

Report No.: SZCR210602150302

Page: 1 of 56

### TEST REPORT

**Application No.:** SZCR2106021503AT **Applicant:** Etekcity Corporation

Address of Applicant: 1202 N Miller St Suite A, ANAHEIM, California, 92806 United States

Manufacturer: Etekcity Corporation

Address of Manufacturer: 1202 N. Miller St. Suite A, Anaheim, CA 92806, USA

Factory: Zhongshan Camry Electronic Co., Ltd

Address of Factory: Baishawan Industrial Park, Qiwan Road, East District, Zhongshan,

Guangdong, China

**Equipment Under Test (EUT):** 

**EUT Name:** Smart Body Weight Scale

Model No.: ESB-591
Trade Mark: Etekcity

**FCC ID**: 2AB22-ESB591

Standard(s): 47 CFR Part 15, Subpart C 15.247

**Date of Receipt:** 2021-06-15

**Date of Test:** 2021-06-15 to 2021-06-23

**Date of Issue:** 2021-06-30

Test Result: Pass\*

Keny Xu EMC Laboratory 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issued defined therein. Any holder of this 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)83071443,

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



Report No.: SZCR210602150302

Page: 2 of 56

|         | Revision Record                      |            |  |          |  |  |  |
|---------|--------------------------------------|------------|--|----------|--|--|--|
| Version | Version Chapter Date Modifier Remark |            |  |          |  |  |  |
| 01      |                                      | 2021-06-30 |  | Original |  |  |  |
|         |                                      |            |  |          |  |  |  |
|         |                                      |            |  |          |  |  |  |

| Authorized for issue by: |                              |  |
|--------------------------|------------------------------|--|
|                          | Benson Wong                  |  |
|                          | Benson Wang/Project Engineer |  |
|                          | Exic Fu                      |  |
|                          | Eric Fu/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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 3 of 56

### **Test Summary**

| 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 C 15.203 & 15.247(b)(4) | Pass   |  |  |  |

| Radio Spectrum Matter Part                                  |                                     |   |  |        |  |  |
|---|-------------------------------------|---|--|--------|--|--|
| Item  | Standard                            | Method                                  | Requirement                                  | Result |  |  |
| Conducted Peak<br>Output Power                              |                                     | 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 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                             | 47 CFR Part 15,<br>Subpart C 15.247 | ANSI C63.10 (2013)<br>Section 11.11     | 47 CFR Part 15, Subpart<br>C 15.247(d)       | Pass   |  |  |
| Radiated Emissions<br>which fall in the<br>restricted bands |                                     | ANSI C63.10 (2013)<br>Section 6.10.5    | 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   |  |  |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

Co.,Ltd. No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 4 of 56

### **Contents**

|   |                |  | Page |
|---|----------------|--|------|
| 1 | COV            | ER PAGE                                | 1    |
| 2 | TES            | T SUMMARY                              | 3    |
| 3 | CON            | ITENTS                                 | 4    |
| 4 |                | IERAL INFORMATION                      |      |
| 4 | GEN            |  |      |
|   | 4.1            | DETAILS OF E.U.T.                      |      |
|   | 4.2            | DESCRIPTION OF SUPPORT UNITS           |      |
|   | 4.3            | MEASUREMENT UNCERTAINTY                |      |
|   | 4.4            | TEST LOCATION                          |      |
|   | 4.5            | TEST FACILITY                          |      |
|   | 4.6            | DEVIATION FROM STANDARDS               |      |
|   | 4.7            | ABNORMALITIES FROM STANDARD CONDITIONS | 7    |
| 5 | EQU            | IIPMENT LIST                           | 8    |
|   |                |  |      |
| 6 | RAD            | NO SPECTRUM TECHNICAL REQUIREMENT      | 11   |
|   | 6.1            | ANTENNA REQUIREMENT                    |      |
|   | 6.1.1          |  |      |
|   | 6.1.2          | ,                                      |      |
|   |                |  |      |
| 7 | RAD            | NO SPECTRUM MATTER TEST RESULTS        | 12   |
|   | 7.1            | CONDUCTED PEAK OUTPUT POWER            | 12   |
|   | 7.1.1          | I E.U.T. Operation                     | 12   |
|   | 7.1.2          | Part Mode Description                  | 12   |
|   | 7.1.3          | B Test Setup Diagram                   | 13   |
|   | 7.1.4          | Measurement Procedure and Data         | 13   |
|   | 7.2            | MINIMUM 6DB BANDWIDTH                  | 14   |
|   | 7.2.1          | f E.U.T. Operation                     | 14   |
|   | 7.2.2          |  |      |
|   | 7.2.3          | , 5                                    |      |
|   | 7.2.4          |  |      |
|   | 7.3            | POWER SPECTRUM DENSITY                 |      |
|   | 7.3.1          | - F                                    |      |
|   |                | 2 Test Mode Description                |      |
|   | 7.3.3          | · · · · · · · · · · · · · · · · · · ·  |      |
|   | 7.3.4          |  |      |
|   | 7.4            | CONDUCTED BAND EDGES MEASUREMENT       |      |
|   | 7.4.1          |  |      |
|   | 7.4.2          | ·                                      |      |
|   | 7.4.3          | , 5                                    |      |
|   | 7.4.4<br>7.5   |  |      |
|   | 7.5<br>7.5.1   | CONDUCTED SPURIOUS EMISSIONS           |      |
|   | 7.5.1<br>7.5.2 | •                                      |      |
|   | 7.5.2<br>7.5.3 | ·                                      |      |
|   | 7.0.3          | rest Setup Diagram                     | 1 /  |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 5 of 56

|    | 7.5.4 | Measurement Procedure and Data                        | 17 |
|----|-------|---|----|
| 7. | .6 F  | RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS | 18 |
|    | 7.6.1 | E.U.T. Operation                                      | 18 |
|    | 7.6.2 | Test Mode Description                                 |    |
|    | 7.6.3 | Test Setup Diagram                                    |    |
|    | 7.6.4 | Measurement Procedure and Data                        |    |
| 7. | .7 F  | RADIATED SPURIOUS EMISSIONS BELOW 1GHz                | 24 |
|    | 7.7.1 | E.U.T. Operation                                      | 24 |
|    | 7.7.2 | Test Mode Description                                 | 24 |
|    | 7.7.3 | Test Setup Diagram                                    |    |
|    | 7.7.4 | Measurement Procedure and Data                        | 25 |
| 7. | .8 F  | RADIATED SPURIOUS EMISSIONS ABOVE 1GHZ                | 28 |
|    | 7.8.1 | E.U.T. Operation                                      | 28 |
|    | 7.8.2 | Test Mode Description                                 | 28 |
|    | 7.8.3 | Test Setup Diagram                                    |    |
|    | 7.8.4 | Measurement Procedure and Data                        |    |
| 8  | TEST  | SETUP PHOTO   | 36 |
| 9  | EUT C | CONSTRUCTIONAL DETAILS (EUT PHOTOS)                   | 36 |
| 10 | APPF  | NDIX  | 37 |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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



Report No.: SZCR210602150302

6 of 56 Page:

### **General Information**

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

| Power supply:        | 4.5VDC(1.5V×3"AAA" Size Batteries) |
|----------------------|------------------------------------|
| Operation Frequency: | 2402MHz to 2480MHz                 |
| Bluetooth Version:   | V4.2 LE                            |
| Modulation Type:     | GFSK                               |
| Number of Channels:  | 40                                 |
| Channel Spacing:     | 2MHz                               |
| Antenna Type:        | Integral Antenna                   |
| Antenna Gain:        | 1dBi                               |

### 4.2 Description of Support Units

| Description                                     | Manufacturer | Model No. | Serial No. |  |  |  |
|---|--------------|-----------|------------|--|--|--|
|   | -            | -         | -          |  |  |  |
| The EUT has been tested as an independent unit. |              |           |            |  |  |  |

### 4.3 Measurement Uncertainty

| Test Item   | Measurement Uncertainty                   |
|---|---|
| Conducted Peak Output Power                           | ± 0.75dB                                  |
| Minimum 6dB Bandwidth                                 | ± 3%                                      |
| Power Spectrum Density                                | ± 2.84dB                                  |
| Conducted Band Edges Measurement                      | ± 0.75dB                                  |
| Conducted Spurious Emissions                          | ± 0.75dB                                  |
| Radiated Emissions which fall in the restricted bands | ± 4.5dB (Below 1GHz);± 4.8dB (Above 1GHz) |
| Radiated Spurious Emissions Below 1GHz                | ± 4.5dB                                   |
| Radiated Spurious Emissions Above 1GHz                | ± 4.8dB                                   |

#### Remark:

The U<sub>lab</sub> (lab Uncertainty) is less than U<sub>cispr</sub> (CISPR Uncertainty), so the test results

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 its document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written 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, \*\*Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-75

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 7 of 56

#### 4.4 Test Location

All tests were performed at:

