

# TEST REPORT

**Application No.:** SZCR2504001576AT  
**Applicant:** DT Research, Inc.  
**Address of Applicant:** 3RD FL NO 36 WUQUAN 7TH RD WUGU DISTRICT, NEW TAIPEI, Taiwan  
**Manufacturer:** DT Research, Inc.  
**Address of Manufacturer:** 2000 Concourse Drive, San Jose, CA 95131, USA  
**Factory:** DT Research, Inc. Taiwan Branch  
**Address of Factory:** 6F., No.36 Wuquan 7 th Rd., Wugu Dist. New Taipei City 248 Taiwan  
**Equipment Under Test (EUT):**  
**EUT Name:** Rugged Tablet  
**Model No.:** DA323EP, DA323EO, DA323xxxxx (x=0-9, A-Z, - or null, or /) ♣  
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.  
**Trade Mark:**   
**FCC ID:** YE3600-SC668SWF  
**Standard(s) :** 47 CFR Part 15, Subpart E 15.407  
**Date of Receipt:** 2025-04-21  
**Date of Test:** 2025-04-23 to 2025-04-30  
**Date of Issue:** 2025-04-30

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

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

*Keny Xu*

Keny Xu  
EMC Laboratory Manager



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 2 of 136

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2025-04-30 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                            |  |  |
|--------------------------|--|----------------------------|--|--|
| Authorized for issue by: |  |                            |  |  |
|                          |  | Edison Li                  |  |  |
|                          |  | Edison Li/Project Engineer |  |  |
|                          |  | Eric Fu                    |  |  |
|                          |  | Eric Fu/Reviewer           |  |  |



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Inspection & Testing 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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## 2 Test Summary

| Radio Spectrum Technical Requirement |                                  |        |                                      |        |
|--------------------------------------|----------------------------------|--------|--------------------------------------|--------|
| Item                                 | Standard                         | Method | Requirement                          | Result |
| Antenna Requirement                  | 47 CFR Part 15, Subpart E 15.407 | N/A    | 47 CFR Part 15, Subpart C 15.203     | Pass   |
| Transmission in the Absence of Data  |                                  | N/A    | 47 CFR Part 15, Subpart E 15.407 (c) | Pass   |

| Radio Spectrum Matter Part                            |                                  |                                    |                                                          |        |
|-------------------------------------------------------|----------------------------------|------------------------------------|----------------------------------------------------------|--------|
| Item                                                  | Standard                         | Method                             | Requirement                                              | Result |
| Conducted Emissions at AC Power Line (150kHz-30MHz)   | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 (2013) Section 6.2     | 47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(9) | Pass   |
| Radiated Emissions which fall in the restricted bands |                                  | ANSI C63.10 (2013) Section 6.10.5  | 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)   | Pass   |
| Radiated Emissions (Below 1GHz)                       |                                  | ANSI C63.10 (2013) Section 6.4,6.5 | 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)   | Pass   |
| Radiated Emissions (Above 1GHz)                       |                                  | ANSI C63.10 (2013) Section 6.6     | 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)   | Pass   |
| Non-occupancy period                                  |                                  | KDB 905462 D02 Section 7.8.3       | KDB 905462 D02 Section 5.1                               | Pass   |
| Channel Move Time                                     |                                  | KDB 905462 D02 Section 7.8.3       | KDB 905462 D02 Section 5.1                               | Pass   |
| Channel Closing Transmission Time                     |                                  | KDB 905462 D02 Section 7.8.3       | KDB 905462 D02 Section 5.1                               | Pass   |

### Remark:

Model No.: DA323EP, DA323EO, DA323xxxxx (x=0-9, A-Z, - or null, or ., or /)

Only the model DA323EP was tested, since according to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for all the above models, with only difference on model No..

This report is prepared for FCC class II permissive change to install the granted module(FCC ID:YE3600-SC668SWF, Granted on 06/29/2023) into a host product and also change the antenna gains.

Therefore in this report Conducted Emissions at AC Power Line (150kHz-30MHz), Radiated Emissions which fall in the restricted bands and Radiated Spurious Emissions were fully retested on model DA323EP and shown the data in this report.



### 3 Contents

|                                                                 | Page |
|-----------------------------------------------------------------|------|
| 1 Cover Page .....                                              | 1    |
| 2 Test Summary .....                                            | 3    |
| 3 Contents .....                                                | 4    |
| 4 General Information .....                                     | 6    |
| 4.1 Details of E.U.T. ....                                      | 6    |
| 4.2 Description of Support Units .....                          | 7    |
| 4.3 Measurement Uncertainty .....                               | 7    |
| 4.4 Test Location .....                                         | 8    |
| 4.5 Test Facility .....                                         | 8    |
| 4.6 Deviation from Standards .....                              | 8    |
| 4.7 Abnormalities from Standard Conditions .....                | 8    |
| 5 Equipment List .....                                          | 9    |
| 6 Radio Spectrum Technical Requirement .....                    | 11   |
| 6.1 Antenna Requirement .....                                   | 11   |
| 6.1.1 Test Requirement: .....                                   | 11   |
| 6.1.2 Conclusion .....                                          | 11   |
| 6.2 Transmission in the Absence of Data .....                   | 11   |
| 6.2.1 Test Requirement: .....                                   | 11   |
| 6.2.2 Conclusion .....                                          | 11   |
| 7 Radio Spectrum Matter Test Results .....                      | 12   |
| 7.1 Conducted Emissions at AC Power Line (150kHz-30MHz) .....   | 12   |
| 7.1.1 E.U.T. Operation .....                                    | 12   |
| 7.1.2 Test Mode Description .....                               | 12   |
| 7.1.3 Test Setup Diagram .....                                  | 13   |
| 7.1.4 Measurement Procedure and Data .....                      | 13   |
| 7.2 Radiated Emissions which fall in the restricted bands ..... | 16   |
| 7.2.1 E.U.T. Operation .....                                    | 16   |
| 7.2.2 Test Mode Description .....                               | 17   |
| 7.2.3 Test Setup Diagram .....                                  | 18   |
| 7.2.4 Measurement Procedure and Data .....                      | 19   |
| 7.3 Radiated Emissions (Below 1GHz) .....                       | 90   |
| 7.3.1 E.U.T. Operation .....                                    | 90   |
| 7.3.2 Test Mode Description .....                               | 90   |
| 7.3.3 Test Setup Diagram .....                                  | 92   |
| 7.3.4 Measurement Procedure and Data .....                      | 92   |
| 7.4 Radiated Emissions (Above 1GHz) .....                       | 95   |
| 7.4.1 E.U.T. Operation .....                                    | 95   |
| 7.4.2 Test Mode Description .....                               | 96   |
| 7.4.3 Test Setup Diagram .....                                  | 97   |



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 5 of 136

|       |                                               |     |
|-------|-----------------------------------------------|-----|
| 7.4.4 | Measurement Procedure and Data.....           | 98  |
| 7.5   | Channel Move Time .....                       | 123 |
| 7.5.1 | E.U.T. Operation .....                        | 123 |
| 7.5.2 | Test Mode Description .....                   | 123 |
| 7.5.3 | Test Setup Diagram .....                      | 124 |
| 7.5.4 | Measurement Procedure and Data.....           | 125 |
| 7.6   | Non-occupancy period .....                    | 126 |
| 7.6.1 | E.U.T. Operation .....                        | 126 |
| 7.6.2 | Test Mode Description .....                   | 126 |
| 7.6.3 | Test Setup Diagram .....                      | 127 |
| 7.6.4 | Measurement Procedure and Data.....           | 128 |
| 7.7   | Channel Closing Transmission Time .....       | 129 |
| 7.7.1 | E.U.T. Operation .....                        | 129 |
| 7.7.2 | Test Mode Description .....                   | 129 |
| 7.7.3 | Test Setup Diagram .....                      | 130 |
| 7.7.4 | Measurement Procedure and Data.....           | 131 |
| 8     | Test Setup Photo .....                        | 132 |
| 9     | EUT Constructional Details (EUT Photos) ..... | 132 |
| 10    | Appendix.....                                 | 133 |



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing & Calibration 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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## 4 General Information

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

|               |                                                                                                                                                                                                     |                |                     |                      |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------|----------------------|
| Power supply: | AC Adapter1<br>Model: A20-065N3A<br>Input: AC 100-240V, 50/60Hz, 1.6A<br>Output: DC 5.0V, 3.0A 15.0W/ DC 9V, 3A/ DC 12V, 3A/ DC 15V, 3A/ DC 20.0V, 3.25A 65.0W                                      |                |                     |                      |
|               | USB Type-C AC Power Adapter2<br>Model: FSP065-A1BR3<br>Input: AC 100-240V, 50/60Hz, 1.7A<br>Output: DC 5.0V, 3.0A 15.0W/ DC 9V, 3A 27.0W/ DC 12V, 3A 36.0W/ DC 15V, 3A 45.0W/ DC 20.0V, 3.25A 65.0W |                |                     |                      |
|               | AC Adapter3<br>Model: A18-065N3A<br>Input: AC 100-240V, 50/60Hz, 1.7A<br>Output: DC 19.0V, 3.42A 65.0W                                                                                              |                |                     |                      |
|               | Note: all 3 adapters were tested, this report only shows the worst test data;                                                                                                                       |                |                     |                      |
|               | Rechargeable Lithium-Ion Polymer Battery1<br>Model: ACC-006-29<br>Rated Capacity: 3800mAh<br>Voltage: DC 11.4V<br>Watt-Hour: 43.32Wh<br>Max Charge Voltage: 13.05V                                  |                |                     |                      |
| Cable(s):     | Rechargeable Lithium-Ion Polymer Battery2<br>Model: PT352044-2S(2ICP4/20/44)<br>Rated Capacity: 250mAh<br>Voltage: DC 7.4V<br>Watt-Hour: 1.85Wh<br>Max Charge Voltage: 8.4V                         |                |                     |                      |
|               | USB Type-C cable:140cm unshielded                                                                                                                                                                   |                |                     |                      |
|               | Operation Frequency:                                                                                                                                                                                | Band           | Mode                | Frequency Range(MHz) |
|               |                                                                                                                                                                                                     | UNII Band I    | 802.11a/n/ac(20MHz) | 5180-5240            |
|               |                                                                                                                                                                                                     |                | 802.11n/ac(40MHz)   | 5190-5230            |
|               |                                                                                                                                                                                                     |                | 802.11ac(80MHz)     | 5210                 |
|               |                                                                                                                                                                                                     | UNII Band II-A | 802.11a/n/ac(20MHz) | 5260-5320            |
|               |                                                                                                                                                                                                     |                |                     | Number of channels   |



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 <https://www.sgs.com/en/Terms-and-Conditions>. 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. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 7 of 136

|                  |                                                                                                                                        |                     |           |    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------|----|
|                  |                                                                                                                                        | 802.11n/ac(40MHz)   | 5270-5310 | 2  |
|                  |                                                                                                                                        | 802.11ac(80MHz)     | 5290      | 1  |
|                  | UNII Band II-C                                                                                                                         | 802.11a/n/ac(20MHz) | 5500-5720 | 12 |
|                  |                                                                                                                                        | 802.11n/ac(40MHz)   | 5510-5710 | 6  |
|                  |                                                                                                                                        | 802.11ac(80MHz)     | 5530-5670 | 3  |
|                  | UNII Band III                                                                                                                          | 802.11a/n/ac(20MHz) | 5745-5825 | 5  |
|                  |                                                                                                                                        | 802.11n/ac(40MHz)   | 5755-5795 | 2  |
|                  |                                                                                                                                        | 802.11ac(80MHz)     | 5775      | 1  |
| Modulation Type: | 802.11a: OFDM(QPSK, BPSK, 16QAM, 64QAM)<br>802.11n: OFDM(QPSK, BPSK, 16QAM, 64QAM)<br>802.11ac: OFDM(QPSK, BPSK, 16QAM, 64QAM, 256QAM) |                     |           |    |
| DFS Function:    | Slave without radar detection                                                                                                          |                     |           |    |
| TPC Function:    | Not support                                                                                                                            |                     |           |    |
| Antenna Type:    | PIFA Antenna                                                                                                                           |                     |           |    |
| Antenna Gain:    | 3.21dBi                                                                                                                                |                     |           |    |

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

### 4.2 Description of Support Units

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

### 4.3 Measurement Uncertainty

| Test Item                                                                                                                                                                                                                                                                                                                                       | Measurement Uncertainty                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Conducted Emissions at AC Power Line (150kHz-30MHz)                                                                                                                                                                                                                                                                                             | ± 3.1dB                                     |
| Radiated Emissions which fall in the restricted bands                                                                                                                                                                                                                                                                                           | ± 6.0dB (below 1GHz); ± 4.6dB (above 1GHz); |
| Radiated Emissions (Below 1GHz)                                                                                                                                                                                                                                                                                                                 | ± 6.0dB for 3m; ± 5.0dB for 10m             |
| Radiated Emissions (Above 1GHz)                                                                                                                                                                                                                                                                                                                 | ± 4.6dB (1-18GHz); ± 4.8dB (18-40GHz)       |
| Remark:<br>The U <sub>lab</sub> (lab Uncertainty) is less than U <sub>CISPR/ETSI</sub> (CISPR/ETSI 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. |                                             |



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing & Calibration 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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 8 of 136

### 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, Nanshan District, 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: CN1336

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

Designation Number: CN1336. Test Firm Registration Number: 787754.

#### • 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



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch EMC 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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.ssgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## 5 Equipment List

| Conducted Emissions at AC Power Line (150kHz-30MHz) |                  |                  |               |            |              |
|-----------------------------------------------------|------------------|------------------|---------------|------------|--------------|
| Equipment                                           | Manufacturer     | Model No.        | Inventory No. | Cal Date   | Cal Due Date |
| Shielding Room                                      | ZhongYu Electron | GB-88            | SEM001-06     | 2022-05-14 | 2025-05-13   |
| EMI Test Receiver                                   | Rohde&Schwarz    | ESR              | SZ-WRG-M-047  | 2025-01-08 | 2026-01-07   |
| Measurement Software                                | AUDIX            | e3 V8.2014-6-27a | N/A           | N/A        | N/A          |
| Coaxial Cable                                       | SGS              | N/A              | SEM024-01     | 2024-07-06 | 2025-07-05   |
| LISN                                                | Rohde&Schwarz    | ENV216           | SEM007-01     | 2024-08-15 | 2025-08-14   |
| LISN                                                | ETS-LINDGREN     | 3816/2           | SEM007-02     | 2025-03-03 | 2026-03-02   |

| Radiated Emissions which fall in the restricted bands |                 |                 |               |            |              |
|-------------------------------------------------------|-----------------|-----------------|---------------|------------|--------------|
| Equipment                                             | Manufacturer    | Model No.       | Inventory No. | Cal Date   | Cal Due Date |
| Signal & Spectrum Analyzer                            | Rohde & Schwarz | FSV             | SZ-WRG-M-048  | 2025-01-07 | 2026-01-06   |
| Low Noise Amplifier 30M-8GHz                          | Tonscend        | TAP30M8G30      | SZ-WRG-M-050  | 2025-01-07 | 2026-01-06   |
| Double Ridge Horn Antenna 1GHz-18GHz                  | SCHWARZBECK     | BBHA 9120 D     | SZ-WRG-M-055  | 2023-12-21 | 2025-12-20   |
| RSE Test Software                                     | AUDIX           | e3 V8.2014-6-27 | N/A           | N/A        | N/A          |
| Chamber                                               | CRTSGSSAC966    | N/A             | SZ-WRG-C-063  | 2025-01-06 | 2028-01-05   |
| Humidity and Temperature Indicator                    | deli            | 8838            | SEM002-46     | 2024-07-24 | 2025-07-23   |

| Radiated Spurious Emissions Below 1GHz |                      |                 |               |            |              |
|----------------------------------------|----------------------|-----------------|---------------|------------|--------------|
| Equipment                              | Manufacturer         | Model No.       | Inventory No. | Cal Date   | Cal Due Date |
| Loop Antenna                           | ETS-Lindgren         | 6502            | SEM003-08     | 2023-11-20 | 2025-11-19   |
| 3m Semi-Anechoic Chamber               | ETS-LINDGREN         | N/A             | SEM001-01     | 2023-06-19 | 2026-06-18   |
| MXE EMI Receiver                       | Agilent Technologies | N9038A          | SEM004-15     | 2024-08-14 | 2025-08-13   |
| BiConiLog Antenna                      | ETS-LINDGREN         | 3142C           | SEM003-01     | 2023-09-16 | 2025-09-15   |
| Pre-Amplifier                          | Agilent Technologies | 8447D           | SEM005-01     | 2025-03-04 | 2026-03-03   |
| Measurement Software                   | AUDIX                | e3 V8.2014-6-27 | N/A           | N/A        | N/A          |
| Coaxial Cable                          | SGS                  | N/A             | SEM025-01     | 2024-07-06 | 2025-07-05   |



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 10 of 136

| Radiated Spurious Emissions Above 1GHz |                 |                 |               |            |              |
|----------------------------------------|-----------------|-----------------|---------------|------------|--------------|
| Equipment                              | Manufacturer    | Model No.       | Inventory No. | Cal Date   | Cal Due Date |
| Signal & Spectrum Analyzer             | Rohde & Schwarz | FSV             | SZ-WRG-M-048  | 2025-01-07 | 2026-01-06   |
| Low Noise Amplifier 1G-18GHz           | Tonscend        | TAP01018050     | SZ-WRG-M-051  | 2025-01-07 | 2026-01-06   |
| Low Noise Amplifier 18G-40GHz          | Tonscend        | TAP18040048     | SZ-WRG-M-052  | 2025-01-08 | 2026-01-07   |
| Double Ridge Horn Antenna 1GHz-18GHz   | SCHWARZBECK     | BBHA 9120 D     | SZ-WRG-M-055  | 2023-12-21 | 2025-12-20   |
| SHF-EHF Horn 15GHz-40GHz               | SCHWARZBECK     | BBHA 9170       | SZ-WRG-M-056  | 2023-12-25 | 2025-12-24   |
| RSE Test Software                      | AUDIX           | e3 V8.2014-6-27 | N/A           | N/A        | N/A          |
| Chamber                                | CRTSGSSAC966    | N/A             | SZ-WRG-C-063  | 2025-01-06 | 2028-01-05   |
| Humidity and Temperature Indicator     | deli            | 8838            | SEM002-46     | 2024-07-24 | 2025-07-23   |

| DFS                         |              |                                               |               |          |              |
|-----------------------------|--------------|-----------------------------------------------|---------------|----------|--------------|
| Equipment                   | Manufacturer | Model No.                                     | Inventory No. | Cal Date | Cal Due Date |
| Manual Step Attenuator      | KEYSIGHT     | 8494B                                         | SEM021-05     | 2025/3/3 | 2026/3/2     |
| Manual Step Attenuator      | KEYSIGHT     | 8496B                                         | SEM021-06     | 2025/3/3 | 2026/3/2     |
| Measurement Software        | KEYSIGHT     | Signal Studio for DFS Radar Profiles V2.2.0.0 | N/A           | N/A      | N/A          |
| Measurement Software        | Agilent      | ISMonitor10                                   | N/A           | N/A      | N/A          |
| MXG Vector Signal Generator | Agilent      | N5182A                                        | SEM006-21     | 2025/3/3 | 2026/3/2     |
| MXA Signal Analyzer         | KEYSIGHT     | N9020A                                        | SEM004-22     | 2025/3/4 | 2026/3/3     |

| General used equipment          |                                           |           |               |            |              |
|---------------------------------|-------------------------------------------|-----------|---------------|------------|--------------|
| Equipment                       | Manufacturer                              | Model No. | Inventory No. | Cal Date   | Cal Due Date |
| Humidity/ Temperature Indicator | deli                                      | 8838      | SEM002-32     | 2024-07-24 | 2025-07-23   |
| Humidity/ Temperature Indicator | deli                                      | 8838      | SEM002-33     | 2024-07-24 | 2025-07-23   |
| Barometer                       | Changchun Meteorological Industry Factory | DYM3      | SEM002-01     | 2025-03-03 | 2026-03-02   |



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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
 中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 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

#### 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 antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna connector is a IPEX type that comply with Part15.203, the best case gain of the antenna is 3.21dBi.

Antenna location: Refer to internal photo.

### 6.2 Transmission in the Absence of Data

#### 6.2.1 Test Requirement:

47 CFR Part 15, Subpart E 15.407 (c)

#### 6.2.2 Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

WIFI chip support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.



## 7 Radio Spectrum Matter Test Results

### 7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(9)

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

| Frequency of emission(MHz) | Conducted limit(dBμV) |           |
|----------------------------|-----------------------|-----------|
|                            | Quasi-peak            | Average   |
| 0.15-0.5                   | 66 to 56*             | 56 to 46* |
| 0.5-5                      | 56                    | 46        |
| 5-30                       | 60                    | 50        |

\*Decreases with the logarithm of the frequency.

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

Operating Environment:

Temperature: 25.3 °C

Humidity: 40.5 % RH

Atmospheric Pressure: 1020 mbar

#### 7.1.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Final test            | 12        | Charge+TX mode (U-NII-1)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.  |
| Pre-scan              | 14        | Charge+TX mode (U-NII-2A)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
| Pre-scan              | 16        | Charge+TX mode (U-NII-2C)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |

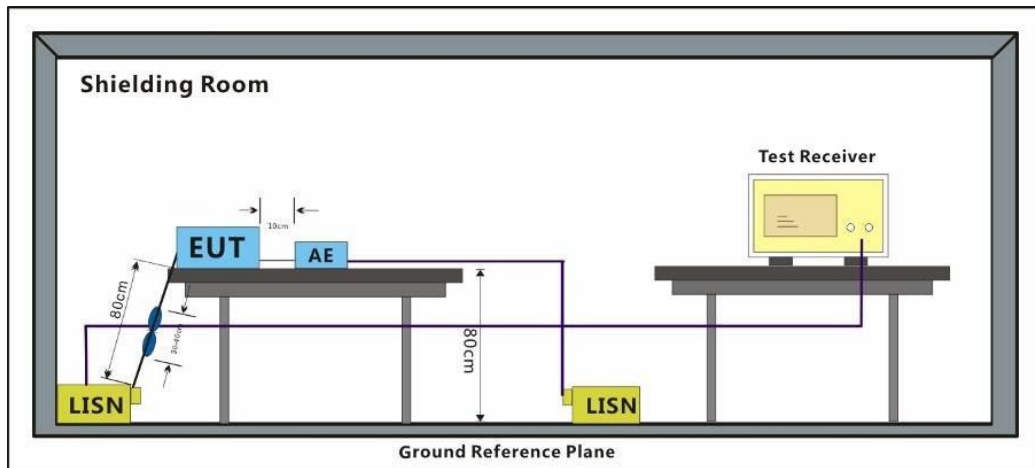


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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)

|          |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-scan | 18 | Charge+TX mode (U-NII-3)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
|----------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 7.1.3 Test Setup Diagram



### 7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark 1: Level=Read Level+ Cable Loss+ LISN Factor

Remark 2: Pre-test AC 120V/50-60Hz&AC 240V/50-60Hz then choose the AC 120/60Hz as worst case.



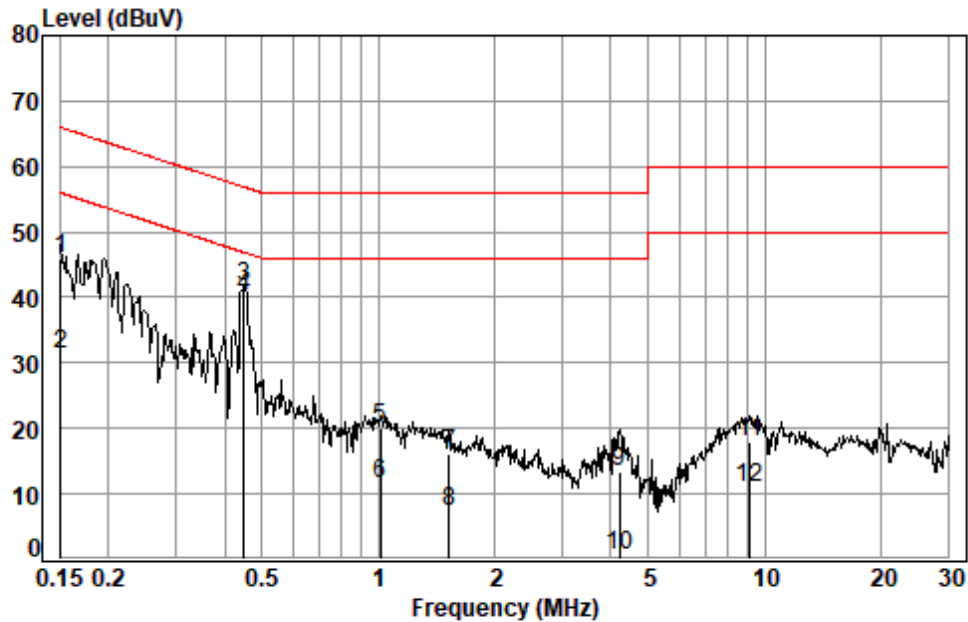
## SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 14 of 136

Test Mode: 12; Line: Live line



Site : Shielding Room  
Condition: Line  
Job No. : 01576AT  
Test mode: 12

|     | Freq   | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark  |
|-----|--------|------------|-------------|------------|-------|------------|------------|---------|
|     | MHz    | dB         | dB          | dBuV       | dBuV  | dBuV       | dB         |         |
| 1   | 0.1508 | 0.06       | 9.97        | 35.84      | 45.87 | 65.96      | -20.09     | QP      |
| 2   | 0.1508 | 0.06       | 9.97        | 21.19      | 31.22 | 55.96      | -24.74     | Average |
| 3 * | 0.4492 | 0.08       | 9.75        | 31.86      | 41.69 | 56.89      | -15.20     | QP      |
| 4 * | 0.4492 | 0.08       | 9.75        | 30.19      | 40.02 | 46.89      | -6.87      | Average |
| 5   | 1.0103 | 0.09       | 9.72        | 10.23      | 20.04 | 56.00      | -35.96     | QP      |
| 6   | 1.0103 | 0.09       | 9.72        | 1.81       | 11.62 | 46.00      | -34.38     | Average |
| 7   | 1.5274 | 0.10       | 9.70        | 6.22       | 16.02 | 56.00      | -39.98     | QP      |
| 8   | 1.5274 | 0.10       | 9.70        | -2.38      | 7.42  | 46.00      | -38.58     | Average |
| 9   | 4.2242 | 0.12       | 9.69        | 3.52       | 13.33 | 56.00      | -42.67     | QP      |
| 10  | 4.2242 | 0.12       | 9.69        | -9.05      | 0.76  | 46.00      | -45.24     | Average |
| 11  | 9.1557 | 0.19       | 9.84        | 7.87       | 17.90 | 60.00      | -42.10     | QP      |
| 12  | 9.1557 | 0.19       | 9.84        | 1.06       | 11.09 | 50.00      | -38.91     | Average |



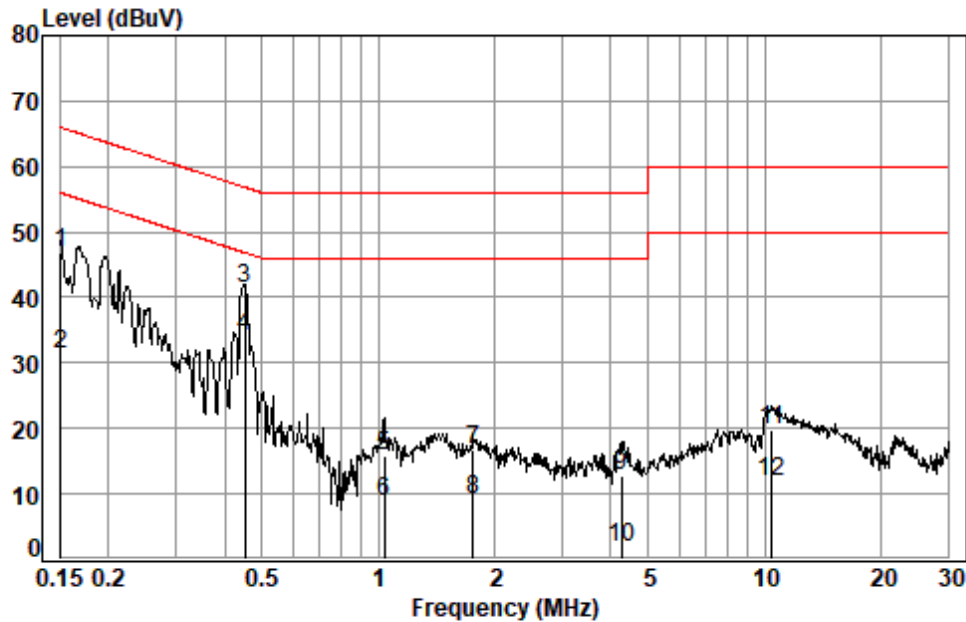
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (SZEMC) Laboratory

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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Test Mode: 12; Line: Neutral Line



Site : Shielding Room  
Condition: Neutral  
Job No. : 01576AT  
Test mode: 12

|     | Freq    | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark  |
|-----|---------|------------|-------------|------------|-------|------------|------------|---------|
|     | MHz     | dB         | dB          | dBuV       | dBuV  | dBuV       | dB         |         |
| 1   | 0.1508  | 0.06       | 9.86        | 36.85      | 46.77 | 65.96      | -19.19     | QP      |
| 2   | 0.1508  | 0.06       | 9.86        | 21.49      | 31.41 | 55.96      | -24.55     | Average |
| 3 * | 0.4515  | 0.08       | 9.75        | 31.42      | 41.25 | 56.85      | -15.60     | QP      |
| 4 * | 0.4515  | 0.08       | 9.75        | 24.25      | 34.08 | 46.85      | -12.77     | Average |
| 5   | 1.0375  | 0.09       | 9.77        | 5.94       | 15.80 | 56.00      | -40.20     | QP      |
| 6   | 1.0375  | 0.09       | 9.77        | -1.18      | 8.68  | 46.00      | -37.32     | Average |
| 7   | 1.7623  | 0.10       | 9.67        | 6.86       | 16.63 | 56.00      | -39.37     | QP      |
| 8   | 1.7623  | 0.10       | 9.67        | -0.55      | 9.22  | 46.00      | -36.78     | Average |
| 9   | 4.2692  | 0.12       | 9.68        | 2.90       | 12.70 | 56.00      | -43.30     | QP      |
| 10  | 4.2692  | 0.12       | 9.68        | -7.90      | 1.90  | 46.00      | -44.10     | Average |
| 11  | 10.4524 | 0.21       | 10.03       | 9.64       | 19.88 | 60.00      | -40.12     | QP      |
| 12  | 10.4524 | 0.21       | 10.03       | 1.55       | 11.79 | 50.00      | -38.21     | Average |



## 7.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

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                            |

\*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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.

### 7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 24.6 °C

Humidity: 50.5 % RH

Atmospheric Pressure: 1020 mbar



## 7.2.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-scan              | 11        | TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                      |
| Pre-scan              | 12        | Charge+TX mode (U-NII-1)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.  |
| Pre-scan              | 13        | TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Pre-scan              | 14        | Charge+TX mode (U-NII-2A)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
| Final test            | 15        | TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Final test            | 16        | Charge+TX mode (U-NII-2C)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |

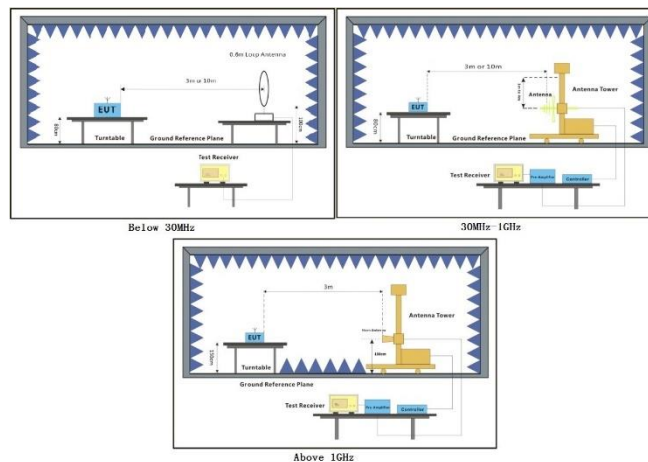


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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)

|            |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |    | 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Final test | 17 | TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Final test | 18 | Charge+TX mode (U-NII-3)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |

### 7.2.3 Test Setup Diagram



## 7.2.4 Measurement Procedure and Data

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

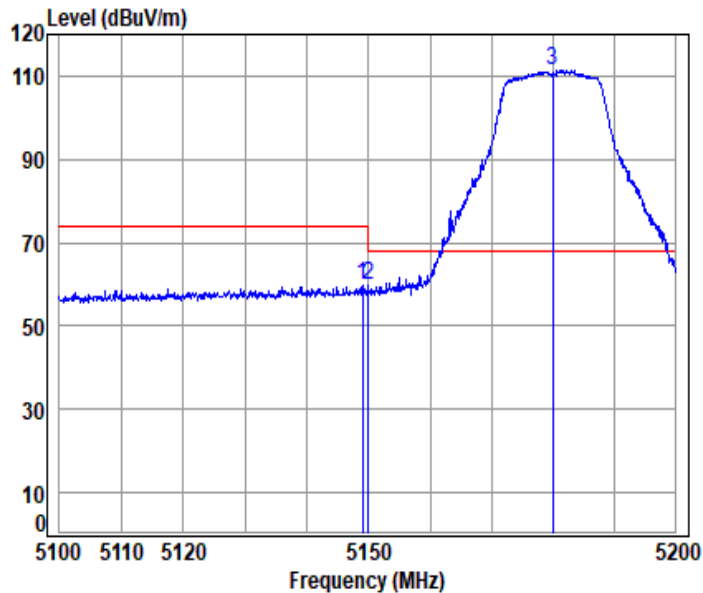
Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 3. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.



