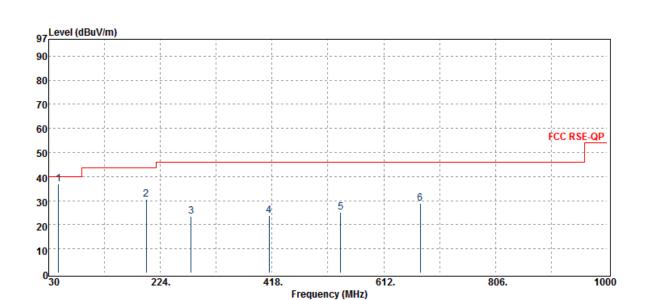
Measurement Antenna Pol.

# **Radiated Spurious Emission Measurement Result Below 1GHz Worst-Case Data:** 802.11a 5150~5250 MHz

Test Date :2018-08-14 **Operation Band** :802.11aB1

Fundamental Frequency :5220 MHz Temp./Humi. :23 deg\_C / 62 RH

Operation Mode :Tx CH MID Engineer EUT Pol. :E2 Plane :VERTICAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
47.46	Peak	44.52	-7.64	36.88	40.00	-3.12
199.75	Peak	39.90	-9.26	30.64	43.50	-12.86
277.35	Peak	29.67	-6.27	23.40	46.00	-22.60
413.15	Peak	26.65	-2.95	23.70	46.00	-22.30
537.31	Peak	26.82	-1.65	25.17	46.00	-20.83
675.05	Peak	27.44	1.37	28.81	46.00	-17.19

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 53 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

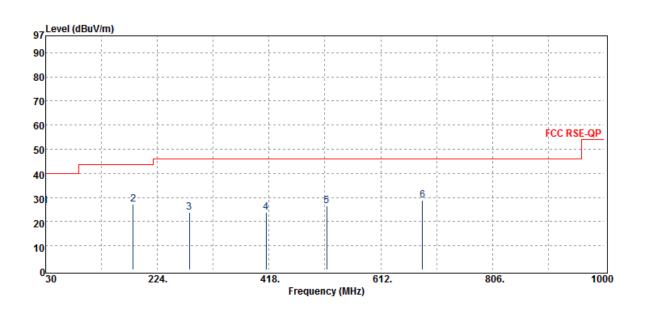
EUT Pol.

:802.11aB1 :5220 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
30.00	Peak	35.32	-8.96	26.36	40.00	-13.64
182.29	Peak	35.62	-8.37	27.25	43.50	-16.25
279.29	Peak	29.98	-6.17	23.81	46.00	-22.19
413.15	Peak	26.83	-2.95	23.88	46.00	-22.12
517.91	Peak	28.05	-1.46	26.59	46.00	-19.41
684.75	Peak	27.43	1.58	29.01	46.00	-16.99

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



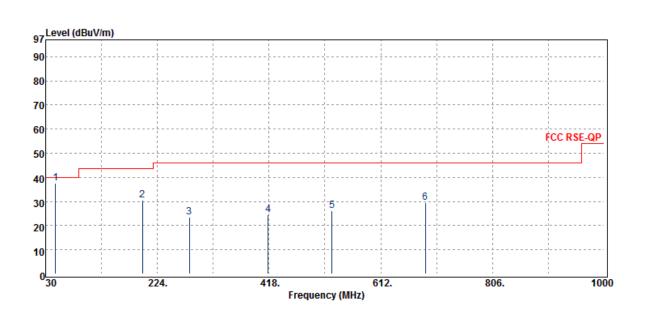
Page: 54 of 180

#### 802.11a 5250~5350 MHz

**Test Date** :2018-08-14 **Operation Band** :802.11aB2

**Fundamental Frequency** Temp./Humi. :5300 MHz :23 deg\_C / 62 RH **Operation Mode** :Tx CH MID :Tin

Engineer EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
47.46	Peak	45.33	-7.64	37.69	40.00	-2.31
197.81	Peak	39.67	-9.20	30.47	43.50	-13.03
279.29	Peak	29.55	-6.17	23.38	46.00	-22.62
416.06	Peak	27.39	-2.91	24.48	46.00	-21.52
527.61	Peak	27.61	-1.34	26.27	46.00	-19.73
689.60	Peak	27.53	1.88	29.41	46.00	-16.59

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 55 of 180

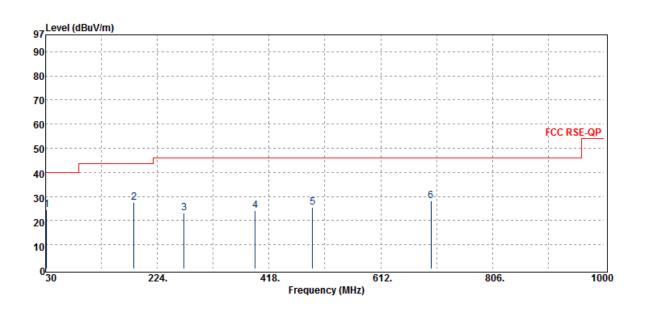
**Operation Band** Fundamental Frequency

**Operation Mode** EUT Pol. :E2 Plane

:802.11aB2 :5300 MHz :Tx CH MID Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
31.94	Peak	33.40	-8.88	24.52	40.00	-15.48
183.26	Peak	36.04	-8.47	27.57	43.50	-15.93
270.56	Peak	29.89	-6.63	23.26	46.00	-22.74
393.75	Peak	27.63	-3.42	24.21	46.00	-21.79
493.66	Peak	28.18	-2.72	25.46	46.00	-20.54
699.30	Peak	26.54	1.74	28.28	46.00	-17.72

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



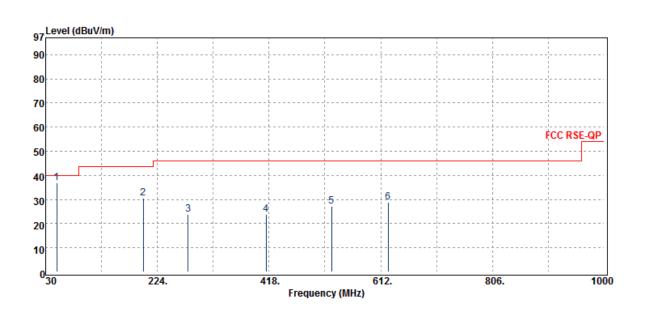
Page: 56 of 180

#### 802.11a, 5470~5725 MHz

**Operation Band** :802.11aB3 Test Date :2018-08-14

Fundamental Frequency :5580 MHz Temp./Humi. :23 deg\_C / 62 RH **Operation Mode** :Tx CH MID Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB	
	49.40	Peak	44.51	-7.48	37.03	40.00	-2.97	-
	199.75	Peak	39.86	-9.26	30.60	43.50	-12.90	
	277.35	Peak	30.17	-6.27	23.90	46.00	-22.10	
	413.15	Peak	26.74	-2.95	23.79	46.00	-22.21	
	526.64	Peak	28.47	-1.43	27.04	46.00	-18.96	
	624.61	Peak	28.01	0.71	28.72	46.00	-17.28	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

t (886-2) 2299-3279

f (886-2) 2298-0488



Page: 57 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

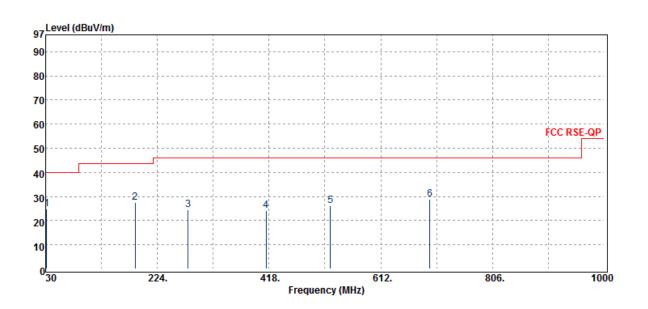
EUT Pol.

:802.11aB3 :5580 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
31.94	Peak	33.62	-8.88	24.74	40.00	-15.26
185.20	Peak	36.17	-8.64	27.53	43.50	-15.97
277.35	Peak	30.61	-6.27	24.34	46.00	-21.66
413.15	Peak	27.11	-2.95	24.16	46.00	-21.84
524.70	Peak	27.63	-1.56	26.07	46.00	-19.93
697.36	Peak	27.65	1.33	28.98	46.00	-17.02

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



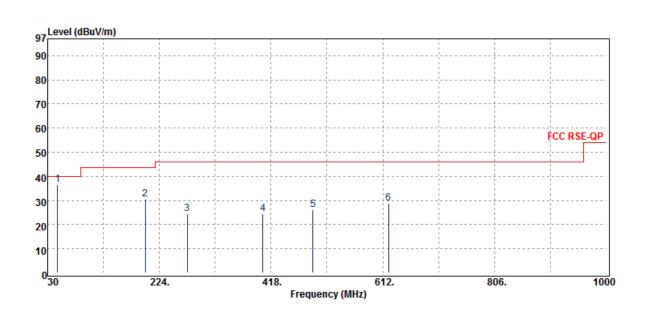
Page: 58 of 180

#### 802.11a, 5725~5850 MHz

**Test Date** :2018-08-14 **Operation Band** :802.11aB4

**Fundamental Frequency** Temp./Humi. :5785 MHz :23 deg\_C / 62 RH

**Operation Mode** :Tx CH MID Engineer :Tin EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
47.46	Peak	44.16	-7.64	36.52	40.00	-3.48
199.75	Peak	39.83	-9.26	30.57	43.50	-12.93
272.50	Peak	30.91	-6.53	24.38	46.00	-21.62
403.45	Peak	27.51	-3.07	24.44	46.00	-21.56
490.75	Peak	28.53	-2.32	26.21	46.00	-19.79
621.70	Peak	28.56	0.47	29.03	46.00	-16.97

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 59 of 180

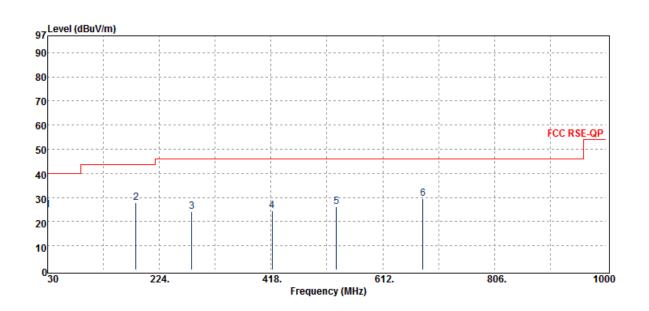
**Operation Band** Fundamental Frequency **Operation Mode** 

:802.11aB4 :5785 MHz :Tx CH MID EUT Pol. :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
30.00	Peak	33.85	-8.96	24.89	40.00	-15.11
183.26	Peak	36.35	-8.47	27.88	43.50	-15.62
280.26	Peak	30.22	-6.12	24.10	46.00	-21.90
419.94	Peak	27.26	-2.77	24.49	46.00	-21.51
531.49	Peak	27.45	-1.41	26.04	46.00	-19.96
681.84	Peak	27.98	1.50	29.48	46.00	-16.52

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 60 of 180

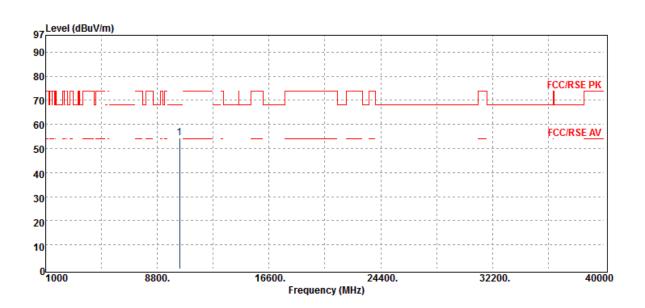
#### **Above 1GHz Worst-Case Data:**

**Test Date** :2018-08-14 **Operation Band** :802.11aB1

**Fundamental Frequency** Temp./Humi. :5180 MHz :23 deg\_C / 62 RH

**Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
	10360.00	Peak	34.56	19.71	54.27	68.20	-13.93

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.

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。同時此樣品僅保留的人。本根各元程命公司者而并可,不可能分檢製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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. and offenders may be prosecuted to the fullest extent of the law.



Page: 61 of 180

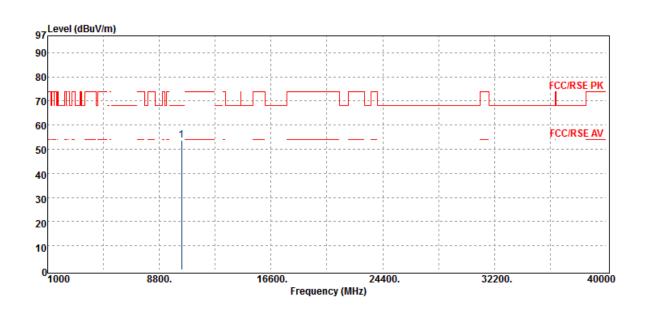
**Operation Band** Fundamental Frequency **Operation Mode** 

:802.11aB1 :5180 MHz :Tx CH LOW EUT Pol. :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	<b>@</b> 3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10360.00	Peak	33.92	19.71	53.63	68.20	-14.57	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 62 of 180

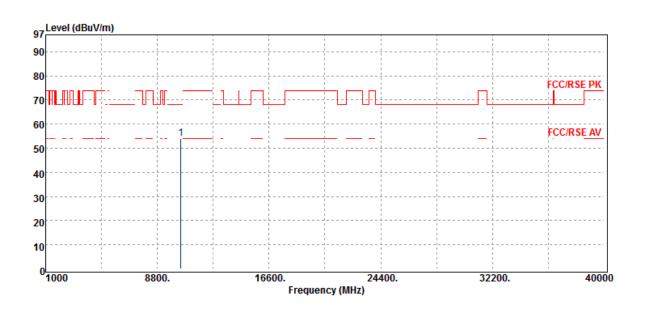
**Operation Band** Fundamental Frequency **Operation Mode** 

:802.11aB1 :5220 MHz :Tx CH MID EUT Pol. :E2 Plane

Test Date :2018-08-14 :23 deg\_C / 62 RH

Temp./Humi. Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10440.00	Peak	33.86	20.05	53.91	68.20	-14.29	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 63 of 180

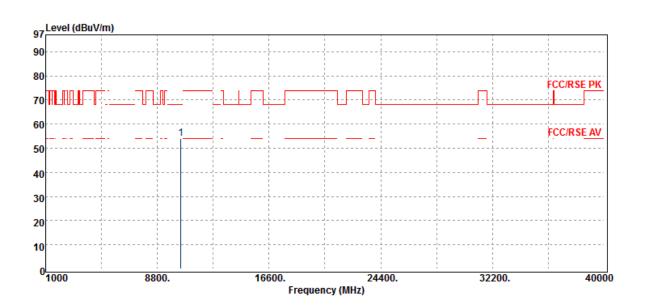
**Operation Band** Fundamental Frequency

:802.11aB1 :5220 MHz **Operation Mode** :Tx CH MID EUT Pol. :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	_	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
	10440.00	Peak	34.12	20.05	54.17	68.20	-14.03	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 64 of 180

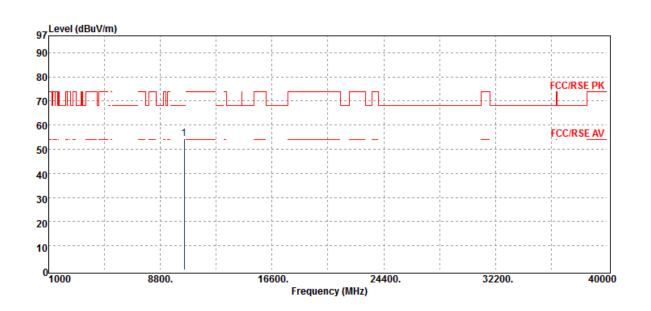
**Operation Band** Fundamental Frequency

**Operation Mode** EUT Pol. :E2 Plane

:802.11aB1 :5240 MHz :Tx CH HIGH Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10480.00	Peak	34.31	20.07	54.38	68.20	-13.82	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 65 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

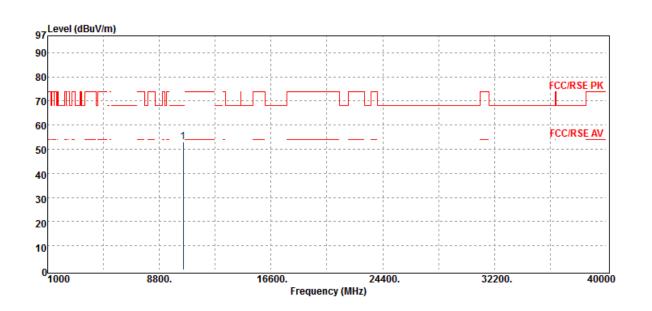
EUT Pol.

:802.11aB1 :5240 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
•	10480.00	Peak	33.08	20.07	53.15	68.20	-15.05	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



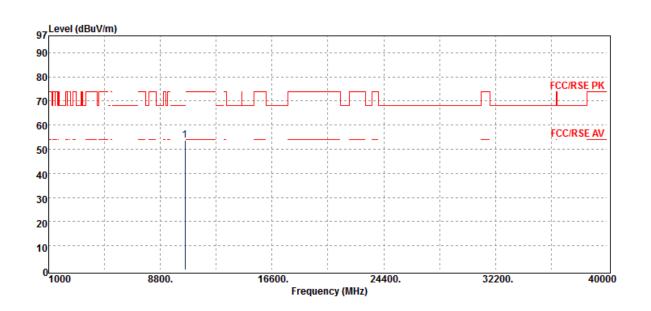
Page: 66 of 180

### Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

**Operation Band** :802.11aB2 **Test Date** :2018-08-14 Fundamental Frequency :5260 MHz Temp./Humi. :23 deg\_C / 62 RH

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	<b>@</b> 3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10520.00	Peak	33.58	20.00	53.58	68.20	-14.62	_

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.

Offices otherwise stated the results shown if this less report refer only to the sample(s) lessed and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the first report refer only to the sample(s) are retained to 90 days only. 
Fix a fail will, a fail will be a fail and offenders may be prosecuted to the fullest extent of the law.



Page: 67 of 180

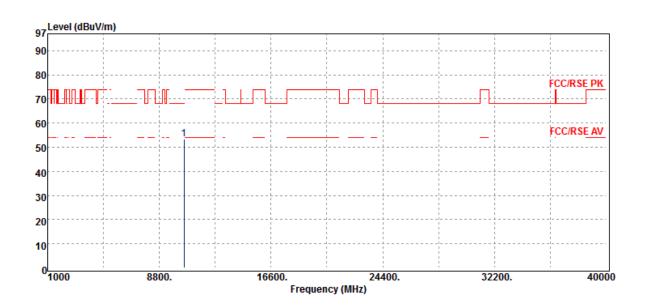
**Operation Band** Fundamental Frequency

:802.11aB2 :5260 MHz **Operation Mode** :Tx CH LOW EUT Pol. :E2 Plane

Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB	
•	10520.00	Peak	33.51	20.00	53.51	68.20	-14.69	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 68 of 180

**Operation Band** Fundamental Frequency

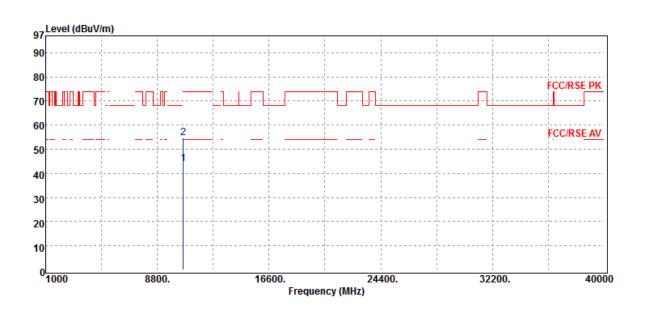
**Operation Mode** EUT Pol.

