

## TEST REPORT

**Application No.:** GZCR2109021111AT  
**Applicant:** SHANTOU CHENGHAI LENENG TOYS INDUSTRIAL CO., LTD  
**Address of Applicant:** CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA  
**Manufacturer:** SHANTOU CHENGHAI LENENG TOYS INDUSTRIAL CO., LTD  
**Address of Manufacturer:** CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA  
**Equipment Under Test (EUT):**  
**EUT Name:** INTELLIGENT REMOTE CONTROL TOYS  
**Model No.:** F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F26, F27, F28, F29, F30, K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, K16, K17, K18, K19, K20, K21, K22, K23, K24, K25, K26, K27, K28, K29, K30, G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20 ♣  
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.  
**Standard(s) :** 47 CFR Part 15, Subpart C 15.249  
**Date of Receipt:** 2021-08-23  
**Date of Test:** 2021-08-23 to 2021-09-15  
**Date of Issue:** 2021-09-17

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

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



Kobe Jian  
 EMC Laboratory Manager

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2021-09-17 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                         |  |                                                                                     |  |  |
|-------------------------|--|-------------------------------------------------------------------------------------|--|--|
| Authorized for issue by |  |                                                                                     |  |  |
|                         |  |  |  |  |
|                         |  | Curry Wu/Project Engineer                                                           |  |  |
|                         |  |  |  |  |
|                         |  | Ricky Liu/Reviewer                                                                  |  |  |

## 2 Test Summary

| Radio Spectrum Technical Requirement |                                  |        |                                  |        |
|--------------------------------------|----------------------------------|--------|----------------------------------|--------|
| Item                                 | Standard                         | Method | Requirement                      | Result |
| Antenna Requirement                  | 47 CFR Part 15, Subpart C 15.249 | N/A    | 47 CFR Part 15, Subpart C 15.203 | Pass   |

| Radio Spectrum Matter Part                           |                                  |                                        |                                                       |        |
|------------------------------------------------------|----------------------------------|----------------------------------------|-------------------------------------------------------|--------|
| Item                                                 | Standard                         | Method                                 | Requirement                                           | Result |
| 20dB Bandwidth                                       | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.9         | 47 CFR Part 15, Subpart C 15.215                      | Pass   |
| Field Strength of the Fundamental Signal (15.249(a)) |                                  | ANSI C63.10 (2013) Section 6.5&6.6     | 47 CFR Part 15, Subpart C 15.249(a)                   | Pass   |
| Restricted Band Around Fundamental Frequency         |                                  | ANSI C63.10 (2013) Section 6.10.5      | 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209 | Pass   |
| Radiated Emissions                                   |                                  | ANSI C63.10 (2013) Section 6.4&6.5&6.6 | 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)     | Pass   |

### Note:

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

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

### Declaration of EUT Family Grouping:

Model No.: F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F26, F27, F28, F29, F30, K1, K2, K3, K4, K5, K6, K7, K8, K9, K10, K11, K12, K13, K14, K15, K16, K17, K18, K19, K20, K21, K22, K23, K24, K25, K26, K27, K28, K29, K30, G1, G2, G3, G4, G5, G6, G7, G8, G9, G10, G11, G12, G13, G14, G15, G16, G17, G18, G19, G20

Only the model F5 was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used and internal wiring and functions were identical for the above models, with only difference on color, appearance and package.

### 3 Contents

|                                                                | Page      |
|----------------------------------------------------------------|-----------|
| <b>1 Cover Page .....</b>                                      | <b>1</b>  |
| <b>2 Test Summary.....</b>                                     | <b>3</b>  |
| <b>3 Contents .....</b>                                        | <b>4</b>  |
| <b>4 General Information.....</b>                              | <b>5</b>  |
| 4.1 Details of E.U.T. ....                                     | 5         |
| 4.2 Description of Support Units.....                          | 5         |
| 4.3 Measurement Uncertainty .....                              | 5         |
| 4.4 Test Location .....                                        | 6         |
| 4.5 Test Facility.....                                         | 6         |
| 4.6 Deviation from Standards.....                              | 7         |
| 4.7 Abnormalities from Standard Conditions.....                | 7         |
| <b>5 Equipment List .....</b>                                  | <b>8</b>  |
| <b>6 Radio Spectrum Technical Requirement.....</b>             | <b>11</b> |
| 6.1 Antenna Requirement .....                                  | 11        |
| 6.1.1 Test Requirement: .....                                  | 11        |
| 6.1.2 Conclusion .....                                         | 11        |
| <b>7 Radio Spectrum Matter Test Results.....</b>               | <b>12</b> |
| 7.1 20dB Bandwidth .....                                       | 12        |
| 7.1.1 E.U.T. Operation.....                                    | 12        |
| 7.1.2 Test Mode Description .....                              | 12        |
| 7.1.3 Test Setup Diagram .....                                 | 12        |
| 7.1.4 Measurement Procedure and Data.....                      | 12        |
| 7.2 Field Strength of the Fundamental Signal (15.249(a)) ..... | 16        |
| 7.2.1 E.U.T. Operation.....                                    | 17        |
| 7.2.2 Test Mode Description .....                              | 17        |
| 7.2.3 Test Setup Diagram .....                                 | 18        |
| 7.2.4 Measurement Procedure and Data.....                      | 18        |
| 7.3 Restricted Band Around Fundamental Frequency.....          | 26        |
| 7.3.1 E.U.T. Operation.....                                    | 26        |
| 7.3.2 Test Mode Description .....                              | 26        |
| 7.3.3 Test Setup Diagram .....                                 | 26        |
| 7.3.4 Measurement Procedure and Data.....                      | 27        |
| 7.4 Radiated Emissions.....                                    | 33        |
| 7.4.1 E.U.T. Operation.....                                    | 33        |
| 7.4.2 Test Mode Description .....                              | 33        |
| 7.4.3 Test Setup Diagram .....                                 | 34        |
| 7.4.4 Measurement Procedure and Data.....                      | 35        |
| <b>8 Test Setup Photo.....</b>                                 | <b>44</b> |
| <b>9 EUT Constructional Details (EUT Photos).....</b>          | <b>46</b> |



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

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

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

No. 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgs.com.cn  
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

## 4 General Information

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

Power supply: Input 4.5Vdc via 'AAA' battery\*3  
Antenna Gain: 0dBi  
Antenna Type: Integral antenna  
Modulation Type: GFSK  
Operation Frequency: 2407MHz to 2475 MHz  
Number of Channels: 3  
Channel list: 2407MHz, 2445MHz, 2475 MHz

### 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                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 20dB Bandwidth                                                                                                                                                                                                                                                                                                                        | ± 3%                                                              |
| Field Strength of the Fundamental Signal (15.249(a))                                                                                                                                                                                                                                                                                  | 5.08dB (1GHz-6GHz); 5.14dB (above 6GHz)                           |
| Restricted Band Around Fundamental Frequency                                                                                                                                                                                                                                                                                          | 5.06dB (30MHz-1GHz ; 3m ) 5.08dB (1GHz-6GHz); 5.14dB (above 6GHz) |
| Radiated Emissions (below 1GHz)                                                                                                                                                                                                                                                                                                       | 5.06dB (30MHz-1GHz ; 3m )                                         |
| Radiated Emissions (above 1GHz)                                                                                                                                                                                                                                                                                                       | 5.08dB (1GHz-6GHz); 5.14dB (above 6GHz)                           |
| Remark:<br>The U <sub>lab</sub> (lab Uncertainty) is less than U <sub>CISPR</sub> (CISPR Uncertainty), so the test results<br>– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;<br>– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit. |                                                                   |

#### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,  
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,  
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

#### 4.5 Test Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

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

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

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

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

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

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

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

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

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

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

- **CBTL (Lab Code: TL129)**

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



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

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

**4.6 Deviation from Standards**

None

**4.7 Abnormalities from Standard Conditions**

None



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

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

## 5 Equipment List

| 20 dB Bandwidth                |                 |          |              |            |              |
|--------------------------------|-----------------|----------|--------------|------------|--------------|
| Equipment                      | Manufacturer    | Model No | Inventory No | Cal Date   | Cal Due Date |
| EMI Test Receiver(9kHz-3.6GHz) | Rohde & Schwarz | ESR3     | EMC2221      | 2021-06-01 | 2022-05-31   |
| 6dB Attenuator                 | HP              | 8491A    | EMC2062      | 2020-04-15 | 2022-04-14   |
| Test Software JS1120-3         | HangTianXing    | V2.6     | GZE100-69    | N/A        | N/A          |
| MI CABLE                       | SGS-EMC         | 0.8M     | EMC2136      | 2019-11-02 | 2021-11-01   |
| MI CABLE                       | SGS-EMC         | 0.8M     | EMC2137      | 2019-11-02 | 2021-11-01   |

| Field Strength of the Fundamental Signal (15.249(a)) |                                |               |              |            |              |
|------------------------------------------------------|--------------------------------|---------------|--------------|------------|--------------|
| Equipment                                            | Manufacturer                   | Model No      | Inventory No | Cal Date   | Cal Due Date |
| EMI Test Receiver(20Hz-26.5GHz)                      | Rohde & Schwarz                | ESIB26        | EMC0522      | 2021-01-08 | 2022-01-07   |
| Chamber cable(Above 1GHz)                            | Scoflex                        | KMKM-8.0m     | EMC0545      | 2020-09-09 | 2022-09-08   |
| Horn Antenna(1GHz-18GHz)                             | SCHWARZBECK<br>MESS-ELEKTRONIK | BBHA 9120D    | EMC2026      | 2019-09-25 | 2022-09-24   |
| 1GHz-26.5 GHz Pre-Amplifier                          | Agilent                        | 8449B         | EMC0521      | 2021-01-08 | 2022-01-07   |
| 966 Anechoic Chamber                                 | C.R.T                          | 9m x 6m x 6m  | EMC2142      | 2020-12-20 | 2023-12-19   |
| MXE EMI Receiver(10Hz-8.4GHz)                        | Keysight                       | N9038A        | EMC2139      | 2020-11-13 | 2021-11-12   |
| Test Software E3                                     | Audix                          | Ver.6.120110a | GZE100-61    | N/A        | N/A          |
| EXA Signal Analyzer                                  | AgilentTechnologies            | N9010A        | EMC2138      | 2020-09-17 | 2021-09-16   |

| Restricted Band Around Fundamental Frequency |                                |              |              |            |              |
|----------------------------------------------|--------------------------------|--------------|--------------|------------|--------------|
| Equipment                                    | Manufacturer                   | Model No     | Inventory No | Cal Date   | Cal Due Date |
| EMI Test Receiver(20Hz-26.5GHz)              | Rohde & Schwarz                | ESIB26       | EMC0522      | 2021-01-08 | 2022-01-07   |
| Chamber cable(Above 1GHz)                    | Scoflex                        | KMKM-8.0m    | EMC0545      | 2020-09-09 | 2022-09-08   |
| Horn Antenna(1GHz-18GHz)                     | SCHWARZBECK<br>MESS-ELEKTRONIK | BBHA 9120D   | EMC2026      | 2019-09-25 | 2022-09-24   |
| 1GHz-26.5 GHz Pre-Amplifier                  | Agilent                        | 8449B        | EMC0521      | 2021-01-08 | 2022-01-07   |
| 2.4GHz Filter                                | Micro-Tronics                  | BRM 50702    | EMC2069      | 2021-01-08 | 2022-01-07   |
| 966 Anechoic Chamber                         | C.R.T                          | 9m x 6m x 6m | EMC2142      | 2020-12-20 | 2023-12-19   |
| MXE EMI Receiver(10Hz-8.4GHz)                | Keysight                       | N9038A       | EMC2139      | 2020-11-13 | 2021-11-12   |



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

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

|                                             |              |               |           |            |            |
|---------------------------------------------|--------------|---------------|-----------|------------|------------|
| EXA Signal Analyzer(10Hz-44GHz)             | Keysight     | N9010A        | EMC2138   | 2020-09-17 | 2021-09-16 |
| Test Software E3                            | Audix        | Ver.6.120110a | GZE100-61 | N/A        | N/A        |
| Notch Filter (5150-5880)                    | Mico-Tronics | BRM50716      | EMC2168   | 2021-07-29 | 2022-07-28 |
| Horn Antenna(14-40GHz)                      | SCHWARZBECK  | BBHA 9170     | EMC2041   | 2020-06-28 | 2023-06-27 |
| Microwave Broadband Preamplifier (18-40GHz) | SCHWARZBECK  | BBV 9721      | EMC2172   | 2020-09-09 | 2021-09-08 |
|                                             |              |               |           | 2021-08-30 | 2022-08-29 |

| Radiated Emissions (below 1GHz)              |                             |               |              |            |              |
|----------------------------------------------|-----------------------------|---------------|--------------|------------|--------------|
| Equipment                                    | Manufacturer                | Model No      | Inventory No | Cal Date   | Cal Due Date |
| EMI Test Receiver(10Hz-26.5GHz)              | Rohde & Schwarz             | ESIB26        | EMC0522      | 2021-01-08 | 2022-01-07   |
| EMI Test Receiver(9kHz-3GHz)                 | Rohde & Schwarz             | ESCI          | EMC0056      | 2021-01-03 | 2022-01-02   |
| Chamber cable                                | HangTianXing                | N/A           | EMC0542      | 2020-09-09 | 2022-09-08   |
| Trilog Broadband Antenna(25MHz-1GHz)-On Site | SCHWARZBECK MESS-ELEKTRONIK | VULB 9168     | EMC2174      | 2018-09-06 | 2021-09-05   |
| Trilog Broadband Antenna(25MHz-1GHz)-Lab     | SCHWARZBECK MESS-ELEKTRONIK | VULB 9168     | SEM003-18    | 2019-02-22 | 2022-02-22   |
| Amplifier(9kHz-1.3GHz)                       | HP                          | 8447F         | EMC2065      | 2021-05-19 | 2022-05-18   |
| Active Loop Antenna-RED                      | ETS-Lindgren                | 6502          | EMC2190      | 2019-12-27 | 2021-12-26   |
| High Pass Filter (915MHz)                    | FSY MICROWAVE               | HM1465-9SS    | EMC2079      | 2021-01-08 | 2022-01-07   |
| 10m Semi-Anechoic Chamber                    | ETS                         | N/A           | EMC0530      | 2019-10-20 | 2022-10-19   |
| Test Software E3                             | Audix                       | Ver.6.120110a | GZE100-61    | N/A        | N/A          |

| Radiated Spurious Emissions (Above 1GHz) |                             |            |              |            |              |
|------------------------------------------|-----------------------------|------------|--------------|------------|--------------|
| Equipment                                | Manufacturer                | Model No   | Inventory No | Cal Date   | Cal Due Date |
| EMI Test Receiver(20Hz-26.5GHz)          | Rohde & Schwarz             | ESIB26     | EMC0522      | 2021-01-08 | 2022-01-07   |
| Chamber cable(Above 1GHz)                | Scoflex                     | KMKM-8.0m  | EMC0545      | 2020-09-09 | 2022-09-08   |
| Horn Antenna(1GHz-18GHz)                 | SCHWARZBECK MESS-ELEKTRONIK | BBHA 9120D | EMC2026      | 2019-09-25 | 2022-09-24   |
| 1GHz-26.5 GHz Pre-Amplifier              | Agilent                     | 8449B      | EMC0521      | 2021-01-08 | 2022-01-07   |



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

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

SGS-CSTC Standards Technical Services Co., Ltd. No. 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgs.com.cn  
Guangzhou Branch Testing & Inspection Laboratory 中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

|                                             |               |               |           |            |            |
|---------------------------------------------|---------------|---------------|-----------|------------|------------|
| 2.4GHz Filter                               | Micro-Tronics | BRM 50702     | EMC2069   | 2021-01-08 | 2022-01-07 |
| 966 Anechoic Chamber                        | C.R.T         | 9m x 6m x 6m  | EMC2142   | 2020-12-20 | 2023-12-19 |
| MXE EMI Receiver(10Hz-8.4GHz)               | Keysight      | N9038A        | EMC2139   | 2020-11-13 | 2021-11-12 |
| EXA Signal Analyzer(10Hz-44GHz)             | Keysight      | N9010A        | EMC2138   | 2020-09-17 | 2021-09-16 |
| Test Software E3                            | Audix         | Ver.6.120110a | GZE100-61 | N/A        | N/A        |
| Horn Antenna(14-40GHz)                      | SCHWARZBECK   | BBHA 9170     | EMC2041   | 2020-06-28 | 2023-06-27 |
| Microwave Broadband Preamplifier (18-40GHz) | SCHWARZBECK   | BBV 9721      | EMC2172   | 2020-09-09 | 2021-09-08 |
|                                             |               |               |           | 2021-08-30 | 2022-08-29 |

**General used equipment**

| Equipment | Manufacturer | Model No | Inventory No | Cal Date   | Cal Due Date |
|-----------|--------------|----------|--------------|------------|--------------|
| DMM       | Fluke        | 73       | EMC0006      | 2021-07-05 | 2022-07-05   |
| DMM       | Fluke        | 73       | EMC0007      | 2021-07-05 | 2022-07-05   |



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

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

SGS-CSTC Standards Technical Services Co., Ltd.  
Guangzhou Branch Testing Center EEC Laboratory

No.198 Kezhu Road, Sciotech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgsgroup.com.cn  
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

## 6 Radio Spectrum Technical Requirement

### 6.1 Antenna Requirement

#### 6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

15.203 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.