### 11a\_TX\_CH\_36\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

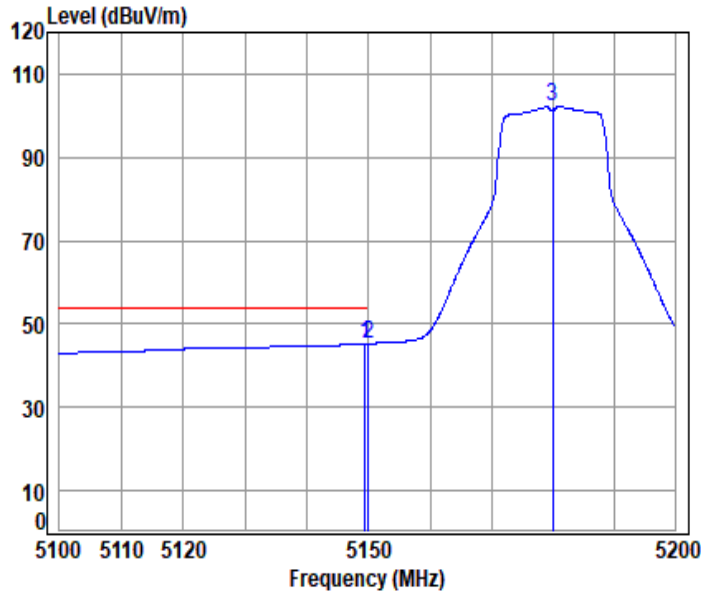
Mode : 5180 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5148.958 | 10.14 | 32.40  | 30.84  | 48.15 | 59.85  | 74.00  | -14.15 | peak   |
| 2    | 5149.980 | 10.14 | 32.40  | 30.84  | 48.19 | 59.89  | 74.00  | -14.11 | peak   |
| 3 pp | 5180.000 | 10.25 | 32.46  | 30.83  | 99.43 | 111.31 | 68.20  | 43.11  | peak   |



### 11a\_TX\_CH\_36\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

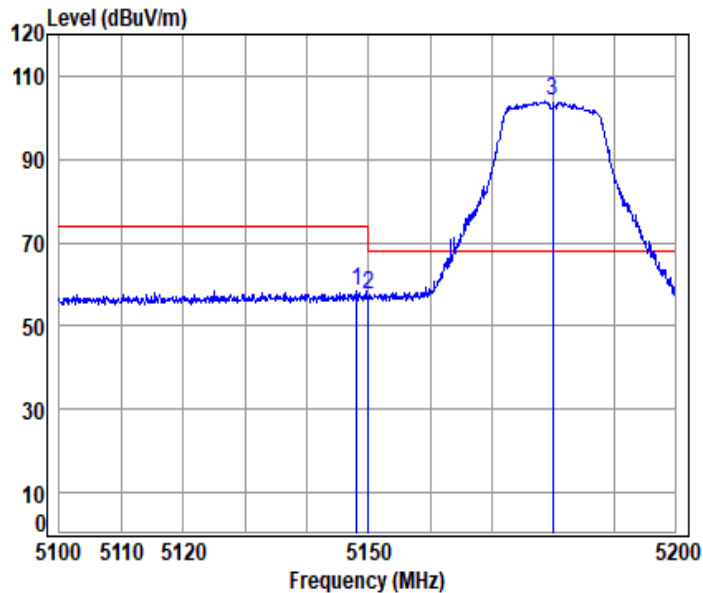
Mode : 5180 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|------|----------|-------|--------|--------|-------|--------|--------|---------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1    | 5149.458 | 10.14 | 32.40  | 30.84  | 33.50 | 45.20  | 54.00  | -8.80 Average |
| 2 pp | 5149.980 | 10.14 | 32.40  | 30.84  | 33.59 | 45.29  | 54.00  | -8.71 Average |
| 3    | 5180.000 | 10.25 | 32.46  | 30.83  | 90.31 | 102.19 | -----  | ----- Average |



### 11a\_TX\_CH\_36\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

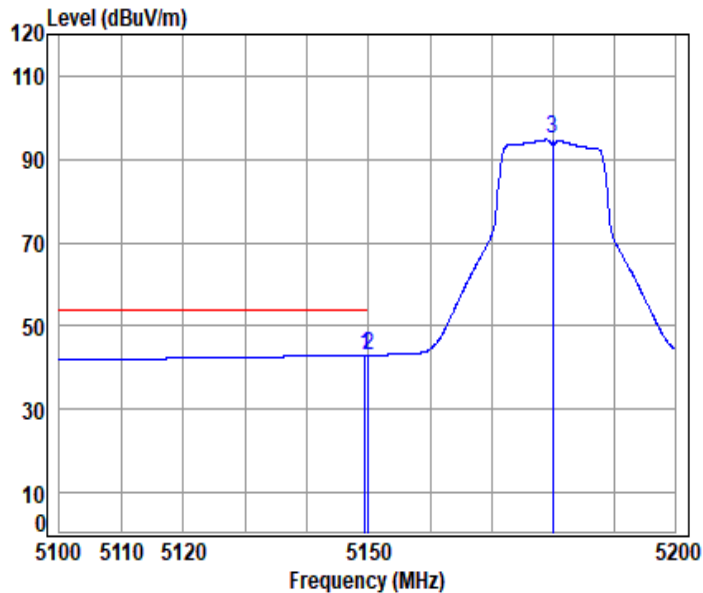
Mode : 5180 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5148.058 | 10.13 | 32.40  | 30.84  | 46.73 | 58.42  | 74.00  | -15.58 | peak   |
| 2    | 5149.980 | 10.14 | 32.40  | 30.84  | 45.70 | 57.40  | 74.00  | -16.60 | peak   |
| 3 pp | 5180.000 | 10.25 | 32.46  | 30.83  | 91.93 | 103.81 | 68.20  | 35.61  | peak   |



### 11a\_TX\_CH\_36\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

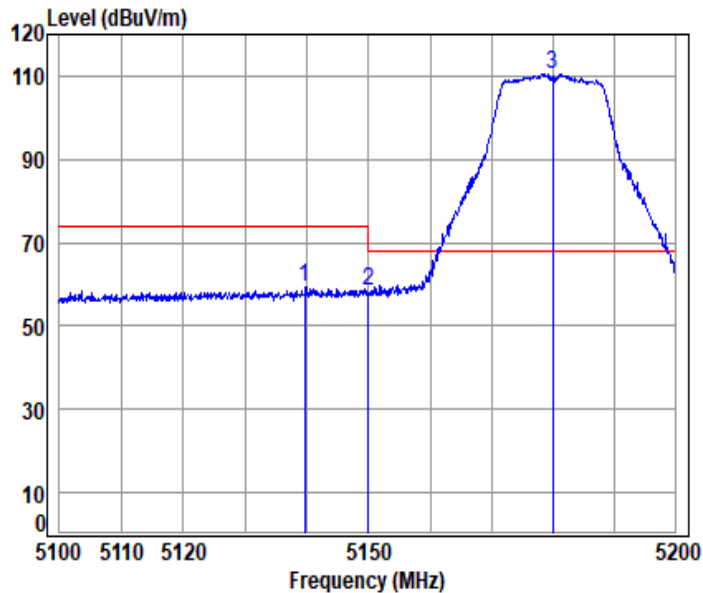
Mode : 5180 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |                |
|------|----------|-------|--------|--------|-------|--------|--------|----------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark         |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB             |
| 1    | 5149.458 | 10.14 | 32.40  | 30.84  | 31.25 | 42.95  | 54.00  | -11.05 Average |
| 2 pp | 5149.980 | 10.14 | 32.40  | 30.84  | 31.27 | 42.97  | 54.00  | -11.03 Average |
| 3    | 5180.000 | 10.25 | 32.46  | 30.83  | 82.82 | 94.70  | -----  | ----- Average  |



11ac\_VHT(20M)\_TX\_CH\_36\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

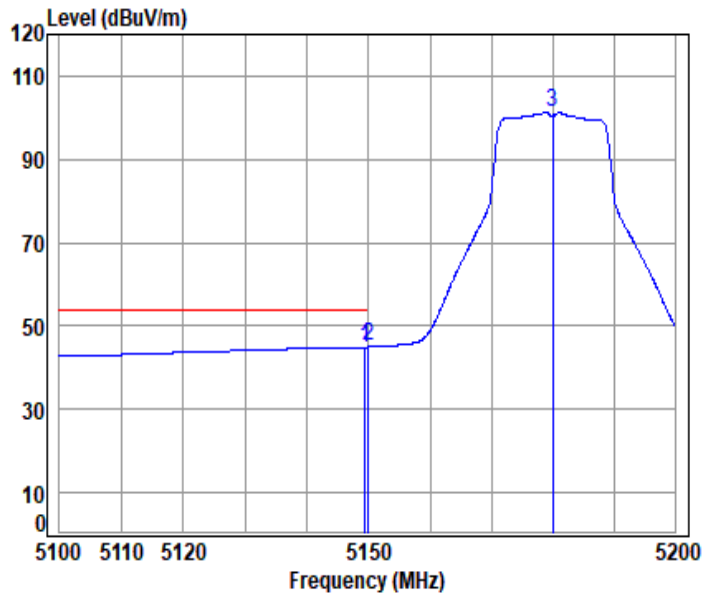
Mode : 5180 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5139.667 | 10.10 | 32.38  | 30.84  | 47.75 | 59.39  | 74.00  | -14.61 | peak   |
| 2    | 5149.980 | 10.14 | 32.40  | 30.84  | 46.78 | 58.48  | 74.00  | -15.52 | peak   |
| 3 pp | 5180.000 | 10.25 | 32.46  | 30.83  | 98.47 | 110.35 | 68.20  | 42.15  | peak   |



11ac\_VHT(20M)\_TX\_CH\_36\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

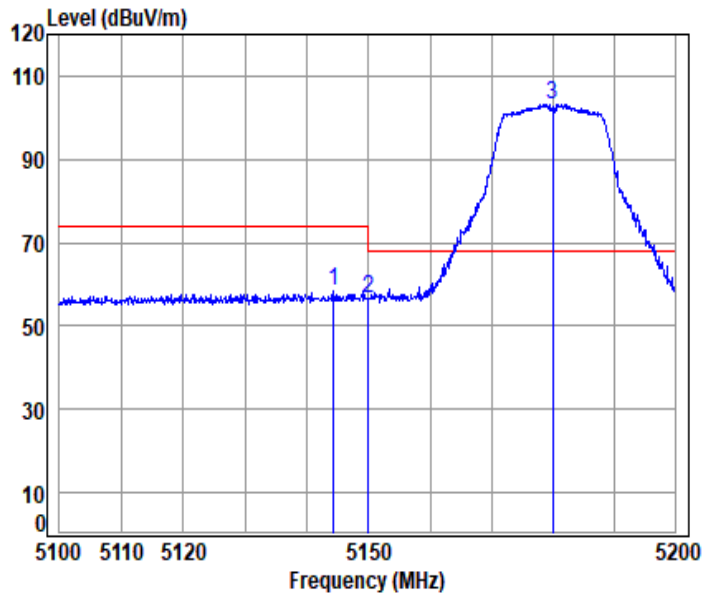
Mode : 5180 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|------|----------|-------|--------|--------|-------|--------|--------|---------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1    | 5149.458 | 10.14 | 32.40  | 30.84  | 33.20 | 44.90  | 54.00  | -9.10 Average |
| 2 pp | 5149.980 | 10.14 | 32.40  | 30.84  | 33.28 | 44.98  | 54.00  | -9.02 Average |
| 3    | 5180.000 | 10.25 | 32.46  | 30.83  | 89.37 | 101.25 | -----  | ----- Average |



### 11ac\_VHT(20M)\_TX\_CH\_36\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

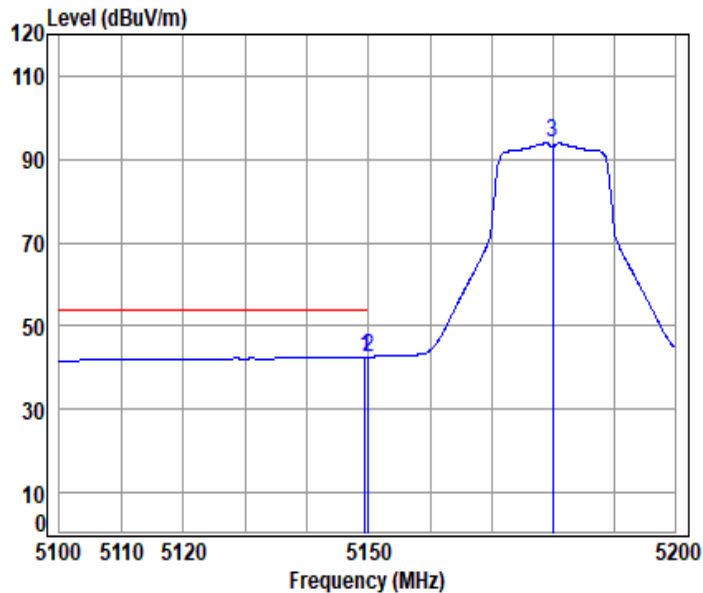
Mode : 5180 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1    | 5144.260 | 10.12 | 32.39  | 30.84  | 46.61 | 58.28  | 74.00  | -15.72 peak |
| 2    | 5149.980 | 10.14 | 32.40  | 30.84  | 45.11 | 56.81  | 74.00  | -17.19 peak |
| 3 pp | 5180.000 | 10.25 | 32.46  | 30.83  | 91.42 | 103.30 | 68.20  | 35.10 peak  |



11ac\_VHT(20M)\_TX\_CH\_36\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

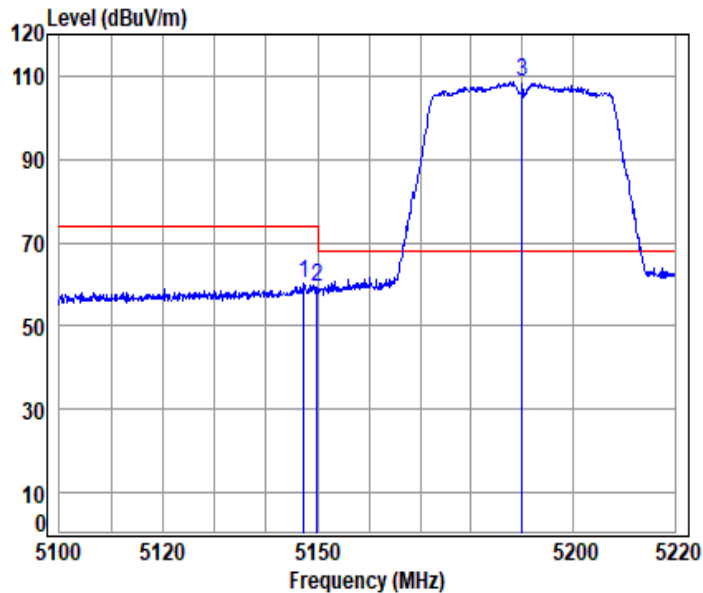
Mode : 5180 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |         |
|------|----------|-------|--------|--------|-------|--------|--------|--------|---------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark  |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1    | 5149.458 | 10.14 | 32.40  | 30.84  | 30.93 | 42.63  | 54.00  | -11.37 | Average |
| 2 pp | 5149.980 | 10.14 | 32.40  | 30.84  | 30.94 | 42.64  | 54.00  | -11.36 | Average |
| 3    | 5180.000 | 10.25 | 32.46  | 30.83  | 82.00 | 93.88  | -----  | -----  | Average |



11ac\_VHT(40M)\_TX\_CH\_38\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

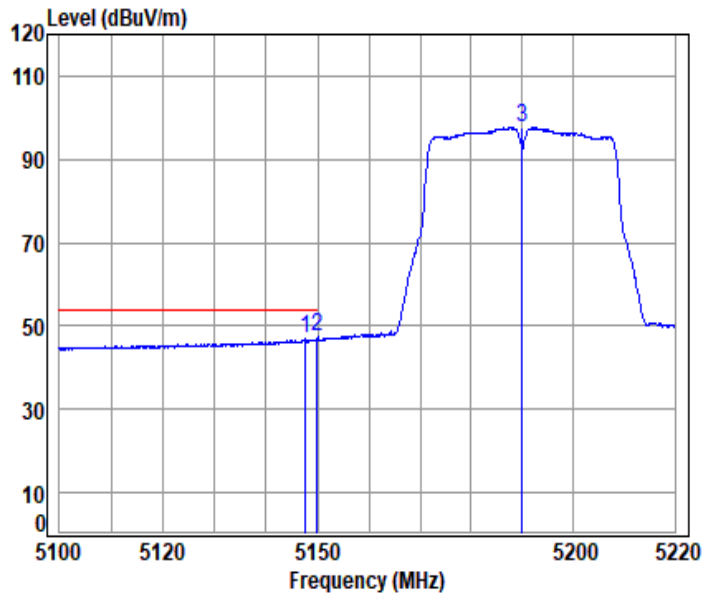
Mode : 5190 Band edge

: 5G Wi-Fi 11ac40

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 5147.306 | 10.13 | 32.39  | 30.84  | 48.61 | 60.29  | 74.00  | -13.71 | peak   |
| 2 | 5149.980 | 10.14 | 32.40  | 30.84  | 47.58 | 59.28  | 74.00  | -14.72 | peak   |
| 3 | 5190.000 | 10.29 | 32.48  | 30.82  | 96.49 | 108.44 | 68.20  | 40.24  | peak   |



11ac\_VHT(40M)\_TX\_CH\_38\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

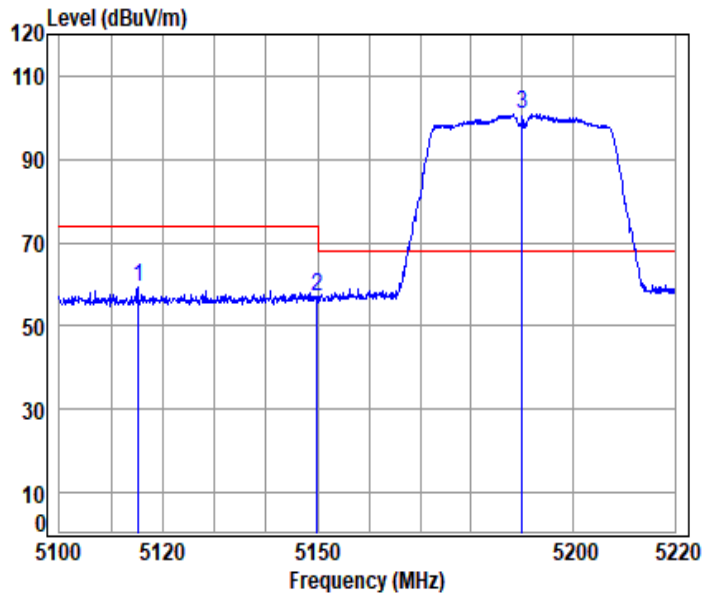
Mode : 5190 Band edge

: 5G Wi-Fi 11ac40

|   |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---|----------|-------|--------|--------|-------|--------|--------|---------------|
|   | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 | 5147.666 | 10.13 | 32.40  | 30.84  | 35.33 | 47.02  | 54.00  | -6.98 Average |
| 2 | 5149.980 | 10.14 | 32.40  | 30.84  | 35.58 | 47.28  | 54.00  | -6.72 Average |
| 3 | 5190.000 | 10.29 | 32.48  | 30.82  | 85.63 | 97.58  | -----  | ----- Average |



### 11ac\_VHT(40M)\_TX\_CH\_38\_Verical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

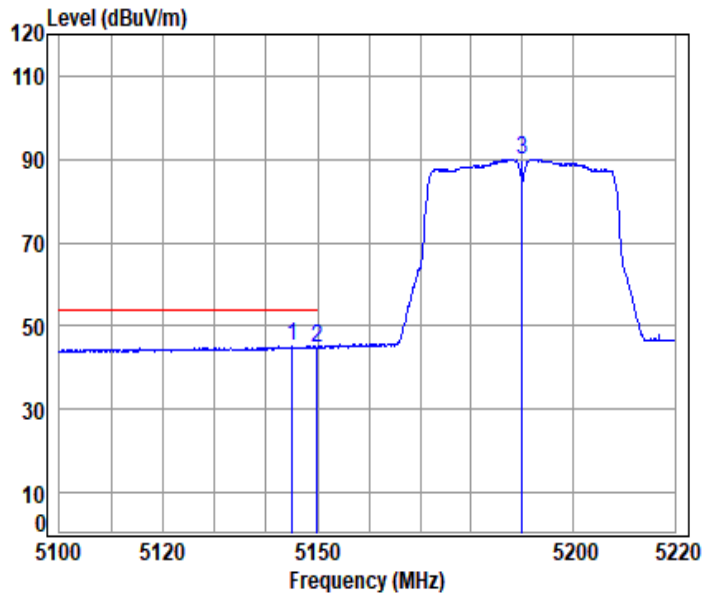
Mode : 5190 Band edge

: 5G Wi-Fi 11ac40

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 5115.205 | 10.01 | 32.33  | 30.85  | 47.95 | 59.44  | 74.00  | -14.56 | peak   |
| 2 | 5149.980 | 10.14 | 32.40  | 30.84  | 45.23 | 56.93  | 74.00  | -17.07 | peak   |
| 3 | 5190.000 | 10.29 | 32.48  | 30.82  | 88.81 | 100.76 | 68.20  | 32.56  | peak   |



11ac\_VHT(40M)\_TX\_CH\_38\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

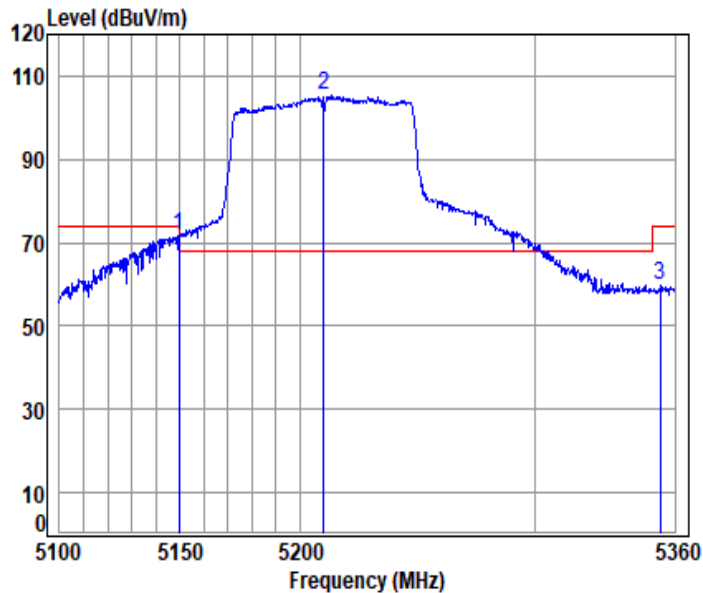
Mode : 5190 Band edge

: 5G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over  |         |
|------|----------|-------|--------|--------|-------|--------|--------|-------|---------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit | Remark  |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |         |
| 1 pp | 5145.152 | 10.12 | 32.39  | 30.84  | 33.44 | 45.11  | 54.00  | -8.89 | Average |
| 2    | 5149.980 | 10.14 | 32.40  | 30.84  | 33.22 | 44.92  | 54.00  | -9.08 | Average |
| 3    | 5190.000 | 10.29 | 32.48  | 30.82  | 78.16 | 90.11  | -----  | ----- | Average |



11ac\_VHT(80M)\_TX\_CH\_42\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5210 Band edge

: 5G Wi-Fi 11ac80

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5149.435 | 10.14 | 32.40  | 30.84  | 60.15 | 71.85  | 74.00  | -2.15  | peak   |
| 2 pp | 5210.000 | 10.32 | 32.52  | 30.82  | 93.25 | 105.27 | 68.20  | 37.07  | peak   |
| 3    | 5353.874 | 10.46 | 32.80  | 30.76  | 47.21 | 59.71  | 74.00  | -14.29 | peak   |



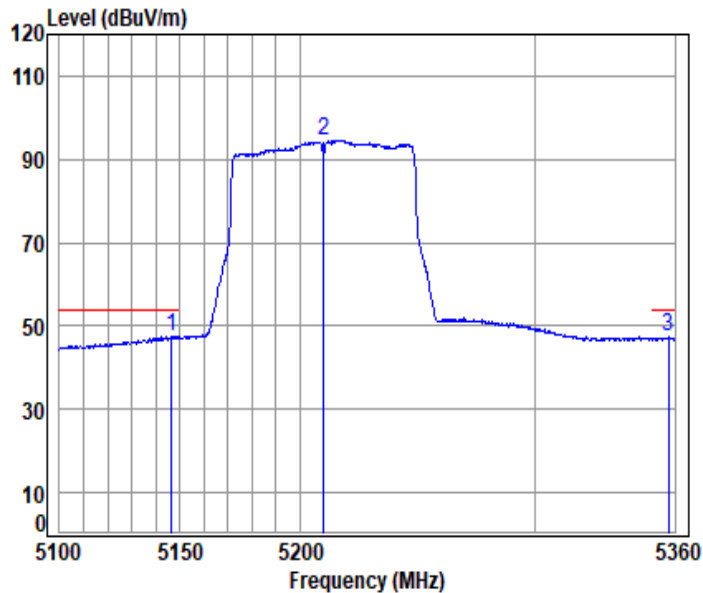
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_VHT(80M)\_TX\_CH\_42\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

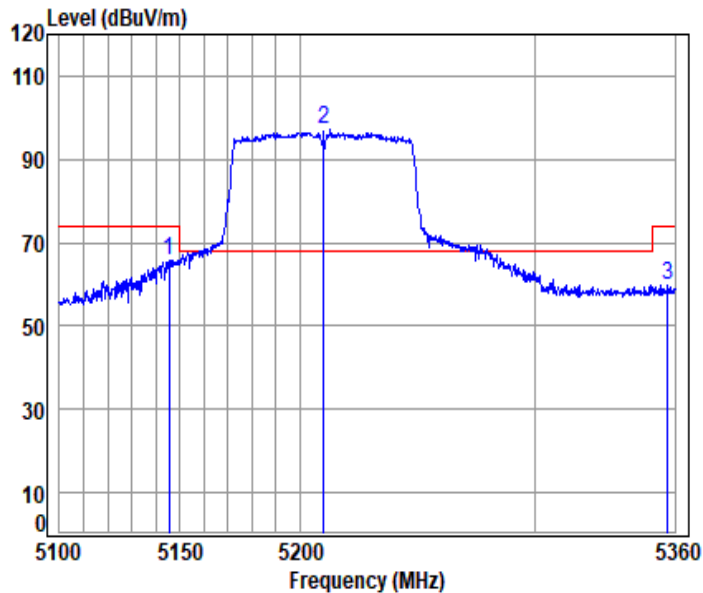
Mode : 5210 Band edge

: 5G Wi-Fi 11ac80

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark  |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5146.363 | 10.13 | 32.39  | 30.84  | 35.89 | 47.57  | 54.00  | -6.43 Average |
| 2 5210.000    | 10.32 | 32.52  | 30.82  | 82.42 | 94.44  | -----  | ----- Average |
| 3 5357.335    | 10.47 | 32.80  | 30.76  | 34.83 | 47.34  | 54.00  | -6.66 Average |



### 11ac\_VHT(80M)\_TX\_CH\_42\_Verical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

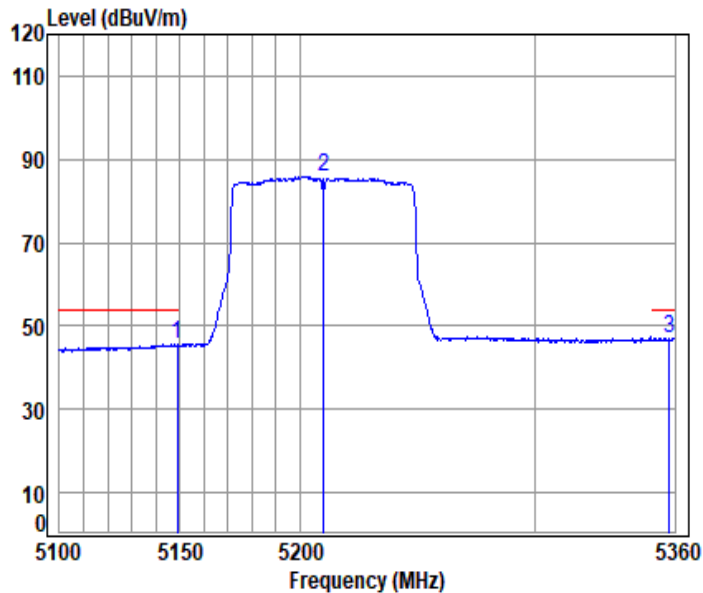
Mode : 5210 Band edge

: 5G Wi-Fi 11ac80

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5145.339 | 10.12 | 32.39  | 30.84  | 54.22 | 65.89  | 74.00  | -8.11  | peak   |
| 2 pp | 5210.000 | 10.32 | 32.52  | 30.82  | 85.28 | 97.30  | 68.20  | 29.10  | peak   |
| 3    | 5357.069 | 10.47 | 32.80  | 30.76  | 47.34 | 59.85  | 74.00  | -14.15 | peak   |



11ac\_VHT(80M)\_TX\_CH\_42\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

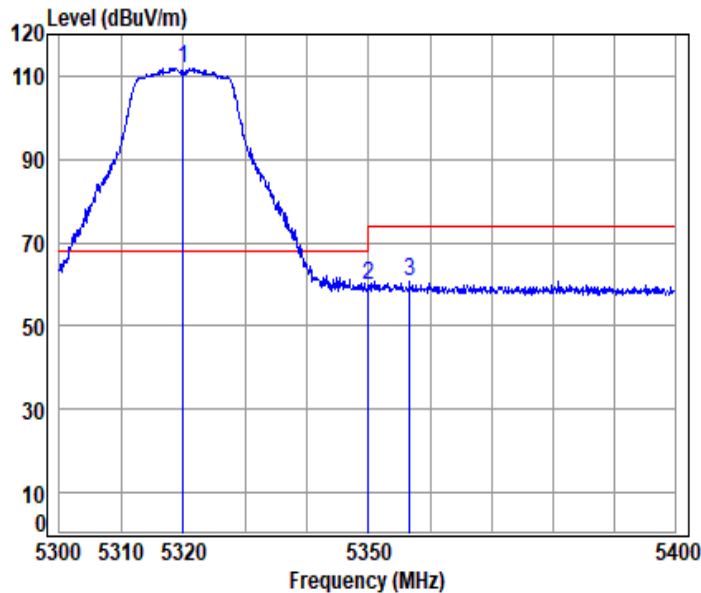
Mode : 5210 Band edge

: 5G Wi-Fi 11ac80

|   |             | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---|-------------|-------|--------|--------|-------|--------|--------|---------------|
|   | Freq        | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 | 5148.922    | 10.14 | 32.40  | 30.84  | 33.99 | 45.69  | 54.00  | -8.31 Average |
| 2 | 5210.000    | 10.32 | 32.52  | 30.82  | 73.87 | 85.89  | -----  | ----- Average |
| 3 | pp 5357.602 | 10.48 | 32.80  | 30.76  | 34.52 | 47.04  | 54.00  | -6.96 Average |



### 11a\_TX\_CH\_64\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5320 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5320.000 | 10.35 | 32.74  | 30.77  | 99.54 | 111.86 | 68.20  | 43.66 peak  |
| 2    | 5350.020 | 10.45 | 32.80  | 30.76  | 47.30 | 59.79  | 74.00  | -14.21 peak |
| 3    | 5356.671 | 10.47 | 32.80  | 30.76  | 48.25 | 60.76  | 74.00  | -13.24 peak |



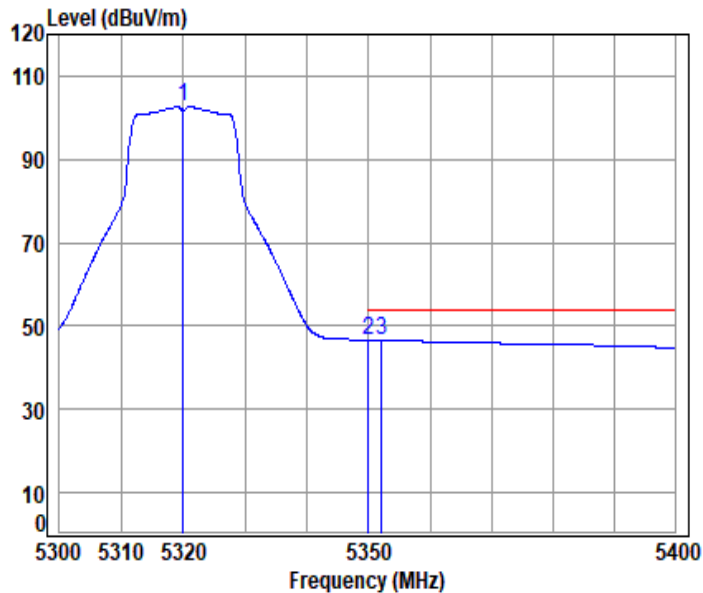
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.ssgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 11a\_TX\_CH\_64\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5320 Band edge

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---|-------------|-------|--------|--------|-------|--------|--------|---------------|
|   | Freq        | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 | 5320.000    | 10.35 | 32.74  | 30.77  | 90.35 | 102.67 | -----  | ----- Average |
| 2 | pp 5350.020 | 10.45 | 32.80  | 30.76  | 34.09 | 46.58  | 54.00  | -7.42 Average |
| 3 | 5352.067    | 10.46 | 32.80  | 30.76  | 34.07 | 46.57  | 54.00  | -7.43 Average |



