

Page: 1 of 26

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT





**Applicant:** INVENTEC CORPORATION

No.66, Hougang street, ShihLin District, Taipei City, Taiwan.

**Product Name:** All-In-One PC

**Brand Name:** HP

Model No.: TPC-I051-32

**Model Difference:** N/A

ER/2021/80014 **Report Number:** 

FCC ID DGI-TPC-I051-3202

**Issue Date:** September 16, 2021

August 11, 2021 ~ September 7, 2021 **Date of Test:** 

Date of EUT Received: August 4, 2021

Approved By

CHUN-, CHIZEH, CHIE

#### We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10:2013 and the energy emitted by the sample EUT comply with FCC rule part §15C.

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

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. SGS Taiwan Ltd. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號

台灣檢驗科技股份有限公司 t (886-2) 2299-3279 f (886-2) 2298-0488

www.sgs.com.tw



Page: 2 of 26

Revision History								
Report Number Revision Description Issue Date Revised B								
ER/2021/80014	00	Original	September 16, 2021	Yuri Tsai				

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

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

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號 t (886-2) 2299-3279



Page: 3 of 26

## **Table of Contents**

1	GENERAL INFORMATION	4
2	SYSTEM TEST CONFIGURATION	6
3	SUMMARY OF TEST RESULTS	8
4	DESCRIPTION OF TEST MODES	8
5	MEASUREMENT UNCERTAINTY	9
6	CONDUCTED EMISSIONS TEST	10
7	RADIATED EMISSION TEST	14
8	20 dB OCCUPIED BANDWIDTH MEASUREMENT	24
9	ANTENNA REQUIREMENT	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 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="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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



Page: 4 of 26

# **GENERAL INFORMATION**

## 1.1 Product Description

Product Name:	All-In-One PC
Brand Name:	HP
Model No.:	TPC-I051-32
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	0001760BM6
Power Supply:	12.58Vdc from Switching Power Supply

## 1.2 RF Specification

Technology:	Wireless Power Transfer
Operating Frequency	120 kHz ~ 130 kHz
Transmit Power	< -27.19dBuV/m at 3m.
Number of Channels	1
Antenna Type	Loop

Note: Antenna information is provided by the applicant.

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

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

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



Page: 5 of 26

## 1.3 Test Methodology

FCC Part 15, Supbpart C ANSI C63.10:2013

## 1.4 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
		SAC 1		
		SAC 3		
		Conduction 1		
	No.134, Wu Kung Road, New Taipei	Conducted 1		
	Industrial Park, Wuku District, New	Conducted 2	TW0027	
	Taipei City, Taiwan.	Conducted 3		TW3702
		Conducted 4	_	
		Conducted 5		
SGS Taiwan Ltd.		Conducted 6		
Central RF Lab.	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conduction C		
(TAF code 3702)		SAC C		
(1711 OOGC 0702)		SAC D		
		SAC G		
		Conducted A		
		Conducted B	TW0028	
	lacyddir City, falwaii coc	Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

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

## 1.5 Special Accessories

There is no special accessory used while test was conducted.

#### 1.6 Equipment Modifications

There was no modification incorporated into the EUT.

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

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

\*\*SCS\*\*\* Taking\*\*\* \*\*No.134.\*\*\*\* \*\*No.134.\*\*\*\*

\*\*No.134.\*\*\*\* \*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*

\*\*No.134.\*

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



Page: 6 of 26

## 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

The Transmitter was operated in the normal operating mode. The Tx frequency was fixed which was for the purpose of the measurements.

#### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is a placed on a table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 9kHz and 30MHz. The CISPR Quasi-Peak and Average detector mode is employed. The two LISNs provide 50uH/50 ohm 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 a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. 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 radiated emissions, 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.

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

Radiated emission below 30MHz is measured in a 9m\*9m\*6m semi-anechoic chamber,

the measurements correspond to those obtained at an open-field test site. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. SGS Taiwan Ltd. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號

t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



Page: 7 of 26

# 2.4 Test Configuration

#### 2.4.1 AC Power Line Conducted Emission



#### 2.4.2 Emission Measurements



## 2.4.3 Equipment used for test

Equipment	Mfr/Brand	Model/Type No.	Series No.
WPC Test Software	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.