#### 6.1.2 Conclusion

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.

Antenna location: Refer to Internal photos

## 7 Radio Spectrum Matter Test Results

### 7.1 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215  
Test Method: ANSI C63.10 (2013) Section 6.9  
Limit: N/A

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

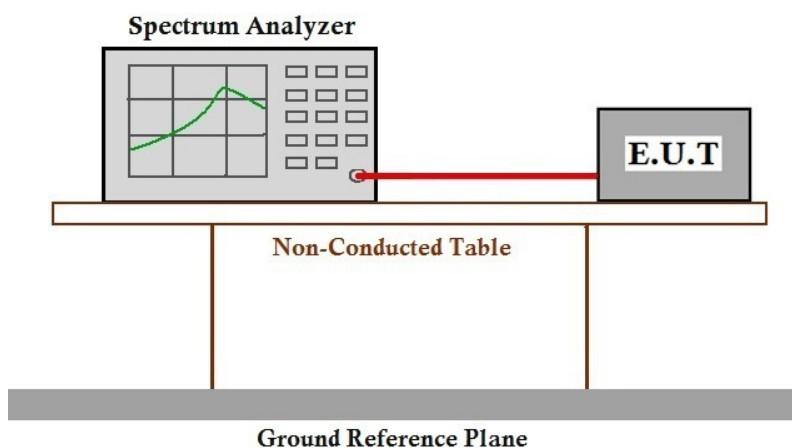
Operating Environment:

Temperature: 22.5 °C Humidity: 52.7 % RH Atmospheric Pressure: 1010 mbar

#### 7.1.2 Test Mode Description

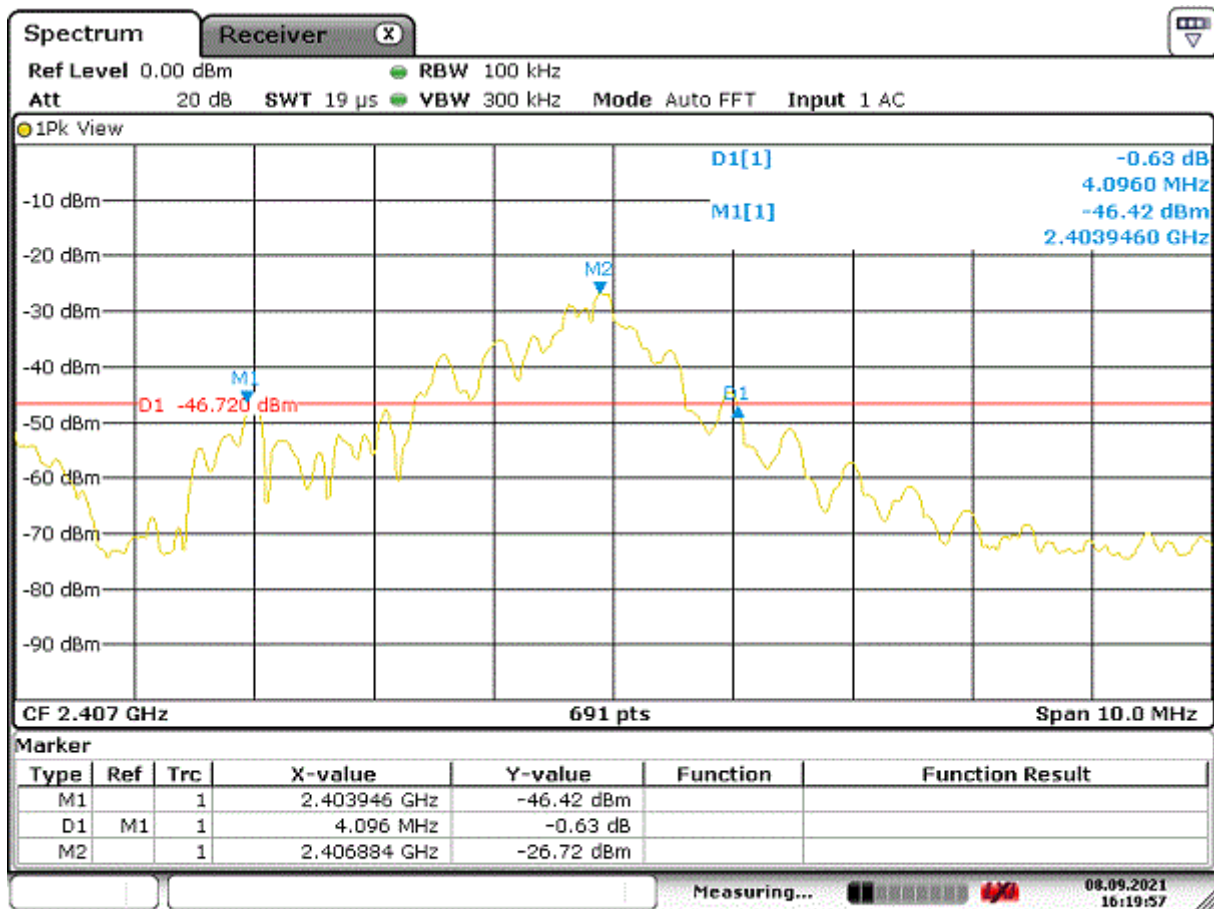
| Pre-scan / Mode | Description                                                |
|-----------------|------------------------------------------------------------|
| Final test Code |                                                            |
| Final test 01   | TX mode_Keep the EUT in transmitting with modulation mode. |

#### 7.1.3 Test Setup Diagram

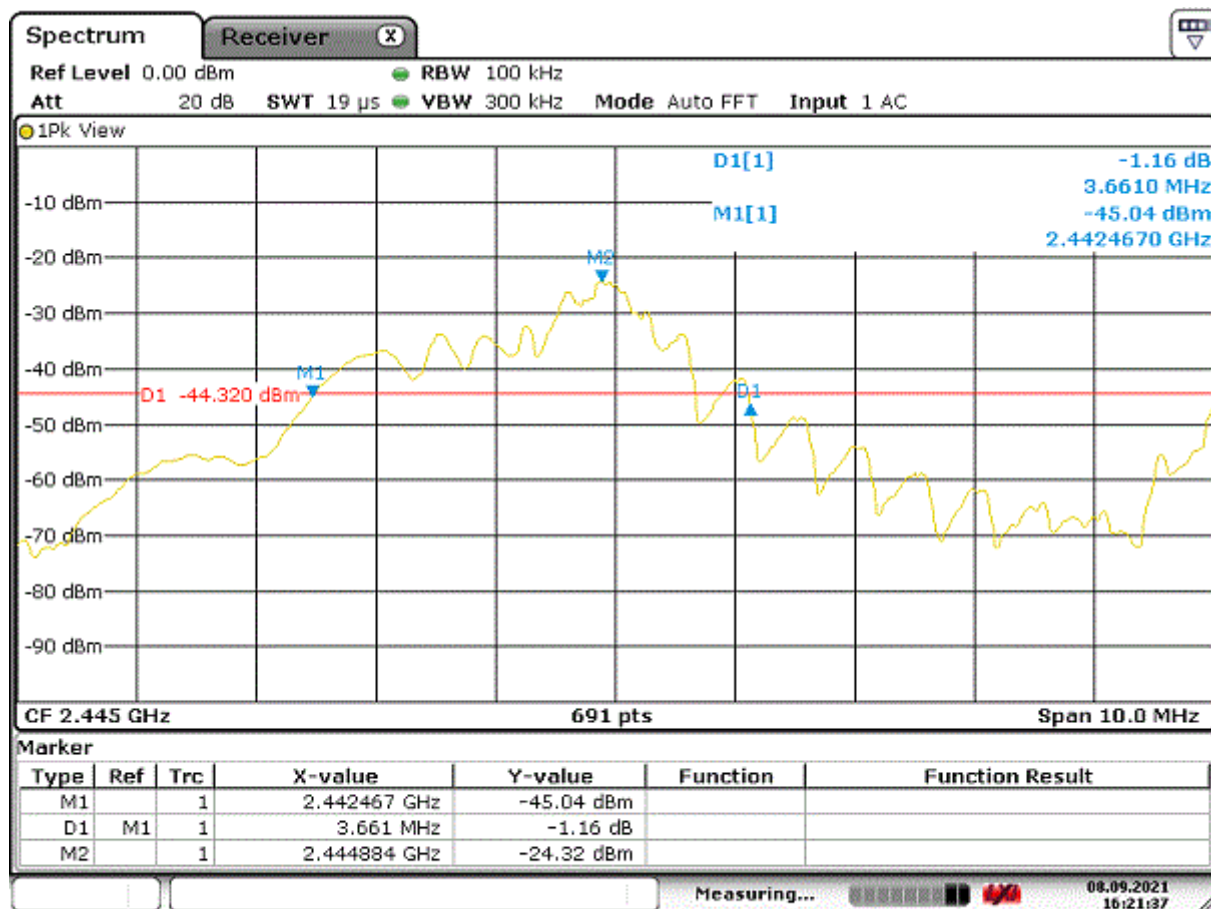


#### 7.1.4 Measurement Procedure and Data

| Test channel | 20dB bandwidth (MHz) | Results |
|--------------|----------------------|---------|
| Lowest       | 4.096                | Pass    |
| Middle       | 3.661                | Pass    |
| Highest      | 2.808                | Pass    |



Date: 8 SEP 2021 16:19:57



Date: 8 SEP 2021 16:21:37

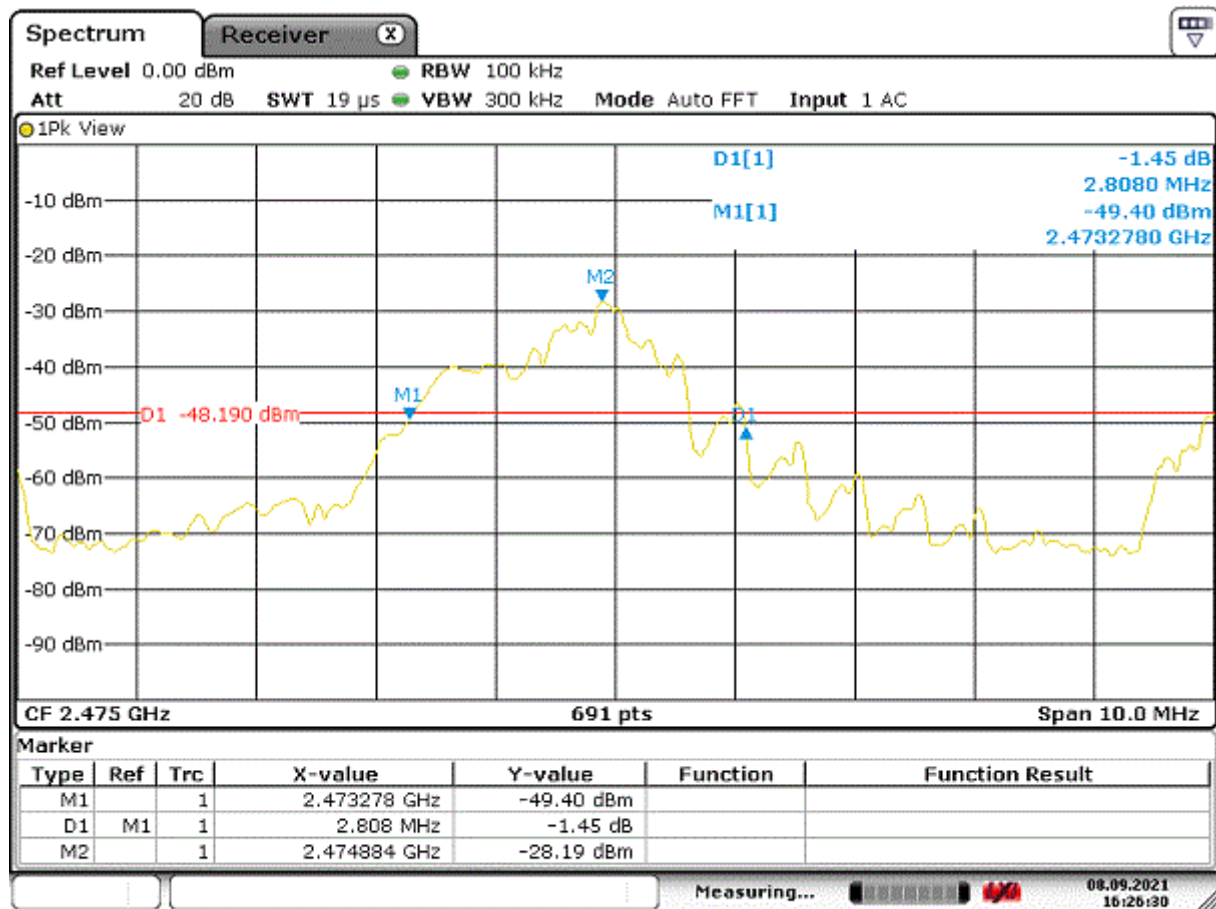


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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

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

No. 198 Kezhu Road, Science Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgs.com.cn  
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com



Date: 8 SEP 2021 16:26:29



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed hereof, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>, and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms--Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or expiration of the document, from any source, is prohibited. Any unauthorized use or reproduction of the document, 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.**

Results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
**Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 83071443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)**  
 No.190 Kexu Road, Science Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 [www.sgsroad.com.cn](http://www.sgsroad.com.cn)  
**中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058**  
[sgs.china@sgs.com](http://sgs.china@sgs.com)

### 7.2 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement: 47 CFR Part 15, Subpart C 15.249(a)  
 Test Method: ANSI C63.10 (2013) Section 6.5&6.6  
 Measurement Distance: 3m  
 Limit:

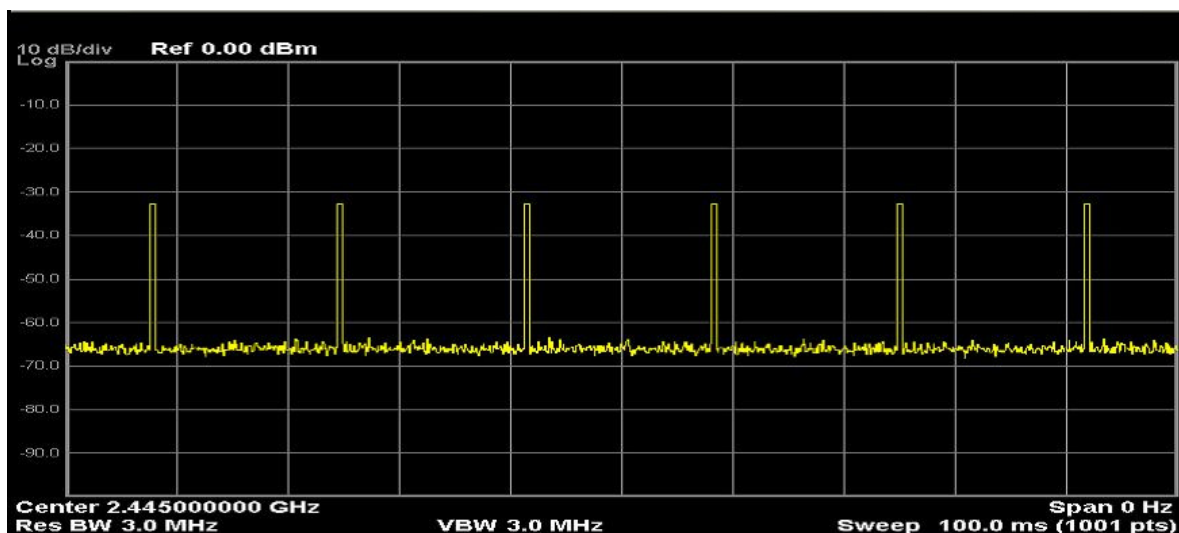
| Fundamental frequency(MHz) | Field strength of fundamental(millivolts/meter) | Field strength of harmonics(microvolts/meter) |
|----------------------------|-------------------------------------------------|-----------------------------------------------|
| 902-928                    | 50                                              | 500                                           |
| 2400-2483.5                | 50                                              | 500                                           |
| 5725-5875                  | 50                                              | 500                                           |
| 24000-24250                | 250                                             | 2500                                          |

Remark: The frequencies above 1000MHz 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.