:802.11aB2 :5300 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10600.00	Average	23.54	20.38	43.92	54.00	-10.08
	10600.00	Peak	34.35	20.38	54.73	74.00	-19.27

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.

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 69 of 180

**Operation Band** Fundamental Frequency

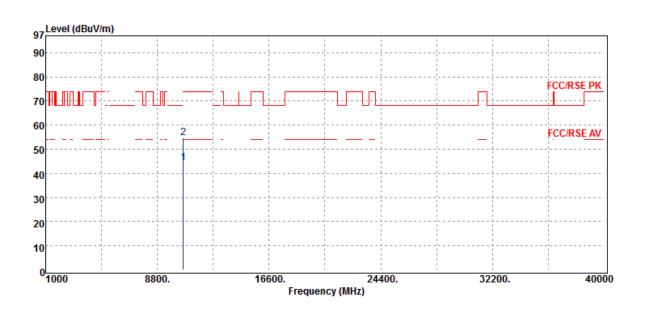
**Operation Mode** EUT Pol.

:802.11aB2 :5300 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10600.00	Average	24.05	20.38	44.43	54.00	-9.57
	10600.00	Peak	34.26	20.38	54.64	74.00	-19.36

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 70 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

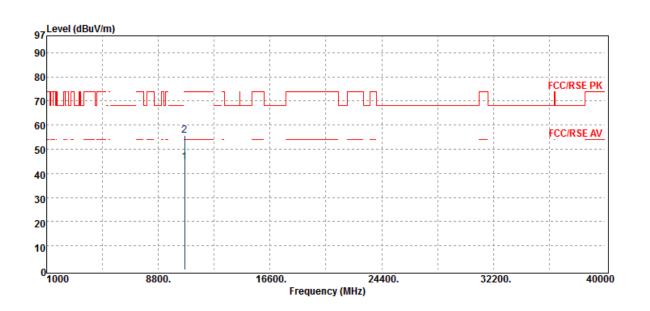
EUT Pol.

:802.11aB2 :5320 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14

Temp./Humi. :23 deg\_C / 62 RH Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10640.00	Average	24.15	20.44	44.59	54.00	-9.41
10640.00	Peak	35.19	20.44	55.63	74.00	-18.37

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 71 of 180

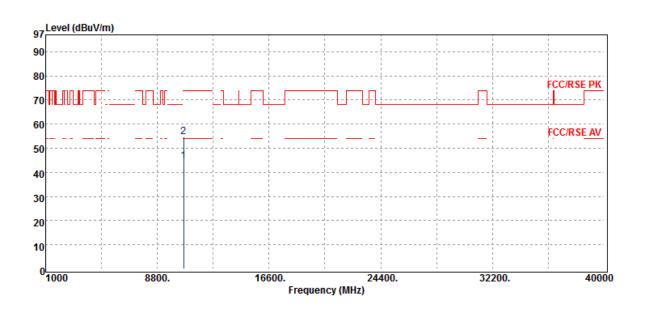
**Operation Band** Fundamental Frequency

:802.11aB2 :5320 MHz **Operation Mode** :Tx CH HIGH EUT Pol. :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10640.00	Average	24.12	20.44	44.56	54.00	-9.44
	10640.00	Peak	34.16	20.44	54.60	74.00	-19.40

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



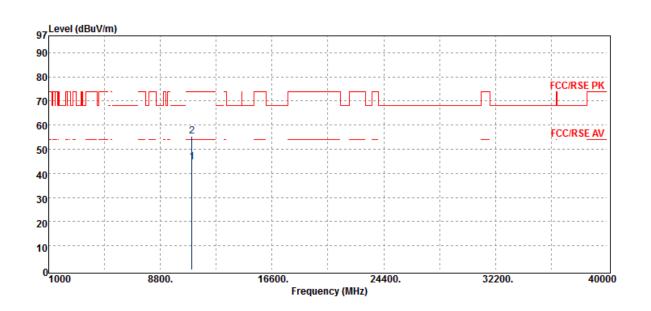
Page: 72 of 180

### Radiated Spurious Emission Measurement Result 802.11a, 5470~5725 MHz

**Operation Band** :802.11aB3 **Test Date** :2018-08-14 Fundamental Frequency :5500 MHz Temp./Humi. :23 deg\_C / 62 RH

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
_	11000.00	Average	23.33	21.37	44.70	54.00	-9.30
	11000.00	Peak	34.12	21.37	55.49	74.00	-18.51

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.

Offices otherwise stated the results shown if this less report refer only to the sample(s) lessed and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the first report refer only to the sample(s) are retained to 90 days only. 
Fix a fail will, a fail will be a fail and offenders may be prosecuted to the fullest extent of the law.



:2018-08-14

:23 deg\_C / 62 RH

Page: 73 of 180

**Operation Band** Fundamental Frequency

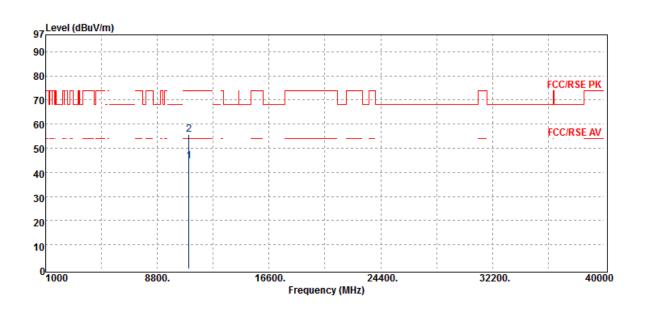
:5500 MHz **Operation Mode** :Tx CH LOW EUT Pol. :E2 Plane

:802.11aB3

Test Date Temp./Humi.

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11000.00	Average	23.33	21.37	44.70	54.00	-9.30
	11000.00	Peak	34.23	21.37	55.60	74.00	-18.40

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 74 of 180

**Operation Band** Fundamental Frequency

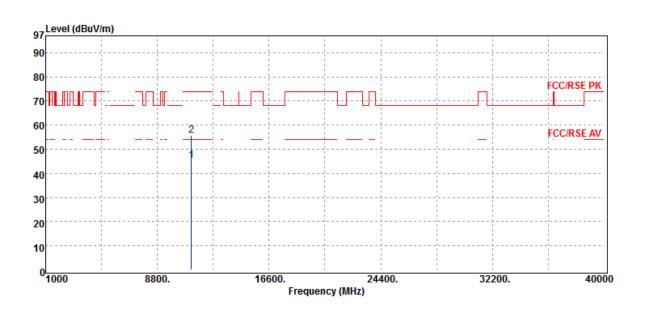
**Operation Mode** EUT Pol.

:802.11aB3 :5580 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11160.00	Average	23.84	21.51	45.35	54.00	-8.65
	11160.00	Peak	34.17	21.51	55.68	74.00	-18.32

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 75 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

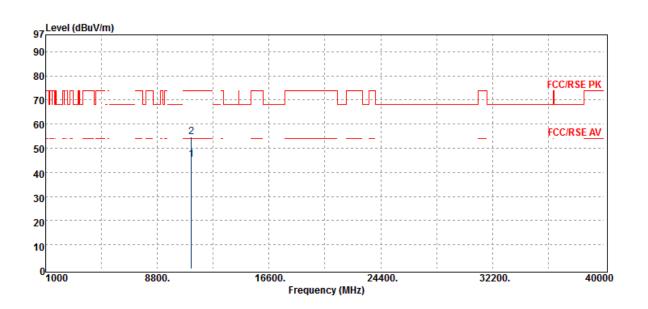
EUT Pol.

:802.11aB3 :5580 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11160.00	Average	23.87	21.51	45.38	54.00	-8.62
	11160.00	Peak	33.32	21.51	54.83	74.00	-19.17

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 76 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

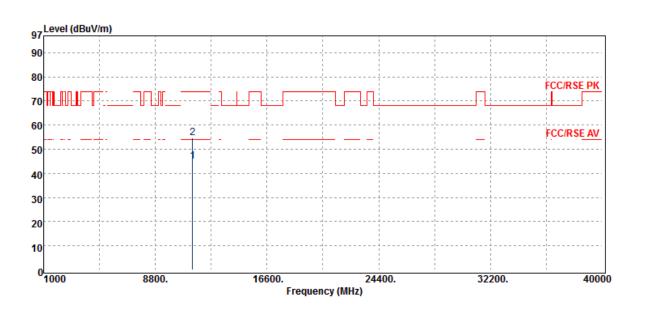
EUT Pol.

:802.11aB3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11400.00	Average	23.39	21.62	45.01	54.00	-8.99
	11400.00	Peak	33.14	21.62	54.76	74.00	-19.24

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 77 of 180

**Operation Band** Fundamental Frequency

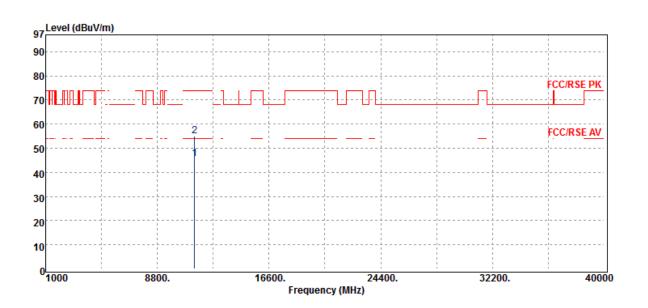
**Operation Mode** EUT Pol.

:802.11aB3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11400.0	0 Average	24.08	21.62	45.70	54.00	-8.30
11400.0	0 Peak	33.44	21.62	55.06	74.00	-18.94

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



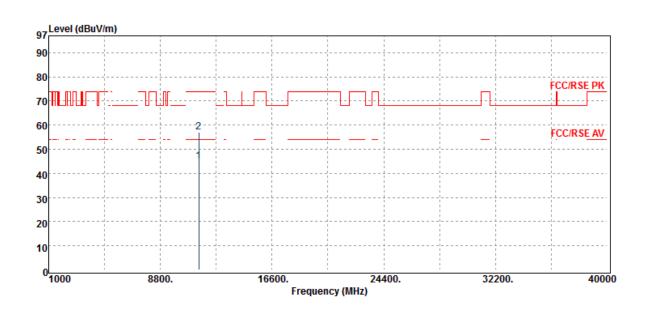
Page: 78 of 180

## Radiated Spurious Emission Measurement Result 802.11a, 5725~5850 MHz

**Operation Band** :802.11aB4 Test Date :2018-08-14 Fundamental Frequency :5745 MHz Temp./Humi. :23 deg\_C / 62 RH

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	11490.00	Average	23.41	21.61	45.02	54.00	-8.98
	11490.00	Peak	35.55	21.61	57.16	74.00	-16.84

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.

Offices otherwise stated the results shown if this less report refer only to the sample(s) lessed and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the first report refer only to the sample(s) are retained to 90 days only. 
Fix a fail will, a fail will be some and conditions of the sample(s) lessed and such as a fail of the sample(s) are retained to 90 days only. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and officed may be accessible to the full cut of the fall less. and offenders may be prosecuted to the fullest extent of the law.



Page: 79 of 180

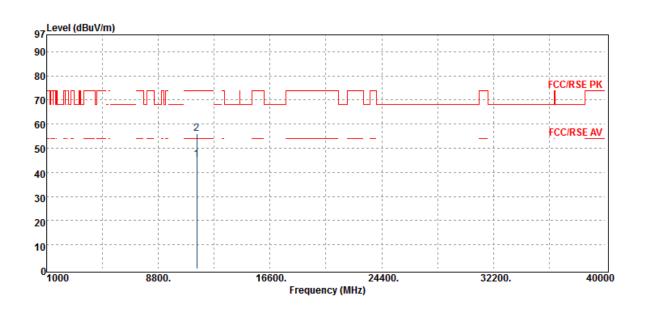
**Operation Band** Fundamental Frequency

:802.11aB4 :5745 MHz **Operation Mode** :Tx CH LOW EUT Pol. :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11490.00	Average	23.84	21.61	45.45	54.00	-8.55
11490.00	Peak	34.44	21.61	56.05	74.00	-17.95

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 80 of 180

**Operation Band** Fundamental Frequency

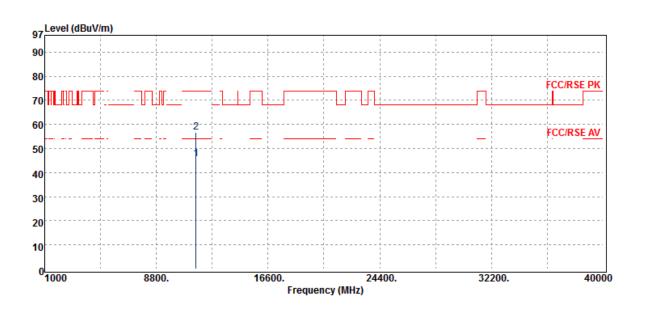
**Operation Mode** EUT Pol.

:802.11aB4 :5785 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	${ m d} B \mu V$	dB	dBμV/m	dBμV/m	dB
11570.00	Average	24.13	21.66	45.79	54.00	-8.21
11570.00	Peak	35.19	21.66	56.85	74.00	-17.15

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 81 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

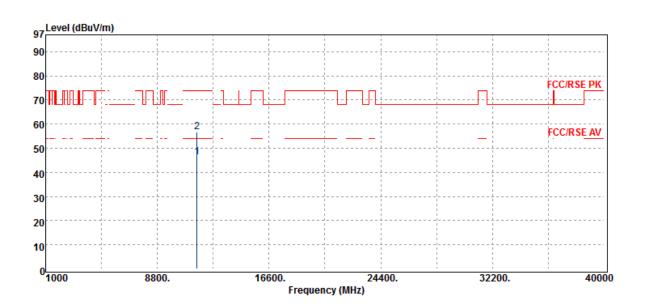
EUT Pol.

:802.11aB4 :5785 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	$\mathrm{d} \mathrm{B} \mu \mathrm{V}$	dB	dBμV/m	dBμV/m	dB
	11570.00	Average	24.78	21.66	46.44	54.00	-7.56
	11570.00	Peak	35.15	21.66	56.81	74.00	-17.19

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.

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 82 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

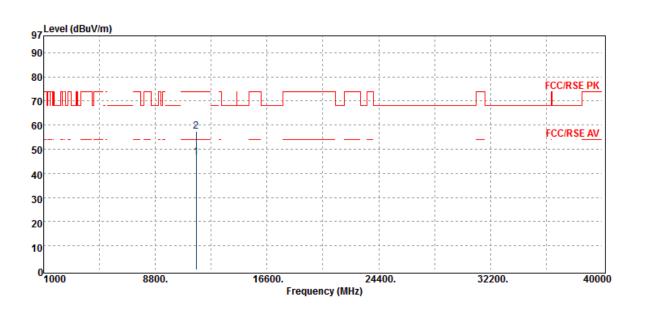
:802.11aB4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14

Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11650.00	Average	25.01	21.60	46.61	54.00	-7.39
	11650.00	Peak	35.64	21.60	57.24	74.00	-16.76

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 83 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

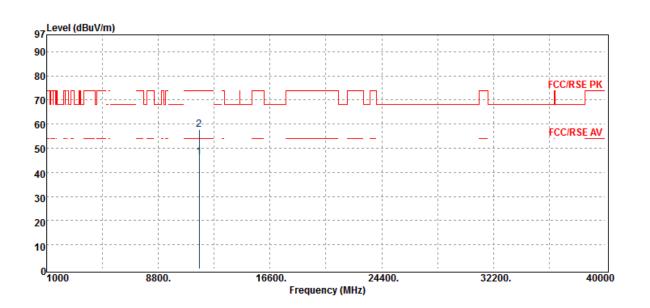
EUT Pol.

:802.11aB4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11650.00	Average	24.88	21.60	46.48	54.00	-7.52
11650.00	Peak	36.28	21.60	57.88	74.00	-16.12

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



:2018-08-14

:23 deg\_C / 62 RH

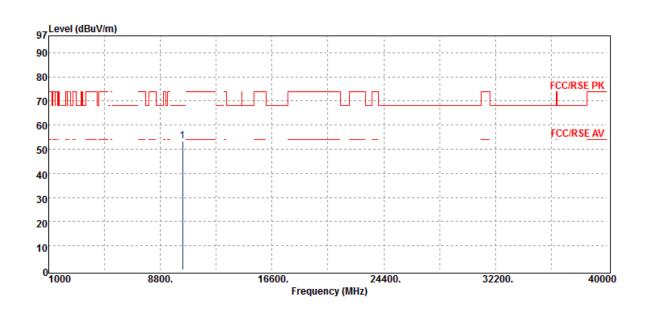
Page: 84 of 180

# Radiated Spurious Emission Measurement Result 802.11n HT20, 5150~5250 MHz

**Operation Band** :802.11n20B1 **Test Date** Fundamental Frequency :5180 MHz Temp./Humi.

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	<b>@</b> 3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10360.00	Peak	33.75	19.71	53.46	68.20	-14.74	_

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.

Offices otherwise stated the results shown in this sets report refer only to the sample(s) lested and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the sample state of the sample and offenders may be prosecuted to the fullest extent of the law.



Page: 85 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

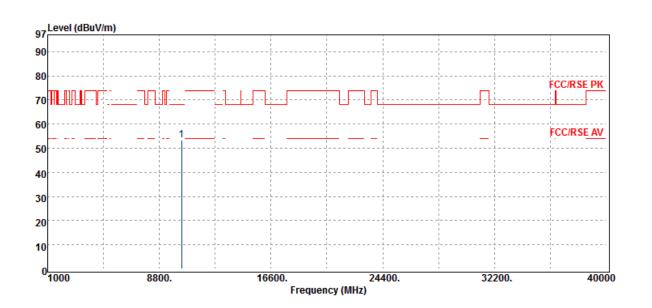
EUT Pol.

