

**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 1 of 16

**TEST REPORT****Application No.:** FYCR2207000288AT**Applicant:** Navico Inc.**Address of Applicant:** 4500 S. 129th East Avenue, Ste. 200 Tulsa Oklahoma United States 74134**Manufacturer:** Navico Auckland Limited**Address of Manufacturer:** Arrenway Drive, Rosedale, Auckland, 0632 New Zealand**Factory:** Shenzhen Fastrain Technology Co., Ltd.**Address of Factory:** No.3 Baolong 4th Rd., Baolong Industrial Area, Longgang District, Shenzhen, China**Equipment Under Test (EUT):****EUT Name:** Marine VHF Radio**Model No.:** V60-B, RS40-B \*

\* Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

**Trade mark:** B&G, SIMRAD**Standard(s) :** 47 CFR Part 15, Subpart B**Date of Receipt:** 2022-07-29**Date of Test:** 2022-07-29 to 2022-08-11**Date of Issue:** 2022-08-12

<b>Test Result:</b>	<b>Pass*</b>
---------------------	--------------

\* In the configuration tested, the EUT complied with the standards specified above.



Winkey Wang  
EMC Technical Manager



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions of Electronic Documents at <http://www.sgs.com/en/electronic-Conditions-Terms-and-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

Fuyong Lab, Xinxiong TechnoPark, Fanyang Road, Fanyang Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 2 of 16

**Revision Record**

<b>Version</b>	<b>Chapter</b>	<b>Date</b>	<b>Modifier</b>	<b>Remark</b>
01		2022-08-12		Original

**Authorized for issue by:**

	 _____ <b>Tree Zhan/Project Engineer</b>		
	 _____ <b>Winkey Wang/Reviewer</b>		

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com](http://www.sgsgroup.com)

中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 3 of 16

**2 Test Summary**

<b>Emission Part</b>				
<b>Item</b>	<b>Standard</b>	<b>Method</b>	<b>Requirement</b>	<b>Result</b>
Radiated Emissions (30MHz-1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	15.109(a);Class B	Pass
Radiated Emissions (Above 1GHz)		ANSI C63.4:2014	15.109(g);Class B	Pass

**Remark:**

Model No.: V60-B, RS40-B

Only the model V60-B was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for all the above models, with only differences are the trade name and model no. for trading purpose.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



### 3 Contents

	Page
<b>1 COVER PAGE</b>	<b>1</b>
<b>2 TEST SUMMARY</b>	<b>3</b>
<b>3 CONTENTS</b>	<b>4</b>
<b>4 GENERAL INFORMATION</b>	<b>5</b>
4.1 DETAILS OF E.U.T	5
4.2 DESCRIPTION OF SUPPORT UNITS	5
4.3 MEASUREMENT UNCERTAINTY	5
4.4 TEST LOCATION	6
4.5 TEST FACILITY	6
4.6 DEVIATION FROM STANDARDS	6
4.7 ABNORMALITIES FROM STANDARD CONDITIONS	6
<b>5 EQUIPMENT LIST</b>	<b>7</b>
<b>6 EMISSION TEST RESULTS</b>	<b>9</b>
6.1 RADIATED EMISSIONS (30MHz-1GHz)	9
6.1.1 E.U.T. Operation	9
6.1.2 Test Mode Description	9
6.1.3 Test Setup Diagram	10
6.1.4 Measurement Procedure and Data	10
6.2 RADIATED EMISSIONS (ABOVE 1GHz)	13
6.2.1 E.U.T. Operation	13
6.2.2 Test Mode Description	13
6.2.3 Test Setup Diagram	13
6.2.4 Measurement Procedure and Data	13
<b>7 TEST SETUP PHOTO</b>	<b>16</b>
<b>8 EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)</b>	<b>16</b>



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 5 of 16

**4 General Information****4.1 Details of E.U.T.**

Power supply:	12 VDC battery system
Cable:	DC cable: longer than 300cm unshielded
Sample Type:	Mobile device
Internal Source:	More than 108MHz

Remark: The information in this section is provided by the applicant or manufacturer, CCS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

