

EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 1 of 52 FCC ID: 2AOJNSWY41

# TEST REPORT

| Applicant:Zhongshan Transtek Electronics Co., LtdAddress of Applicant:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaManufacturer:Zhongshan Transtek Electronics Co., LtdAddress of Manufacturer:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaFactory:Zhongshan Transtek Electronics Co., LtdAddress of Factory:Zhongshan Transtek Electronics Co., LtdProduct Name:Body ScaleModel No.:SWY41 |
|---|
| Zhongshan, Guangdong, ChinaManufacturer:Zhongshan Transtek Electronics Co., LtdAddress of Manufacturer:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaFactory:Zhongshan Transtek Electronics Co., LtdAddress of Factory:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaProduct Name:Body Scale  |
| Address of Manufacturer:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaFactory:Zhongshan Transtek Electronics Co., LtdAddress of Factory:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaProduct Name:Body Scale   |
| Factory:Zhongshan, Guangdong, ChinaFactory:Zhongshan Transtek Electronics Co., LtdAddress of Factory:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaProduct Name:Body Scale  |
| Address of Factory:Zone E, No.105, Dongli Road, Torch Development District, 528437<br>Zhongshan, Guangdong, ChinaProduct Name:Body Scale  |
| Zhongshan, Guangdong, China         Product Name:       Body Scale  |
| · · · · · · · · · · · · · · · · · · ·   |
| Model No.: SWY41  |
|   |
| Standard(s): 47 CFR Part 15, Subpart C 15.247   |
| Date of Receipt: 2024-10-11   |
| Date of Test: 2024-11-08 to 2024-11-18  |
| Date of Issue: 2024-12-10   |
| Test Result: Pass*  |

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

Ridey Lin

Ricky Liu 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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. 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 form exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written 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,** 

s Co.Ltd No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 oralony 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com

Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 2 of 52

| Revision Record |                  |            |          |  |  |  |
|-----------------|------------------|------------|----------|--|--|--|
| Version         | Report No.       | Date       | Remark   |  |  |  |
| 01              | GZCR241000118702 | 2024-12-10 | Original |  |  |  |
|                 |                  |            |          |  |  |  |
|                 |                  |            |          |  |  |  |

| Authorized for issue by: |                             |  |
|--------------------------|-----------------------------|--|
|                          | Sumzton                     |  |
|                          | Allen Zhou/Project Engineer |  |
|                          | vius cui                    |  |
|                          | Vico Cui/Reviewer           |  |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 3 of 52

#### **Test Summary** 2

| Radio Spectrum Technical Requirement |                                     |        |  |        |  |  |  |
|--------------------------------------|-------------------------------------|--------|--|--------|--|--|--|
| Item                                 | Standard                            | Method | Requirement  | Result |  |  |  |
| Antenna Requirement                  | 47 CFR Part 15,<br>Subpart C 15.247 | N/A    | 47 CFR Part 15, Subpart<br>C 15.203 & 15.247(b)(4) | Pass   |  |  |  |

| Radio Spectrum Matter Part                                  |                                     |   |  |        |  |  |  |
|---|-------------------------------------|---|--|--------|--|--|--|
| Item  | Standard                            | Method                                  | Requirement                                  | Result |  |  |  |
| Radiated Emissions<br>which fall in the<br>restricted bands |                                     | ANSI C63.10 (2013)<br>Section 11.12     | 47 CFR Part 15, Subpart<br>C 15.205 & 15.209 | Pass   |  |  |  |
| Radiated Spurious<br>Emissions Below<br>1GHz                | -                                   | ANSI C63.10 (2013)<br>Section 6.4,6.5   | 47 CFR Part 15, Subpart<br>C 15.205 & 15.209 | Pass   |  |  |  |
| Radiated Spurious<br>Emissions Above<br>1GHz                |                                     | ANSI C63.10 (2013)<br>Section 6.6       | 47 CFR Part 15, Subpart<br>C 15.205 & 15.209 | Pass   |  |  |  |
| Conducted Peak<br>Output Power                              | 47 CFR Part 15,<br>Subpart C 15.247 | ANSI C63.10 (2013)<br>Section 11.9.1    | 47 CFR Part 15, Subpart<br>C 15.247(b)(3)    | Pass   |  |  |  |
| Minimum 6dB<br>Bandwidth                                    |                                     | ANSI C63.10 (2013)<br>Section 11.8.1    | 47 CFR Part 15, Subpart<br>C 15.247a(2)      | Pass   |  |  |  |
| Power Spectrum<br>Density                                   |                                     | ANSI C63.10 (2013)<br>Section 11.10.2   | 47 CFR Part 15, Subpart<br>C 15.247(e)       | Pass   |  |  |  |
| Conducted Band<br>Edges Measurement                         |                                     | ANSI C63.10 (2013)<br>Section 11.13.3.2 | 47 CFR Part 15, Subpart<br>C 15.247(d)       | Pass   |  |  |  |
| Conducted Spurious<br>Emissions                             |                                     | ANSI C63.10 (2013)<br>Section 11.11     | 47 CFR Part 15, Subpart<br>C 15.247(d)       | Pass   |  |  |  |

### Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 4 of 52

# 3 Contents

SGS-CS

Guangzhou B

in the second

|   |                | F   | Page |
|---|----------------|---|------|
| 1 | Cover          | Page  | 1    |
|   |                |   |      |
| 2 | Test S         | Summary   | 3    |
| ~ | 0              |   |      |
| 3 | Conte          | nts   | 4    |
| 4 | Gener          | al Information  | 6    |
| - |                |   |      |
|   |                | Details of E.U.T.<br>Description of Support Units   |      |
|   |                | Aeasurement Uncertainty   |      |
|   |                | Fest Location   |      |
|   |                | Fest Facility   |      |
|   |                | Deviation from Standards  |      |
|   |                | Abnormalities from Standard Conditions  |      |
| 5 | Equip          | ment List   | . 9  |
| • | =40.6          |   |      |
| 6 | Radio          | Spectrum Technical Requirement  | 11   |
|   | 6.1 A          | Antenna Requirement   | 11   |
|   | 6.1.1          | Test Requirement:   |      |
|   | 6.1.2          | Conclusion  |      |
| 7 | -              | Spectrum Matter Test Results  |      |
| 1 |                |   |      |
|   |                | Radiated Emissions which fall in the restricted bands   |      |
|   | 7.1.1          | E.U.T. Operation  |      |
|   | 7.1.2          | Test Mode Description   |      |
|   | 7.1.3          | Test Setup Diagram  |      |
|   | 7.1.4<br>7.2 F | Measurement Procedure and Data<br>Radiated Spurious Emissions Below 1GHz  |      |
|   | 7.2 г<br>7.2.1 | E.U.T. Operation  |      |
|   | 7.2.1          | Test Mode Description   |      |
|   | 7.2.3          | Test Setup Diagram  |      |
|   | 7.2.4          | Measurement Procedure and Data  |      |
|   | 7.3 F          | Radiated Spurious Emissions Above 1GHz  |      |
|   | 7.3.1          | E.U.T. Operation  |      |
|   |                | Test Mode Description   |      |
|   | 7.3.3          | Test Setup Diagram  |      |
|   | 7.3.4          | Measurement Procedure and Data  |      |
|   |                | Conducted Peak Output Power   |      |
|   | 7.4.1<br>7.4.2 | E.U.T. Operation<br>Test Setup Diagram  |      |
|   | 7.4.2          | Measurement Procedure and Data  |      |
|   |                | Ainimum 6dB Bandwidth   |      |
|   | 7.5.1          | E.U.T. Operation  |      |
|   | 7.5.2          | Test Mode Description   |      |
|   | 7.5.3          | Test Setup Diagram  | 31   |
|   | 7.5.4          | Measurement Procedure and Data  | 31   |
|   |                | Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf,<br>available on request or accessible at <u>https://www.sgs.com/enTerms-and-Conditions</u> . Attention is drawn to the limitation of liability,<br>indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects<br>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<br>responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations<br>unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted<br>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<br>sample(s) are retained for 30 days only.<br>Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,<br>or enail: CN_Doccheck@sas.com |      |

Wees Co.,Ltd No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 ECLaboratory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 5 of 52 Daue.

|        | 18                                  | iye. | 5 01 52 |    |
|--------|-------------------------------------|------|---------|----|
| 7.6    | Power Spectrum Density              |      |         |    |
| 7.6.1  |                                     |      |         |    |
| 7.6.2  |                                     |      |         |    |
| 7.6.3  | 3 Test Setup Diagram                |      |         |    |
| 7.6.4  | 4 Measurement Procedure and Data    |      |         |    |
| 7.7    | Conducted Band Edges Measurement    |      |         |    |
| 7.7.′  | 1 E.U.T. Operation                  |      |         |    |
| 7.7.2  | 2 Test Mode Description             |      |         |    |
| 7.7.3  | 3 Test Setup Diagram                |      |         |    |
| 7.7.4  |                                     |      |         |    |
| 7.8    | Conducted Spurious Emissions        |      |         |    |
| 7.8.1  | 1 E.U.T. Operation                  |      |         |    |
| 7.8.2  | 2 Test Mode Description             |      |         |    |
| 7.8.3  |                                     |      |         |    |
| 7.8.4  |                                     |      |         | 34 |
| 8 Test | t Setup Photo                       |      |         | 35 |
| 9 EUT  | Constructional Details (EUT Photos) |      |         |    |
| 10 App | endix                               |      |         |    |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s 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,

es Co., Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 CLaboratory 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 6 of 52

