



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250100039803

Page: 1 of 33

# DFS TEST Report

**Application No.:** SZCR2501000398AT  
**Applicant:** Huawei Technologies Co., Ltd.  
**Address of Applicant:** Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen, 518129, P.R.C  
**Manufacturer:** Huawei Technologies Co., Ltd.  
**Address of Manufacturer:** Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen, 518129, P.R.C  
**Equipment Under Test (EUT):**  
**EUT Name:** GPON ONU  
**Model No.:** W617C  
**Trade Mark:** HUAWEI  
**Standards:** MIC Item 19-3 of Article 2 Paragraph 1  
**Test Method:** MIC Notice No.88 Appendix No.45  
**Date of Receipt:** 2025-01-24  
**Date of Test:** 2025-10-28 to 2025-11-18  
**Date of Issue:** 2025-11-20

|                     |              |
|---------------------|--------------|
| <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 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.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

Member of the SGS Group (SGS SA)

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2025-11-20 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                              |  |
|--------------------------|--|------------------------------|--|
| Authorized for issue by: |  |                              |  |
|                          |  | Darren Yuan                  |  |
|                          |  | Darren Yuan/Project Engineer |  |
|                          |  | Eric Fu                      |  |
|                          |  | Eric Fu/Reviewer             |  |



### 1 Test Summary

| Item                              | Tested Bandwidth and Channel |                 | Limit                                                                                            | Result |
|-----------------------------------|------------------------------|-----------------|--------------------------------------------------------------------------------------------------|--------|
|                                   | Bandwidth (MHz) / mode       | Frequency (MHz) |                                                                                                  |        |
| Channel Availability Check Time   | 160 / 802.11ax160            | 5250/5570       | ≥ 60sec                                                                                          | Pass   |
| Probability of detection          | 160 / 802.11ax160            | 5250/5570       | W53 ≥ 60%<br>W56 Fixed Pulse 1 to Variable Pulse 3 ≥ 60%<br>W56 Chirp ≥ 80%<br>W56 Hopping ≥ 70% | Pass   |
|                                   | 160 / 802.11ax160            | 5250/5570       |                                                                                                  |        |
| Channel Move Time                 | 160 / 802.11ax160            | 5250/5570       | ≤ 10sec                                                                                          | Pass   |
| Channel Closing Transmission Time | 160 / 802.11ax160            | 5250/5570       | ≤ 260ms                                                                                          | Pass   |
| Non-Occupancy Period Test         | 160 / 802.11ax160            | 5250/5570       | ≥ 30 minutes                                                                                     | Pass   |



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

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

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 Contents

|                                                                | Page |
|----------------------------------------------------------------|------|
| 1 COVER PAGE .....                                             | 1    |
| 1 TEST SUMMARY .....                                           | 3    |
| 2 CONTENTS .....                                               | 4    |
| 3 GENERAL INFORMATION .....                                    | 5    |
| 3.1 DETAILS OF E.U.T. ....                                     | 5    |
| 3.2 DESCRIPTION OF SUPPORT UNITS .....                         | 6    |
| 3.3 TEST LOCATION .....                                        | 7    |
| 3.4 TEST FACILITY .....                                        | 7    |
| 3.5 DEVIATION FROM STANDARDS .....                             | 7    |
| 3.6 ABNORMALITIES FROM STANDARD CONDITIONS .....               | 7    |
| 4 EQUIPMENT LIST .....                                         | 8    |
| 5 REQUIREMENTS AND PARAMETERS FOR DFS TEST .....               | 9    |
| 5.1 DFS DETECTION THRESHOLDS .....                             | 9    |
| 5.2 DFS RESPONSE REQUIREMENTS .....                            | 9    |
| 5.3 RADAR TEST WAVEFORMS .....                                 | 10   |
| 6 DFS TEST RESULTS .....                                       | 12   |
| 6.1 E.U.T. OPERATION .....                                     | 12   |
| 6.2 RADAR WAVEFORM CALIBRATION PROCEDURE .....                 | 12   |
| 6.3 CONDUCTED CALIBRATION SETUP .....                          | 12   |
| 6.4 RADAR WAVEFORM CALIBRATION RESULT .....                    | 13   |
| 6.5 CONDUCTED TEST SETUP CONFIGURATION .....                   | 21   |
| 6.6 CHANNEL AVAILABILITY CHECK (W53/W56) .....                 | 22   |
| 6.6.1 Definition and limit of Channel Availability Check ..... | 22   |
| 6.6.2 Test Procedure .....                                     | 22   |
| 6.6.3 Measurement Data .....                                   | 23   |
| 6.7 IN-SERVICE MONITORING (W56) .....                          | 27   |
| 6.7.1 Definition of In-Service Monitoring .....                | 27   |
| 6.7.2 Test Procedure .....                                     | 27   |
| 6.7.3 Measurement Data .....                                   | 30   |



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

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

### 3 General Information

#### 3.1 Details of E.U.T.

|                               |                                                         |                                                                 |
|-------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|
| Power Supply:                 | 12V DC from adapter.                                    |                                                                 |
| WLAN Mode Supported:          | 802.11a:                                                | 20 MHz channel bandwidth                                        |
|                               | 802.11n:                                                | 20 MHz / 40 MHz channel bandwidth                               |
|                               | 802.11ac:                                               | 20 MHz / 40 MHz / 80 MHz / 160 MHz channel bandwidth            |
|                               | 802.11ax:                                               | 20 MHz / 40 MHz / 80 MHz / 160 MHz channel bandwidth            |
|                               | 802.11be:                                               | 20 MHz / 40 MHz / 80 MHz / 160 MHz channel bandwidth            |
| Operation Frequency (20MHz):  | W52: 5180-5240MHz; W53: 5260-5320MHz; W56: 5500-5720MHz |                                                                 |
| Operation Frequency (40MHz):  | W52: 5190-5230MHz; W53: 5270-5310MHz; W56: 5510-5710MHz |                                                                 |
| Operation Frequency (80MHz):  | W52: 5210MHz; W53: 5290MHz; W56: 5530-5690MHz           |                                                                 |
| Operation Frequency (160MHz): | W52: 5250MHz; W56: 5570MHz                              |                                                                 |
| Modulation Type:              | 802.11a:                                                | OFDM (BPSK, QPSK, 16QAM, 64QAM)                                 |
|                               | 802.11n:                                                | OFDM (BPSK, QPSK, 16QAM, 64QAM)                                 |
|                               | 802.11ac:                                               | OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)                         |
|                               | 802.11ax:                                               | OFDM /OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)         |
|                               | 802.11be:                                               | OFDM/OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM) |
| Channel Spacing:              | 20MHz:                                                  | 802.11a/n(HT20)/ac(VHT20)/ax(HE20)/be(EHT20)                    |
|                               | 40MHz:                                                  | 802.11n(HT40)/ac(VHT40)/ax(HE40)/be(EHT40)                      |
|                               | 80MHz:                                                  | 802.11ac(VHT80)/ax(HE80)/be(EHT80)                              |
|                               | 160MHz:                                                 | 802.11ac(VHT160)/ax(HE160)/be(EHT160)                           |



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

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

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

|                |                                                                                  |                                                                                                                |  |
|----------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--|
| Antenna Type:  | PIFA Antenna                                                                     |                                                                                                                |  |
| Antenna Gain*: | <input checked="" type="checkbox"/> Provided by client                           |                                                                                                                |  |
|                | Omni-directional antenna                                                         | W52: 2.91dBi(Ant1); 2.84dBi(Ant2);<br>W53: 2.98dBi(Ant1); 2.50dBi(Ant2);<br>W56: 3.39dBi(Ant1); 2.59dBi(Ant2); |  |
|                | Directional antenna                                                              | W52: 5.05dBi(Ant1); 5.40dBi(Ant2);<br>W53: 4.97dBi(Ant1); 5.26dBi(Ant2);<br>W56: 4.96dBi(Ant1); 5.32dBi(Ant2); |  |
|                | High density antenna                                                             | W52: 6.04dBi(Ant1); 6.16dBi(Ant2);<br>W53: 5.96dBi(Ant1); 6.05dBi(Ant2);<br>W56: 6.11dBi(Ant1); 6.15dBi(Ant2); |  |
| Smart System:  | <input checked="" type="checkbox"/> SISO                                         | 802.11a/n/ac/ax/be                                                                                             |  |
|                | <input checked="" type="checkbox"/> MIMO                                         | 802.11a/n/ac/ax/be: 2Tx & 2Rx                                                                                  |  |
|                | <input checked="" type="checkbox"/> Diversity                                    | CDD: 802.11a: 2Tx & 2Rx                                                                                        |  |
| DFS Function:  | <input checked="" type="checkbox"/> Master                                       |                                                                                                                |  |
|                | <input type="checkbox"/> Slave with radar detection                              | <input type="checkbox"/> Slave without radar detection                                                         |  |
| TPC Function:  | <input checked="" type="checkbox"/> Support <input type="checkbox"/> Not Support |                                                                                                                |  |

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.