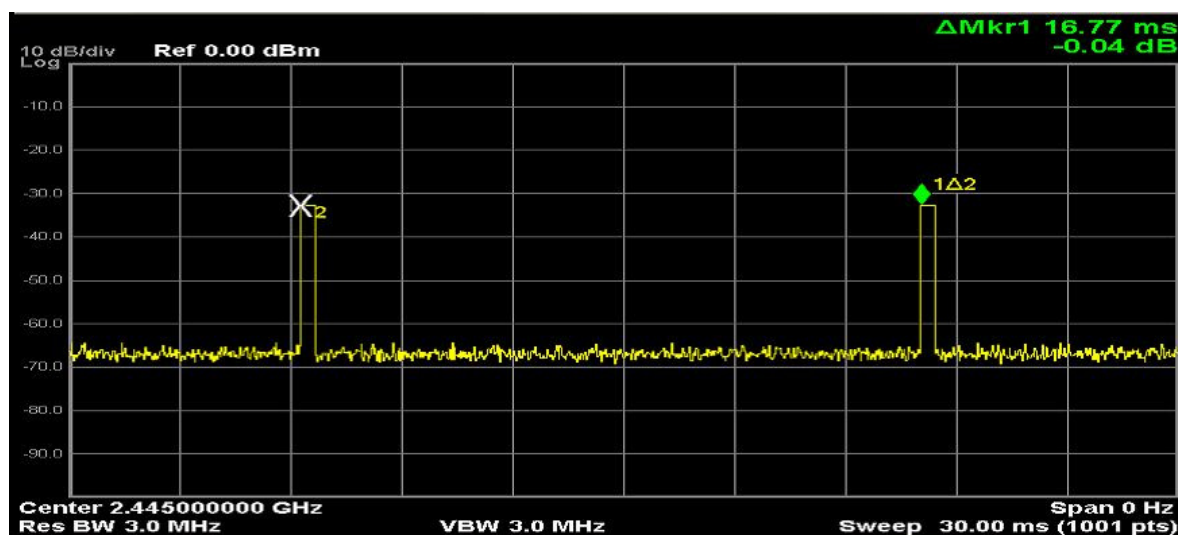
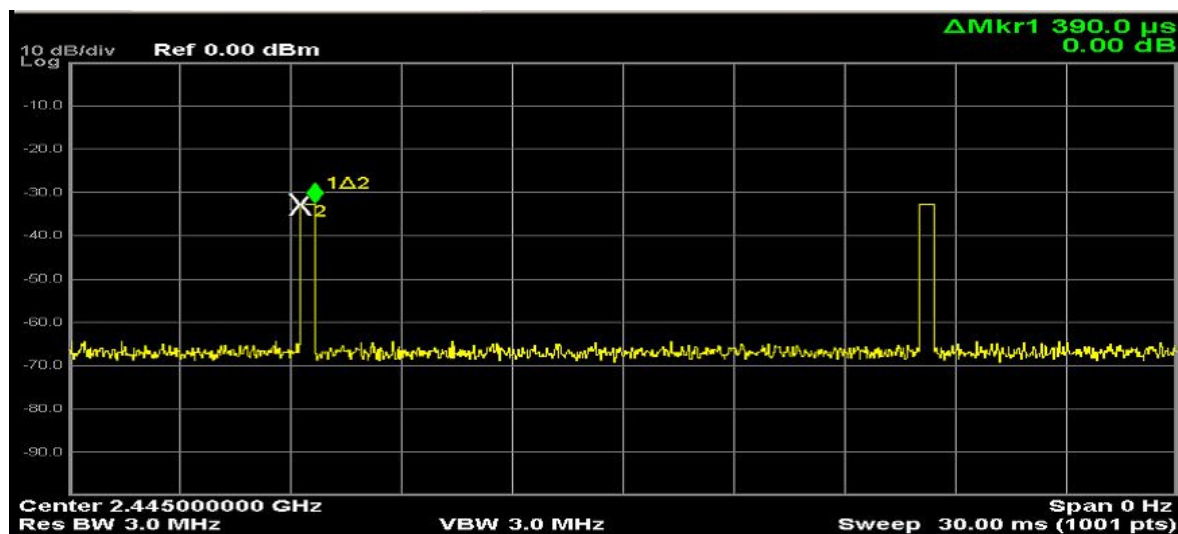
For fundamental frequency in "902-928MHz", the field strength of fundamental is based on Quasi-Peak.

Average value:

|                    |                                  |
|--------------------|----------------------------------|
| Calculate Formula: | Average value=Peak value + PDCF  |
|                    | PDCF=20 log(Duty cycle)          |
|                    | Duty cycle= T on time / T period |
| Test data:         | Ton time =0.39ms                 |
|                    | T period =16.77ms                |
|                    | Duty cycle=2%                    |
|                    | PDCF value= -32.67dB             |



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



### 7.2.1 E.U.T. Operation

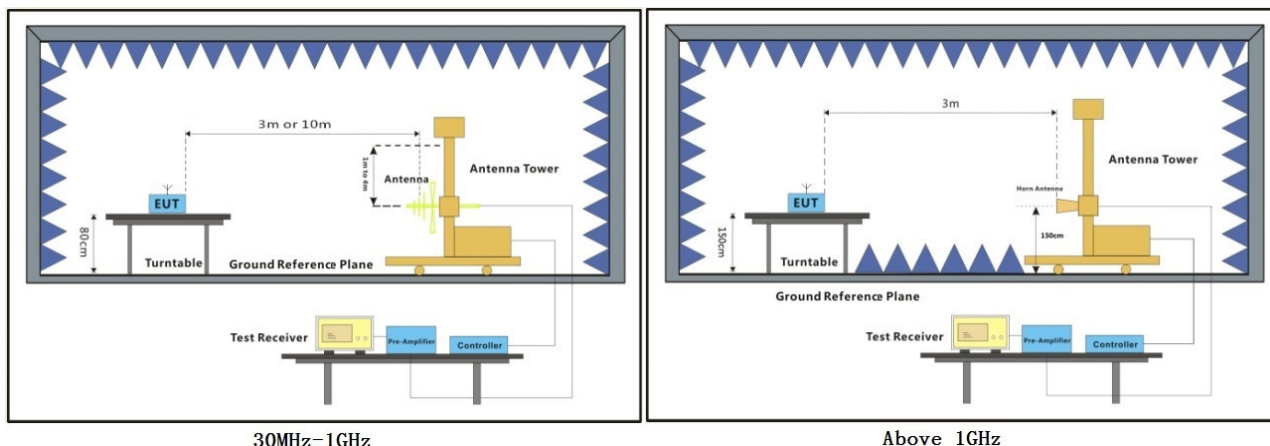
Operating Environment:

Temperature: 23.4 °C Humidity: 53.8 % RH Atmospheric Pressure: 1010 mbar

### 7.2.2 Test Mode Description

| Pre-scan / Mode | Description                                                |
|-----------------|------------------------------------------------------------|
| Final test Code |                                                            |
| Final test 01   | TX mode_Keep the EUT in transmitting with modulation mode. |

### 7.2.3 Test Setup Diagram



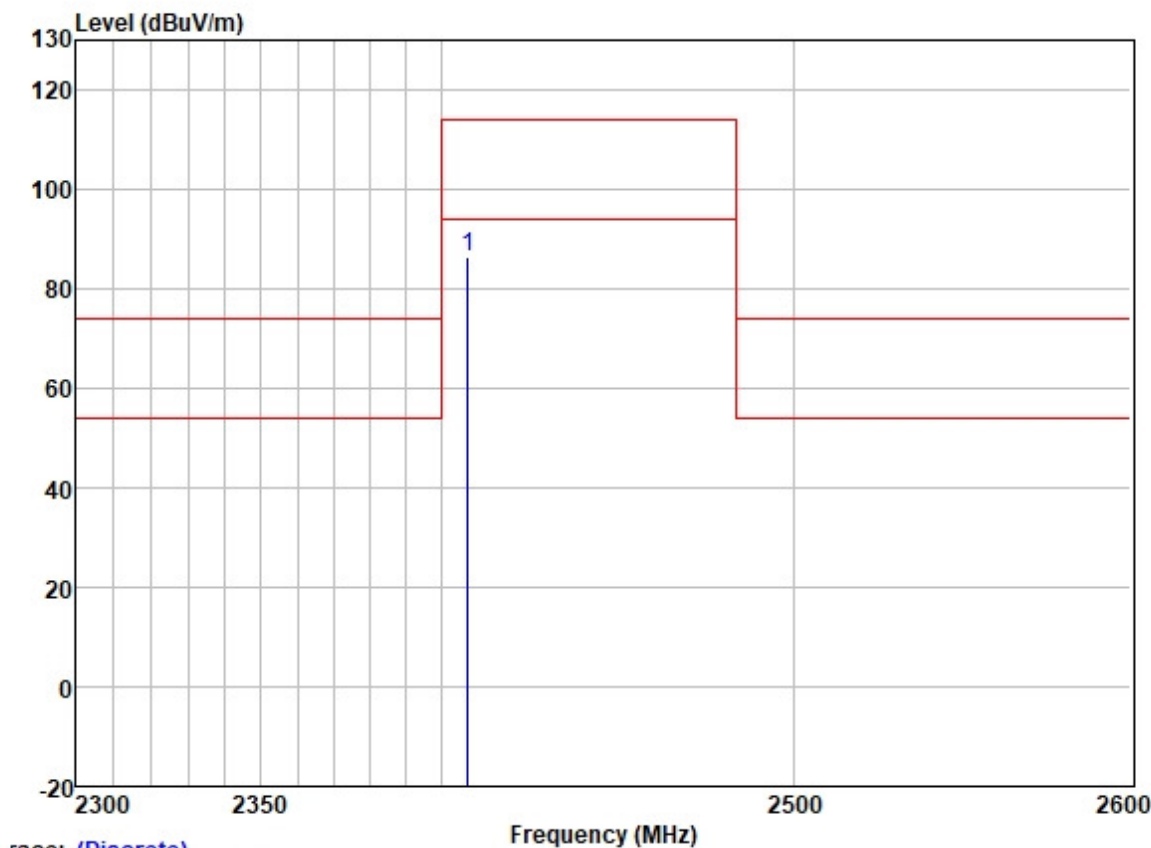
### 7.2.4 Measurement Procedure and Data

- 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.
- 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.
- 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.
- 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.
- 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.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- 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.
- Repeat above procedures until all frequencies measured was complete.

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

Remark 2: Antenna: 3 denotes the type of antenna for above 1000MHz.

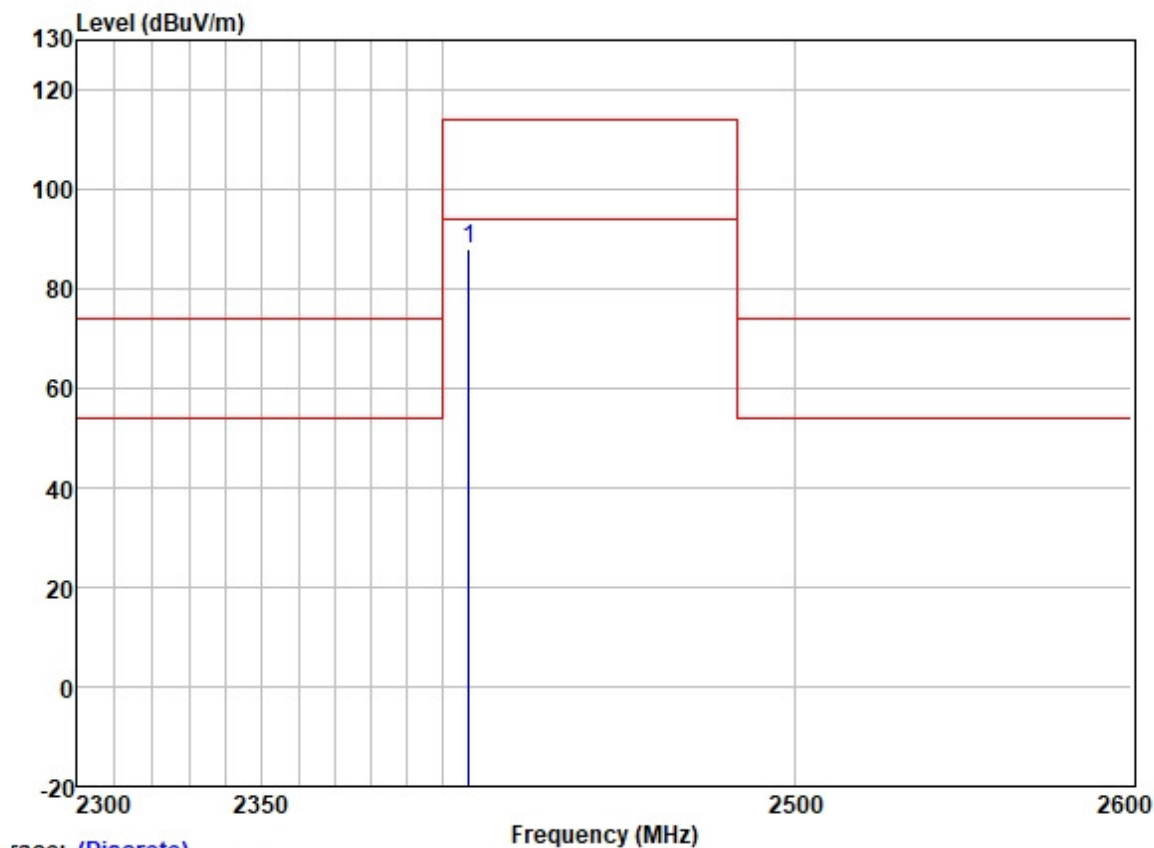
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:Low



Trace: (Discrete)

|            | Read  | Antenna | Cable | Preamp |        | Limit  | Over   |            |        |
|------------|-------|---------|-------|--------|--------|--------|--------|------------|--------|
| Freq       | Level | Factor  | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase  | Remark |
| MHz        | dBuV  | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |            |        |
| 1 2407.000 | 93.04 | 27.36   | 3.48  | 37.59  | 86.29  | 114.00 | -27.71 | HORIZONTAL | Peak   |