:802.11n20B1 :5180 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB	
,	10360.00	Peak	33.72	19.71	53.43	68.20	-14.77	•

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 86 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

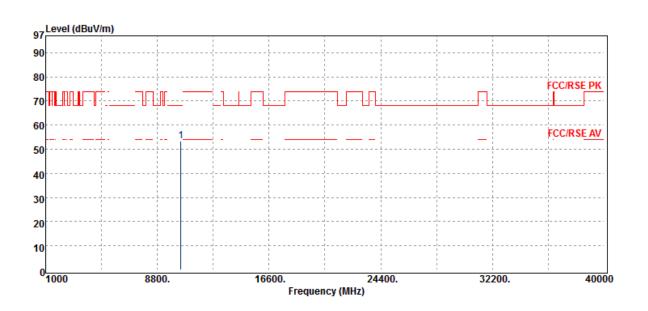
EUT Pol.

:802.11n20B1 :5220 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	<b>@</b> 3m	-	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10440.00	Peak	33.47	20.05	53.52	68.20	-14.68	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



:2018-08-14

:23 deg\_C / 62 RH

Page: 87 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

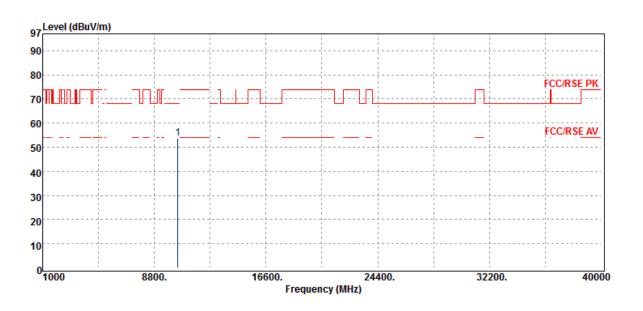
EUT Pol.

:802.11n20B1 :5220 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi.

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10440.00	Peak	33.70	20.05	53.75	68.20	-14.45	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 88 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

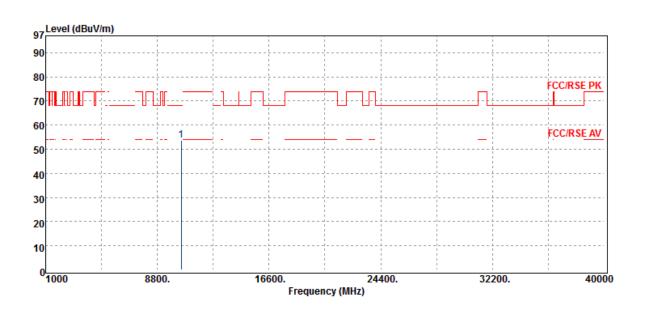
EUT Pol.

:802.11n20B1 :5240 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	<b>@</b> 3m	-	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10480.00	Peak	33.78	20.07	53.85	68.20	-14.35	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 89 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

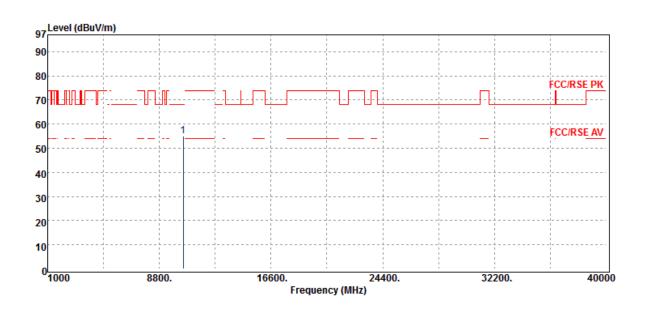
EUT Pol.

:802.11n20B1 :5240 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10480.00	Peak	35.01	20.07	55.08	68.20	-13.12	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 90 of 180

## Radiated Spurious Emission Measurement Result 802.11n HT20, 5250~5350 MHz

**Operation Band** Fundamental Frequency

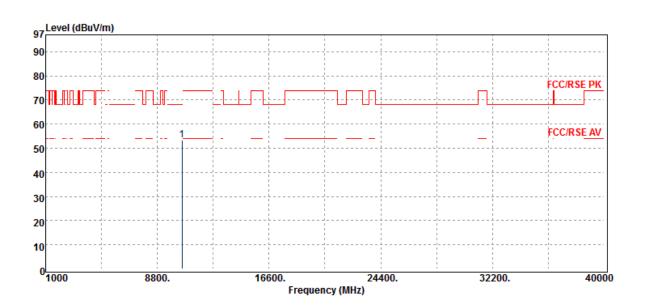
**Operation Mode** EUT Pol.

:802.11n20B2 :5260 MHz :Tx CH LOW :E2 Plane

**Test Date** :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m	_	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10520.00	Peak	33.44	20.00	53.44	68.20	-14.76	

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.

Offices otherwise stated the results shown in this sets report refer only to the sample(s) lested and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the sample state of the sample and offenders may be prosecuted to the fullest extent of the law.



Page: 91 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

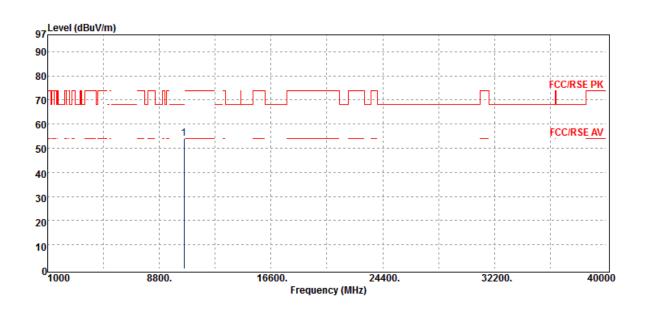
EUT Pol.

:802.11n20B2 :5260 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m		
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB	_
	10520.00	Peak	33.89	20.00	53.89	68.20	-14.31	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 92 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

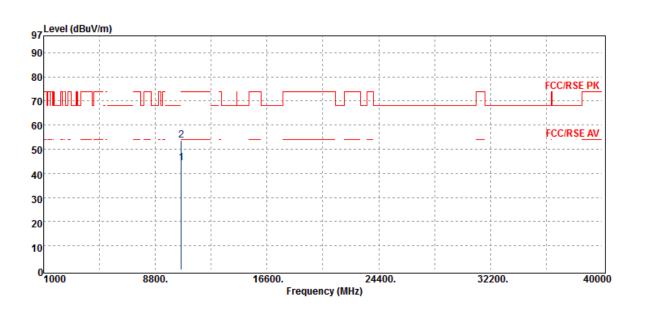
EUT Pol.

:802.11n20B2 :5300 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10600.00	Average	24.02	20.38	44.40	54.00	-9.60
	10600.00	Peak	33.38	20.38	53.76	74.00	-20.24

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 93 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

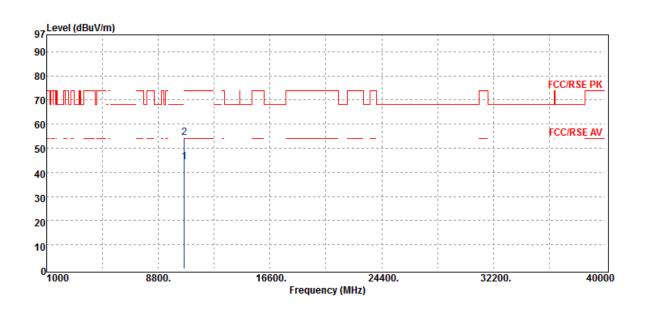
EUT Pol.

:802.11n20B2 :5300 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10600.00	Average	24.05	20.38	44.43	54.00	-9.57
	10600.00	Peak	33.99	20.38	54.37	74.00	-19.63

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 94 of 180

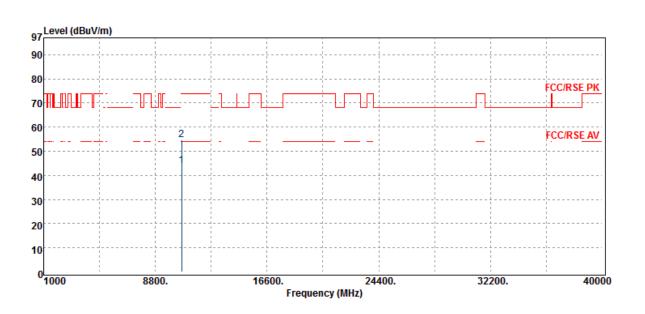
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B2 :5320 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10640.00	Average	23.39	20.44	43.83	54.00	-10.17
10640.00	Peak	34.39	20.44	54.83	74.00	-19.17

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 95 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

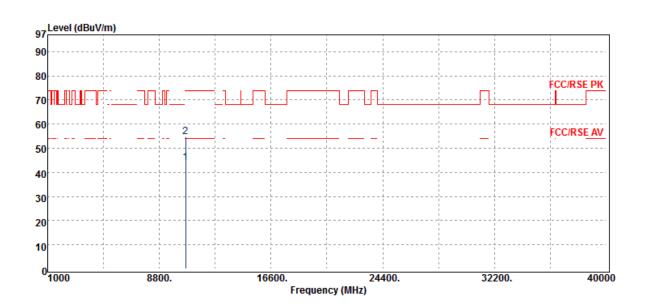
EUT Pol.

:802.11n20B2 :5320 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10640.00	Average	23.59	20.44	44.03	54.00	-9.97
	10640.00	Peak	34.23	20.44	54.67	74.00	-19.33

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



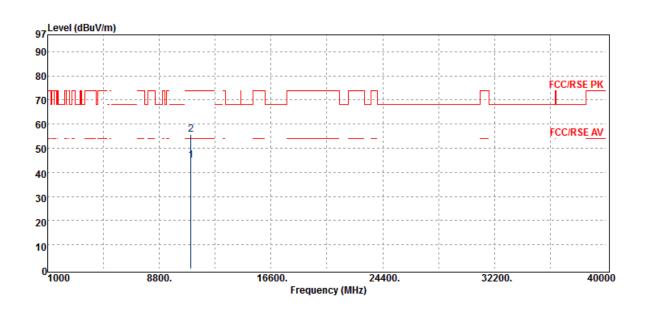
Page: 96 of 180

#### Radiated Spurious Emission Measurement Result 802.11n HT20, 5470~5725 MHz

**Operation Band** :802.11n20B3 **Test Date** :2018-08-14 Fundamental Frequency :5500 MHz Temp./Humi. :23 deg\_C / 62 RH

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11000.00	Average	23.58	21.37	44.95	54.00	-9.05
11000.00	Peak	34.18	21.37	55.55	74.00	-18.45

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.

Offices otherwise stated the results shown in this sets report refer only to the sample(s) lested and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the sample state of the sample and offenders may be prosecuted to the fullest extent of the law.



Page: 97 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

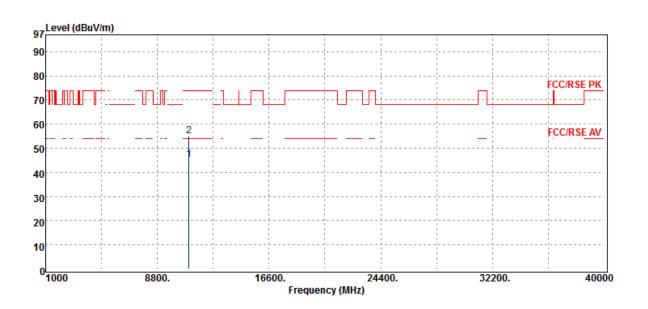
EUT Pol.

:802.11n20B3 :5500 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11000.00	Average	23.89	21.37	45.26	54.00	-8.74
	11000.00	Peak	33.65	21.37	55.02	74.00	-18.98

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 98 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

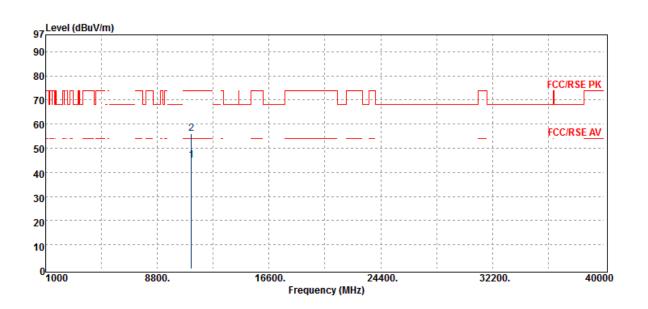
EUT Pol.

:802.11n20B3 :5580 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11160.00	Average	23.30	21.51	44.81	54.00	-9.19
	11160.00	Peak	34.46	21.51	55.97	74.00	-18.03

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 99 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

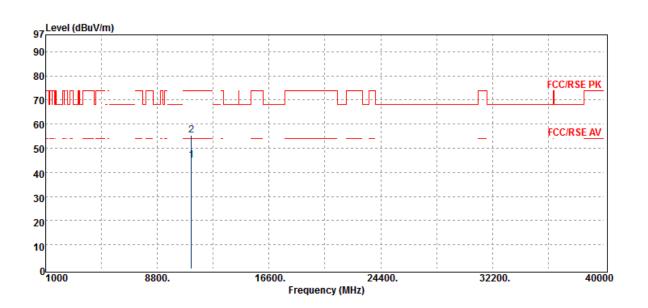
EUT Pol.

:802.11n20B3 :5580 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11160.00	Average	23.53	21.51	45.04	54.00	-8.96
	11160.00	Peak	33.98	21.51	55.49	74.00	-18.51

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 100 of 180

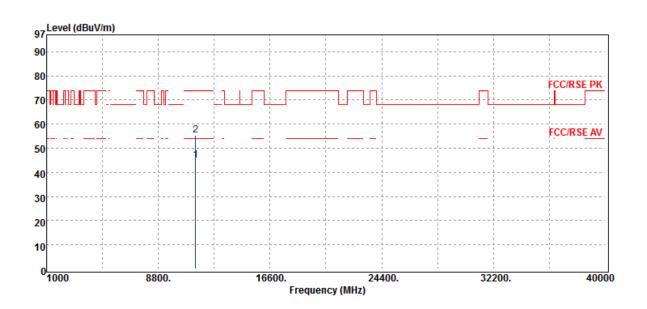
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11400.00	) Average	23.39	21.62	45.01	54.00	-8.99
11400.00	) Peak	33.88	21.62	55.50	74.00	-18.50

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 101 of 180

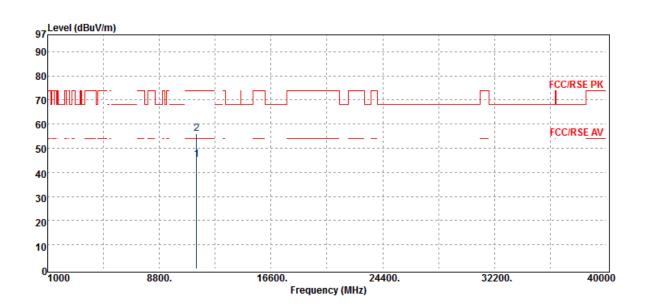
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	_
_	11400.00	Average	23.77	21.62	45.39	54.00	-8.61	
	11400.00	Peak	34.44	21.62	56.06	74.00	-17.94	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



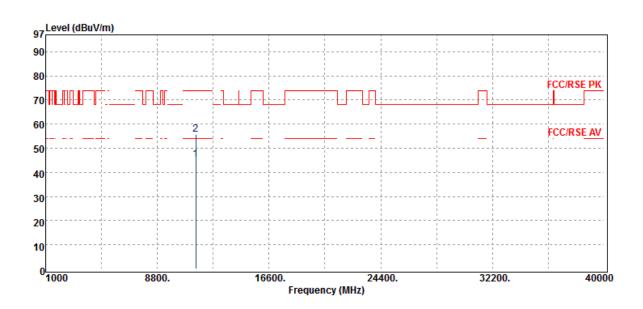
Page: 102 of 180

## Radiated Spurious Emission Measurement Result 802.11n HT20, 5725~5850 MHz

**Operation Band** :802.11n20B4 **Test Date** :2018-08-14

**Fundamental Frequency** :5745 MHz Temp./Humi. :23 deg\_C / 62 RH **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
-	11490.00	Average	23.79	21.61	45.40	54.00	-8.60
	11490.00	Peak	34.25	21.61	55.86	74.00	-18.14

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.

Offices otherwise stated the results shown in this sets report refer only to the sample(s) lested and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the state of the sample(s) are the sample(s) are retained to 90 days only. 
Fix a fail will, a test the sample state of the sample and offenders may be prosecuted to the fullest extent of the law.



Page: 103 of 180

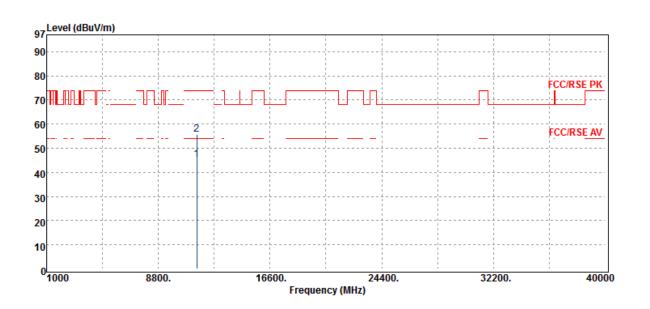
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5745 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	<b>@</b> 3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11490.00	Average	23.84	21.61	45.45	54.00	-8.55
11490.00	Peak	34.02	21.61	55.63	74.00	-18.37

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 104 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

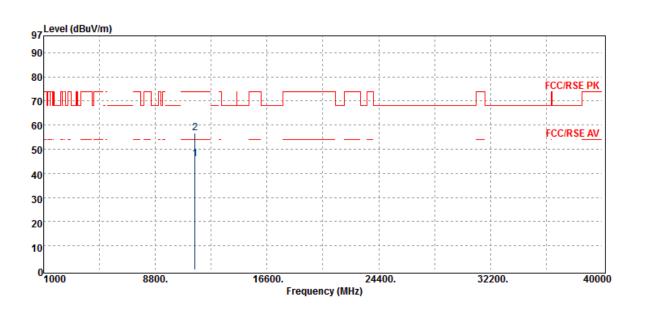
EUT Pol.

:802.11n20B4 :5785 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11570.00	Average	24.39	21.66	46.05	54.00	-7.95
	11570.00	Peak	35.13	21.66	56.79	74.00	-17.21

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 105 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

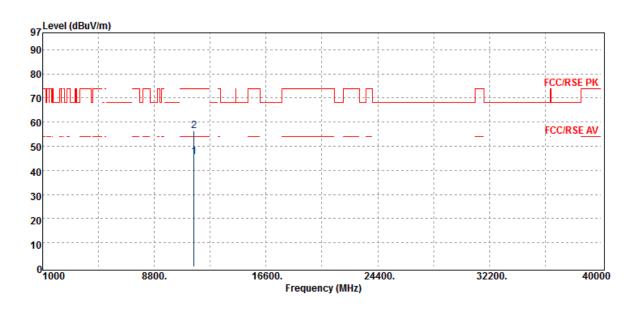
EUT Pol.

:802.11n20B4 :5785 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11570.00	Average	23.86	21.66	45.52	54.00	-8.48
11570.00	Peak	34.67	21.66	56.33	74.00	-17.67

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.