### 3.2 Description of Support Units

| Description | Manufacturer | Model No.         | Serial No. |
|-------------|--------------|-------------------|------------|
| Laptop      | Lenovo       | Thinkpad L14 Gen4 | N/A        |



### 3.3 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.

### 3.4 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.

### 3.5 Deviation from Standards

None

### 3.6 Abnormalities from Standard Conditions

None



### 4 Equipment List

| DFS Test                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                           |            |              |            |              |                  |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------|--------------|------------|--------------|------------------|----------------|
| Equipment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Manufacturer                              | Model No   | Inventory No | Cal Date   | Cal Due Date | Calibration body | Classification |
| DC Power Supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rohde & Schwarz                           | NGSM 32/10 | SEM011-04    | 2025-10-17 | 2026-10-16   | SGS              | (c)            |
| MXA Signal Analyzer (10Hz-26.5GHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | KEYSIGHT                                  | N9020A     | SEM004-17    | 2025-03-19 | 2026-03-18   | GRGTEST          | (c)            |
| Signal Generator (9kHz-40GHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | KEYSIGHT                                  | N5173B     | SEM006-05    | 2025-09-26 | 2026-09-25   | CEPREI           | (c)            |
| Manual Step Attenuator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KEYSIGHT                                  | 8494B      | SEM021-05    | 2025-07-09 | 2026-07-08   | GRGTEST          | (c)            |
| Manual Step Attenuator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KEYSIGHT                                  | 8496B      | SEM021-06    | 2025-07-09 | 2026-07-08   | GRGTEST          | (c)            |
| Humidity/ Temperature Indicator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Shanghai Meteorological Industry Factory  | ZJ1-2B     | SEM002-04    | 2025-09-01 | 2026-08-31   | SGS              | (c)            |
| Barometer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Changchun Meteorological Industry Factory | DYM3       | SEM002-01    | 2025-03-21 | 2026-03-20   | CEPREI           | (c)            |
| <p>Remark:</p> <p>(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.</p> <p>(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992) .</p> <p>(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).</p> <p>(d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).</p> <p style="text-align: right;">From JRL Article 24-2, paragraph 4, Item 2</p> |                                           |            |              |            |              |                  |                |

## 5 Requirements and Parameters for DFS test

### 5.1 DFS Detection Thresholds

Below provides the DFS Detection Thresholds for Master Devices as well as Client Devices incorporating In-Service Monitoring.

**Table 1 DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection**

| Maximum Transmit Power    | Value                                             |
|---------------------------|---------------------------------------------------|
| EIRP $\geq$ 200 milliwatt | -64 dBm + absolute gain of receiver antenna (dBi) |
| EIRP < 200 milliwatt      | -62 dBm + absolute gain of receiver antenna (dBi) |

### 5.2 DFS Response Requirements

**Table 2 DFS Response Requirement Values**

| Parameter                                                                                                                                                                                           | Value                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Non-occupancy period                                                                                                                                                                                | Minimum 30 minutes (note 1) |
| Channel Availability Check Time                                                                                                                                                                     | 60 seconds                  |
| Channel Move Time                                                                                                                                                                                   | 10 seconds                  |
| Channel Closing Transmission Time                                                                                                                                                                   | 260 milliseconds            |
| Note 1: During Channel Availability Check or In-Service Monitoring, if the Master Device detects the radar signal it shall stop transmitting on the radar signal frequency for at least 30 minutes. |                             |

### 5.3 RADAR TEST WAVEFORMS

**Table 3 Fixed and Variable Pulse Radar Signal and Detection rates (W53)**

| Test Signal | Pulse Width [us] | Pulse Repetition Frequency [Hz] | Number of Pulses     | Repeat Period [Seconds] | Detection Rate (Note 2) [%] |
|-------------|------------------|---------------------------------|----------------------|-------------------------|-----------------------------|
| Pulse 1     | 0.5~5            | 200~1000                        | 10                   | 15.0                    | 60 or more (Note 1)         |
| Pulse 2     | 0.5~15           | 200~1600                        | 15                   | 15.0                    | 60 or more (Note 1)         |
| Pulse 3     | 0.5~5            | 200~1000                        | 0.026 * X<br>X=22~30 | 15.0                    | 60 or more (Note 1)         |
| Pulse 4     | 0.5~15           | 200~1600                        | 0.026 * X<br>X=22~30 | 15.0                    | 60 or more (Note 1)         |
| Pulse 5     | 60%              | 1114~1118                       | 30                   | 15.0                    | 60 or more (Note 1)         |
| Pulse 6     | 0.5~15           | 928~932                         | 25                   | 15.0                    | 60 or more (Note 1)         |
| Pulse 7     | 60%              | 886~890                         | 24                   | 15.0                    | 60 or more (Note 1)         |
| Pulse 8     | 0.5~15           | 738~742                         | 20                   | 15.0                    | 60 or more (Note 1)         |

Note 1: The detection rate (as a percentage) is defined as the rate of detect of the radar signal when the test data throughput (from the EUT to the Link Partner) is set to 17 percent of the EUT's maximum throughput. Data for error correction or controlling the EUT shall not be considered as part of the throughput.

**Table 4 Fixed and Variable Pulse Radar Signal and Detection rates (W56)**

| Test Signal | Pulse Width [us] | Pulse Repetition Frequency [Hz] | Number of Pulses | Repeat Period [Seconds] | Detection Rate (Note 2) [%] |
|-------------|------------------|---------------------------------|------------------|-------------------------|-----------------------------|
| Pulse 1     | 0.5              | 720                             | 18               | 15.0                    | 60 or more (Note 1)         |
| Pulse 2     | 1.0              | 700                             | 18               | 15.0                    | 60 or more (Note 1)         |
| Pulse 3     | 2.0              | 250                             | 18               | 15.0                    | 60 or more (Note 1)         |
| Pulse 4     | 1~5μs            | 4,347 ~ 6,667                   | 23 ~ 29          | 15.0                    | 60 or more (Note 1)         |
| Pulse 5     | 6~10μs           | 2,000 ~ 5,000                   | 16 ~ 18          | 15.0                    | 60 or more (Note 1)         |
| Pulse 6     | 11~20μs          | 2,000 ~ 5,000                   | 12 ~ 16          | 15.0                    | 60 or more (Note 1)         |

Note 1: The detection rate (as a percentage) is defined as the rate of detect of the radar signal when the test data throughput (from the EUT to the Link Partner) is set to 17 percent of the EUT's maximum throughput. Data for error correction or controlling the EUT shall not be considered as part of the throughput.

Note 2: The average detection rate for 6 pulses in Table 4 shall be over 80 percent



**Table 5 Chirp Pulse Radar Signal and Detection Rate (W56)**

| Test Signal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pulse Width [us] | Pulse Repetition Frequency [Hz] | Number of Pulses | Repeat Period [Seconds] | Detection Rate [%] |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------|------------------|-------------------------|--------------------|
| Chirp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50 ~ 100         | 500 ~ 1,000                     | 1 ~ 3            | 12.0                    | 80 or more(Note1)  |
| <p>Note 1: The detection rate (as a percentage) is defined as the rate of detect of the radar signal when the test data throughput (from the EUT to the Link Partner) is set to 17 percent of the EUT's maximum throughput. Data for error correction or controlling the EUT shall not be considered as part of the throughput.</p> <p>Note 2: One burst consisting of continuous pulses is generated in 12 seconds.</p> <p>Note 3: The chirp width shall be a frequency width selected from the range 5 to 20 MHz, in increments of 1 MHz. All the chirp widths in one burst cycle should be of the same width.</p> <p>Note 4: The number of bursts shall be an integer in the range of 8 to 20 and the burst interval shall be a time period derived from dividing 12 seconds by the number of bursts.</p> <p>Note 5: If there are multiple pulses within one burst, the width of each pulse shall be equal.</p> <p>Note 6: If there are multiple pulses within one burst, the pulse repetition frequency shall not have any relationships with that for the subsequent pulses.</p> |                  |                                 |                  |                         |                    |

**Table 6 Hopping Pulse Radar Signal and Detection Rate (W56)**

| Test Signal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Pulse Width [us] | Pulse Repetition Frequency [Hz] | Number of Pulses | Number of Continuous Pulses | Detection Rate [%] |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------|------------------|-----------------------------|--------------------|
| Hopping                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1.0              | 3,000                           | 9                | 10.0                        | 70 or more (Note1) |
| <p>Note 1: The detection rate is defined as the rate when the throughput (from the EUT to the Link Partner) during the test shall be 17 percent to the EUT's maximum throughput. Data for error correction or controlling EUT shall not be included for the throughput.</p> <p>Note 2: The hopping frequency shall be any frequency in the range 5,250 to 5,724 MHz in increments of 1 MHz.</p> <p>Note 3: An individual hopping interval shall be 3ms and the total of all hopping intervals shall be 300ms.</p> <p>Note 4: Burst intervals shall be 3ms.</p> |                  |                                 |                  |                             |                    |



## 6 DFS Test Results

### 6.1 E.U.T. Operation

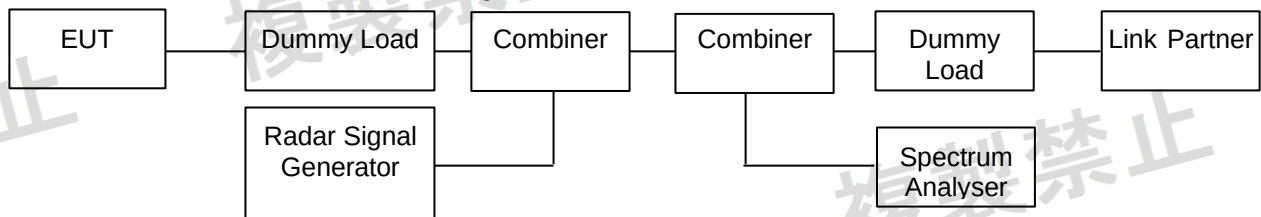
Operating Environment:

Temperature: 23.7 °C Humidity: 55.1 % RH Atmospheric Pressure: 1015 mbar

### 6.2 Radar Waveform Calibration Procedure

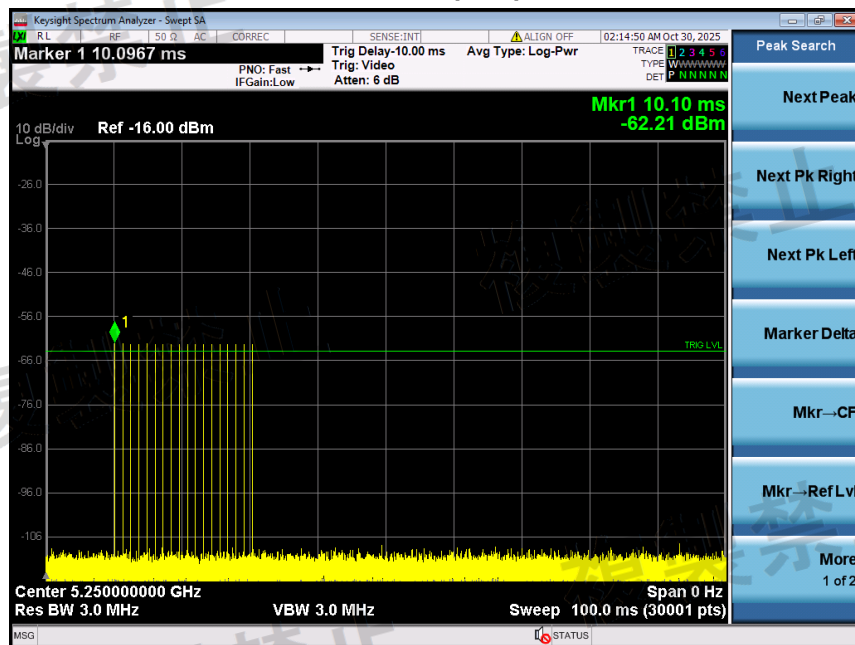
- 1) A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- 2) The interference Radar Detection Threshold Level is  $-62\text{dBm} + 3.78\text{dBi} = -58.22\text{dBm}$  that had been taken into account the output power range and antenna gain.
- 3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process, there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz.
- 4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $-62\text{dBm} + 3.78\text{dBi} = -58.22\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar waveform.