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

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

\*\*SCS\*\*\* Taking\*\*\* \*\*No.134.\*\*\*\* \*\*No.134.\*\*\*\*

\*\*No.134.\*\*\*\* \*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*

\*\*No.134.\* No.134,Wu Kung Road, New Taipei Índustrial Park, Wuku District, New Taipei City, Taiwan/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 www.sgs.com.tw



Page: 8 of 26

## **SUMMARY OF TEST RESULTS**

FCC Rules	Description Of Test	Result
§15.207	AC Power Line Conducted Emission	Compliant
§15.209	Radiated Emission Limits, general requirement	Compliant
§15.215 (c)	20 dB OCCUPIED BANDWIDTH	Compliant
§15.203 Antenna Requirement		Compliant

#### **DESCRIPTION OF TEST MODES**

The EUT stay in continuous transmitting mode. The frequency is the default channel to test, where it is the only manipulative channel as this application supports.

The field strength of radiation emission was measured as EUT three orthogonal planes, E1 / E2 / H, are positioned to pre-scan the emission generating the highest one. The worst position is tested and recorded.

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

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

\*\*SCS\*\*\* Taking\*\*\* \*\*No.134.\*\*\*\* \*\*No.134.\*\*\*\*

\*\*No.134.\*\*\*\* \*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*

\*\*No.134.\*

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



Page: 9 of 26

## **MEASUREMENT UNCERTAINTY**

Test Items	U	Uncertainty		
AC Power Line Conducted Emission	+/-	2.34	dB	
Frequency Stability	+/-	1.53	Hz	
Emission Bandwidth		1.53	Hz	
Temperature		0.4	°C	
Humidity		3.5	%	
DC / AC Power Source		1	%	

Radiated Spurious Emission Measurement Uncertainty					
	+/-	<b>2.64 dB</b> 9kHz~30MHz		9kHz~30MHz	
Polarization: Vertical	+/-	4.93	dB	30MHz - 1000MHz	
Polarization: Vertical	+/-	4.81	dB	1GHz - 18GHz	
	+/-	4.52	dB	18GHz - 40GHz	
	+/-	2.64	dB	9kHz~30MHz	
Polarization: Harizantal	+/-	4.45	dB	30MHz - 1000MHz	
Polarization: Horizontal	+/-	4.81	dB	1GHz - 18GHz	
	+/-	4.52	dB	18GHz - 40GHz	

#### Note:

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

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

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,不可部份複聚。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. 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,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號

t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



Page: 10 of 26

## **CONDUCTED EMISSIONS TEST**

#### 6.1 Limitation

According to section 15.207(a) Conducted Emission Limits as following.

Trestraining to occurre	( ) _	
Frequency range		Limits (dBuV)
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

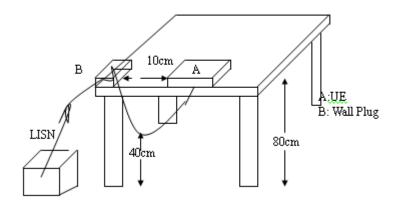
#### Note

- 1. The lower limit shall apply at the transition frequencies
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

## 6.2 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 EUT was placed flushed with the rear of the table.
- 3. The LISN was connected with 120Vac/60Hz power source.

## 6.3 Test SET-UP (Block Diagram of Configuration)



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

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

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



Page: 11 of 26

#### 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 frequency measured were complete.

## 6.6 Measurement Equipment Used:

Conducted Emission Test Site: Conduction 1									
EQUIPMENT TYPE MFR MODEL SERIAL LAST CAL. CAL DUE.									
EMI Test Receiver	R&S	ESCI 7	100759	08/26/2021	08/25/2022				
LISN	SCHWARZBECK	NSLK 8127	8127-465	04/09/2021	04/08/2022				
Coaxial Cables	N/A	Coaxial Cable	161207	12/07/2020	12/06/2021				
Test Software	audix	e3	Ver. 6.11812c	N.C.R	N.C.R				