#### **General Information** 4

#### Details of E.U.T. 4.1

| Power supply:        | DC 3V=2 X DC 1.5V AAA batteries            |
|----------------------|--|
| Cable(s):            | None                                       |
| Test Voltage:        | DC 3V                                      |
| Operation Frequency: | 2402MHz to 2480MHz                         |
| Modulation Type:     | GFSK                                       |
| Number of Channels:  | 40   |
| Channel Spacing:     | 2MHz                                       |
| Antenna Type:        | PCB Antenna                                |
| Antenna Gain:        | -4.11 dBi according to antenna test report |
| Antenna Number:      | 1  |

Remark: The information in this section is provided by the applicant or manufacturer, SGS 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.  |
|--------------|--------------|-----------|-------------|
| Mobile Phone | SAMSUNG      | SM-G9508  | R28K110W9JV |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 7 of 52 Page:

### 4.3 Measurement Uncertainty

| Test Item   | Measurement Uncertainty  |
|---|--|
| Radiated Emissions which fall in the restricted bands | ±5.14dB (3m); ±4.90dB (10m);±4.88dB<br>(1GHz-6GHz);±5.06dB (6GHz-18GHz);<br>±5.30dB (18GHz-40GHz)                |
| Radiated Spurious Emissions Below 1GHz                | ±3.08dB (9kHz to<br>150kHz);±3.19dB(150kHz to<br>30MHz);±5.14dB (30MHz-1GHz) (3m);<br>±4.90dB (30MHz-1GHz) (10m) |
| Radiated Spurious Emissions Above 1GHz                | ±4.88dB (1GHz-6GHz);±5.06dB (6GHz-<br>18GHz); ±5.30dB (18GHz-40GHz)  |
| Conducted Peak Output Power                           | ± 0.75dB   |
| Minimum 6dB Bandwidth                                 | ± 0.274%   |
| Power Spectrum Density                                | ± 2.84dB   |
| Conducted Band Edges Measurement                      | ± 0.75dB   |
| Conducted Spurious Emissions                          | ± 0.75dB   |
| Remark:   |  |

Remark:

The U<sub>lab</sub> (lab Uncertainty) is less than U<sub>cispr</sub> (CISPR Uncertainty) or U<sub>ETSI</sub>(ETSI Uncertainty).

Emission decision rule:

- Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit, marked as Pass in the report.

- Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit, marked as Fail in the report.

### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory, No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 Tel: +86 20 82155555 No tests were sub-contracted.



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s up the function of the section of th

No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 8 of 52 Page:

### 4.5 Test Facility

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

#### ACMA

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

### • SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

#### FCC Recognized Accredited Test Firm(Registration No.: 486818)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

#### ISED (Registration No.: 4620B, CAB identifier: CN0052)

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

#### VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

### CBTL (Lab Code: TL129)

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

### 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such example(s) tested and such as a price only. up the function of the section of th

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 9 of 52

#### **Equipment List** 5

| Radiated Emissions which fall in the restricted bands |                                |               |               |            |              |  |
|---|--------------------------------|---------------|---------------|------------|--------------|--|
| Equipment   | Manufacturer                   | Model No.     | Inventory No. | Cal Date   | Cal Due Date |  |
| 1GHz-26.5 GHz Pre-<br>Amplifier                       | Agilent                        | 8449B         | EMC0521       | 2024-10-14 | 2025-10-13   |  |
| EMI Test Receiver<br>(10Hz-26.5GHz)                   | Rohde & Schwarz                | ESIB26        | EMC0522       | 2024-09-02 | 2025-09-01   |  |
| Chamber cable (Above<br>1GHz)                         | Scoflex                        | KMKM-8.0m     | EMC0545       | 2024-08-19 | 2026-08-18   |  |
| Horn Antenna (1GHz-<br>18GHz)                         | SCHWARZBECK<br>MESS-ELEKTRONIK | BBHA 9120D    | EMC2026       | 2022-09-23 | 2025-09-22   |  |
| Horn Antenna (14-<br>40GHz)                           | SCHWARZBECK                    | BBHA 9170     | EMC2041       | 2023-06-18 | 2026-06-17   |  |
| EXA Signal Analyzer<br>(10Hz-44GHz)                   | Keysight                       | N9010A        | EMC2138       | 2024-08-19 | 2025-08-18   |  |
| MXE EMI Receiver<br>(10Hz-8.4GHz)                     | Keysight                       | N9038A        | EMC2139       | 2024-10-14 | 2025-10-13   |  |
| 966 Anechoic Chamber                                  | C.R.T                          | 9m x 6m x 6m  | EMC2142       | 2023-12-20 | 2026-12-19   |  |
| Test Software E3                                      | Audix                          | Ver.6.120110a | GZE100-61     | N/A        | N/A          |  |

| Radiated Spurious Emissions Below 1GHz   |                                 |                   |               |            |              |  |
|--|---------------------------------|-------------------|---------------|------------|--------------|--|
| Equipment                                | Manufacturer                    | Model No.         | Inventory No. | Cal Date   | Cal Due Date |  |
| 966 Anechoic Chamber                     | Shenzhen C.R.T                  | CRTSGSSAC9<br>66  | EMC2230       | 2022-04-12 | 2025-04-11   |  |
| EMI Test Receiver(1Hz-<br>8GHz)          | Rohde & Schwarz                 | ESW8              | EMC2229       | 2024-02-19 | 2025-02-18   |  |
| Amplifier(9k-1000MHz)                    | SONOMA                          | 310               | EMC2237       | 2024-03-22 | 2025-03-21   |  |
| Trilog Broadband<br>Antenna (25MHz-2GHz) | Schwarzbeck Mess-<br>Elektronik | VULB 9168         | EMC2238       | 2022-04-20 | 2025-04-19   |  |
| Coaxial Cable                            | Mirco-COAX<br>UTIFLEX ve        | LA2-C125-<br>8000 | EMC2239       | 2023-06-14 | 2025-06-13   |  |
| Test Software E3                         | Audix                           | Ver.6.191211      | GZE100-81     | N/A        | N/A          |  |
| Active Loop Antenna-<br>RED              | ETS-Lindgren                    | 6502              | EMC2190       | 2024-04-08 | 2026-04-07   |  |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 10 of 52

| Radiated Spurious Emissions Above 1GHz |                                |               |               |            |              |  |  |  |
|--|--------------------------------|---------------|---------------|------------|--------------|--|--|--|
| Equipment                              | Manufacturer                   | Model No.     | Inventory No. | Cal Date   | Cal Due Date |  |  |  |
| 1GHz-26.5 GHz Pre-<br>Amplifier        | Agilent                        | 8449B         | EMC0521       | 2024-10-14 | 2025-10-13   |  |  |  |
| EMI Test Receiver<br>(10Hz-26.5GHz)    | Rohde & Schwarz                | ESIB26        | EMC0522       | 2024-09-02 | 2025-09-01   |  |  |  |
| Chamber cable (Above<br>1GHz)          | Scoflex                        | KMKM-8.0m     | EMC0545       | 2024-08-19 | 2026-08-18   |  |  |  |
| Horn Antenna (1GHz-<br>18GHz)          | SCHWARZBECK<br>MESS-ELEKTRONIK | BBHA 9120D    | EMC2026       | 2022-09-23 | 2025-09-22   |  |  |  |
| Horn Antenna (14-<br>40GHz)            | SCHWARZBECK                    | BBHA 9170     | EMC2041       | 2023-06-18 | 2026-06-17   |  |  |  |
| 2.4GHz Filter                          | Micro-Tronics                  | BRM 50702     | EMC2069       | 2024-10-14 | 2025-10-13   |  |  |  |
| EXA Signal Analyzer<br>(10Hz-44GHz)    | Keysight                       | N9010A        | EMC2138       | 2024-08-19 | 2025-08-18   |  |  |  |
| MXE EMI Receiver<br>(10Hz-8.4GHz)      | Keysight                       | N9038A        | EMC2139       | 2024-10-14 | 2025-10-13   |  |  |  |
| 966 Anechoic Chamber                   | C.R.T                          | 9m x 6m x 6m  | EMC2142       | 2023-12-20 | 2026-12-19   |  |  |  |
| Test Software E3                       | Audix                          | Ver.6.120110a | GZE100-61     | N/A        | N/A          |  |  |  |

| RF Conducted Test                   |              |           |               |            |              |
|-------------------------------------|--------------|-----------|---------------|------------|--------------|
| Equipment                           | Manufacturer | Model No. | Inventory No. | Cal Date   | Cal Due Date |
| MI CABLE                            | SGS-EMC      | 0.8M      | EMC2137       | 2023-11-02 | 2025-11-01   |
| EXA Signal Analyzer<br>(10Hz-44GHz) | Keysight     | N9010A    | EMC2138       | 2024-08-19 | 2025-08-18   |
| 4X4 Power sensor Unit               | TST          | TSPS2023R | EMC2226       | 2024-08-19 | 2025-08-18   |
| Test Software                       | TST          | V2.0      | GZE100-78     | N/A        | N/A          |

| General used equipmen | t            |          |              |            |              |
|-----------------------|--------------|----------|--------------|------------|--------------|
| Equipment             | Manufacturer | Model No | Inventory No | Cal Date   | Cal Due Date |
| DMM                   | Fluke        | 73       | EMC0006      | 2024-06-13 | 2025-06-12   |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 11 of 52

#### **Radio Spectrum Technical Requirement** 6

### 6.1 Antenna Requirement

### 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

### 6.1.2 Conclusion

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna: The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -4.11 dBi. Antenna location: Refer to internal photo.