### 6.3 Conducted Calibration Setup

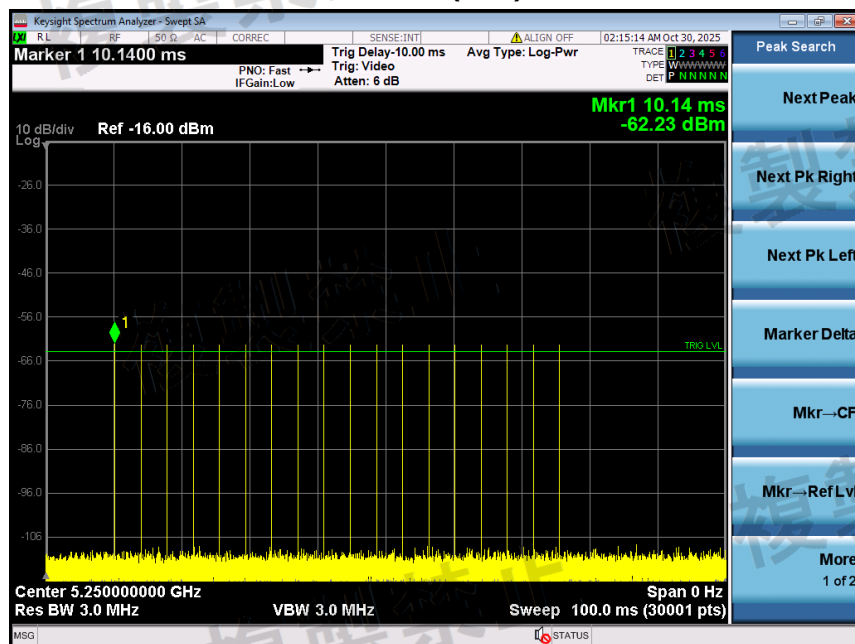


### 6.4 Radar Waveform Calibration Result

Pulse 1 (W53)



Pulse 2 (W53)



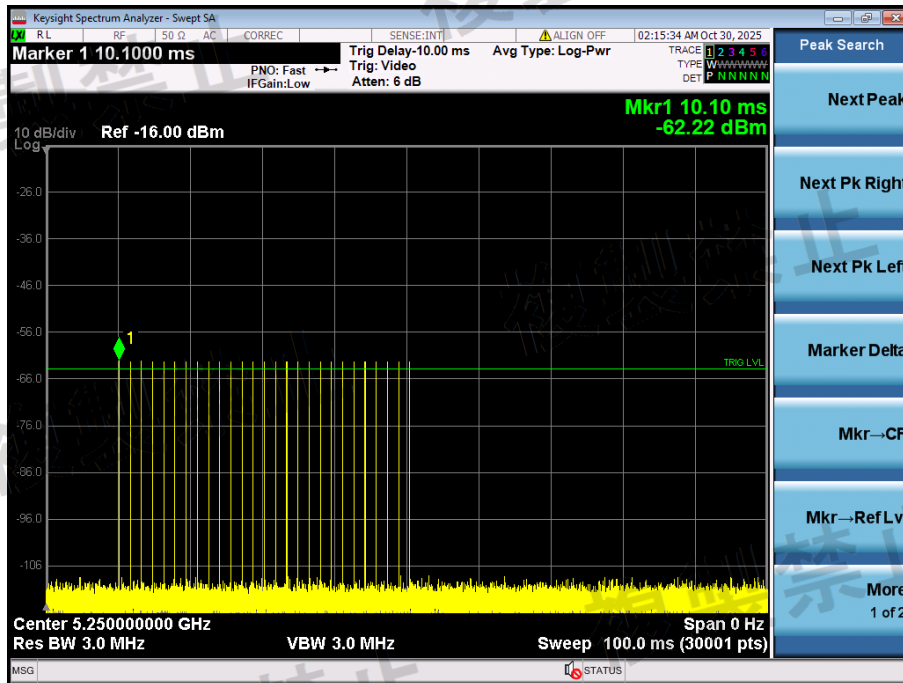
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction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

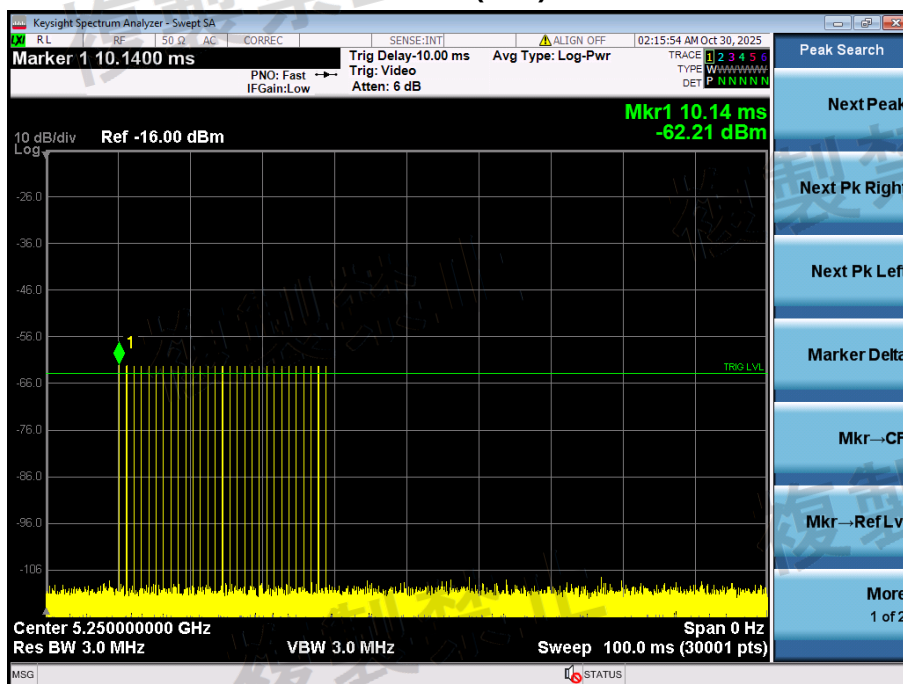
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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

Pulse 3 (W53)



Pulse 4 (W53)



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.

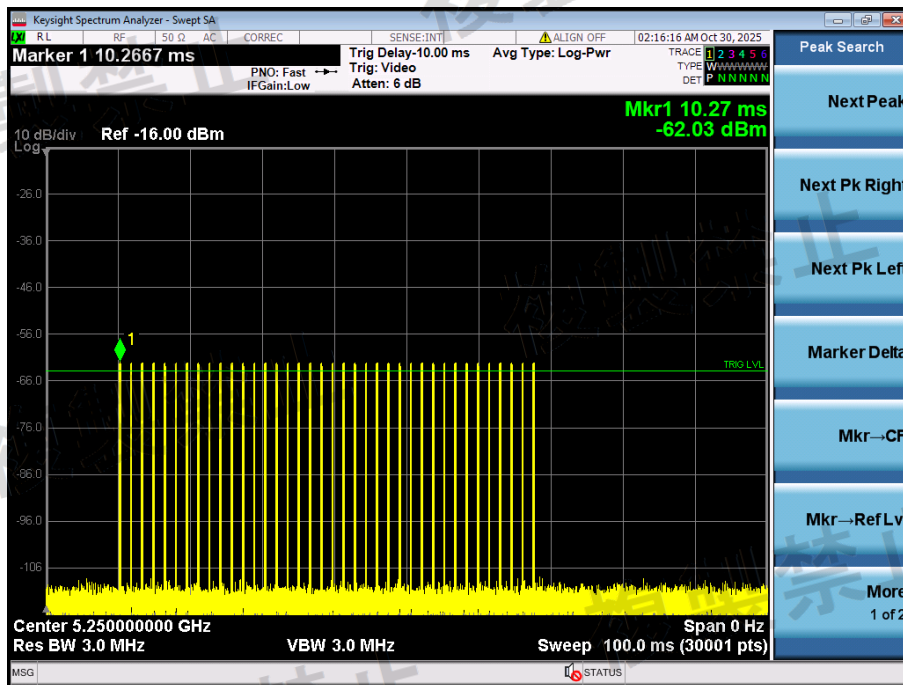
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