Note: N.C.R refers to Not Calibrated Required

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

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

\*\*SCS\*\*\* Taking\*\*\* \*\*No.134.\*\*\*\* \*\*No.134.\*\*\*\*

\*\*No.134.\*\*\*\* \*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*\*

\*\*No.134.\*\*

\*\*No.134.\*

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



Page: 12 of 26

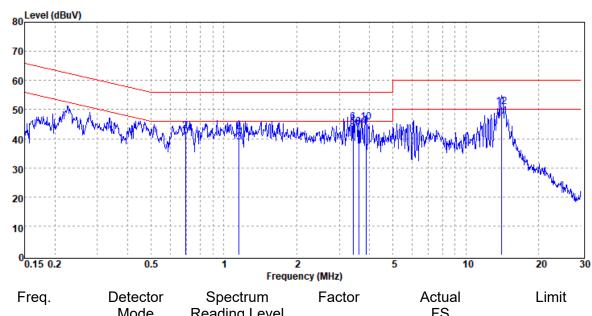
#### 6.7 Measurement Result:

Report Number Test Site :Conduction 1 :ER/2021/80014

Test Mode :WPC **Test Date** :2021-08-27

:AC 120V/60Hz Power Temp./Humi. :25.2/64 Probe Engineer :Nick Lin

Note:



Frequency (MHZ)						
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV	dΒμV	dB
0.69	Average	38.83	0.12	38.95	46.00	-7.05
0.69	QP	42.54	0.12	42.66	56.00	-13.34
1.15	Average	38.65	0.12	38.77	46.00	-7.23
1.15	QP	41.62	0.12	41.74	56.00	-14.26
3.42	Average	43.69	0.41	44.10	46.00	-1.90
3.42	QP	45.25	0.41	45.66	56.00	-10.34
3.61	Average	42.47	0.42	42.89	46.00	-3.11
3.61	QP	43.56	0.42	43.98	56.00	-12.02
3.86	Average	43.93	0.44	44.37	46.00	-1.63
3.86	QP	45.24	0.44	45.68	56.00	-10.32
14.01	Average	44.82	1.00	45.82	50.00	-4.18
14.01	QP	49.98	1.00	50.98	60.00	-9.02

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

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

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



Page: 13 of 26

Report Number :ER/2021/80014

:WPC Test Mode

Power :AC 120V/60Hz

Probe :N

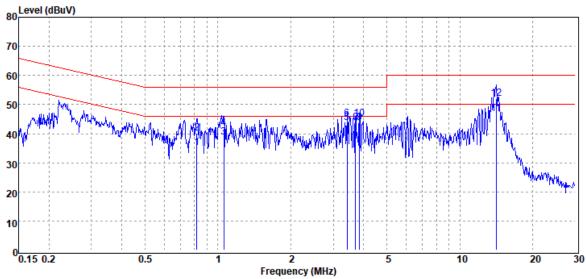
Note:

:Conduction 1 **Test Site** 

**Test Date** :2021-08-27

Temp./Humi. :25.2/64

Engineer :Nick Lin



		quo.	, ()			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV	dΒμV	dB
						_
0.82	Average	34.94	0.17	35.11	46.00	-10.89
0.82	QP	40.07	0.17	40.24	56.00	-15.76
1.06	Average	38.49	0.16	38.65	46.00	-7.35
1.06	QP	41.60	0.16	41.76	56.00	-14.24
3.42	Average	43.29	0.38	43.67	46.00	-2.33
3.42	QP	44.71	0.38	45.09	56.00	-10.91
3.71	Average	41.45	0.39	41.84	46.00	-4.16
3.71	QP	43.32	0.39	43.71	56.00	-12.29
3.85	Average	43.32	0.39	43.71	46.00	-2.29
3.85	QP	44.71	0.39	45.10	56.00	-10.90
14.12	Average	45.83	0.93	46.76	50.00	-3.24
14.12	QP	51.10	0.93	52.03	60.00	-7.97

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. 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。

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,不可部份複聚。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. 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: 14 of 26