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 106 of 180

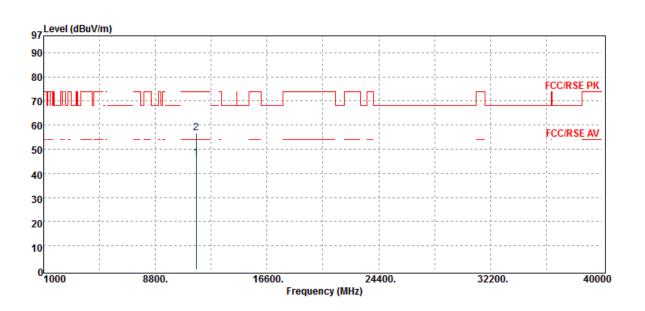
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	<b>@</b> 3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11650.00	Average	24.58	21.60	46.18	54.00	-7.82
11650.00	Peak	35.27	21.60	56.87	74.00	-17.13

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 107 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

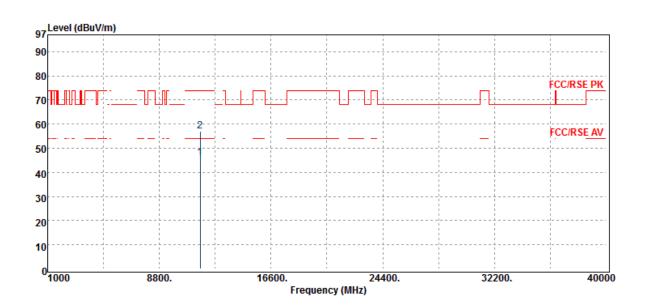
EUT Pol.

:802.11n20B4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11650.00	Average	24.44	21.60	46.04	54.00	-7.96
	11650.00	Peak	35.49	21.60	57.09	74.00	-16.91

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 108 of 180

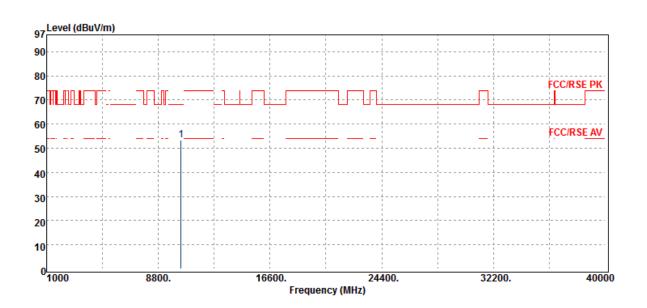
# Radiated Spurious Emission Measurement Result 802.11n HT40, 5150~5250 MHz

**Test Date** :2018-08-14 **Operation Band** :802.11n40B1

**Fundamental Frequency** Temp./Humi. :5190 MHz :23 deg\_C / 62 RH

**Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10380.00	Peak	33.51	19.78	53.29	68.20	-14.91

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。同時此樣品僅保留的人。本根各法规本公司書面持可,不可能分積製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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. and offenders may be prosecuted to the fullest extent of the law.



:2018-08-14

:23 deg\_C / 62 RH

Page: 109 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

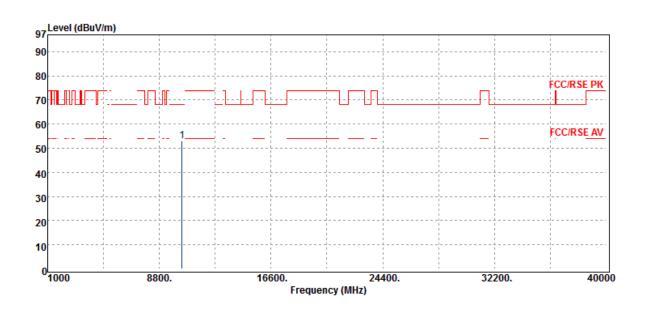
EUT Pol.

:802.11n40B1 :5190 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi.

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m	-	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10380.00	Peak	33.33	19.78	53.11	68.20	-15.09	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 110 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

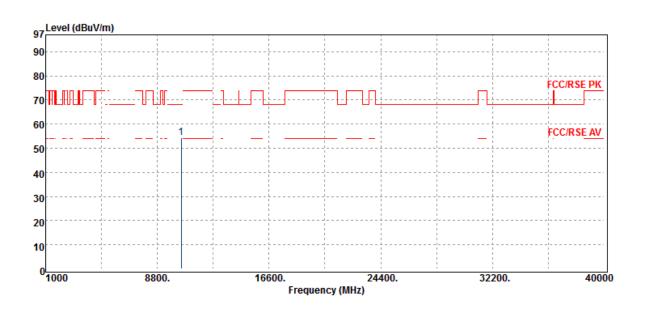
EUT Pol.

:802.11n40B1 :5230 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
_	10460.00	Peak	34.18	20.07	54.25	68.20	-13.95

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 111 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

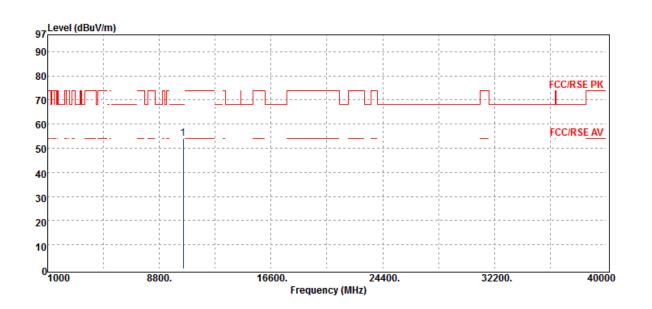
EUT Pol.

:802.11n40B1 :5230 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10460.00	Peak	34.12	20.07	54.19	68.20	-14.01	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



:2018-08-14

:23 deg\_C / 62 RH

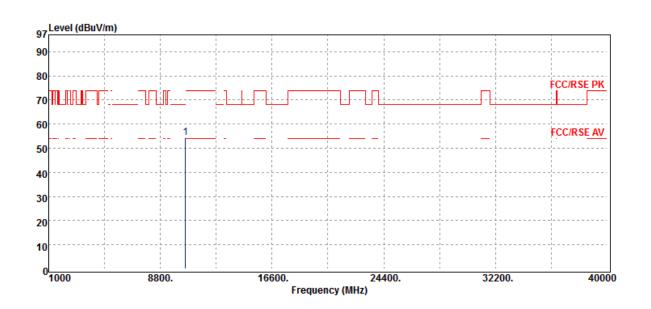
Page: 112 of 180

## Radiated Spurious Emission Measurement Result 802.11n HT40, 5250~5350 MHz

**Operation Band** :802.11n40B2 **Test Date** Fundamental Frequency :5270 MHz Temp./Humi.

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10540.00	Peak	34.31	20.02	54.33	68.20	-13.87	_

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.

Offices otherwise stated the results shown if this less report refer only to the sample(s) lessed and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the first report refer only to the sample(s) are retained to 90 days only. 
Fix a fail will, a fail will be some and conditions of the sample(s) lessed and such as a fail of the sample(s) are retained to 90 days only. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and officed may be accessible to the full cut of the fall less. and offenders may be prosecuted to the fullest extent of the law.



Page: 113 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

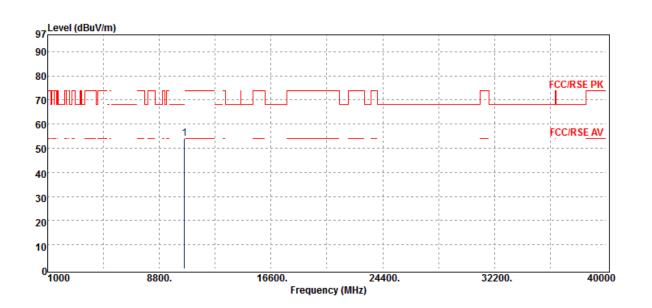
EUT Pol.

:802.11n40B2 :5270 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10540.00	Peak	34.11	20.02	54.13	68.20	-14.07	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 114 of 180

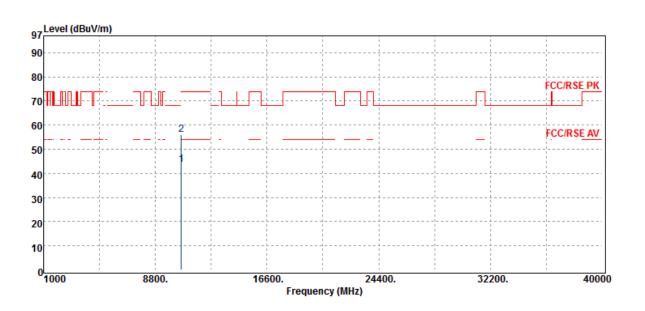
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10620.00	Average	23.31	20.41	43.72	54.00	-10.28
10620.00	Peak	35.55	20.41	55.96	74.00	-18.04

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 115 of 180

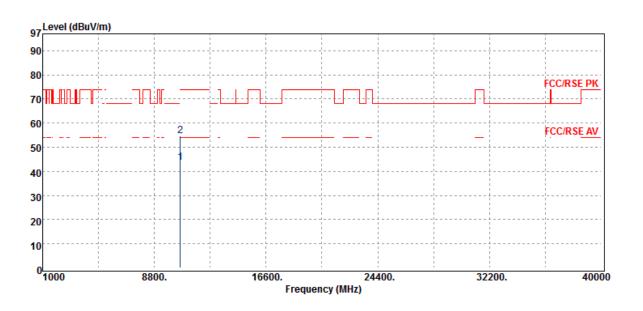
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Fred	p. Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MH:	z PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10620	.00 Average	23.21	20.41	43.62	54.00	-10.38
10620	.00 Peak	34.28	20.41	54.69	74.00	-19.31

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.

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 116 of 180

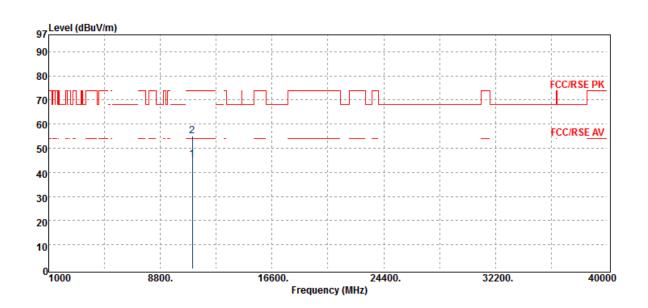
# Radiated Spurious Emission Measurement Result 802.11n HT40, 5470~5725 MHz

**Test Date** :2018-08-14 **Operation Band** :802.11n40B3

**Fundamental Frequency** Temp./Humi. :5510 MHz :23 deg\_C / 62 RH

**Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Detector	Spectrum	Factor	Actual	Limit	Margin	
Mode	Reading Level		FS	@3m		
PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
Average	23.88	21.46	45.34	54.00	-8.66	_
Peak	33.66	21.46	55.12	74.00	-18.88	
	Mode PK/QP/AV Average	Mode Reading Level PK/QP/AV dBμV Average 23.88	Mode Reading Level PK/QP/AV dBμV dB Average 23.88 21.46	Mode         Reading Level         FS           PK/QP/AV         dBμV         dB         dBμV/m           Average         23.88         21.46         45.34	Mode Pk/QP/AV         Reading Level dB μV/m         FS dB μV/m         @3m dB μV/m           Average         23.88         21.46         45.34         54.00	Mode Pk/QP/AV         Reading Level Bk/QP/AV         FS dBμV/m dBμV/m dBμV/m dB           Average         23.88         21.46         45.34         54.00         -8.66

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.

Offices otherwise stated the results shown if this less report refer only to the sample(s) lessed and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the first report refer only to the sample(s) are retained to 90 days only. 
Fix a fail will, a fail will be some and conditions of the sample(s) lessed and such as a fail of the sample(s) are retained to 90 days only. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and officed may be accessible to the full cut of the fall less. and offenders may be prosecuted to the fullest extent of the law.



Page: 117 of 180

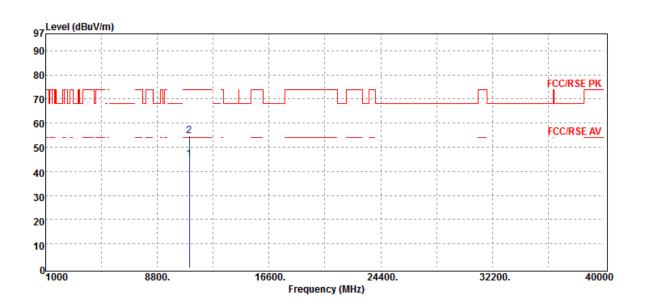
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5510 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11020.00	Average	23.39	21.46	44.85	54.00	-9.15
11020.00	Peak	33.37	21.46	54.83	74.00	-19.17

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 118 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

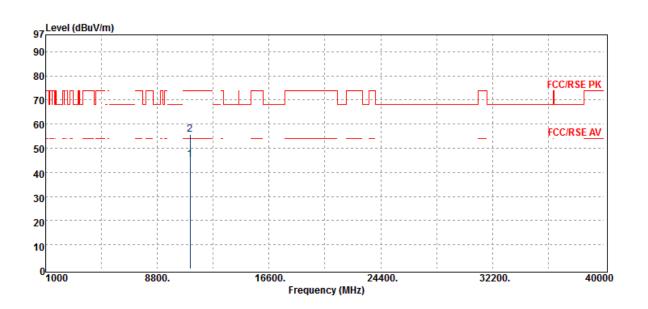
EUT Pol.

:802.11n40B3 :5550 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11100.00	Average	23.82	21.53	45.35	54.00	-8.65
	11100.00	Peak	34.08	21.53	55.61	74.00	-18.39

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 119 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

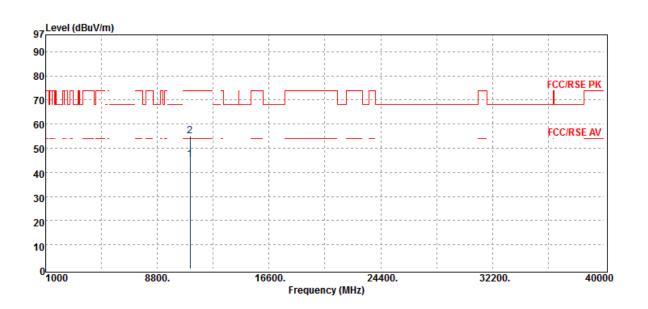
EUT Pol.

:802.11n40B3 :5550 MHz :Tx CH MID :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
_	11100.00	Average	23.89	21.53	45.42	54.00	-8.58
	11100.00	Peak	33.55	21.53	55.08	74.00	-18.92

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 120 of 180

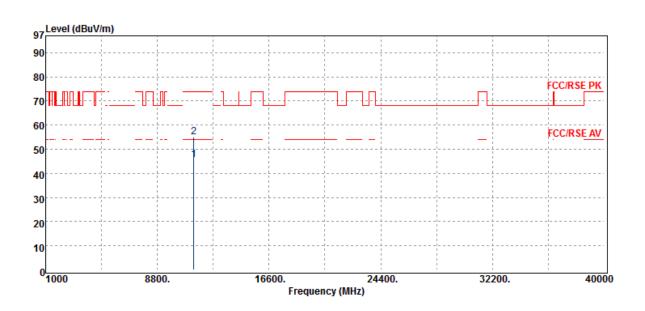
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11340.00	Average	24.18	21.54	45.72	54.00	-8.28
	11340.00	Peak	33.55	21.54	55.09	74.00	-18.91

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 121 of 180

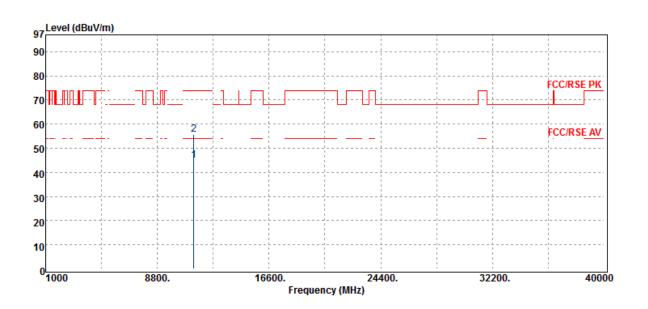
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11340.00	Average	23.57	21.54	45.11	54.00	-8.89
	11340.00	Peak	34.20	21.54	55.74	74.00	-18.26

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



:2018-08-14

:23 deg\_C / 62 RH

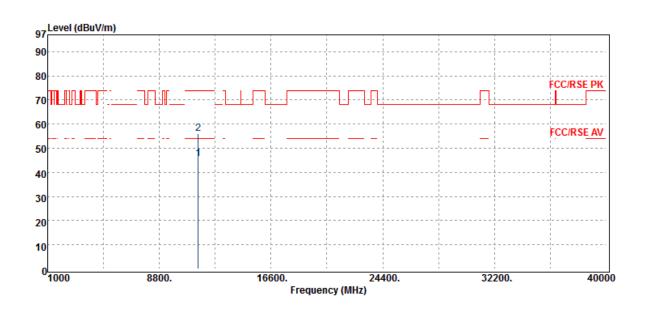
Page: 122 of 180

# Radiated Spurious Emission Measurement Result 802.11n HT40, 5725~5850 MHz

**Operation Band** :802.11n40B4 **Test Date** Fundamental Frequency :5755 MHz Temp./Humi.

:Tx CH LOW **Operation Mode** Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11510.00	Average	24.11	21.66	45.77	54.00	-8.23
11510.00	Peak	34.41	21.66	56.07	74.00	-17.93

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.

Offices otherwise stated the results shown if this less report refer only to the sample(s) lessed and such as an pieck) are retained to 90 days only. 
Fix a fail will, a test the first report refer only to the sample(s) are retained to 90 days only. 
Fix a fail will, a fail will be some and conditions of the sample(s) lessed and such as a fail of the sample(s) are retained to 90 days only. 
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and officed may be accessible to the full cut of the fall less. and offenders may be prosecuted to the fullest extent of the law.