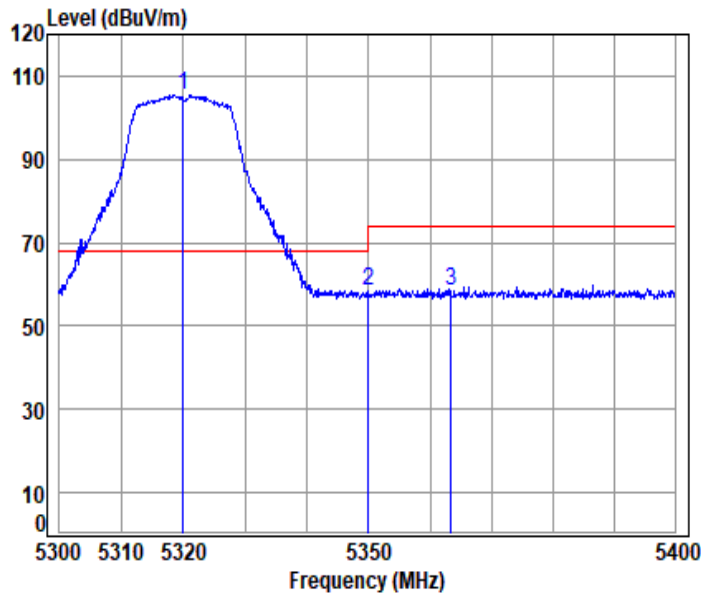
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 11a\_TX\_CH\_64\_Verical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5320 Band edge

: 5G Wi-Fi 11a

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|---------------|-------|--------|--------|-------|--------|--------|-------------|
| Freq          | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp 5320.000 | 10.35 | 32.74  | 30.77  | 93.20 | 105.52 | 68.20  | 37.32 peak  |
| 2 5350.020    | 10.45 | 32.80  | 30.76  | 45.85 | 58.34  | 74.00  | -15.66 peak |
| 3 5363.383    | 10.50 | 32.80  | 30.75  | 45.73 | 58.28  | 74.00  | -15.72 Peak |



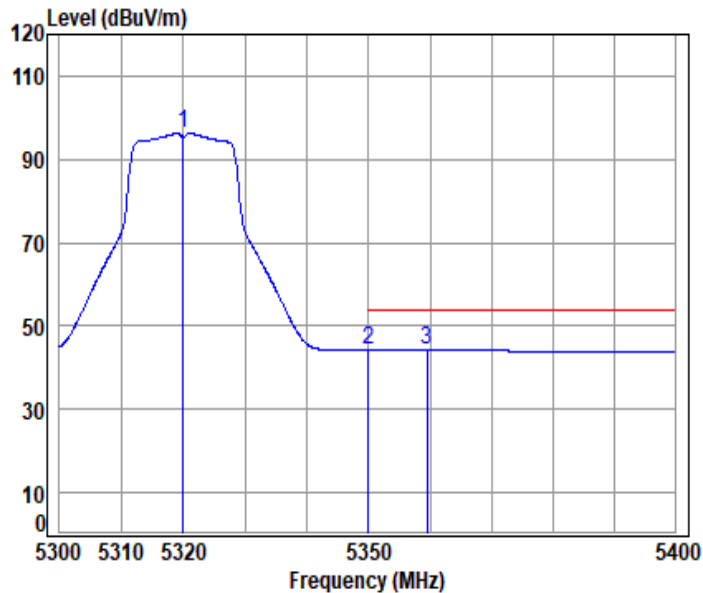
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 11a\_TX\_CH\_64\_Verical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

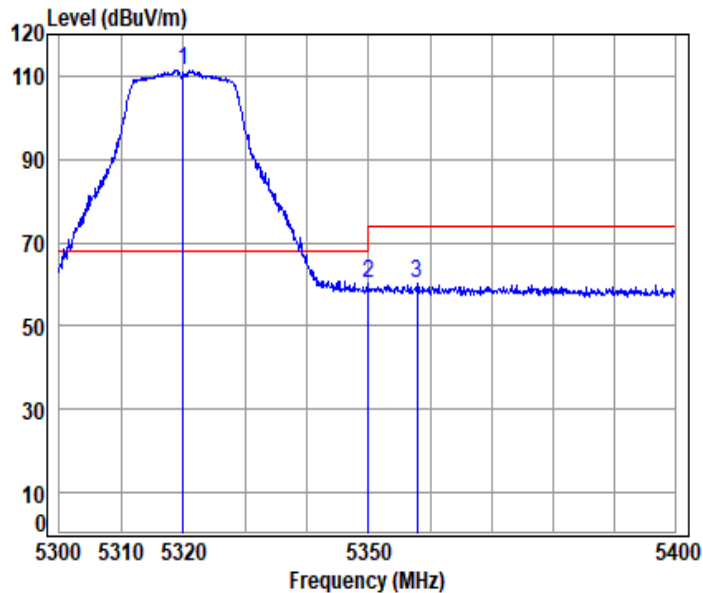
Mode : 5320 Band edge

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---|-------------|-------|--------|--------|-------|--------|--------|---------------|
|   | Freq        | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 | 5320.000    | 10.35 | 32.74  | 30.77  | 83.97 | 96.29  | -----  | Average       |
| 2 | 5350.020    | 10.45 | 32.80  | 30.76  | 31.68 | 44.17  | 54.00  | -9.83 Average |
| 3 | pp 5359.475 | 10.48 | 32.80  | 30.76  | 31.74 | 44.26  | 54.00  | -9.74 Average |



11ac\_VHT(20M)\_TX\_CH\_64\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

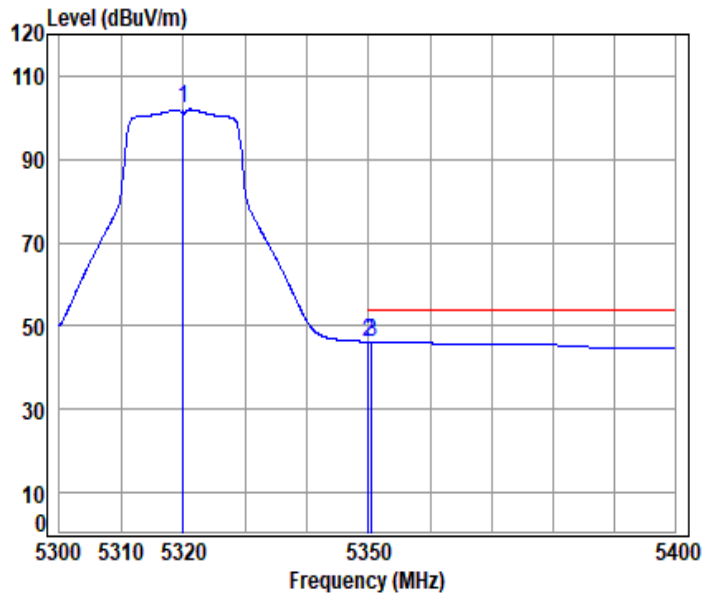
Mode : 5320 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5320.000 | 10.35 | 32.74  | 30.77  | 99.00 | 111.32 | 68.20  | 43.12 peak  |
| 2    | 5350.020 | 10.45 | 32.80  | 30.76  | 47.78 | 60.27  | 74.00  | -13.73 peak |
| 3    | 5357.873 | 10.48 | 32.80  | 30.76  | 47.58 | 60.10  | 74.00  | -13.90 peak |



11ac\_VHT(20M)\_TX\_CH\_64\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

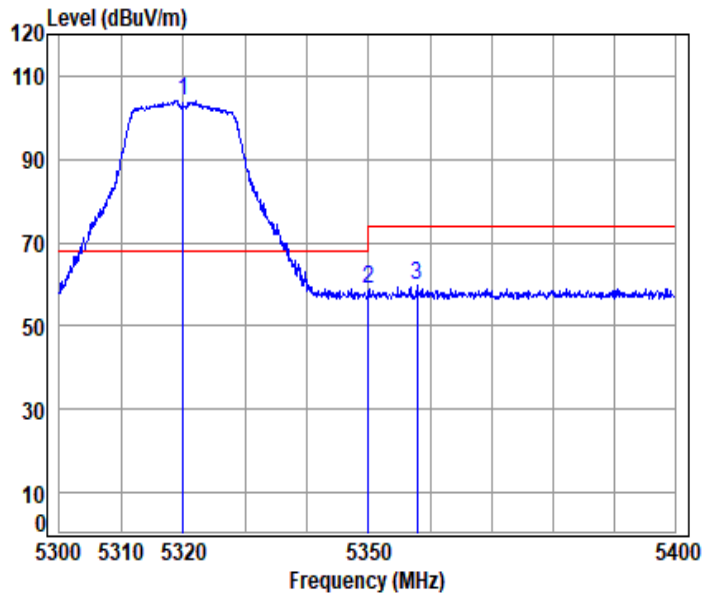
Mode : 5320 Band edge

: 5G Wi-Fi 11ac20

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over  |         |
|---|-------------|-------|--------|--------|-------|--------|--------|-------|---------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit | Remark  |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |         |
| 1 | 5320.000    | 10.35 | 32.74  | 30.77  | 89.69 | 102.01 | -----  | ----- | Average |
| 2 | pp 5350.020 | 10.45 | 32.80  | 30.76  | 33.71 | 46.20  | 54.00  | -7.80 | Average |
| 3 | 5350.566    | 10.45 | 32.80  | 30.76  | 33.64 | 46.13  | 54.00  | -7.87 | Average |



### 11ac\_VHT(20M)\_TX\_CH\_64\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

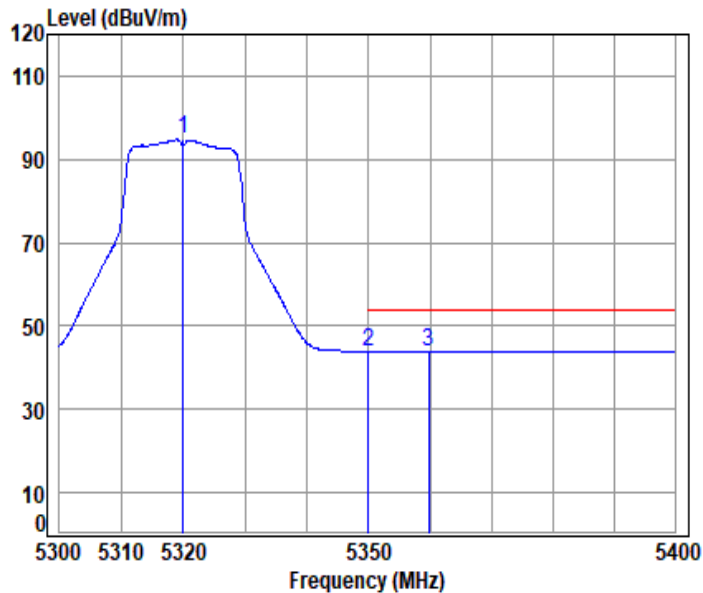
Mode : 5320 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 pp | 5320.000 | 10.35 | 32.74  | 30.77  | 91.69 | 104.01 | 68.20  | 35.81  | peak   |
| 2    | 5350.020 | 10.45 | 32.80  | 30.76  | 46.31 | 58.80  | 74.00  | -15.20 | peak   |
| 3    | 5357.873 | 10.48 | 32.80  | 30.76  | 47.26 | 59.78  | 74.00  | -14.22 | peak   |



11ac\_VHT(20M)\_TX\_CH\_64\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

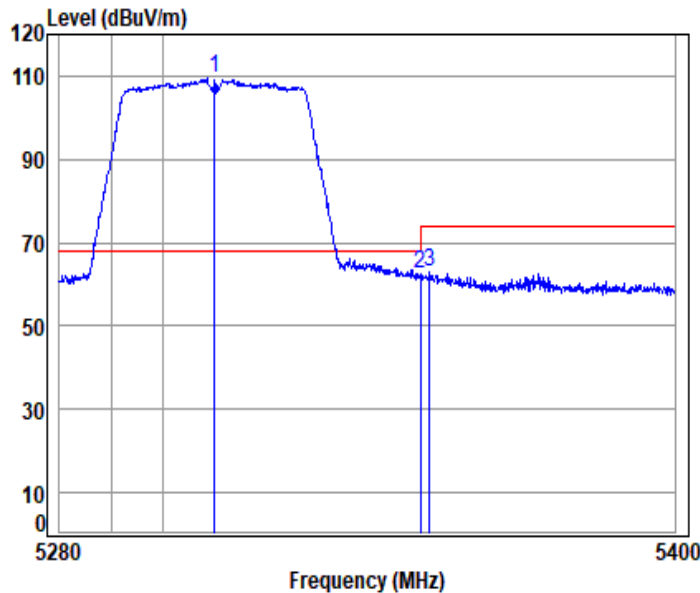
Mode : 5320 Band edge

: 5G Wi-Fi 11ac20

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |         |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|---------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark  |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |         |
| 1 | 5320.000    | 10.35 | 32.74  | 30.77  | 82.38 | 94.70  | -----  | -----  | Average |
| 2 | 5350.020    | 10.45 | 32.80  | 30.76  | 31.45 | 43.94  | 54.00  | -10.06 | Average |
| 3 | pp 5359.775 | 10.48 | 32.80  | 30.76  | 31.45 | 43.97  | 54.00  | -10.03 | Average |



11ac\_VHT(40M)\_TX\_CH\_62\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

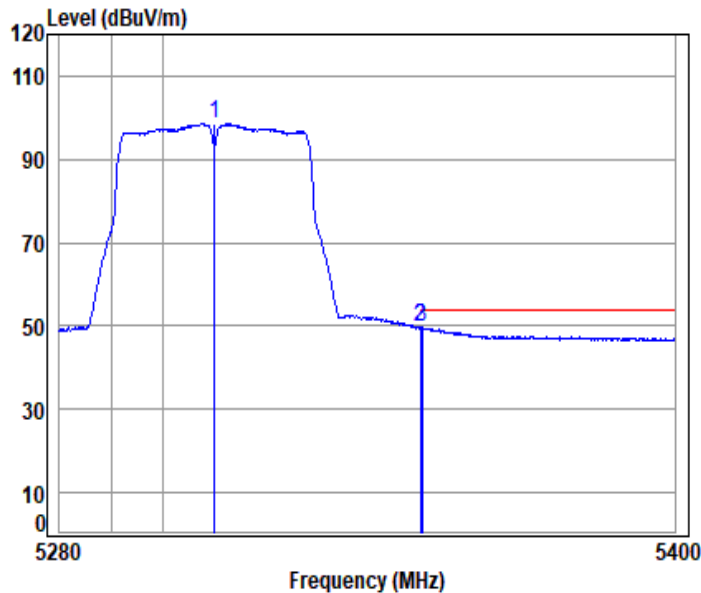
Mode : 5310 Band edge

: 5G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|------|----------|-------|--------|--------|-------|--------|--------|--------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1 pp | 5310.000 | 10.31 | 32.72  | 30.78  | 97.47 | 109.72 | 68.20  | 41.52 peak   |
| 2    | 5350.020 | 10.45 | 32.80  | 30.76  | 49.91 | 62.40  | 74.00  | -11.60 peak  |
| 3    | 5351.796 | 10.46 | 32.80  | 30.76  | 50.24 | 62.74  | 74.00  | -11.26 peak  |



11ac\_VHT(40M)\_TX\_CH\_62\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

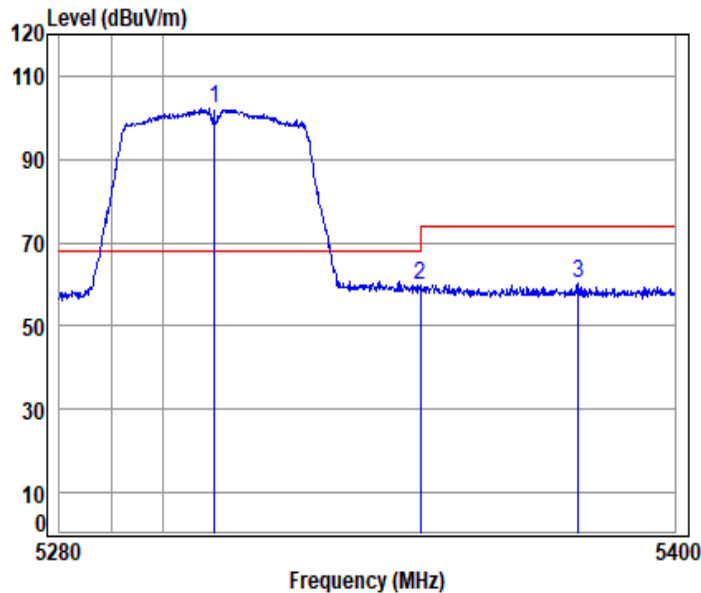
Mode : 5310 Band edge

: 5G Wi-Fi 11ac40

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over  |         |
|---|----------|-------|--------|--------|-------|--------|--------|-------|---------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit | Remark  |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |         |
| 1 | 5310.000 | 10.31 | 32.72  | 30.78  | 86.28 | 98.53  | -----  | ----- | Average |
| 2 | 5350.020 | 10.45 | 32.80  | 30.76  | 37.25 | 49.74  | 54.00  | -4.26 | Average |
| 3 | 5350.474 | 10.45 | 32.80  | 30.76  | 37.04 | 49.53  | 54.00  | -4.47 | Average |



### 11ac\_VHT(40M)\_TX\_CH\_62\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

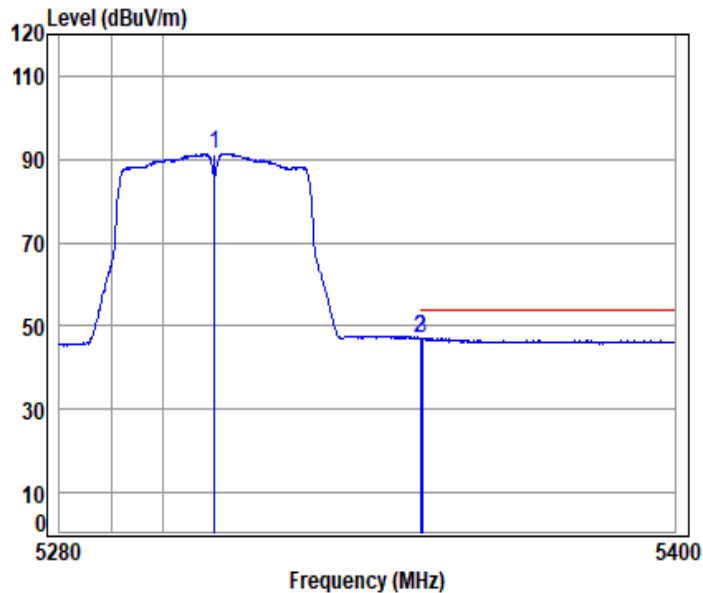
Mode : 5310 Band edge

: 5G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|------|----------|-------|--------|--------|-------|--------|--------|--------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1 pp | 5310.000 | 10.31 | 32.72  | 30.78  | 89.94 | 102.19 | 68.20  | 33.99 peak   |
| 2    | 5350.020 | 10.45 | 32.80  | 30.76  | 47.10 | 59.59  | 74.00  | -14.41 peak  |
| 3    | 5380.981 | 10.56 | 32.80  | 30.75  | 47.54 | 60.15  | 74.00  | -13.85 peak  |



11ac\_VHT(40M)\_TX\_CH\_62\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

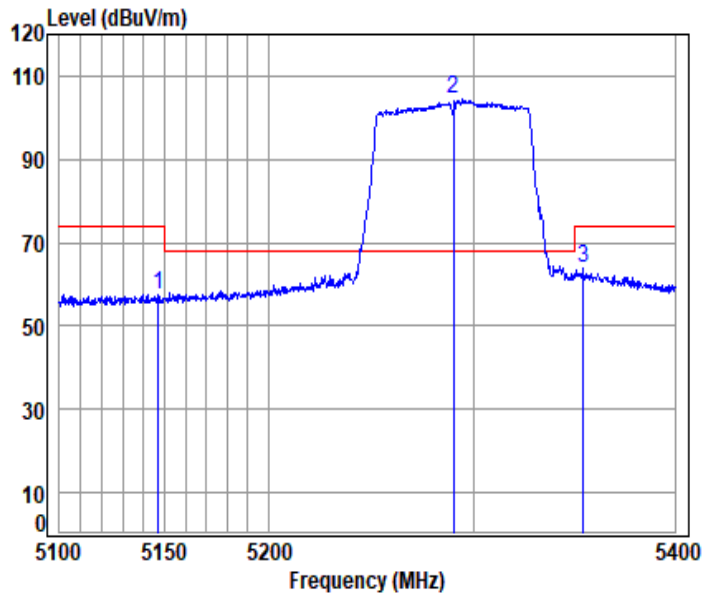
Mode : 5310 Band edge

: 5G Wi-Fi 11ac40

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over  |         |
|---|----------|-------|--------|--------|-------|--------|--------|-------|---------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit | Remark  |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |         |
| 1 | 5310.000 | 10.31 | 32.72  | 30.78  | 79.20 | 91.45  | -----  | ----- | Average |
| 2 | 5350.020 | 10.45 | 32.80  | 30.76  | 34.68 | 47.17  | 54.00  | -6.83 | Average |
| 3 | 5350.474 | 10.45 | 32.80  | 30.76  | 34.52 | 47.01  | 54.00  | -6.99 | Average |



11ac\_VHT(80M)\_TX\_CH\_58\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

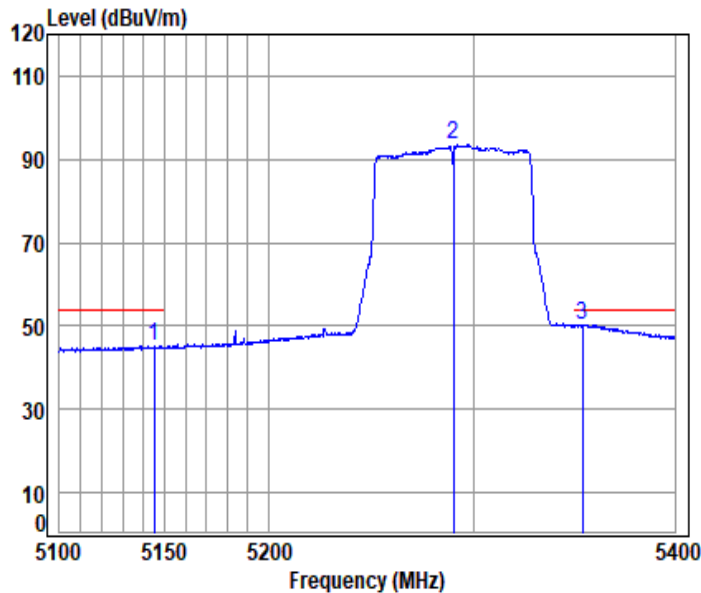
Mode : 5290 Band edge

: 5G Wi-Fi 11ac80

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 5147.149 | 10.13 | 32.39  | 30.84  | 45.81 | 57.49  | 74.00  | -16.51 | peak   |
| 2 | 5290.000 | 10.28 | 32.68  | 30.78  | 92.24 | 104.42 | 68.20  | 36.22  | peak   |
| 3 | 5354.206 | 10.46 | 32.80  | 30.76  | 51.40 | 63.90  | 74.00  | -10.10 | peak   |



11ac\_VHT(80M)\_TX\_CH\_58\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

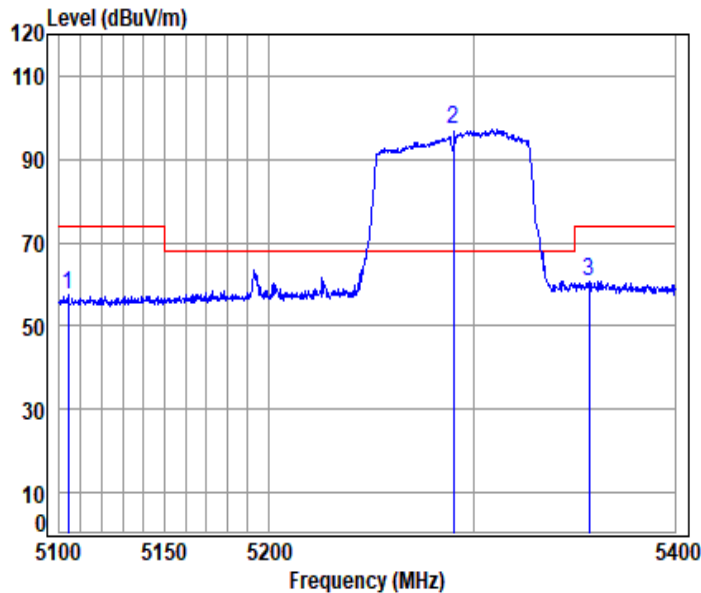
Mode : 5290 Band edge

: 5G Wi-Fi 11ac80

|   |             | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---|-------------|-------|--------|--------|-------|--------|--------|---------------|
|   | Freq        | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 | 5145.090    | 10.12 | 32.39  | 30.84  | 33.66 | 45.33  | 54.00  | -8.67 Average |
| 2 | 5290.000    | 10.28 | 32.68  | 30.78  | 81.22 | 93.40  | -----  | ----- Average |
| 3 | pp 5353.899 | 10.46 | 32.80  | 30.76  | 37.91 | 50.41  | 54.00  | -3.59 Average |



### 11ac\_VHT(80M)\_TX\_CH\_58\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

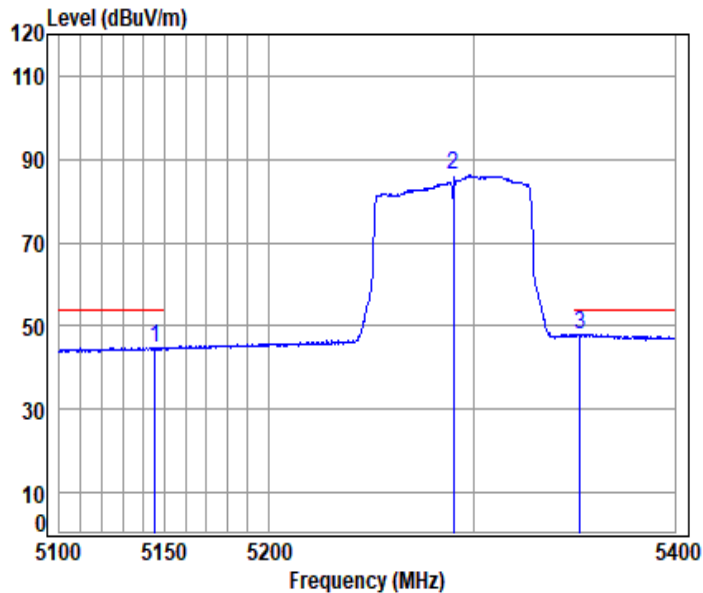
Mode : 5290 Band edge

: 5G Wi-Fi 11ac80

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5104.083 | 9.97  | 32.31  | 30.86  | 46.14 | 57.56  | 74.00  | -16.44 | peak   |
| 2 pp | 5290.000 | 10.28 | 32.68  | 30.78  | 84.92 | 97.10  | 68.20  | 28.90  | peak   |
| 3    | 5357.267 | 10.47 | 32.80  | 30.76  | 48.12 | 60.63  | 74.00  | -13.37 | peak   |



11ac\_VHT(80M)\_TX\_CH\_58\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

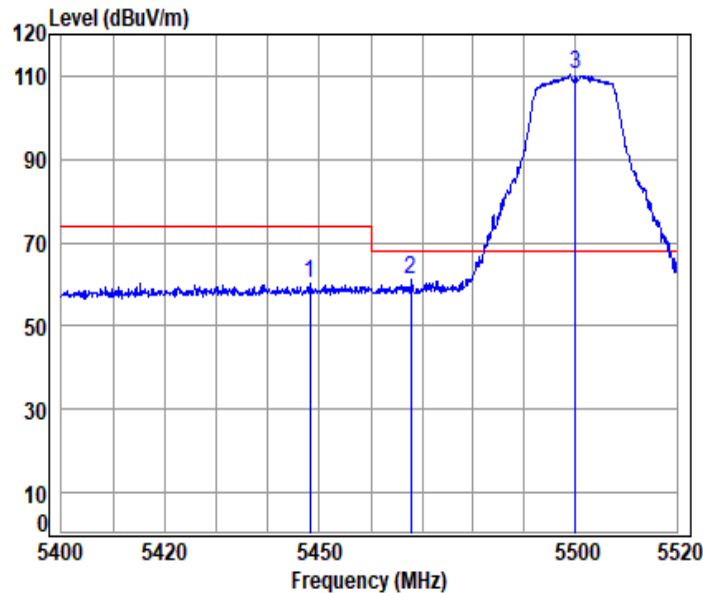
Mode : 5290 Band edge

: 5G Wi-Fi 11ac80

|   |             | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---|-------------|-------|--------|--------|-------|--------|--------|---------------|
|   | Freq        | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 | 5145.679    | 10.12 | 32.39  | 30.84  | 33.20 | 44.87  | 54.00  | -9.13 Average |
| 2 | 5290.000    | 10.28 | 32.68  | 30.78  | 73.94 | 86.12  | -----  | ----- Average |
| 3 | pp 5352.676 | 10.46 | 32.80  | 30.76  | 35.51 | 48.01  | 54.00  | -5.99 Average |



### 11a\_TX\_CH\_100\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5500 Band edge

: 5G Wi-Fi 11a

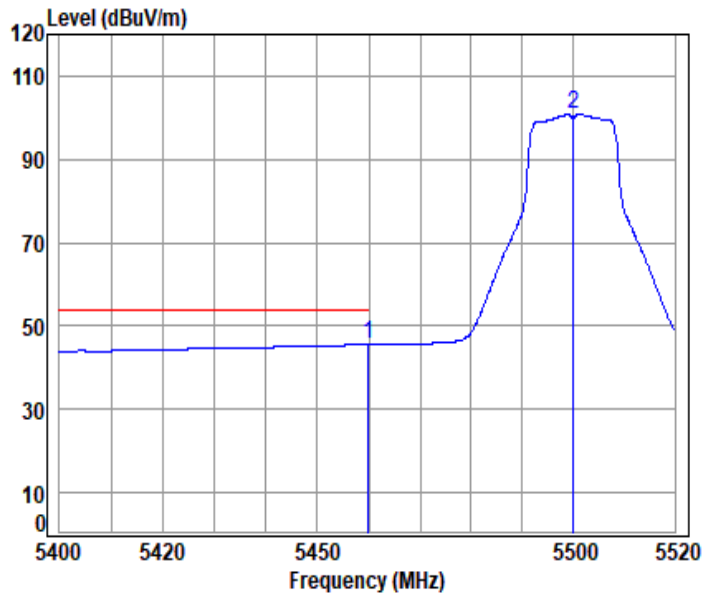
|      | Cable    | Ant    | Preamp | Read  | Limit  | Over   |                   |
|------|----------|--------|--------|-------|--------|--------|-------------------|
| Freq | Loss     | Factor | Factor | Level | Line   | Limit  | Remark            |
| MHz  | dB       | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB                |
| 1    | 5448.163 | 10.60  | 32.90  | 30.72 | 47.55  | 60.33  | 74.00 -13.67 peak |
| 2    | 5467.836 | 10.59  | 32.90  | 30.71 | 48.41  | 61.19  | 68.20 -7.01 peak  |
| 3    | 5500.000 | 10.58  | 32.90  | 30.70 | 97.50  | 110.28 | 68.20 42.08 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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

### 11a\_TX\_CH\_100\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

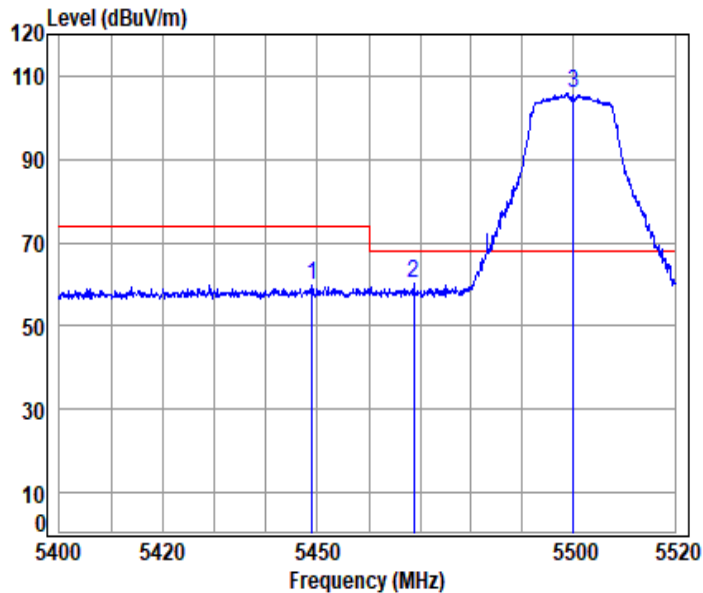
Mode : 5500 Band edge

: 5G Wi-Fi 11a

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5459.910 | 10.60 | 32.90  | 30.72  | 32.70 | 45.48  | 54.00  | -8.52 Average |
| 2 5500.000    | 10.58 | 32.90  | 30.70  | 88.20 | 100.98 | -----  | ----- Average |



### 11a\_TX\_CH\_100\_Verical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

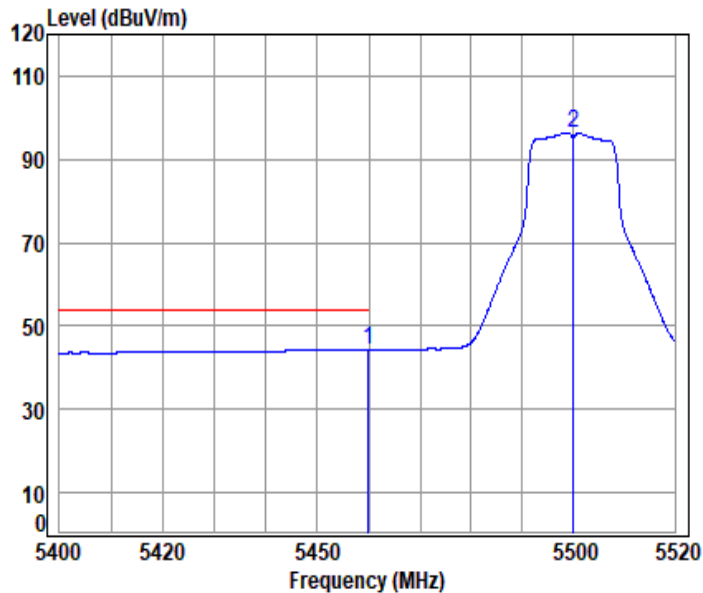
Mode : 5500 Band edge

: 5G Wi-Fi 11a

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 5449.001 | 10.60 | 32.90  | 30.72  | 46.85 | 59.63  | 74.00  | -14.37 | peak   |
| 2 | 5468.798 | 10.59 | 32.90  | 30.71  | 47.24 | 60.02  | 68.20  | -8.18  | peak   |
| 3 | 5500.000 | 10.58 | 32.90  | 30.70  | 92.93 | 105.71 | 68.20  | 37.51  | peak   |