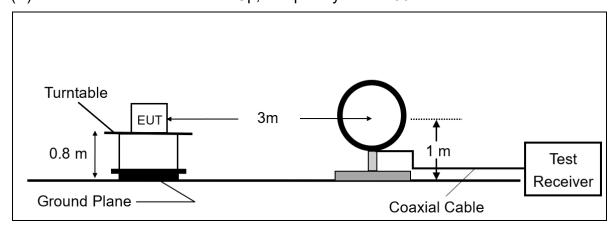
#### RADIATED EMISSION TEST

#### 7.1 Measurement Procedure

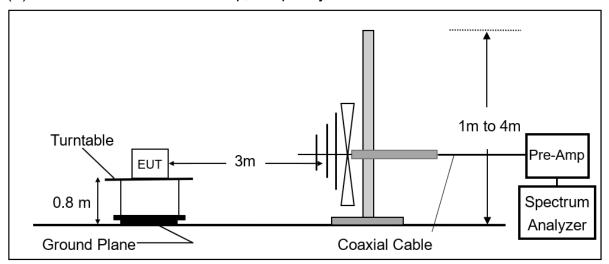
- The EUT was placed on a turn table which is 0.8m above ground plane.
- Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

#### 7.2 Test SET-UP:

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



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



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

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. SGS Taiwan Ltd. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號

t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



Page: 15 of 26

## 7.3 Measurement Equipment Used:

Radiated Emission Test Site: SAC 3								
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/20/2021	08/19/2022			
PXA Spectrum Analyzer	Agilent	N9030A	MY53120760	04/27/2021	04/26/2022			
EMI Test Receiver	R&S	ESCI 7	100759	08/26/2021	08/25/2022			
Pre-Amplifier	HP	8447D	2944A07676	12/16/2020	12/15/2021			
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2636/2	12/16/2020	12/15/2021			
Coaxial Cable	Huber Suhner	SUCOFLEX 104	340057/4	12/16/2020	12/15/2021			
Coaxial Cable	Huber Suhner	SUCOFLEX 104PEA	800052/2	12/16/2020	12/15/2021			
Site Cal	SGS	SAC 3	N/A	01/01/2021	12/31/2021			
Test Software	audix	e3	Ver. 6.11812c	N.C.R	N.C.R			

Note: N.C.R refers to Not Calibrated Required

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

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,不可部份複聚。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com.tw/Terms-and-Conditions">http://www.sgs.com.tw/Terms-and-Conditions</a>. 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,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號



Page: 16 of 26

# 7.4 Applicable Standard

The field strength of any emissions appearing outside of operation frequency shall not exceed the general radiated emission limits in section 15.209 as below.

Frequency (MHz)	Field strength (μV/m)	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. Emission level in  $dB\mu V/m=20 \log (\mu V/m)$
- 2. Distance extrapolation factor = 40 log (required distance/ test distance) (dB)
- 3. 20\*log(30uV/m) + 40dB = 69.54 dBuV/m
- The lower limit shall apply at the transition frequencies. 4.
- 5. The measurement was undertaken in closer distance at 3m, where extrapolation factor is offset to convert the limit of the measurement.
- 6. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of §15.205.
- 7. The general radiated emission limits in §15.209 apply for the spurious emission generate from UE, except for the fundamental emission where the respective section specifies otherwise.
- Actual FS(dB $\mu$ V/m) = Spectrum. Reading level(dB $\mu$ V) + Factor(dB) Factor(dB) = Antenna Factor(dB) + Cable Loss(dB) – Pre Amplifier Gain(dB)

1.

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

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

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

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



Page: 17 of 26

## 7.4.1 Frequency range 30 MHz to 1000 MHz

The electric field radiated emissions within 30 - 1000 MHz from the WPT subassembly of WPT source and client devices and WPT systems shall comply with the limits applicable to induction cooking equipment, as set out in ICES-001 table 4.

Table 4: Electric field strength radiated emission limits for induction cooking appliances

Frequency range (MHz)	OATS or SAC* 10 m measurement distance Quasi- peak (dBµV/m)	OATS or SAC* 3 m measurement distance Quasi- peak (dBµV/m)	FAR* 3 m measurement distance Quasi- peak (dBµV/m)
30 – 230	30	40	42 to 35 **
230 – 1000	37	47	42

<sup>\*</sup> OATS = open-area test site, SAC = semi-anechoic chamber, FAR = fully-anechoic room (see CSA CISPR 11:19).