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

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

#### 4.5 Test Facility

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

#### • A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

#### • VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

#### • FCC -Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

#### Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

#### 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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



Report No.: SZCR210602150302

Page: 8 of 56

### 5 Equipment List

| Conducted Peak Output Power |              |                          |              |            |              |  |
|-----------------------------|--------------|--------------------------|--------------|------------|--------------|--|
| Equipment                   | Manufacturer | Model No                 | Inventory No | Cal Date   | Cal Due Date |  |
| Shielding Room              | SAEMC        | MSR433                   | SEM001-11    | 2019-06-13 | 2022-06-12   |  |
| DC Power Supply             | KEYSIGHT     | E3642A                   | SEM011-07    | 2021-03-23 | 2022-03-22   |  |
| Manual Step Attenuator      | KEYSIGHT     | 8494B                    | SEM021-05    | 2021-04-08 | 2022-04-07   |  |
| Manual Step Attenuator      | KEYSIGHT     | 8496B                    | SEM021-06    | 2021-04-08 | 2022-04-07   |  |
| Power Sensor                | KEYSIGHT     | U2021XA                  | SEM009-13    | 2021-03-24 | 2022-03-23   |  |
| Power Sensor                | KEYSIGHT     | U2021XA                  | SEM009-14    | 2021-03-24 | 2022-03-23   |  |
| Power Sensor                | KEYSIGHT     | U2021XA                  | SEM009-15    | 2021-03-24 | 2022-03-23   |  |
| Power Sensor                | KEYSIGHT     | U2021XA                  | SEM009-16    | 2021-03-24 | 2022-03-23   |  |
| Measurement Software        | JS Tonscend  | JS1120-2<br>BT/WIFI V2.6 | N/A          | N/A        | N/A          |  |
| Coaxial Cable               | SGS          | N/A                      | SEM028-01    | 2020-07-10 | 2021-07-09   |  |

| Minimum 6dB Bandwidth |                 |                    |              |            |              |  |
|-----------------------|-----------------|--------------------|--------------|------------|--------------|--|
| Equipment             | Manufacturer    | Model No           | Inventory No | Cal Date   | Cal Due Date |  |
| Shielding Room        | SAEMC           | MSR733             | SEM001-09    | 2019-06-13 | 2022-06-12   |  |
| DC Power Supply       | Rohde & Schwarz | NGSM 32/10         | SEM011-04    | 2021-03-23 | 2022-03-22   |  |
| MXA Signal Analyzer   | KEYSIGHT        | N9020A             | SEM004-17    | 2021-04-08 | 2022-04-07   |  |
| Measurement Software  | TST             | TST PASS<br>V1.0.5 | N/A          | N/A        | N/A          |  |
| Coaxial Cable         | SGS             | N/A                | SEM031-01    | 2020-07-10 | 2021-07-09   |  |
| Attenuator            | Huber+Suhner    | 6620_SMA-50-<br>1  | SEM021-09    | 2021-04-08 | 2022-04-07   |  |

| Power Spectrum Density |                 |                    |              |            |              |  |
|------------------------|-----------------|--------------------|--------------|------------|--------------|--|
| Equipment              | Manufacturer    | Model No           | Inventory No | Cal Date   | Cal Due Date |  |
| Shielding Room         | SAEMC           | MSR733             | SEM001-09    | 2019-06-13 | 2022-06-12   |  |
| DC Power Supply        | Rohde & Schwarz | NGSM 32/10         | SEM011-04    | 2021-03-23 | 2022-03-22   |  |
| MXA Signal Analyzer    | KEYSIGHT        | N9020A             | SEM004-17    | 2021-04-08 | 2022-04-07   |  |
| Measurement Software   | TST             | TST PASS<br>V1.0.5 | N/A          | N/A        | N/A          |  |
| Coaxial Cable          | SGS             | N/A                | SEM031-01    | 2020-07-10 | 2021-07-09   |  |
| Attenuator             | Huber+Suhner    | 6620_SMA-50-<br>1  | SEM021-09    | 2021-04-08 | 2022-04-07   |  |

| Conducted Band Edges Measurement |                 |            |              |            |              |
|----------------------------------|-----------------|------------|--------------|------------|--------------|
| Equipment                        | Manufacturer    | Model No   | Inventory No | Cal Date   | Cal Due Date |
| Shielding Room                   | SAEMC           | MSR733     | SEM001-09    | 2019-06-13 | 2022-06-12   |
| DC Power Supply                  | Rohde & Schwarz | NGSM 32/10 | SEM011-04    | 2021-03-23 | 2022-03-22   |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

 Co.,Ltd.
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China
 518057
 t (86-755) 26012053
 f (86-755) 26710594
 www.sgsgroup.com.cn

 atory.
 中国・深圳・科技园中区M-10栋一号厂房
 邮编: 518057
 t (86-755) 26012053
 f (86-755) 26710594
 sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 9 of 56

| MXA Signal Analyzer  | KEYSIGHT     | N9020A             | SEM004-17 | 2021-04-08 | 2022-04-07 |
|----------------------|--------------|--------------------|-----------|------------|------------|
| Measurement Software | TST          | TST PASS<br>V1.0.5 | N/A       | N/A        | N/A        |
| Coaxial Cable        | SGS          | N/A                | SEM031-01 | 2020-07-10 | 2021-07-09 |
| Attenuator           | Huber+Suhner | 6620_SMA-50-<br>1  | SEM021-09 | 2021-04-08 | 2022-04-07 |

| Conducted Spurious Emissions |                 |                    |              |            |              |
|------------------------------|-----------------|--------------------|--------------|------------|--------------|
| Equipment                    | Manufacturer    | Model No           | Inventory No | Cal Date   | Cal Due Date |
| Shielding Room               | SAEMC           | MSR733             | SEM001-09    | 2019-06-13 | 2022-06-12   |
| DC Power Supply              | Rohde & Schwarz | NGSM 32/10         | SEM011-04    | 2021-03-23 | 2022-03-22   |
| MXA Signal Analyzer          | KEYSIGHT        | N9020A             | SEM004-17    | 2021-04-08 | 2022-04-07   |
| Measurement Software         | TST             | TST PASS<br>V1.0.5 | N/A          | N/A        | N/A          |
| Coaxial Cable                | SGS             | N/A                | SEM031-01    | 2020-07-10 | 2021-07-09   |
| Attenuator                   | Huber+Suhner    | 6620_SMA-50-<br>1  | SEM021-09    | 2021-04-08 | 2022-04-07   |

| Radiated Emissions wh       | Radiated Emissions which fall in the restricted bands |                     |              |            |              |  |
|-----------------------------|---|---------------------|--------------|------------|--------------|--|
| Equipment                   | Manufacturer  | Model No            | Inventory No | Cal Date   | Cal Due Date |  |
| 3m Semi-Anechoic<br>Chamber | AUDIX   | N/A                 | SEM001-02    | 2021-03-26 | 2024-03-25   |  |
| EXA Signal Analyzer         | Agilent Technologies Inc                              | N9010A              | SEM004-12    | 2021-02-01 | 2022-01-31   |  |
| Horn Antenna                | Rohde&Schwarz   | HF907               | SEM003-07    | 2021-04-14 | 2024-04-13   |  |
| Pre-Amplifier               | Compliance<br>Directions Systems<br>Inc.              | PAP-0126            | SEM004-11    | 2020-09-23 | 2021-09-22   |  |
| Measurement Software        | AUDIX   | e3 V8.2014-6-<br>27 | N/A          | N/A        | N/A          |  |
| Coaxial Cable               | SGS   | N/A                 | SEM026-01    | 2020-07-10 | 2021-07-09   |  |
| Horn Antenna                | Schwarzbeck   | BBHA 9170           | SEM003-15    | 2020-11-14 | 2023-11-13   |  |
| Pre-Amplifier               | Compliance<br>Directions Systems<br>Inc.              | PAP-2640-50         | SEM005-08    | 2021-03-24 | 2022-03-23   |  |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

中国·深圳·科技园中区M-10栋一号厂房

Co.,Ltd. No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 10 of 56

| Radiated Spurious Emissions Below 1GHz |                      |                     |              |            |              |
|--|----------------------|---------------------|--------------|------------|--------------|
| Equipment                              | Manufacturer         | Model No            | Inventory No | Cal Date   | Cal Due Date |
| 3m Semi-Anechoic<br>Chamber            | ETS-LINDGREN         | N/A                 | SEM001-01    | 2020-07-19 | 2023-07-18   |
| MXE EMI Receiver                       | Agilent Technologies | N9038A              | SEM004-15    | 2020-11-02 | 2021-11-01   |
| BiConiLog Antenna                      | ETS-LINDGREN         | 3142C               | SEM003-02    | 2019-05-24 | 2022-05-23   |
| Pre-Amplifier                          | Agilent Technologies | 8447D               | SEM005-01    | 2021-03-24 | 2022-03-23   |
| Measurement Software                   | AUDIX                | e3 V8.2014-6-<br>27 | N/A          | N/A        | N/A          |
| Coaxial Cable                          | SGS                  | N/A                 | SEM025-01    | 2020-07-10 | 2021-07-09   |

| Radiated Spurious Emissions Above 1GHz |  |                     |              |            |              |
|--|--|---------------------|--------------|------------|--------------|
| Equipment                              | Manufacturer                             | Model No            | Inventory No | Cal Date   | Cal Due Date |
| 3m Semi-Anechoic<br>Chamber            | AUDIX                                    | N/A                 | SEM001-02    | 2021-03-26 | 2024-03-25   |
| EXA Signal Analyzer                    | Agilent Technologies Inc                 | N9010A              | SEM004-12    | 2021-02-01 | 2022-01-31   |
| Horn Antenna                           | Rohde&Schwarz                            | HF907               | SEM003-07    | 2021-04-14 | 2024-04-13   |
| Pre-Amplifier                          | Compliance<br>Directions Systems<br>Inc. | PAP-0126            | SEM004-11    | 2020-09-23 | 2021-09-22   |
| Measurement Software                   | AUDIX                                    | e3 V8.2014-6-<br>27 | N/A          | N/A        | N/A          |
| Coaxial Cable                          | SGS                                      | N/A                 | SEM026-01    | 2020-07-10 | 2021-07-09   |

| General used equipment             |   |          |              |            |              |
|------------------------------------|---|----------|--------------|------------|--------------|
| Equipment                          | Manufacturer                                    | Model No | Inventory No | Cal Date   | Cal Due Date |
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory  | ZJ1-2B   | SEM002-04    | 2020-09-15 | 2021-09-14   |
| Humidity/ Temperature Indicator    | Mingle  | N/A      | SEM002-08    | 2020-09-15 | 2021-09-14   |
| Barometer                          | Changchun<br>Meteorological<br>Industry Factory | DYM3     | SEM002-01    | 2021-03-30 | 2022-03-29   |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 11 of 56

#### 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 1dBi

Antenna location: Refer to internal photo.