检验检测专用童 spection & Testing Services 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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indennification 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) tested and such as a print or appearance of the sole only. ample(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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 12 of 52 Page:

#### **Radio Spectrum Matter Test Results** 7

#### Radiated Emissions which fall in the restricted bands 7.1

| Test Requirement | 47 CFR Part 15, Subpart C 15.205 & 15.209 |
|------------------|---|
| Test Method:     | ANSI C63.10 (2013) Section 11.12          |
| Limit:           |   |

Test Distance: 3 m

| Frequency (MHz) | Field strength<br>(microvolts/meter) | Measurement<br>distance(meters) |
|-----------------|--------------------------------------|---------------------------------|
| 0.009-0.490     | 2400/F(kHz)                          | 300                             |
| 0.490-1.705     | 24000/F(kHz)                         | 30                              |
| 1.705-30.0      | 30                                   | 30                              |
| 30-88           | 100                                  | 3                               |
| 88-216          | 150                                  | 3                               |
| 216-960         | 200                                  | 3                               |
| Above 960       | 500                                  | 3                               |

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

### 7.1.1 E.U.T. Operation

| Operating Enviror | nment:  |           |           |                       |      |      |
|-------------------|---------|-----------|-----------|-----------------------|------|------|
| Temperature:      | 24.3 °C | Humidity: | 49.9 % RH | Atmospheric Pressure: | 1013 | mbar |

### 7.1.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |



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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. 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 example(a) for 20 days only. 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,

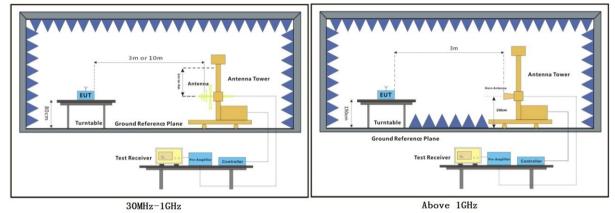
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 13 of 52

### 7.1.3 Test Setup Diagram



### 7.1.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in 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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. 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 Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written 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) 83071443, or email: <u>CN.Doceheck@sgs.com</u>** 

No.198, Kezhu Koad, Science Uty, Economic & lecnnological Uevelopment Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

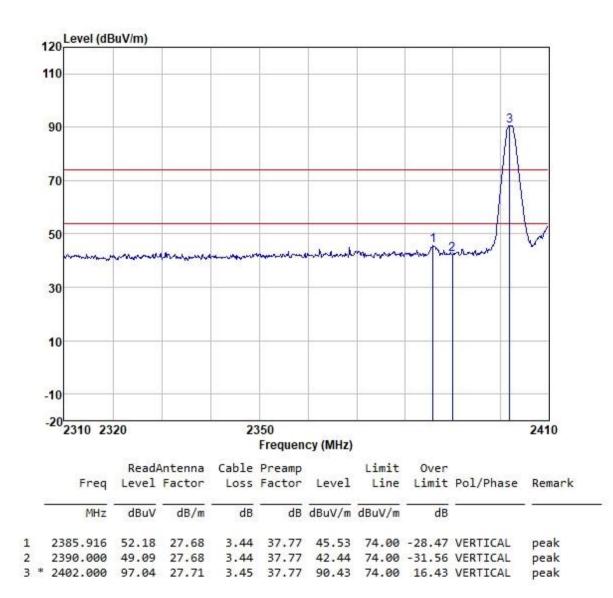
t (86-20) 82155555 sgs.china@sgs.com



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 14 of 52

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:Low





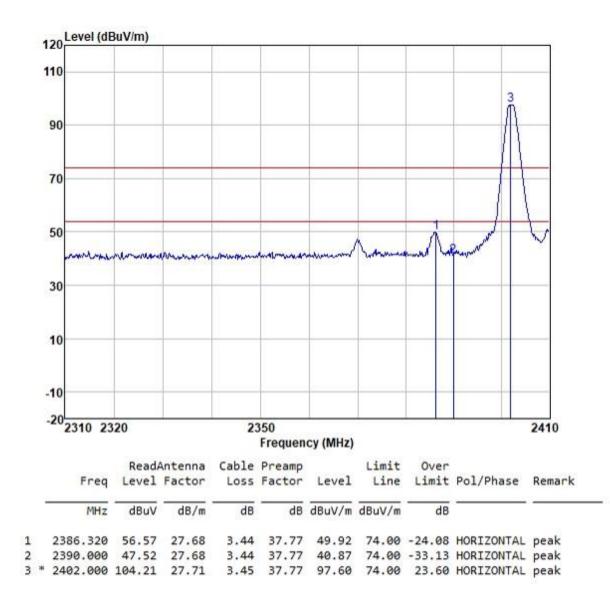
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to 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 Cilent'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 unavful 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 example(s) tested and such example(s 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 15 of 52

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:Low





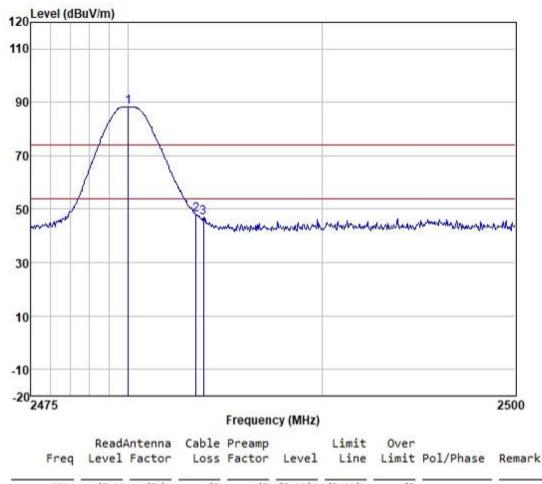
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to 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 Cilent'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 unavful 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 example(s) tested and such example(s 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 16 of 52 Page:

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:High



|   | MHz      | dBuV  | dB/m  | dB   | dB    | dBuV/m | dBuV/m | dB     |          |      |
|---|----------|-------|-------|------|-------|--------|--------|--------|----------|------|
| 1 | 2480.000 | 94.67 | 27.84 | 3.48 | 37.76 | 88.23  | 74.00  | 14.23  | VERTICAL | peak |
| 2 | 2483.500 | 54.48 | 27.85 | 3.49 | 37.76 | 48.06  | 74.00  | -25.94 | VERTICAL | peak |
| 3 | 2483.871 | 53.41 | 27.85 | 3.49 | 37.76 | 46.99  | 74.00  | -27.01 | VERTICAL | 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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 example(s) tested and such ample(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,

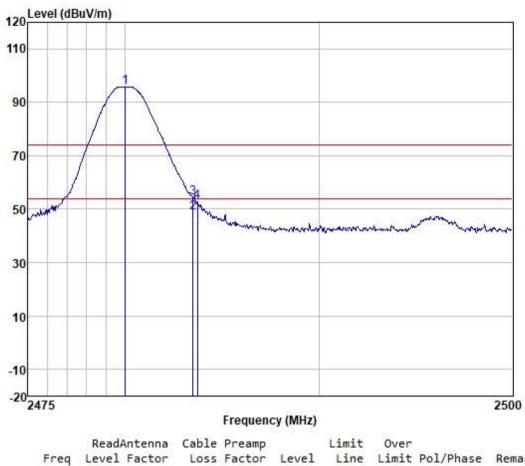
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 17 of 52

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:High



|     | Freq     |        | Factor |      |       |        |        |        | Pol/Phase  | Remark  |
|-----|----------|--------|--------|------|-------|--------|--------|--------|------------|---------|
|     | MHz      | dBuV   | dB/m   | dB   | dB    | dBuV/m | dBuV/m | dB     | <u>.</u>   | 12      |
| 1 * | 2480.000 | 102.05 | 27.84  | 3.48 | 37.76 | 95.61  | 74.00  | 21.61  | HORIZONTAL | peak    |
| 2   | 2483.500 | 55.24  | 27.85  | 3.49 | 37.76 | 48.82  | 54.00  | -5.18  | HORIZONTAL | Average |
| 3   | 2483.500 | 60.71  | 27.85  | 3.49 | 37.76 | 54.29  | 74.00  | -19.71 | HORIZONTAL | peak    |
| 4   | 2483.721 | 59.15  | 27.85  | 3.49 | 37.76 | 52.73  | 74.00  | -21.27 | HORIZONTAL | 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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



Report No.: GZCR241000118702 Page: 18 of 52

### 7.2 Radiated Spurious Emissions Below 1GHz

| Test Requirement | 47 CFR Part 15, Subpart C 15.205 & 15.209 |
|------------------|---|
| Test Method:     | ANSI C63.10 (2013) Section 6.4,6.5        |
| Limit:           |   |
| Tast Distances   | 0   |

Test Distance: 3 m

| Frequency (MHz) | Field strength<br>(microvolts/meter) | Measurement<br>distance(meters) |
|-----------------|--------------------------------------|---------------------------------|
| 0.009-0.490     | 2400/F(kHz)                          | 300                             |
| 0.490-1.705     | 24000/F(kHz)                         | 30                              |
| 1.705-30.0      | 30                                   | 30                              |
| 30-88           | 100                                  | 3                               |
| 88-216          | 150                                  | 3                               |
| 216-960         | 200                                  | 3                               |
| 960-1000        | 500                                  | 3                               |

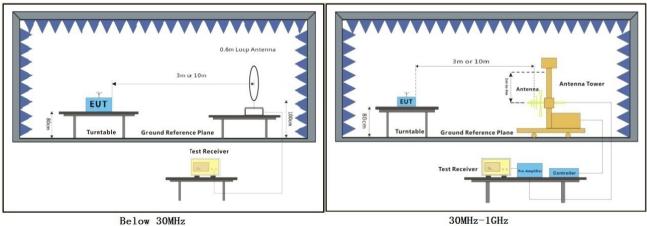
### 7.2.1 E.U.T. Operation

| Operating Enviror | nment:  |           |           |                       |      |      |
|-------------------|---------|-----------|-----------|-----------------------|------|------|
| Temperature:      | 22.4 °C | Humidity: | 43.3 % RH | Atmospheric Pressure: | 1013 | mbar |

### 7.2.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |

### 7.2.3 Test Setup Diagram





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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. 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 Cilent'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: <u>CN.Doccheck@sgs.com</u> [No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86–20) 82155555

中国·广东·广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 www.sgsgroup.com.cn t (86–20) 82155555 sgs.china@sgs.com



EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 19 of 52 Page:

### 7.2.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using guasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.