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

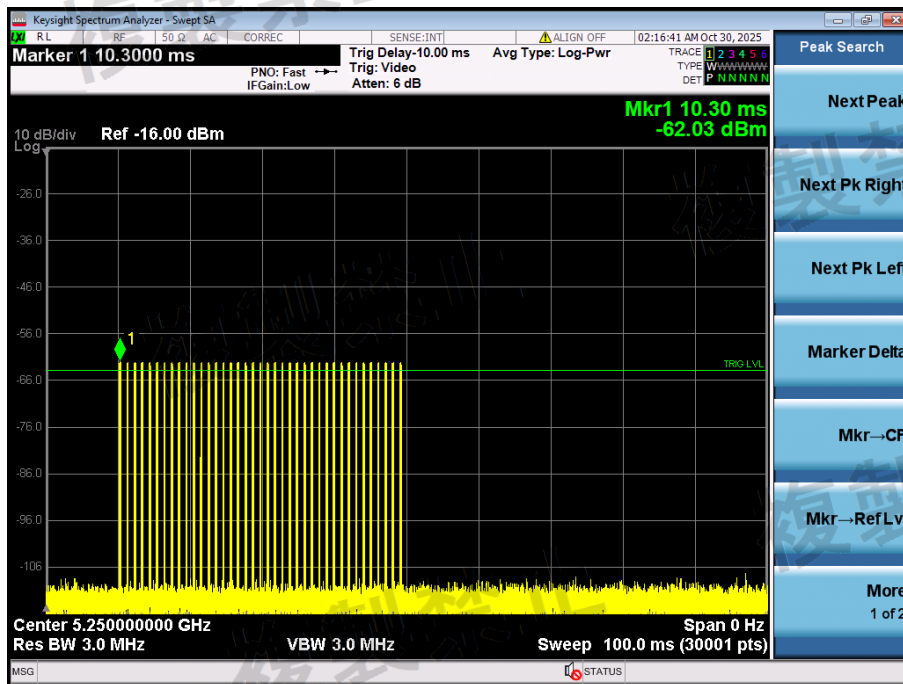
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057

t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Pulse 5 (W53)



Pulse 6 (W53)



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.

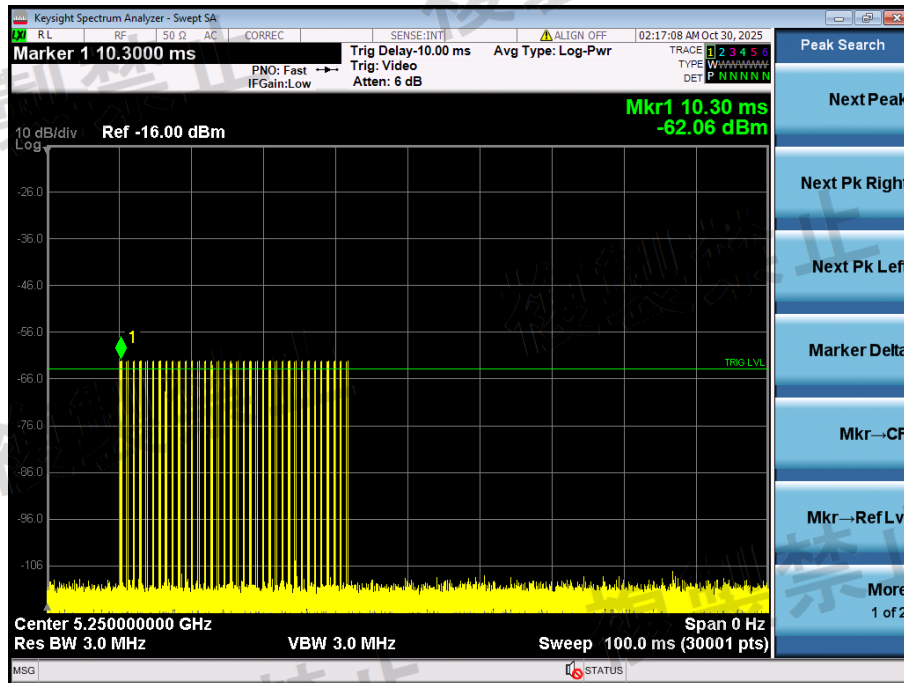
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

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

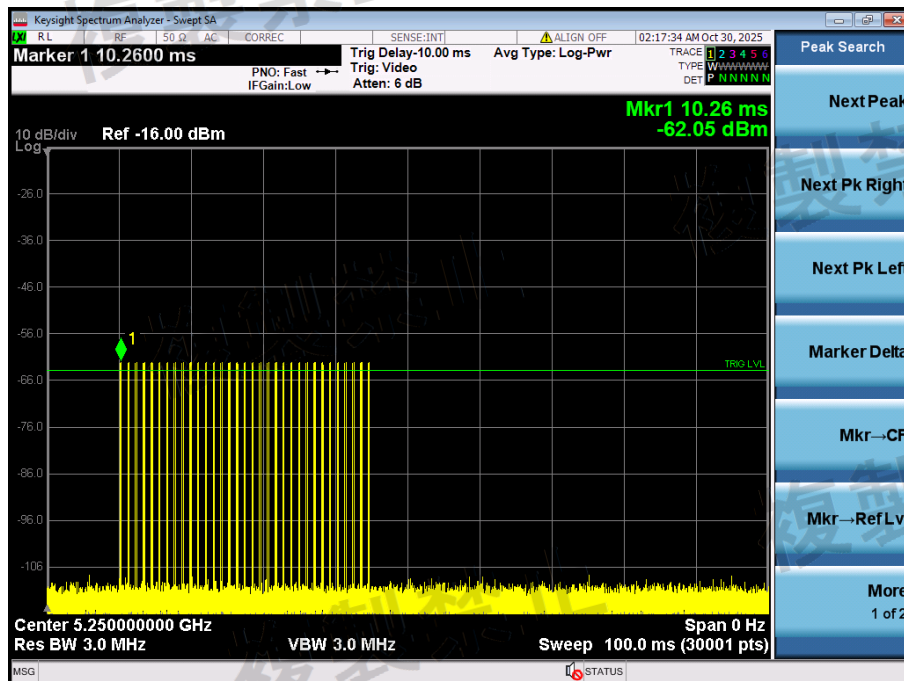
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057

t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Pulse 7 (W53)



Pulse 8 (W53)



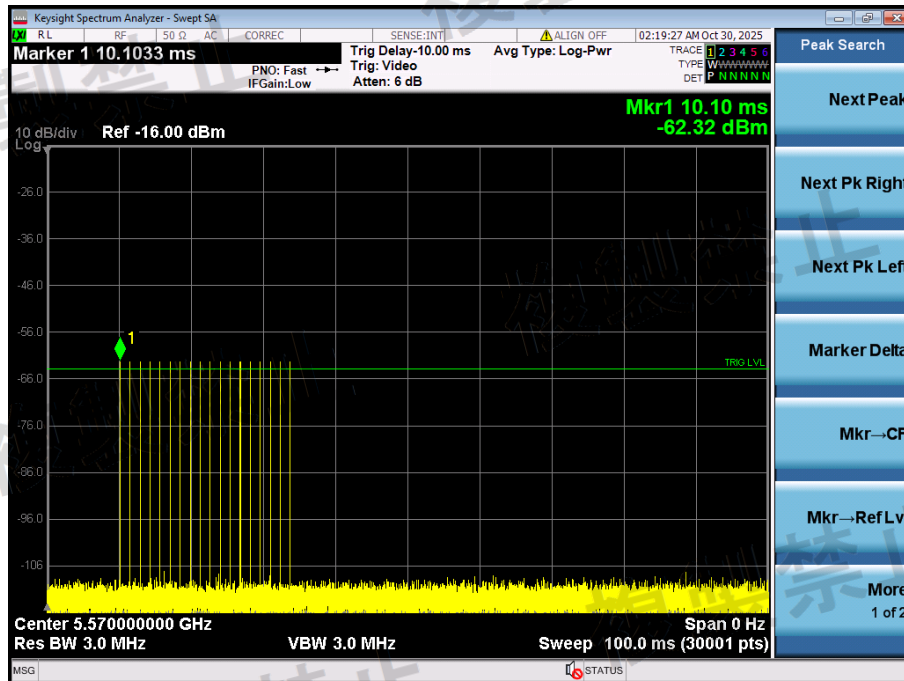
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction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

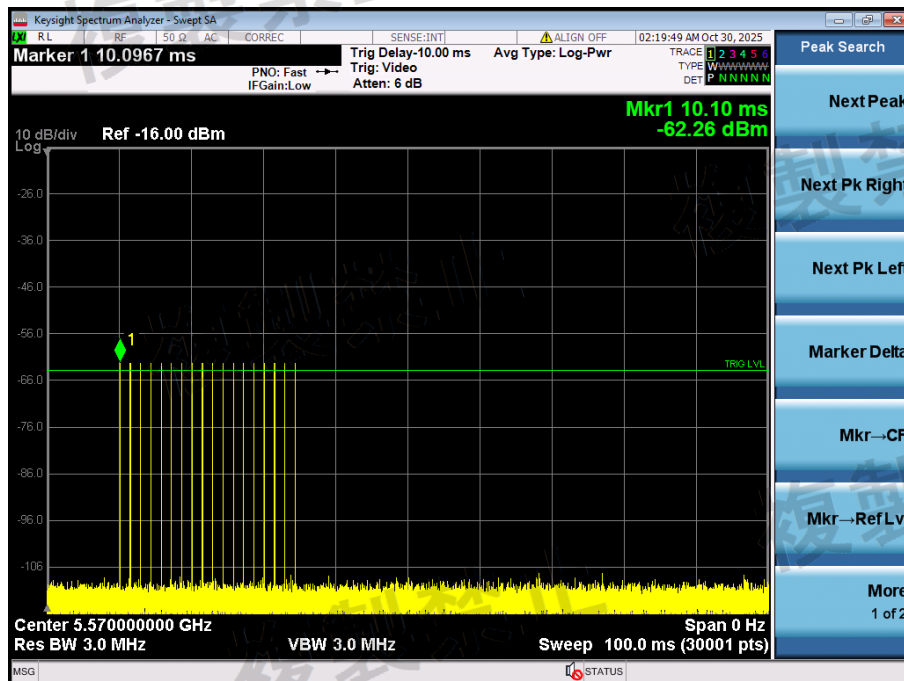
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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