Report No.: SZCR210602150302

Page: 12 of 56

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

#### 7.1 Conducted Peak Output Power

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

#### Limit:

| Frequency range(MHz) | Output power of the intentional radiator(watt)         |
|----------------------|--|
|                      | 1 for ≥50 hopping channels                             |
| 902-928              | 0.25 for 25≤ hopping channels <50                      |
|                      | 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                               |
| 5725-5850            | 1 for frequency hopping systems and digital modulation |

#### 7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 24.8 °C Humidity: 40.5 % RH Atmospheric Pressure: 1010 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

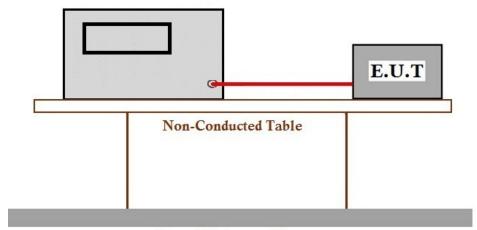
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 13 of 56

#### 7.1.3 Test Setup Diagram



**Ground Reference Plane** 

#### 7.1.4 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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



Report No.: SZCR210602150302

Page: 14 of 56

#### 7.2 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
Test Method: ANSI C63.10 (2013) Section 11.8.1

Limit:

≥500 kHz

#### 7.2.1 E.U.T. Operation

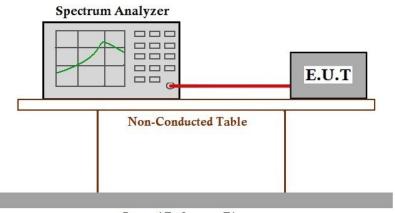
Operating Environment:

Temperature: 24.8 °C Humidity: 40.5 % RH Atmospheric Pressure: 1010 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



**Ground Reference Plane** 

#### 7.2.4 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn



Report No.: SZCR210602150302

Page: 15 of 56

#### 7.3 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

#### 7.3.1 E.U.T. Operation

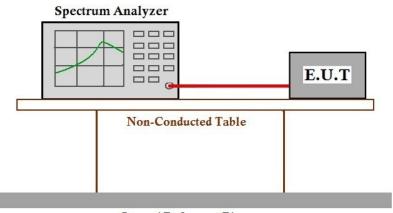
Operating Environment:

24.8 °C Temperature: Humidity: 40.5 % RH Atmospheric Pressure: 1010 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



**Ground Reference Plane** 

#### 7.3.4 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 16 of 56

#### 7.4 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).

#### 7.4.1 E.U.T. Operation

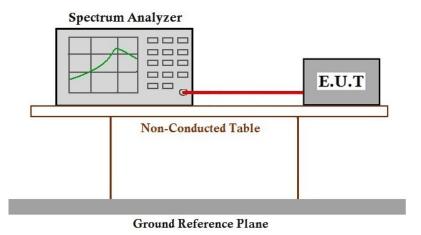
Operating Environment:

Temperature: 24.8 °C Humidity: 40.5 % RH Atmospheric Pressure: 1010 mbar

7.4.2 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. |

#### 7.4.3 Test Setup Diagram



#### 7.4.4 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 17 of 56

#### 7.5 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).

#### 7.5.1 E.U.T. Operation

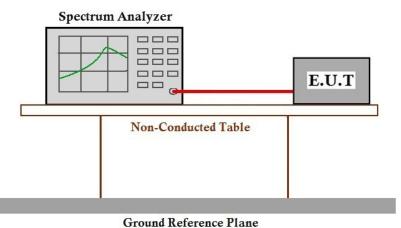
Operating Environment:

Temperature: 24.8 °C Humidity: 40.5 % RH Atmospheric Pressure: 1010 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 1 la

#### 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic Documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 18 of 56

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

47 CFR Part 15, Subpart C 15,205 & 15,209 Test Requirement

Test Method: ANSI C63.10 (2013) Section 6.10.5

Measurement Distance: 3m

Limit:

| Frequency (MHz) | Field strength(microvolts/meter) | Measurement 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.

#### 7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 21.2 °C Humidity: 54.3 % RH Atmospheric Pressure: 1010 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. |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

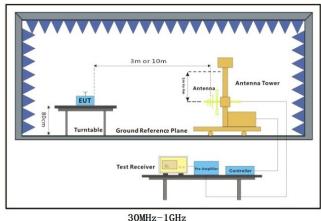
www.sgsgroup.com.cn sgs.china@sgs.com

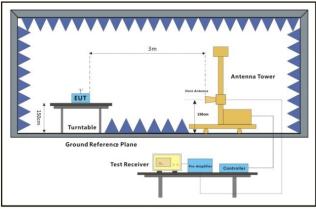


Report No.: SZCR210602150302

Page: 19 of 56

#### 7.6.3 Test Setup Diagram





Above 1GHz

#### 7.6.4 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 middle 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 <a href="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

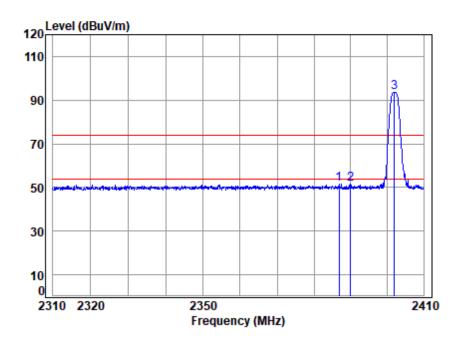
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 20 of 56

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



Site : chamber

Condition: 3m HORIZONTAL Job No : 21503AT/21504AT Mode : 2402 Band edge

Note : BLE

> 1 2 3

|          | Cable | Ant    | Preamp | Read   |        | Limit  | 0ver   |        |
|----------|-------|--------|--------|--------|--------|--------|--------|--------|
| Freq     | Loss  | Factor | Factor | Level  | Level  | Line   | Limit  | Remark |
|          |       |        |        |        |        |        |        |        |
| MHz      | dB    | dB/m   | dB     | dBuV   | dBuV/m | dBuV/m | dB     |        |
|          |       |        |        |        |        |        |        |        |
| 2386.826 | 4.34  | 28.87  | 40.42  | 58.63  | 51.42  | 74.00  | -22.58 | peak   |
| 2390.000 | 4.34  | 28.88  | 40.42  | 58.69  | 51.49  | 74.00  | -22.51 | peak   |
| 2402.000 | 4.36  | 28.90  | 40.43  | 100.63 | 93.46  | 74.00  | 19.46  | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

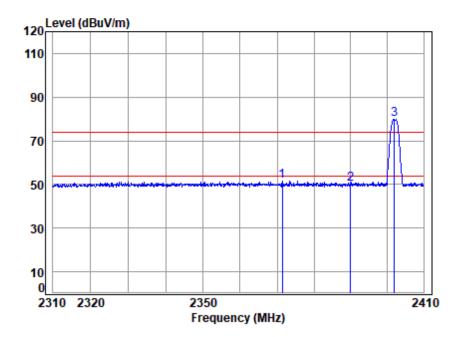
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 21 of 56

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



Site : chamber

Condition: 3m VERTICAL

Job No : 21503AT/21504AT Mode : 2402 Band edge

Note : BLE

> 1 2 3

|            | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |
|------------|-------|--------|--------|-------|--------|--------|--------|--------|
| Freq       | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|            |       |        |        |       |        |        |        |        |
| MHz        | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
|            |       |        |        |       |        |        |        |        |
| 2371.399   | 4.31  | 28.84  | 40.41  | 58.83 | 51.57  | 74.00  | -22.43 | peak   |
| 2390.000   | 4.34  | 28.88  | 40.42  | 57.52 | 50.32  | 74.00  | -23.68 | peak   |
| . 2402.000 | 4.36  | 28.90  | 40.43  | 86.83 | 79.66  | 74.00  | 5.66   | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

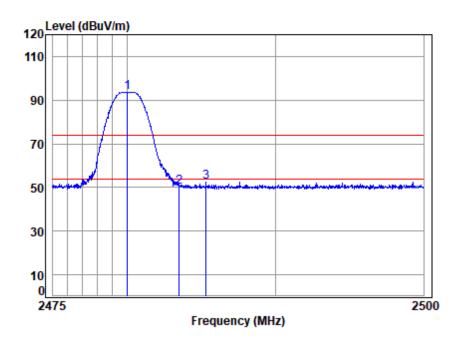
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 22 of 56