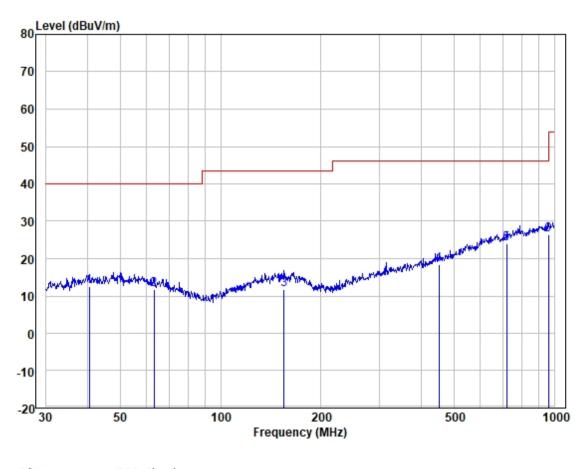
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/Terms-and-Conditions</a>. Attention is drawn to 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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such example(s) tested and such as a price only. ample(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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 20 of 52



Test Mode: 00; Polarity: Horizontal

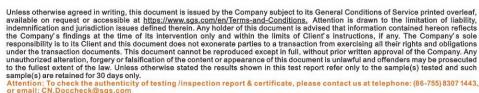
| Site      | : | 966 | Chamber |
|-----------|---|-----|---------|
| Job       | : |     |         |
| Model     | : |     |         |
| Power     | : |     |         |
| Test Mode | : |     |         |
|           |   |     |         |

检验检测专用章 nspection & Testing Services

Guangz

C Laboratory.

|   | Freq    |       |          |      |          | Measured |        |        | Pol/<br>Phase | Remark |
|---|---------|-------|----------|------|----------|----------|--------|--------|---------------|--------|
|   | ineq    | Lever | , ac coi | 2033 | 1 40 001 |          | LINC   | CIMIC  | - Hube        | Remark |
|   | MHz     | dBuV  | dB/m     | dB   | dB       | dBuV/m   | dBuV/m | dB     |               |        |
| 1 | 40.417  | 25.98 | 19.16    | 0.35 | 32.87    | 12.62    | 40.00  | -27.38 | HORIZONTAL    | QP     |
| 2 | 63.313  | 25.86 | 18.30    | 0.42 | 32.87    | 11.71    | 40.00  | -28.29 | HORIZONTAL    | QP     |
| 3 | 154.821 | 24.67 | 19.16    | 0.69 | 32.82    | 11.70    | 43.52  | -31.82 | HORIZONTAL    | QP     |
| 4 | 451.135 | 27.44 | 22.75    | 1.23 | 32.98    | 18.44    | 46.02  | -27.58 | HORIZONTAL    | QP     |
| 5 | 719.200 | 27.85 | 27.10    | 1.55 | 32.50    | 24.00    | 46.02  | -22.02 | HORIZONTAL    | QP     |
| 6 | 958.794 | 26.59 | 29.74    | 1.81 | 31.72    | 26.42    | 46.02  | -19.60 | HORIZONTAL    | QP     |

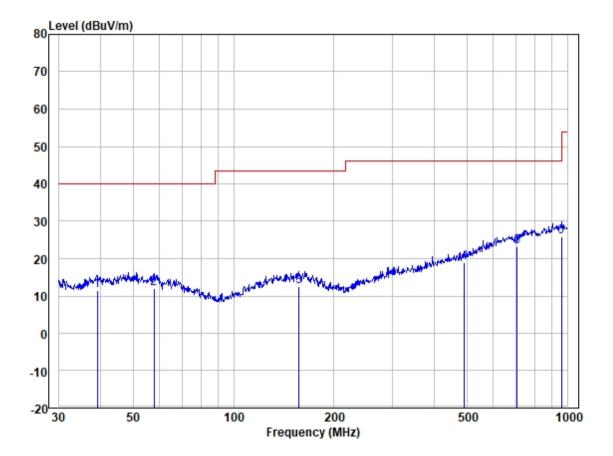


No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 21 of 52



Test Mode: 00; Polarity: Vertical

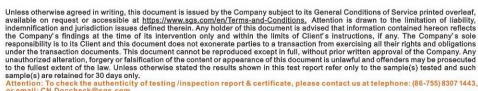
| Site      | : | 966 | Chamber |
|-----------|---|-----|---------|
| Job       | : |     |         |
| Model     | : |     |         |
| Power     | : |     |         |
| Test Mode | : |     |         |
|           |   |     |         |

检验检测专用章 nspection & Testing Services

Guangz

C Laboratory.

|   | Freq    |       |       |      |       | Measured<br>Level |        |        | Pol/<br>Phase | Remark |
|---|---------|-------|-------|------|-------|-------------------|--------|--------|---------------|--------|
|   | MHz     | dBuV  | dB/m  | dB   | dB    | dBuV/m            | dBuV/m | dB     |               |        |
| 1 | 39.024  | 25.07 | 18.93 | 0.35 | 32.86 | 11.49             | 40.00  | -28.51 | VERTICAL      | QP     |
| 2 | 57.796  | 25.48 | 18.99 | 0.41 | 32.87 | 12.01             | 40.00  | -27.99 | VERTICAL      | QP     |
| 3 | 157.007 | 25.57 | 19.18 | 0.69 | 32.83 | 12.61             | 43.52  | -30.91 | VERTICAL      | QP     |
| 4 | 490.745 | 27.36 | 23.33 | 1.28 | 32.99 | 18.98             | 46.02  | -27.04 | VERTICAL      | QP     |
| 5 | 706.700 | 27.33 | 26.97 | 1.54 | 32.52 | 23.32             | 46.02  | -22.70 | VERTICAL      | QP     |
| 6 | 958.794 | 26.03 | 29.74 | 1.81 | 31.72 | 25.86             | 46.02  | -20.16 | VERTICAL      | QP     |



No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com



| EMC-TRF-01 | Rev 1 | .1 |
|------------|-------|----|
|------------|-------|----|

Report No.: GZCR241000118702 Page: 22 of 52

### 7.3 Radiated Spurious Emissions Above 1GHz

| Test Requirement | 47 CFR Part 15, Subpart C 15.205 & 15.209 |
|------------------|---|
| Test Method:     | ANSI C63.10 (2013) Section 6.6            |
| Limit:           |   |

| Frequency (MHz) | Field strength<br>(microvolts/meter) | Measurement<br>distance(meters) |
|-----------------|--------------------------------------|---------------------------------|
| Above 1000      | 500                                  | 3                               |

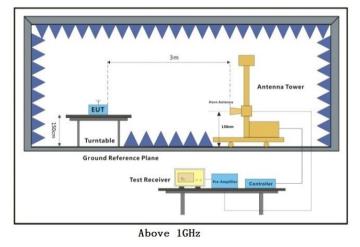
### 7.3.1 E.U.T. Operation

| Operating Enviro | nment:  |           |           |                       |      |      |
|------------------|---------|-----------|-----------|-----------------------|------|------|
| Temperature:     | 24.3 °C | Humidity: | 49.9 % RH | Atmospheric Pressure: | 1013 | mbar |

### 7.3.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |

### 7.3.3 Test Setup Diagram







EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 23 of 52 Page:

### 7.3.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in 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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such example(s) tested and such as a price only. to the fullest extent of the fair. Since series and series and the series of the serie

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



检验检测专用章 Inspection & Testing Services

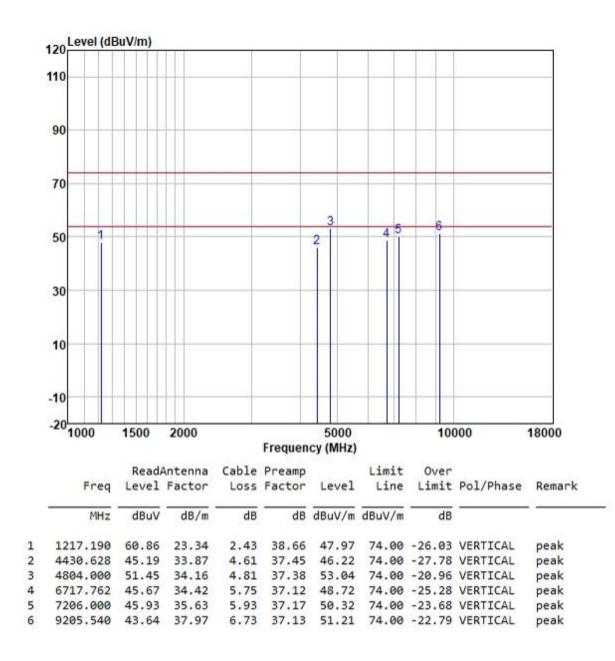
C Laboratory.