Pulse 1 (W56)



Pulse 2 (W56)



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

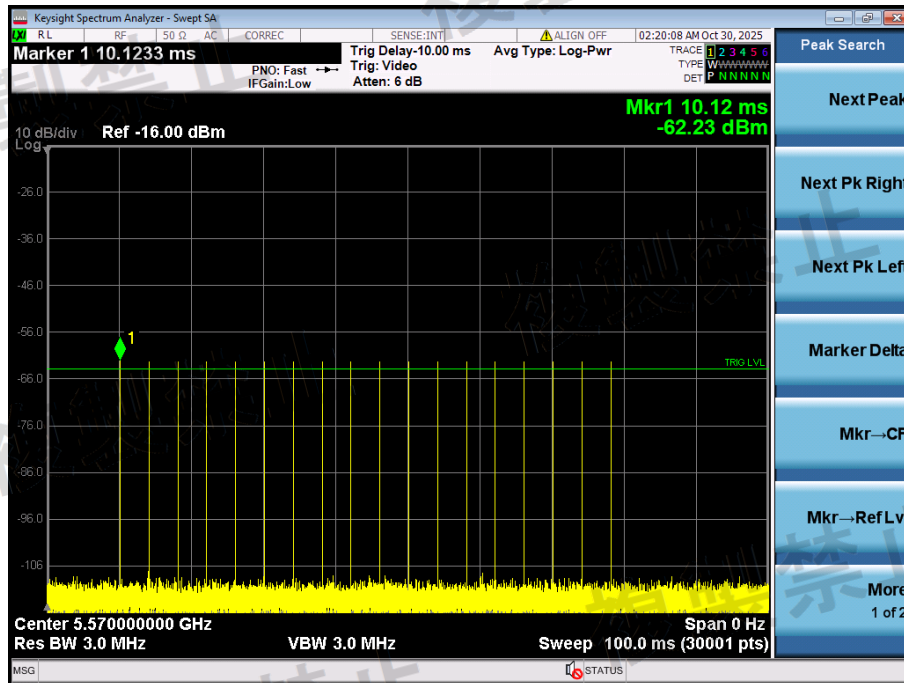
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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

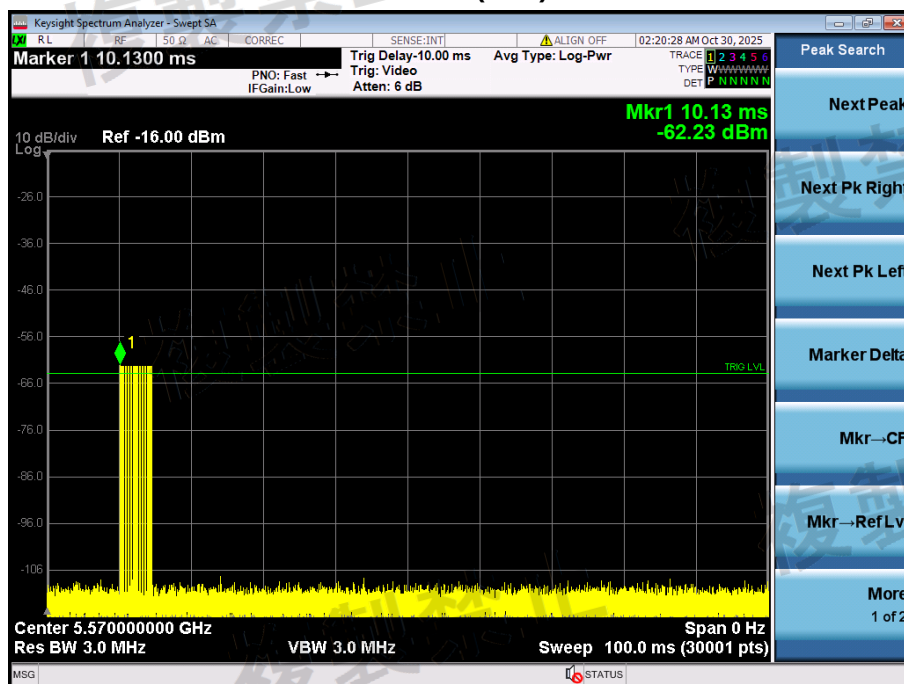
t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn

t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Pulse 3 (W56)



Pulse 4 (W56)



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)

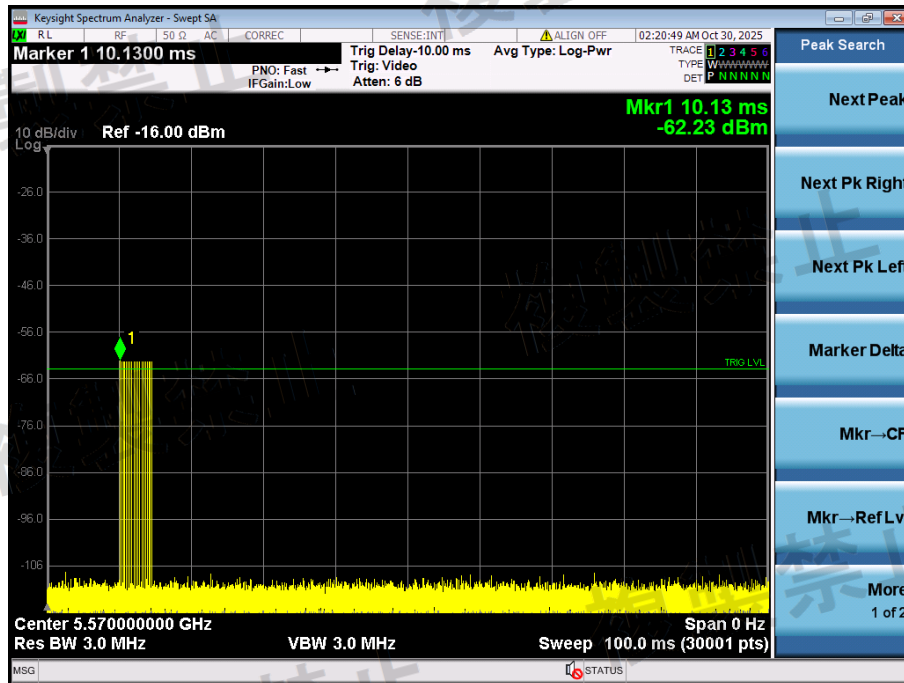
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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

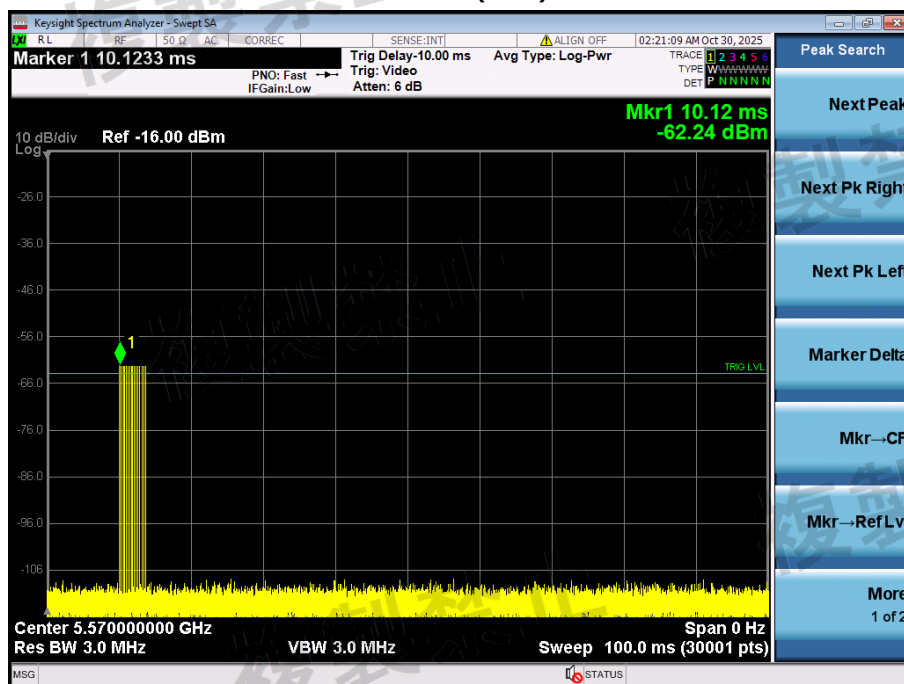
t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn

t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Pulse 5 (W56)



Pulse 6 (W56)



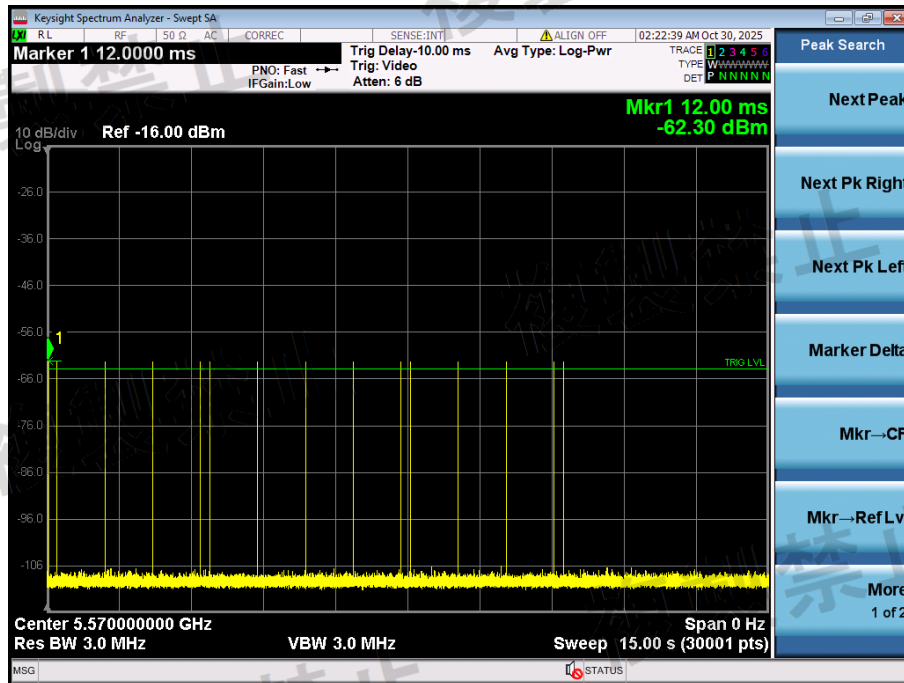
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction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