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



Site : chamber

Condition: 3m HORIZONTAL Job No : 21503AT/21504AT Mode : 2480 Band edge

Note : BLE

|   |          | Cable | Ant    | Preamp | Read   |        | Limit  | 0ver   |        |  |
|---|----------|-------|--------|--------|--------|--------|--------|--------|--------|--|
|   | Freq     | Loss  | Factor | Factor | Level  | Level  | Line   | Limit  | Remark |  |
|   |          |       |        |        |        |        |        |        |        |  |
|   | MHz      | dB    | dB/m   | dB     | dBuV   | dBuV/m | dBuV/m | dB     |        |  |
|   |          |       |        |        |        |        |        |        |        |  |
| 1 | 2480.000 | 4.49  | 29.06  | 40.47  | 100.67 | 93.75  | 74.00  | 19.75  | peak   |  |
| 2 | 2483.500 | 4.49  | 29.07  | 40.47  | 57.15  | 50.24  | 74.00  | -23.76 | peak   |  |
| 3 | 2485.294 | 4.50  | 29.07  | 40.47  | 59.49  | 52.59  | 74.00  | -21.41 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

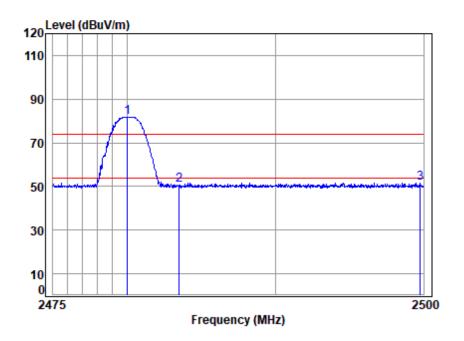
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 23 of 56

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



Site : chamber

Condition: 3m VERTICAL

Job No : 21503AT/21504AT Mode : 2480 Band edge

Note : BLE

|   |            | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |  |
|---|------------|-------|--------|--------|-------|--------|--------|--------|--------|--|
|   | Freq       | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |  |
|   |            |       |        |        |       |        |        |        |        |  |
|   | MHz        | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |  |
|   |            |       |        |        |       |        |        |        |        |  |
| 1 | . 2480.000 | 4.49  | 29.06  | 40.47  | 88.69 | 81.77  | 74.00  | 7.77   | peak   |  |
| 2 | 2483.500   | 4.49  | 29.07  | 40.47  | 57.40 | 50.49  | 74.00  | -23.51 | peak   |  |
| 3 | 2499.774   | 4.52  | 29.10  | 40.48  | 58.57 | 51.71  | 74.00  | -22.29 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210602150302

24 of 56 Page:

#### 7.7 Radiated Spurious Emissions Below 1GHz

47 CFR Part 15, Subpart C 15.205 & 15.209 Test Requirement

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Measurement Distance: 3m

#### Limit:

| Frequency (MHz) | Field strength(microvolts/meter) | Measurement 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                            |

#### 7.7.1 E.U.T. Operation

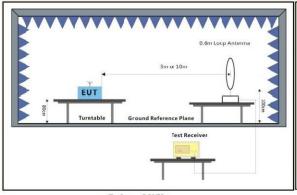
Operating Environment:

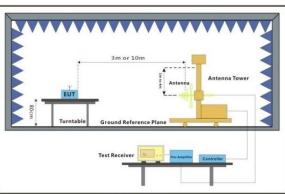
Humidity: 46.2 % RH Temperature: 25.1 °C Atmospheric Pressure: 1010 mbar

#### 7.7.2 Test Mode Description

| <b>=</b>                 | 040 50       | puon  |  |  |  |  |  |  |
|--------------------------|--------------|---|--|--|--|--|--|--|
| 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





Below 30MHz 30MHz-1GHz



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 25 of 56

#### 7.7.4 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-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 quasi-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.

- 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.
- 3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

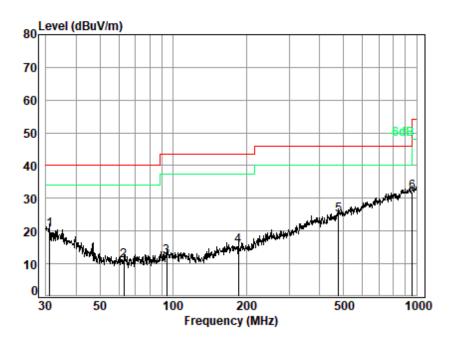
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sas.com.



Report No.: SZCR210602150302

Page: 26 of 56

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



Site : chamber

Condition: 3m HORIZONTAL

Job No. : 21503AT

Test Mode: 00

|     | _      |        |      | Preamp |       |        |        |        |        |
|-----|--------|--------|------|--------|-------|--------|--------|--------|--------|
|     | Freq   | Factor | Loss | Factor | Level | Level  | Line   | Limit  | Remark |
|     | MHz    | dB/m   | dB   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1   | 31.07  | 22.19  | 0.61 | 27.73  | 25.19 | 20.26  | 40.00  | -19.74 | Peak   |
| 2   | 62.87  | 12.87  | 0.80 | 27.66  | 24.88 | 10.89  | 40.00  | -29.11 | Peak   |
| 3   | 94.10  | 13.51  | 1.22 | 27.62  | 25.04 | 12.15  | 43.50  | -31.35 | Peak   |
| 4   | 185.14 | 15.45  | 1.19 | 27.20  | 26.16 | 15.60  | 43.50  | -27.90 | Peak   |
| 5   | 478.85 | 24.22  | 2.46 | 27.72  | 25.94 | 24.90  | 46.00  | -21.10 | Peak   |
| 6 p | 958.79 | 29.48  | 3.56 | 26.86  | 25.64 | 31.82  | 46.00  | -14.18 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

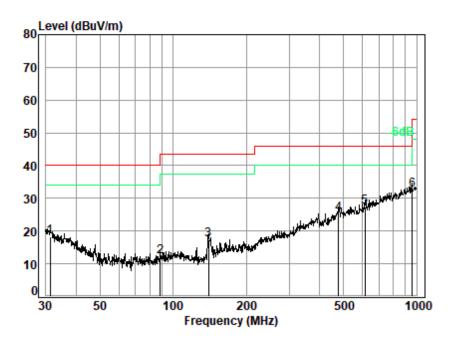
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

27 of 56 Page:

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



Site : chamber

Condition: 3m VERTICAL

Job No. : 21503AT

Test Mode: 00

|     | louc. oo |         |       |        |       |           |           |        |        |
|-----|----------|---------|-------|--------|-------|-----------|-----------|--------|--------|
|     |          | Ant     | Cable | Preamp | Read  |           | Limit     | 0ver   |        |
|     | Freq     | Factor  | Loss  | Factor | Level | Level     | Line      | Limit  | Remark |
| _   | MHz      | dB/m    | dB    | dB     | dRuV  | dBuV/m    | dBuV/m    | dB     |        |
|     | 1112     | ub/ III | u.    | u.     | aba*  | abav, iii | abav, iii | u.b    |        |
| 1   | 31.18    | 22.10   | 0.61  | 27.73  | 23.13 | 18.11     | 40.00     | -21.89 | Peak   |
| 2   | 88.65    | 12.97   | 1.29  | 27.62  | 25.48 | 12.12     | 43.50     | -31.38 | Peak   |
| 3   | 139.85   | 13.39   | 1.15  | 27.38  | 30.05 | 17.21     | 43.50     | -26.29 | Peak   |
| 4   | 478.85   | 24.22   | 2.46  | 27.72  | 26.39 | 25.35     | 46.00     | -20.65 | Peak   |
| 5   | 614.21   | 26.47   | 2.73  | 28.10  | 26.40 | 27.50     | 46.00     | -18.50 | Peak   |
| 6 p | 958.79   | 29.48   | 3.56  | 26.86  | 26.39 | 32.57     | 46.00     | -13.43 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

28 of 56 Page:

#### 7.8 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

Measurement Distance: 3m

#### Limit:

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

#### 7.8.1 E.U.T. Operation

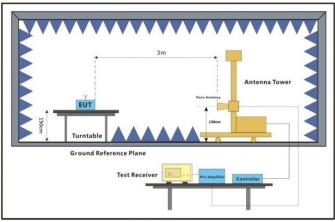
Operating Environment:

23.3 °C Humidity: 53.9 % RH Temperature: Atmospheric Pressure: 1010 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



Above 1GHz



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 its document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written 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, \*\*Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-755) 8307 1443, \*\*Certificate, please contact us at telephone: (86-75

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 29 of 56

#### 7.8.4 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.

- 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

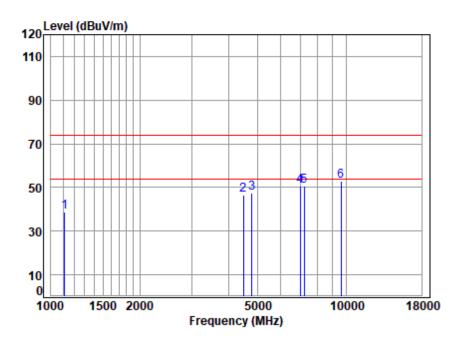
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sas.com.