### 11a\_TX\_CH\_100\_Vetical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

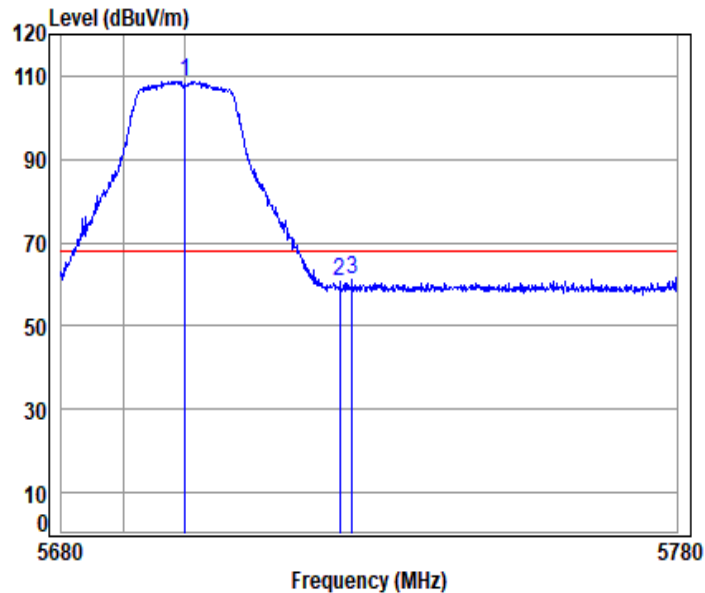
Mode : 5500 Band edge

: 5G Wi-Fi 11a

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5459.910 | 10.60 | 32.90  | 30.72  | 31.58 | 44.36  | 54.00  | -9.64 Average |
| 2 5500.000    | 10.58 | 32.90  | 30.70  | 83.66 | 96.44  | -----  | ----- Average |



### 11a\_TX\_CH\_140\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

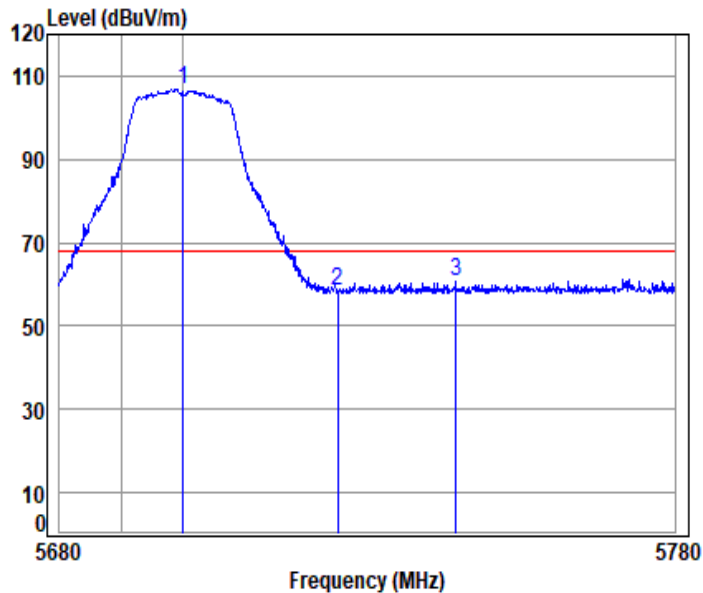
Mode : 5700 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |            |
|------|----------|-------|--------|--------|-------|--------|--------|------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark     |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB         |
| 1 pp | 5700.000 | 10.56 | 33.20  | 30.62  | 95.58 | 108.72 | 68.20  | 40.52 peak |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 47.23 | 60.55  | 68.20  | -7.65 peak |
| 3    | 5726.982 | 10.68 | 33.25  | 30.61  | 47.68 | 61.00  | 68.20  | -7.20 peak |



### 11a\_TX\_CH\_140\_Verical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5700 Band edge

: 5G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |            |
|------|----------|-------|--------|--------|-------|--------|--------|------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark     |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB         |
| 1 pp | 5700.000 | 10.56 | 33.20  | 30.62  | 93.77 | 106.91 | 68.20  | 38.71 peak |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 45.10 | 58.42  | 68.20  | -9.78 peak |
| 3    | 5744.200 | 10.76 | 33.29  | 30.60  | 47.11 | 60.56  | 68.20  | -7.64 peak |



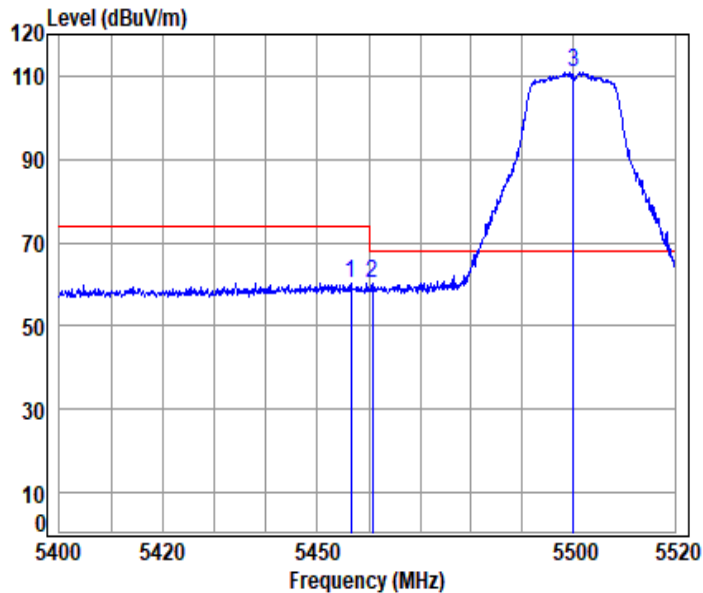
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_VHT(20M)\_TX\_CH\_100\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

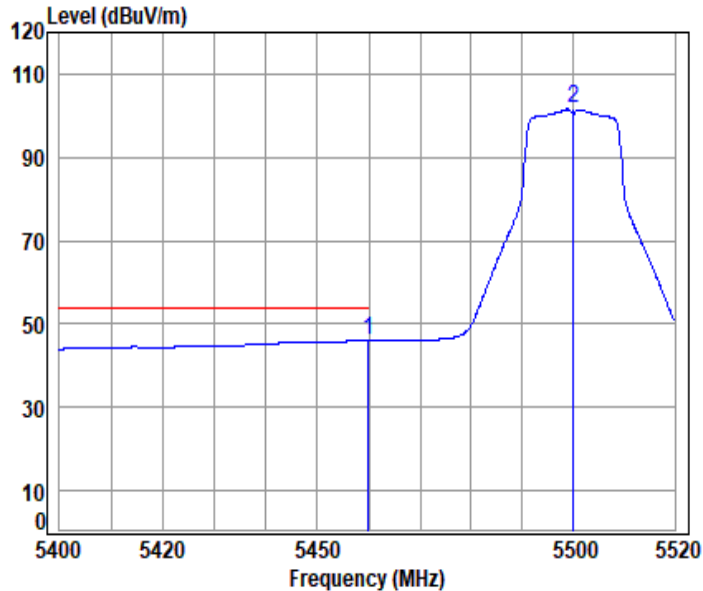
Mode : 5500 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5456.551 | 10.60 | 32.90  | 30.72  | 47.67 | 60.45  | 74.00  | -13.55 | peak   |
| 2    | 5460.750 | 10.60 | 32.90  | 30.72  | 47.37 | 60.15  | 68.20  | -8.05  | peak   |
| 3 pp | 5500.000 | 10.58 | 32.90  | 30.70  | 98.06 | 110.84 | 68.20  | 42.64  | peak   |



11ac\_VHT(20M)\_TX\_CH\_100\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

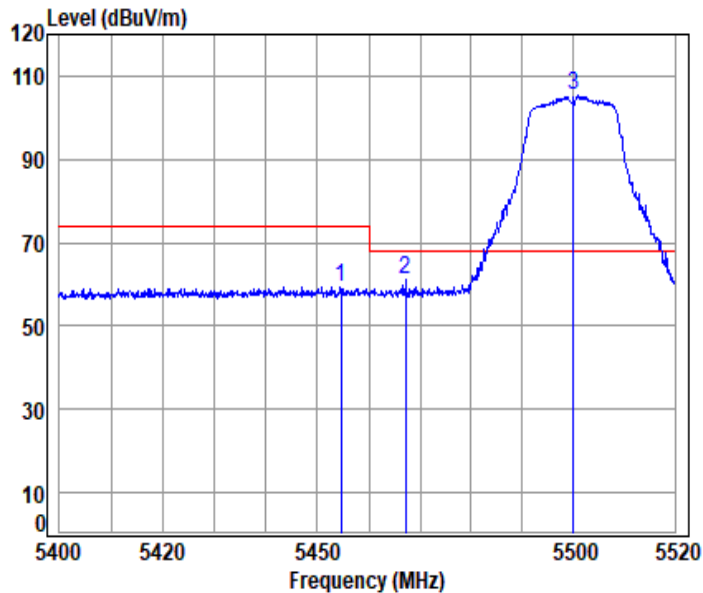
Mode : 5500 Band edge

: 5G Wi-Fi 11ac20

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark  |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5459.910 | 10.60 | 32.90  | 30.72  | 33.18 | 45.96  | 54.00  | -8.04 Average |
| 2 5500.000    | 10.58 | 32.90  | 30.70  | 88.75 | 101.53 | -----  | ----- Average |



11ac\_VHT(20M)\_TX\_CH\_100\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

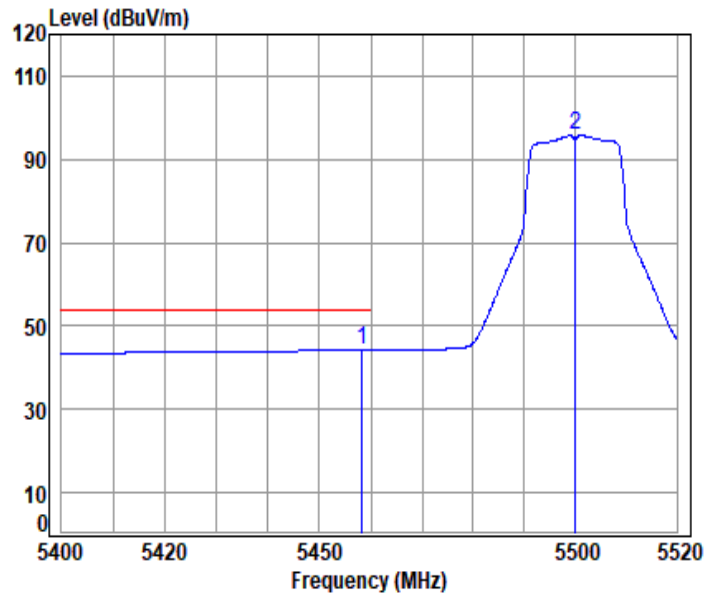
Mode : 5500 Band edge

: 5G Wi-Fi 11ac20

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 5454.513 | 10.60 | 32.90  | 30.72  | 46.72 | 59.50  | 74.00  | -14.50 | peak   |
| 2 | 5467.235 | 10.59 | 32.90  | 30.71  | 48.40 | 61.18  | 68.20  | -7.02  | Peak   |
| 3 | 5500.000 | 10.58 | 32.90  | 30.70  | 92.50 | 105.28 | 68.20  | 37.08  | peak   |



11ac\_VHT(20M)\_TX\_CH\_100\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

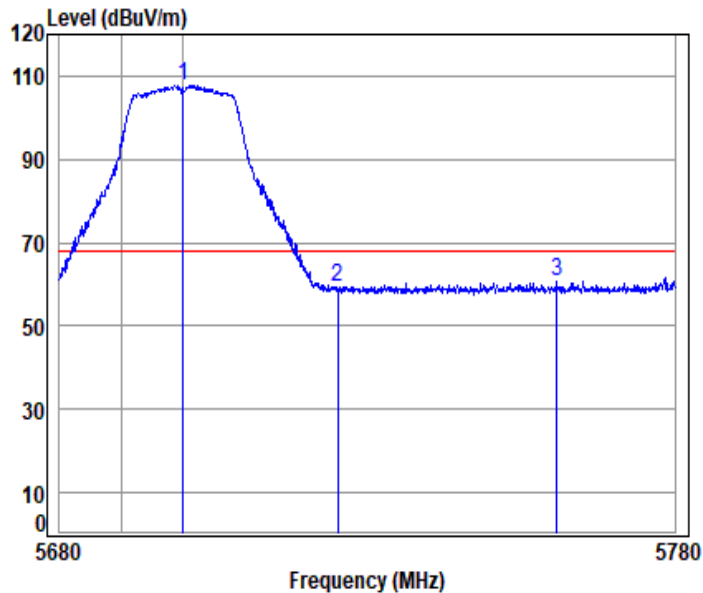
Mode : 5500 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preampl | Read  | Limit  | Over   |               |
|------|----------|-------|--------|---------|-------|--------|--------|---------------|
|      | Freq     | Loss  | Factor | Factor  | Level | Line   | Limit  | Remark        |
|      | MHz      | dB    | dB/m   | dB      | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp | 5458.230 | 10.60 | 32.90  | 30.72   | 31.48 | 44.26  | 54.00  | -9.74 Average |
| 2    | 5500.000 | 10.58 | 32.90  | 30.70   | 83.07 | 95.85  | -----  | ----- Average |



11ac\_VHT(20M)\_TX\_CH\_140\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

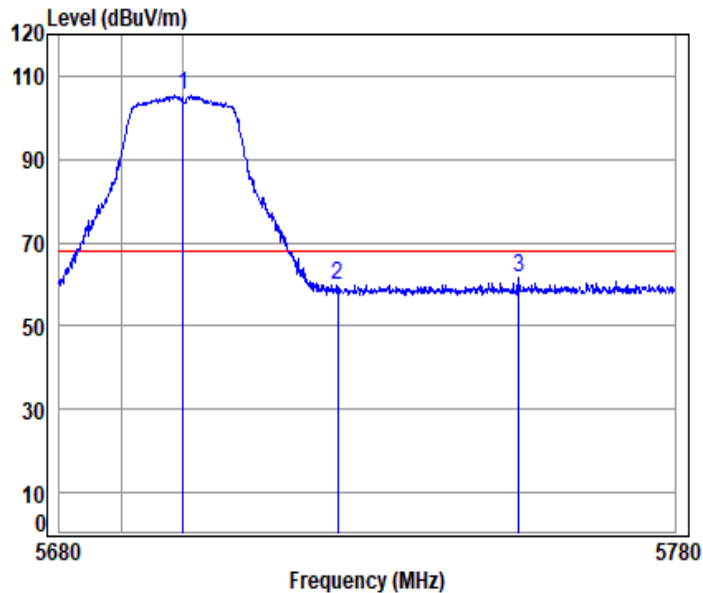
Mode : 5700 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |            |
|------|----------|-------|--------|--------|-------|--------|--------|------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark     |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB         |
| 1 pp | 5700.000 | 10.56 | 33.20  | 30.62  | 94.71 | 107.85 | 68.20  | 39.65 peak |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 45.77 | 59.09  | 68.20  | -9.11 peak |
| 3    | 5760.665 | 10.84 | 33.32  | 30.60  | 47.21 | 60.77  | 68.20  | -7.43 peak |



11ac\_VHT(20M)\_TX\_CH\_140\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5700 Band edge

: 5G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|------|----------|-------|--------|--------|-------|--------|--------|--------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1 pp | 5700.000 | 10.56 | 33.20  | 30.62  | 92.19 | 105.33 | 68.20  | 37.13 peak   |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 46.25 | 59.57  | 68.20  | -8.63 peak   |
| 3    | 5754.535 | 10.81 | 33.31  | 30.60  | 48.11 | 61.63  | 68.20  | -6.57 peak   |



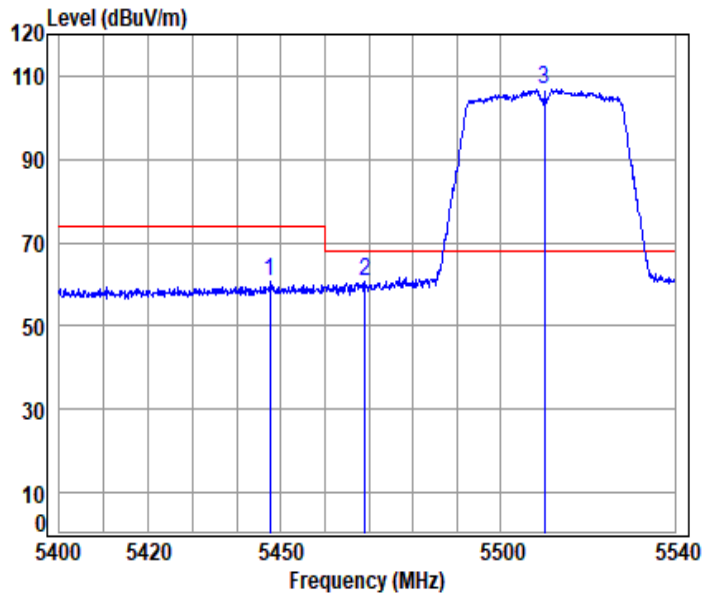
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_VHT(40M)\_TX\_CH\_102\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

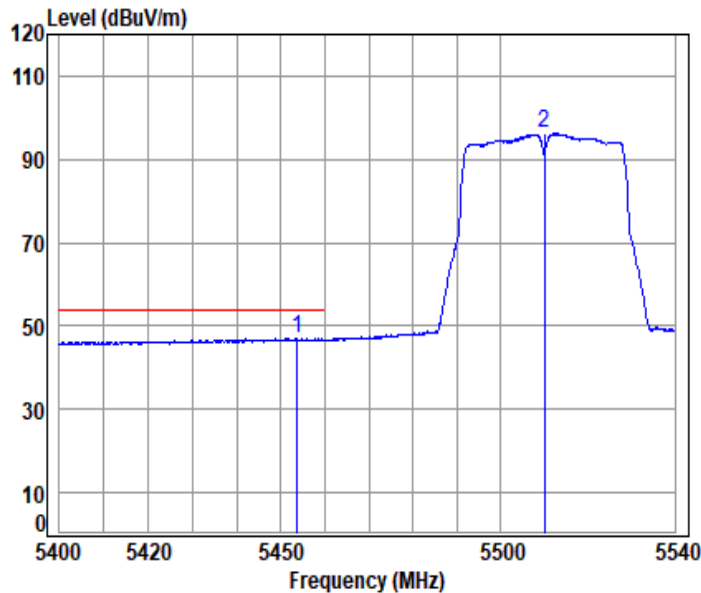
Mode : 5510 Band edge

: 5G Wi-Fi 11ac40

|      | Cable    | Ant    | Preamp | Read  | Limit  | Over   |                   |
|------|----------|--------|--------|-------|--------|--------|-------------------|
| Freq | Loss     | Factor | Factor | Level | Level  | Line   | Limit Remark      |
| MHz  | dB       | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB                |
| 1    | 5447.478 | 10.60  | 32.89  | 30.72 | 47.76  | 60.53  | 74.00 -13.47 peak |
| 2    | 5468.992 | 10.59  | 32.90  | 30.71 | 48.01  | 60.79  | 68.20 -7.41 peak  |
| 3 pp | 5510.000 | 10.56  | 32.90  | 30.70 | 93.98  | 106.74 | 68.20 38.54 peak  |



11ac\_VHT(40M)\_TX\_CH\_102\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

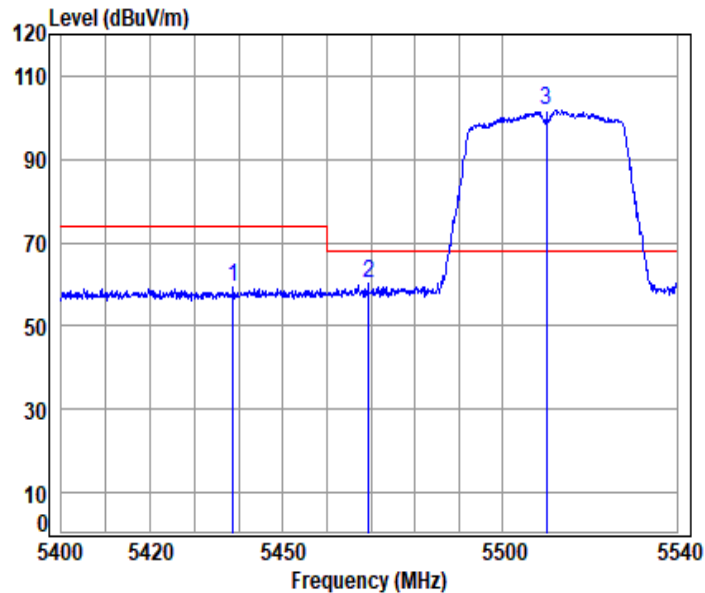
Mode : 5510 Band edge

: 5G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|------|----------|-------|--------|--------|-------|--------|--------|---------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark        |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp | 5453.755 | 10.60 | 32.90  | 30.72  | 34.27 | 47.05  | 54.00  | -6.95 Average |
| 2    | 5510.000 | 10.56 | 32.90  | 30.70  | 83.51 | 96.27  | -----  | ----- Average |



### 11ac\_VHT(40M)\_TX\_CH\_102\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

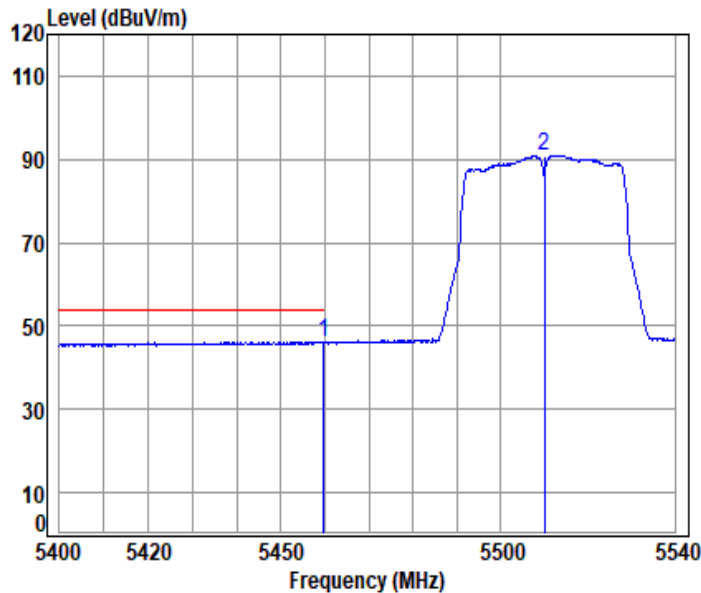
Mode : 5510 Band edge

: 5G Wi-Fi 11ac40

|      | Cable    | Ant    | Preamp | Read  | Limit  | Over   |                   |
|------|----------|--------|--------|-------|--------|--------|-------------------|
| Freq | Loss     | Factor | Factor | Level | Level  | Line   | Limit Remark      |
| MHz  | dB       | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB                |
| 1    | 5438.700 | 10.60  | 32.88  | 30.72 | 46.36  | 59.12  | 74.00 -14.88 peak |
| 2    | 5469.412 | 10.59  | 32.90  | 30.71 | 47.34  | 60.12  | 68.20 -8.08 peak  |
| 3    | 5510.000 | 10.56  | 32.90  | 30.70 | 89.01  | 101.77 | 68.20 33.57 peak  |



11ac\_VHT(40M)\_TX\_CH\_102\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

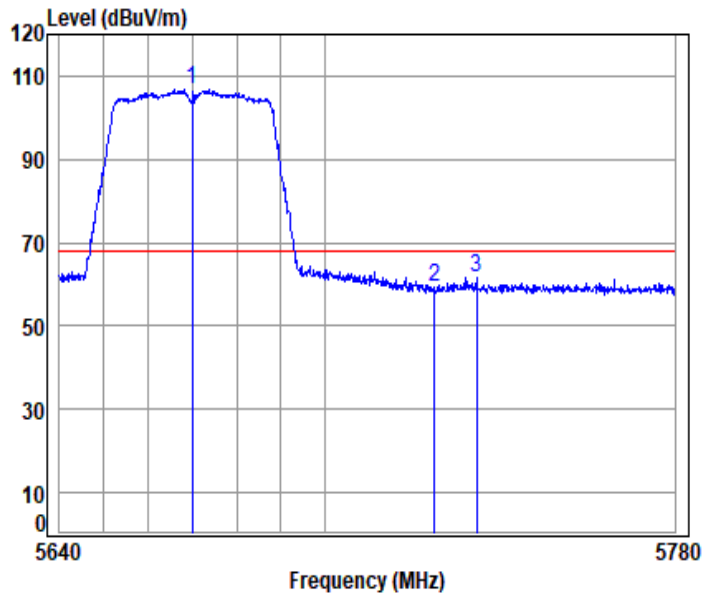
Mode : 5510 Band edge

: 5G Wi-Fi 11ac40

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark  |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5459.761 | 10.60 | 32.90  | 30.72  | 33.40 | 46.18  | 54.00  | -7.82 Average |
| 2 5510.000    | 10.56 | 32.90  | 30.70  | 78.26 | 91.02  | -----  | ----- Average |



11ac\_VHT(40M)\_TX\_CH\_134\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5670 Band edge

: 5G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |            |
|------|----------|-------|--------|--------|-------|--------|--------|------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark     |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB         |
| 1 pp | 5670.000 | 10.52 | 33.14  | 30.63  | 93.61 | 106.64 | 68.20  | 38.44 peak |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 45.79 | 59.11  | 68.20  | -9.09 peak |
| 3    | 5734.545 | 10.72 | 33.27  | 30.61  | 48.42 | 61.80  | 68.20  | -6.40 peak |



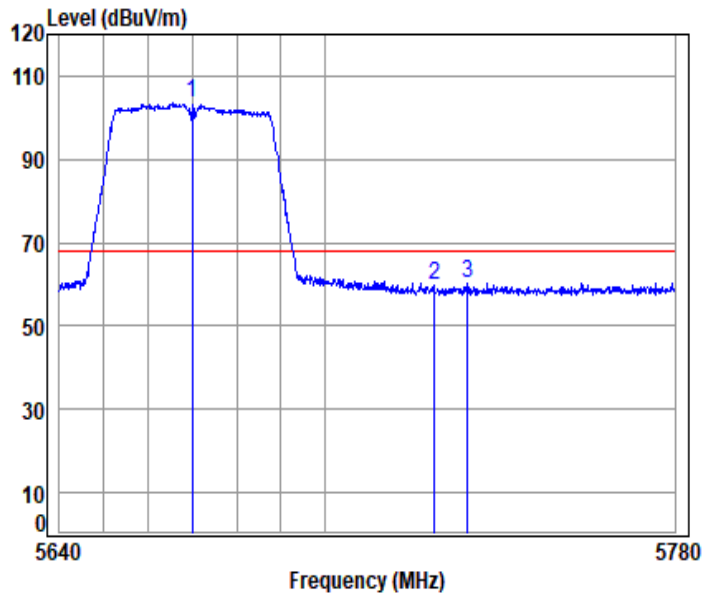
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 11ac\_VHT(40M)\_TX\_CH\_134\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

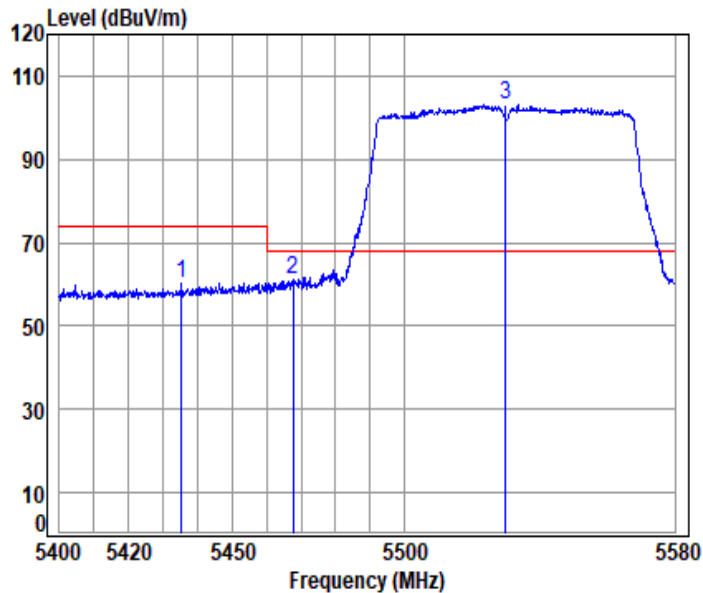
Mode : 5670 Band edge

: 5G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |            |
|------|----------|-------|--------|--------|-------|--------|--------|------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark     |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB         |
| 1 pp | 5670.000 | 10.52 | 33.14  | 30.63  | 90.65 | 103.68 | 68.20  | 35.48 peak |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 46.53 | 59.85  | 68.20  | -8.35 peak |
| 3    | 5732.436 | 10.71 | 33.26  | 30.61  | 46.91 | 60.27  | 68.20  | -7.93 peak |



11ac\_VHT(80M)\_TX\_CH\_106\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

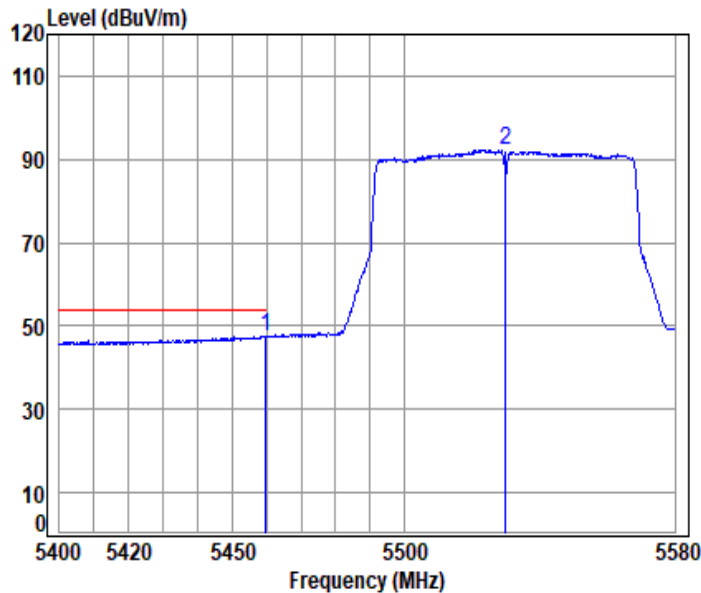
Mode : 5530 Band edge

: 5G Wi-Fi 11ac80

|   |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 5435.351 | 10.61 | 32.87  | 30.73  | 47.60 | 60.35  | 74.00  | -13.65 | peak   |
| 2 | 5467.706 | 10.59 | 32.90  | 30.71  | 48.44 | 61.22  | 68.20  | -6.98  | peak   |
| 3 | 5530.000 | 10.53 | 32.90  | 30.69  | 90.47 | 103.21 | 68.20  | 35.01  | peak   |



11ac\_VHT(80M)\_TX\_CH\_106\_Horizontal-Avg



Condition: 3m HORIZONTAL

Job No : 01576AT

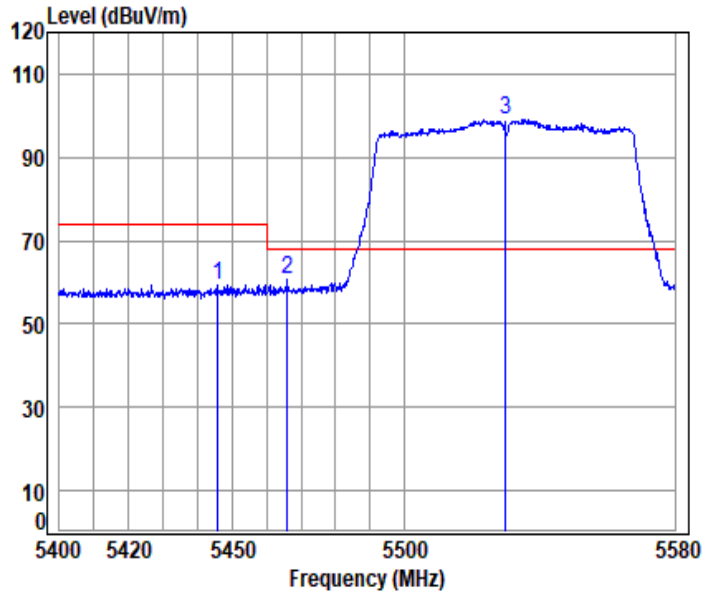
Mode : 5530 Band edge

: 5G Wi-Fi 11ac80

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark  |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5459.823 | 10.60 | 32.90  | 30.72  | 34.81 | 47.59  | 54.00  | -6.41 Average |
| 2 5530.000    | 10.53 | 32.90  | 30.69  | 79.33 | 92.07  | -----  | ----- Average |