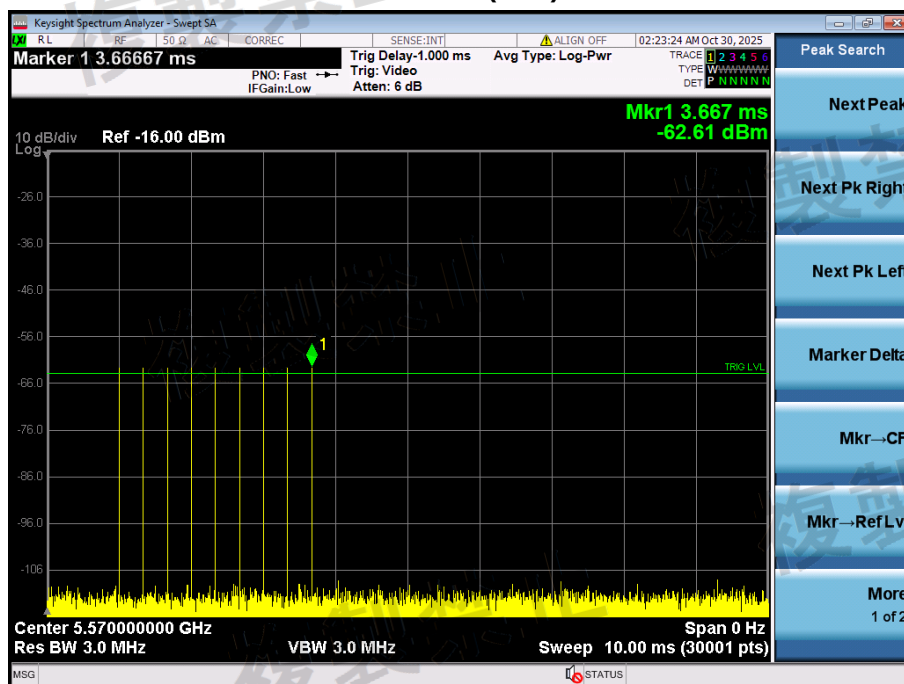
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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

### Chirp (W56)



### HOPPING(W56)



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.

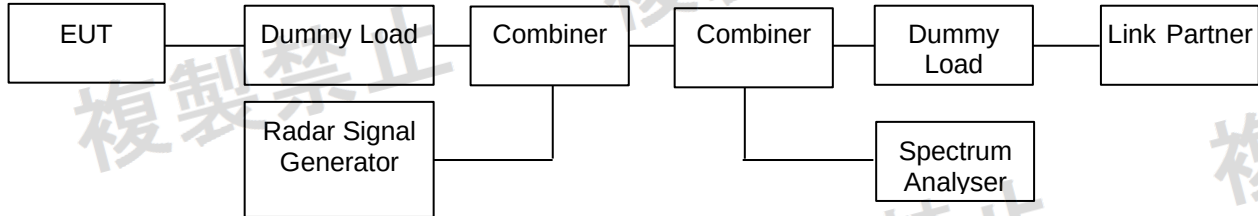
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

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

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

Member of the SGS Group (SGS SA)

### 6.5 Conducted Test Setup Configuration



#### EUT Configuration

##### (a) W53/W56 Band

1. The test frequency shall be chosen randomly from the available frequencies supported by the EUT
2. During the test, the throughput (from the EUT to the Link Partner) shall be 17 percent of the EUT's maximum throughput over a communications link. Error correction data or data for controlling the EUT shall be considered as additional data and not part of the throughput.

### 6.6 Channel Availability Check (W53/W56)

#### 6.6.1 Definition and limit of Channel Availability Check

Channel Availability Check is defined as the mechanism by which a EUT checks channels for the presence of radar signals for 60 seconds. This mechanism is used for identifying Available Channels.

#### 6.6.2 Test Procedure

##### [Setting 1] Signal Generator Setting

Output frequency: Center of test frequency

Modulation: Pulse modulation, as defined in the Table 3 to Table 6

Output level: Use the average output levels defined in Table 1.

##### [Setting 2] Spectrum Analyzer Setting

Frequency: Center of test frequency

Span: 0 Hz

RBW: 1 MHz

VBW: 1 MHz

Sweep: 15 seconds

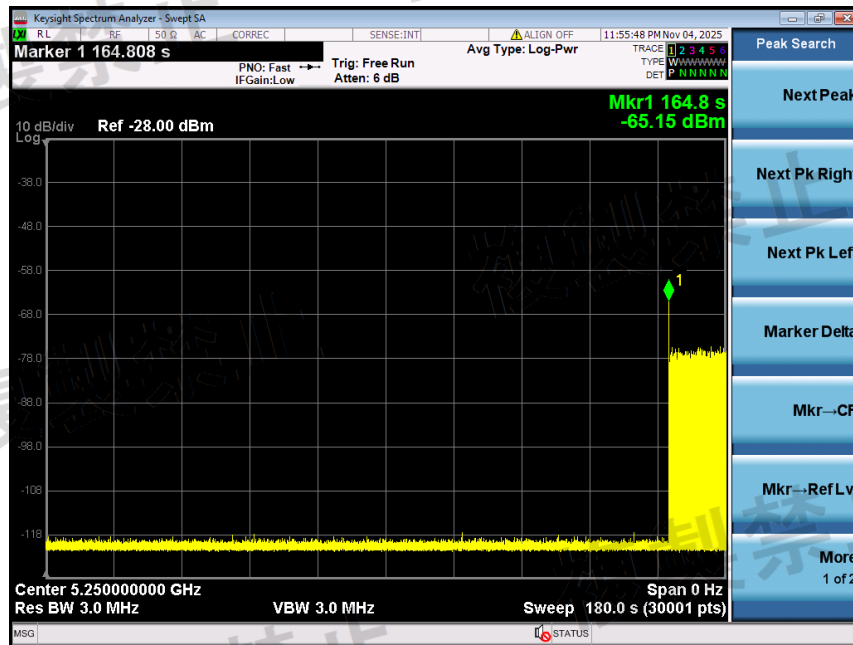
Detector: Positive peak

1. Configure the signal generator to [Setting 1]
2. Initialize the EUT to select Channel Availability Check mode then using either the spectrum analyzer or the Link Partner check that the EUT does not transmit any signals.
3. Within 60 seconds after initializing the EUT, set the signal generator output ON to supply the EUT with the test signal.
4. Check whether the EUT detects the test signal using the EUT's own software or using the Link Partner, then record the result.
5. Repeat the procedure in steps (2) through (4) until five results have been collected  
-If the EUT detects the test signal four times or more, then the test report shall record a "Pass", otherwise "Fail".

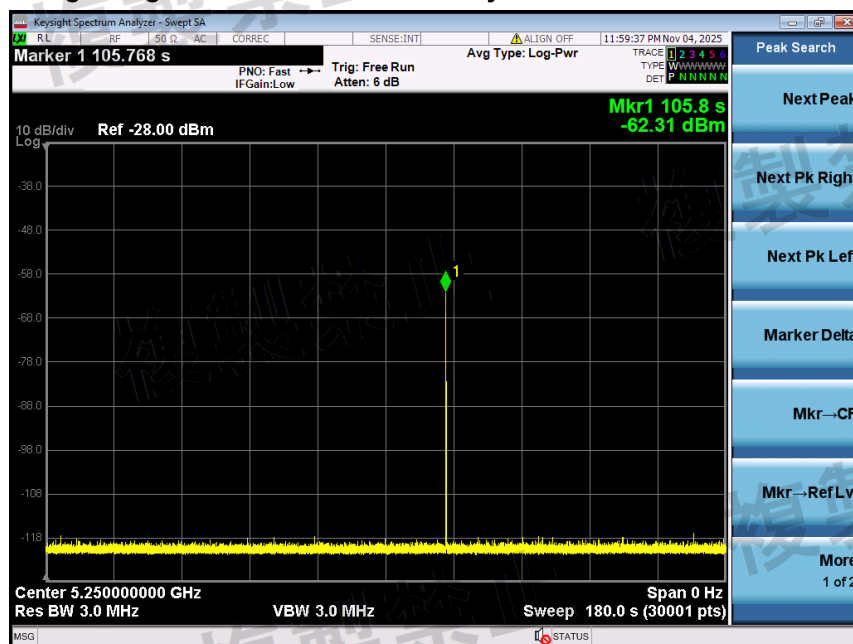


### 6.6.3 Measurement Data

Power Up (T1 = 164.8 sec)



### Radar Burst at the Beginning of the Channel Availability Check Time



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.