Report No.: SZCR210602150302

Page: 30 of 56

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



Site : chamber

Condition: 3m HORIZONTAL Job No : 21503AT/21504AT

Mode : 2402 TX SE

Note : BLE

|   |          | _     |        |        |       |        |        |        |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   |          |       |        |        |       |        |        |        |        |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
|   |          |       |        |        |       |        |        |        |        |
| 1 | 1112.872 | 2.60  | 24.89  | 39.69  | 50.76 | 38.56  | 74.00  | -35.44 | peak   |
| 2 | 4495.125 | 6.76  | 33.00  | 41.87  | 48.80 | 46.69  | 74.00  | -27.31 | peak   |
| 3 | 4804.000 | 7.10  | 33.62  | 42.14  | 48.96 | 47.54  | 74.00  | -26.46 | peak   |
| 4 | 6995.172 | 8.54  | 35.49  | 41.70  | 48.30 | 50.63  | 74.00  | -23.37 | peak   |
| 5 | 7206.000 | 8.74  | 35.67  | 41.50  | 47.76 | 50.67  | 74.00  | -23.33 | peak   |
| 6 | 9608.000 | 10.81 | 37.34  | 37.76  | 42.38 | 52.77  | 74.00  | -21.23 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房

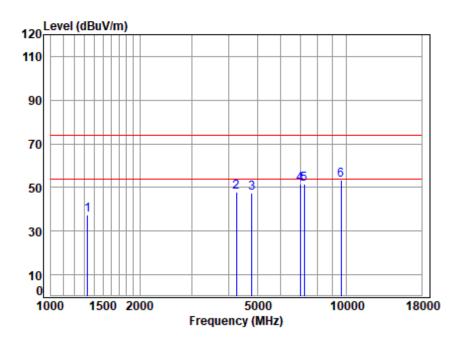
Member of the SGS Group (SGS SA)



Report No.: SZCR210602150302

Page: 31 of 56

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



Site : chamber

Condition: 3m VERTICAL

Job No : 21503AT/21504AT

Mode : 2402 TX SE

Note : BLE

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 1331.288 | 3.00  | 25.38  | 39.85  | 48.96 | 37.49  | 74.00  | -36.51 | peak   |
| 2 | 4242.641 | 6.52  | 32.80  | 41.64  | 50.33 | 48.01  | 74.00  | -25.99 | peak   |
| 3 | 4804.000 | 7.10  | 33.62  | 42.14  | 48.96 | 47.54  | 74.00  | -26.46 | peak   |
| 4 | 6995.172 | 8.54  | 35.49  | 41.70  | 49.20 | 51.53  | 74.00  | -22.47 | peak   |
| 5 | 7206.000 | 8.74  | 35.67  | 41.50  | 48.46 | 51.37  | 74.00  | -22.63 | peak   |
| 6 | 9608.000 | 10.81 | 37.34  | 37.76  | 42.82 | 53.21  | 74.00  | -20.79 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

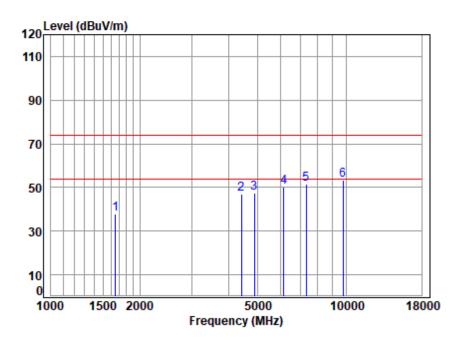
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 32 of 56

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



Site : chamber

Condition: 3m HORIZONTAL Job No : 21503AT/21504AT

Mode : 2440 TX SE

Note : BLE

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
| _ |          |       |        |        |       |        |        |        |        |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
|   |          |       |        |        |       |        |        |        |        |
| 1 | 1653.550 | 3.39  | 26.48  | 40.04  | 47.93 | 37.76  | 74.00  | -36.24 | peak   |
| 2 | 4417.841 | 6.68  | 32.94  | 41.80  | 49.19 | 47.01  | 74.00  | -26.99 | peak   |
| 3 | 4880.000 | 7.18  | 33.77  | 42.20  | 48.83 | 47.58  | 74.00  | -26.42 | peak   |
| 4 | 6142.019 | 8.27  | 34.60  | 42.29  | 49.83 | 50.41  | 74.00  | -23.59 | peak   |
| 5 | 7320.000 | 8.84  | 35.76  | 41.40  | 48.29 | 51.49  | 74.00  | -22.51 | peak   |
| 6 | 9760.000 | 10.76 | 37.41  | 37.50  | 42.88 | 53.55  | 74.00  | -20.45 | 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

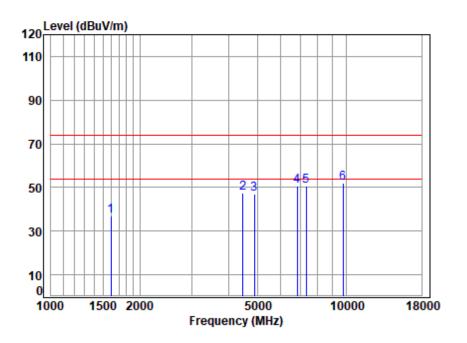
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 33 of 56

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



Site : chamber

Condition: 3m VERTICAL

Job No : 21503AT/21504AT

Mode : 2440 TX SE

Note : BLE

|   |          | _     |        |        |       |        |        |        |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   |          |       |        |        |       |        |        |        |        |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
|   |          |       |        |        |       |        |        |        |        |
| 1 | 1597.181 | 3.35  | 26.20  | 40.01  | 47.34 | 36.88  | 74.00  | -37.12 | peak   |
| 2 | 4469.214 | 6.73  | 32.98  | 41.85  | 49.41 | 47.27  | 74.00  | -26.73 | peak   |
| 3 | 4880.000 | 7.18  | 33.77  | 42.20  | 48.21 | 46.96  | 74.00  | -27.04 | peak   |
| 4 | 6815.551 | 8.45  | 35.18  | 41.82  | 48.65 | 50.46  | 74.00  | -23.54 | peak   |
| 5 | 7320.000 | 8.84  | 35.76  | 41.40  | 47.38 | 50.58  | 74.00  | -23.42 | peak   |
| 6 | 9760 000 | 10 76 | 37 41  | 37 50  | 41 39 | 52 06  | 74 99  | -21 94 | neak   |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

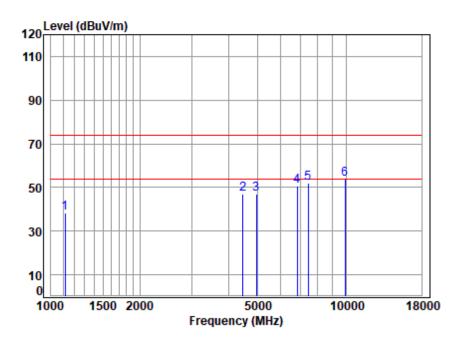
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 34 of 56

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



Site : chamber

Condition: 3m HORIZONTAL Job No : 21503AT/21504AT

Mode : 2480 TX SE

Note : BLE

|          | _   |   |  |  |   |  |  |        |
|----------|---|---|--|--|---|--|--|--------|
|          | Cable   | Ant   | Preamp   | Read   |   | Limit  | 0ver   |        |
| Freq     | Loss  | Factor  | Factor   | Level  | Level   | Line   | Limit  | Remark |
|          |   |   |  |  |   |  |  |        |
| MHz      | dB  | dB/m  | dB   | dBuV   | dBuV/m  | dBuV/m   | dB   |        |
|          |   |   |  |  |   |  |  |        |
| 1116.093 | 2.60  | 24.90   | 39.70  | 50.49  | 38.29   | 74.00  | -35.71   | peak   |
| 4469.214 | 6.73  | 32.98   | 41.85  | 49.21  | 47.07   | 74.00  | -26.93   | peak   |
| 4960.000 | 7.26  | 33.92   | 42.27  | 48.24  | 47.15   | 74.00  | -26.85   | peak   |
| 6835.278 | 8.46  | 35.21   | 41.81  | 48.63  | 50.49   | 74.00  | -23.51   | peak   |
| 7440.000 | 8.96  | 35.85   | 41.29  | 48.66  | 52.18   | 74.00  | -21.82   | peak   |
| 9920.000 | 10.71   | 37.47   | 37.23  | 42.73  | 53.68   | 74.00  | -20.32   | peak   |
|          | MHz<br>1116.093<br>4469.214<br>4960.000<br>6835.278<br>7440.000 | MHz dB  1116.093 2.60 4469.214 6.73 4960.000 7.26 6835.278 8.46 7440.000 8.96 | Freq         Loss Factor           MHz         dB         dB/m           1116.093         2.60         24.90           4469.214         6.73         32.98           4960.000         7.26         33.92           6835.278         8.46         35.21           7440.000         8.96         35.85 | Freq         Loss Factor         Factor           MHz         dB         dB/m         dB           1116.093         2.60         24.90         39.70           4469.214         6.73         32.98         41.85           4960.000         7.26         33.92         42.27           6835.278         8.46         35.21         41.81           7440.000         8.96         35.85         41.29 | Freq         Loss Factor Factor         Level           MHz         dB         dB/m         dB         dBuV           1116.093         2.60         24.90         39.70         50.49           4469.214         6.73         32.98         41.85         49.21           4960.000         7.26         33.92         42.27         48.24           6835.278         8.46         35.21         41.81         48.63           7440.000         8.96         35.85         41.29         48.66 | Freq         Loss Factor Factor         Level         Level           MHz         dB         dB/m         dB         dBuV         dBuV/m           1116.093         2.60         24.90         39.70         50.49         38.29           4469.214         6.73         32.98         41.85         49.21         47.07           4960.000         7.26         33.92         42.27         48.24         47.15           6835.278         8.46         35.21         41.81         48.63         50.49           7440.000         8.96         35.85         41.29         48.66         52.18 | Freq         Loss Factor         Factor         Level         Level         Line           MHz         dB         dB/m         dB         dBuV         dBuV/m         dBuV/m           1116.093         2.60         24.90         39.70         50.49         38.29         74.00           4469.214         6.73         32.98         41.85         49.21         47.07         74.00           4960.000         7.26         33.92         42.27         48.24         47.15         74.00           6835.278         8.46         35.21         41.81         48.63         50.49         74.00           7440.000         8.96         35.85         41.29         48.66         52.18         74.00 |        |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