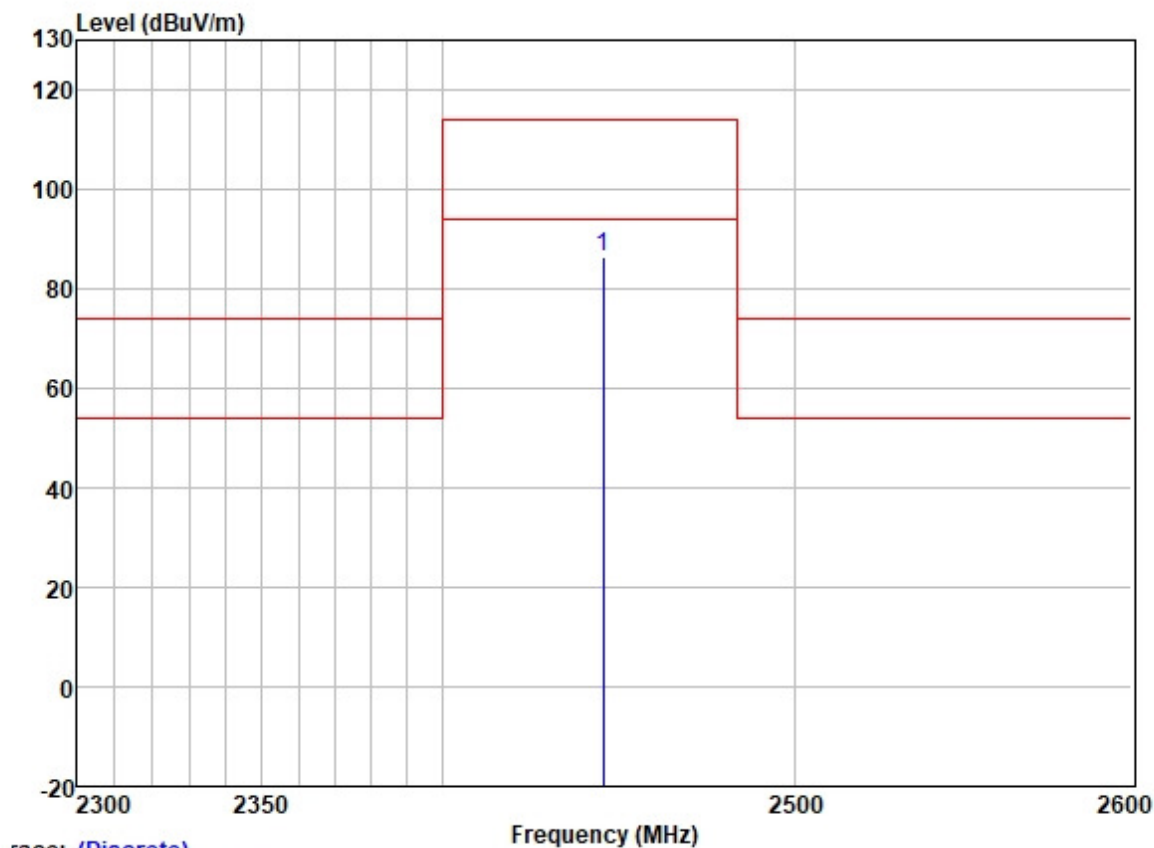
Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:Low



Trace: (Discrete)

|      | Read     | Antenna | Cable | Preamp |        | Limit  | Over   |           |               |
|------|----------|---------|-------|--------|--------|--------|--------|-----------|---------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase | Remark        |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |           |               |
| 1    | 2407.000 | 94.91   | 27.36 | 3.48   | 37.59  | 88.16  | 114.00 | -25.84    | VERTICAL Peak |

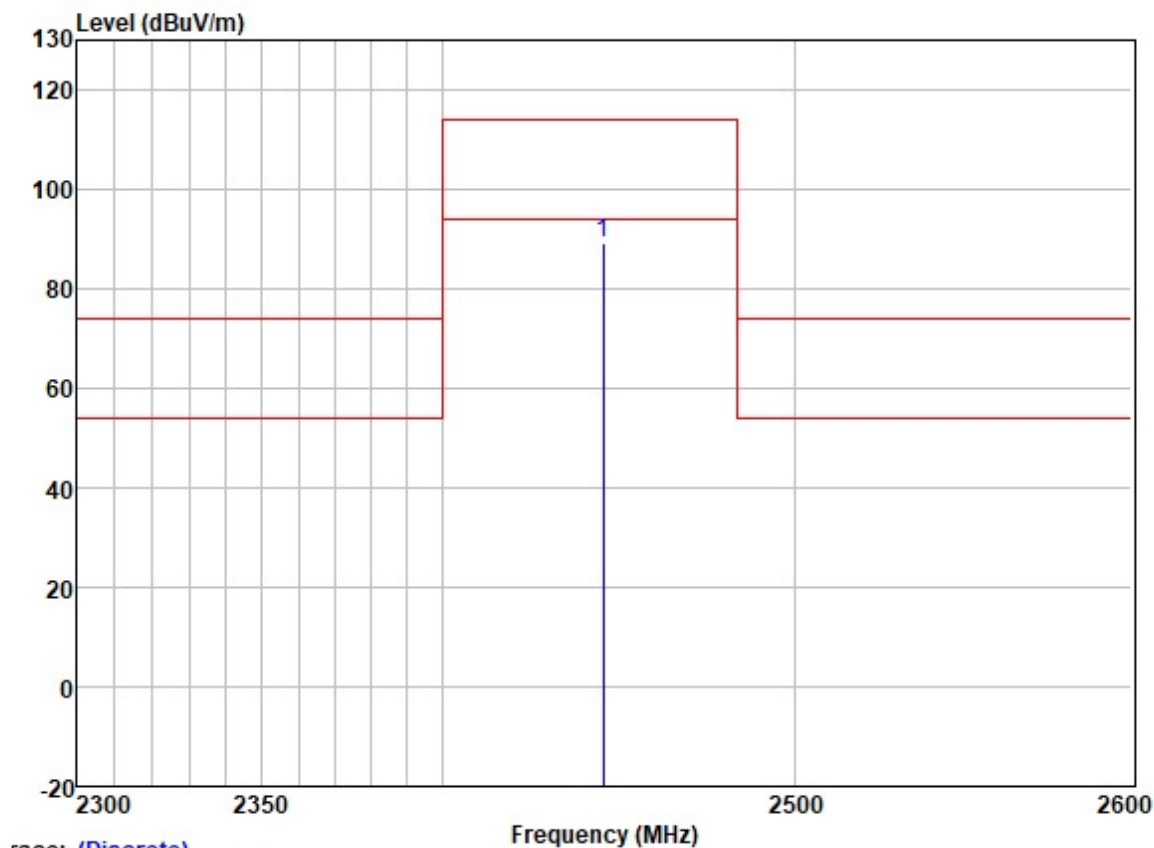
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:middle



Trace: (Discrete)

|   | Freq     | ReadAntenna<br>Level Factor | Cable<br>Loss | Preamp<br>Factor | Level | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark          |
|---|----------|-----------------------------|---------------|------------------|-------|---------------|---------------|-----------|-----------------|
|   | MHz      | dBuV                        | dB/m          | dB               | dB    | dBuV/m        | dBuV/m        | dB        |                 |
| 1 | 2445.000 | 93.08                       | 27.42         | 3.40             | 37.58 | 86.32         | 114.00        | -27.68    | HORIZONTAL Peak |

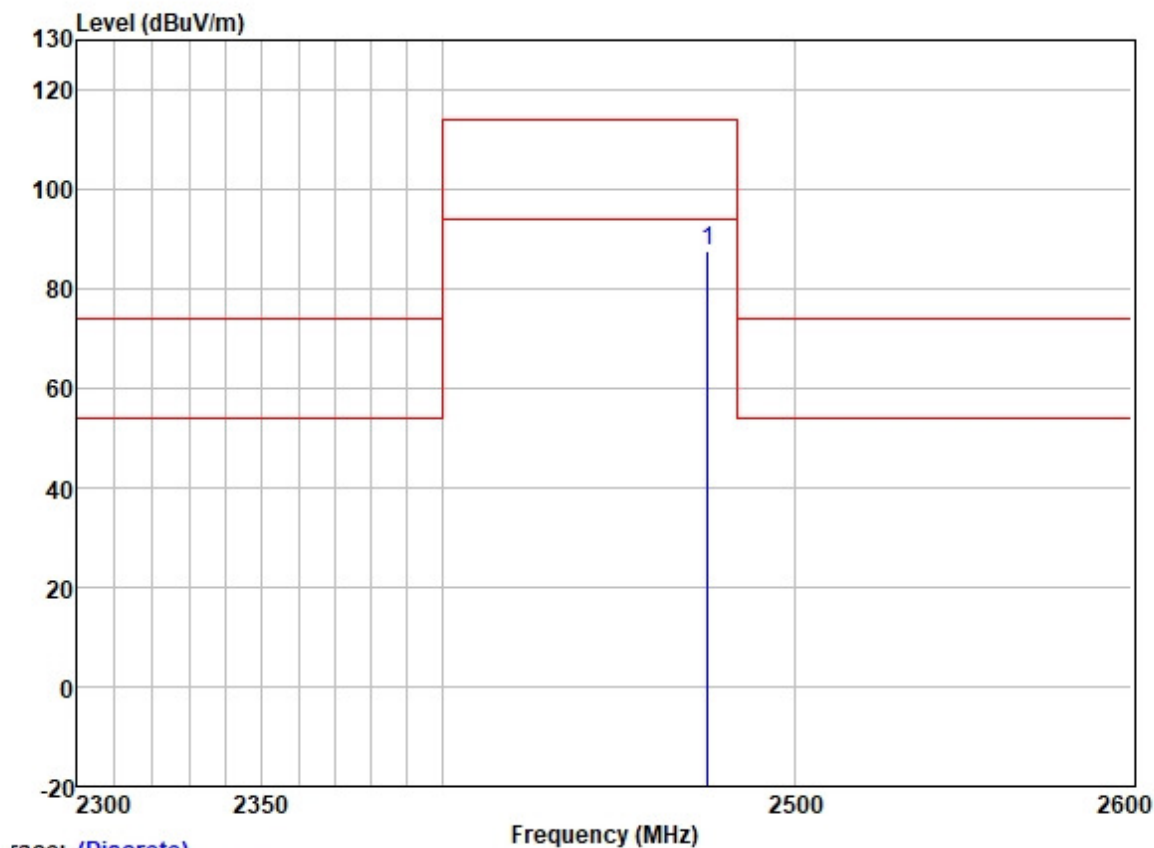
Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:middle



Trace: (Discrete)

|   | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark |
|---|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|--------|
|   | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |        |
| 1 | 2445.000 | 95.99                | 27.42  | 3.40          | 37.58            | 89.23  | 114.00        | -24.77        | VERTICAL  | Peak   |

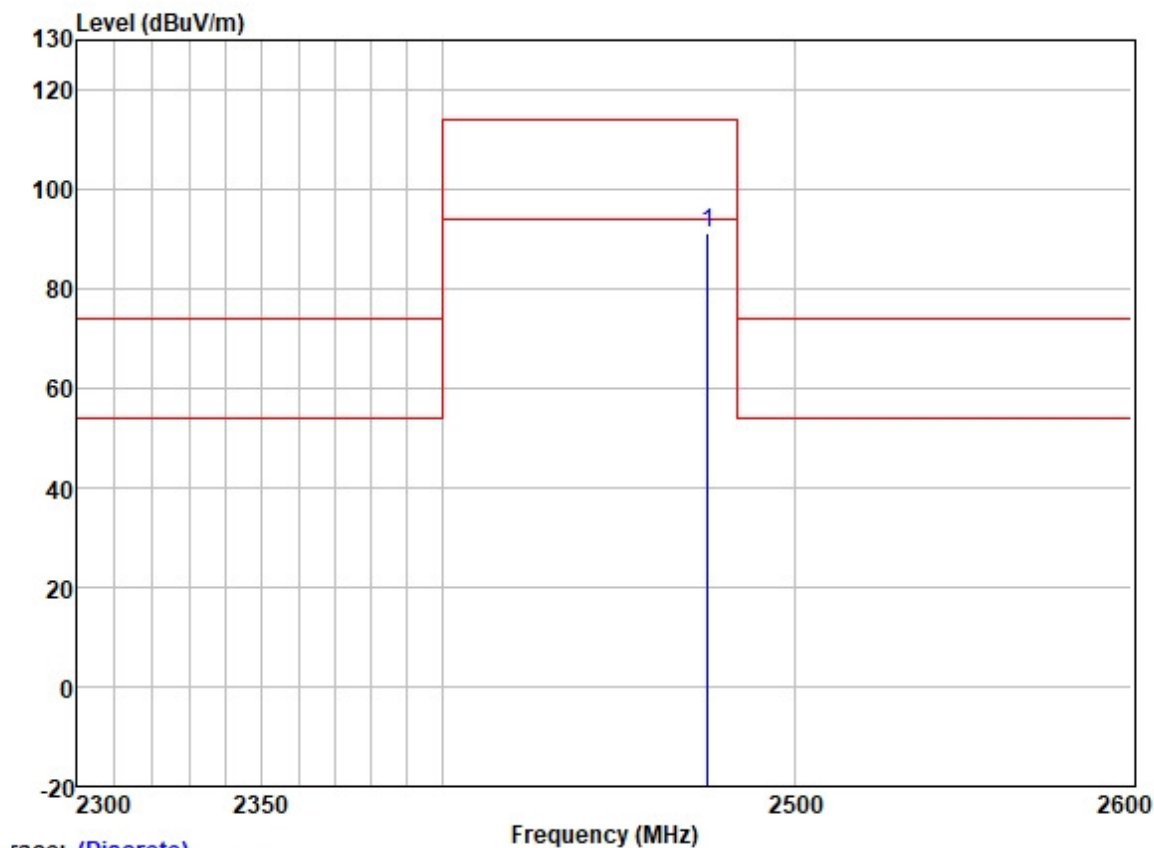
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:High



Trace: (Discrete)

|      | Read     | Antenna | Cable | Preamp |        | Limit  | Over   |           |                 |
|------|----------|---------|-------|--------|--------|--------|--------|-----------|-----------------|
| Freq | Level    | Factor  | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase | Remark          |
| MHz  | dBuV     | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |           |                 |
| 1    | 2475.000 | 94.08   | 27.47 | 3.60   | 37.57  | 87.58  | 114.00 | -26.42    | HORIZONTAL Peak |

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:High



Trace: (Discrete)

|   | Freq     | ReadAntenna<br>Level | Factor | Cable<br>Loss | Preamp<br>Factor | Level  | Limit<br>Line | Over<br>Limit | Pol/Phase | Remark |
|---|----------|----------------------|--------|---------------|------------------|--------|---------------|---------------|-----------|--------|
|   | MHz      | dBuV                 | dB/m   | dB            | dB               | dBuV/m | dBuV/m        | dB            |           |        |
| 1 | 2475.000 | 97.83                | 27.47  | 3.60          | 37.57            | 91.33  | 114.00        | -22.67        | VERTICAL  | Peak   |

## Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:  
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 2) 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. So, only the above measurement data were 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

### 7.3 Restricted Band Around Fundamental Frequency

Test Requirement: 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209  
 Test Method: ANSI C63.10 (2013) Section 6.10.5  
 Measurement Distance: 3m  
 Limit:

| Frequency     | Limit (dBuV/m @3m) | Remark           |
|---------------|--------------------|------------------|
| 30MHz-88MHz   | 40.0               | Quasi-peak Value |
| 88MHz-216MHz  | 43.5               | Quasi-peak Value |
| 216MHz-960MHz | 46.0               | Quasi-peak Value |
| 960MHz-1GHz   | 54.0               | Quasi-peak Value |
| Above 1GHz    | 54.0               | Average Value    |
| Above 1GHz    | 74.0               | Peak Value       |