**4.2 Description of Support Units**

Description	Manufacturer	Model No.	Serial No.
DC power	ZHAOXIN	RXN-305D	REF. No.SEA2700
Coaxial Attenuator	Provided by client	TS4	HYT168793
Cell Site Test Set	HP	8921A	3633A04615
Audio Analyzer	Rohde & Schwarz	UPV	SEM008-03
GNSS Antenna	NAVICO	GPS-500	/

**4.3 Measurement Uncertainty**

Test Item	Measurement Uncertainty
Radiated Emissions (30MHz-1GHz)	± 3.1dB (Below 1GHz)
Radiated Emissions (Above 1GHz)	± 4.4dB (Above 1GHz)

Remark:

The  $U_{lab}$  (lab Uncertainty) is less than  $U_{cispr/ETSI}$  (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)



Fuyong lab, Xinxiong TechnoPark, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## Compliance Certification Services (Kunshan) Inc. Shenzhen Branch

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 6 of 16

### 4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc. Shenzhen branch.

Fuyong lab. Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China

Tel: +86 755 8866 3988 Fax: +86 755 2671 0594

No tests were sub-contracted.

### 4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 6606.01)**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6606.01.

- **FCC –Designation Number: CN1322**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized as an accredited testing laboratory.

Designation Number: CN1322. Test Firm Registration Number: 718073

- **Innovation, Science and Economic Development Canada**

Compliance Certification Services (Kunshan) Inc. Shenzhen branch has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0129.

IC#: 28189.

### 4.6 Deviation from Standards

None

### 4.7 Abnormalities from Standard Conditions

None

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab. Xinlong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



# Compliance Certification Services (Kunshan) Inc. Shenzhen Branch

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 7 of 16

## 5 Equipment List

Radiated Emissions (30MHz-1GHz)						
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	
3m Anechoic Chamber	CRT	N/A	SEM001-13	2021/7/13	2024/7/12	
Trilog-Broadband Antenna	Schwarzbeck	VULB9168	SEM003-33	2021/9/25	2024/9/24	
Biconical Antenna	Schwarzbeck	VUBA9117	SEM003-35	2021/12/26	2024/12/25	
Loop Antenna	ETS-LINDGREN	6502	SEM003-36	2021/9/26	2024/9/25	
MXE EMI receiver	Agilent	N9038A	SEM004-05	2022/7/12	2023/7/11	
Pre-amplifier	HP	8447D	SEM005-02	2022/7/12	2023/7/11	
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2021/7/11	2024/7/10	
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	SEM003-32	2021/9/26	2024/9/25	
Double-ridged waveguide horn	ETS-LINDGREN	3117	SEM003-34	2021/9/25	2024/9/24	
Spectrum Analyzer	Rohde & Schwarz	101288	SEM004-08	2022/7/12	2023/7/11	
Low Noise Amplifier	CLAVIIO	BDLNA-0118-352810	SEM005-05	2022/7/12	2023/7/11	
Pre-amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2022/7/12	2023/7/11	
Pre-amplifier	Rohde & Schwarz	CH14-H052	SEM005-17	2022/7/12	2023/7/11	

Radiated Emissions (Above 1GHz)						
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	
3m Anechoic Chamber	CRT	N/A	SEM001-13	2021/7/13	2024/7/12	
Trilog-Broadband Antenna	Schwarzbeck	VULB9168	SEM003-33	2021/9/25	2024/9/24	
Biconical Antenna	Schwarzbeck	VUBA9117	SEM003-35	2021/12/26	2024/12/25	
Loop Antenna	ETS-LINDGREN	6502	SEM003-36	2021/9/26	2024/9/25	
MXE EMI receiver	Agilent	N9038A	SEM004-05	2022/7/12	2023/7/11	
Pre-amplifier	HP	8447D	SEM005-02	2022/7/12	2023/7/11	
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2021/7/11	2024/7/10	
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	SEM003-32	2021/9/26	2024/9/25	
Double-ridged waveguide horn	ETS-LINDGREN	3117	SEM003-34	2021/9/25	2024/9/24	
Spectrum Analyzer	Rohde & Schwarz	101288	SEM004-08	2022/7/12	2023/7/11	