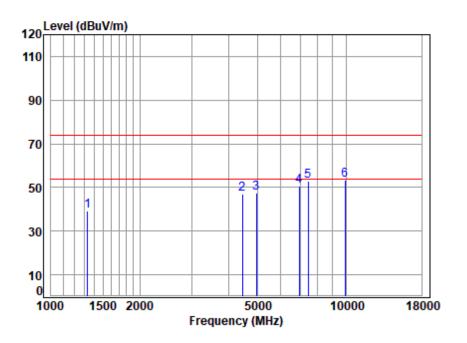
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 35 of 56

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



Site : chamber

Condition: 3m VERTICAL

Job No : 21503AT/21504AT

Mode : 2480 TX SE

Note : BLE

|   |          | _     |        |        |       |        |        |        |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | 0ver   |        |
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   |          |       |        |        |       |        |        |        |        |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
|   |          |       |        |        |       |        |        |        |        |
| 1 | 1331.288 | 3.00  | 25.38  | 39.85  | 50.91 | 39.44  | 74.00  | -34.56 | peak   |
| 2 | 4456.315 | 6.72  | 32.97  | 41.84  | 49.20 | 47.05  | 74.00  | -26.95 | peak   |
| 3 | 4960.000 | 7.26  | 33.92  | 42.27  | 48.52 | 47.43  | 74.00  | -26.57 | peak   |
| 4 | 6934.778 | 8.51  | 35.39  | 41.74  | 48.63 | 50.79  | 74.00  | -23.21 | peak   |
| 5 | 7440.000 | 8.96  | 35.85  | 41.29  | 49.36 | 52.88  | 74.00  | -21.12 | peak   |
| 6 | 9920 000 | 10 71 | 37 /17 | 37 23  | 12 51 | 53 //9 | 7/ 00  | -20 51 | neak   |



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 中国·深圳·科技园中区M-10栋一号厂房



Report No.: SZCR210602150302

36 of 56 Page:

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

Refer to Setup Photos

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

Refer to External and Internal Photos for SZCR2106021503AT



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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 37 of 56

# 10 Appendix

1. Duty Cycle

1.1 Ant1

### 1.1.1 Test Result

| Ant1                       |         |                    |           |             |                   |   |                          |  |
|----------------------------|---------|--------------------|-----------|-------------|-------------------|---|--------------------------|--|
| Mode                       | ТХ Туре | Frequency<br>(MHz) | T_on (ms) | Period (ms) | Duty Cycle<br>(%) | Duty Cycle<br>Correction Factor<br>(dB) | Max. DC<br>Variation (%) |  |
|                            |         | 2402               | 2.74      | 3.51        | 77.99             | 1.08                                    | 0.01                     |  |
| 1M                         | SISO    | 2440               | 2.74      | 3.51        | 77.97             | 1.08                                    | 0.04                     |  |
|                            |         | 2480               | 2.75      | 3.51        | 78.45             | 1.05                                    | 0.04                     |  |
| Note1: Only for Report Use |         |                    |           |             |                   |   |                          |  |

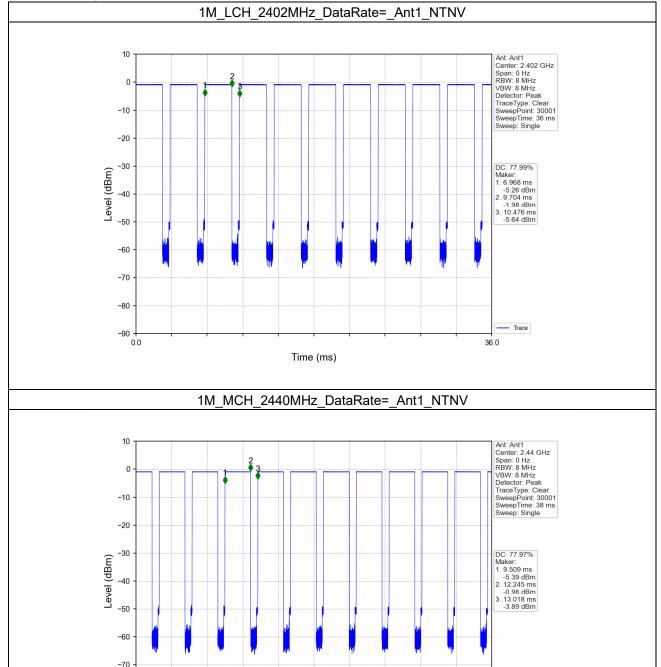




Report No.: SZCR210602150302

Page: 38 of 56

#### 1.1.2 Test Graph





-80

-90

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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国・深圳・科技园中区M-10栋一号厂房

Time (ms)

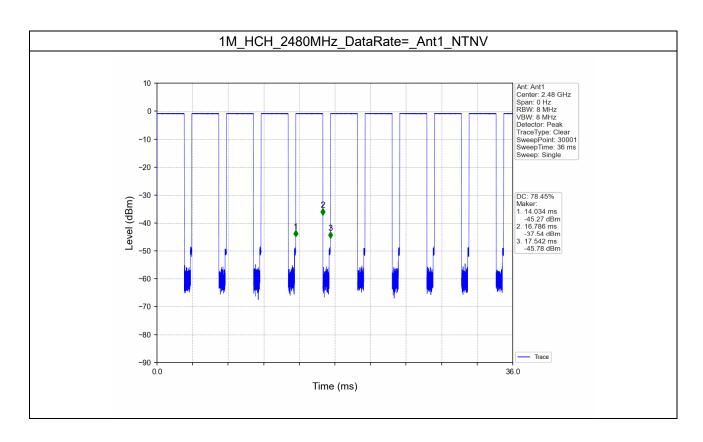
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

38.0



Report No.: SZCR210602150302

Page: 39 of 56





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 40 of 56

### 2. Bandwidth

#### 2.1 OBW

### 2.1.1 Test Result

| Mode                       | TX Type | Frequency (MHz) | Ant | 99% Occupied Bandwidth (MHz) | Limit | Verdict |  |  |
|----------------------------|---------|-----------------|-----|------------------------------|-------|---------|--|--|
| 1M                         |         | 2402            | 1   | 1.11                         | /     | Note1   |  |  |
|                            | SISO    | 2440            | 1   | 1.09                         | /     | Note1   |  |  |
|                            |         | 2480            | 1   | 1.08                         | /     | Note1   |  |  |
| Note1: Only for Report Use |         |                 |     |                              |       |         |  |  |

格質格測を用章 Inspection & Testing Services SGS-CSTS Testing Services を SGS-CSTS Testing Services を SGS-CSTS Testing Services を Shenzhen Branch Ama Services と 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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

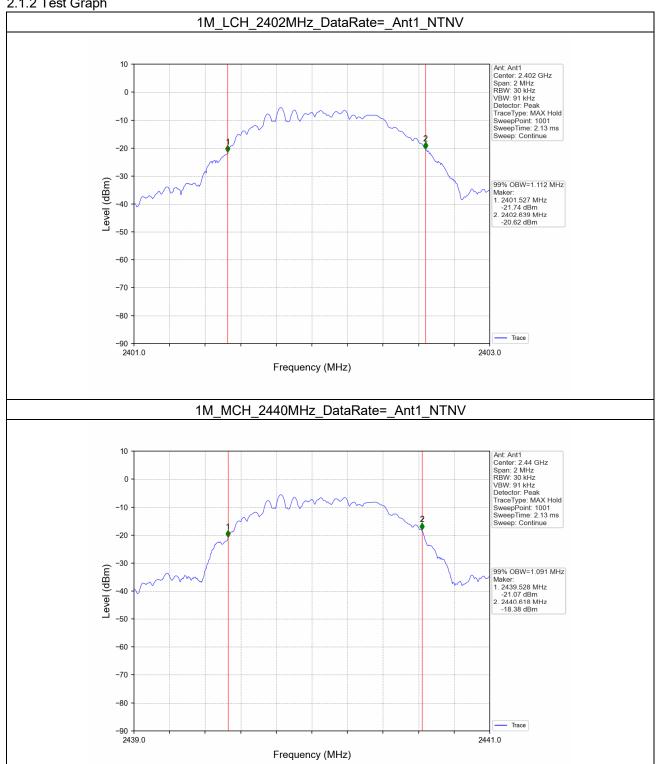
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 41 of 56