### 11ac\_VHT(80M)\_TX\_CH\_106\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

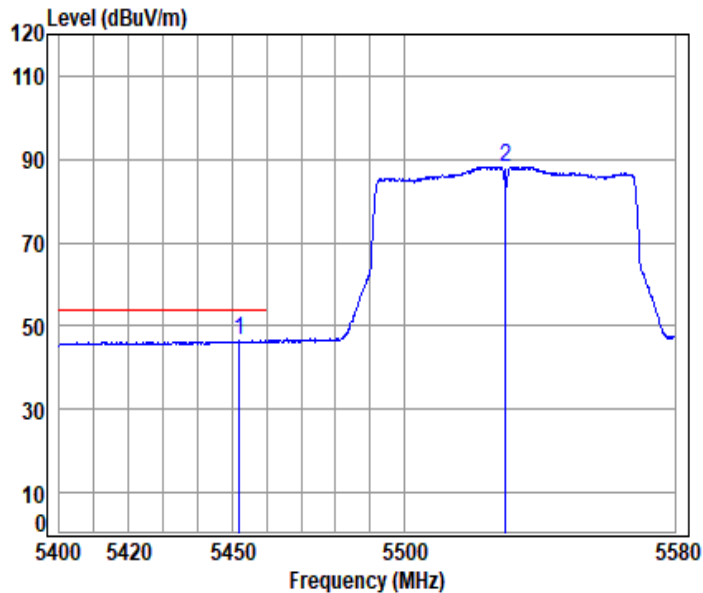
Mode : 5530 Band edge

: 5G Wi-Fi 11ac80

|      | Cable    | Ant    | Preamp | Read  | Limit  | Over   |                   |
|------|----------|--------|--------|-------|--------|--------|-------------------|
| Freq | Loss     | Factor | Factor | Level | Level  | Line   | Limit Remark      |
| MHz  | dB       | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB                |
| 1    | 5445.698 | 10.60  | 32.89  | 30.72 | 46.64  | 59.41  | 74.00 -14.59 peak |
| 2    | 5466.092 | 10.59  | 32.90  | 30.71 | 47.69  | 60.47  | 68.20 -7.73 peak  |
| 3    | 5530.000 | 10.53  | 32.90  | 30.69 | 86.27  | 99.01  | 68.20 30.81 peak  |



11ac\_VHT(80M)\_TX\_CH\_106\_Vertical-Avg



Condition: 3m VERTICAL

Job No : 01576AT

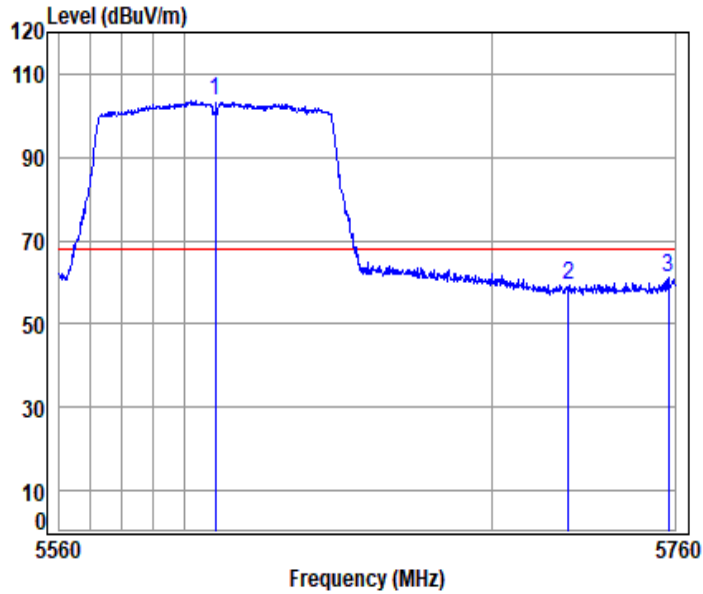
Mode : 5530 Band edge

: 5G Wi-Fi 11ac80

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |               |
|---------------|-------|--------|--------|-------|--------|--------|---------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark  |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB            |
| 1 pp 5451.951 | 10.60 | 32.90  | 30.72  | 33.59 | 46.37  | 54.00  | -7.63 Average |
| 2 5530.000    | 10.53 | 32.90  | 30.69  | 75.45 | 88.19  | -----  | ----- Average |



11ac\_VHT(80M)\_TX\_CH\_122\_Horizontal-Peak



Condition: 3m HORIZONTAL

Job No : 01576AT

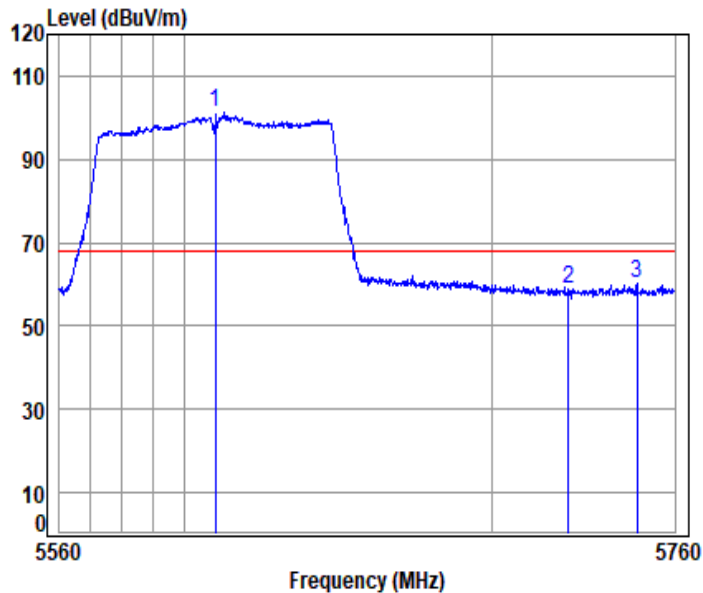
Mode : 5610 Band edge

: 5G Wi-Fi 11ac80

|      | Cable    | Ant   | Preamp | Read   |       | Limit  | Over   |              |
|------|----------|-------|--------|--------|-------|--------|--------|--------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1 pp | 5610.000 | 10.43 | 33.02  | 30.66  | 90.90 | 103.69 | 68.20  | 35.49 peak   |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 45.92 | 59.24  | 68.20  | -8.96 peak   |
| 3    | 5757.965 | 10.83 | 33.32  | 30.60  | 47.76 | 61.31  | 68.20  | -6.89 peak   |



11ac\_VHT(80M)\_TX\_CH\_122\_Vertical-Peak



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5610 Band edge

: 5G Wi-Fi 11ac80

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |            |
|------|----------|-------|--------|--------|-------|--------|--------|------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark     |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB         |
| 1 pp | 5610.000 | 10.43 | 33.02  | 30.66  | 88.30 | 101.09 | 68.20  | 32.89 peak |
| 2    | 5725.000 | 10.68 | 33.25  | 30.61  | 45.37 | 58.69  | 68.20  | -9.51 peak |
| 3    | 5747.597 | 10.78 | 33.30  | 30.60  | 46.60 | 60.08  | 68.20  | -8.12 peak |



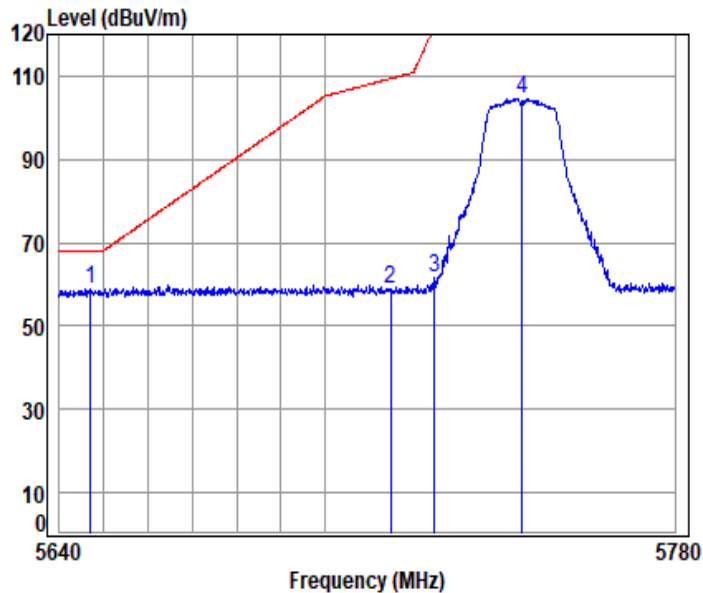
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 11a\_TX\_CH\_149\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

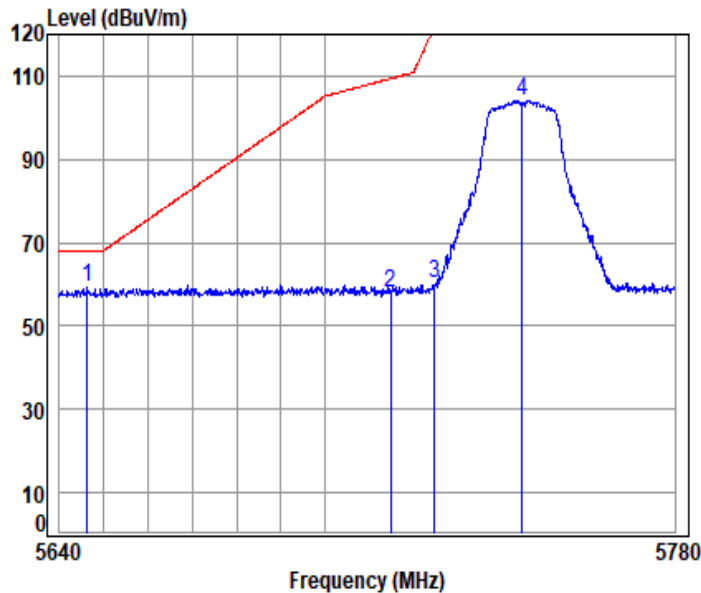
Mode : 5745 Band edge

: 5.8G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5646.919 | 10.48 | 33.09  | 30.64  | 45.79 | 58.72  | 68.20  | -9.48 peak  |
| 2    | 5715.000 | 10.63 | 33.23  | 30.61  | 45.42 | 58.67  | 109.40 | -50.73 peak |
| 3    | 5725.000 | 10.68 | 33.25  | 30.61  | 48.29 | 61.61  | 122.20 | -60.59 peak |
| 4    | 5745.000 | 10.77 | 33.29  | 30.60  | 91.11 | 104.57 | -----  | ----- peak  |



### 11a\_TX\_CH\_149\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

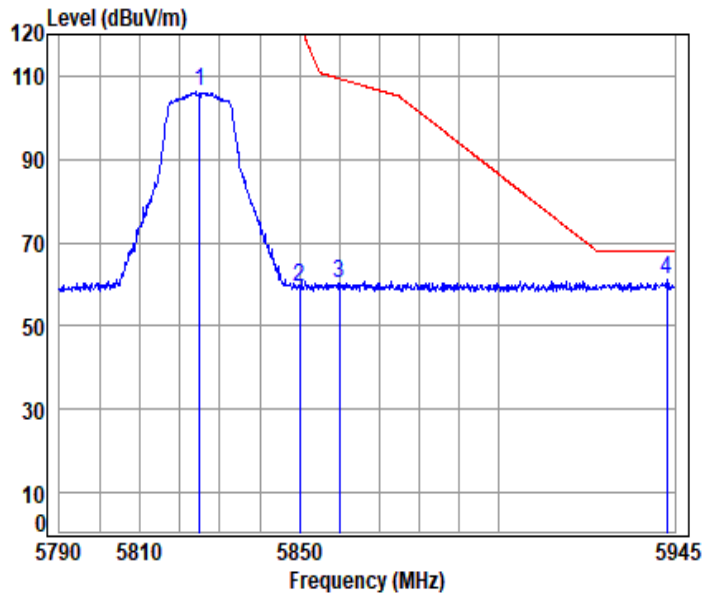
Mode : 5745 Band edge

: 5.8G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5646.227 | 10.48 | 33.09  | 30.64  | 46.37 | 59.30  | 68.20  | -8.90 peak  |
| 2    | 5715.000 | 10.63 | 33.23  | 30.61  | 44.81 | 58.06  | 109.40 | -51.34 peak |
| 3    | 5725.000 | 10.68 | 33.25  | 30.61  | 46.91 | 60.23  | 122.20 | -61.97 peak |
| 4    | 5745.000 | 10.77 | 33.29  | 30.60  | 90.55 | 104.01 | -----  | ----- peak  |



### 11a\_TX\_CH\_165\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5825 Band edge

: 5.8G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1    | 5825.000 | 10.99 | 33.50  | 30.57  | 92.25 | 106.17 | -----  | peak        |
| 2    | 5850.000 | 10.95 | 33.60  | 30.56  | 45.10 | 59.09  | 122.20 | -63.11 peak |
| 3    | 5860.000 | 10.94 | 33.58  | 30.56  | 46.38 | 60.34  | 109.40 | -49.06 peak |
| 4 pp | 5942.958 | 10.86 | 33.59  | 30.52  | 47.10 | 61.03  | 68.20  | -7.17 peak  |



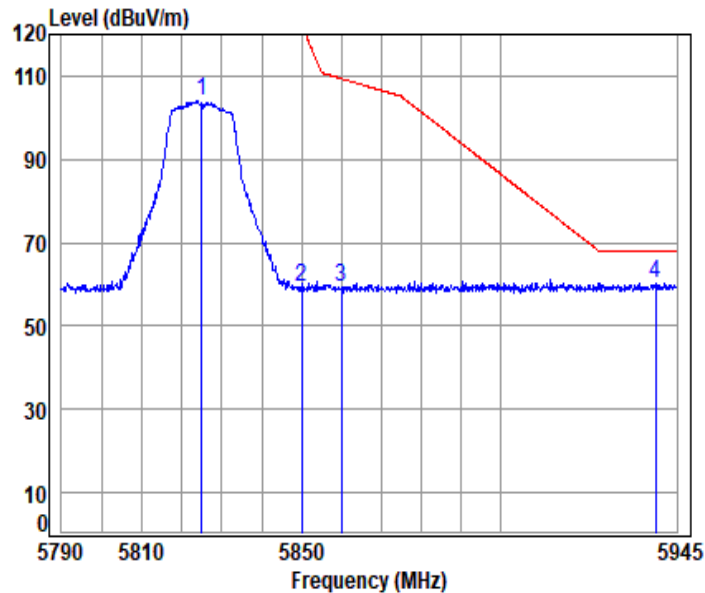
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11a\_TX\_CH\_165\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5825 Band edge

: 5.8G Wi-Fi 11a

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5825.000 | 10.99 | 33.50  | 30.57  | 90.27 | 104.19 | -----  | -----  | peak   |
| 2    | 5850.000 | 10.95 | 33.60  | 30.56  | 45.31 | 59.30  | 122.20 | -62.90 | peak   |
| 3    | 5860.000 | 10.94 | 33.58  | 30.56  | 45.30 | 59.26  | 109.40 | -50.14 | peak   |
| 4 pp | 5939.663 | 10.86 | 33.58  | 30.52  | 46.34 | 60.26  | 68.20  | -7.94  | peak   |



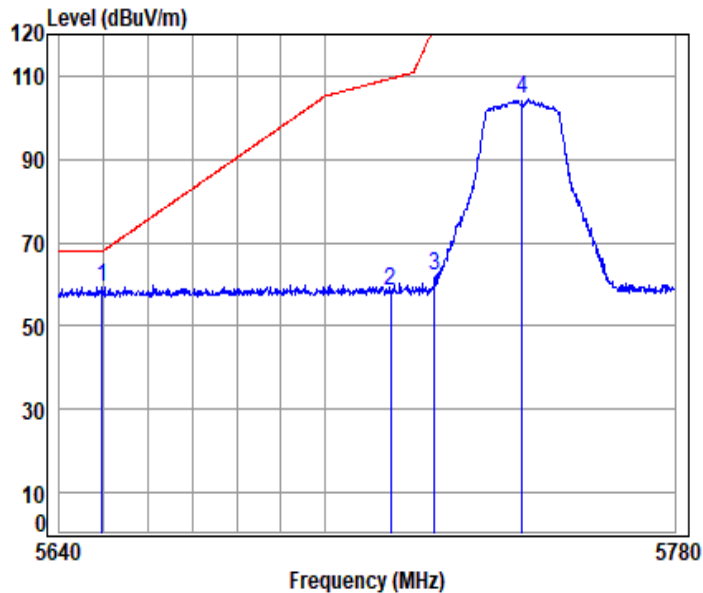
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.ssgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_HT(20M)\_TX\_CH\_149\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

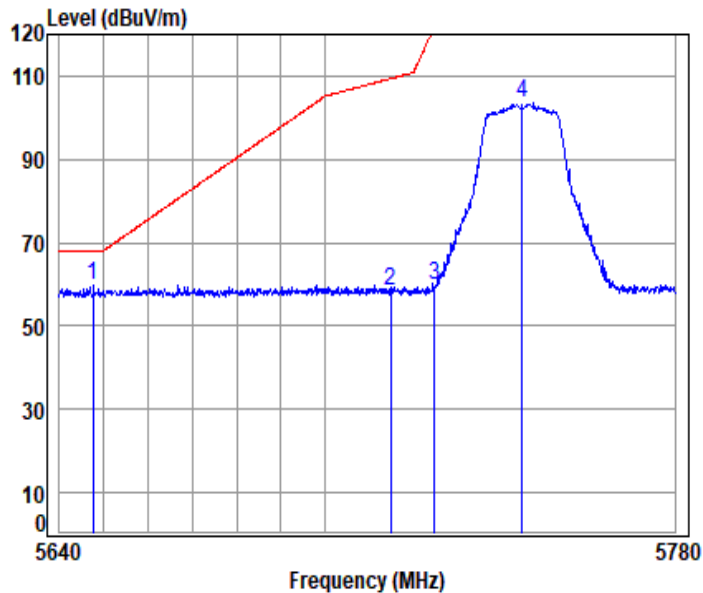
Mode : 5745 Band edge

: 5.8G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5649.550 | 10.48 | 33.10  | 30.64  | 46.42 | 59.36  | 68.20  | -8.84 peak  |
| 2    | 5715.000 | 10.63 | 33.23  | 30.61  | 45.37 | 58.62  | 109.40 | -50.78 peak |
| 3    | 5725.000 | 10.68 | 33.25  | 30.61  | 48.51 | 61.83  | 122.20 | -60.37 peak |
| 4    | 5745.000 | 10.77 | 33.29  | 30.60  | 90.90 | 104.36 | -----  | ----- peak  |



11ac\_HT(20M)\_TX\_CH\_149\_Verical



Condition: 3m VERTICAL

Job No : 01576AT

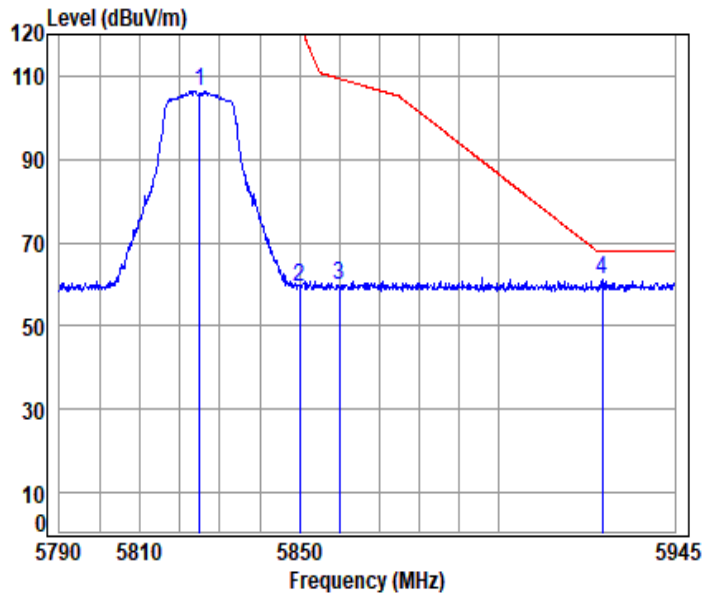
Mode : 5745 Band edge

: 5.8G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5647.611 | 10.48 | 33.10  | 30.64  | 46.65 | 59.59  | 68.20  | -8.61 peak  |
| 2    | 5715.000 | 10.63 | 33.23  | 30.61  | 45.15 | 58.40  | 109.40 | -51.00 peak |
| 3    | 5725.000 | 10.68 | 33.25  | 30.61  | 46.30 | 59.62  | 122.20 | -62.58 peak |
| 4    | 5745.000 | 10.77 | 33.29  | 30.60  | 90.00 | 103.46 | -----  | ----- peak  |



11ac\_HT(20M)\_TX\_CH\_165\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5825 Band edge

: 5.8G Wi-Fi 11ac20

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|------|----------|-------|--------|--------|-------|--------|--------|--------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1    | 5825.000 | 10.99 | 33.50  | 30.57  | 92.52 | 106.44 | -----  | ----- peak   |
| 2    | 5850.000 | 10.95 | 33.60  | 30.56  | 45.47 | 59.46  | 122.20 | -62.74 peak  |
| 3    | 5860.000 | 10.94 | 33.58  | 30.56  | 45.74 | 59.70  | 109.40 | -49.70 peak  |
| 4 pp | 5926.496 | 10.87 | 33.55  | 30.53  | 47.21 | 61.10  | 68.20  | -7.10 peak   |



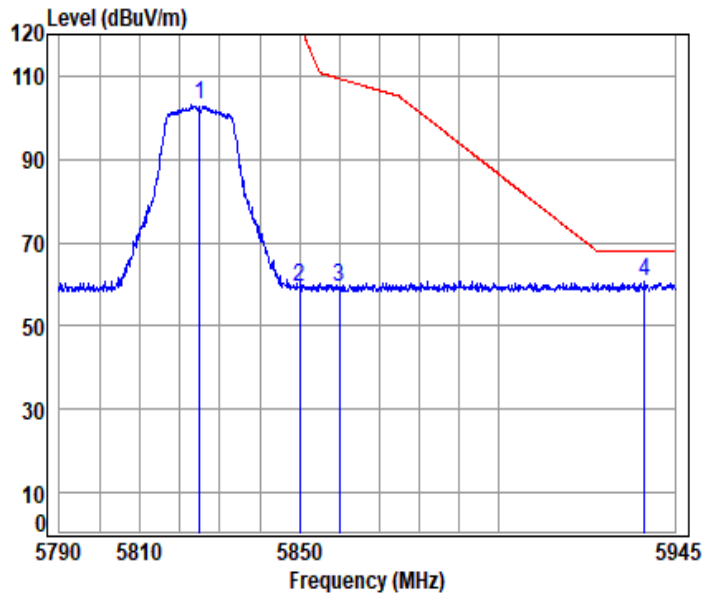
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.ssgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_HT(20M)\_TX\_CH\_165\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

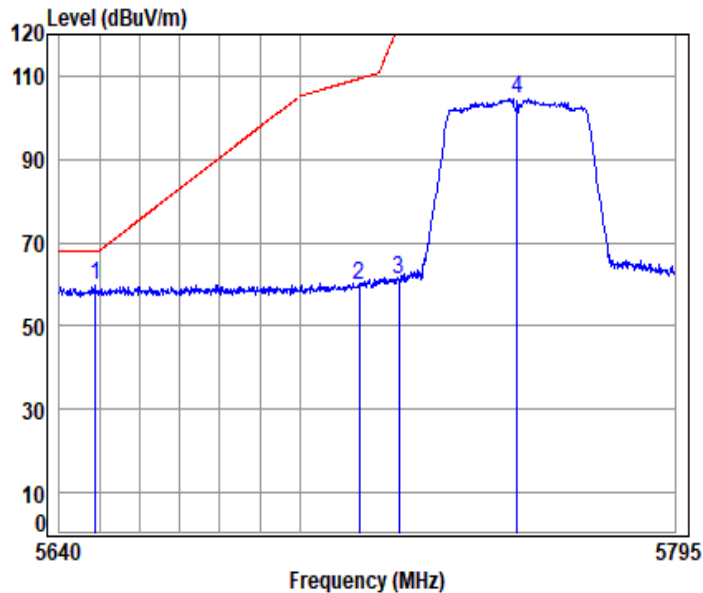
Mode : 5825 Band edge

: 5.8G Wi-Fi 11ac20

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|---------------|-------|--------|--------|-------|--------|--------|--------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1 5825.000    | 10.99 | 33.50  | 30.57  | 89.00 | 102.92 | -----  | ----- peak   |
| 2 5850.000    | 10.95 | 33.60  | 30.56  | 45.11 | 59.10  | 122.20 | -63.10 peak  |
| 3 5860.000    | 10.94 | 33.58  | 30.56  | 45.34 | 59.30  | 109.40 | -50.10 peak  |
| 4 pp 5937.309 | 10.86 | 33.57  | 30.53  | 46.59 | 60.49  | 68.20  | -7.71 peak   |



11ac\_HT(40M)\_TX\_CH\_151\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

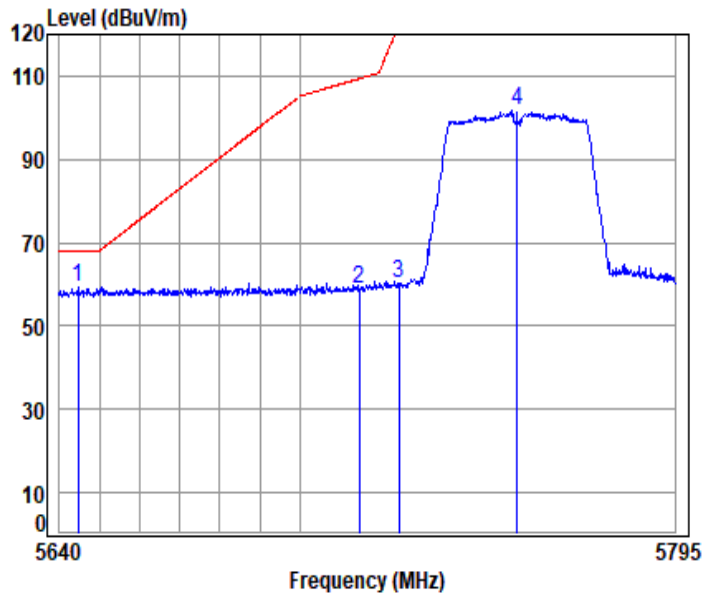
Mode : 5755 Band edge

: 5.8G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5649.029 | 10.48 | 33.10  | 30.64  | 46.87 | 59.81  | 68.20  | -8.39 peak  |
| 2    | 5715.000 | 10.63 | 33.23  | 30.61  | 46.60 | 59.85  | 109.40 | -49.55 peak |
| 3    | 5725.000 | 10.68 | 33.25  | 30.61  | 48.02 | 61.34  | 122.20 | -60.86 peak |
| 4    | 5755.000 | 10.81 | 33.31  | 30.60  | 91.15 | 104.67 | -----  | ----- peak  |



11ac\_HT(40M)\_TX\_CH\_151\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

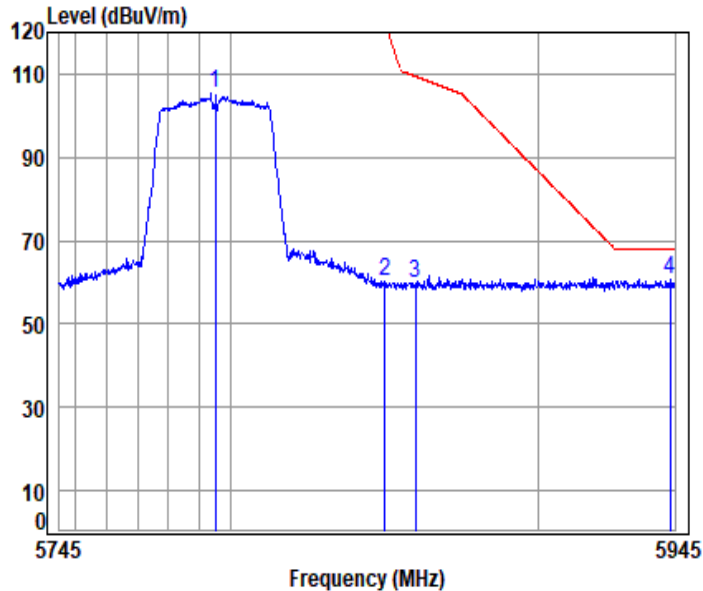
Mode : 5755 Band edge

: 5.8G Wi-Fi 11ac40

|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|------|----------|-------|--------|--------|-------|--------|--------|-------------|
|      | Freq     | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp | 5644.589 | 10.48 | 33.09  | 30.64  | 46.52 | 59.45  | 68.20  | -8.75 peak  |
| 2    | 5715.000 | 10.63 | 33.23  | 30.61  | 45.43 | 58.68  | 109.40 | -50.72 peak |
| 3    | 5725.000 | 10.68 | 33.25  | 30.61  | 46.97 | 60.29  | 122.20 | -61.91 peak |
| 4    | 5755.000 | 10.81 | 33.31  | 30.60  | 88.20 | 101.72 | -----  | ----- peak  |



11ac\_HT(40M)\_TX\_CH\_159\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5795 Band edge

: 5.8G Wi-Fi 11ac40

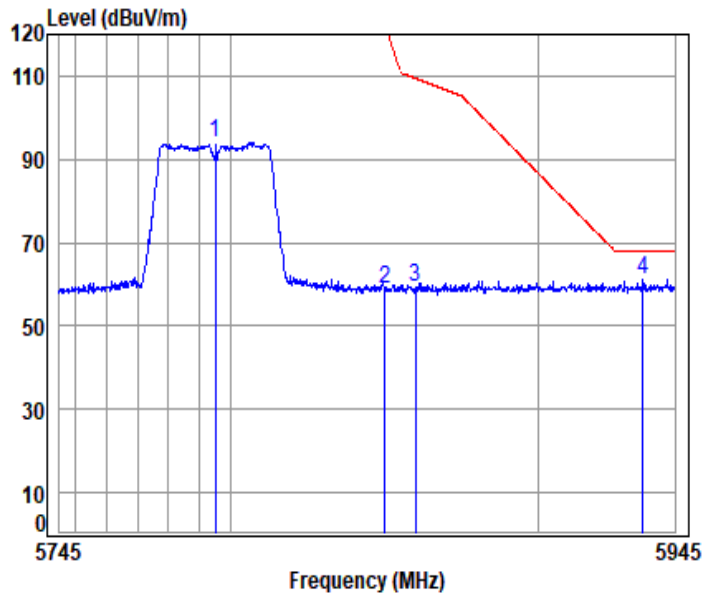
|      |          | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|------|----------|-------|--------|--------|-------|--------|--------|--------------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1    | 5795.000 | 11.00 | 33.39  | 30.58  | 91.39 | 105.20 | -----  | ----- peak   |
| 2    | 5850.000 | 10.95 | 33.60  | 30.56  | 46.18 | 60.17  | 122.20 | -62.03 peak  |
| 3    | 5860.000 | 10.94 | 33.58  | 30.56  | 45.82 | 59.78  | 109.40 | -49.62 peak  |
| 4 pp | 5943.373 | 10.86 | 33.59  | 30.52  | 46.82 | 60.75  | 68.20  | -7.45 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 <https://www.sgs.com/en/Terms-and-Conditions>. 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

11ac\_HT(40M)\_TX\_CH\_159\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5795 Band edge

: 5.8G Wi-Fi 11ac40

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |              |
|---------------|-------|--------|--------|-------|--------|--------|--------------|
| Freq          | Loss  | Factor | Factor | Level | Level  | Line   | Limit Remark |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB           |
| 1 5795.000    | 11.00 | 33.39  | 30.58  | 80.29 | 94.10  | -----  | ----- peak   |
| 2 5850.000    | 10.95 | 33.60  | 30.56  | 45.07 | 59.06  | 122.20 | -63.14 peak  |
| 3 5860.000    | 10.94 | 33.58  | 30.56  | 45.25 | 59.21  | 109.40 | -50.19 peak  |
| 4 pp 5934.431 | 10.86 | 33.57  | 30.53  | 47.17 | 61.07  | 68.20  | -7.13 peak   |



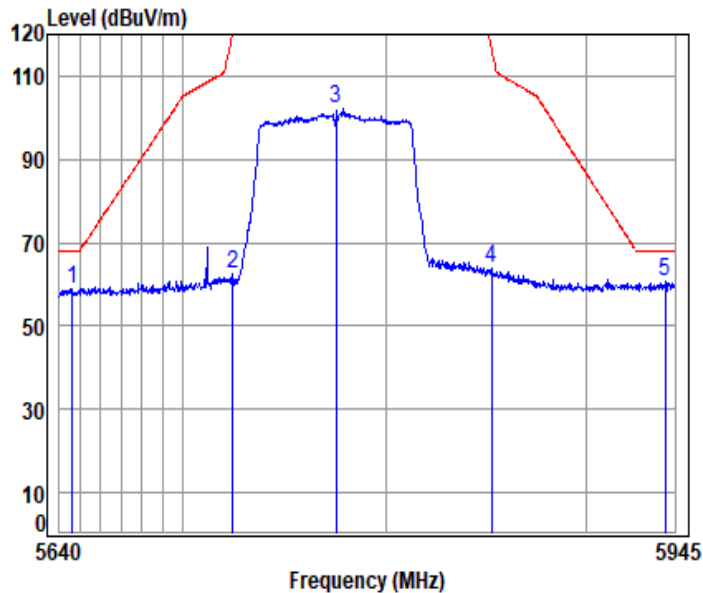
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_VHT(80M)\_TX\_CH\_155\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

Mode : 5775 Band edge

: 5.8G Wi-Fi 11ac80

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5646.241 | 10.48 | 33.09  | 30.64  | 46.13 | 59.06  | 68.20  | -9.14  | peak   |
| 2    | 5724.088 | 10.67 | 33.25  | 30.61  | 48.99 | 62.30  | 120.12 | -57.82 | peak   |
| 3    | 5775.000 | 10.91 | 33.35  | 30.59  | 88.43 | 102.10 | -----  | -----  | peak   |
| 4    | 5852.424 | 10.95 | 33.60  | 30.56  | 49.71 | 63.70  | 116.67 | -52.97 | peak   |
| 5 pp | 5939.993 | 10.86 | 33.58  | 30.52  | 46.84 | 60.76  | 68.20  | -7.44  | peak   |