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

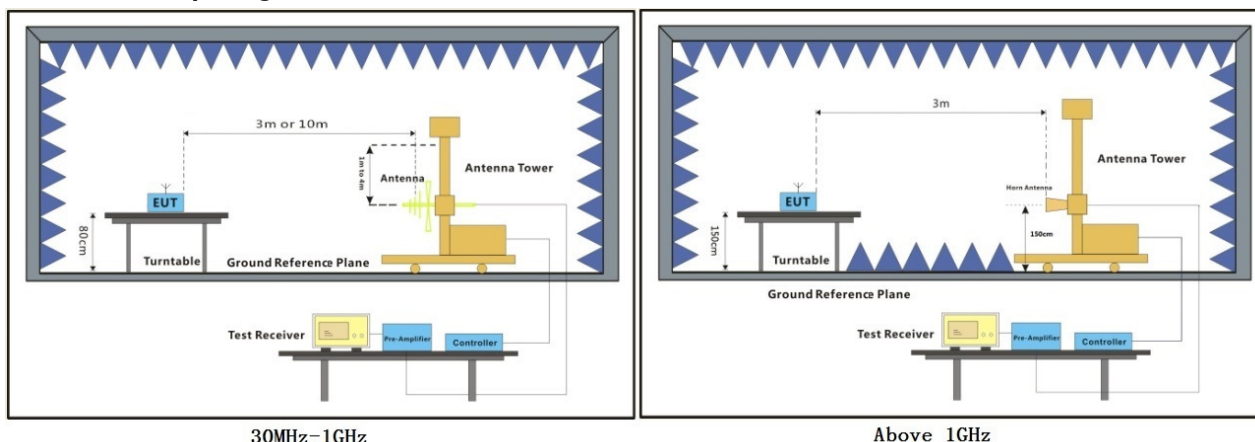
#### 7.3.1 E.U.T. Operation

Operating Environment:  
 Temperature: 23.4 °C Humidity: 53.8 % RH Atmospheric Pressure: 1010 mbar

#### 7.3.2 Test Mode Description

| Pre-scan / Mode | Description                                                |
|-----------------|------------------------------------------------------------|
| Final test Code |                                                            |
| Final test 01   | TX mode_Keep the EUT in transmitting with modulation mode. |

#### 7.3.3 Test Setup Diagram



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

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

SGS-CSTC Standards Technical Services Co., Ltd. No. 198 Kezhu Road, Sciotech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgs.com.cn  
 Guangzhou branch Testing Center EEC Laboratory 中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

### 7.3.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

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

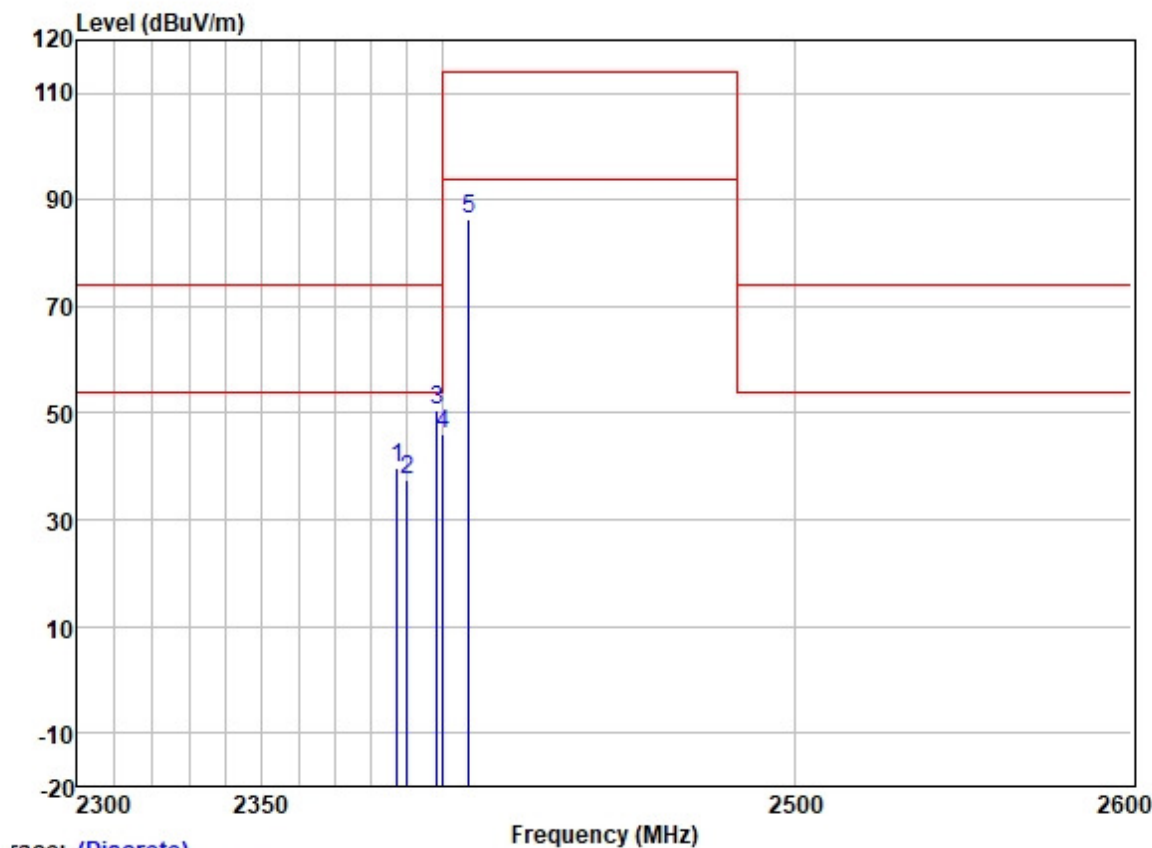
Remark 2: Antenna: 3 denotes the type of antenna for above 1000MHz.



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

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

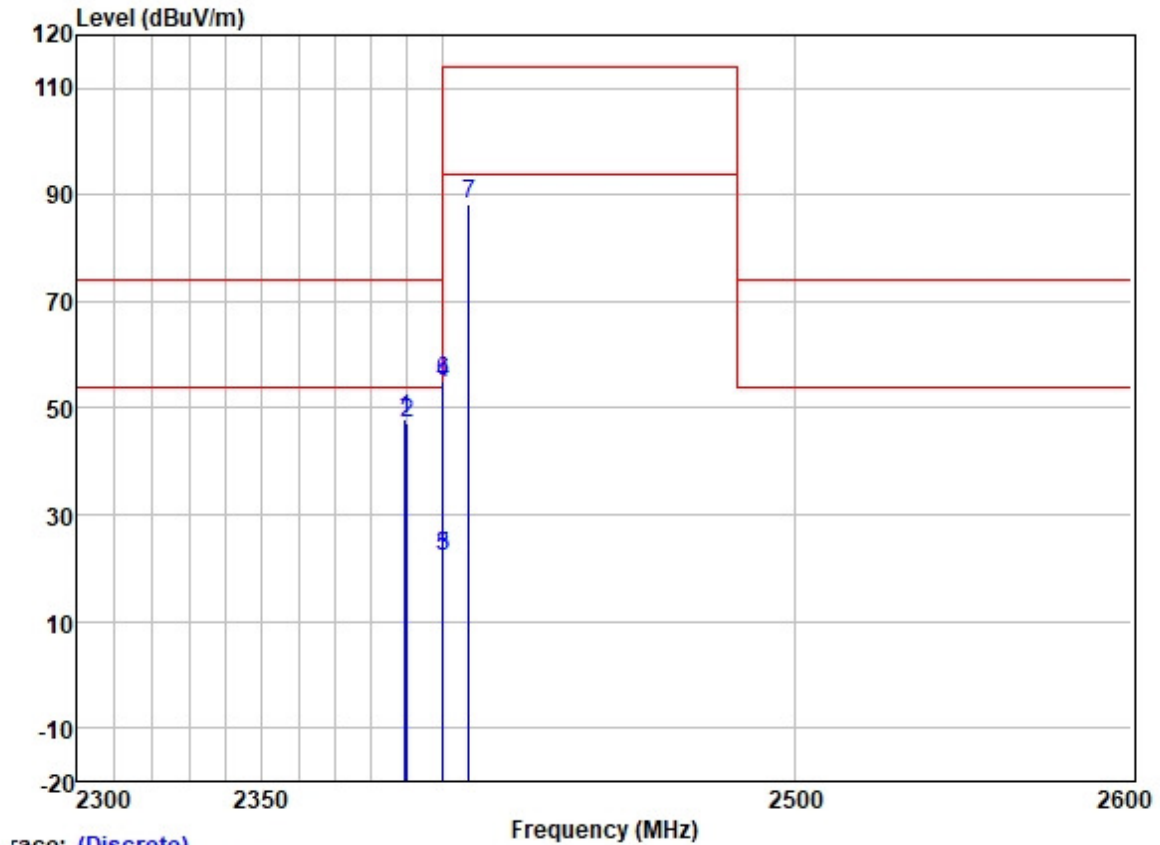
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:Low



race: (Discrete)

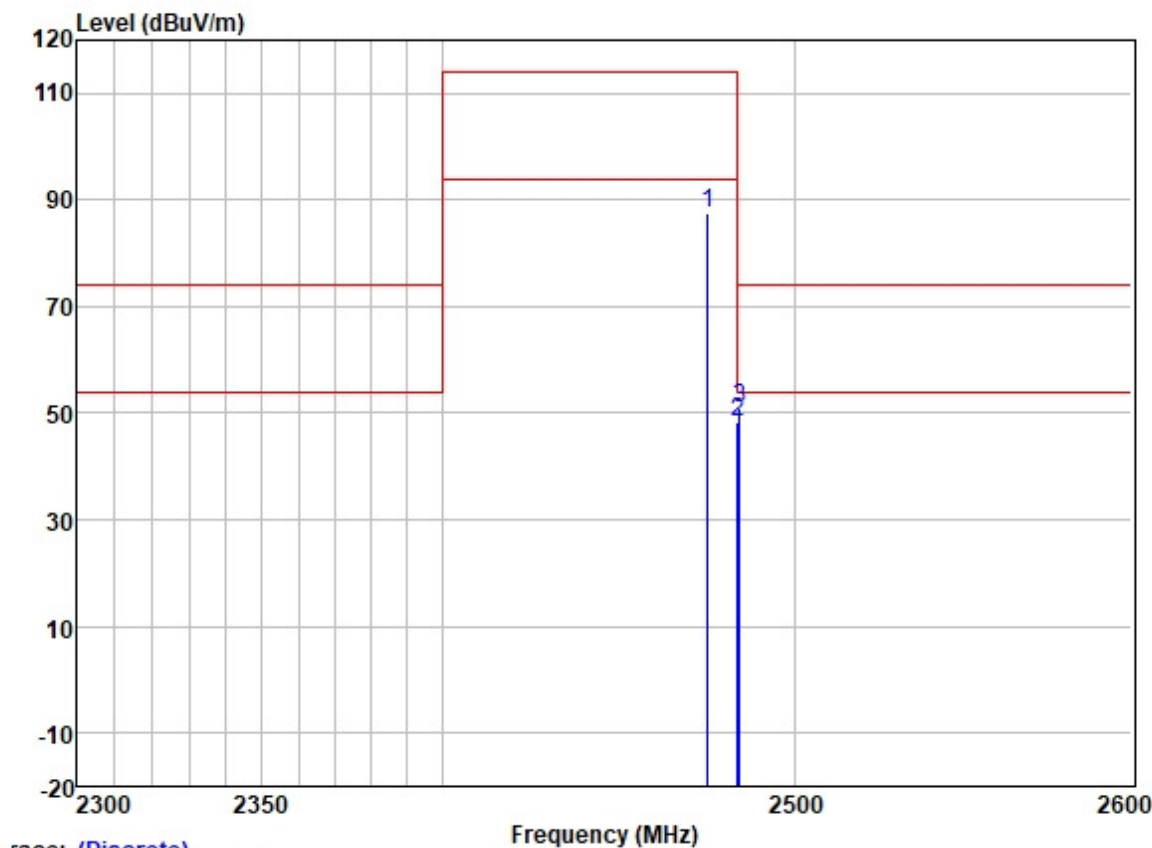
|   |          | Read  | Antenna | Cable | Preamp |        | Limit  | Over   |            |        |
|---|----------|-------|---------|-------|--------|--------|--------|--------|------------|--------|
|   | Freq     | Level | Factor  | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase  | Remark |
|   | MHz      | dBuV  | dB/m    | dB    | dB     | dBuV/m | dBuV/m | dB     |            |        |
| 1 | 2387.220 | 46.62 | 27.33   | 3.48  | 37.60  | 39.83  | 74.00  | -34.17 | HORIZONTAL | Peak   |
| 2 | 2390.000 | 44.32 | 27.33   | 3.48  | 37.59  | 37.54  | 74.00  | -36.46 | HORIZONTAL | Peak   |
| 3 | 2398.178 | 57.22 | 27.35   | 3.50  | 37.59  | 50.48  | 74.00  | -23.52 | HORIZONTAL | Peak   |
| 4 | 2400.000 | 52.67 | 27.35   | 3.50  | 37.59  | 45.93  | 74.00  | -28.07 | HORIZONTAL | Peak   |
| 5 | 2407.000 | 93.04 | 27.36   | 3.48  | 37.59  | 86.29  | 114.00 | -27.71 | HORIZONTAL | Peak   |

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:Low



| Race: (Discrete) | Frequency (MHz) |             |        |        |        |        |        |           |          |         |
|------------------|-----------------|-------------|--------|--------|--------|--------|--------|-----------|----------|---------|
|                  | Freq            | ReadAntenna | Cable  | Preamp |        | Limit  | Over   | Pol/Phase | Remark   |         |
|                  |                 | Level       | Factor | Loss   | Factor | Level  | Line   |           |          | Limit   |
|                  | MHz             | dBuV        | dB/m   | dB     | dB     | dBuV/m | dBuV/m | dB        |          |         |
| 1                | 2389.387        | 54.61       | 27.33  | 3.48   | 37.59  | 47.83  | 74.00  | -26.17    | VERTICAL | Peak    |
| 2                | 2390.000        | 53.87       | 27.33  | 3.48   | 37.59  | 47.09  | 74.00  | -26.91    | VERTICAL | Peak    |
| 3                | 2399.837        | 28.81       | 27.35  | 3.50   | 37.59  | 22.07  | 54.00  | -31.93    | VERTICAL | Average |
| 4                | 2399.837        | 61.48       | 27.35  | 3.50   | 37.59  | 54.74  | 74.00  | -19.26    | VERTICAL | Peak    |
| 5                | 2400.000        | 28.96       | 27.35  | 3.50   | 37.59  | 22.22  | 54.00  | -31.78    | VERTICAL | Average |
| 6                | 2400.000        | 61.63       | 27.35  | 3.50   | 37.59  | 54.89  | 74.00  | -19.11    | VERTICAL | Peak    |
| 7                | 2407.000        | 94.91       | 27.36  | 3.48   | 37.59  | 88.16  | 114.00 | -25.84    | VERTICAL | Peak    |