#### 2.1.2 Test Graph





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

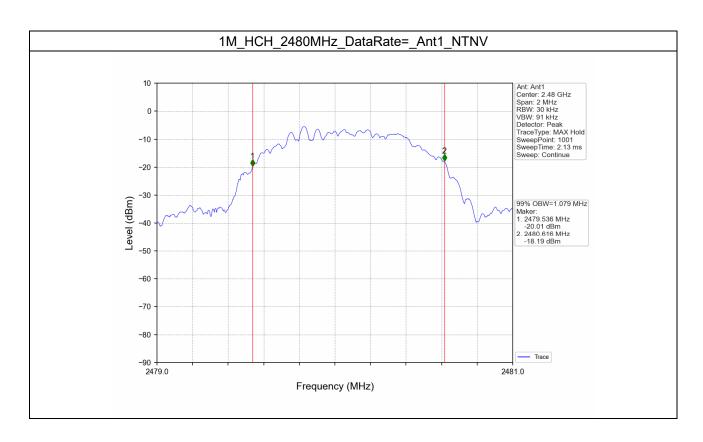
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 42 of 56





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 43 of 56

### 2.2 6dB BW

### 2.2.1 Test Result

| Mode | TX Type | Frequency (MHz) | Ant | 6dB Bandwidth (MHz) | Limit    | Verdict |
|------|---------|-----------------|-----|---------------------|----------|---------|
|      | SISO    | 2402            | 1   | 0.79                | 79 >=0.5 |         |
| 1M   |         | 2440            | 1   | 0.79                | >=0.5    | Pass    |
|      |         | 2480            | 1   | 0.79                | >=0.5    | Pass    |

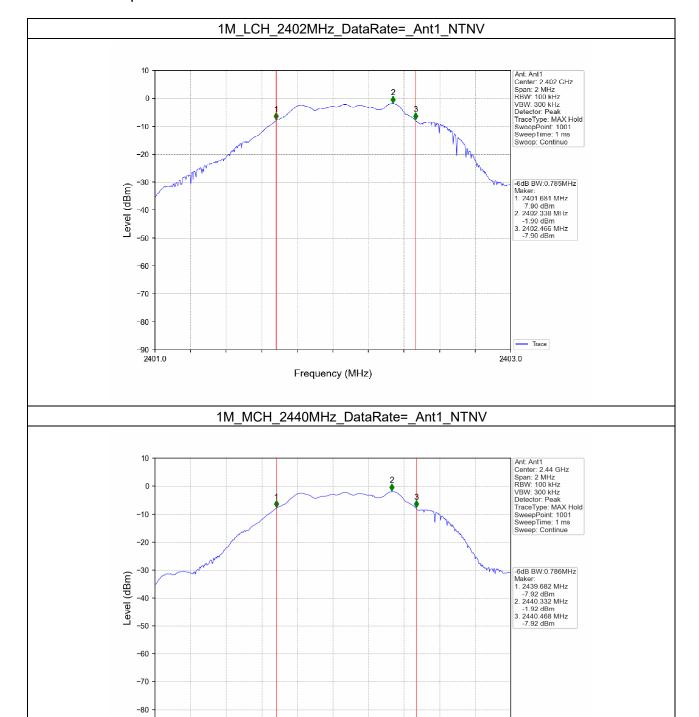




Report No.: SZCR210602150302

Page: 44 of 56

### 2.2.2 Test Graph





-90 2439.0

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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

Frequency (MHz)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国・深圳・科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com

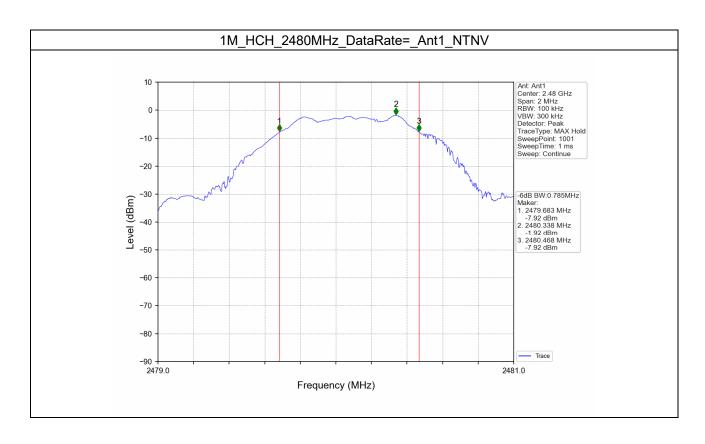
Trace

2441.0



Report No.: SZCR210602150302

Page: 45 of 56







Report No.: SZCR210602150302

Page: 46 of 56

### 3. Maximum Conducted Output Power

#### 3.1 Power

### 3.1.1 Test Result

| Mode        | TX<br>Type | Fraguency (MHz)   | Measured Peak Output Power (dBm) | Limit (dBm)    | Verdict |
|-------------|------------|-------------------|----------------------------------|----------------|---------|
|             |            | Frequency (MHz)   | Ant1                             | LIIIII (UDIII) |         |
|             | SISO       | 2402              | -0.86                            | <=30           | Pass    |
| 1M          |            | 2440              | -0.91                            | <=30           | Pass    |
|             |            | 2480              | -0.78                            | <=30           | Pass    |
| Note1: Ante | nna Gai    | n: Ant1: 1.00dBi; |                                  |                |         |



Report No.: SZCR210602150302

Page: 47 of 56

## 4. Maximum Power Spectral Density

4.1 PSD

### 4.1.1 Test Result

| Mode                                | TX<br>Type | Frequency (MHz) | Maximum PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |  |  |
|-------------------------------------|------------|-----------------|------------------------|------------------|---------|--|--|
| Wode                                |            |                 | Ant1                   | LIMIL (UDM/3KHZ) |         |  |  |
| 1M                                  | SISO       | 2402            | -17.96                 | <=8              | Pass    |  |  |
|                                     |            | 2440            | -18.25                 | <=8              | Pass    |  |  |
|                                     |            | 2480            | -17.76                 | <=8              | Pass    |  |  |
| Note1: Antenna Gain: Ant1: 1.00dBi; |            |                 |                        |                  |         |  |  |

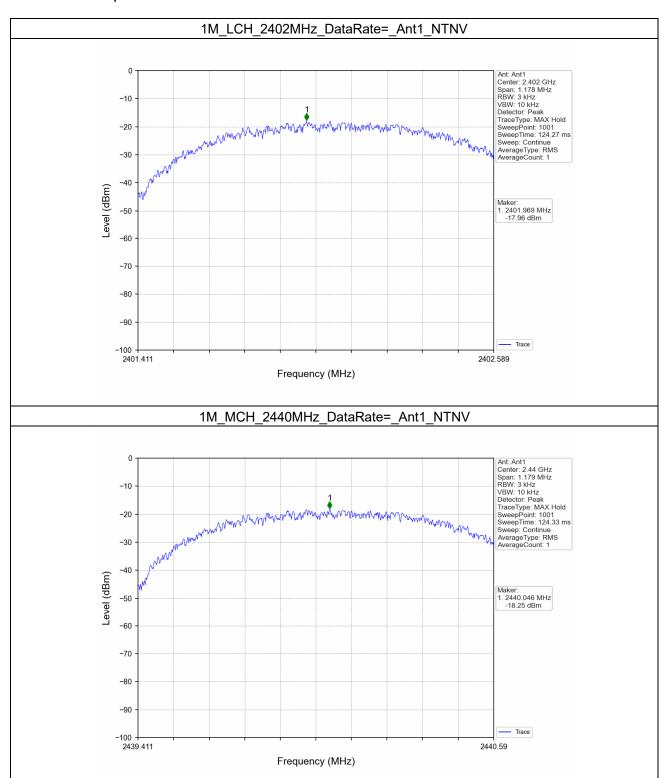




Report No.: SZCR210602150302

Page: 48 of 56

### 4.1.2 Test Graph





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国・深圳・科技园中区M-10栋一号厂房

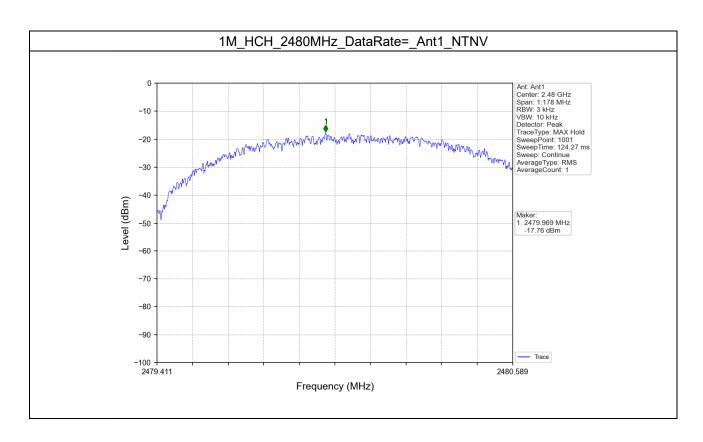
邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com



Report No.: SZCR210602150302

Page: 49 of 56





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</a>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issue defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

50 of 56 Page:

### 5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Ref

### 5.1.1 Test Result

| Mode | TX<br>Type | Frequency (MHz) | Ant | Level of Reference (dBm) | Limit (dBm) | Verdict |
|------|------------|-----------------|-----|--------------------------|-------------|---------|
|      |            | 2402            | 1   | -1.93                    | 1           | /       |
| 1M   | SISO       | 2440            | 1   | -1.98                    | /           | /       |
|      |            | 2480            | 1   | -1.93                    | /           | /       |

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.