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com



Fuyong lab, Xinxiong TechnoPark, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 sgs.china@sgs.com

**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 8 of 16

Low Noise Amplifier	CLAVIIO	BDLNA-0118-352810	SEM005-05	2022/7/12	2023/7/11
Pre-amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2022/7/12	2023/7/11
Pre-amplifier	Rohde & Schwarz	CH14-H052	SEM005-17	2022/7/12	2023/7/11
Pre-amplifier	TST PASS	LNA04080G30	SEM005-27	2022/4/15	2023/4/14
Pre-amplifier	TST PASS	LNA10180G45	SEM005-28	2022/4/15	2023/4/14

**General used equipment**

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Mingle	TH607	SEM002-22	2022-07-12	2023-07-11
Humidity/ Temperature Indicator	Mingle	TH607	SEM002-23	2022-07-12	2023-07-11
Barometer	DUMAI	DYM3	SEM002-24	2022-07-12	2023-07-11

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong Lab, Xinxiong TechnoPark, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



## 6 Emission Test Results

### 6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 15, Subpart B

Test Method: ANSI C63.4:2014

Measurement Distance: 3m

Limit:

FREQUENCY (MHz)	dB $\mu$ V/m (At 10m)	dB $\mu$ V/m (At 3m)
	Class B	Class B
30MHz -88MHz	29.5	40.0
88MHz-216MHz	33.1	43.5
216MHz-960MHz	35.6	46.0
960MHz-1000MHz	43.5	54.0

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.6 °C

Humidity: 51.7 % RH

Atmospheric Pressure: 1020 mbar

#### 6.1.2 Test Mode Description

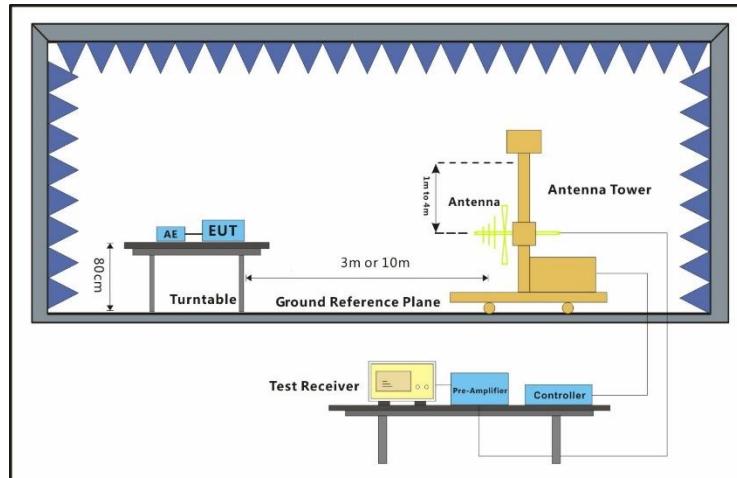
Pre-scan / Final test	Mode Code	Description
Final test	00	On mode, keep EUT working normally.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com](http://www.sgsgroup.com)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)



**6.1.3 Test Setup Diagram****6.1.4 Measurement Procedure and Data**

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 www.sgs.com/cn  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 sgs.china@sgs.com

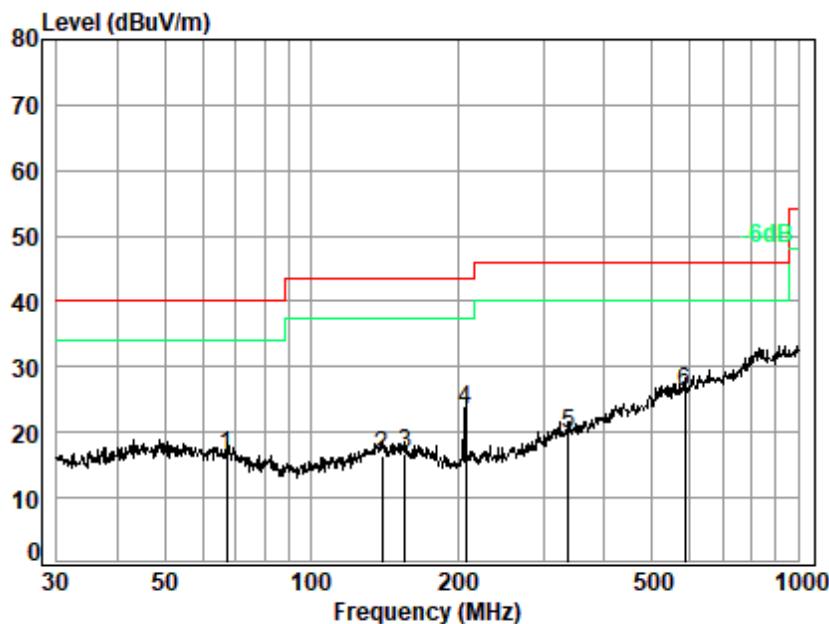
**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 11 of 16