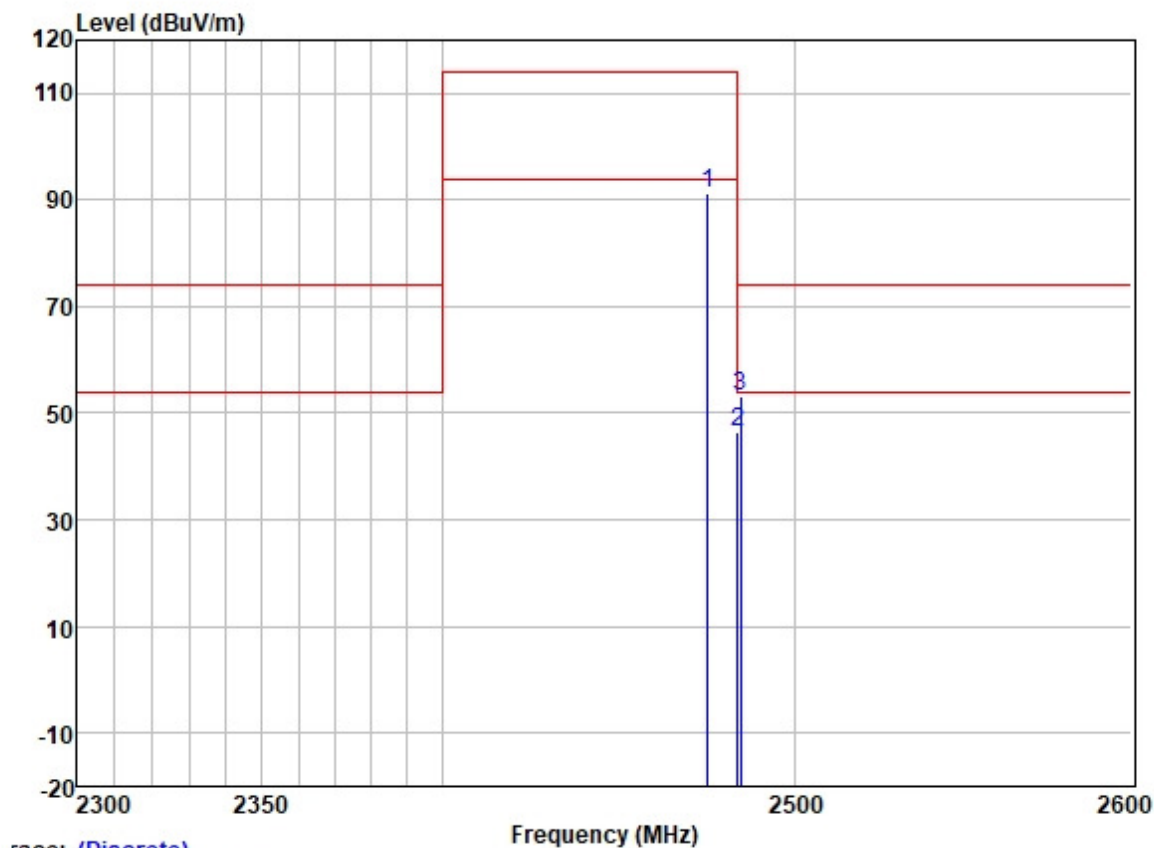
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:High



Trace: (Discrete)

|   | Freq     | ReadAntenna | Cable  | Preamp |        | Limit  | Over   |        |            |        |
|---|----------|-------------|--------|--------|--------|--------|--------|--------|------------|--------|
|   |          | Level       | Factor | Loss   | Factor | Level  | Line   | Limit  | Pol/Phase  | Remark |
|   | MHz      | dBuV        | dB/m   | dB     | dB     | dBuV/m | dBuV/m | dB     |            |        |
| 1 | 2475.000 | 94.08       | 27.47  | 3.60   | 37.57  | 87.58  | 114.00 | -26.42 | HORIZONTAL | Peak   |
| 2 | 2483.500 | 54.97       | 27.48  | 3.53   | 37.57  | 48.41  | 74.00  | -25.59 | HORIZONTAL | Peak   |
| 3 | 2484.115 | 57.33       | 27.48  | 3.53   | 37.57  | 50.77  | 74.00  | -23.23 | HORIZONTAL | Peak   |

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:High



|   | Freq     | ReadAntenna | Cable  | Preamp |        | Limit  | Over   |        |           |        |
|---|----------|-------------|--------|--------|--------|--------|--------|--------|-----------|--------|
|   |          | Level       | Factor | Loss   | Factor | Level  | Line   | Limit  | Pol/Phase | Remark |
|   | MHz      | dBuV        | dB/m   | dB     | dB     | dBuV/m | dBuV/m | dB     |           |        |
| 1 | 2475.000 | 97.83       | 27.47  | 3.60   | 37.57  | 91.33  | 114.00 | -22.67 | VERTICAL  | Peak   |
| 2 | 2483.500 | 53.05       | 27.48  | 3.53   | 37.57  | 46.49  | 74.00  | -27.51 | VERTICAL  | Peak   |
| 3 | 2484.325 | 59.91       | 27.48  | 3.53   | 37.57  | 53.35  | 74.00  | -20.65 | VERTICAL  | Peak   |

**Remark:**

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:  
 Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 2) 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. So, only the above measurement data were 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
 Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

## 7.4 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.4&6.5&6.6

Measurement Distance: 3m

Limit:

| Frequency(MHz) | Field strength<br>(microvolts/meter) | Limit<br>(dBuV/m) | Detector | Measurement Distance<br>(meters) |
|----------------|--------------------------------------|-------------------|----------|----------------------------------|
| 0.009-0.490    | 2400/F(kHz)                          | -                 | -        | 300                              |
| 0.490-1.705    | 24000/F(kHz)                         | -                 | -        | 30                               |
| 1.705-30       | 30                                   | -                 | -        | 30                               |
| 30-88          | 100                                  | 40.0              | QP       | 3                                |
| 88-216         | 150                                  | 43.5              | QP       | 3                                |
| 216-960        | 200                                  | 46.0              | QP       | 3                                |
| 960-1000       | 500                                  | 54.0              | QP       | 3                                |
| Above 1000     | 500                                  | 54.0              | AV       | 3                                |

### 7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C

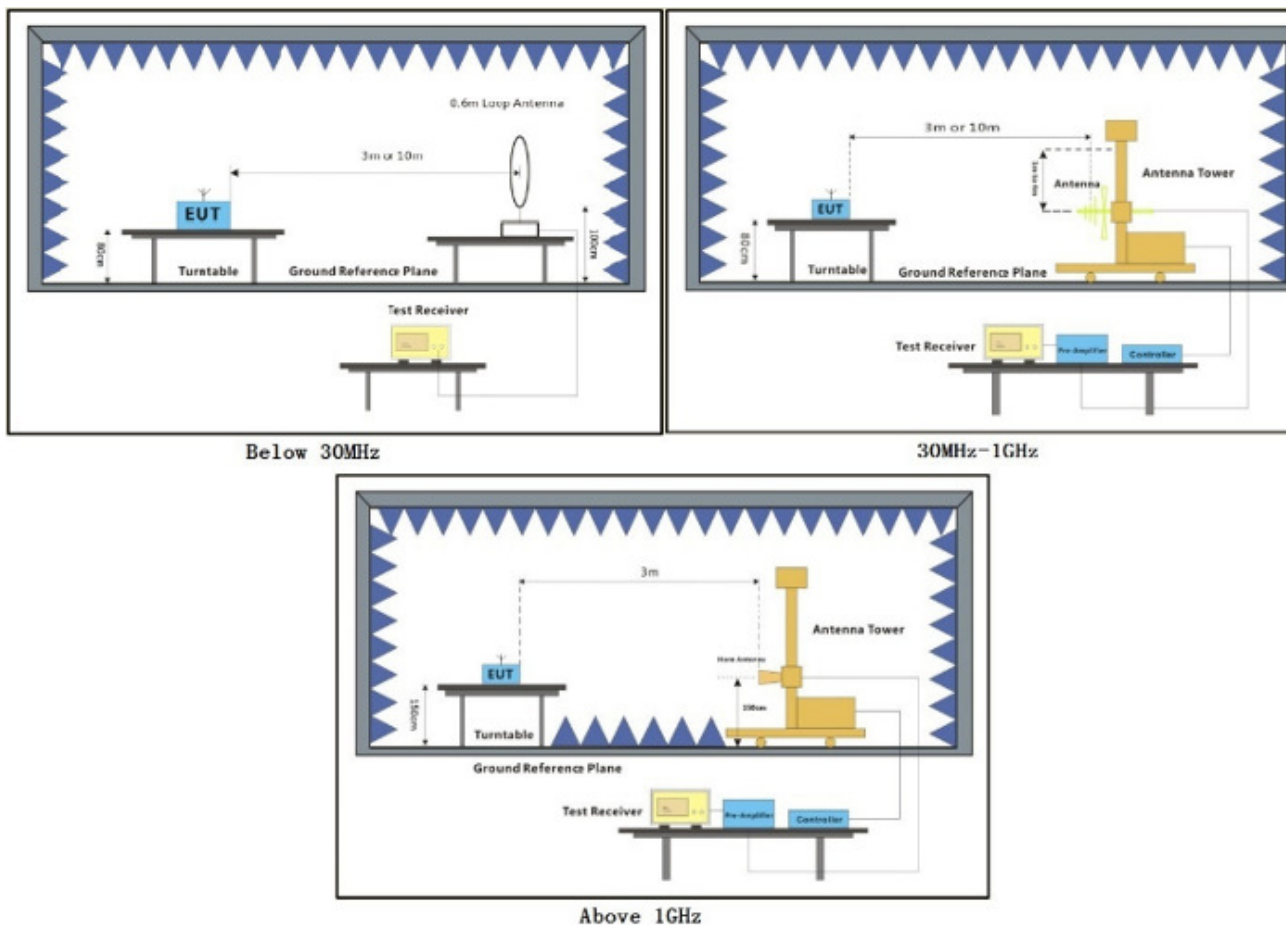
Humidity: 53.8 % RH

Atmospheric Pressure: 1010 mbar

### 7.4.2 Test Mode Description

| Pre-scan / Mode | Description                                                |
|-----------------|------------------------------------------------------------|
| Final test Code |                                                            |
| Final test 01   | TX mode_Keep the EUT in transmitting with modulation mode. |

### 7.4.3 Test Setup Diagram



#### 7.4.4 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) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and 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.

4) 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.

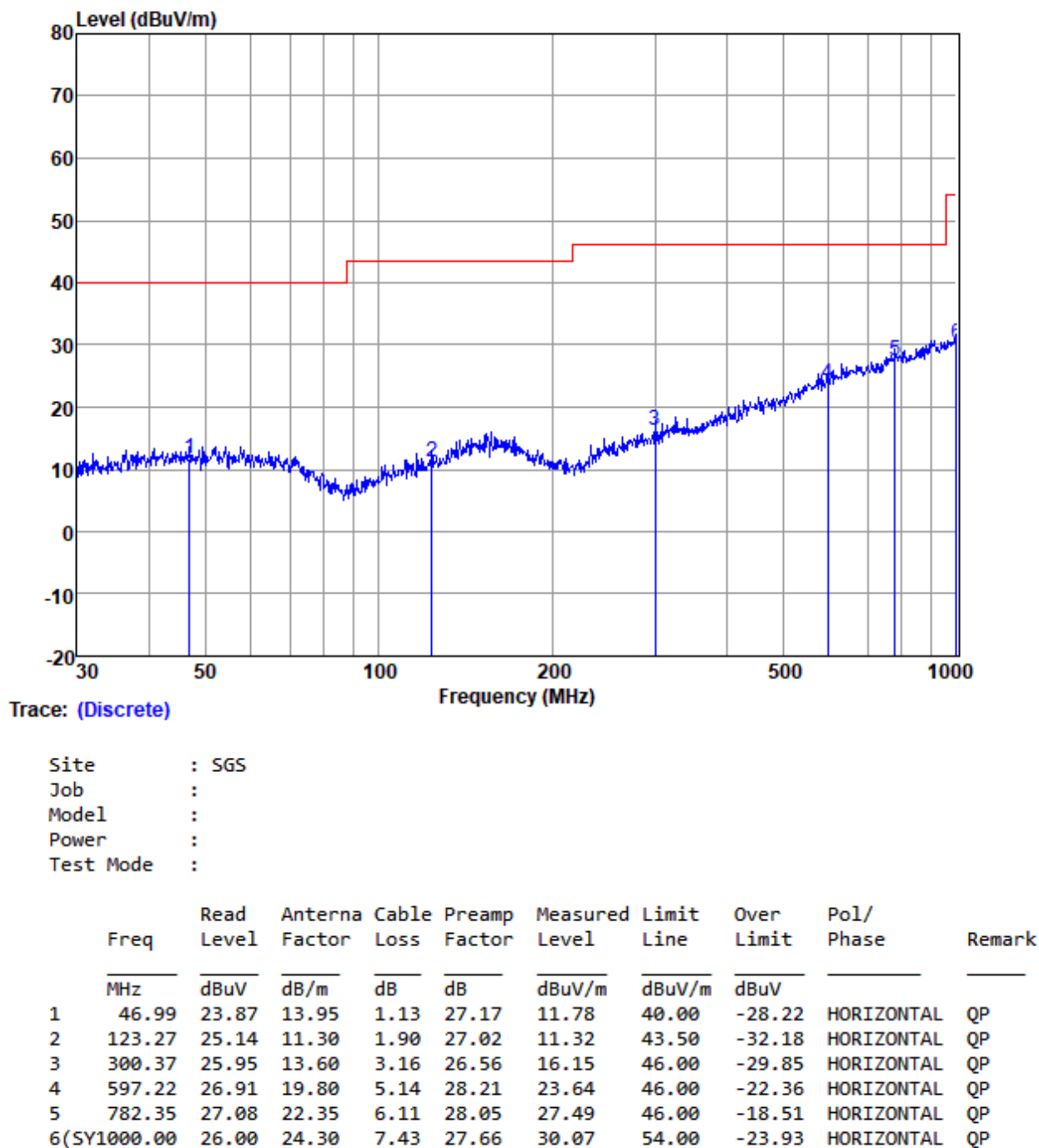


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

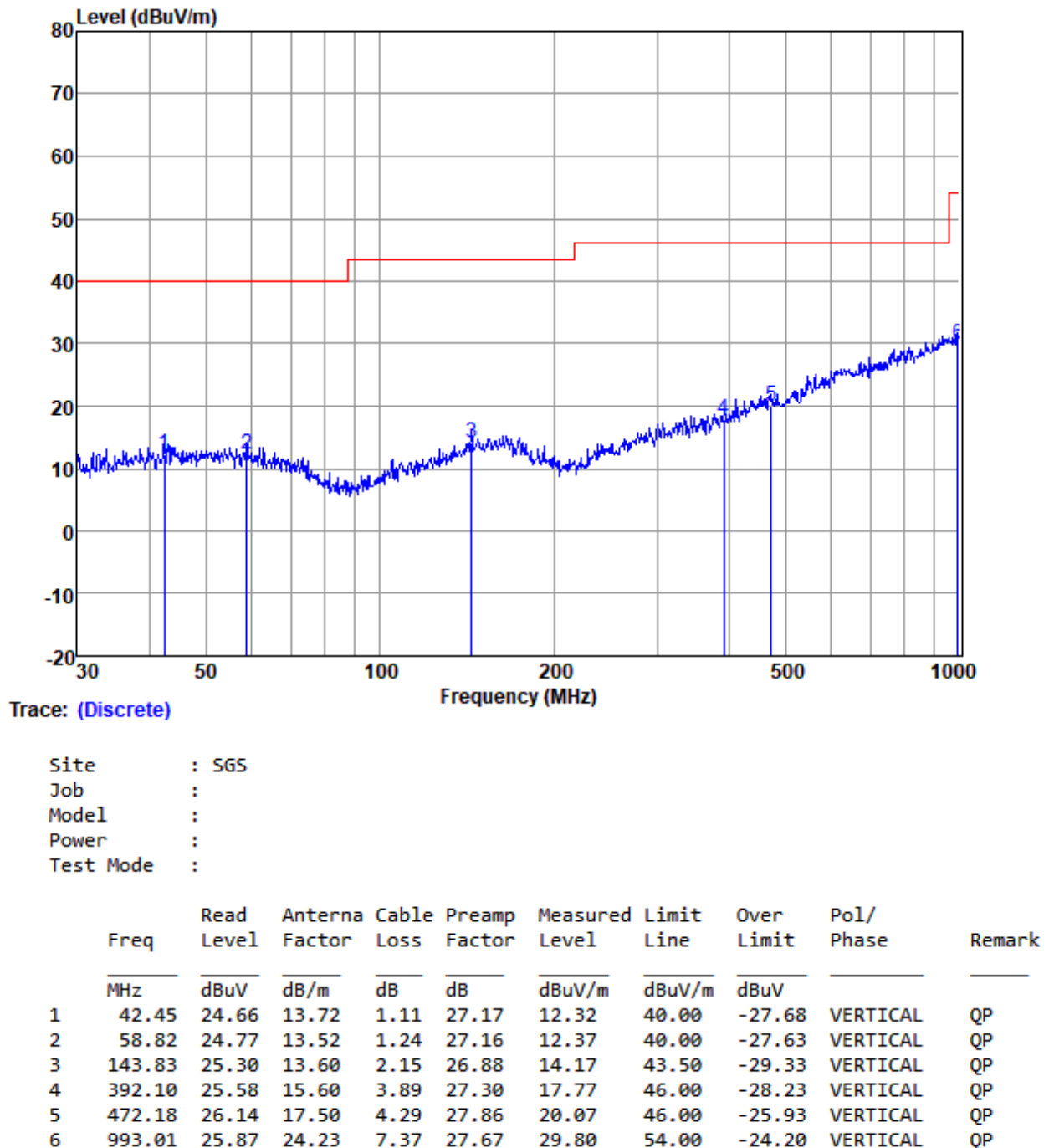
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