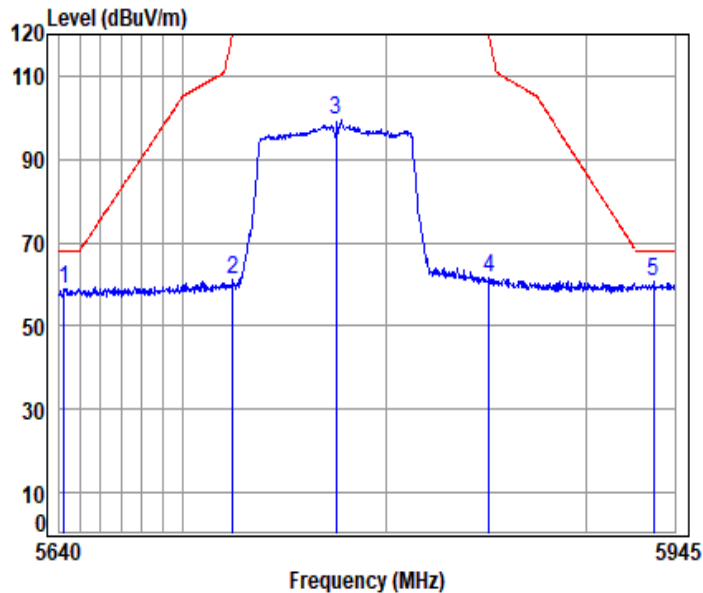
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
Shenzhen Branch Testing & Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

11ac\_VHT(80M)\_TX\_CH\_155\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5775 Band edge

: 5.8G Wi-Fi 11ac80

|      |          | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq     | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz      | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 5642.377 | 10.47 | 33.08  | 30.64  | 46.12 | 59.03  | 68.20  | -9.17  | peak   |
| 2    | 5724.088 | 10.67 | 33.25  | 30.61  | 47.79 | 61.10  | 120.12 | -59.02 | peak   |
| 3    | 5775.000 | 10.91 | 33.35  | 30.59  | 85.68 | 99.35  | -----  | -----  | peak   |
| 4    | 5851.191 | 10.95 | 33.60  | 30.56  | 47.69 | 61.68  | 119.48 | -57.80 | peak   |
| 5 pp | 5934.052 | 10.86 | 33.57  | 30.53  | 47.01 | 60.91  | 68.20  | -7.29  | peak   |



## 7.3 Radiated Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

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                            |

### 7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23.3 °C

Humidity: 45.3 % RH

Atmospheric Pressure: 1020 mbar

### 7.3.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-scan              | 11        | TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Final test            | 12        | Charge+TX mode (U-NII-1)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
| Pre-scan              | 13        | TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data                                                                                                                                 |



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400157605

Page: 91 of 136

|          |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |    | rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Pre-scan | 14 | Charge+TX mode (U-NII-2A)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
| Pre-scan | 15 | TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Pre-scan | 16 | Charge+TX mode (U-NII-2C)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
| Pre-scan | 17 | TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                      |
| Pre-scan | 18 | Charge+TX mode (U-NII-3)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.  |



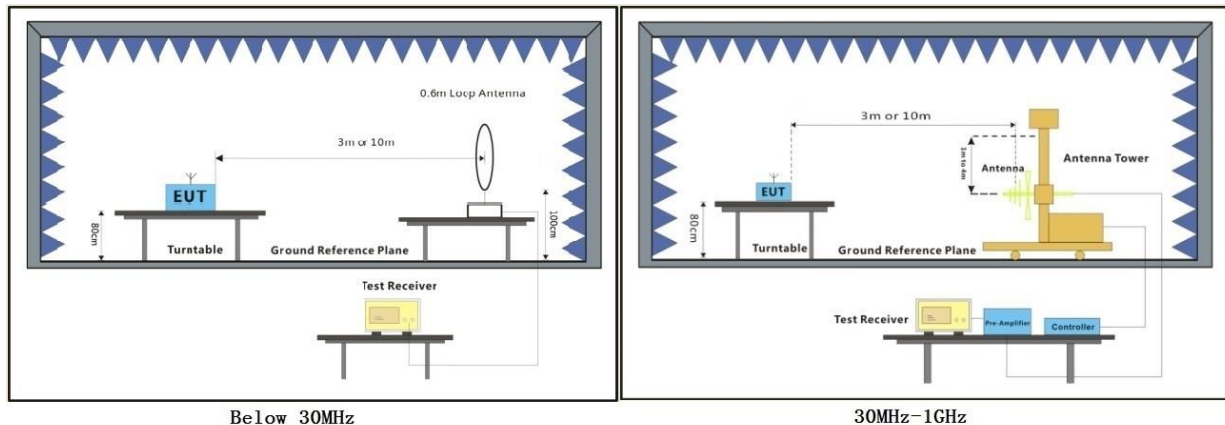
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Platform Laboratory

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 <https://www.sgs.com/en/Terms-and-Conditions>. 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)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 7.3.3 Test Setup Diagram



### 7.3.4 Measurement Procedure and Data

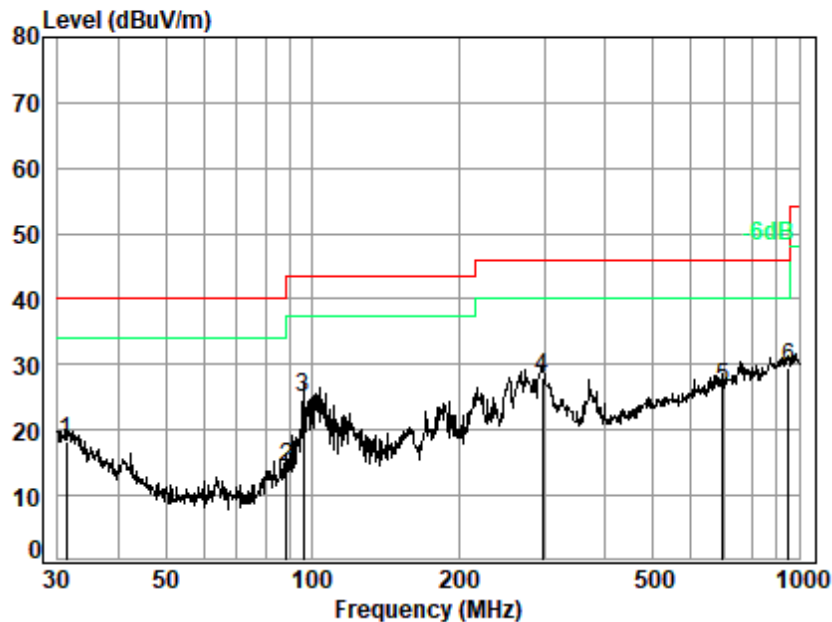
- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which 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 quasi-peak 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:

- Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
- 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.



Test Mode: 12; Polarity: Horizontal

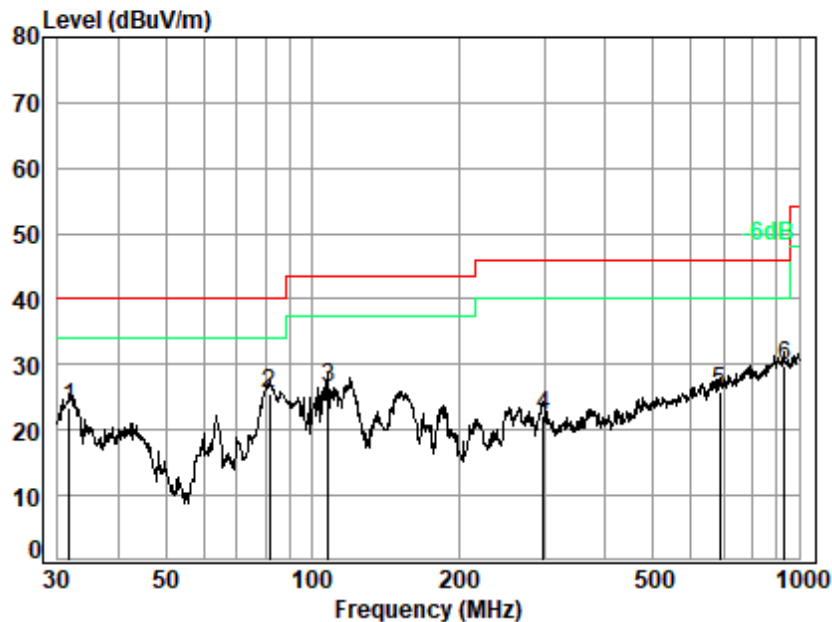


Site : chamber  
Condition: 3m HORIZONTAL  
Job No. : 01576AT  
Test Mode: 12

|      | Ant     | Cable | Preamp | Read  |        | Limit  | Over  |           |
|------|---------|-------|--------|-------|--------|--------|-------|-----------|
| Freq | Factor  | Loss  | Factor | Level | Level  | Line   | Limit | Remark    |
| MHz  | dB/m    | dB    | dB     | dBuV  | dBuV/m | dBuV/m | dB    |           |
| 1    | 31.180  | 20.65 | 0.68   | 27.79 | 24.66  | 18.20  | 40.00 | -21.80 QP |
| 2    | 88.342  | 11.52 | 1.15   | 27.62 | 29.30  | 14.35  | 43.50 | -29.15 QP |
| 3    | 95.762  | 12.16 | 1.20   | 27.60 | 39.33  | 25.09  | 43.50 | -18.41 QP |
| 4    | 297.224 | 17.69 | 2.19   | 26.76 | 34.74  | 27.86  | 46.00 | -18.14 QP |
| 5    | 696.857 | 25.88 | 3.53   | 27.73 | 24.87  | 26.55  | 46.00 | -19.45 QP |
| 6 q  | 952.094 | 28.17 | 4.26   | 26.39 | 23.42  | 29.46  | 46.00 | -16.54 QP |



Test Mode: 12; Polarity: Vertical



Site : chamber  
Condition: 3m VERTICAL  
Job No. : 01576AT  
Test Mode: 12

|     | Ant<br>Freq | Cable<br>Factor | Preamp<br>Loss | Preamp<br>Factor | Read<br>Level | Read<br>Level | Limit<br>Line | Over<br>Limit | Remark |
|-----|-------------|-----------------|----------------|------------------|---------------|---------------|---------------|---------------|--------|
|     | MHz         | dB/m            | dB             | dB               | dBuV          | dBuV/m        | dBuV/m        | dB            |        |
| 1   | 31.620      | 20.45           | 0.69           | 27.79            | 30.06         | 23.41         | 40.00         | -16.59        | QP     |
| 2 q | 81.783      | 10.60           | 1.10           | 27.64            | 41.57         | 25.63         | 40.00         | -14.37        | QP     |
| 3   | 107.888     | 12.09           | 1.28           | 27.56            | 40.64         | 26.45         | 43.50         | -17.05        | QP     |
| 4   | 298.268     | 17.82           | 2.19           | 26.76            | 29.07         | 22.32         | 46.00         | -23.68        | QP     |
| 5   | 687.151     | 25.71           | 3.50           | 27.76            | 24.46         | 25.91         | 46.00         | -20.09        | QP     |
| 6   | 932.272     | 28.16           | 4.21           | 26.53            | 23.98         | 29.82         | 46.00         | -16.18        | QP     |



## 7.4 Radiated Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

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

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                            |

\*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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.

### 7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C

Humidity: 50.8 % RH

Atmospheric Pressure: 1020 mbar



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 <https://www.sgs.com/en/Terms-and-Conditions>. 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.  
Shenzhen Branch Testing and Calibration Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 7.4.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-scan              | 11        | TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                      |
| Pre-scan              | 12        | Charge+TX mode (U-NII-1)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.  |
| Pre-scan              | 13        | TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Pre-scan              | 14        | Charge+TX mode (U-NII-2A)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |
| Final test            | 15        | TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Final test            | 16        | Charge+TX mode (U-NII-2C)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |

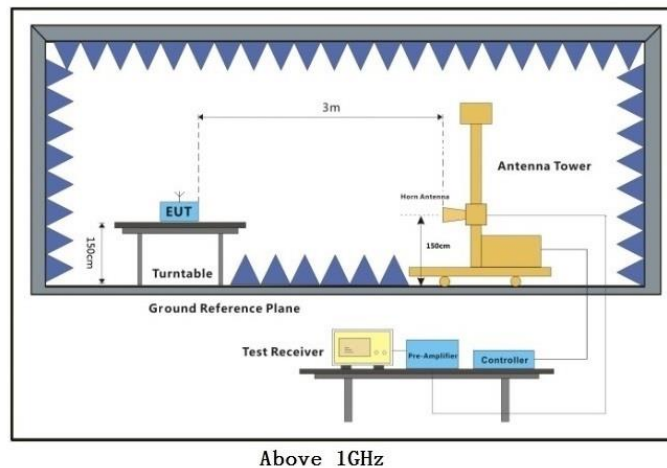


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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)

|            |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |    | 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Final test | 17 | TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report.                     |
| Final test | 18 | Charge+TX mode (U-NII-3)_Keep the EUT in charging and continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT20); data rate @ HT0/HT8 is the worst case of IEEE 802.11n(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT20); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT40); data rate @ VHT0 is the worst case of IEEE 802.11ac(HT80). Only the data of worst case is recorded in the report. |

### 7.4.3 Test Setup Diagram



## 7.4.4 Measurement Procedure and Data

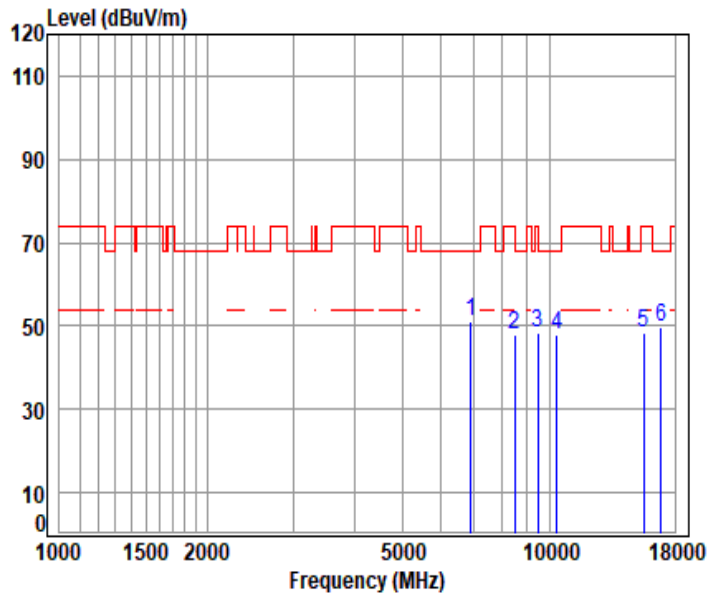
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which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

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, 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.
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
5. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.
6. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.
7. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.



### 11a\_TX\_CH\_36\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

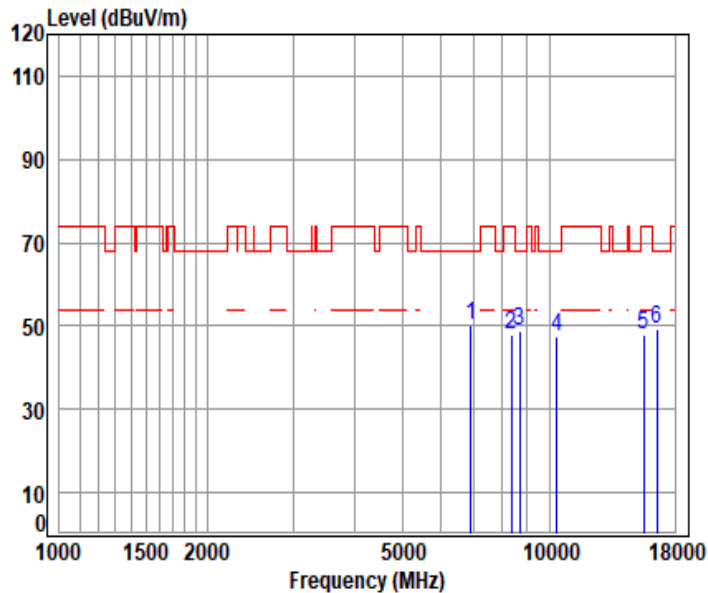
Mode : 5180 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | pp 6902.598 | 11.37 | 36.19  | 56.72  | 60.37 | 51.21  | 68.20  | -16.99 | peak   |
| 2 | 8479.478    | 12.17 | 38.34  | 55.47  | 52.99 | 48.03  | 74.00  | -25.97 | peak   |
| 3 | 9475.153    | 12.50 | 38.85  | 54.57  | 51.42 | 48.20  | 74.00  | -25.80 | peak   |
| 4 | 10360.000   | 13.60 | 39.00  | 53.88  | 49.21 | 47.93  | 68.20  | -20.27 | peak   |
| 5 | 15540.000   | 17.00 | 38.56  | 54.14  | 46.97 | 48.39  | 74.00  | -25.61 | peak   |
| 6 | 16846.870   | 17.80 | 39.60  | 54.25  | 46.54 | 49.69  | 68.20  | -18.51 | peak   |



11a\_TX\_CH\_36\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

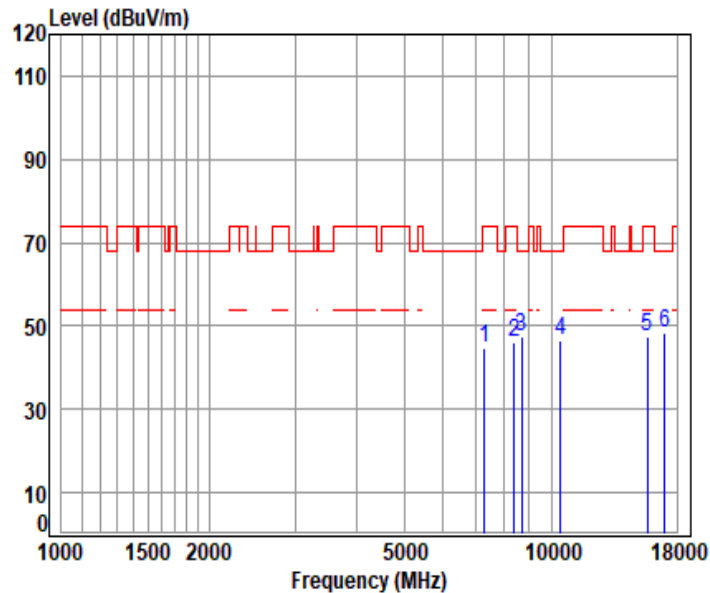
Mode : 5180 TX RSE

: 5G Wi-Fi 11a

|               | Cable | Ant    | Preamp | Read  | Limit  | Over   |             |
|---------------|-------|--------|--------|-------|--------|--------|-------------|
| Freq          | Loss  | Factor | Factor | Level | Line   | Limit  | Remark      |
| MHz           | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB          |
| 1 pp 6902.598 | 11.37 | 36.19  | 56.72  | 59.51 | 50.35  | 68.20  | -17.85 peak |
| 2 8367.938    | 11.67 | 38.66  | 55.57  | 53.10 | 47.86  | 74.00  | -26.14 peak |
| 3 8698.174    | 12.09 | 38.59  | 55.27  | 53.47 | 48.88  | 68.20  | -19.32 peak |
| 4 10360.000   | 13.60 | 39.00  | 53.88  | 48.69 | 47.41  | 68.20  | -20.79 peak |
| 5 15540.000   | 17.00 | 38.56  | 54.14  | 46.43 | 47.85  | 74.00  | -26.15 peak |
| 6 16574.540   | 17.67 | 39.12  | 54.17  | 46.84 | 49.46  | 68.20  | -18.74 peak |



### 11a\_TX\_CH\_44\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

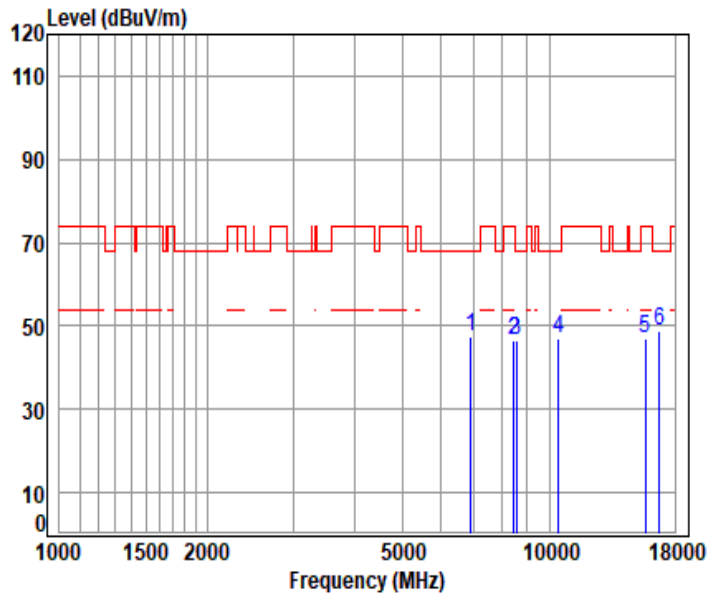
Mode : 5220 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7285.470    | 11.51 | 36.67  | 56.47  | 52.97 | 44.68  | 74.00  | -29.32 | peak   |
| 2 | 8393.547    | 11.64 | 38.61  | 55.55  | 51.42 | 46.12  | 74.00  | -27.88 | peak   |
| 3 | 8689.318    | 12.08 | 38.56  | 55.28  | 52.12 | 47.48  | 68.20  | -20.72 | peak   |
| 4 | 10440.000   | 13.63 | 39.04  | 53.84  | 47.62 | 46.45  | 68.20  | -21.75 | peak   |
| 5 | 15660.000   | 17.23 | 38.56  | 54.10  | 45.94 | 47.63  | 74.00  | -26.37 | peak   |
| 6 | pp17002.020 | 18.08 | 39.70  | 54.30  | 45.04 | 48.52  | 68.20  | -19.68 | peak   |



11a\_TX\_CH\_44\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

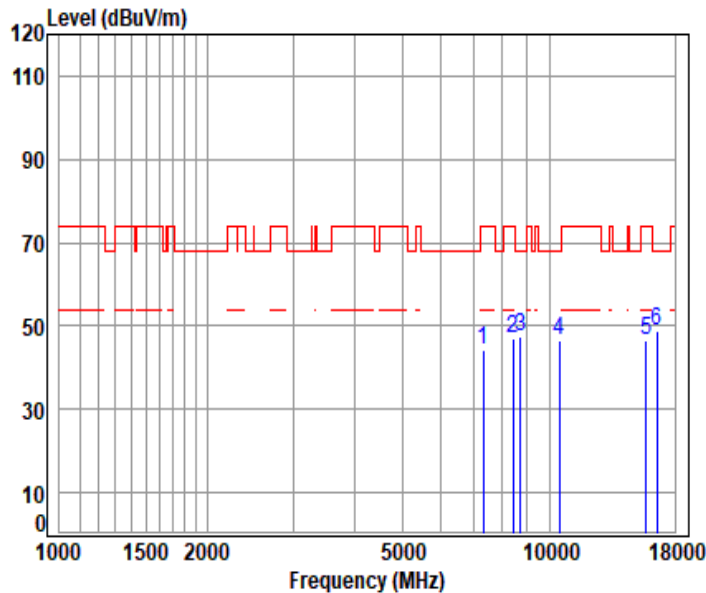
Mode : 5220 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 6902.598    | 11.37 | 36.19  | 56.72  | 56.42 | 47.26  | 68.20  | -20.94 | peak   |
| 2 | 8462.222    | 12.05 | 38.38  | 55.48  | 51.54 | 46.49  | 74.00  | -27.51 | peak   |
| 3 | 8548.855    | 12.14 | 38.30  | 55.41  | 51.70 | 46.73  | 68.20  | -21.47 | peak   |
| 4 | 10440.000   | 13.63 | 39.04  | 53.84  | 48.26 | 47.09  | 68.20  | -21.11 | peak   |
| 5 | 15660.000   | 17.23 | 38.56  | 54.10  | 45.32 | 47.01  | 74.00  | -26.99 | peak   |
| 6 | pp16727.180 | 17.55 | 39.45  | 54.22  | 46.11 | 48.89  | 68.20  | -19.31 | peak   |



### 11a\_TX\_CH\_48\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

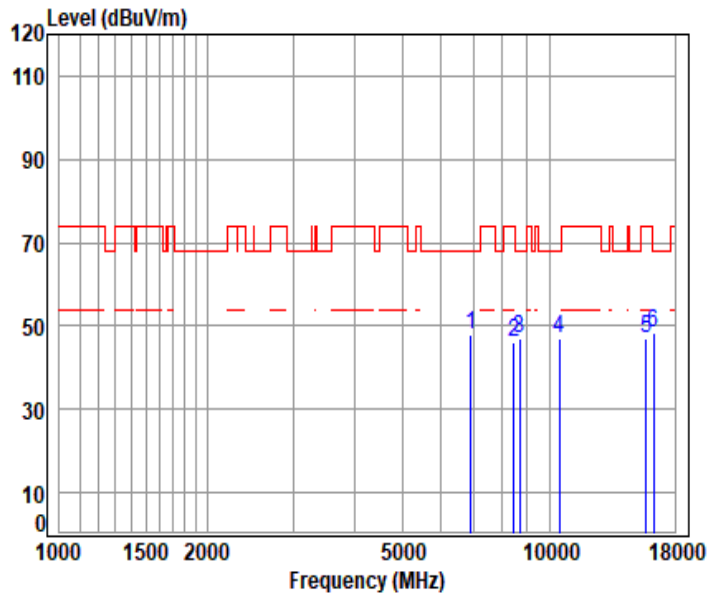
Mode : 5240 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7322.668    | 11.51 | 36.75  | 56.44  | 52.63 | 44.45  | 74.00  | -29.55 | peak   |
| 2 | 8436.402    | 11.88 | 38.45  | 55.51  | 52.19 | 47.01  | 74.00  | -26.99 | peak   |
| 3 | 8724.793    | 12.13 | 38.55  | 55.25  | 51.95 | 47.38  | 68.20  | -20.82 | peak   |
| 4 | 10480.000   | 13.64 | 39.08  | 53.81  | 47.65 | 46.56  | 68.20  | -21.64 | peak   |
| 5 | 15720.000   | 17.22 | 38.58  | 54.08  | 45.00 | 46.72  | 74.00  | -27.28 | peak   |
| 6 | pp16574.540 | 17.67 | 39.12  | 54.17  | 45.98 | 48.60  | 68.20  | -19.60 | peak   |



11a\_TX\_CH\_48\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

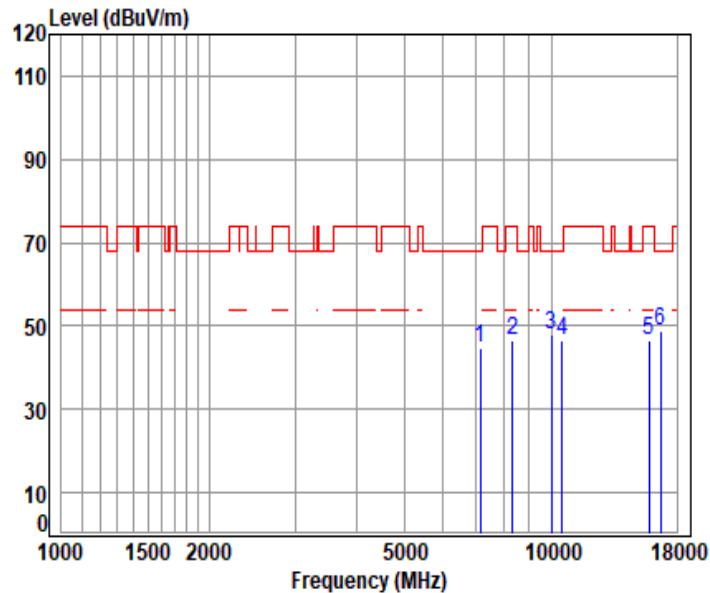
Mode : 5240 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 6902.598    | 11.37 | 36.19  | 56.72  | 56.91 | 47.75  | 68.20  | -20.45 | peak   |
| 2 | 8462.222    | 12.05 | 38.38  | 55.48  | 51.25 | 46.20  | 74.00  | -27.80 | peak   |
| 3 | 8698.174    | 12.09 | 38.59  | 55.27  | 51.77 | 47.18  | 68.20  | -21.02 | peak   |
| 4 | 10480.000   | 13.64 | 39.08  | 53.81  | 47.98 | 46.89  | 68.20  | -21.31 | peak   |
| 5 | 15720.000   | 17.22 | 38.58  | 54.08  | 45.47 | 47.19  | 74.00  | -26.81 | peak   |
| 6 | pp16306.610 | 17.22 | 38.61  | 54.09  | 46.82 | 48.56  | 68.20  | -19.64 | peak   |



### 11a\_TX\_CH\_52\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

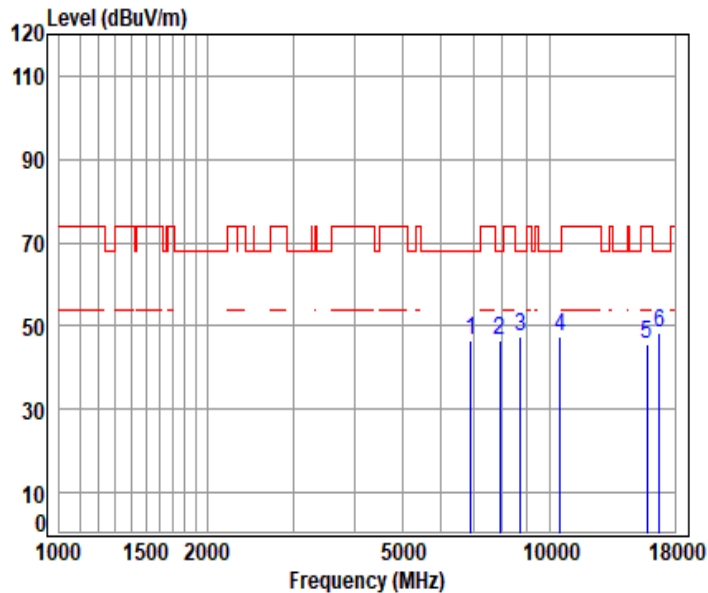
Mode : 5260 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7145.831    | 11.77 | 36.49  | 56.58  | 53.24 | 44.92  | 68.20  | -23.28 | peak   |
| 2 | 8325.429    | 11.73 | 38.31  | 55.61  | 52.10 | 46.53  | 74.00  | -27.47 | peak   |
| 3 | 10000.720   | 13.01 | 38.90  | 54.10  | 50.07 | 47.88  | 68.20  | -20.32 | peak   |
| 4 | 10520.000   | 13.63 | 39.14  | 53.79  | 47.70 | 46.68  | 68.20  | -21.52 | peak   |
| 5 | 15780.000   | 17.08 | 38.52  | 54.07  | 44.89 | 46.42  | 74.00  | -27.58 | peak   |
| 6 | pp16676.140 | 17.60 | 39.35  | 54.20  | 46.07 | 48.82  | 68.20  | -19.38 | peak   |



11a\_TX\_CH\_52\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

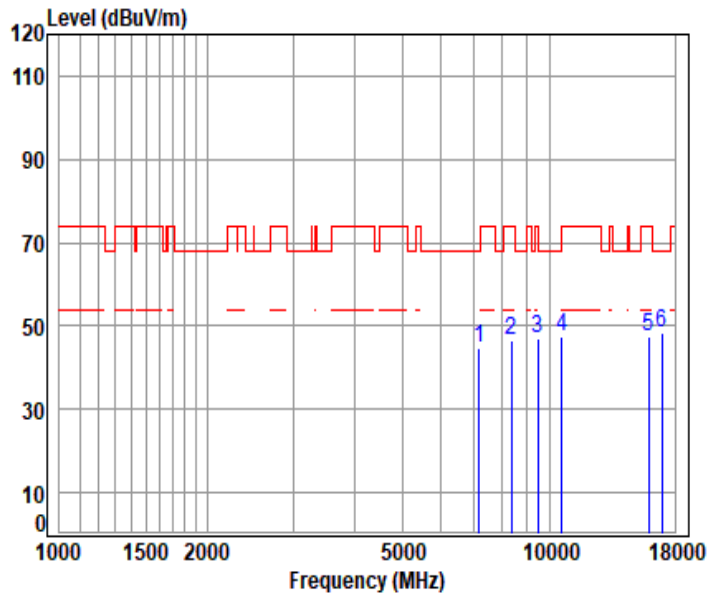
Mode : 5260 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 6902.598    | 11.37 | 36.19  | 56.72  | 55.59 | 46.43  | 68.20  | -21.77 | peak   |
| 2 | 7912.043    | 11.54 | 37.62  | 55.97  | 53.28 | 46.47  | 68.20  | -21.73 | peak   |
| 3 | 8707.038    | 12.10 | 38.59  | 55.26  | 51.93 | 47.36  | 68.20  | -20.84 | peak   |
| 4 | 10520.000   | 13.63 | 39.14  | 53.79  | 48.28 | 47.26  | 68.20  | -20.94 | peak   |
| 5 | 15780.000   | 17.08 | 38.52  | 54.07  | 43.97 | 45.50  | 74.00  | -28.50 | peak   |
| 6 | pp16727.180 | 17.55 | 39.45  | 54.22  | 45.64 | 48.42  | 68.20  | -19.78 | peak   |