Page: 123 of 180

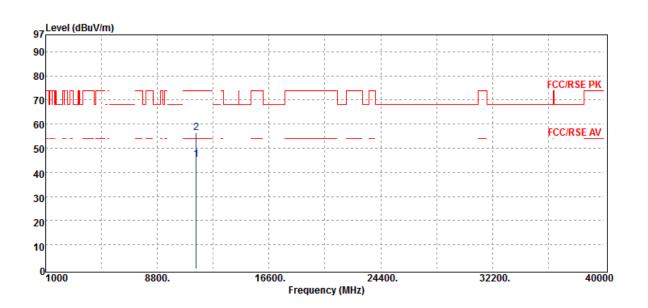
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5755 MHz :Tx CH LOW :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	<b>@</b> 3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11510.00	Average	23.77	21.66	45.43	54.00	-8.57
11510.00	Peak	34.84	21.66	56.50	74.00	-17.50

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 124 of 180

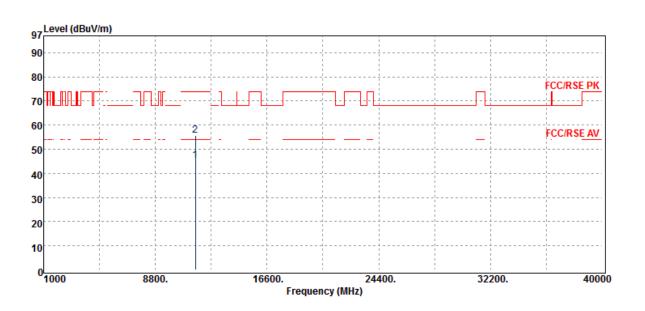
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-08-14 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Fred	q. Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MH	z PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11590	.00 Average	23.57	21.66	45.23	54.00	-8.77
11590	.00 Peak	34.12	21.66	55.78	74.00	-18.22

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 125 of 180

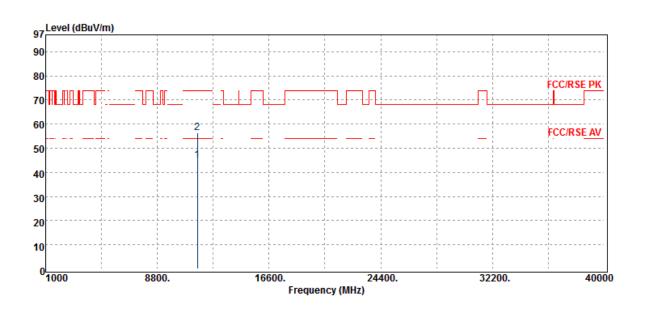
**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. :2018-08-14 :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	11590.00	Average	23.44	21.66	45.10	54.00	-8.90
	11590.00	Peak	34.71	21.66	56.37	74.00	-17.63

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 126 of 180

# Band edge falling to restricted band

## 802.11a mode

**Operation Band** :802.11aB1 Fundamental Frequency :5180 MHz

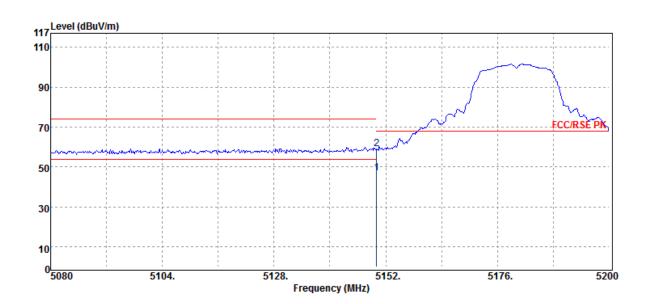
:Bandedge CH LOW **Operation Mode** 

EUT Pol. :E2 Plane **Test Date** :2018-09-03

Temp./Humi. :23 deg\_C / 62 RH

Engineer :Tin

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5150.00	Average	38.80	8.32	47.12	54.00	-6.88
5150.00	Peak	50.84	8.32	59.16	74.00	-14.84

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 127 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

:802.11aB1 :5180 MHz

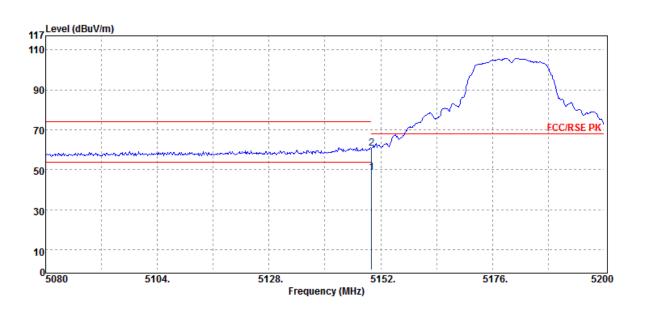
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	5150.00	Average	40.07	8.32	48.39	54.00	-5.61
	5150.00	Peak	52.58	8.32	60.90	74.00	-13.10

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

f (886-2) 2298-0488



Page: 128 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

:802.11aB2 :5320 MHz

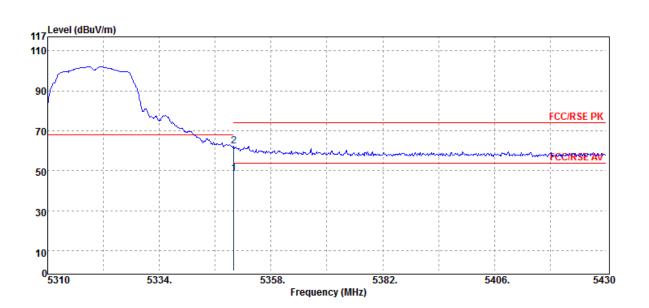
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	<b>@</b> 3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	39.78	8.63	48.41	54.00	-5.59
5350.00	Peak	53.73	8.63	62.36	74.00	-11.64

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 129 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB2 :5320 MHz

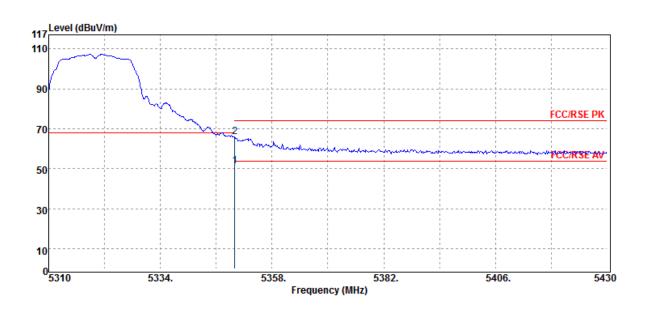
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	5350.00	Average	42.59	8.63	51.22	54.00	-2.78
	5350.00	Peak	57.39	8.63	66.02	74.00	-7.98

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

f (886-2) 2298-0488



Page: 130 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

:802.11aB3 :5500 MHz

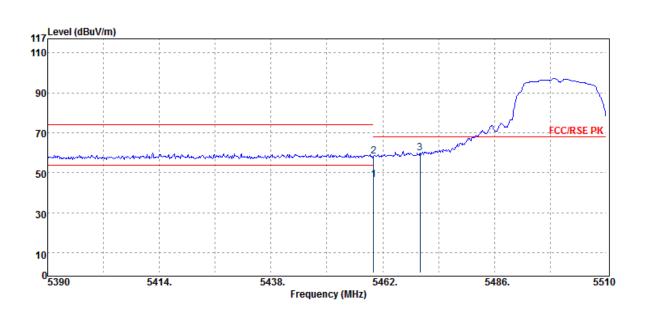
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5460.00	Average	37.87	8.75	46.62	54.00	-7.38
5460.00	Peak	49.48	8.75	58.23	74.00	-15.77
5470.00	Peak	51.11	8.74	59.85	68.20	-8.35

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 131 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5500 MHz

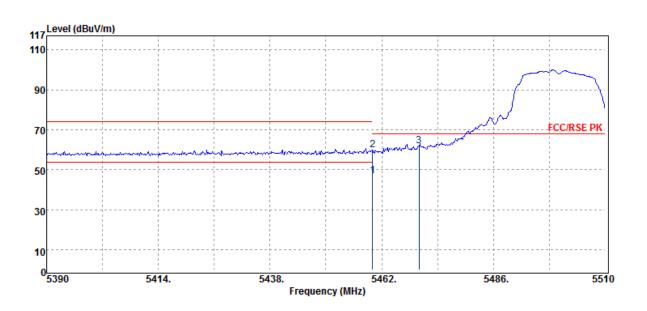
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
	5460.00	Average	38.34	8.75	47.09	54.00	-6.91
	5460.00	Peak	51.27	8.75	60.02	74.00	-13.98
	5470.00	Peak	53.16	8.74	61.90	68.20	-6.30

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 132 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5700 MHz

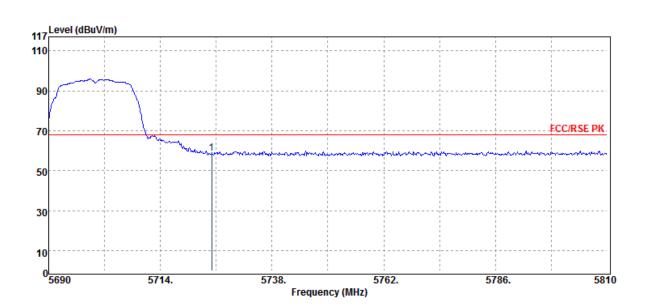
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
-	5725.00	Peak	49.18	9.44	58.62	68.20	-9.58	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 133 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5700 MHz

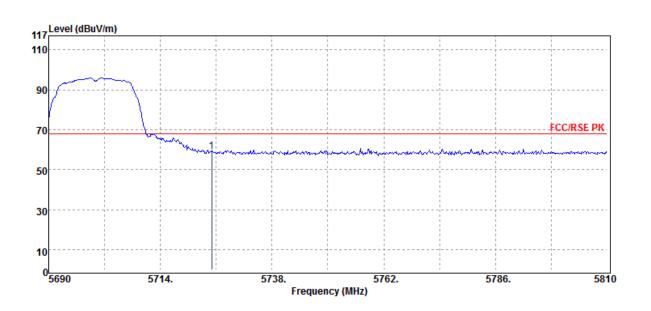
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
-	5725.00	Peak	49.56	9.44	59.00	68.20	-9.20	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 134 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

:802.11aB4 :5745 MHz

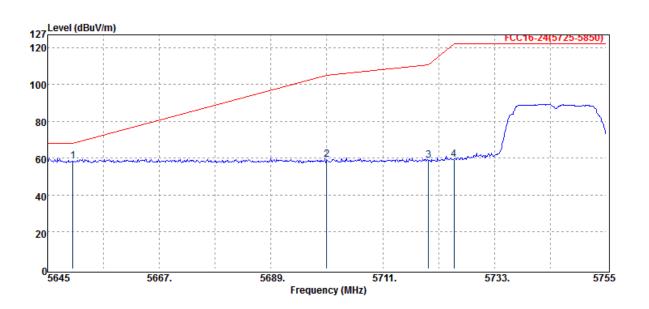
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	49.34	9.20	58.54	68.23	-9.69
5700.00	Peak	49.76	9.35	59.11	105.23	-46.12
5720.00	Peak	49.27	9.43	58.70	110.83	-52.13
5725.00	Peak	50.07	9.44	59.51	122.23	-62.72

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 135 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5745 MHz

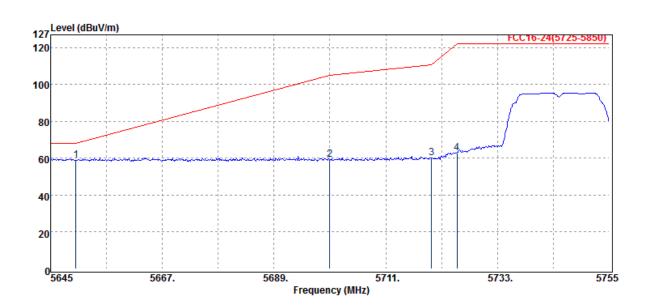
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	49.79	9.20	58.99	68.23	-9.24
5700.00	Peak	49.88	9.35	59.23	105.23	-46.00
5720.00	Peak	50.62	9.43	60.05	110.83	-50.78
5725.00	Peak	53.52	9.44	62.96	122.23	-59.27

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 136 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5825 MHz

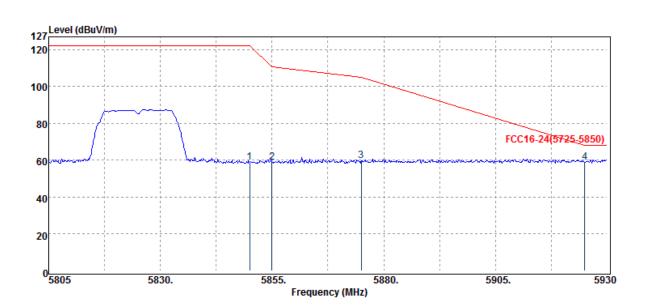
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	49.27	9.77	59.04	122.23	-63.19
5855.00	Peak	49.32	9.78	59.10	110.83	-51.73
5875.00	Peak	50.15	9.82	59.97	105.23	-45.26
5925.00	Peak	48.90	9.98	58.88	68.23	-9.35

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

t (886-2) 2299-3279

f (886-2) 2298-0488



Page: 137 of 180

**Operation Band** Fundamental Frequency **Operation Mode** 

EUT Pol.

:802.11aB4 :5825 MHz

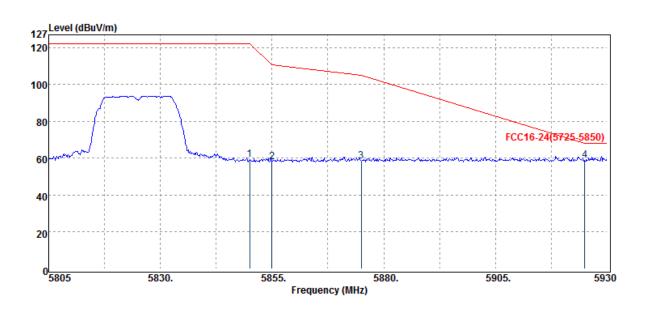
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	49.38	9.77	59.15	122.23	-63.08
5855.00	Peak	48.38	9.78	58.16	110.83	-52.67
5875.00	Peak	48.62	9.82	58.44	105.23	-46.79
5925.00	Peak	48.84	9.98	58.82	68.23	-9.41

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 138 of 180

#### 802.11n20 HT mode

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5180 MHz

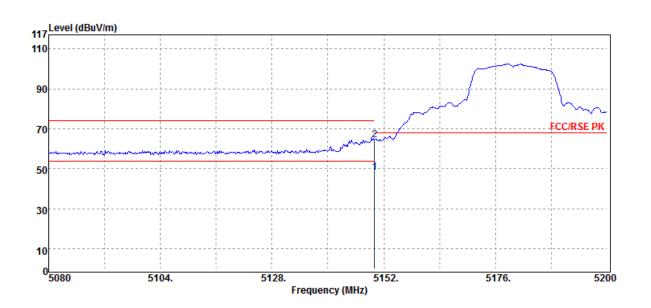
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	5150.00	Average	39.72	8.32	48.04	54.00	-5.96
	5150.00	Peak	56.13	8.32	64.45	74.00	-9.55

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。同時此樣品僅保留的人。本根各法规本公司書面持可,不可能分積製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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. and offenders may be prosecuted to the fullest extent of the law.



Page: 139 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5180 MHz

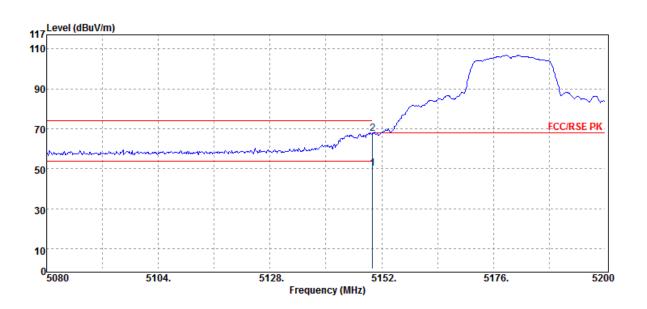
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	5150.00	Average	41.82	8.32	50.14	54.00	-3.86
	5150.00	Peak	59.35	8.32	67.67	74.00	-6.33

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 140 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5320 MHz

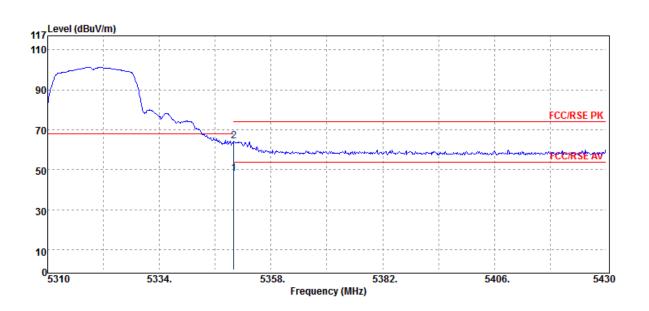
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	5350.00	Average	39.34	8.63	47.97	54.00	-6.03
	5350.00	Peak	55.60	8.63	64.23	74.00	-9.77

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 141 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5320 MHz

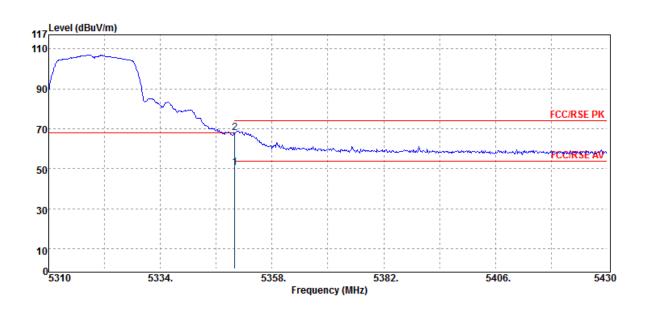
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5350.00	Average	42.00	8.63	50.63	54.00	-3.37
5350.00	Peak	59.54	8.63	68.17	74.00	-5.83

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 142 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5500 MHz

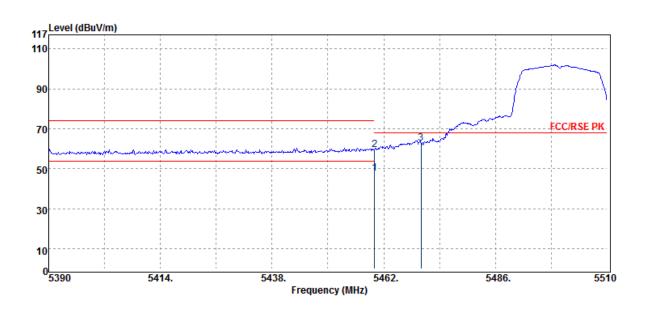
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5460.00	Average	38.96	8.75	47.71	54.00	-6.29
5460.00	Peak	50.59	8.75	59.34	74.00	-14.66
5470.00	Peak	54.12	8.74	62.86	68.20	-5.34

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 143 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5500 MHz

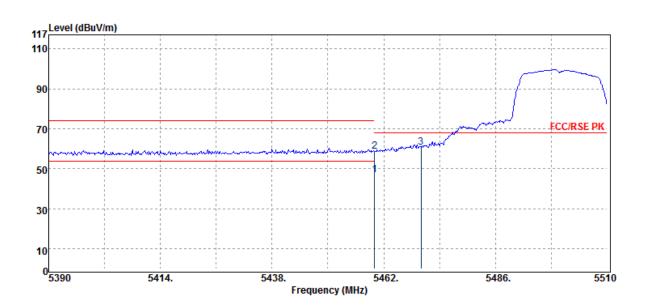
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
	5460.00	Average	38.41	8.75	47.16	54.00	-6.84
	5460.00	Peak	49.78	8.75	58.53	74.00	-15.47
	5470.00	Peak	52.15	8.74	60.89	68.20	-7.31

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 144 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz

:Bandedge CH HIGH

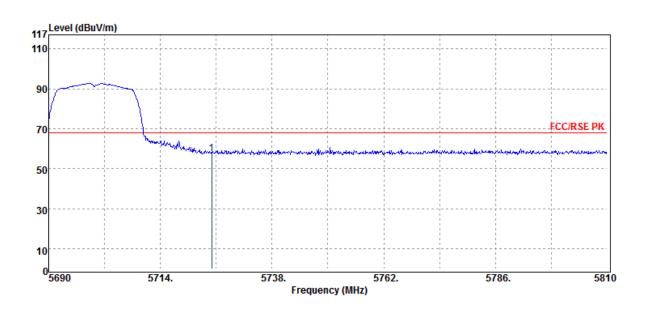
:E2 Plane

Test Date :2018-08-31

Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
5725.00	Peak	48.24	9.44	57.68	68.20	-10.52	