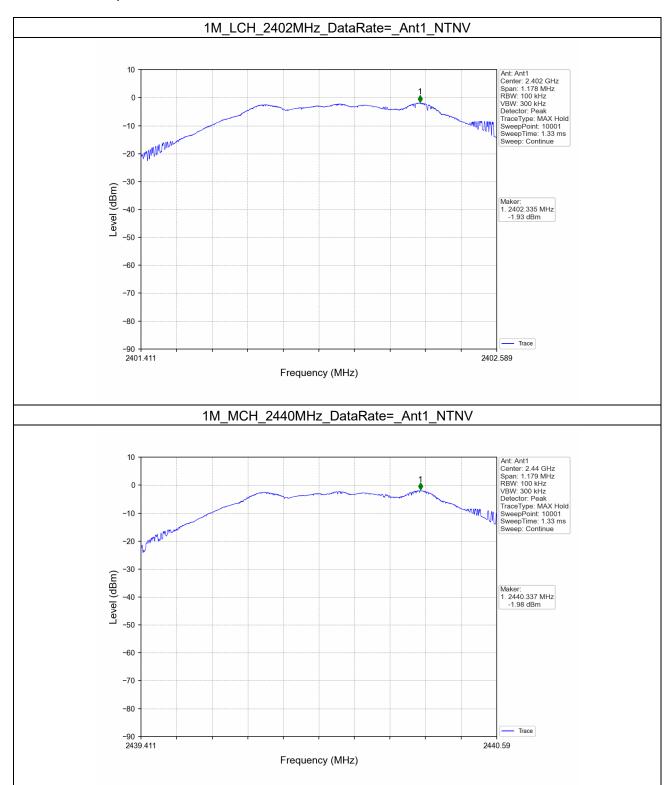




Report No.: SZCR210602150302

Page: 51 of 56

### 5.1.2 Test Graph





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

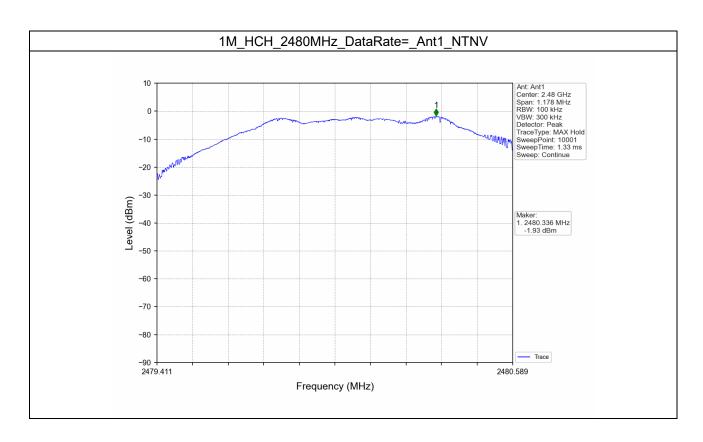
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 52 of 56







# SGS-CSTC Standards Technical Services Co., Ltd.

Report No.: SZCR210602150302

Page: 53 of 56

### 5.2 CSE

#### 5.2.1 Test Result

| Mode | TX<br>Type | Frequency (MHz)                | Ant                    | Level of Reference (dBm) | Limit (dBm)            | Verdict |
|------|------------|--------------------------------|------------------------|--------------------------|------------------------|---------|
| 1M   |            | 2402                           | 1                      | Refer To Test Graph      | Refer To Test<br>Graph | Pass    |
|      | SISO       | ISO 2440 1 Refer To Test Graph | Refer To Test<br>Graph | Pass                     |                        |         |
|      |            | 2480                           | 1                      | Refer To Test Graph      | Refer To Test<br>Graph | 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.

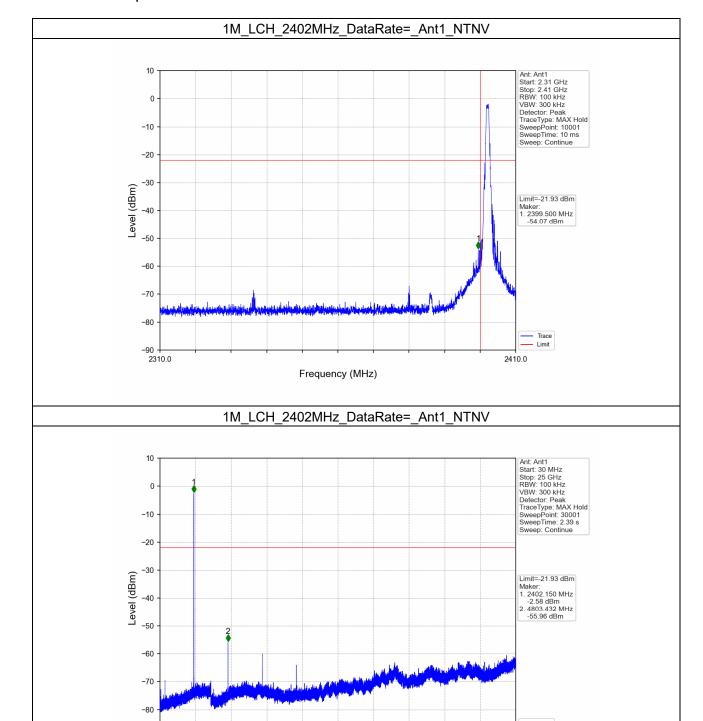




Report No.: SZCR210602150302

Page: 54 of 56

### 5.2.2 Test Graph





-90 30.0

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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 中国・深圳・科技园中区M-10栋一号厂房

Frequency (MHz)

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594

www.sgsgroup.com.cn sgs.china@sgs.com

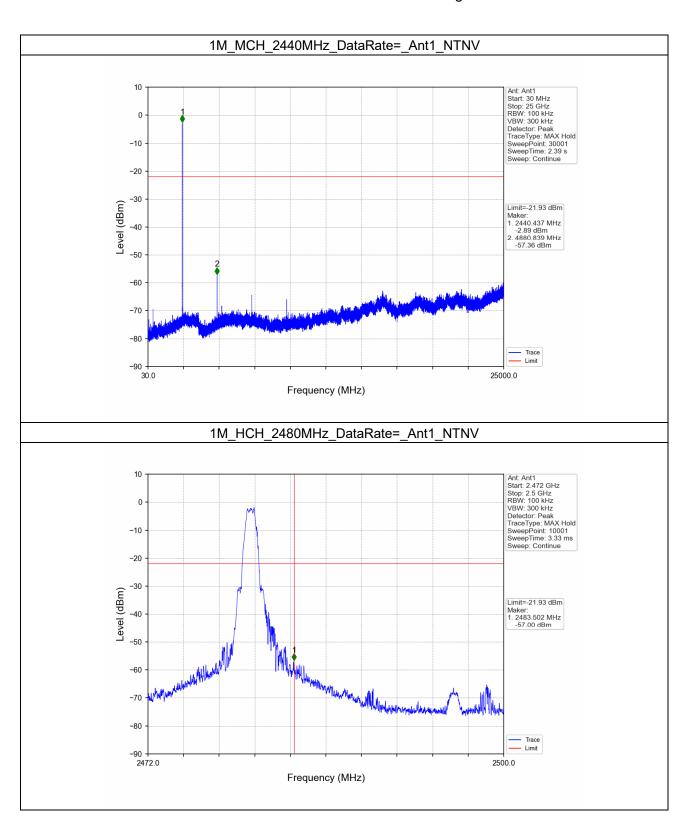
- Limit

25000.0



Report No.: SZCR210602150302

Page: 55 of 56





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="http://www.sgs.com/en/Terms-and-Conditions.aspx">http://www.sgs.com/en/Terms-and-Conditions.aspx</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx">http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx</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 sample(s) are retained for 30 days only.

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

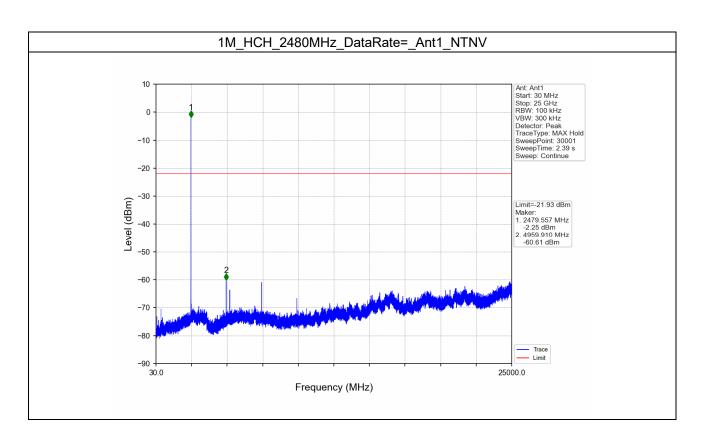
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86–755) 26012053 f (86–755) 26710594 www.sgsgroup.com.cn 中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057 t (86-755) 26012053 f (86-755) 26710594



Report No.: SZCR210602150302

Page: 56 of 56



- End of the Report -