### 11a\_TX\_CH\_60\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

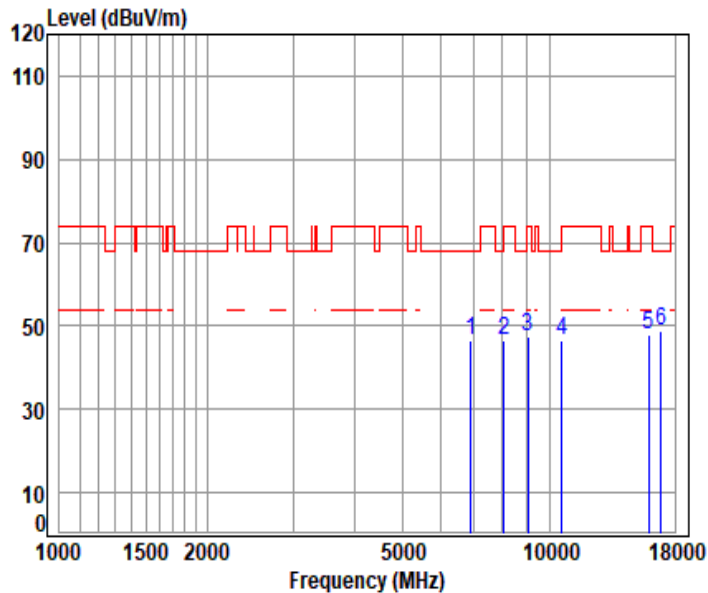
Mode : 5300 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7167.700    | 11.67 | 36.54  | 56.57  | 53.15 | 44.79  | 68.20  | -23.41 | peak   |
| 2 | 8367.938    | 11.67 | 38.66  | 55.57  | 51.65 | 46.41  | 74.00  | -27.59 | peak   |
| 3 | 9475.153    | 12.50 | 38.85  | 54.57  | 50.43 | 47.21  | 74.00  | -26.79 | peak   |
| 4 | 10600.000   | 13.59 | 39.30  | 53.74  | 48.26 | 47.41  | 68.20  | -20.79 | peak   |
| 5 | 15900.000   | 17.28 | 38.70  | 54.03  | 45.35 | 47.30  | 74.00  | -26.70 | peak   |
| 6 | pp16932.880 | 18.14 | 39.63  | 54.28  | 44.67 | 48.16  | 68.20  | -20.04 | peak   |



11a\_TX\_CH\_60\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

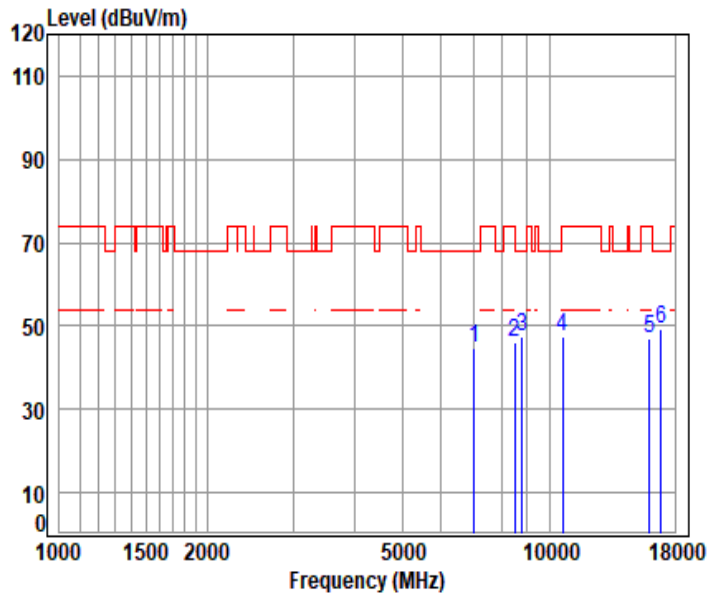
Mode : 5300 TX RSE

: 5G Wi-Fi 11a

|      | Cable       | Ant    | Preamp | Read  |        | Limit  | Over  |             |
|------|-------------|--------|--------|-------|--------|--------|-------|-------------|
| Freq | Loss        | Factor | Factor | Level | Level  | Line   | Limit | Remark      |
| MHz  | dB          | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |             |
| 1    | 6902.598    | 11.37  | 36.19  | 56.72 | 55.80  | 46.64  | 68.20 | -21.56 peak |
| 2    | 8074.876    | 11.48  | 37.80  | 55.83 | 52.88  | 46.33  | 74.00 | -27.67 peak |
| 3    | 9032.237    | 12.14  | 38.60  | 54.97 | 51.75  | 47.52  | 74.00 | -26.48 peak |
| 4    | 10600.000   | 13.59  | 39.30  | 53.74 | 47.61  | 46.76  | 68.20 | -21.44 peak |
| 5    | 15900.000   | 17.28  | 38.70  | 54.03 | 45.80  | 47.75  | 74.00 | -26.25 peak |
| 6    | pp16881.220 | 18.04  | 39.60  | 54.26 | 45.35  | 48.73  | 68.20 | -19.47 peak |



### 11a\_TX\_CH\_64\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

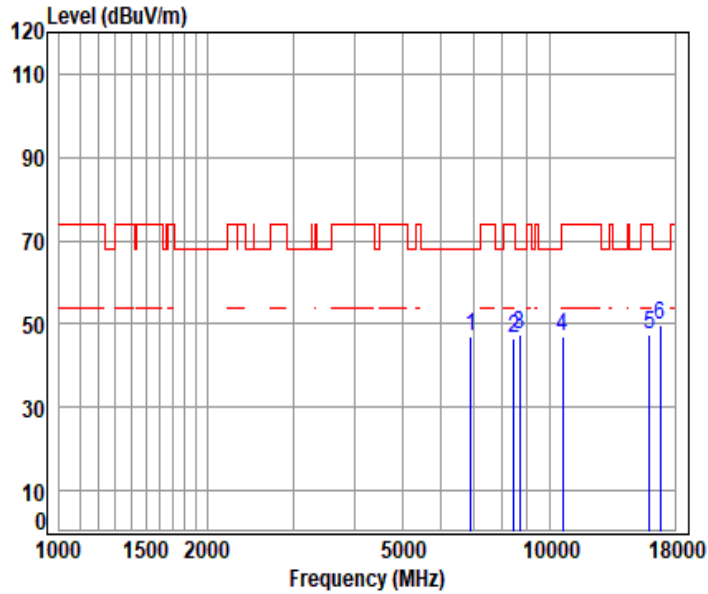
Mode : 5320 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7023.162    | 11.51 | 36.25  | 56.68  | 53.63 | 44.71  | 68.20  | -23.49 | peak   |
| 2 | 8470.845    | 12.11 | 38.36  | 55.48  | 51.12 | 46.11  | 74.00  | -27.89 | peak   |
| 3 | 8787.224    | 12.23 | 38.50  | 55.19  | 51.92 | 47.46  | 68.20  | -20.74 | peak   |
| 4 | 10640.000   | 13.77 | 39.34  | 53.72  | 48.04 | 47.43  | 74.00  | -26.57 | peak   |
| 5 | 15960.000   | 17.20 | 38.64  | 54.01  | 45.20 | 47.03  | 74.00  | -26.97 | peak   |
| 6 | pp16881.220 | 18.04 | 39.60  | 54.26  | 46.03 | 49.41  | 68.20  | -18.79 | peak   |



11a\_TX\_CH\_64\_Verical



Condition: 3m VERTICAL

Job No : 01576AT

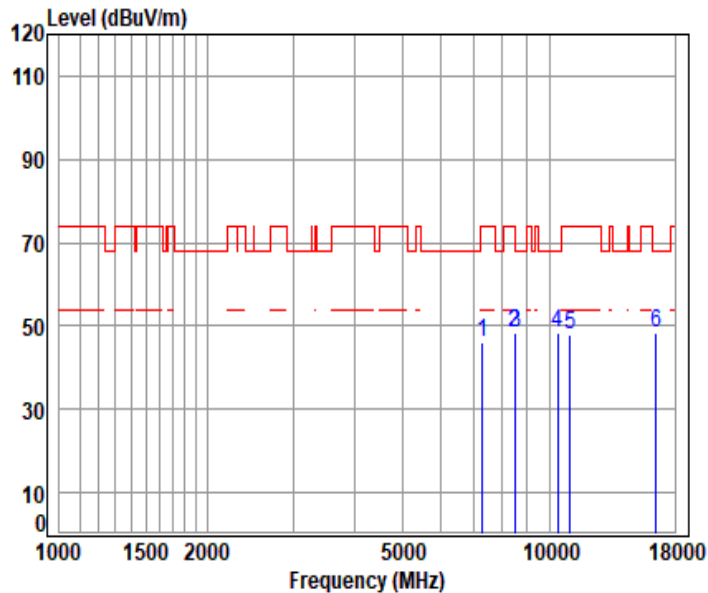
Mode : 5320 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 6902.598    | 11.37 | 36.19  | 56.72  | 56.12 | 46.96  | 68.20  | -21.24 | peak   |
| 2 | 8445.000    | 11.94 | 38.42  | 55.50  | 51.52 | 46.38  | 74.00  | -27.62 | peak   |
| 3 | 8698.174    | 12.09 | 38.59  | 55.27  | 51.89 | 47.30  | 68.20  | -20.90 | peak   |
| 4 | 10640.000   | 13.77 | 39.34  | 53.72  | 47.40 | 46.79  | 74.00  | -27.21 | peak   |
| 5 | 15960.000   | 17.20 | 38.64  | 54.01  | 45.50 | 47.33  | 74.00  | -26.67 | peak   |
| 6 | pp16812.580 | 17.55 | 39.60  | 54.24  | 46.75 | 49.66  | 68.20  | -18.54 | peak   |



### 11a\_TX\_CH\_100\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

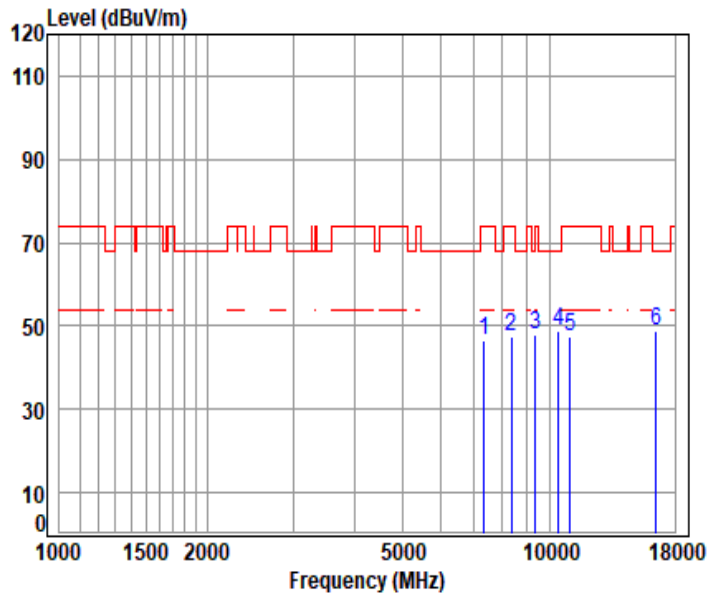
Mode : 5500 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7300.327    | 11.51 | 36.70  | 56.46  | 54.22 | 45.97  | 74.00  | -28.03 | peak   |
| 2 | 8479.478    | 12.17 | 38.34  | 55.47  | 53.34 | 48.38  | 74.00  | -25.62 | peak   |
| 3 | 8514.096    | 12.26 | 38.30  | 55.44  | 53.32 | 48.44  | 68.20  | -19.76 | peak   |
| 4 | 10395.390   | 13.62 | 39.00  | 53.86  | 49.77 | 48.53  | 68.20  | -19.67 | peak   |
| 5 | 11000.000   | 14.17 | 39.40  | 53.50  | 47.98 | 48.05  | 74.00  | -25.95 | peak   |
| 6 | pp16500.000 | 17.74 | 38.90  | 54.15  | 46.09 | 48.58  | 68.20  | -19.62 | peak   |



11a\_TX\_CH\_100\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

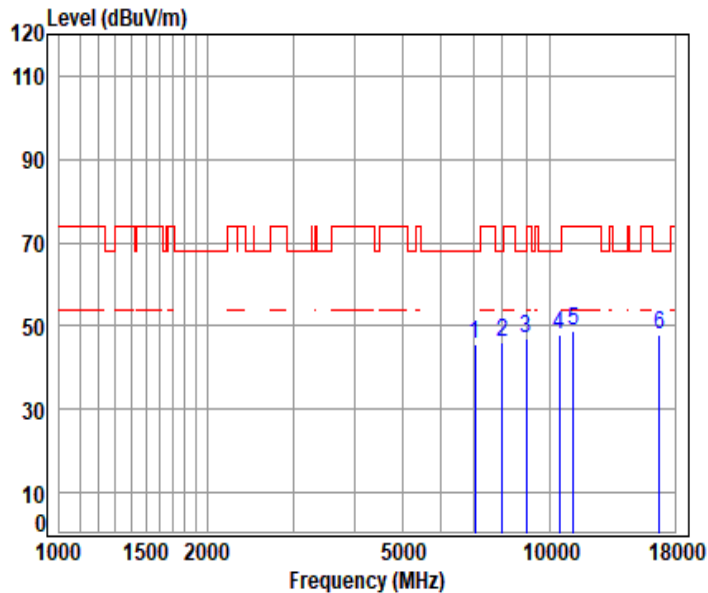
Mode : 5500 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7345.079    | 11.51 | 36.79  | 56.42  | 54.44 | 46.32  | 74.00  | -27.68 | peak   |
| 2 | 8350.908    | 11.69 | 38.70  | 55.58  | 52.76 | 47.57  | 74.00  | -26.43 | peak   |
| 3 | 9360.045    | 12.25 | 38.80  | 54.68  | 51.56 | 47.93  | 74.00  | -26.07 | peak   |
| 4 | 10416.590   | 13.62 | 39.02  | 53.85  | 49.86 | 48.65  | 68.20  | -19.55 | peak   |
| 5 | 11000.000   | 14.17 | 39.40  | 53.50  | 47.40 | 47.47  | 74.00  | -26.53 | peak   |
| 6 | pp16500.000 | 17.74 | 38.90  | 54.15  | 46.52 | 49.01  | 68.20  | -19.19 | peak   |



### 11a\_TX\_CH\_116\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

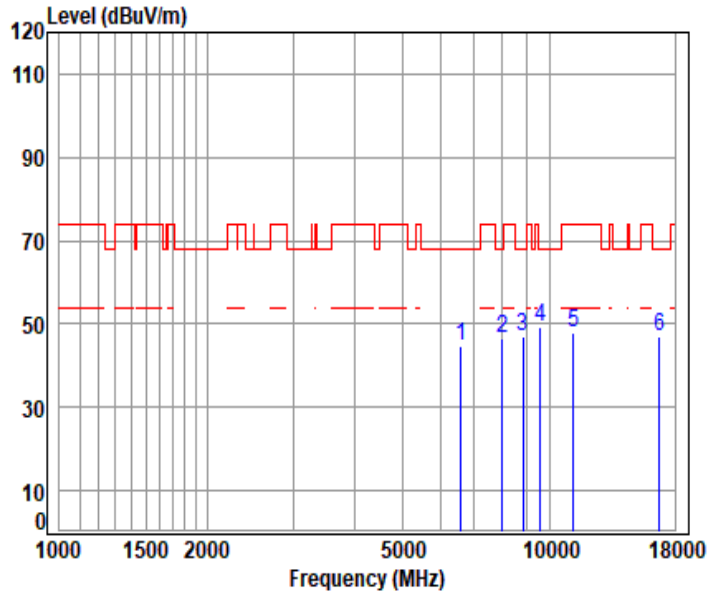
Mode : 5580 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7037.483    | 11.60 | 36.27  | 56.67  | 54.21 | 45.41  | 68.20  | -22.79 | peak   |
| 2 | 8017.507    | 11.54 | 37.80  | 55.88  | 52.66 | 46.12  | 68.20  | -22.08 | peak   |
| 3 | 8968.067    | 12.17 | 38.54  | 55.03  | 51.19 | 46.87  | 68.20  | -21.33 | peak   |
| 4 | 10448.470   | 13.63 | 39.05  | 53.83  | 48.92 | 47.77  | 68.20  | -20.43 | peak   |
| 5 | 11160.000   | 14.72 | 39.56  | 53.55  | 47.93 | 48.66  | 74.00  | -25.34 | peak   |
| 6 | pp16740.000 | 17.54 | 39.48  | 54.22  | 45.08 | 47.88  | 68.20  | -20.32 | peak   |



### 11a\_TX\_CH\_116\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

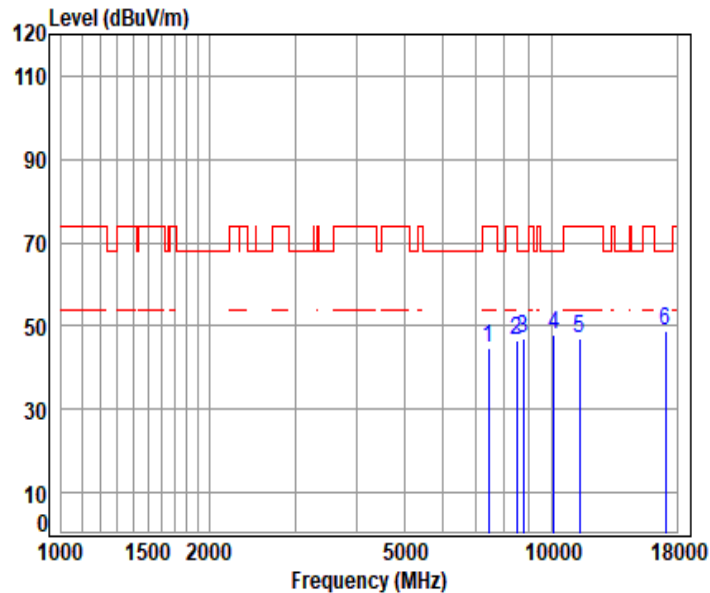
Mode : 5580 TX RSE

: 5G Wi-Fi 11a

|      |           | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|------|-----------|-------|--------|--------|-------|--------|--------|--------|--------|
|      | Freq      | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|      | MHz       | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1    | 6586.642  | 11.61 | 35.15  | 56.78  | 54.83 | 44.81  | 68.20  | -23.39 | peak   |
| 2    | 8009.345  | 11.55 | 37.80  | 55.89  | 53.00 | 46.46  | 68.20  | -21.74 | peak   |
| 3    | 8814.115  | 12.25 | 38.50  | 55.17  | 51.26 | 46.84  | 68.20  | -21.36 | peak   |
| 4 pp | 9581.912  | 12.45 | 38.80  | 54.48  | 52.47 | 49.24  | 68.20  | -18.96 | peak   |
| 5    | 11160.000 | 14.72 | 39.56  | 53.55  | 47.03 | 47.76  | 74.00  | -26.24 | peak   |
| 6    | 16740.000 | 17.54 | 39.48  | 54.22  | 44.20 | 47.00  | 68.20  | -21.20 | peak   |



### 11a\_TX\_CH\_140\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

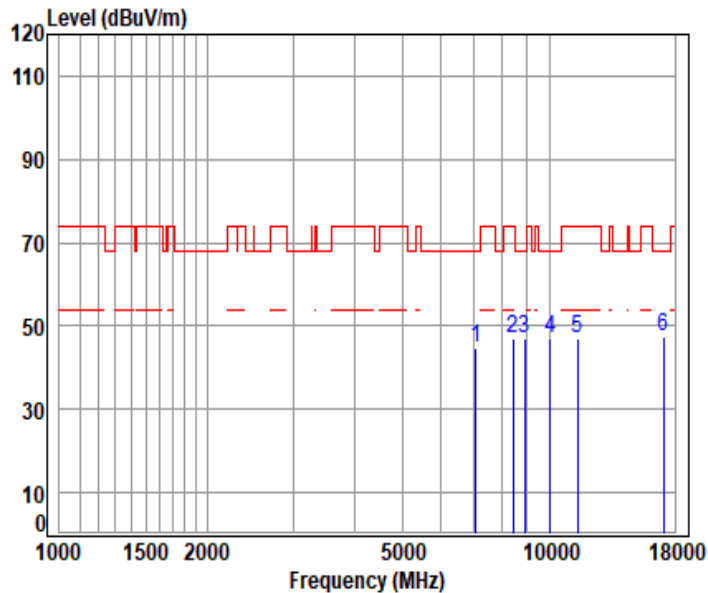
Mode : 5700 TX RSE

: 5G Wi-Fi 11a

|      | Cable       | Ant    | Preamp | Read  |        | Limit  | Over  |             |
|------|-------------|--------|--------|-------|--------|--------|-------|-------------|
| Freq | Loss        | Factor | Factor | Level | Level  | Line   | Limit | Remark      |
| MHz  | dB          | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |             |
| 1    | 7427.838    | 11.42  | 36.76  | 56.36 | 53.03  | 44.85  | 74.00 | -29.15 peak |
| 2    | 8479.478    | 12.17  | 38.34  | 55.47 | 51.49  | 46.53  | 74.00 | -27.47 peak |
| 3    | 8742.585    | 12.16  | 38.51  | 55.23 | 51.77  | 47.21  | 68.20 | -20.99 peak |
| 4    | 10103.110   | 13.26  | 39.10  | 54.04 | 49.74  | 48.06  | 68.20 | -20.14 peak |
| 5    | 11400.000   | 14.21  | 39.70  | 53.62 | 46.90  | 47.19  | 74.00 | -26.81 peak |
| 6    | pp17100.000 | 18.47  | 39.80  | 54.32 | 44.79  | 48.74  | 68.20 | -19.46 peak |



### 11a\_TX\_CH\_140\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

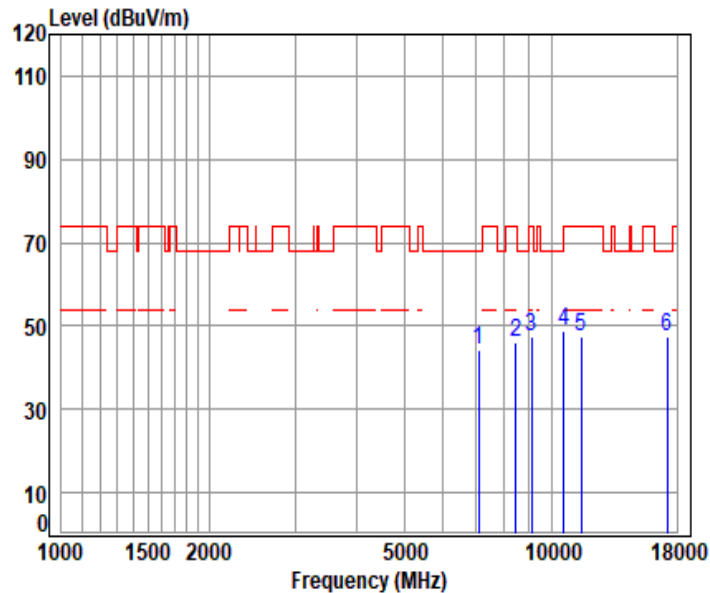
Mode : 5700 TX RSE

: 5G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7080.624    | 11.87 | 36.36  | 56.64  | 52.93 | 44.52  | 68.20  | -23.68 | peak   |
| 2 | 8410.663    | 11.70 | 38.56  | 55.53  | 52.07 | 46.80  | 74.00  | -27.20 | peak   |
| 3 | 8895.287    | 12.22 | 38.59  | 55.09  | 51.49 | 47.21  | 68.20  | -20.99 | peak   |
| 4 | 10010.910   | 13.04 | 38.92  | 54.09  | 49.12 | 46.99  | 68.20  | -21.21 | peak   |
| 5 | 11400.000   | 14.21 | 39.70  | 53.62  | 46.54 | 46.83  | 74.00  | -27.17 | peak   |
| 6 | pp17100.000 | 18.47 | 39.80  | 54.32  | 43.50 | 47.45  | 68.20  | -20.75 | peak   |



### 11a\_TX\_CH\_149\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

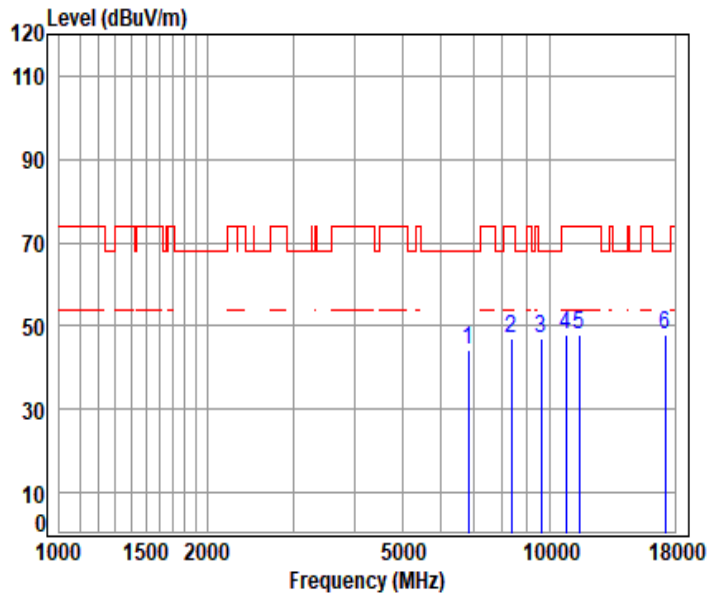
Mode : 5745 TX RSE

: 5.8G Wi-Fi 11a

|      | Cable       | Ant    | Preamp | Read  | Limit  | Over   |                   |
|------|-------------|--------|--------|-------|--------|--------|-------------------|
| Freq | Loss        | Factor | Factor | Level | Level  | Line   | Limit Remark      |
| MHz  | dB          | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB                |
| 1    | 7087.840    | 11.91  | 36.38  | 56.63 | 52.59  | 44.25  | 68.20 -23.95 peak |
| 2    | 8445.000    | 11.94  | 38.42  | 55.50 | 51.07  | 45.93  | 74.00 -28.07 peak |
| 3    | 9087.606    | 12.12  | 38.60  | 54.92 | 51.63  | 47.43  | 74.00 -26.57 peak |
| 4    | 10609.330   | 13.63  | 39.31  | 53.73 | 49.67  | 48.88  | 74.00 -25.12 peak |
| 5    | 11490.000   | 14.97  | 39.61  | 53.65 | 46.62  | 47.55  | 74.00 -26.45 peak |
| 6    | pp17235.000 | 17.83  | 40.01  | 54.35 | 43.88  | 47.37  | 68.20 -20.83 peak |



### 11a\_TX\_CH\_149\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

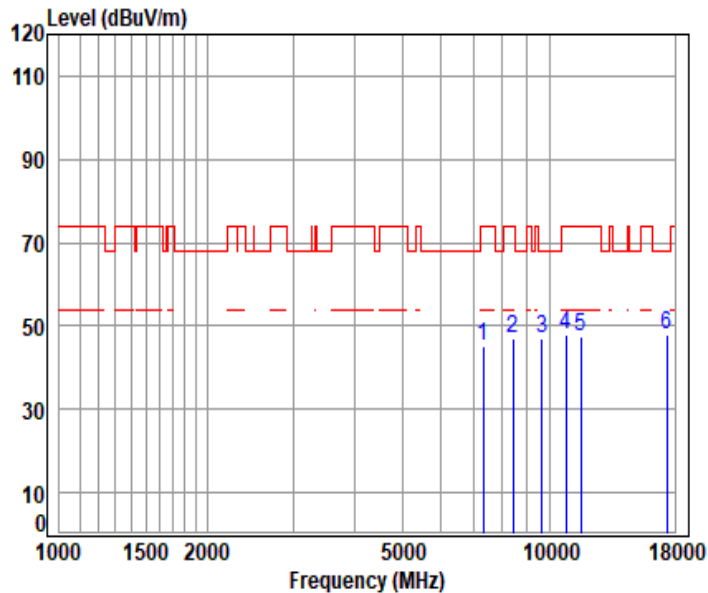
Mode : 5745 TX RSE

: 5.8G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 6825.690    | 11.37 | 35.95  | 56.73  | 53.59 | 44.18  | 68.20  | -24.02 | peak   |
| 2 | 8350.908    | 11.69 | 38.70  | 55.58  | 52.12 | 46.93  | 74.00  | -27.07 | peak   |
| 3 | 9591.677    | 12.44 | 38.80  | 54.47  | 50.19 | 46.96  | 68.20  | -21.24 | peak   |
| 4 | 10805.640   | 13.70 | 39.30  | 53.62  | 48.35 | 47.73  | 74.00  | -26.27 | peak   |
| 5 | 11490.000   | 14.97 | 39.61  | 53.65  | 46.85 | 47.78  | 74.00  | -26.22 | peak   |
| 6 | pp17235.000 | 17.83 | 40.01  | 54.35  | 44.52 | 48.01  | 68.20  | -20.19 | peak   |



### 11a\_TX\_CH\_157\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

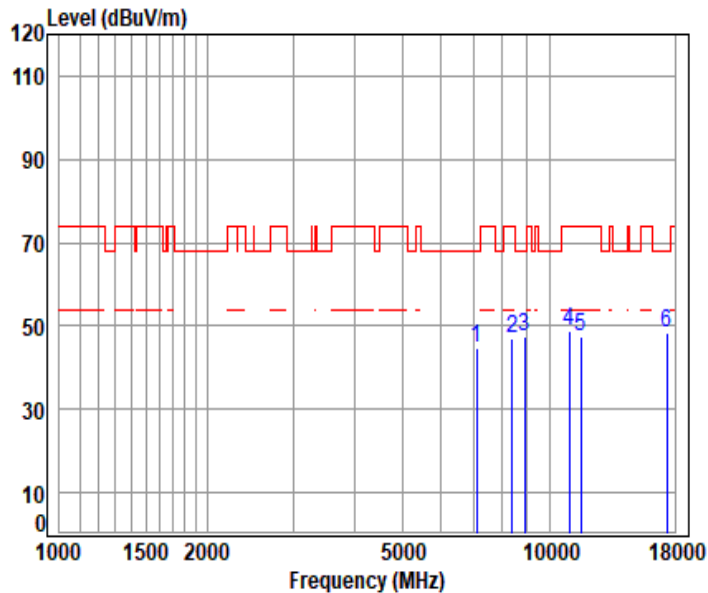
Mode : 5785 TX RSE

: 5.8G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7330.131    | 11.51 | 36.76  | 56.44  | 53.26 | 45.09  | 74.00  | -28.91 | peak   |
| 2 | 8419.234    | 11.76 | 38.52  | 55.52  | 52.11 | 46.87  | 74.00  | -27.13 | peak   |
| 3 | 9640.650    | 12.54 | 38.72  | 54.42  | 50.24 | 47.08  | 68.20  | -21.12 | peak   |
| 4 | 10794.640   | 13.70 | 39.31  | 53.62  | 48.72 | 48.11  | 74.00  | -25.89 | peak   |
| 5 | 11570.000   | 14.78 | 39.60  | 53.67  | 46.84 | 47.55  | 74.00  | -26.45 | peak   |
| 6 | pp17355.000 | 18.00 | 40.31  | 54.37  | 43.99 | 47.93  | 68.20  | -20.27 | peak   |



11a\_TX\_CH\_157\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

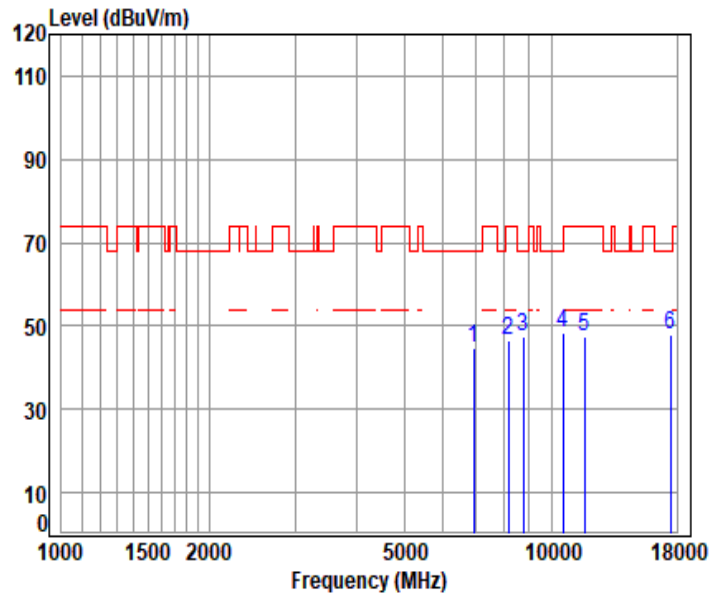
Mode : 5785 TX RSE

: 5.8G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 7102.293    | 11.98 | 36.40  | 56.62  | 52.97 | 44.73  | 68.20  | -23.47 | peak   |
| 2 | 8376.465    | 11.66 | 38.65  | 55.56  | 52.03 | 46.78  | 74.00  | -27.22 | peak   |
| 3 | 8877.185    | 12.23 | 38.55  | 55.11  | 51.86 | 47.53  | 68.20  | -20.67 | peak   |
| 4 | 10983.190   | 14.13 | 39.38  | 53.51  | 48.72 | 48.72  | 74.00  | -25.28 | peak   |
| 5 | 11570.000   | 14.78 | 39.60  | 53.67  | 46.60 | 47.31  | 74.00  | -26.69 | peak   |
| 6 | pp17355.000 | 18.00 | 40.31  | 54.37  | 44.21 | 48.15  | 68.20  | -20.05 | peak   |