## Note:

- The more stringent limit applies at the transition frequency. 1.
- 2. Measurements are demonstrated in SAC with distance at 3m.
- Actual FS(dB $\mu$ V/m) = Spectrum. Reading level(dB $\mu$ V) + Factor(dB) Factor(dB) = Antenna Factor(dB) + 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. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製

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

<sup>\*\*</sup> The limit level in dBµV/m decreases linearly with the logarithm of frequency.



Page: 18 of 26

#### 7.5 Test Result

## 7.5.1 Field Strength of Fundamental Emission

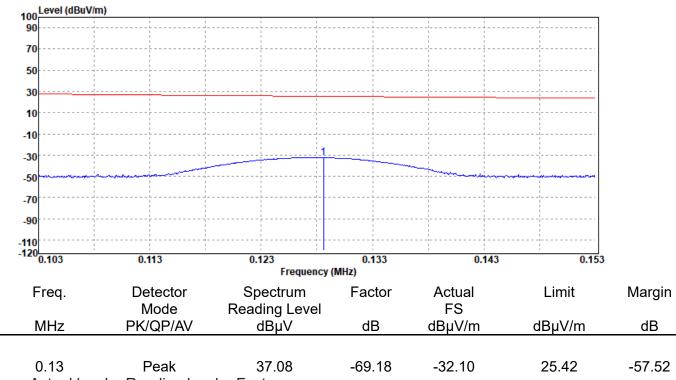
:SAC 3 Report Number :ER-2021-80014 Test Site

**Operation Mode** :WPC **Test Date** :2021-08-11

**Test Frequency** :128KHz Temp./Humi. :26.4/50

:VERTICAL Test Mode :Main Antenna Pol.

**EUT Pol** :H Plane Engineer :Nick Lin



Actual level = Reading level + Factor

Factor = Antenna factor + cable loss - distance factor distance factor=3m to 300m, within the band 9kHz-490kHz 3m to 30m, within the band 490kHz-30MHz

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

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

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



Page: 19 of 26

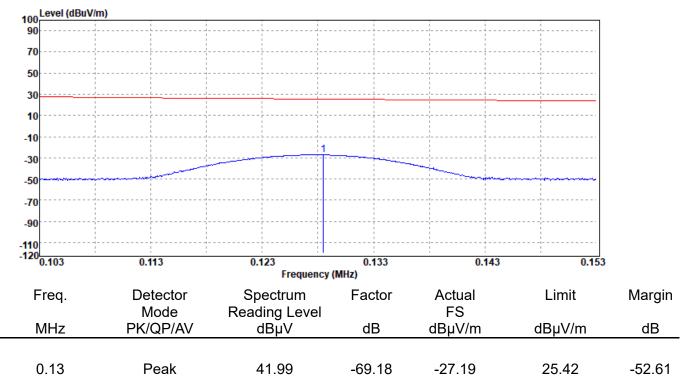
Test Site :SAC 3 Report Number :ER-2021-80014

:2021-08-11 **Operation Mode** :WPC **Test Date** 

**Test Frequency** :128KHz :26.4/50 Temp./Humi.

Test Mode :HORIZONTAL :Main Antenna Pol.

**EUT Pol** :H Plane Engineer :Nick Lin



Actual level = Reading level + Factor

Factor = Antenna factor + cable loss - distance factor

distance factor=3m to 300m, within the band 9kHz-490kHz

3m to 30m, within the band 490kHz-30MHz

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

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



Page: 20 of 26

#### 7.5.3 Below 30 MHz test result

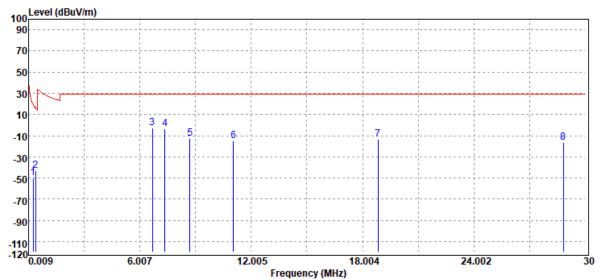
Report Number :ER-2021-80014 Test Site :SAC 3