Guangzhou

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 24 of 52

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:Low



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s up the function of the section of th

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



检验检测专用章 nspection & Testing Services

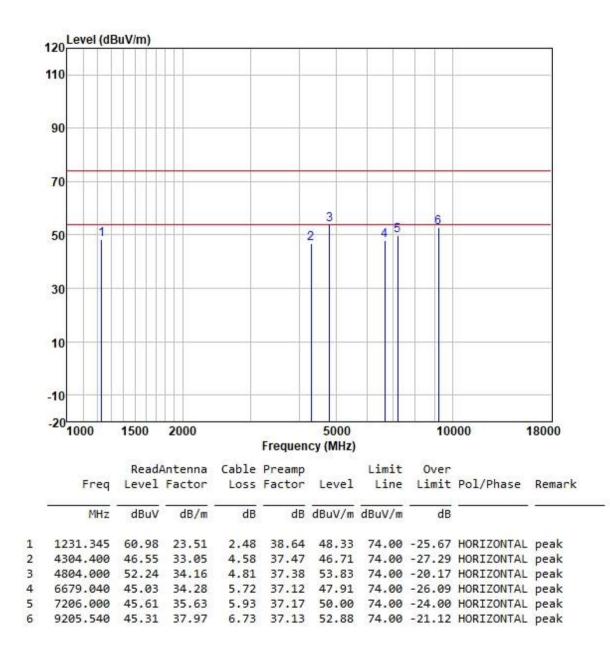
C Laboratory.

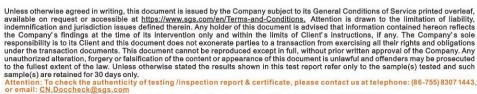
Guangz

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 25 of 52

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:Low





No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



检验检测专用章 Inspection & Testing Services

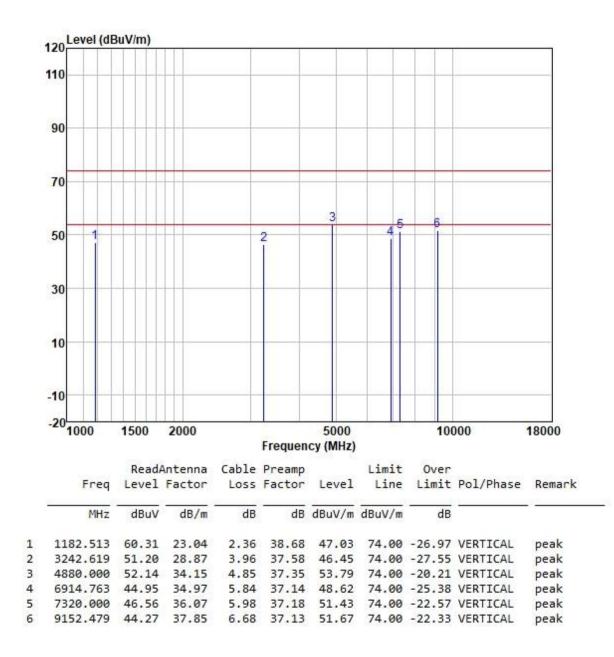
C Laboratory.

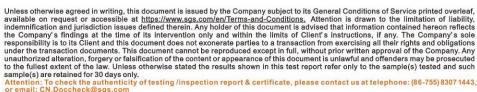
Guangz

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 26 of 52

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:middle



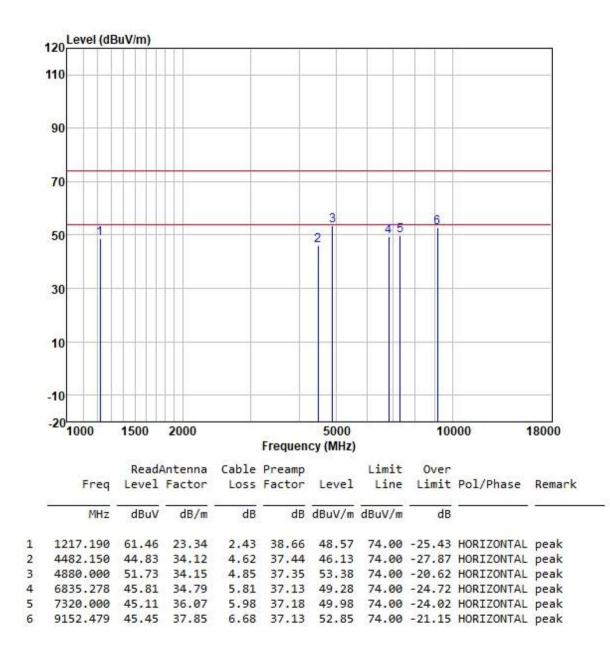


No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 27 of 52

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:middle





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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s up the function of the section of th

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



检验检测专用章 Inspection & Testing Services

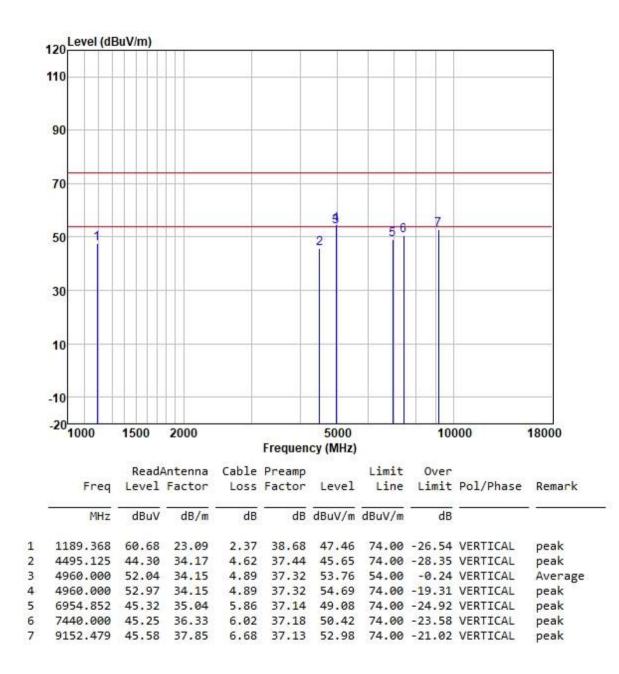
C Laboratory.

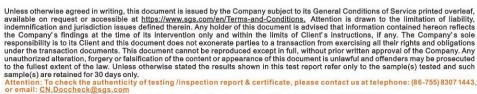
Guangz

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 28 of 52

Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:High





No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

sgs.china@sgs.com t (86-20) 82155555

www.sgsgroup.com.cn



检验检测专用章 Inspection & Testing Services

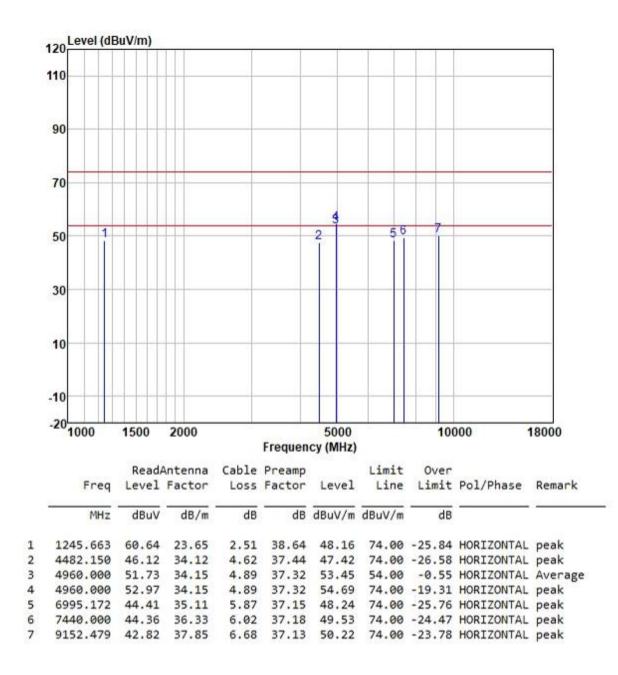
C Laboratory.