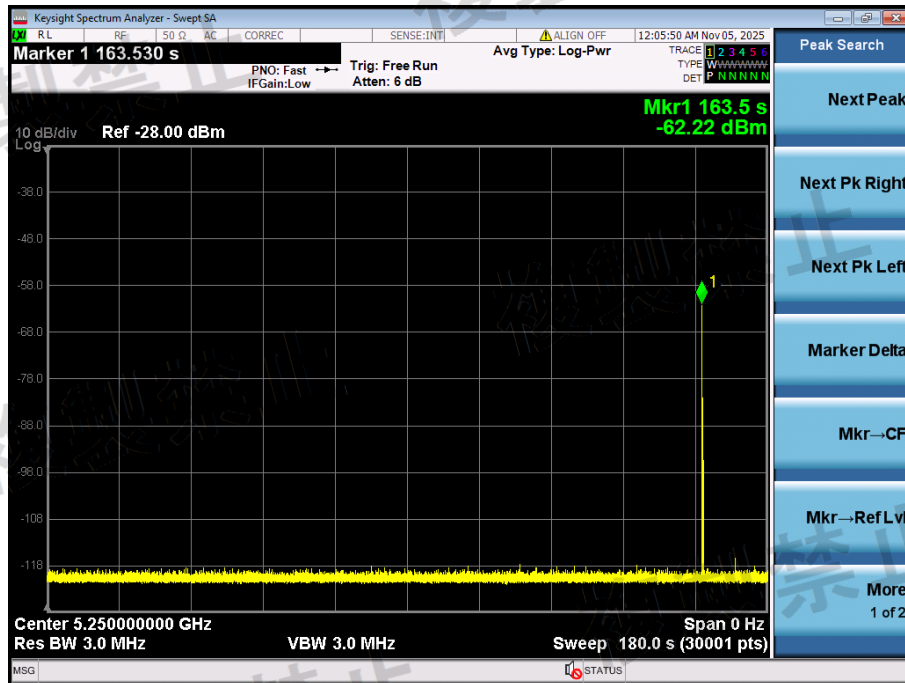
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

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

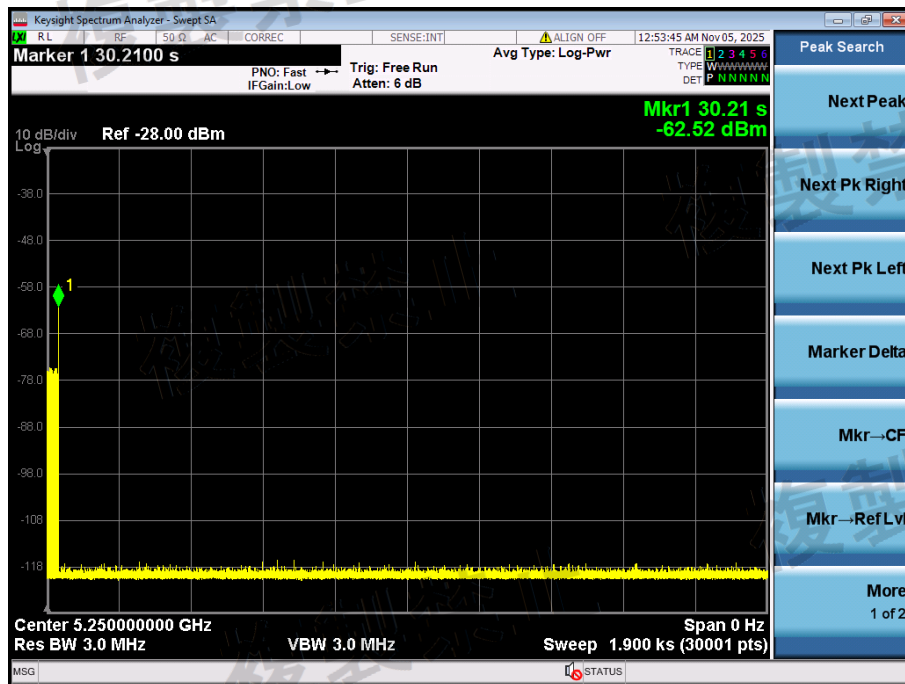
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057

Member of the SGS Group (SGS SA)

### Radar Burst at the end of the Channel Availability Check Time



### Non-Occupancy Period



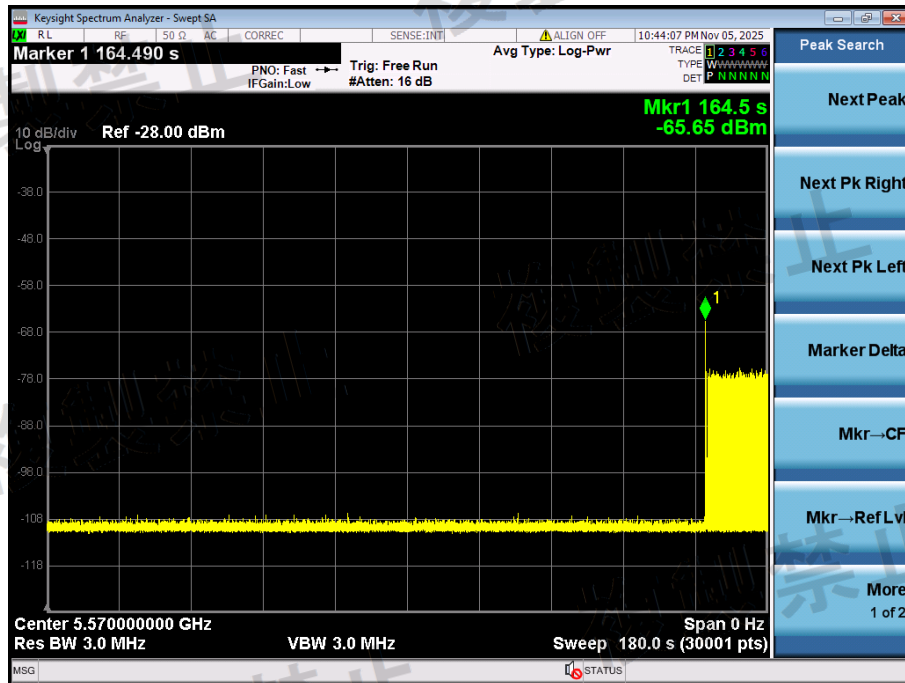
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <https://www.sgs.com/en/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction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

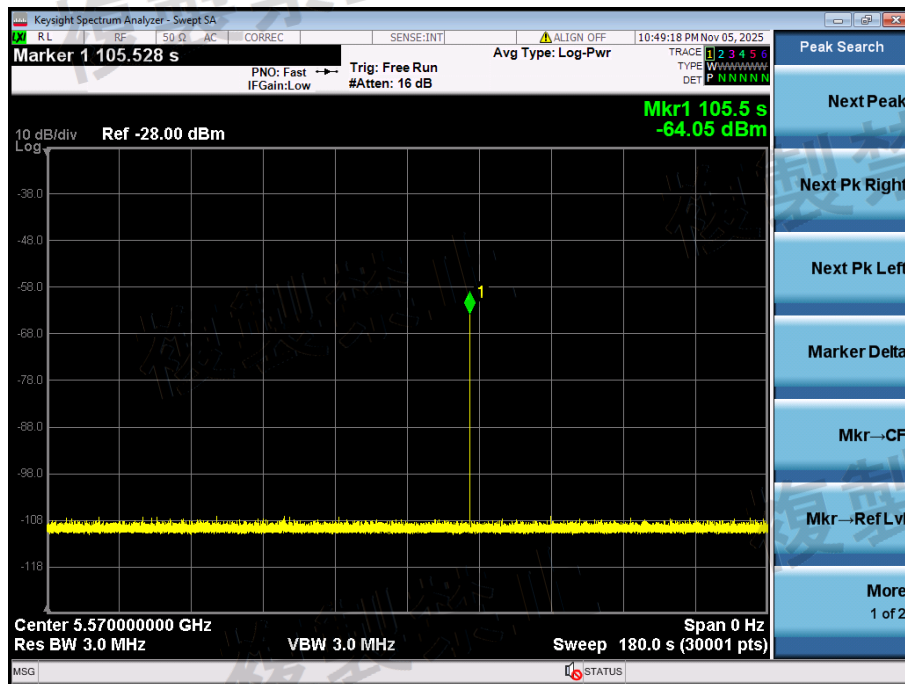
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch

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

Power Up (T1 = 164.5 sec)



Radar Burst at the Beginning of the Channel Availability Check Time



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.

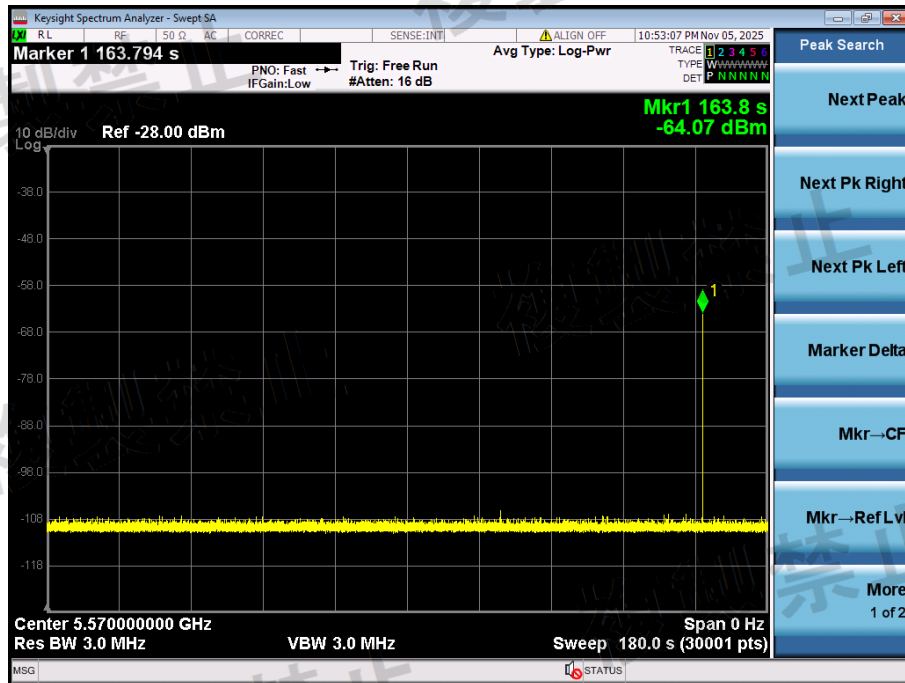
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