Operation Mode :WPC Test Date :2021-08-11

Test Frequency :128KHz Temp./Humi. :26.4/50

Test Mode Antenna Pol. :VERTICAL :Tx

**EUT Pol** :H Plane Engineer :Nick Lin



			,			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
0.26	Peak	19.03	-68.76	-49.73	19.44	-69.17
0.38	Peak	25.83	-68.65	-42.82	15.91	-58.73
6.69	Peak	26.01	-28.45	-2.44	29.54	-31.98
7.37	Peak	25.09	-28.31	-3.22	29.54	-32.76
8.69	Peak	15.47	-28.06	-12.59	29.54	-42.13
11.05	Peak	12.78	-27.94	-15.16	29.54	-44.70
18.85	Peak	14.76	-28.45	-13.69	29.54	-43.23
28.82	Peak	14.08	-30.55	-16.47	29.54	-46.01

Actual level = Reading level + Factor

Factor = Antenna factor + cable loss – distance factor distance factor=3m to 300m, within the band 9kHz-490kHz 3m to 30m, within the band 490kHz-30MHz

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

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

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

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號 www.sgs.com.tw



Page: 21 of 26

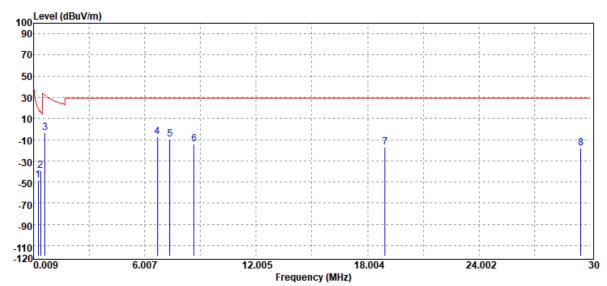
Test Site :SAC 3 Report Number :ER-2021-80014

**Operation Mode** :WPC Test Date :2021-08-11

Test Frequency :128KHz Temp./Humi. :26.4/50

Test Mode Antenna Pol. :HORIZONTAL :Tx

**EUT Pol** :H Plane Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit dBµV/m	Margin dB
		·		•	•	
0.26	Peak	20.26	-68.76	-48.50	19.44	-67.94
0.38	Peak	29.14	-68.65	-39.51	15.95	-55.46
0.64	Peak	25.11	-28.59	-3.48	31.54	-35.02
6.69	Peak	21.18	-28.45	-7.27	29.54	-36.81
7.37	Peak	18.62	-28.31	-9.69	29.54	-39.23
8.66	Peak	13.52	-28.07	-14.55	29.54	-44.09
18.93	Peak	10.88	-28.45	-17.57	29.54	-47.11
29.50	Peak	12.36	-30.68	-18.32	29.54	-47.86

Actual level = Reading level + Factor

Factor = Antenna factor + cable loss - distance factor

distance factor=3m to 300m, within the band 9kHz-490kHz 3m to 30m, within the band 490kHz-30MHz

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

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

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

No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號 www.sgs.com.tw



Page: 22 of 26

## 7.5.5 Above 30MHz test result

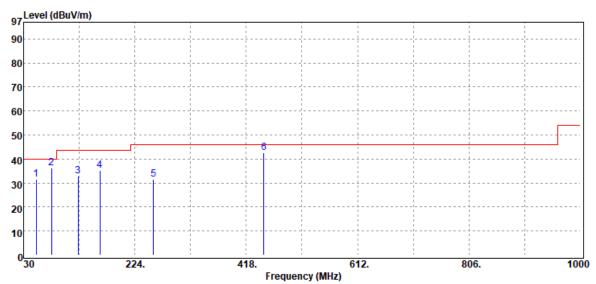
Report Number :ER-2021-80014 Test Site :SAC 3