Test Mode: 00; Polarity: Horizontal



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 00288AT  
Mode : 00

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Line Limit	Over Limit	Remark	
								MHz	dB
1	66.9669	0.27	16.43	24.84	24.63	16.49	40.00	-23.51	QP
2	139.8508	0.91	17.43	25.53	23.76	16.57	43.50	-26.93	QP
3	155.9101	0.81	17.30	25.54	24.02	16.59	43.50	-26.91	QP
4	207.8501	0.72	15.44	25.57	32.80	23.39	43.50	-20.11	QP
5	337.2155	1.38	19.72	25.62	24.20	19.68	46.00	-26.32	QP
6	584.7895	2.03	24.04	25.70	25.80	26.17	46.00	-19.83	QP

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)



Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com](http://www.sgsgroup.com)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

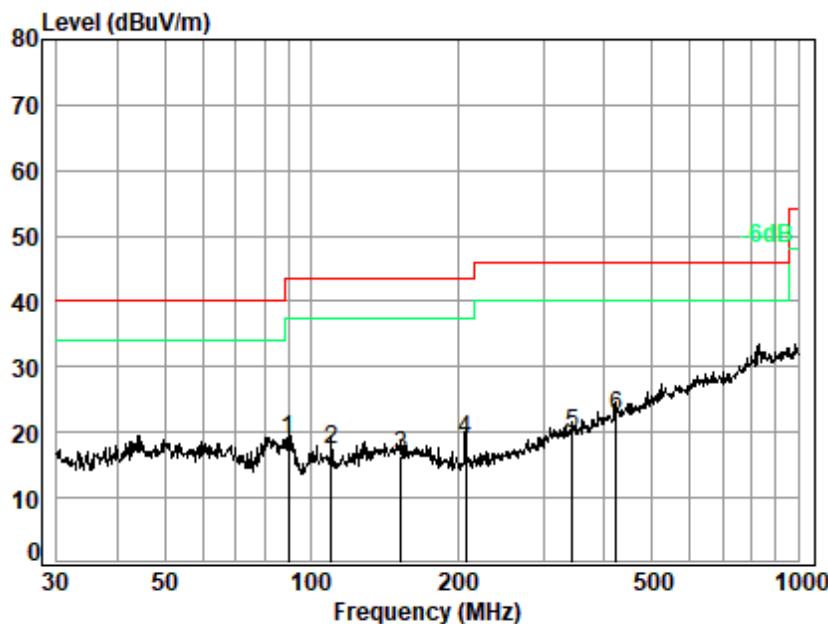
**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 12 of 16

Test Mode: 00; Polarity: Vertical



Site : chamber  
Condition: 3m VERTICAL  
Job No : 00288AT  
Mode : 00

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Line Limit	Over	
							dB	Remark
1 89.9047	0.67	13.61	25.17	29.86	18.97	43.50	-24.53	QP
2 110.1816	0.89	15.22	25.51	26.88	17.48	43.50	-26.02	QP
3 153.2004	0.83	17.36	25.54	23.81	16.46	43.50	-27.04	QP
4 207.8501	0.72	15.44	25.57	28.20	18.79	43.50	-24.71	QP
5 343.1800	1.44	19.80	25.63	24.02	19.63	46.00	-26.37	QP
6 423.5403	1.58	21.12	25.67	25.63	22.66	46.00	-23.34	QP

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)



Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com](http://www.sgsgroup.com)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 6.2 Radiated Emissions (Above 1GHz)