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 145 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz

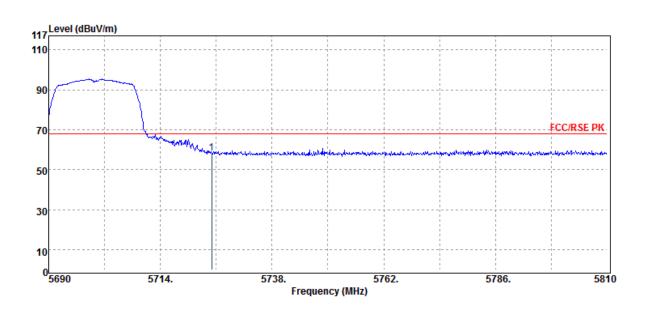
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-08-31 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
-	5725.00	Peak	48.74	9.44	58.18	68.20	-10.02	_

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 146 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5745 MHz

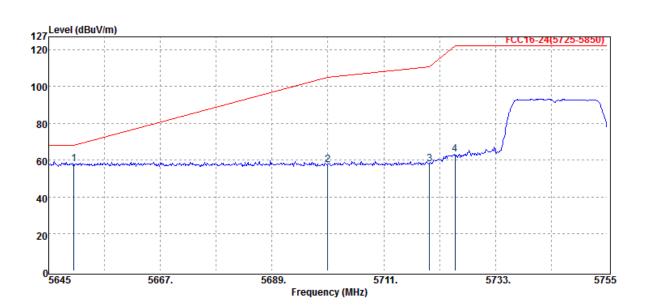
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	48.74	9.20	57.94	68.23	-10.29
5700.00	Peak	48.18	9.35	57.53	105.23	-47.70
5720.00	Peak	48.74	9.43	58.17	110.83	-52.66
5725.00	Peak	53.90	9.44	63.34	122.23	-58.89

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 147 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5745 MHz

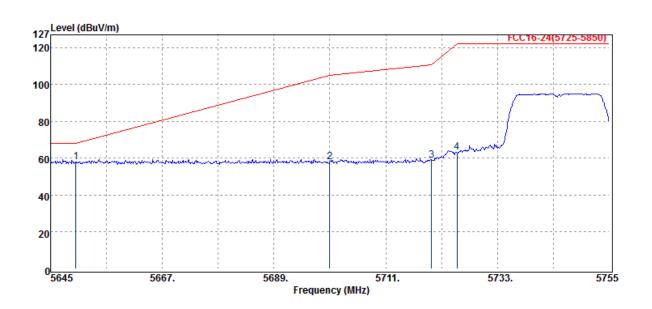
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	48.94	9.20	58.14	68.23	-10.09
5700.00	Peak	48.51	9.35	57.86	105.23	-47.37
5720.00	Peak	49.41	9.43	58.84	110.83	-51.99
5725.00	Peak	53.88	9.44	63.32	122.23	-58.91

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 148 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz

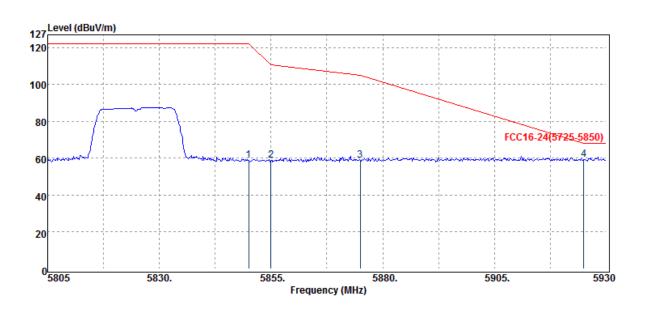
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	49.03	9.77	58.80	122.23	-63.43
5855.00	Peak	49.20	9.78	58.98	110.83	-51.85
5875.00	Peak	49.19	9.82	59.01	105.23	-46.22
5925.00	Peak	49.50	9.98	59.48	68.23	-8.75

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

f (886-2) 2298-0488

www.tw.sgs.com



Page: 149 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz

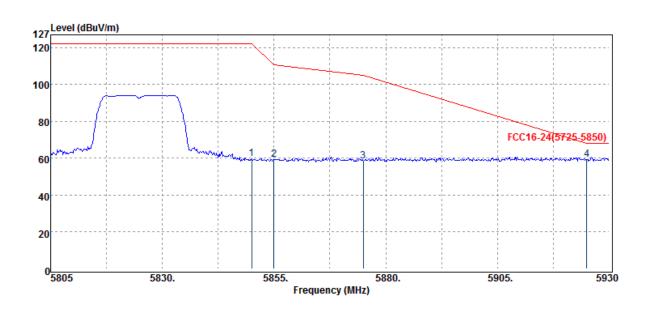
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	49.91	9.77	59.68	122.23	-62.55
5855.00	Peak	49.38	9.78	59.16	110.83	-51.67
5875.00	Peak	48.78	9.82	58.60	105.23	-46.63
5925.00	Peak	49.26	9.98	59.24	68.23	-8.99

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 150 of 180

## 802.11n40 HT mode

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B1 :5190 MHz

:Bandedge CH LOW

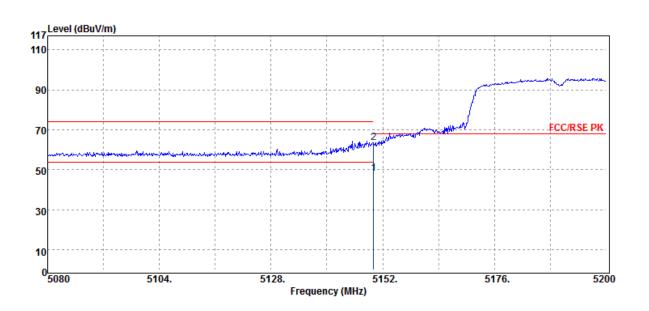
:E2 Plane

Test Date :2018-09-03

Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
_	5150.00	Average	40.05	8.32	48.37	54.00	-5.63
	5150.00	Peak	55.30	8.32	63.62	74.00	-10.38

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。同時此樣品僅保留的人。本根各元程命公司者而并可,不可能分檢製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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. and offenders may be prosecuted to the fullest extent of the law.



Page: 151 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B1 :5190 MHz

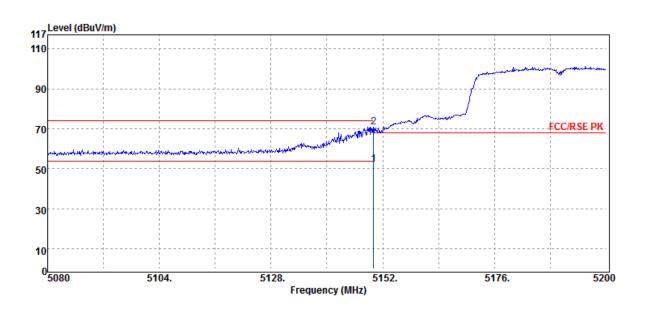
:Bandedge CH LOW

:E2 Plane

Test Date :2018-08-31 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	<b>@</b> 3m	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5	150.00	Average	43.98	8.32	52.30	54.00	-1.70
5	150.00	Peak	62.62	8.32	70.94	74.00	-3.06

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 152 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz

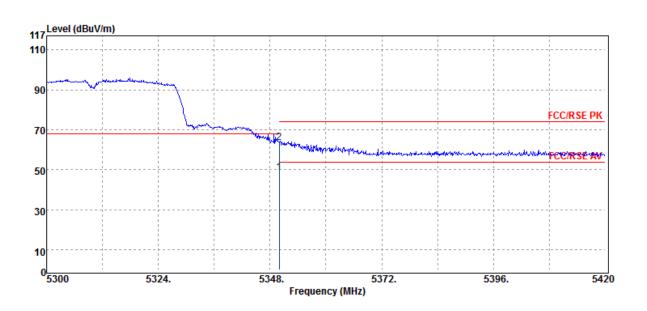
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-08-31 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	-
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
	5350.00	Average	39.96	8.63	48.59	54.00	-5.41
	5350.00	Peak	55.08	8.63	63.71	74.00	-10.29

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 153 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz

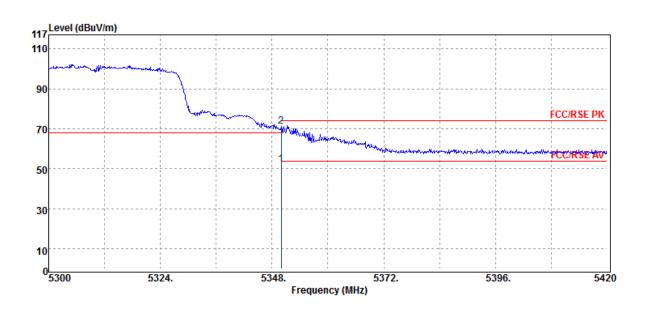
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5350.00	Average	43.67	8.63	52.30	54.00	-1.70
5350.00	Peak	62.78	8.63	71.41	74.00	-2.59

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 154 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5510 MHz

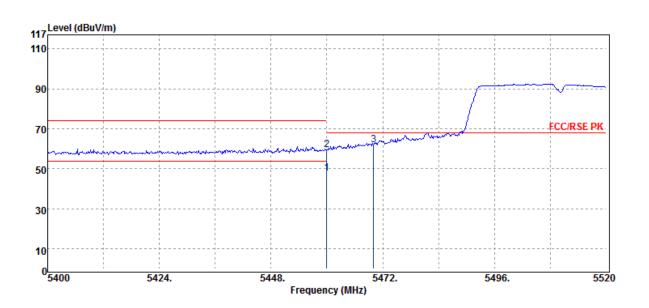
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	_
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5	460.00	Average	39.06	8.75	47.81	54.00	-6.19
5	5460.00	Peak	50.74	8.75	59.49	74.00	-14.51
5	5470.00	Peak	53.35	8.74	62.09	68.20	-6.11

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

f (886-2) 2298-0488



Page: 155 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5510 MHz

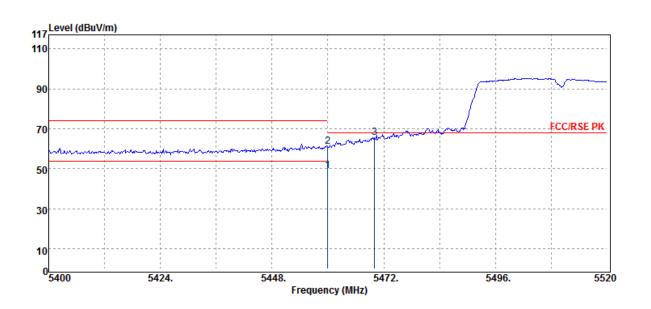
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5460.00	Average	40.23	8.75	48.98	54.00	-5.02
5460.00	Peak	52.18	8.75	60.93	74.00	-13.07
5470.00	Peak	56.87	8.74	65.61	68.20	-2.59

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 156 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz

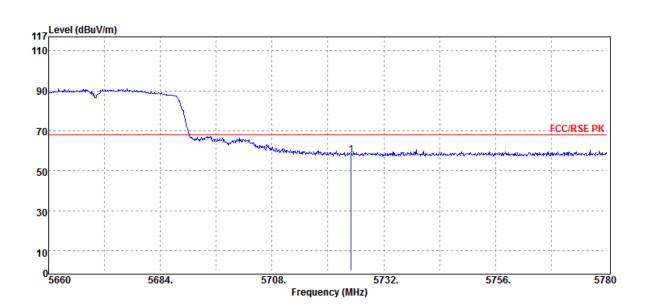
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-08-31 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	<b>@</b> 3m	-	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB	
	5725.00	Peak	48.61	9.44	58.05	68.20	-10.15	

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 157 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz

:Bandedge CH HIGH

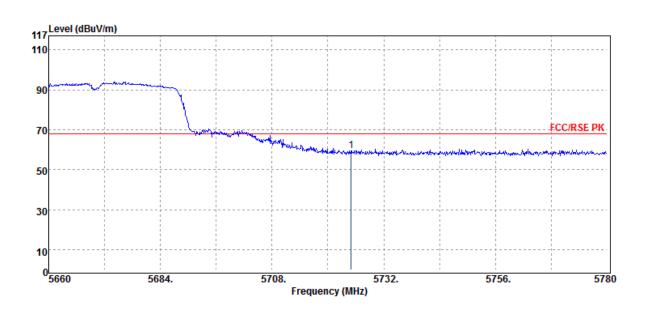
:E2 Plane

Test Date :2018-08-31

Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB	
	5725.00	Peak	49.94	9.44	59.38	68.20	-8.82	-

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 158 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5755 MHz

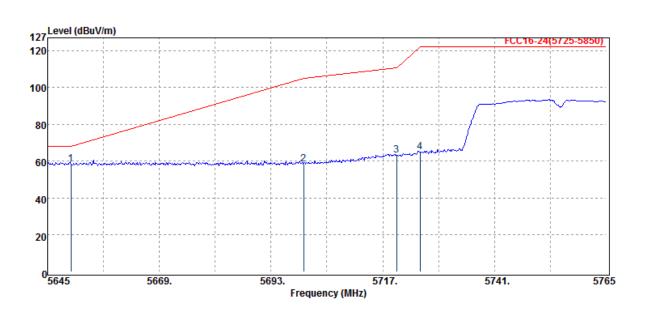
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	49.45	9.20	58.65	68.23	-9.58
5700.00	Peak	49.31	9.35	58.66	105.23	-46.57
5720.00	Peak	53.72	9.43	63.15	110.83	-47.68
5725.00	Peak	55.57	9.44	65.01	122.23	-57.22

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

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 159 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5755 MHz

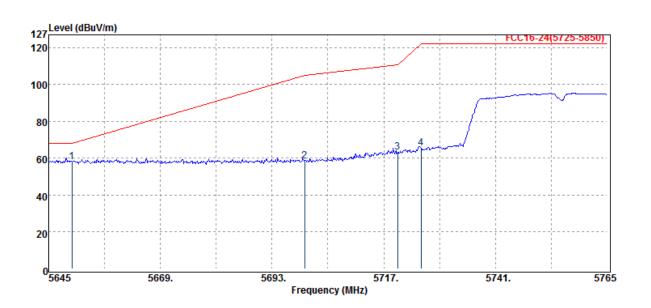
:Bandedge CH LOW

:E2 Plane

Test Date :2018-09-03 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5650.0	0 Peak	48.80	9.20	58.00	68.23	-10.23
5700.0	0 Peak	49.28	9.35	58.63	105.23	-46.60
5720.0	0 Peak	53.97	9.43	63.40	110.83	-47.43
5725.0	0 Peak	55.96	9.44	65.40	122.23	-56.83

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 160 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz

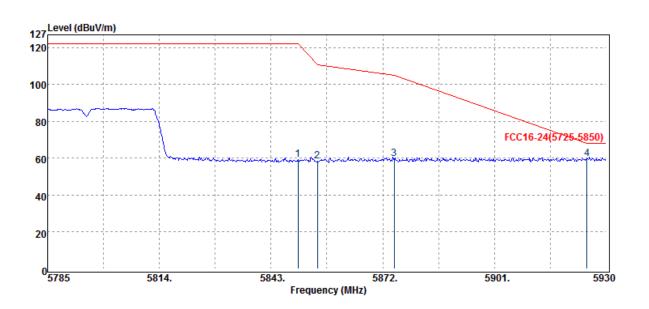
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	49.47	9.77	59.24	122.23	-62.99
5855.00	Peak	48.85	9.78	58.63	110.83	-52.20
5875.00	Peak	49.84	9.82	59.66	105.23	-45.57
5925.00	Peak	49.82	9.98	59.80	68.23	-8.43

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 161 of 180

**Operation Band** Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz

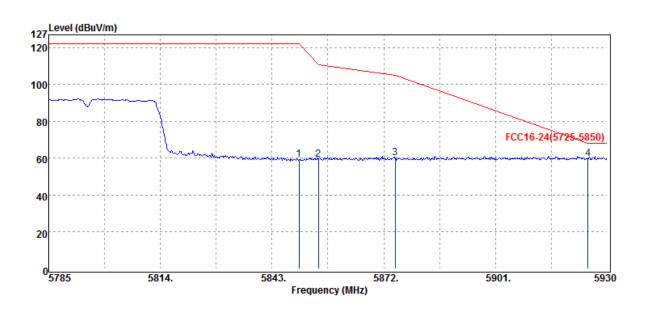
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-09-04 Temp./Humi. :23 deg\_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	49.34	9.77	59.11	122.23	-63.12
5855.00	Peak	49.56	9.78	59.34	110.83	-51.49
5875.00	Peak	50.49	9.82	60.31	105.23	-44.92
5925.00	Peak	49.74	9.98	59.72	68.23	-8.51

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.

Unless otherwise stated the results shown in this test report reter only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此根告结果僅對調試之樣品負責。阿時此樣品僅保留的反。 本根告去經本公司書面持可,不可能份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms\_and\_conditions.htm">www.sgs.com/terms\_and\_conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms\_e-document.htm">www.sgs.com/terms\_e-document.htm</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 162 of 180

# 12 TRANSMISSION IN THE ABSENCE OF DATA

# 12.1 Standard Applicable

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

### 12.2 Result

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

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



Page: 163 of 180

## 13 FREQUENCY STABILITY

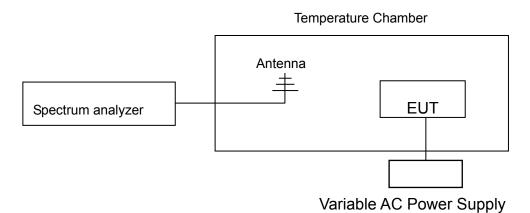
# 13.1 Standard Applicable

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 13.2 Measurement Procedure

- The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
- 2. Set EUT as normal operation.
- 3. Turn the EUT on and couple its output to spectrum.
- 4. Turn the EUT off and set the chamber to the highest temperature specified.
- 5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
- 6. Repeat step with the temperature chamber set to the lowest temperature.