:WPC Operation Mode Test Date :2021-08-11

Test Frequency :128KHz Temp./Humi. :26.4/50

Test Mode Antenna Pol. :VERTICAL :Tx

**EUT Pol** :H Plane :Nick Lin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
	•	•		•	<b>'</b>	
52.31	Peak	40.41	-8.89	31.52	40.00	-8.48
78.50	Peak	48.52	-12.35	36.17	40.00	-3.83
125.06	Peak	42.45	-9.47	32.98	43.50	-10.52
162.89	Peak	43.24	-7.99	35.25	43.50	-8.25
256.01	Peak	40.07	-8.48	31.59	46.00	-14.41
448.35	QP	46.01	-3.31	42.70	46.00	-3.30

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

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

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

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



Page: 23 of 26

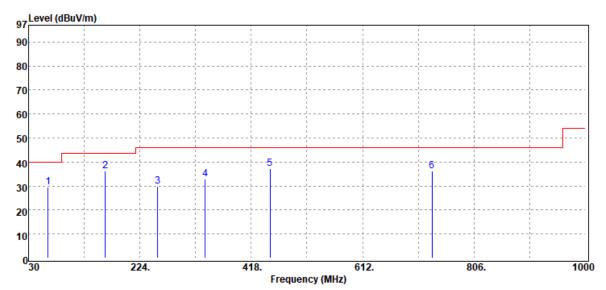
Report Number Test Site :SAC 3 :ER-2021-80014

**Operation Mode** :WPC **Test Date** :2021-08-11

Test Frequency :128KHz Temp./Humi. :26.4/50

Test Mode Antenna Pol. :HORIZONTAL :Tx

**EUT Pol** :H Plane Engineer :Nick Lin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin
IVITZ	PN/QP/AV	аьμν	uБ	ασμν/πι	ασμν/π	dB
63.95	Peak	39.04	-9.42	29.62	40.00	-10.38
163.86	Peak	44.21	-7.99	36.22	43.50	-7.28
255.04	Peak	38.52	-8.49	30.03	46.00	-15.97
337.49	Peak	38.70	-5.65	33.05	46.00	-12.95
450.60	QP	40.51	-3.25	37.26	46.00	-8.74
733.25	Peak	34.74	1.36	36.10	46.00	-9.90

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

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

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



Page: 24 of 26

## 20 dB OCCUPIED BANDWIDTH MEASUREMENT

## 8.1 Standard Applicable:

§2.1049 & §15.215 (c)

#### 8.2 Limit:

None

## 8.3 Test Set-up

Refer to section 6.2 in this report

#### 8.4 Measurement Procedure

20dB bandwidth

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak
- 2. 20dB Bandwidth the resolution bandwidth of 200 Hz and the video bandwidth of 1 kHz were used.
- 3. Measured the spectrum width with power higher than 20dB below carrier.

## 8.5 Measurement Equipment Used:

Conducted Emission Test Site: Conducted 2									
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.				
Loop Antenna	ETS.LINDGREN	6502	148045	10/19/2020	10/18/2021				
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY60240503	12/11/2020	12/10/2021				
DC Block	Mini-Circuits	BLK-18-S+	1	12/16/2020	12/15/2021				

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

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

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



Page: 25 of 26

# 8.7 Measurement Result -20dB Bandwidth

20dB Bandwidth 504 Hz



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

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

\*\*SCS\*\*\* Taking\*\*\* \*\* \*\*Listent\*\* \*\*Listent\*\*\* \*\*Listent\*\*\* \*\*Listent\*\* \*\*Listent\*\*\* \*\*Listent\*\* \*\*Listent\*\* \*\*Listent\*\*\* \*\*Listent\*\* \*\*Listent\*\*\* \*\*Listent\*\* \*\*Listent\*\* \*\*Listent\*\*\* \*\*Listent\*\* \*\*Listent\*

SGS Taiwan Ltd. 台灣檢驗科技股份有限公司 No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號



Page: 26 of 26

## ANTENNA REQUIREMENT

## 9.1 Standard Applicable:

For intentional device, 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.

#### 9.2 Antenna Connected Construction:

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

~ End of Report ~

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

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

SGS Taiwan Ltd. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路134號 www.sgs.com.tw