## Below 1GHz

Test Mode: 01; Polarity: Horizontal

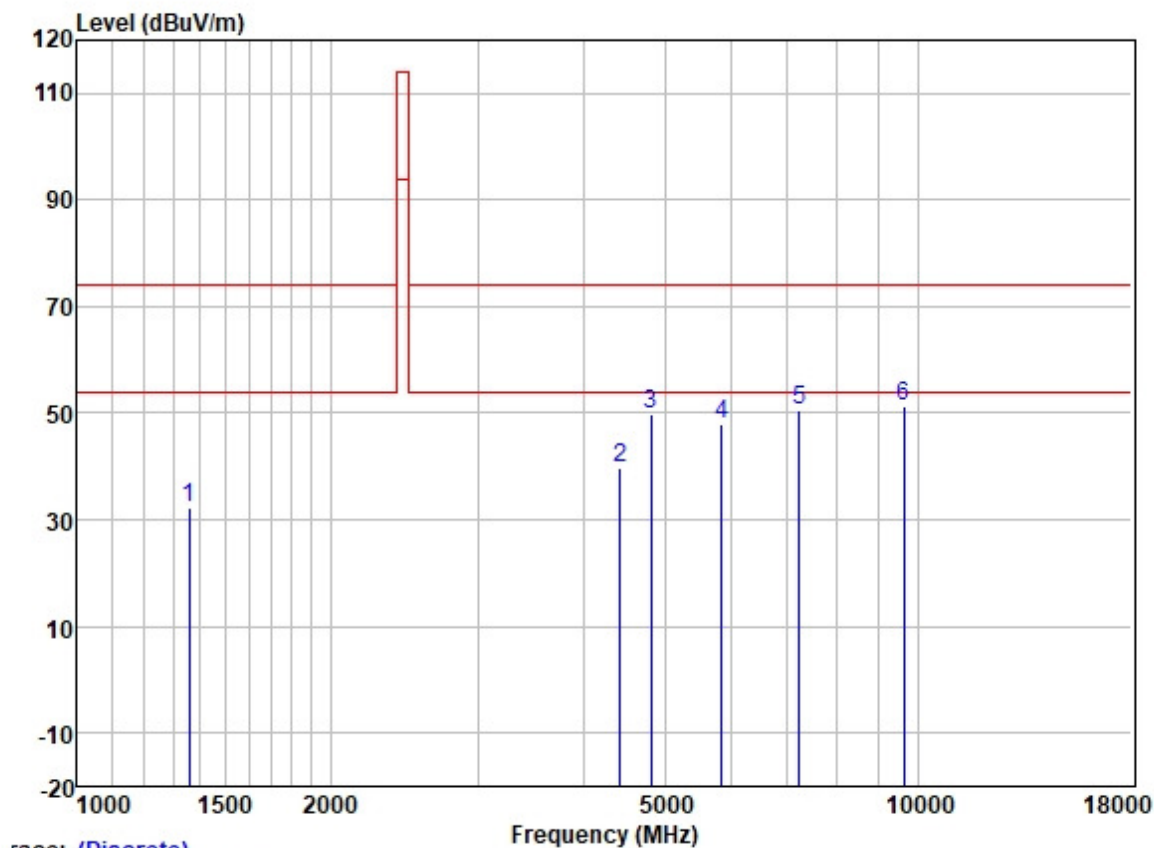


Test Mode: 01; Polarity: Vertical



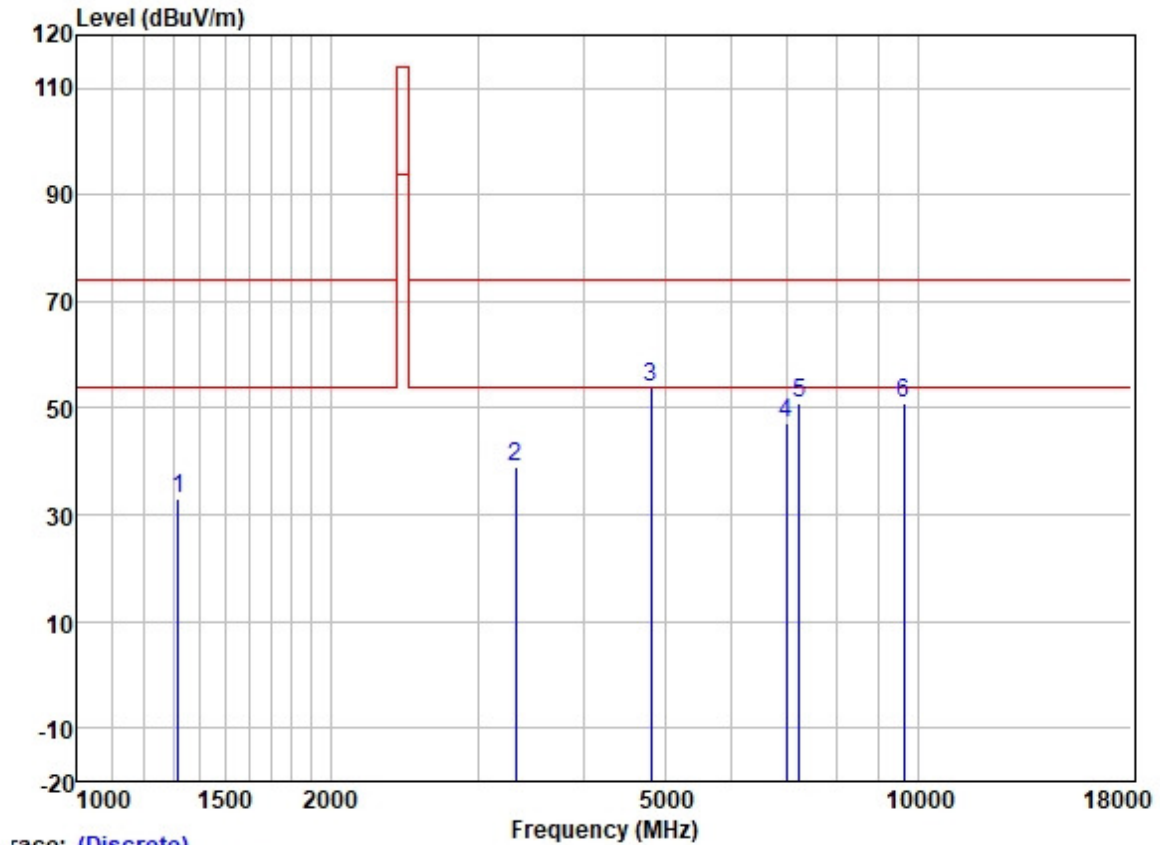
## Above 1GHz

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:Low



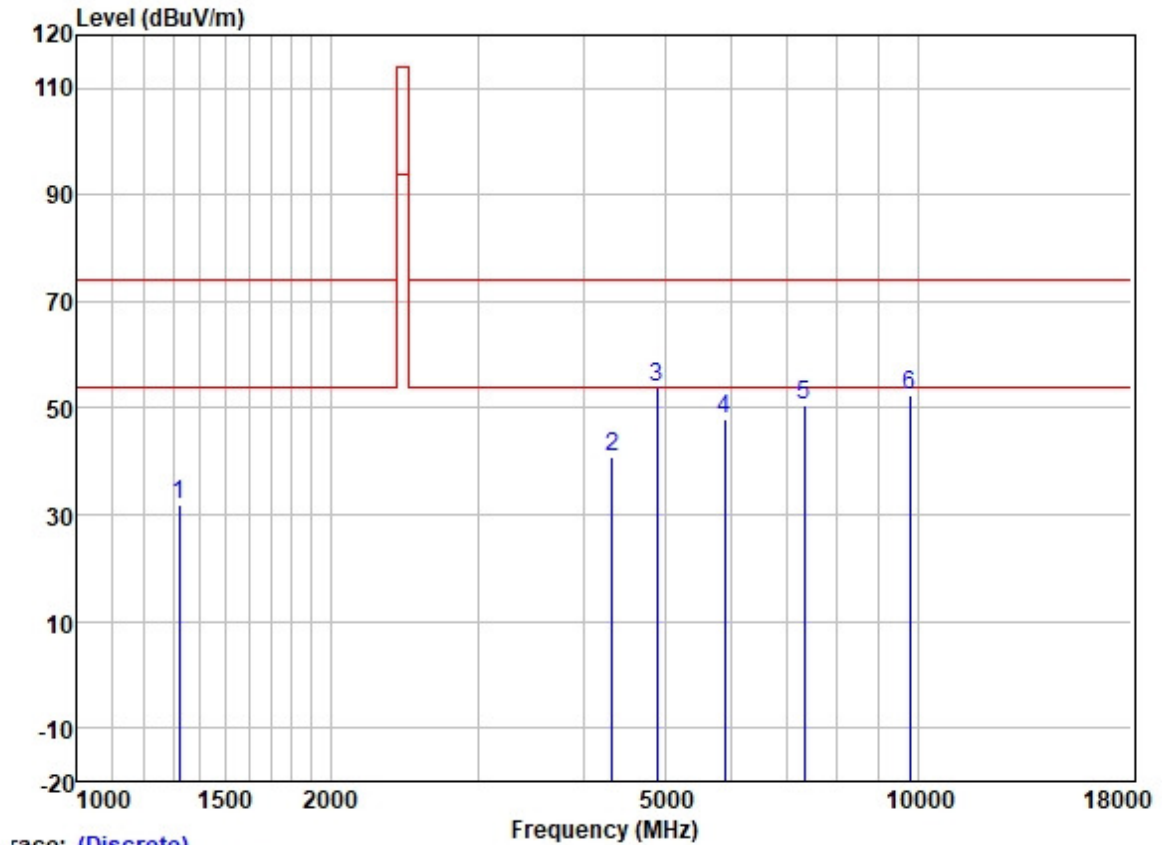
|   |          | ReadAntenna |        | Cable | Preamp |        | Limit  | Over   |            |        |
|---|----------|-------------|--------|-------|--------|--------|--------|--------|------------|--------|
|   | Freq     | Level       | Factor | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase  | Remark |
|   | MHz      | dBuV        | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |            |        |
| 1 | 1358.498 | 42.42       | 25.33  | 2.60  | 38.27  | 32.08  | 74.00  | -41.92 | HORIZONTAL | Peak   |
| 2 | 4430.628 | 41.16       | 30.72  | 4.78  | 36.81  | 39.85  | 74.00  | -34.15 | HORIZONTAL | Peak   |
| 3 | 4814.000 | 49.60       | 31.45  | 5.42  | 36.83  | 49.64  | 74.00  | -24.36 | HORIZONTAL | Peak   |
| 4 | 5847.517 | 46.76       | 32.25  | 6.00  | 36.90  | 48.11  | 74.00  | -25.89 | HORIZONTAL | Peak   |
| 5 | 7221.000 | 46.17       | 35.62  | 6.01  | 37.39  | 50.41  | 74.00  | -23.59 | HORIZONTAL | Peak   |
| 6 | 9628.000 | 43.11       | 38.40  | 7.06  | 37.42  | 51.15  | 74.00  | -22.85 | HORIZONTAL | Peak   |

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:Low



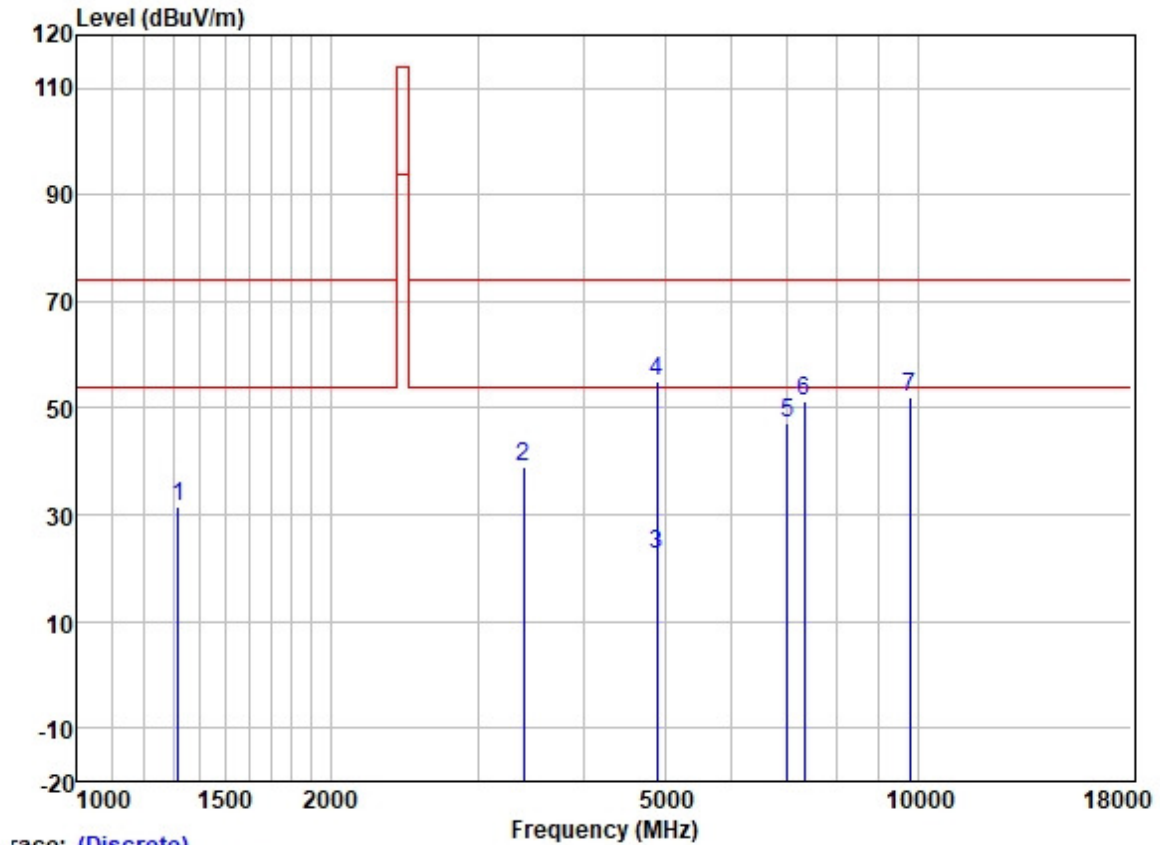
|   |          | ReadAntenna |        | Cable | Preamp |        | Limit  | Over   |           |        |
|---|----------|-------------|--------|-------|--------|--------|--------|--------|-----------|--------|
|   | Freq     | Level       | Factor | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase | Remark |
|   | MHz      | dBuV        | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |           |        |
| 1 | 1319.794 | 43.46       | 25.25  | 2.60  | 38.29  | 33.02  | 74.00  | -40.98 | VERTICAL  | Peak   |
| 2 | 3328.077 | 42.97       | 28.78  | 4.07  | 37.02  | 38.80  | 74.00  | -35.20 | VERTICAL  | Peak   |
| 3 | 4814.000 | 53.90       | 31.45  | 5.42  | 36.83  | 53.94  | 74.00  | -20.06 | VERTICAL  | Peak   |
| 4 | 6974.982 | 43.77       | 34.97  | 5.81  | 37.23  | 47.32  | 74.00  | -26.68 | VERTICAL  | Peak   |
| 5 | 7221.000 | 46.52       | 35.62  | 6.01  | 37.39  | 50.76  | 74.00  | -23.24 | VERTICAL  | Peak   |
| 6 | 9628.000 | 42.86       | 38.40  | 7.06  | 37.42  | 50.90  | 74.00  | -23.10 | VERTICAL  | Peak   |

Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:middle



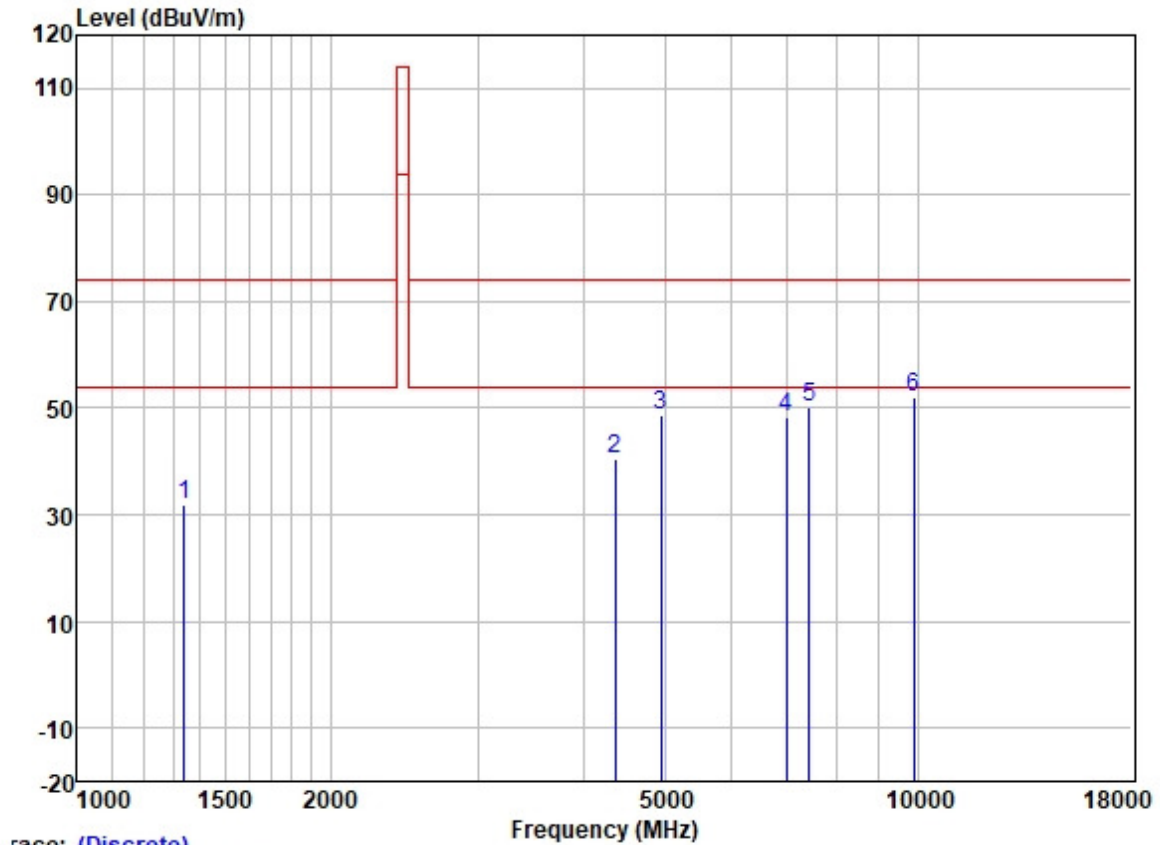
|      | ReadAntenna | Cable  | Preamp |        | Limit  | Over   |       |           |                 |
|------|-------------|--------|--------|--------|--------|--------|-------|-----------|-----------------|
| Freq | Level       | Factor | Loss   | Factor | Level  | Line   | Limit | Pol/Phase | Remark          |
| MHz  | dBuV        | dB/m   | dB     | dB     | dBuV/m | dBuV/m | dB    |           |                 |
| 1    | 1323.614    | 42.44  | 25.26  | 2.60   | 38.29  | 32.01  | 74.00 | -41.99    | HORIZONTAL Peak |
| 2    | 4329.354    | 42.55  | 30.54  | 4.67   | 36.81  | 40.95  | 74.00 | -33.05    | HORIZONTAL Peak |
| 3    | 4890.000    | 53.52  | 31.56  | 5.52   | 36.84  | 53.76  | 74.00 | -20.24    | HORIZONTAL Peak |
| 4    | 5898.442    | 46.80  | 32.31  | 5.90   | 36.90  | 48.11  | 74.00 | -25.89    | HORIZONTAL Peak |
| 5    | 7335.000    | 45.71  | 36.00  | 6.13   | 37.43  | 50.41  | 74.00 | -23.59    | HORIZONTAL Peak |
| 6    | 9780.000    | 44.32  | 38.53  | 7.01   | 37.41  | 52.45  | 74.00 | -21.55    | HORIZONTAL Peak |

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:middle



|   | Freq     | ReadAntenna | Cable  | Preamp |        | Limit  | Over   |        |           |         |
|---|----------|-------------|--------|--------|--------|--------|--------|--------|-----------|---------|
|   | MHz      | Level       | Factor | Loss   | Factor | Level  | Line   | Limit  | Pol/Phase | Remark  |
|   | MHz      | dBuV        | dB/m   | dB     | dB     | dBuV/m | dBuV/m | dB     |           |         |
| 1 | 1319.794 | 42.14       | 25.25  | 2.60   | 38.29  | 31.70  | 74.00  | -42.30 | VERTICAL  | Peak    |
| 2 | 3396.098 | 43.00       | 28.84  | 4.10   | 36.98  | 38.96  | 74.00  | -35.04 | VERTICAL  | Peak    |
| 3 | 4890.000 | 22.21       | 31.56  | 5.52   | 36.84  | 22.45  | 54.00  | -31.55 | VERTICAL  | Average |
| 4 | 4890.000 | 54.88       | 31.56  | 5.52   | 36.84  | 55.12  | 74.00  | -18.88 | VERTICAL  | Peak    |
| 5 | 6995.172 | 43.71       | 35.00  | 5.81   | 37.25  | 47.27  | 74.00  | -26.73 | VERTICAL  | Peak    |
| 6 | 7335.000 | 46.56       | 36.00  | 6.13   | 37.43  | 51.26  | 74.00  | -22.74 | VERTICAL  | Peak    |
| 7 | 9780.000 | 44.08       | 38.53  | 7.01   | 37.41  | 52.21  | 74.00  | -21.79 | VERTICAL  | Peak    |

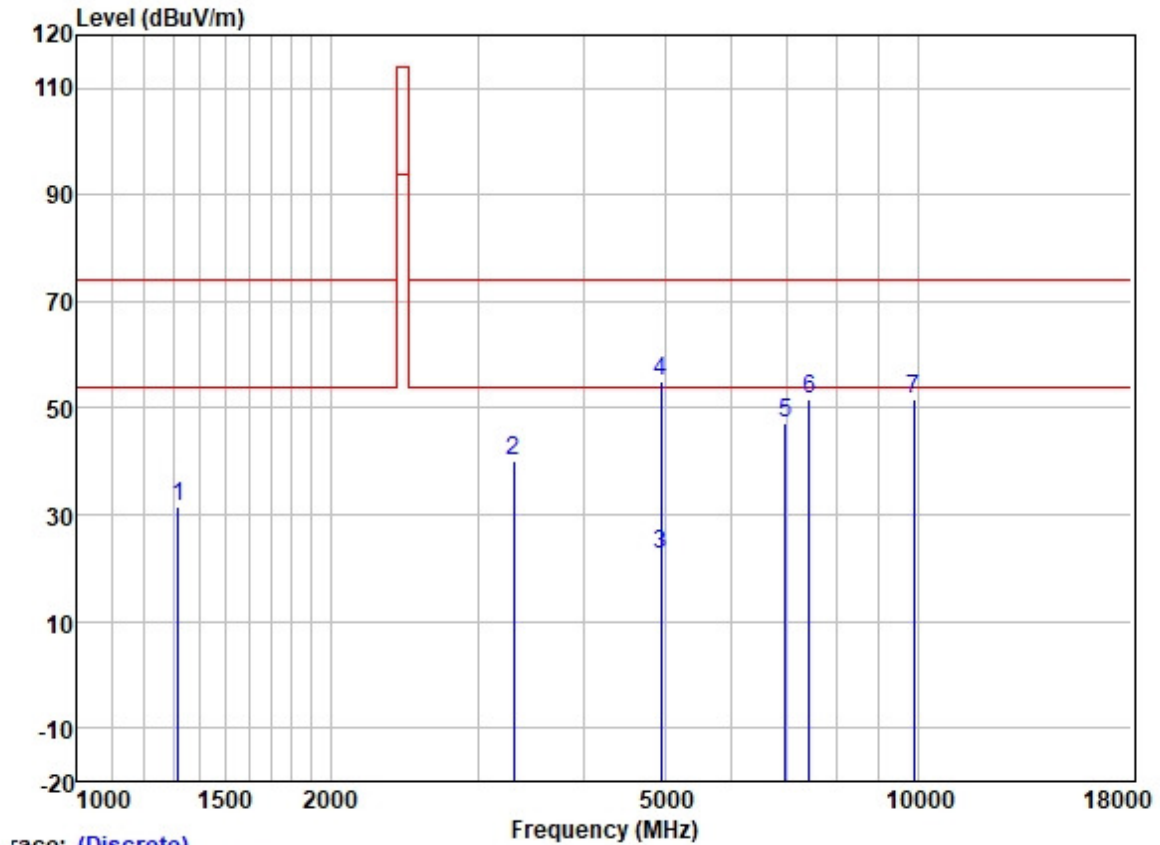
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:High



race: (Discrete)

|   |          | ReadAntenna |        | Cable | Preamp |        | Limit  | Over   |            |        |
|---|----------|-------------|--------|-------|--------|--------|--------|--------|------------|--------|
|   | Freq     | Level       | Factor | Loss  | Factor | Level  | Line   | Limit  | Pol/Phase  | Remark |
|   | MHz      | dBuV        | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |            |        |
| 1 | 1339.006 | 42.16       | 25.29  | 2.60  | 38.27  | 31.78  | 74.00  | -42.22 | HORIZONTAL | Peak   |
| 2 | 4367.058 | 42.10       | 30.62  | 4.68  | 36.81  | 40.59  | 74.00  | -33.41 | HORIZONTAL | Peak   |
| 3 | 4950.000 | 48.42       | 31.64  | 5.62  | 36.84  | 48.84  | 74.00  | -25.16 | HORIZONTAL | Peak   |
| 4 | 6974.982 | 44.73       | 34.97  | 5.81  | 37.23  | 48.28  | 74.00  | -25.72 | HORIZONTAL | Peak   |
| 5 | 7425.000 | 44.99       | 36.27  | 6.22  | 37.47  | 50.01  | 74.00  | -23.99 | HORIZONTAL | Peak   |
| 6 | 9900.000 | 43.86       | 38.63  | 6.97  | 37.41  | 52.05  | 74.00  | -21.95 | HORIZONTAL | Peak   |

Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:High



|   | Freq     | ReadAntenna | Cable  | Preamp |        | Limit  | Over   |        |           |         |
|---|----------|-------------|--------|--------|--------|--------|--------|--------|-----------|---------|
|   | MHz      | Level       | Factor | Loss   | Factor | Level  | Line   | Limit  | Pol/Phase | Remark  |
|   | MHz      | dBuV        | dB/m   | dB     | dB     | dBuV/m | dBuV/m | dB     |           |         |
| 1 | 1319.794 | 42.10       | 25.25  | 2.60   | 38.29  | 31.66  | 74.00  | -42.34 | VERTICAL  | Peak    |
| 2 | 3308.894 | 44.21       | 28.76  | 4.06   | 37.03  | 40.00  | 74.00  | -34.00 | VERTICAL  | Peak    |
| 3 | 4950.000 | 22.09       | 31.64  | 5.62   | 36.84  | 22.51  | 54.00  | -31.49 | VERTICAL  | Average |
| 4 | 4950.000 | 54.76       | 31.64  | 5.62   | 36.84  | 55.18  | 74.00  | -18.82 | VERTICAL  | Peak    |
| 5 | 6954.852 | 43.81       | 34.95  | 5.81   | 37.21  | 47.36  | 74.00  | -26.64 | VERTICAL  | Peak    |
| 6 | 7425.000 | 46.61       | 36.27  | 6.22   | 37.47  | 51.63  | 74.00  | -22.37 | VERTICAL  | Peak    |
| 7 | 9900.000 | 43.55       | 38.63  | 6.97   | 37.41  | 51.74  | 74.00  | -22.26 | VERTICAL  | Peak    |

## 8 Test Setup Photo

### Field Strength of the Fundamental Signal (15.249(a))



### Restricted Band Around Fundamental Frequency



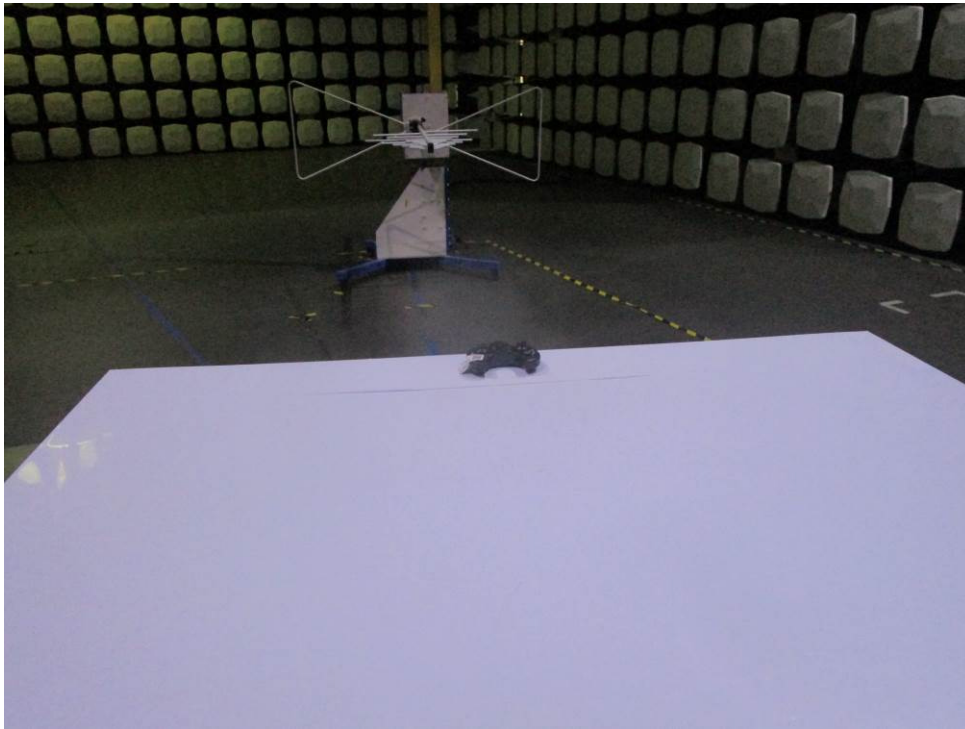
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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

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

No. 198 Kezhu Road, Sciotech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgs.com.cn  
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

### Radiated Emissions (below 1GHz)



### Radiated Emissions (above 1GHz)



## 9 EUT Constructional Details (EUT Photos)

Refer to Appendix - external and internal photos for GZCR2109021111AT

- End of the Report -



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

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