### 13.3 Test SET-UP



## 13.4 Measurement Equipment Used:

SGS Conducted Room									
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due				
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/6/19				
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25				
DC Block PASTERNACK		PE8210	RF29	2017/12/26	2018/12/25				
Notebook	Lenovo	L420	S0011721	N/A	N/A				

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

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

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



Page: 164 of 180

#### 13.5 **Measurement Result**

# Startup:

Operation Mode	802.11 a	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		36	5180	5,179.98631	0.00000264
		44	5220	5,219.99248	0.00000144
		48	5240	5,239.98384	0.00000308
		52	5260	5,260.02890	-0.00000549
		60	5300	5,299.98244	0.00000331
	4.07	64	5320	5,319.99948	0.00000010
		100	5500	5,499.99451	0.00000100
		116	5580	5,579.97843	0.00000387
		140	5700	5,699.96946	0.00000536
		149	5745	5,744.98403	0.00000278
		157	5785	5,784.99213	0.00000136
		165	5825	5,824.99525	0.00000082
-10		36	5180	5,179.97978	0.00000390
	[	44	5220	5,219.98251	0.00000335
		48	5240	5,239.98260	0.00000332
		52	5260	5,260.00209	-0.00000040
		60	5300	5,299.97844	0.00000407
	3.33	64	5320	5,319.98423	0.00000296
		100	5500	5,500.00073	-0.00000013
		116	5580	5,579.99741	0.00000046
		140	5700	5,700.00317	-0.00000056
		149	5745	5,744.96931	0.00000534
		157	5785	5,784.99668	0.00000057
		165	5825	5,824.97949	0.00000352

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

t (886-2) 2299-3279

f (886-2) 2298-0488



Page: 165 of 180

		36	5180	5,179.97657	0.00000452
		44	5220	5,219.99560	0.00000084
		48	5240	5,239.97249	0.00000525
		52	5260	5,260.01792	-0.00000341
		60	5300	5,299.97706	0.00000433
25	3.7V	64	5320	5,319.97974	0.00000381
		100	5500	5,499.99414	0.00000107
		116	5580	5,579.98709	0.00000231
		140	5700	5,700.00412	-0.00000072
		149	5745	5,744.98454	0.00000269
		157	5785	5,785.00088	-0.00000015
		165	5825	5,824.98052	0.00000334
		36	5180	5,180.01070	-0.00000207
		44	5220	5,220.00549	-0.00000105
		48	5240	5,239.98461	0.00000103
		52	5260	5,260.00776	-0.00000147
		60	5300	5,300.00598	-0.00000113
		64	5320	5,319.98156	0.00000347
	4.07	100	5500	5,499.98238	0.00000320
		116	5580	5,580.00159	-0.00000029
		140	5700	5,699.97789	0.00000388
		149	5745	5,745.00206	-0.00000036
		157	5785	5,784.98820	0.00000204
		165	5825	5,824.99793	0.00000036
55		36	5180	5,179.99214	0.00000152
		44	5220	5,219.98154	0.00000354
		48	5240	5,240.00599	-0.00000114
		52	5260	5,259.98448	0.00000295
		60	5300	5,300.00001	0.00000000
	3.33	64	5320	5,320.00136	-0.00000026
		100	5500	5,500.00834	-0.00000152
		116	5580	5,579.99279	0.00000129
		140	5700	5,700.00236	-0.00000041
		149	5745	5,744.97554	0.00000426
		157	5785	5,784.98623	0.00000238
		165	5825	5,824.97542	0.00000422

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 166 of 180

Operation Mode	802.11 n_HT40	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		38	5190	5,189.98651	0.00000260
		46	5230	5,229.99707	0.00000056
		54	5270	5,269.99531	0.00000089
		62	5310	5,310.00123	-0.00000023
	4.07	102	5510	5,510.00392	-0.00000071
		110	5550	5,549.99378	0.00000112
		134	5670	5,669.99555	0.00000078
		151	5755	5,754.97397	0.00000452
-10		159	5795	5,794.97818	0.00000376
		38	5190	5,189.99002	0.00000192
		46	5230	5,230.01359	-0.00000260
		54	5270	5,269.98715	0.00000244
		62	5310	5,309.99567	0.00000082
	3.33	102	5510	5,509.98981	0.00000185
		110	5550	5,549.99084	0.00000165
		134	5670	5,669.99651	0.00000061
		151	5755	5,754.97923	0.00000361
		159	5795	5,794.99127	0.00000151

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 167 of 180

		38	5190	5,189.98856	0.00000220
		46	5230	5,230.01158	-0.00000221
		54	5270	5,269.99779	0.00000042
		62	5310	5,309.99417	0.00000110
25	3.7V	102	5510	5,510.00085	-0.00000015
		110	5550	5,549.99763	0.00000043
		134	5670	5,670.00902	-0.00000159
		151	5755	5,754.98615	0.00000241
		159	5795	5,794.97797	0.00000380
		38	5190	5,189.98622	0.00000265
		46	5230	5,230.00395	-0.00000075
	4.07	54	5270	5,269.99225	0.00000147
		62	5310	5,310.00060	-0.00000011
		102	5510	5,510.00872	-0.00000158
		110	5550	5,549.99625	0.00000068
		134	5670	5,669.99064	0.00000165
		151	5755	5,754.97480	0.00000438
		159	5795	5,794.99021	0.00000169
55		38	5190	5,189.99229	0.00000149
		46	5230	5,229.99977	0.00000004
		54	5270	5,269.98179	0.00000346
		62	5310	5,309.99943	0.00000011
	3.33	102	5510	5,509.99287	0.00000129
		110	5550	5,549.99657	0.00000062
		134	5670	5,670.00450	-0.00000079
		151	5755	5,754.97569	0.00000422
		159	5795	5,794.98221	0.00000307

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 168 of 180

## 2 Minutes:

Operation Mode	802.11 a	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		36	5180	5,179.98497	0.00000290
		44	5220	5,220.00143	-0.00000027
		48	5240	5,239.98048	0.00000373
		52	5260	5,260.01117	-0.00000212
		60	5300	5,299.97966	0.00000384
	4.07	64	5320	5,320.00257	-0.0000048
		100	5500	5,499.99522	0.00000087
		116	5580	5,579.96878	0.00000560
		140	5700	5,699.98056	0.00000341
		149	5745	5,744.99228	0.00000134
		157	5785	5,784.99093	0.00000157
		165	5825	5,824.98875	0.00000193
-10		36	5180	5,179.99070	0.00000180
		44	5220	5,219.96678	0.00000636
		48	5240	5,239.98113	0.00000360
		52	5260	5,259.99491	0.00000097
		60	5300	5,299.98244	0.00000331
	3.33	64	5320	5,319.99488	0.00000096
		100	5500	5,500.00390	-0.00000071
		116	5580	5,580.00000	0.00000000
		140	5700	5,700.00557	-0.00000098
		149	5745	5,744.97628	0.00000413
		157	5785	5,785.00758	-0.00000131
		165	5825	5,824.98108	0.00000325

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

台灣檢驗科技股份有限公司

f (886-2) 2298-0488



Page: 169 of 180

44   5220   5,220.00166   -0.00000032     48   5240   5,239.97877   0.00000405     52   5260   5,260.01057   -0.00000201     60   5300   5,299.98914   0.00000205     60   5300   5,299.98914   0.00000205     100   5500   5,499.97795   0.00000401     116   5580   5,579.98064   0.00000347     140   5700   5,699.99030   0.00000170     149   5745   5,745.00063   -0.00000011     157   5785   5,784.98178   0.0000021     165   5825   5,824.98178   0.00000313      36   5180   5,180.01247   -0.00000241     44   5220   5,219.99965   0.00000006     48   5240   5,239.98857   0.00000006     60   5300   5,299.99850   0.00000028     64   5320   5,319.98353   0.00000310     4.07   100   5500   5,499.98207   0.00000028     64   5320   5,319.98353   0.00000326     116   5580   5,579.98810   0.00000236     116   5580   5,579.98810   0.00000290     149   5745   5,744.99738   0.00000240     149   5745   5,744.99738   0.00000024     149   5745   5,784.98147   0.00000320     165   5825   5,824.99171   0.0000044     157   5785   5,784.98147   0.00000290     149   5745   5,744.99738   0.00000241     48   5240   5,219.98316   0.00000230     165   5825   5,824.99171   0.00000240     149   5745   5,744.99738   0.00000024     44   5220   5,219.98316   0.00000290     165   5825   5,824.99171   0.0000024     44   5220   5,219.98316   0.00000290     165   5825   5,824.99171   0.0000024     48   5240   5,240.01555   0.00000290     165   5825   5,824.99171   0.0000024     48   5240   5,240.01555   0.00000290     165   5825   5,824.99171   0.0000024     167   5800   5,500.01593   0.0000014     3.33   64   5320   5,320.01765   0.0000033     100   5500   5,500.01593   0.00000090     140   5700   5,700.00287   0.00000090     140   5705   5,794.98173   0.00000143     157   5785   5,784.98173   0.00000143     157   5785   5,784.98173   0.00000143     157   5785   5,784.98173   0.00000143		•	7			
A8			36	5180	5,179.98329	0.00000323
S2   S260   S,260.01057   -0.00000201			44	5220	5,220.00166	-0.00000032
Section   Sect			48	5240	5,239.97877	0.00000405
3.7V			52	5260	5,260.01057	-0.00000201
100			60	5300	5,299.98914	0.00000205
116	25	3.7V	64	5320	5,319.98380	0.00000305
140			100	5500	5,499.97795	0.00000401
149			116	5580	5,579.98064	0.00000347
157   5785   5,784,99877   0.00000021     165   5825   5,824,98178   0.00000313     36   5180   5,180.01247   -0.00000241     44   5220   5,219,99965   0.00000007     48   5240   5,239,98857   0.00000006     60   5300   5,299,99850   0.00000028     64   5320   5,319,98353   0.00000310     64   5320   5,319,98353   0.00000310     116   5580   5,579,98810   0.00000213     140   5700   5,699,98346   0.00000290     149   5745   5,744,99738   0.00000046     157   5785   5,824,99171   0.00000142     165   5825   5,824,99171   0.00000142     165   5825   5,824,99171   0.00000044     44   5220   5,219,98316   0.00000320     48   5240   5,240,01555   -0.00000297     52   5260   5,259,98617   0.00000297     52   5260   5,259,98617   0.00000297     52   5260   5,259,98617   0.00000297     52   5260   5,259,98617   0.00000297     52   5260   5,259,98617   0.00000297     52   5260   5,259,98617   0.00000290     116   5580   5,579,99496   0.00000090     140   5700   5,700,00287   -0.00000050     149   5745   5,744,99177   0.00000143     157   5785   5,784,98173   0.00000316			140	5700	5,699.99030	0.00000170
165   5825   5,824.98178   0.00000313			149	5745	5,745.00063	-0.00000011
36			157	5785	5,784.99877	0.00000021
44         5220         5,219.99965         0.00000007           48         5240         5,239.98857         0.000000218           52         5260         5,260.00033         -0.0000006           60         5300         5,299.99850         0.00000310           64         5320         5,319.98353         0.00000326           116         5580         5,579.98810         0.00000213           140         5700         5,699.98346         0.00000290           149         5745         5,744.99738         0.00000046           157         5785         5,784.98147         0.00000320           165         5825         5,824.99171         0.00000044           44         5220         5,219.98316         0.00000297           48         5240         5,240.01555         -0.0000297           52         5260         5,259.98617         0.00000297           52         5260         5,259.98617         0.00000290           116         5580         5,579.99496         0.000000290           116         5580         5,579.99496         0.000000290           116         5580         5,579.99496         0.00000050           149 <td></td> <td></td> <td>165</td> <td>5825</td> <td>5,824.98178</td> <td>0.00000313</td>			165	5825	5,824.98178	0.00000313
44         5220         5,219.99965         0.00000007           48         5240         5,239.98857         0.000000218           52         5260         5,260.00033         -0.0000006           60         5300         5,299.99850         0.00000310           64         5320         5,319.98353         0.00000326           116         5580         5,579.98810         0.00000213           140         5700         5,699.98346         0.00000290           149         5745         5,744.99738         0.00000046           157         5785         5,784.98147         0.00000320           165         5825         5,824.99171         0.00000044           44         5220         5,219.98316         0.00000297           52         5260         5,259.98617         0.00000297           52         5260         5,259.98617         0.00000297           52         5260         5,259.98617         0.00000290           116         5580         5,579.99496         0.00000090           116         5580         5,579.99496         0.000000290           116         5580         5,579.99496         0.000000050           149 <td></td> <td>1</td> <td></td> <td>5400</td> <td>5 400 040 47</td> <td>0.00000044</td>		1		5400	5 400 040 47	0.00000044
48       5240       5,239,98857       0.00000218         52       5260       5,260.00033       -0.00000006         60       5300       5,299,99850       0.000000218         64       5320       5,319,98353       0.00000310         100       5500       5,499,98207       0.00000326         116       5580       5,579,98810       0.00000213         140       5700       5,699,98346       0.00000290         149       5745       5,744,99738       0.00000046         157       5785       5,784,98147       0.00000320         165       5825       5,824,99171       0.00000044         44       5220       5,219,98316       0.000000297         52       5260       5,259,98617       0.00000297         52       5260       5,259,98617       0.00000290         48       5240       5,259,98617       0.00000332         60       5300       5,299,99253       0.00000141         3.33       64       5320       5,320.01765       -0.00000290         116       5580       5,579,99496       0.000000290         140       5700       5,700.00287       -0.00000050         1						
52         5260         5,260.00033         -0.00000006           60         5300         5,299.99850         0.00000028           64         5320         5,319.98353         0.00000310           100         5500         5,499.98207         0.00000326           116         5580         5,579.98810         0.00000213           140         5700         5,699.98346         0.00000290           149         5745         5,744.99738         0.00000046           157         5785         5,784.98147         0.00000320           165         5825         5,824.99171         0.00000142           44         5220         5,219.98316         0.00000297           52         5260         5,259.98617         0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000290           116         5580         5,579.99496         0.000000290           116         5580         5,579.99496         0.000000290           140         5700         5,700.00287         -0.00000050					· ·	
4.07       60       5300       5,299.99850       0.00000028         64       5320       5,319.98353       0.00000310         100       5500       5,499.98207       0.00000326         116       5580       5,579.98810       0.00000290         149       5745       5,744.99738       0.00000046         157       5785       5,784.98147       0.00000320         165       5825       5,824.99171       0.00000044         44       5220       5,219.98316       0.00000323         48       5240       5,240.01555       -0.00000297         52       5260       5,259.98617       0.00000297         52       5260       5,259.99523       0.00000141         3.33       64       5320       5,320.01765       -0.00000332         100       5500       5,500.01593       -0.00000290         116       5580       5,579.99496       0.00000090         140       5700       5,700.00287       -0.00000050         149       5745       5,784.98173       0.00000316					<u>'</u>	
4.07     64     5320     5,319.98353     0.00000310       100     5500     5,499.98207     0.00000326       116     5580     5,579.98810     0.00000213       140     5700     5,699.98346     0.00000290       149     5745     5,744.99738     0.00000046       157     5785     5,784.98147     0.00000320       165     5825     5,824.99171     0.00000044       44     5220     5,219.98316     0.00000323       48     5240     5,240.01555     -0.00000297       52     5260     5,259.98617     0.00000263       60     5300     5,299.99253     0.00000141       3.33     64     5320     5,320.01765     -0.00000332       100     5500     5,500.01593     -0.00000290       116     5580     5,579.99496     0.00000090       140     5700     5,700.00287     -0.00000050       149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316						
4.07       100       5500       5,499.98207       0.00000326         116       5580       5,579.98810       0.00000213         140       5700       5,699.98346       0.00000290         149       5745       5,744.99738       0.00000046         157       5785       5,784.98147       0.00000320         165       5825       5,824.99171       0.00000044         44       5220       5,219.98316       0.00000323         48       5240       5,240.01555       -0.00000297         52       5260       5,259.98617       0.00000243         60       5300       5,299.99253       0.00000141         3.33       64       5320       5,320.01765       -0.0000032         100       5500       5,500.01593       -0.00000290         116       5580       5,579.99496       0.00000090         140       5700       5,700.00287       -0.00000050         149       5745       5,784.98173       0.00000316					· ·	
116         5580         5,579.98810         0.00000213           140         5700         5,699.98346         0.00000290           149         5745         5,744.99738         0.00000046           157         5785         5,784.98147         0.00000320           165         5825         5,824.99171         0.00000044           44         5220         5,219.98316         0.00000323           48         5240         5,240.01555         -0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.0000050           149         5745         5,744.99177         0.00000143           157         5785         5,784.98173         0.00000316					· ·	
140       5700       5,699.98346       0.00000290         149       5745       5,744.99738       0.00000046         157       5785       5,784.98147       0.00000320         165       5825       5,824.99171       0.000000142         36       5180       5,179.99772       0.00000044         44       5220       5,219.98316       0.00000323         48       5240       5,240.01555       -0.00000297         52       5260       5,259.98617       0.00000263         60       5300       5,299.99253       0.00000141         3.33       64       5320       5,320.01765       -0.00000332         100       5500       5,500.01593       -0.00000290         116       5580       5,579.99496       0.00000090         140       5700       5,700.00287       -0.00000050         149       5745       5,744.99177       0.000000143         157       5785       5,784.98173       0.00000316		4.07				
149         5745         5,744.99738         0.00000046           157         5785         5,784.98147         0.00000320           165         5825         5,824.99171         0.00000142           36         5180         5,179.99772         0.00000044           44         5220         5,219.98316         0.00000323           48         5240         5,240.01555         -0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.00000050           149         5745         5,744.99177         0.00000143           157         5785         5,784.98173         0.00000316			116			
157         5785         5,784.98147         0.00000320           165         5825         5,824.99171         0.00000142           36         5180         5,179.99772         0.00000044           44         5220         5,219.98316         0.00000323           48         5240         5,240.01555         -0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.00000050           149         5745         5,744.99177         0.00000143           157         5785         5,784.98173         0.00000316			140	5700	5,699.98346	0.00000290
55         5825         5,824.99171         0.00000142           44         5220         5,179.99772         0.00000044           48         5240         5,240.01555         -0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.0000050           149         5745         5,744.99177         0.00000143           157         5785         5,784.98173         0.00000316			149	5745	5,744.99738	0.00000046
36       5180       5,179.99772       0.00000044         44       5220       5,219.98316       0.00000323         48       5240       5,240.01555       -0.00000297         52       5260       5,259.98617       0.00000263         60       5300       5,299.99253       0.00000141         3.33       64       5320       5,320.01765       -0.00000332         100       5500       5,500.01593       -0.00000290         116       5580       5,579.99496       0.00000090         140       5700       5,700.00287       -0.00000050         149       5745       5,744.99177       0.00000143         157       5785       5,784.98173       0.00000316			157	5785	5,784.98147	0.00000320
44         5220         5,219.98316         0.00000323           48         5240         5,240.01555         -0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.00000050           149         5745         5,744.99177         0.00000316           157         5785         5,784.98173         0.00000316			165	5825	5,824.99171	0.00000142
48         5240         5,240.01555         -0.00000297           52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.00000050           149         5745         5,744.99177         0.00000143           157         5785         5,784.98173         0.00000316	55		36	5180	5,179.99772	0.00000044
52         5260         5,259.98617         0.00000263           60         5300         5,299.99253         0.00000141           3.33         64         5320         5,320.01765         -0.00000332           100         5500         5,500.01593         -0.00000290           116         5580         5,579.99496         0.00000090           140         5700         5,700.00287         -0.00000050           149         5745         5,744.99177         0.00000316           157         5785         5,784.98173         0.00000316			44	5220	5,219.98316	0.00000323
3.33     60     5300     5,299.99253     0.00000141       3.33     64     5320     5,320.01765     -0.00000332       100     5500     5,500.01593     -0.00000290       116     5580     5,579.99496     0.00000090       140     5700     5,700.00287     -0.00000050       149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316			48	5240	5,240.01555	-0.00000297
3.33     64     5320     5,320.01765     -0.00000332       100     5500     5,500.01593     -0.00000290       116     5580     5,579.99496     0.00000090       140     5700     5,700.00287     -0.00000050       149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316			52	5260	5,259.98617	0.00000263
100     5500     5,500.01593     -0.00000290       116     5580     5,579.99496     0.00000090       140     5700     5,700.00287     -0.00000050       149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316			60	5300	5,299.99253	0.00000141
116     5580     5,579.99496     0.00000090       140     5700     5,700.00287     -0.00000050       149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316		3.33	64	5320	5,320.01765	-0.00000332
140     5700     5,700.00287     -0.00000050       149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316			100	5500	5,500.01593	-0.00000290
149     5745     5,744.99177     0.00000143       157     5785     5,784.98173     0.00000316			116	5580	5,579.99496	0.00000090
157         5785         5,784.98173         0.00000316			140	5700	5,700.00287	-0.00000050
			149	5745	5,744.99177	0.00000143
165 5825 5.824.98845 0.0000198			157	5785	5,784.98173	0.00000316
100   3020   3,024.70043   0.00000170			165	5825	5,824.98845	0.00000198

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 170 of 180

Operation Mode	802.11 n_HT40	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		38	5190	5,189.98827	0.00000226
		46	5230	5,230.00194	-0.00000037
		54	5270	5,269.98475	0.00000289
		62	5310	5,310.00592	-0.00000111
	4.07	102	5510	5,509.99765	0.00000043
		110	5550	5,549.99642	0.00000065
		134	5670	5,670.00353	-0.00000062
		151	5755	5,754.98668	0.00000231
-10		159	5795	5,794.97279	0.00000470
		38	5190	5,189.98829	0.00000226
		46	5230	5,229.99927	0.0000014
		54	5270	5,270.00050	-0.00000010
		62	5310	5,309.99328	0.00000127
	3.33	102	5510	5,510.00002	0.00000000
		110	5550	5,549.98939	0.00000191
		134	5670	5,670.00723	-0.00000127
		151	5755	5,754.98564	0.00000250
		159	5795	5,794.98702	0.00000224

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.