Test Requirement: 47 CFR Part 15, Subpart B

Test Method: ANSI C63.4:2014

Measurement Distance: 3m

Limit:

Above 1GHz 74(dB $\mu$ V/m) peak, 54(dB $\mu$ V/m) average at 3m distance

83.54(dB $\mu$ V/m) peak, 63.54(dB $\mu$ V/m) average at 1m distance

Detector: Peak for pre-scan (1MHz resolution bandwidth) 1GHz to 40GHz

### 6.2.1 E.U.T. Operation

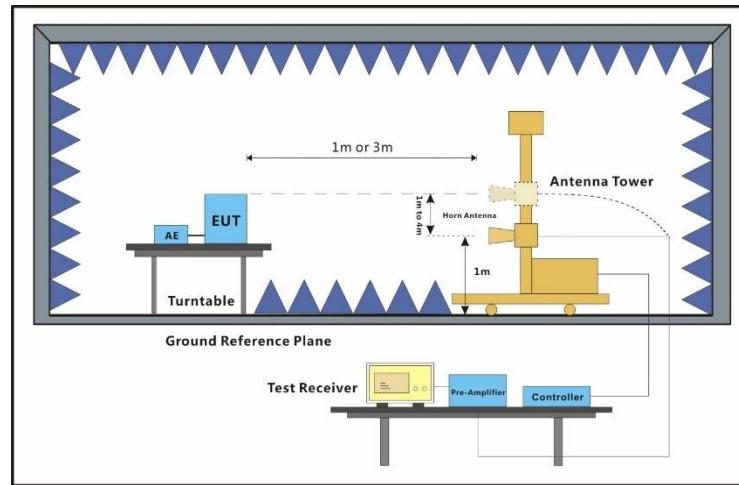
Operating Environment:

Temperature: 22.2 °C      Humidity: 58.2 % RH      Atmospheric Pressure: 1020 mbar

### 6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	On mode, keep EUT working normally.

### 6.2.3 Test Setup Diagram



### 6.2.4 Measurement Procedure and Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.DocCheck@sgs.com

Fuyong lab, Xinxiong TechnoPark, Fuyong Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 www.sgsgroup.com.cn

中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 sgs.china@sgs.com

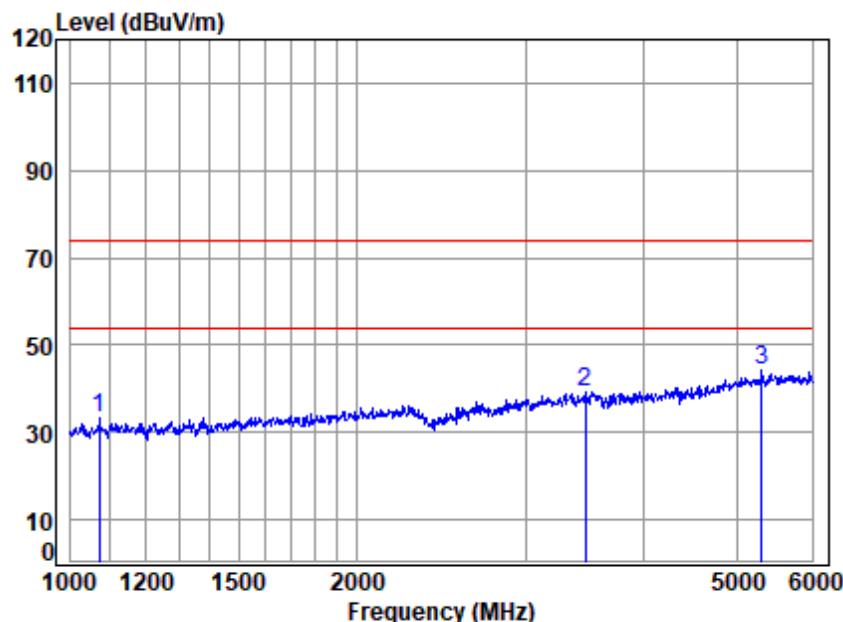
**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 14 of 16

Test Mode: 00; Polarity: Horizontal



Site : chamber  
Condition: 3m HORIZONTAL  
Job No : 00288AT  
Mode : 00  
Note :