11a\_TX\_CH\_165\_Horizontal



Condition: 3m HORIZONTAL

Job No : 01576AT

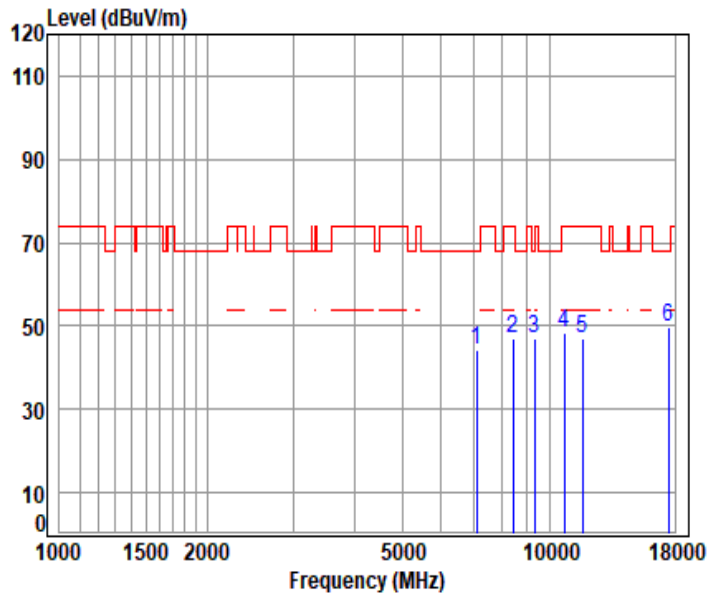
Mode : 5825 TX RSE

: 5.8G Wi-Fi 11a

|   |             | Cable | Ant    | Preamp | Read  |        | Limit  | Over   |        |
|---|-------------|-------|--------|--------|-------|--------|--------|--------|--------|
|   | Freq        | Loss  | Factor | Factor | Level | Level  | Line   | Limit  | Remark |
|   | MHz         | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB     |        |
| 1 | 6944.911    | 11.37 | 36.11  | 56.71  | 53.76 | 44.53  | 68.20  | -23.67 | peak   |
| 2 | 8165.858    | 11.53 | 37.93  | 55.75  | 52.69 | 46.40  | 74.00  | -27.60 | peak   |
| 3 | 8760.413    | 12.19 | 38.50  | 55.22  | 52.00 | 47.47  | 68.20  | -20.73 | peak   |
| 4 | pp10555.440 | 13.61 | 39.21  | 53.77  | 49.19 | 48.24  | 68.20  | -19.96 | peak   |
| 5 | 11650.000   | 14.69 | 39.55  | 53.69  | 46.83 | 47.38  | 74.00  | -26.62 | peak   |
| 6 | 17475.000   | 18.35 | 40.78  | 54.40  | 43.26 | 47.99  | 68.20  | -20.21 | peak   |



11a\_TX\_CH\_165\_Vertical



Condition: 3m VERTICAL

Job No : 01576AT

Mode : 5825 TX RSE

: 5.8G Wi-Fi 11a

|      | Cable       | Ant    | Preamp | Read  |        | Limit  | Over  |             |
|------|-------------|--------|--------|-------|--------|--------|-------|-------------|
| Freq | Loss        | Factor | Factor | Level | Level  | Line   | Limit | Remark      |
| MHz  | dB          | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m | dB    |             |
| 1    | 7087.840    | 11.91  | 36.38  | 56.63 | 52.52  | 44.18  | 68.20 | -24.02 peak |
| 2    | 8419.234    | 11.76  | 38.52  | 55.52 | 52.20  | 46.96  | 74.00 | -27.04 peak |
| 3    | 9331.487    | 12.21  | 38.80  | 54.70 | 50.63  | 46.94  | 74.00 | -27.06 peak |
| 4    | 10728.870   | 13.94  | 39.37  | 53.66 | 48.59  | 48.24  | 74.00 | -25.76 peak |
| 5    | 11650.000   | 14.69  | 39.55  | 53.69 | 46.55  | 47.10  | 74.00 | -26.90 peak |
| 6    | pp17475.000 | 18.35  | 40.78  | 54.40 | 44.86  | 49.59  | 68.20 | -18.61 peak |



## 7.5 Channel Move Time

Test Requirement KDB 905462 D02 Section 5.1  
 Test Method: KDB 905462 D02 Section 7.8.3  
 Limit:

| Test item                         | Limit                                                                                                     | Applicability                                |                                |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------|
|                                   |                                                                                                           | Master Device or client with Radar Detection | Client without Radar Detection |
| Non-occupancy period              | Minimum 30 minutes                                                                                        | Yes                                          | Not required                   |
| Channel Availability Check Time   | 60 seconds                                                                                                | Yes                                          | Not required                   |
| Channel Move Time                 | 10 seconds<br>See Note 1.                                                                                 | Yes                                          | Yes                            |
| Channel Closing Transmission Time | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.<br>See Notes 1 and 2. | Yes                                          | Yes                            |
| U-NII Detection Bandwidth         | Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.                                   | Yes                                          | Not required                   |

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

### 7.5.1 E.U.T. Operation

Operating Environment:

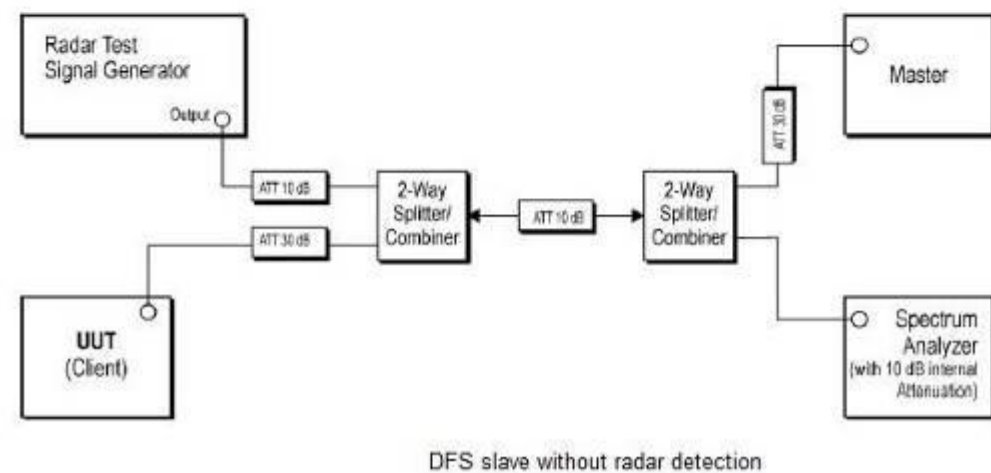
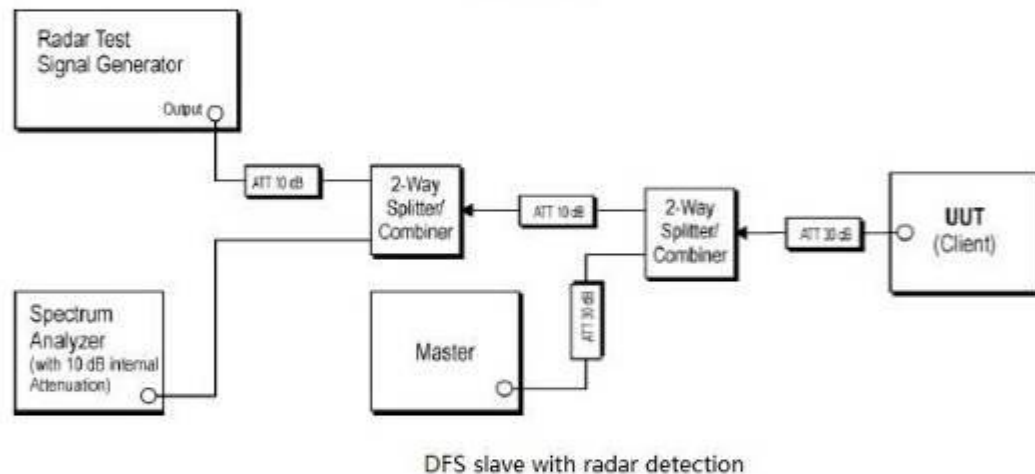
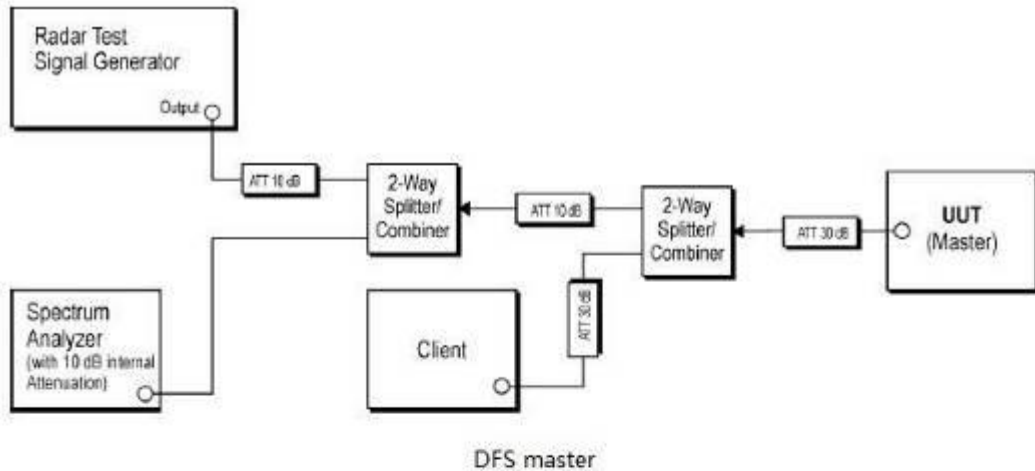
Temperature: 21.7 °C Humidity: 53.4 % RH Atmospheric Pressure: 1020 mbar

### 7.5.2 Test Mode Description

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



### 7.5.3 Test Setup Diagram



## 7.5.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell (0.3ms) = S (12000ms) / B (4000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C (ms) = N \times Dwell (0.3ms)$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



## 7.6 Non-occupancy period

Test Requirement KDB 905462 D02 Section 5.1  
 Test Method: KDB 905462 D02 Section 7.8.3  
 Limit:

| Test item                         | Limit                                                                                                     | Applicability                                |                                |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------|
|                                   |                                                                                                           | Master Device or client with Radar Detection | Client without Radar Detection |
| Non-occupancy period              | Minimum 30 minutes                                                                                        | Yes                                          | Not required                   |
| Channel Availability Check Time   | 60 seconds                                                                                                | Yes                                          | Not required                   |
| Channel Move Time                 | 10 seconds<br>See Note 1.                                                                                 | Yes                                          | Yes                            |
| Channel Closing Transmission Time | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.<br>See Notes 1 and 2. | Yes                                          | Yes                            |
| U-NII Detection Bandwidth         | Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.                                   | Yes                                          | Not required                   |

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

### 7.6.1 E.U.T. Operation

Operating Environment:

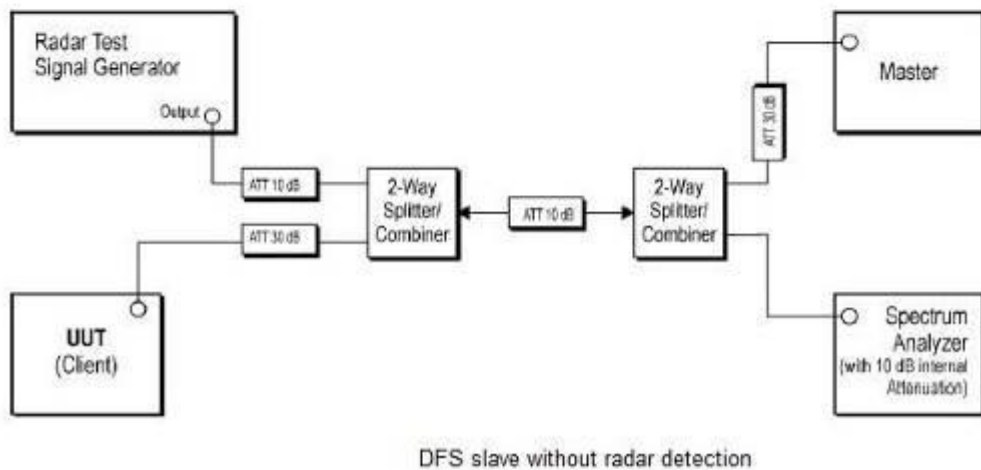
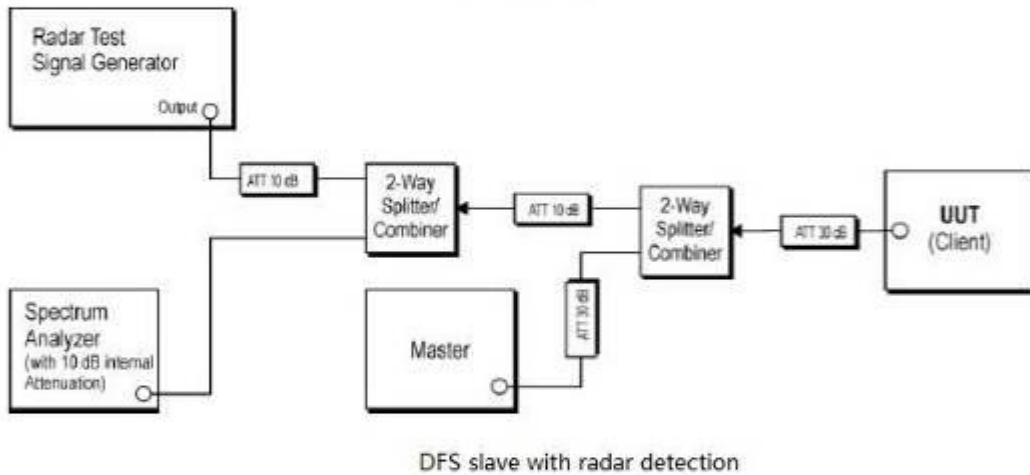
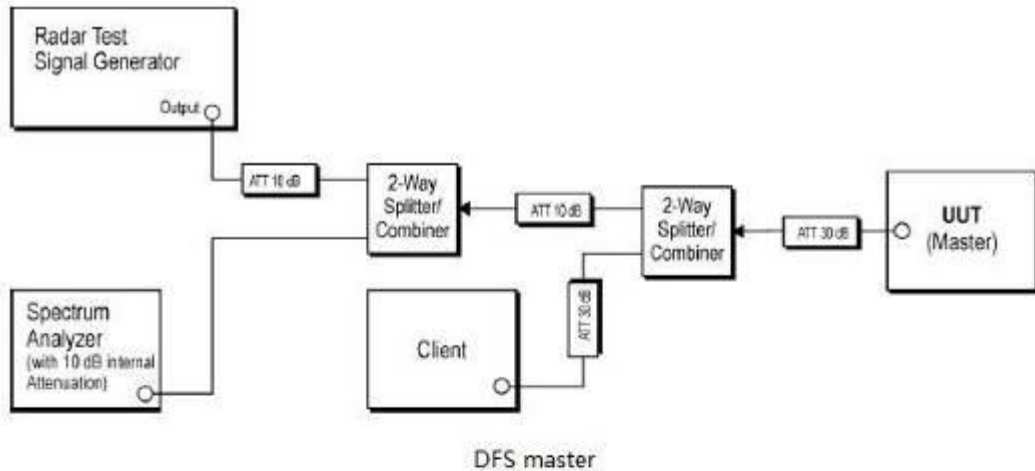
Temperature: 21.7 °C Humidity: 53.4 % RH Atmospheric Pressure: 1020 mbar

### 7.6.2 Test Mode Description

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



### 7.6.3 Test Setup Diagram



## 7.6.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell (0.3ms) = S (12000ms) / B (4000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C (ms) = N \times Dwell (0.3ms)$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



## 7.7 Channel Closing Transmission Time

Test Requirement KDB 905462 D02 Section 5.1  
 Test Method: KDB 905462 D02 Section 7.8.3  
 Limit:

| Test item                         | Limit                                                                                                     | Applicability                                |                                |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------|
|                                   |                                                                                                           | Master Device or client with Radar Detection | Client without Radar Detection |
| Non-occupancy period              | Minimum 30 minutes                                                                                        | Yes                                          | Not required                   |
| Channel Availability Check Time   | 60 seconds                                                                                                | Yes                                          | Not required                   |
| Channel Move Time                 | 10 seconds<br>See Note 1.                                                                                 | Yes                                          | Yes                            |
| Channel Closing Transmission Time | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.<br>See Notes 1 and 2. | Yes                                          | Yes                            |
| U-NII Detection Bandwidth         | Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.                                   | Yes                                          | Not required                   |

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

### 7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 21.7 °C Humidity: 53.4 % RH Atmospheric Pressure: 1020 mbar

### 7.7.2 Test Mode Description

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



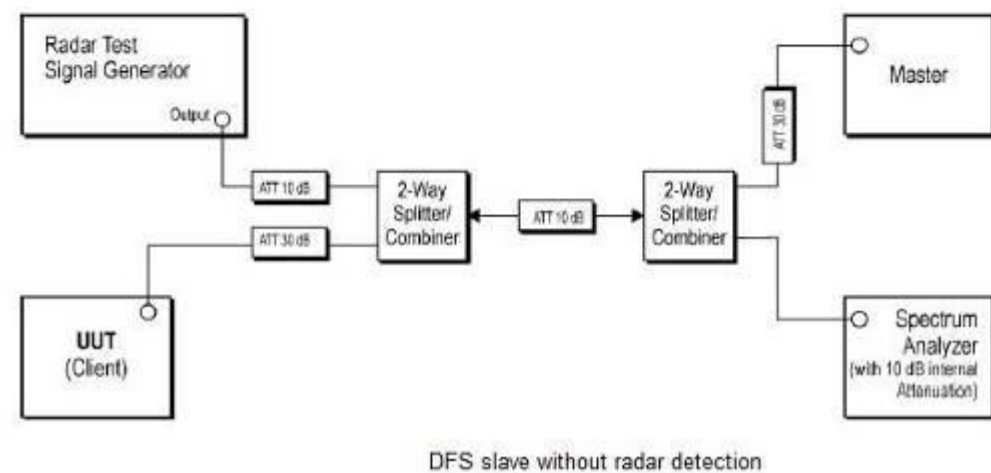
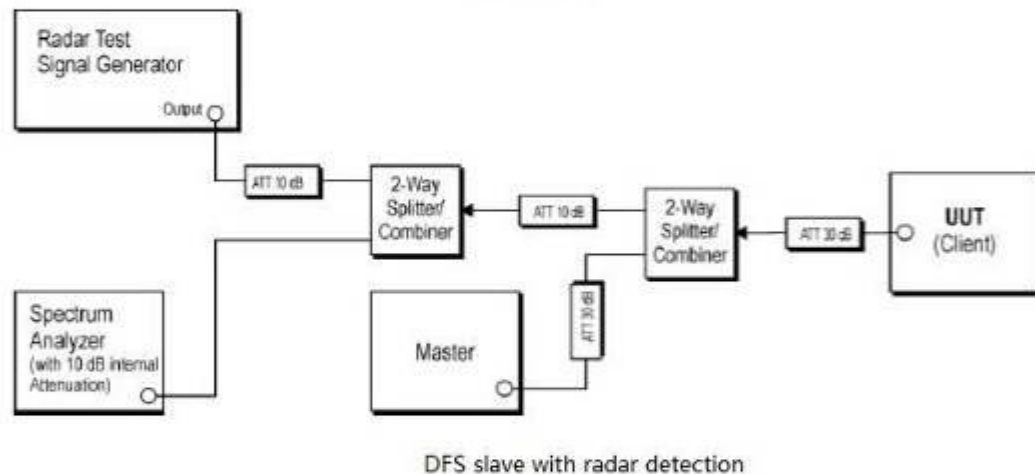
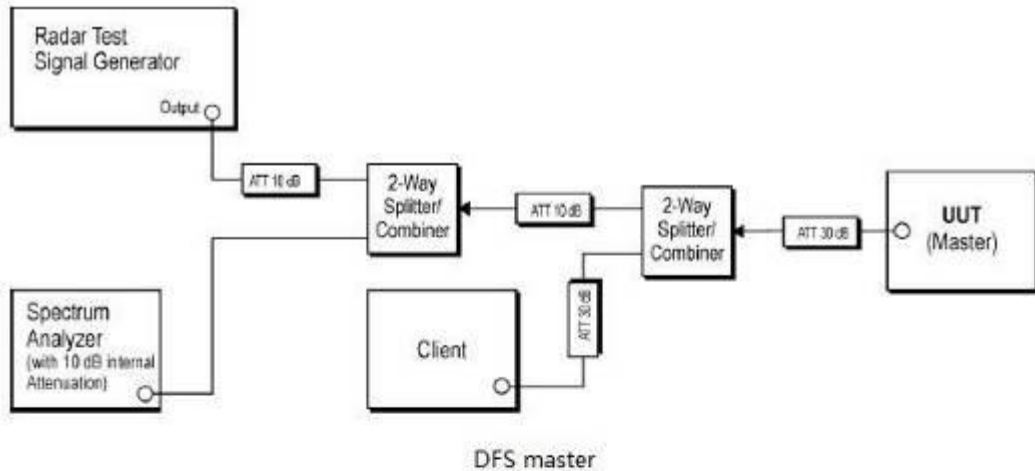
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction 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.  
 Shenzhen Branch Inspection & Testing Services Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
 中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 7.7.3 Test Setup Diagram



## 7.7.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell (0.3ms) = S (12000ms) / B (4000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C (ms) = N \times Dwell (0.3ms)$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



### 8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2504001576AT

### 9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2504001576AT



## 10 Appendix

### 1.DFS

(DFS: Non-occupancy period; Channel Move Time; Channel Closing Transmission Time)

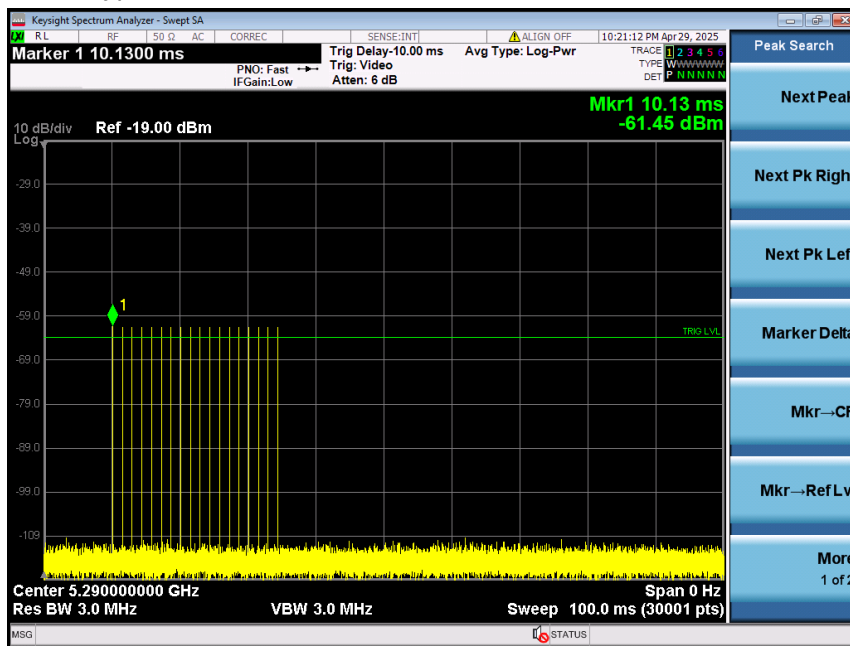
Note: All antennas type has been tested and we found the antenna 1 has the worst result.

Only record the worst test result.

**Test plots as follows:**

Radar Waveform Calibration Result

Radar Type 0

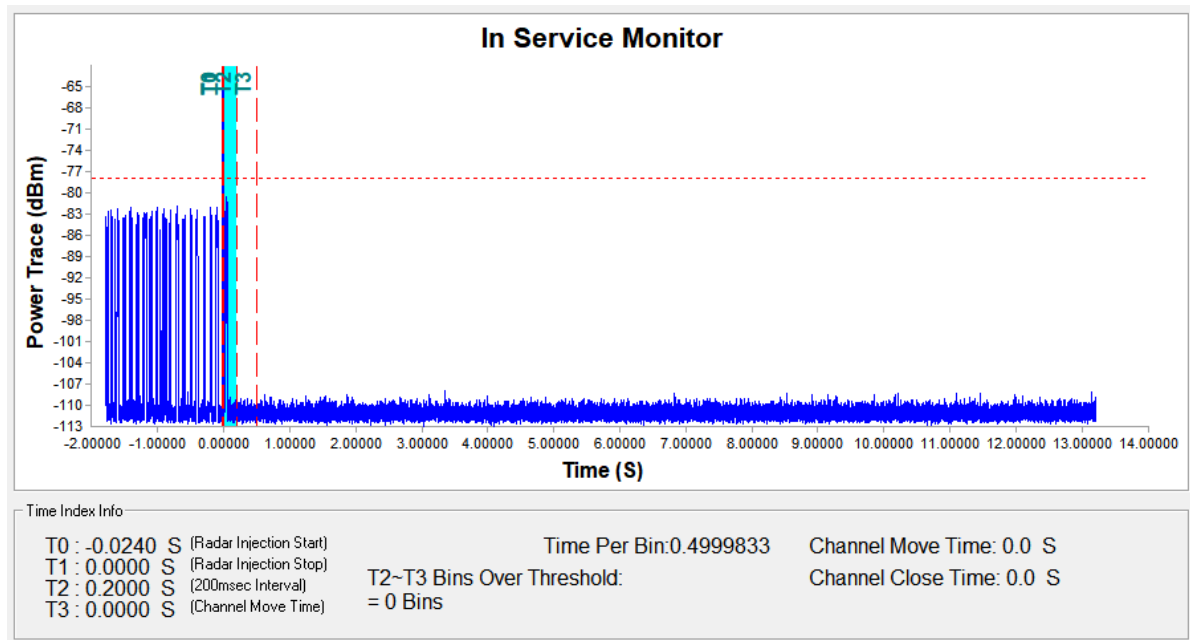
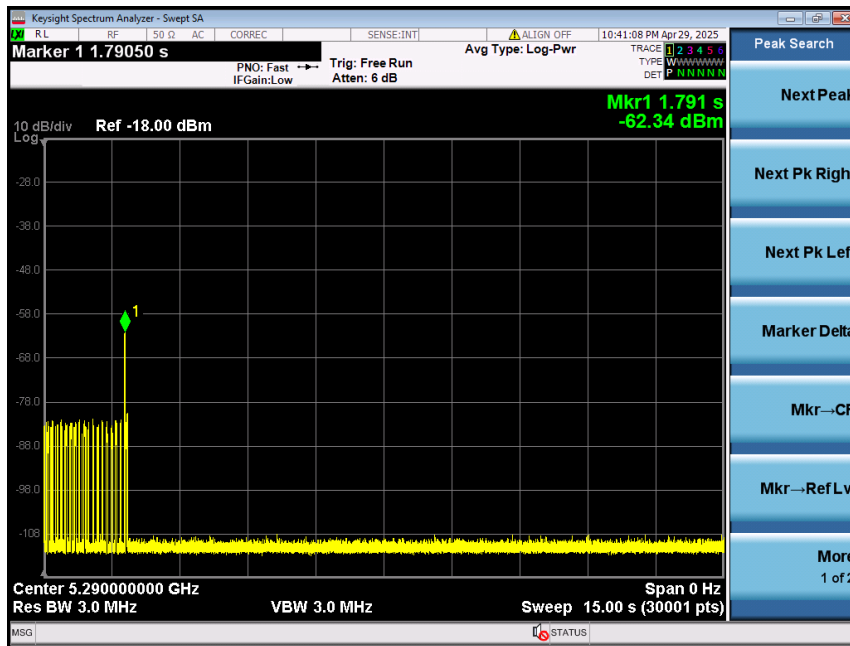


### Test Data:

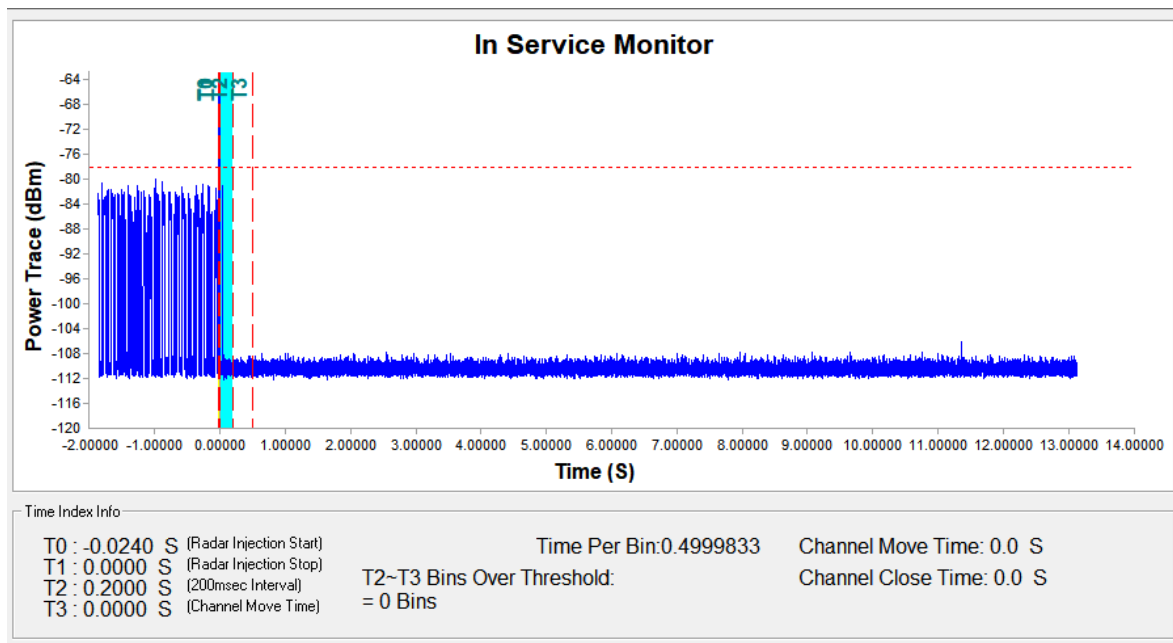
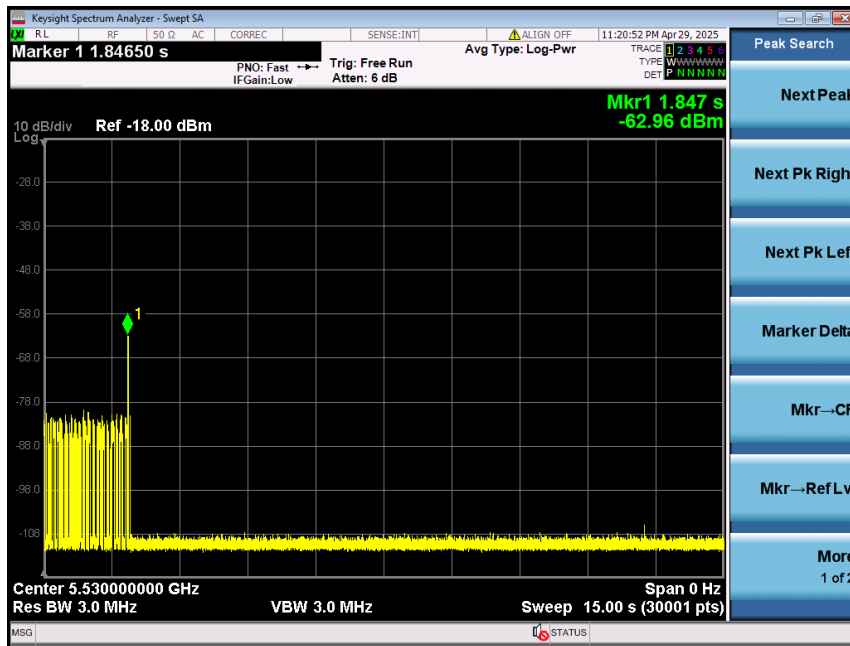
| BW/Channel        | Test Item                         | Test data           | Limit   | Results |
|-------------------|-----------------------------------|---------------------|---------|---------|
| 80MHz/<br>5290MHz | Non-occupancy period              | Refer to test plots | >30 min | pass    |
|                   | Channel Move Time                 | 0.0s                | <10 s   | Pass    |
|                   | Channel Closing Transmission Time | 0.0s                | <60ms   | Pass    |

| BW/Channel        | Test Item                         | Test data           | Limit   | Results |
|-------------------|-----------------------------------|---------------------|---------|---------|
| 80MHz/<br>5530MHz | Non-occupancy period              | Refer to test plots | >30 min | pass    |
|                   | Channel Move Time                 | 0.0s                | <10 s   | Pass    |
|                   | Channel Closing Transmission Time | 0.0s                | <60ms   | Pass    |

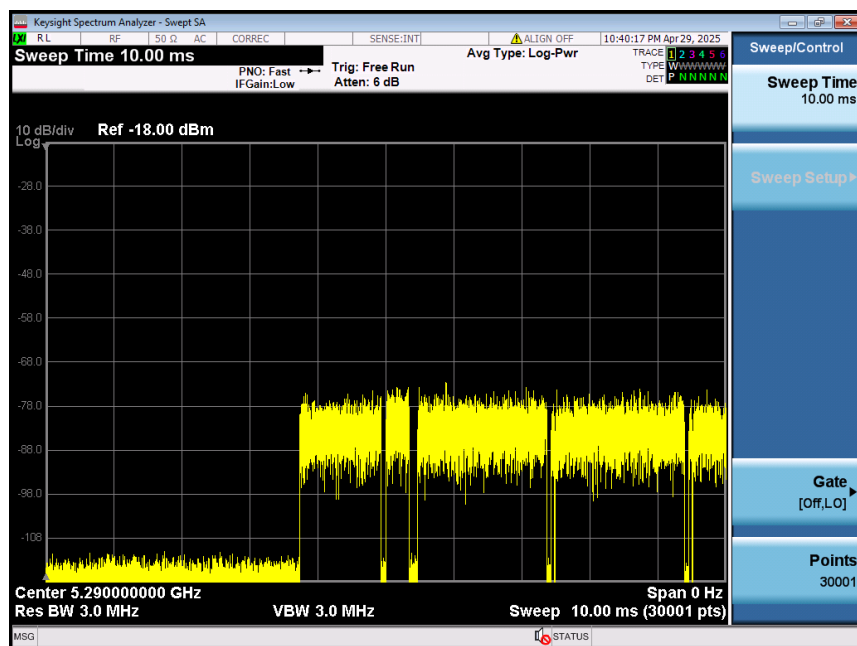
### Test plots as follows(5290MHz):



### Test plots as follows(5530MHz):



Duty Cycle:



- End of the Report -