No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

f (886-2) 2298-0488



Page: 171 of 180

			1	1	
		38	5190	5,189.99914	0.00000016
		46	5230	5,230.00757	-0.00000145
		54	5270	5,269.98364	0.00000310
		62	5310	5,309.99271	0.00000137
25	3.7V	102	5510	5,510.00522	-0.00000095
		110	5550	5,550.00190	-0.00000034
		134	5670	5,670.00502	-0.00000088
		151	5755	5,754.98815	0.00000206
		159	5795	5,794.98044	0.00000338
		38	5190	5,189.98654	0.00000259
		46	5230	5,230.01232	-0.00000236
	4.07	54	5270	5,269.99938	0.00000012
		62	5310	5,309.99825	0.00000033
		102	5510	5,509.99675	0.00000059
		110	5550	5,550.00454	-0.00000082
		134	5670	5,670.00087	-0.00000015
		151	5755	5,754.98983	0.00000177
		159	5795	5,794.97742	0.00000390
55		38	5190	5,189.98680	0.00000254
		46	5230	5,230.00567	-0.00000108
		54	5270	5,269.98352	0.00000313
		62	5310	5,310.01010	-0.00000190
	3.33	102	5510	5,509.99561	0.00000080
		110	5550	5,549.99732	0.00000048
		134	5670	5,669.99561	0.00000077
		151	5755	5,754.98231	0.00000307
	-	159	5795	5,794.97811	0.00000378

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 172 of 180

## 5 Minutes:

Operation Mode	802.11 a	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		36	5180	5,179.98146	0.00000358
		44	5220	5,219.98973	0.00000197
		48	5240	5,239.98323	0.00000320
		52	5260	5,260.01877	-0.00000357
		60	5300	5,299.97996	0.00000378
	4.07	64	5320	5,320.01164	-0.00000219
		100	5500	5,499.99933	0.00000012
		116	5580	5,579.98066	0.00000347
		140	5700	5,699.97364	0.00000462
		149	5745	5,744.99526	0.00000083
		157	5785	5,784.97789	0.00000382
	Ι Γ	165	5825	5,824.99036	0.00000165
-10		36	5180	5,179.98865	0.00000219
		44	5220	5,219.97835	0.00000415
		48	5240	5,239.97566	0.00000465
		52	5260	5,259.99148	0.00000162
		60	5300	5,299.97101	0.00000547
	3.33	64	5320	5,320.00211	-0.00000040
	[	100	5500	5,500.00188	-0.00000034
	[	116	5580	5,580.00254	-0.00000045
	[	140	5700	5,700.01231	-0.00000216
	[	149	5745	5,744.98663	0.00000233
	[	157	5785	5,785.00087	-0.00000015
		165	5825	5,824.97613	0.00000410

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 173 of 180

		36	5180	5,179.98044	0.00000378
		44	5220	5,220.00249	-0.00000048
		48	5240	5,239.98721	0.00000244
		52	5260	5,260.00999	-0.00000190
		60	5300	5,299.98485	0.00000286
25	3.7V	64	5320	5,319.98773	0.00000231
		100	5500	5,499.97982	0.00000367
		116	5580	5,579.99195	0.00000144
		140	5700	5,699.98761	0.00000217
		149	5745	5,744.99998	0.00000000
		157	5785	5,784.98244	0.00000304
		165	5825	5,824.99097	0.00000155
		2.4	F100	F 100 01/00	0.00000010
		36	5180	5,180.01623	-0.00000313
		44	5220	5,220.00821	-0.00000157
		48	5240	5,239.98620	0.00000263
		52	5260	5,259.99528	0.00000090
		60	5300	5,300.00472	-0.00000089
		64	5320	5,319.99584	0.00000078
	4.07	100	5500	5,499.98402	0.00000291
		116	5580	5,579.99509	0.00000088
		140	5700	5,699.97122	0.00000505
		149	5745	5,745.01125	-0.00000196
		157	5785	5,784.97991	0.00000347
		165	5825	5,824.98760	0.00000213
55		36	5180	5,179.98517	0.00000286
		44	5220	5,219.98555	0.00000277
		48	5240	5,240.01028	-0.00000196
		52	5260	5,259.99087	0.00000173
		60	5300	5,299.99783	0.00000041
	3.33	64	5320	5,320.00817	-0.00000154
		100	5500	5,499.99955	0.00000008
		116	5580	5,579.99566	0.00000078
		140	5700	5,700.00449	-0.00000079
		149	5745	5,744.98421	0.00000275
		157	5785	5,784.98153	0.00000319
		165	5825	5,824.97579	0.00000416

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 174 of 180

Operation Mode	802.11 n_HT40	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		38	5190	5,189.99830	0.0000033
		46	5230	5,230.00260	-0.00000050
		54	5270	5,269.99850	0.00000028
		62	5310	5,309.99761	0.00000045
	4.07	102	5510	5,510.00674	-0.00000122
		110	5550	5,549.99154	0.00000152
		134	5670	5,670.00822	-0.00000145
		151	5755	5,754.98011	0.00000346
-10		159	5795	5,794.98993	0.00000174
		38	5190	5,189.99491	0.00000098
		46	5230	5,230.01370	-0.00000262
		54	5270	5,270.00008	-0.00000002
		62	5310	5,309.99398	0.00000113
	3.33	102	5510	5,510.00876	-0.00000159
		110	5550	5,550.00274	-0.00000049
		134	5670	5,669.99045	0.00000168
		151	5755	5,754.97230	0.00000481
		159	5795	5,794.99208	0.00000137

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained neroon 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 and offenders may be prosecuted to the fullest extent of the law.



Page: 175 of 180

		38	5190	5,189.99233	0.00000148
		46	5230	5,230.00648	-0.00000124
		54	5270	5,269.99788	0.00000040
		62	5310	5,310.00923	-0.00000174
25	3.7V	102	5510	5,510.00162	-0.00000029
		110	5550	5,549.99008	0.00000179
		134	5670	5,669.98951	0.00000185
		151	5755	5,754.97829	0.00000377
		159	5795	5,794.97916	0.00000360
		38	5190	5,189.99519	0.00000093
		46	5230	5,229.99687	0.00000060
	4.07	54	5270	5,269.98634	0.00000259
		62	5310	5,310.00780	-0.00000147
		102	5510	5,509.99484	0.00000094
		110	5550	5,550.00846	-0.00000152
		134	5670	5,669.99921	0.0000014
		151	5755	5,754.97919	0.00000362
		159	5795	5,794.98879	0.00000193
55		38	5190	5,189.98174	0.00000352
		46	5230	5,230.01119	-0.00000214
		54	5270	5,269.98443	0.00000295
		62	5310	5,309.99677	0.00000061
	3.33	102	5510	5,510.00280	-0.00000051
		110	5550	5,550.00147	-0.00000026
		134	5670	5,669.99705	0.00000052
		151	5755	5,754.97471	0.00000439
		159	5795	5,794.97609	0.00000413

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 176 of 180

## 10 Minutes:

Operation Mode	802.11 a	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency	Spectrum Frequency	ΔFrequency (MHz)
			(MHz)	(MHz)	(1411 12)
-10		36	5180	5,179.99128	0.00000168
		44	5220	5,219.99966	0.00000006
		48	5240	5,239.97417	0.00000493
		52	5260	5,260.02779	-0.00000528
	4.07	60	5300	5,299.98300	0.00000321
		64	5320	5,320.00048	-0.00000009
		100	5500	5,499.98441	0.00000284
		116	5580	5,579.97702	0.00000412
		140	5700	5,699.96950	0.00000535
		149	5745	5,744.99250	0.00000131
		157	5785	5,784.98729	0.00000220
		165	5825	5,824.99613	0.00000066
		36	5180	5,179.98826	0.00000227
		44	5220	5,219.97481	0.00000483
		48	5240	5,239.97696	0.00000440
	[	52	5260	5,260.00425	-0.00000081
	l [	60	5300	5,299.97726	0.00000429
	3.33	64	5320	5,319.98525	0.00000277
	[	100	5500	5,499.98708	0.00000235
	[	116	5580	5,579.99535	0.00000083
	[	140	5700	5,699.99952	0.00000009
	[	149	5745	5,744.97844	0.00000375
		157	5785	5,784.99115	0.00000153
		165	5825	5,824.98706	0.00000222

t (886-2) 2299-3279

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 177 of 180

36 5180 5,179,98871 0.00000029 44 5220 5,220.00152 -0.00000029 48 5240 5,239,98029 0.00000376 52 5260 5,260.01220 -0.00000321 60 5300 5,299,98297 0.00000321 100 5500 5,499,98696 0.00000237 116 5580 5,579,99119 0.00000158 140 5700 5,700.00226 -0.00000040 149 5745 5,745.00114 -0.00000020 157 5785 5,784,98985 0.00000175 165 5825 5,824,98812 0.00000204  36 5180 5,180.01225 -0.00000204 44 5220 5,219,99126 0.00000167 48 5240 5,239,98660 0.00000256
48         5240         5,239.98029         0.00000376           52         5260         5,260.01220         -0.00000321           60         5300         5,299.98297         0.00000321           100         5500         5,499.98696         0.00000237           116         5580         5,579.99119         0.00000158           140         5700         5,700.00226         -0.00000040           149         5745         5,745.00114         -0.00000020           157         5785         5,784.98985         0.00000175           165         5825         5,824.98812         0.00000204           36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
25         5260         5,260.01220         -0.00000232           60         5300         5,299.98297         0.00000321           3.7V         64         5320         5,319.97990         0.00000378           100         5500         5,499.98696         0.00000237           116         5580         5,579.99119         0.00000158           140         5700         5,700.00226         -0.00000040           149         5745         5,745.00114         -0.00000020           157         5785         5,784.98985         0.00000175           165         5825         5,824.98812         0.000000204           36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
25 3.7V 64 5320 5,299.98297 0.00000321 100 5500 5,499.98696 0.00000237 116 5580 5,579.99119 0.00000158 140 5700 5,700.00226 -0.00000040 149 5745 5,745.00114 -0.00000020 157 5785 5,784.98985 0.00000175 165 5825 5,824.98812 0.00000204 36 5180 5,180.01225 -0.00000204 44 5220 5,219.99126 0.00000167
25     3.7V     64     5320     5,319.97990     0.00000378       100     5500     5,499.98696     0.00000237       116     5580     5,579.99119     0.00000158       140     5700     5,700.00226     -0.00000040       149     5745     5,745.00114     -0.00000020       157     5785     5,784.98985     0.00000175       165     5825     5,824.98812     0.00000204       36     5180     5,180.01225     -0.00000236       44     5220     5,219.99126     0.00000167
100         5500         5,499.98696         0.00000237           116         5580         5,579.99119         0.00000158           140         5700         5,700.00226         -0.00000040           149         5745         5,745.00114         -0.00000020           157         5785         5,784.98985         0.00000175           165         5825         5,824.98812         0.00000204           36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
116         5580         5,579.99119         0.00000158           140         5700         5,700.00226         -0.00000040           149         5745         5,745.00114         -0.00000020           157         5785         5,784.98985         0.00000175           165         5825         5,824.98812         0.00000204           36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
140         5700         5,700.00226         -0.00000040           149         5745         5,745.00114         -0.00000020           157         5785         5,784.98985         0.00000175           165         5825         5,824.98812         0.00000204           36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
149     5745     5,745.00114     -0.00000020       157     5785     5,784.98985     0.00000175       165     5825     5,824.98812     0.00000204       36     5180     5,180.01225     -0.00000236       44     5220     5,219.99126     0.00000167
157         5785         5,784.98985         0.00000175           165         5825         5,824.98812         0.00000204           36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
36         5180         5,180.01225         -0.00000236           44         5220         5,219.99126         0.00000167
36 5180 5,180.01225 -0.00000236 44 5220 5,219.99126 0.00000167
44 5220 5,219.99126 0.00000167
44 5220 5,219.99126 0.00000167
$oxed{L}$
52         5260         5,259.99605         0.00000075
60 5300 5,300.00931 -0.00000176
64 5320 5,319.98211 0.00000336
4.07 100 5500 5,499.97384 0.00000476
116 5580 5,579.99950 0.00000009
140 5700 5,699.98649 0.00000237
149 5745 5,745.00587 -0.00000102
157 5785 5,784.98104 0.00000328
165 5825 5,824.99159 0.00000144
55 36 5180 5,179,99752 0.00000048
55   36   5180   5,179.99752   0.00000048
44 5220 5,219.98485 0.00000290
44 5220 5,219.98485 0.00000290
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313       52     5260     5,259.98123     0.00000357
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313       52     5260     5,259.98123     0.00000357       60     5300     5,299.99273     0.00000137
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313       52     5260     5,259.98123     0.00000357       60     5300     5,299.99273     0.00000137       3.33     64     5320     5,320.01889     -0.00000358
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313       52     5260     5,259.98123     0.00000357       60     5300     5,299.99273     0.00000137       3.33     64     5320     5,320.01889     -0.00000358       100     5500     5,500.01303     -0.00000237
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313       52     5260     5,259.98123     0.00000357       60     5300     5,299.99273     0.00000137       3.33     64     5320     5,320.01889     -0.00000358       100     5500     5,500.01303     -0.00000237       116     5580     5,579.98718     0.00000230
44     5220     5,219.98485     0.00000290       48     5240     5,240.01639     -0.00000313       52     5260     5,259.98123     0.000000357       60     5300     5,299.99273     0.00000137       3.33     64     5320     5,320.01889     -0.00000355       100     5500     5,500.01303     -0.00000237       116     5580     5,579.98718     0.00000230       140     5700     5,700.00759     -0.00000133

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 178 of 180

Operation Mode	802.11 n_HT40	Test Date	2018.08.30
Temperature	:23	Test By	Tom
Humidity	:68 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
-10	4.07	38	5190	5,189.98379	0.00000312
		46	5230	5,230.00533	-0.00000102
		54	5270	5,269.99972	0.00000005
		62	5310	5,309.99681	0.00000060
		102	5510	5,509.99958	80000000
		110	5550	5,549.99335	0.00000120
		134	5670	5,669.99406	0.00000105
		151	5755	5,754.97663	0.00000406
		159	5795	5,794.98044	0.00000338
		38	5190	5,189.99892	0.00000021
		46	5230	5,230.01359	-0.00000260
		54	5270	5,269.99729	0.00000052
		62	5310	5,309.99766	0.00000044
	3.33	102	5510	'	-0.00000073
		110	5550	5,550.00369	-0.00000066
		134	5670	5,669.99698	0.00000053
		151	5755	5,754.97700	0.00000400
		159	5795	5,794.97695	0.00000398

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 179 of 180

=					
25	3.7V	38	5190	5,189.98993	0.00000194
		46	5230	5,230.01125	-0.00000215
		54	5270	5,269.98754	0.00000236
		62	5310	5,310.00493	-0.00000093
		102	5510	5,509.99158	0.00000153
		110	5550	5,549.99247	0.00000136
		134	5670	5,669.99238	0.00000134
		151	5755	5,754.97658	0.00000407
		159	5795	5,794.98347	0.00000285
	4.07	38	5190	5,189.99654	0.00000067
		46	5230	5,230.00948	-0.00000181
		54	5270	5,269.98102	0.00000360
		62	5310	5,309.99771	0.00000043
		102	5510	5,510.00576	-0.00000105
		110	5550	5,550.00539	-0.00000097
		134	5670	5,669.99829	0.00000030
		151	5755	5,754.98825	0.00000204
		159	5795	5,794.97768	0.00000385
55		38	5190	5,190.00023	-0.00000005
		46	5230	5,230.00328	-0.00000063
		54	5270	5,269.98963	0.00000197
	3.33	62	5310	5,310.00427	-0.00000080
		102	5510	5,509.98967	0.00000188
		110	5550	5,549.99677	0.00000058
		134	5670	5,670.00457	-0.00000081
		151	5755	5,754.98293	0.00000297
		159	5795	5,794.98906	0.00000189

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained nereon 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 presented to the full-like extent of the law. and offenders may be prosecuted to the fullest extent of the law.



Page: 180 of 180

# 14 ANTENNA REQUIREMENT

# 14.1 Standard Applicable

According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

According to §15.407, If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 14.2 Antenna Connected Construction

The antenna is designed as permanently attached and no consideration of replacement. Please see EUT photo for details.

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> and conditions.htm</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/terms">www.sgs.com/terms</a> e-document.htm. 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.

sneet extent of the turn.

SGS Taiwan Ltd. No.134,WuKungRoad,NewTaipeiIndustrialPark,WukuDistrict,NewTaipeiCity,Taiwan24803/新北市五股區新北產業園區五工路 134 號

有限公司 t (886-2) 2299-3279

f (886-2) 2298-0488