	Freq	Cable	Ant	Preamp	Read	Limit	Over	Remark	
		MHz	Loss	Factor	Level	dBuV	dBuV/m	dBuV/m	
1	1072.3780	2.83	24.18	52.56	58.64	33.09	74.00	-40.91	Peak
2	3467.6640	6.91	28.69	52.95	56.42	39.07	74.00	-34.93	Peak
3	5311.7420	8.28	32.16	53.00	56.95	44.39	74.00	-29.61	Peak



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com](http://www.sgsgroup.com)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

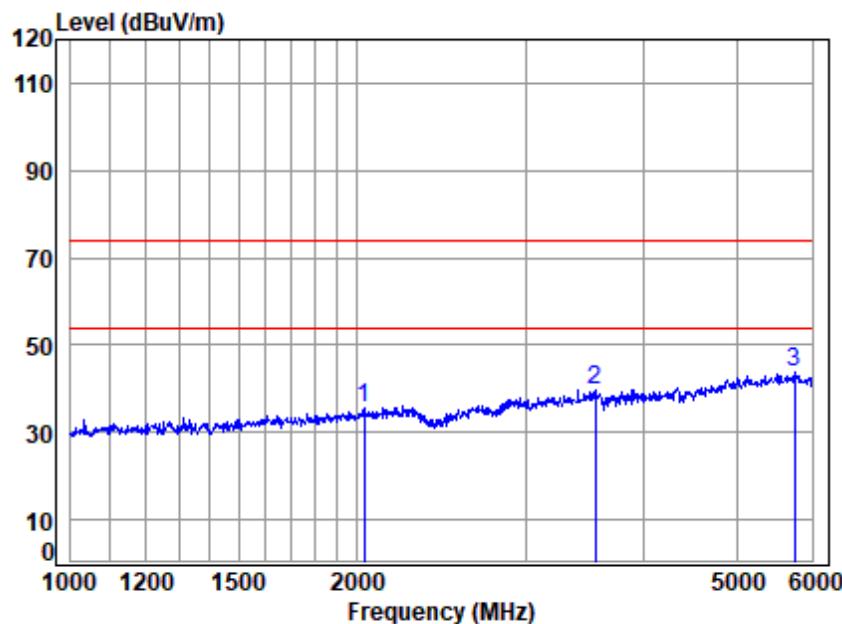
**Compliance Certification Services (Kunshan) Inc. Shenzhen Branch**

SZCCS-TRF-01 Rev. A/0 Aug01,2022

Report No.: FYCR220700028801

Page: 15 of 16

Test Mode: 00; Polarity: Vertical



Site : chamber  
Condition: 3m VERTICAL  
Job No : 00288AT  
Mode : 00  
Note :

	Freq	Cable	Ant	Preamp	Read	Limit	Over	Remark
		MHz	Loss	Factor	Level	Level	Line	
1	2033.0490	4.78	26.29	53.10	57.57	35.54	74.00	-38.46 Peak
2	3555.7490	7.05	28.79	52.92	56.84	39.76	74.00	-34.24 Peak
3	5747.4560	7.95	32.50	52.87	56.18	43.76	74.00	-30.24 Peak



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com](http://www.sgsgroup.com)  
中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)

## 7 Test Setup Photo

Refer to appendix - Test Setup Photos for FYCR2207000288AT.

## 8 EUT Constructional Details (EUT Photos)

Refer to appendix - External and Internal Photos for FYCR2207000288AT.

- End of the Report -



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.DocCheck@sgs.com](mailto:CN.DocCheck@sgs.com)

Fuyong lab, Xinxiong TechnoPark, Fengtang Road, Fuyong Subdistrict, Bao'an, Shenzhen, China 518103 t (86-755) 88663988 f (86-755) 26710594 [www.sgsgroup.com.cn](http://www.sgsgroup.com.cn)

中国·深圳·宝安区福永街道凤塘大道鑫龙科技园福永实验室 邮编: 518103 t (86-755) 88663988 f (86-755) 26710594 [sgs.china@sgs.com](mailto:sgs.china@sgs.com)