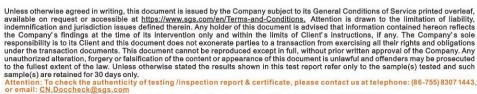
Guangz

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 29 of 52

Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:High





No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



| EMC-TRF-01 | Rev 1.1 |
|------------|---------|
|------------|---------|

Report No.: GZCR241000118702 Page: 30 of 52

### 7.4 Conducted Peak Output Power

| Test Requirement 47 | CFR Part 15, Subpart C 15.247(b)(3) |
|---------------------|-------------------------------------|
| Test Method: AN     | SI C63.10 (2013) Section 11.9.1     |

 Limit:
 Output power of the intentional radiator(watt)

 Frequency range(MHz)
 1 for ≥50 hopping channels

 902-928
 0.25 for 25≤ hopping channels <50</td>

 1 for digital modulation
 1 for ≥75 non-overlapping hopping channels

 2400-2483.5
 0.125 for all other frequency hopping systems

 1 for digital modulation
 1 for digital modulation

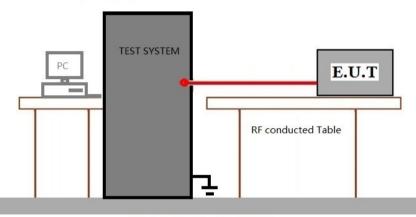
 5725-5850
 1 for frequency hopping systems and digital modulation

### 7.4.1 E.U.T. Operation

Operating Environment: Temperature: 23.4 °C

| Humidity: | 51.8 % RH | Atmospheric Pressure: | 1013 | mbar |
|-----------|-----------|-----------------------|------|------|
|-----------|-----------|-----------------------|------|------|

### 7.4.2 Test Setup Diagram



**Ground Reference Plane** 

### 7.4.3 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written 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**,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 sgs.china@sgs.com

www.sgsgroup.com.cn



| EMC-TRF-01 Rev 1.1 |                  | Report No.: GZCR241000118702         |
|--------------------|------------------|--------------------------------------|
|                    |                  | Page: 31 of 52                       |
|                    |                  |                                      |
| 7.5                | Minimum 6dB Bar  | dwidth                               |
|                    | Test Requirement | 47 CFR Part 15, Subpart C 15.247a(2) |
|                    | Test Method:     | ANSI C63.10 (2013) Section 11.8.1    |
|                    | Limit:           | ≥500 kHz                             |
|                    |                  |                                      |
| 7.5.1              | E.U.T. Operation |                                      |

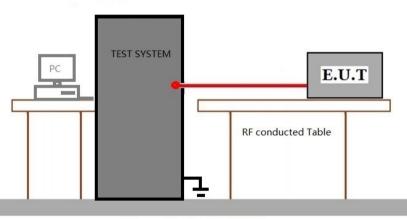
### **Operating Environment:**

| 1 1 1 1 1    |         |           |           |                       |      |      |
|--------------|---------|-----------|-----------|-----------------------|------|------|
| Temperature: | 23.4 °C | Humidity: | 51.8 % RH | Atmospheric Pressure: | 1013 | mbar |

### 7.5.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |

### 7.5.3 Test Setup Diagram



**Ground Reference Plane** 

### 7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 example(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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



| EMC-TRF-01 F | Rev 1.1 |
|--------------|---------|
|--------------|---------|

Report No.: GZCR241000118702 Page: 32 of 52

### 7.6 Power Spectrum Density

| Test Requirement | 47 CFR Part 15, Subpart C 15.247(e)   |  |  |  |  |  |
|------------------|---|--|--|--|--|--|
| Test Method:     | ANSI C63.10 (2013) Section 11.10.2  |  |  |  |  |  |
| Limit:           | ≤8dBm in any 3 kHz band during any time interval of continuous transmission |  |  |  |  |  |

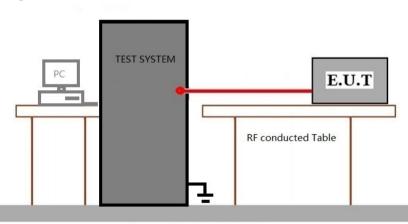
### 7.6.1 E.U.T. Operation

| Operating Environment: |         |           |           |                       |      |      |
|------------------------|---------|-----------|-----------|-----------------------|------|------|
| Temperature:           | 23.4 °C | Humidity: | 51.8 % RH | Atmospheric Pressure: | 1013 | mbar |

### 7.6.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |

### 7.6.3 Test Setup Diagram



**Ground Reference Plane** 

### 7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document 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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86–20) 82155555 www

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663

t (86-20) 82155555 sgs.china@sgs.com

www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 33 of 52

### 7.7 Conducted Band Edges Measurement

| Test Requirement | 47 CFR Part 15, Subpart C 15.247(d)  |
|------------------|--------------------------------------|
| Test Method:     | ANSI C63.10 (2013) Section 11.13.3.2 |

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

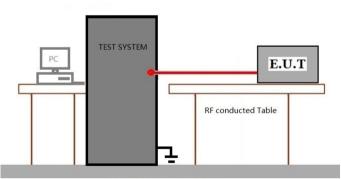
### 7.7.1 E.U.T. Operation

| Operating Enviror | nment:  |           |           |                       |      |      |
|-------------------|---------|-----------|-----------|-----------------------|------|------|
| Temperature:      | 23.4 °C | Humidity: | 51.8 % RH | Atmospheric Pressure: | 1013 | mbar |

### 7.7.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |

### 7.7.3 Test Setup Diagram



**Ground Reference Plane** 

### 7.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indennification 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) tested and such as a print or appearance of the sole only. ample(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,

t (86-20) 82155555 www.sgsgroup.com.cn

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

sgs.china@sgs.com t (86-20) 82155555



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 34 of 52

### 7.8 Conducted Spurious Emissions

| Test Requirement | 47 CFR Part 15, Subpart C 15.247(d) |
|------------------|-------------------------------------|
| Test Method:     | ANSI C63.10 (2013) Section 11.11    |
|                  |                                     |

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c).

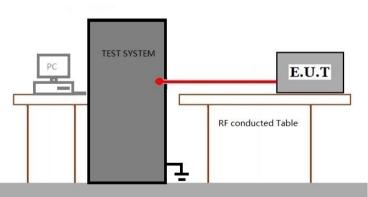
### 7.8.1 E.U.T. Operation

| Operating Enviror | nment:  |           |           |                         |          |
|-------------------|---------|-----------|-----------|-------------------------|----------|
| Temperature:      | 23.4 °C | Humidity: | 51.8 % RH | Atmospheric Pressure: 1 | 013 mbar |

### 7.8.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description   |
|--------------------------|--------------|---|
| Final test               | 00           | TX mode(1Mbps)_Keep the EUT in continuously transmitting mode with GFSK modulation. |

### 7.8.3 Test Setup Diagram



Ground Reference Plane

### 7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. 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,** 

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555

t (86-20) 82155555 sgs.china@sgs.com

www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 35 of 52

#### **Test Setup Photo** 8

Refer to Setup Photos for GZCR241000118702



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s to the function of the family of the family only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 36 of 52

#### **EUT Constructional Details (EUT Photos)** 9

Refer to External and Internal Photos for GZCR2410001187AT



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

S Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 37 of 52

# **10** Appendix

- 1. Duty Cycle
- 1.1 Test Result

### 1.1.1 Ant1

| Ant1 |                                 |      |              |                |                   |                                      |                          |  |
|------|---------------------------------|------|--------------|----------------|-------------------|--------------------------------------|--------------------------|--|
| Mode | Mode TX Frequency<br>Type (MHz) |      | T_on<br>(ms) | Period<br>(ms) | Duty Cycle<br>(%) | Duty Cycle<br>Correction Factor (dB) | Max. DC<br>Variation (%) |  |
|      | SISO                            | 2402 | 100.000      | 100.000        | 100.00            | 0.00                                 | 0.00                     |  |
| 1M   |                                 | 2440 | 100.000      | 100.000        | 100.00            | 0.00                                 | 0.00                     |  |
|      |                                 | 2480 | 100.000      | 100.000        | 100.00            | 0.00                                 | 0.00                     |  |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn

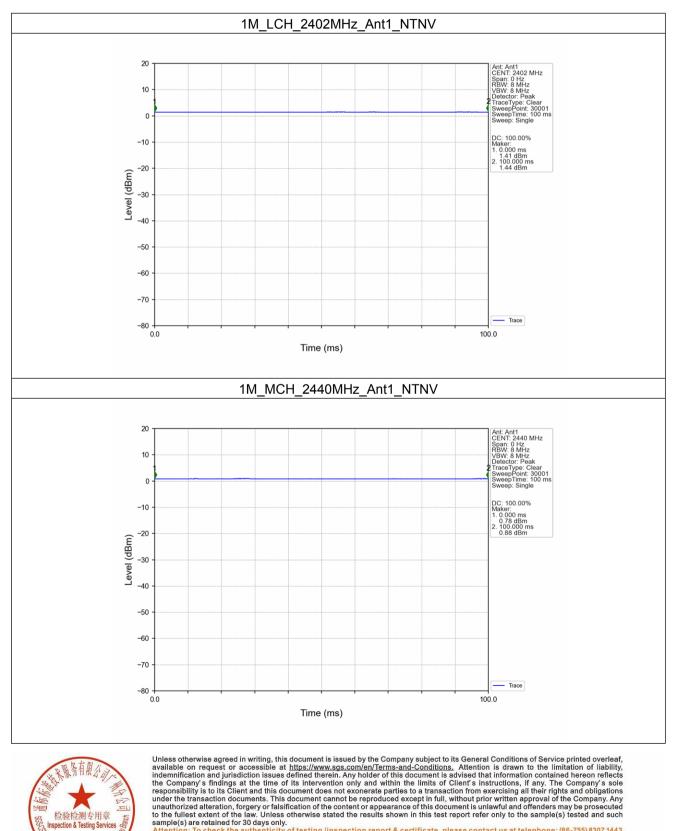


EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 38 of 52

## 1.2 Test Graph

### 1.2.1 Ant1





No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

es Co.,Ltd

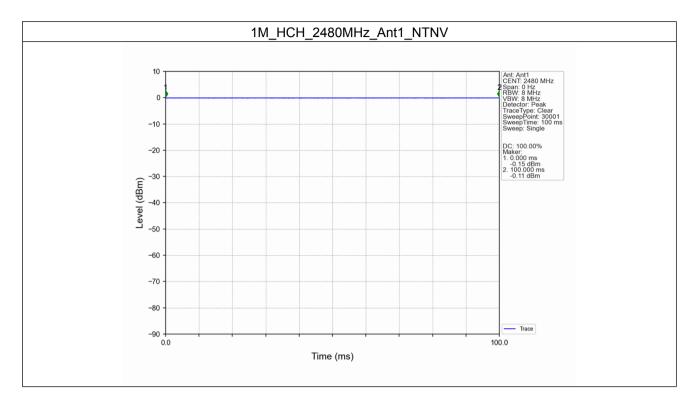
C Laboratory.

Guangzhou E



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 39 of 52





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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com Member of the SGS Group (SGS SA)



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 40 of 52

- 2. Bandwidth
- 2.1 Test Result

### 2.1.1 6dB BW

| Mode | ТХ<br>Туре | Frequency<br>(MHz) | ANT | 6dB Bandw | Vordict |         |
|------|------------|--------------------|-----|-----------|---------|---------|
|      |            |                    |     | Result    | Limit   | Verdict |
| 1M   |            | 2402               | 1   | 0.744     | >=0.5   | Pass    |
|      | SISO       | 2440               | 1   | 0.750     | >=0.5   | Pass    |
|      |            | 2480               | 1   | 0.759     | >=0.5   | Pass    |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

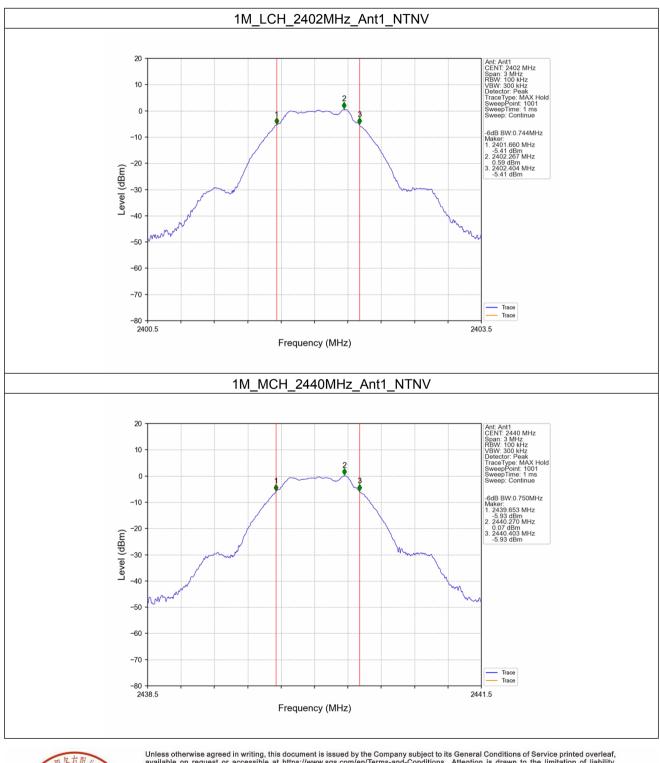


EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 41 of 52

## 2.2 Test Graph

#### 2.2.1 6dB BW





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 <u>https://www.sgs.com/en/Terms-and-Conditions</u>. 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 Cilent'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**,

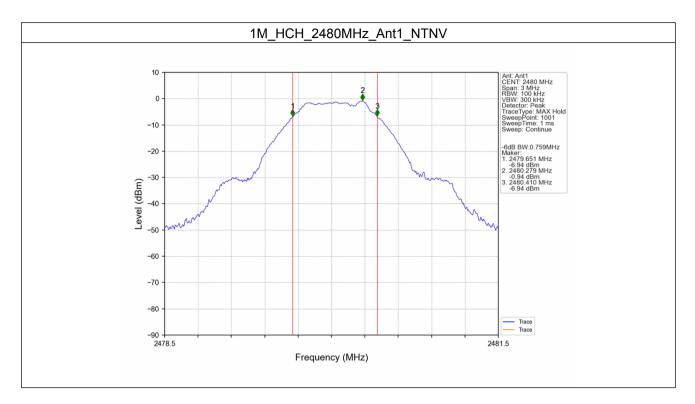
or email: <u>CN.Doccheck@sgs.com</u> No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 42 of 52





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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 43 of 52

## 3. Maximum Conducted Output Power

## 3.1 Test Result

### 3.1.1 Power

| Mode                                 | ТХ   | Frequency<br>(MHz) | Maximum Peak Conduc | Verdict |         |  |  |
|--------------------------------------|------|--------------------|---------------------|---------|---------|--|--|
|                                      | Туре |                    | ANT1                | Limit   | veruici |  |  |
| 1M                                   | SISO | 2402               | 1.48                | <=30    | Pass    |  |  |
|                                      |      | 2440               | 0.90                | <=30    | Pass    |  |  |
|                                      |      | 2480               | -0.06               | <=30    | Pass    |  |  |
| Note1: Antenna Gain: Ant1: -4.11dBi; |      |                    |                     |         |         |  |  |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 example(s) tested and such ample(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,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 44 of 52

## 4. Maximum Power Spectral Density

### 4.1 Test Result

### 4.1.1 PSD

| Mode                                  | ТХ   | Frequency<br>(MHz) | Maximum PS | Vordiat |                                   |  |  |
|---------------------------------------|------|--------------------|------------|---------|-----------------------------------|--|--|
|                                       | Туре |                    | ANT1       | Limit   | veruici                           |  |  |
| 1M                                    |      | 2402               | -14.64     | <=8     | Pass                              |  |  |
|                                       | SISO | 2440               | -15.34     | <=8     | - Verdict<br>Pass<br>Pass<br>Pass |  |  |
|                                       |      | 2480               | -15.30     | <=8     |                                   |  |  |
| Note1: Antenna Gain: Ant1: -4.11 dBi; |      |                    |            |         |                                   |  |  |



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 example(s) tested and such to the function of the family of the family only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443,

es Co., Ltd. No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn



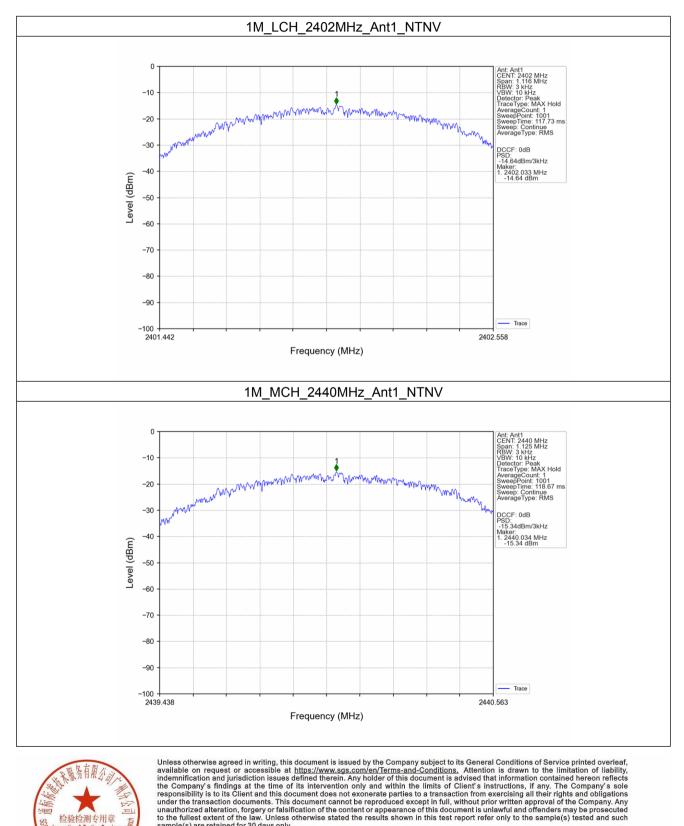
EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 Page: 45 of 52

## 4.2 Test Graph

检验检测专用章 Inspection & Testing Services

Guangzhou

### 4.2.1 PSD



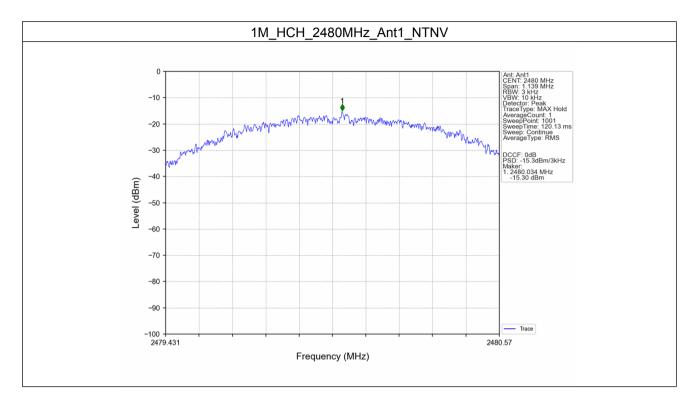
sample(s) are retained for 30 days only. Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 C Laboratory. 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86–20) 82155555 www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 46 of 52





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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

t (86-20) 82155555 sgs.china@sgs.com Member of the SGS Group (SGS SA)

www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 47 of 52

# 5. Unwanted Emissions In Non-restricted Frequency Bands

## 5.1 Test Result

### 5.1.1 Ref

| Mode | TX<br>Type | Frequency<br>(MHz) | ANT | Level of Reference<br>(dBm) |
|------|------------|--------------------|-----|-----------------------------|
| 1M   | 2402       |                    | 1   | 0.57                        |
|      | SISO       | 2440               | 1   | 0.02                        |
|      |            | 2480               | 1   | -0.97                       |

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

### 5.1.2 CSE and Band Edges

| Mode  | ТХ<br>Туре | Frequency<br>(MHz) | ANT | Level of Reference<br>(dBm) | Limit<br>(dBm) | Verdict |  |  |
|---|------------|--------------------|-----|-----------------------------|----------------|---------|--|--|
| 1M  |            | 2402               | 1   | 0.57                        | -19.43         | Pass    |  |  |
|   | SISO       | 2440               | 1   | 0.57                        | -19.43         | Pass    |  |  |
|   |            | 2480               | 1   | 0.57                        | -19.43         | Pass    |  |  |
| Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level. |            |                    |     |                             |                |         |  |  |



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent's instructions, if any. The Company's sole responsibility is to its Cilent and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written 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.

ample(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,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编: 510663 www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 48 of 52

## 5.2 Test Graph

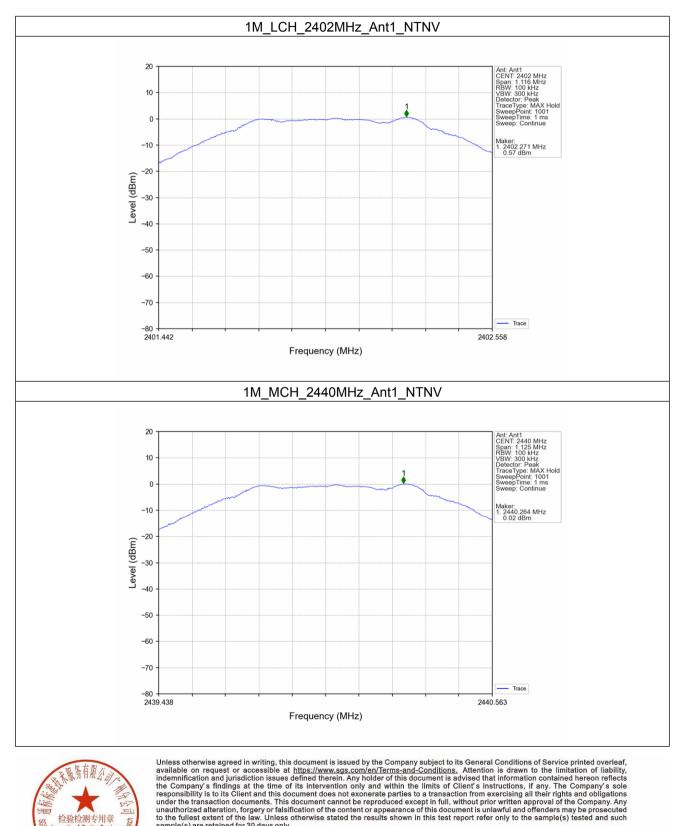
检验检测专用章 Inspection & Testing Services

Guangzhou

es Co.,Ltd

C Laboratory.

### 5.2.1 Ref



No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 t (86-20) 82155555 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

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,

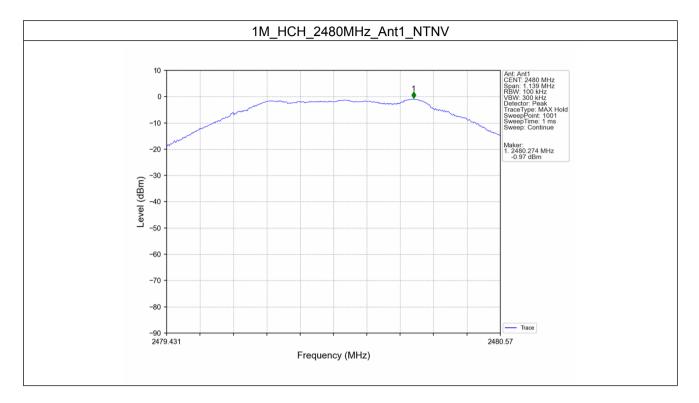
t (86-20) 82155555 sgs.china@sgs.com

www.sgsgroup.com.cn



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 49 of 52





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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

es Co., Ltd. | No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663



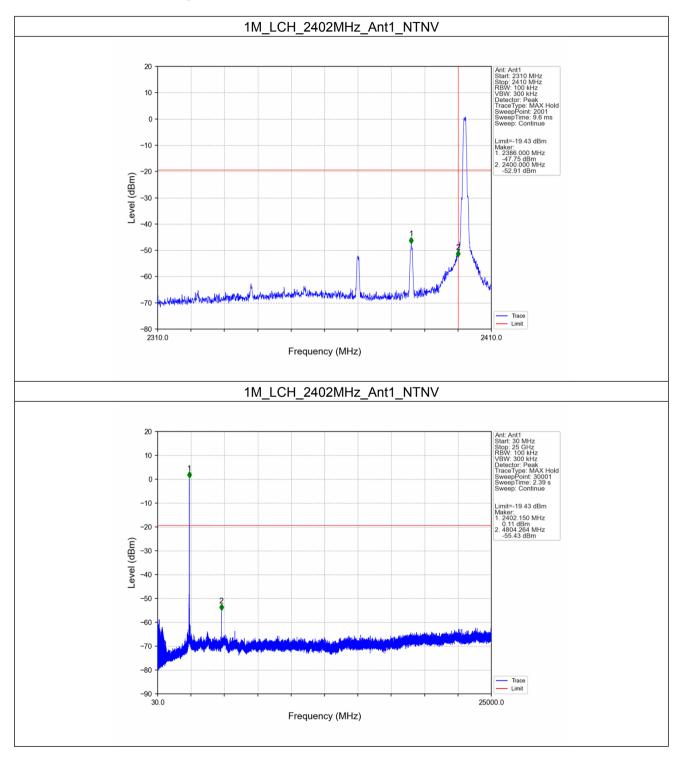
EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 50 of 52 Page:

### 5.2.2 CSE and Band Edges

检验检测专用章 Inspection & Testing Services

Guangzhou

C Laboratory.



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 <a href="https://www.sgs.com/en/Terms-and-Conditions">https://www.sgs.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s 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,

t (86–20) 82155555

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com



检验检测专用章 Inspection & Testing Services

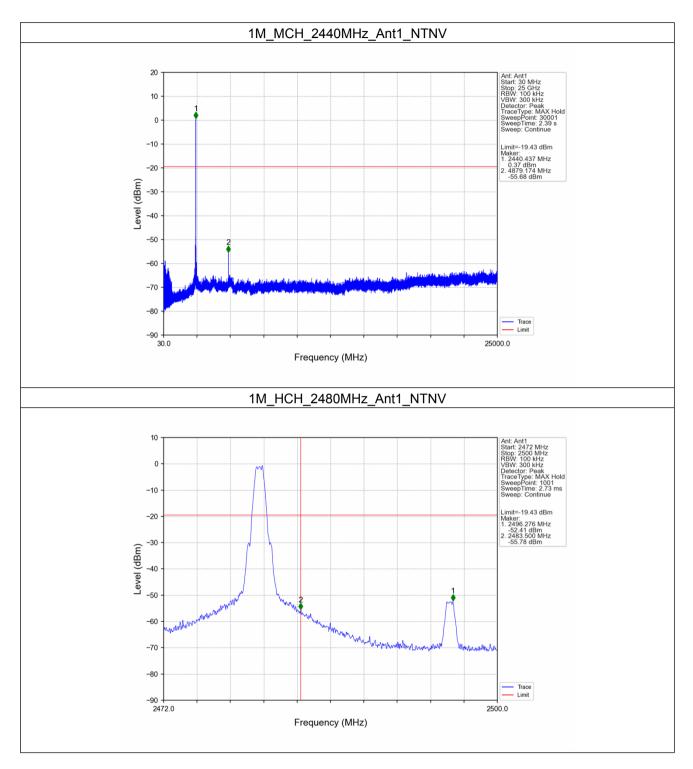
Guangzhou

es Co., Ltd

C Laboratory.

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

EMC-TRF-01 Rev 1.1 Report No.: GZCR241000118702 51 of 52 Page:



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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s 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,

t (86-20) 82155555

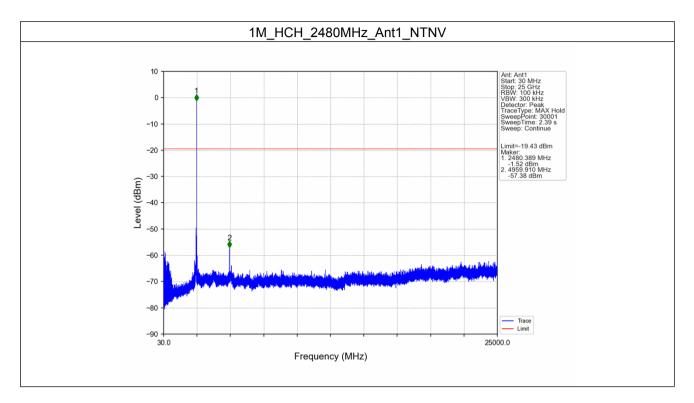
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663

www.sgsgroup.com.cn t (86-20) 82155555 sgs.china@sgs.com



EMC-TRF-01 Rev 1.1

Report No.: GZCR241000118702 Page: 52 of 52



- 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 <a href="https://www.ags.com/en/Terms-and-Conditions">https://www.ags.com/en/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 Cilent'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 unavful 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 example(s) tested and such example(s ample(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,

No. 198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663 中国・广东・广州高新技术产业开发区科学城科珠路198号 邮编:510663 www.sgsgroup.com.cn