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

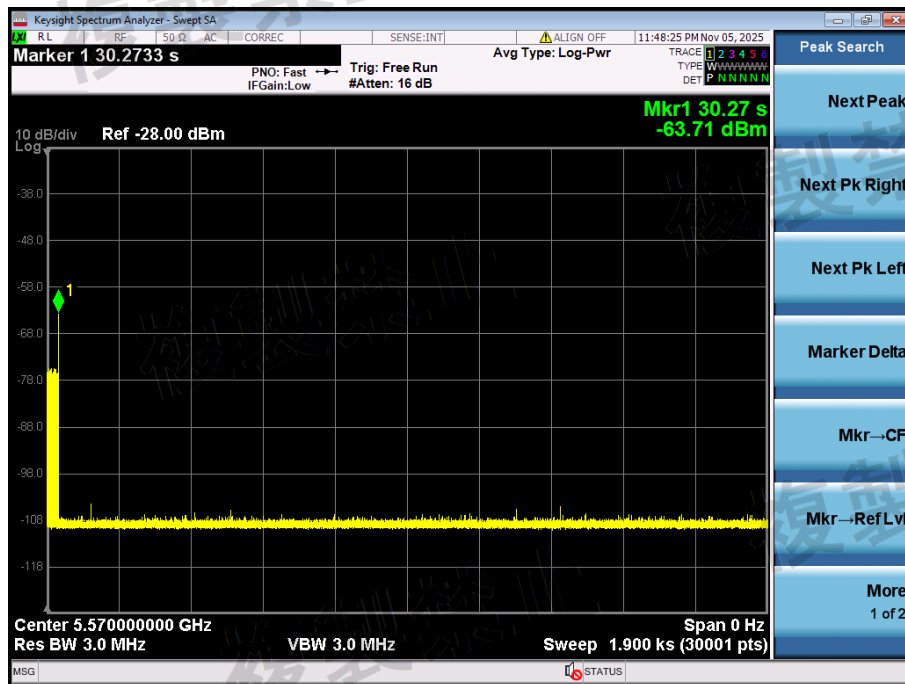
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057  
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编:518057

Member of the SGS Group (SGS SA)

### Radar Burst at the end of the Channel Availability Check Time



### Non-Occupancy Period



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

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057  
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 www.sgsgroup.com.cn

t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 6.7 In-Service Monitoring (W56)

#### 6.7.1 Definition of In-Service Monitoring

In-Service Monitoring is defined as the process by which a EUT monitors each Operating Channel for the presence of radar signals

#### 6.7.2 Test Procedure

##### [Setting 1] Signal Generator Setting

Output frequency: Center of test frequency

Modulation: Pulse modulation, as defined in the Table 3)

Output level: Use the average output levels defined in Table 1.

##### [Setting 2] Spectrum Analyzer Setting

Frequency: Center of test frequency

Span: 0 Hz

RBW: 1 MHz

VBW: 1 MHz

Sweep: 15 seconds

Detector: Positive peak

##### [Setting 3] Spectrum Analyzer Setting

Frequency: Center of test frequency

Span: Greater than limit of OBW

RBW: 1 MHz

VBW: 1 MHz

Sweep: 10 seconds

Detector: Positive peak

#### Test procedure using Fixed and Variable Pulse Radar Signal (Test signal in Table 4)

1. Configure the signal generator to [Setting 1]
2. Initialize the EUT to select In-Service Monitoring mode, establish a communications link between the EUT and the Link Partner.
3. Set the EUT transmitter to the throughput defined in section 8.1 (EUT Configuration (b))
4. Set the signal generator output ON to provide the EUT with the test signal choose from Table 4.
5. Check whether the EUT detects the test signal using the spectrum analyzer (configured to [Setting 2]), then record the result.
6. Repeat the procedure in steps (2) through (5) until twenty results have been obtained, then compare the number of successful test signal detections with the limits shown below:
  - 18 detections or more: Pass
  - 11 – 17 detections: Go to step (7)
  - 10 detections or less: Fail



7. Repeat the same procedure in steps (2) through (5) until an additional 20 results have been obtained, then sum the total detections in this step with those in step (6). Compare the number of successful test signal detections with the limits shown below:

-32 detections or more: Pass

-31 detections or less: Fail

8. Check the detection rate for all test signals in Table 4 by repeating the same procedures in steps (1) through (6). After obtaining all of the detection rates, calculate average detection rate for all signals in Table 4.

### Test procedure using Fixed and Variable Pulse Radar Signal (Test signal in Table 5)

1. Configure the signal generator to [Setting 1]
2. Initialize the EUT to select In-Service Monitoring mode, establish a communications link between the EUT and the Link Partner.
3. Set the EUT transmitter to the throughput defined in section 8.1 (EUT Configuration (b))
4. Set the signal generator output ON to provide the EUT with the test signal choose from Table 5.
5. Check whether the EUT detects the test signal using the spectrum analyzer (configured to [Setting 3]), then record the result.
6. Repeat the procedure in steps (2) through (5) until twenty results have been obtained, then compare the number of successful test signal detections with the limits shown below:
  - 18 detections or more: Pass
  - 15 – 17 detections: Go to step (7)
  - 14 detections or less: Fail
7. Repeat the same procedure in steps (2) through (5) until an additional 20 results have been obtained, then sum the total detections in this step with those in step (6). Compare the number of successful test signal detections with the limits shown below:
  - 32 detections or more: Pass
  - 31 detections or less: Fail

### Test procedure using Fixed and Variable Pulse Radar Signal (Test signal in Table 6)

1. Configure the signal generator to [Setting 1]
2. Initialize the EUT to select In-Service Monitoring mode, establish a communications link between the EUT and the Link Partner.
3. Set the EUT transmitter to the throughput defined in section 8.1 (EUT Configuration (b))
4. Set the signal generator output ON to provide the EUT with the test signal choose from Table 6.
5. Check whether the EUT detects the test signal using the spectrum analyzer (configured to [Setting 3]), then record the result.
6. Repeat the procedure in steps (2) through (5) until twenty results have been obtained, then compare the number of successful test signal detections with the limits shown below:
  - 16 detections or more: Pass
  - 13 – 15 detections: Go to step (7)
  - 12 detections or less: Fail

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)

7. Repeat the same procedure in steps (2) through (5) until an additional 20 results have been obtained, then sum the total detections in this step with those in step (6). Compare the number of successful test signal detections with the limits shown below:

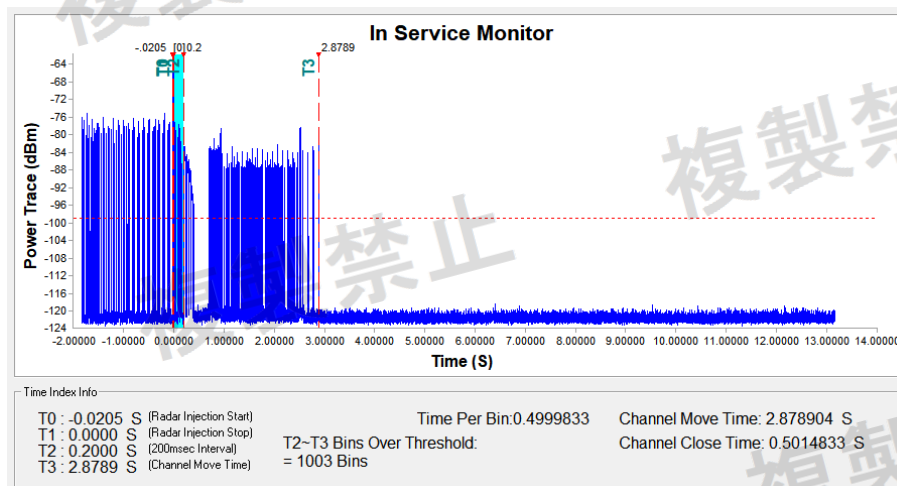
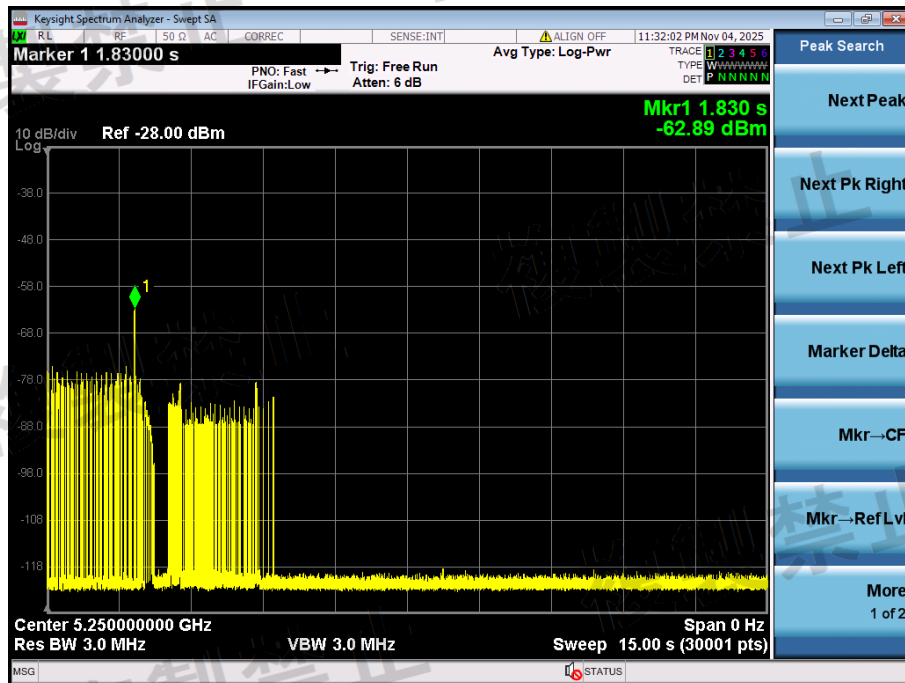
-28 detections or more: Pass

-27 detections or less: Fail



### 6.7.3 Measurement Data

#### Channel Move Time and Channel Closing Transmission Time (W53:5250MHz)



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.

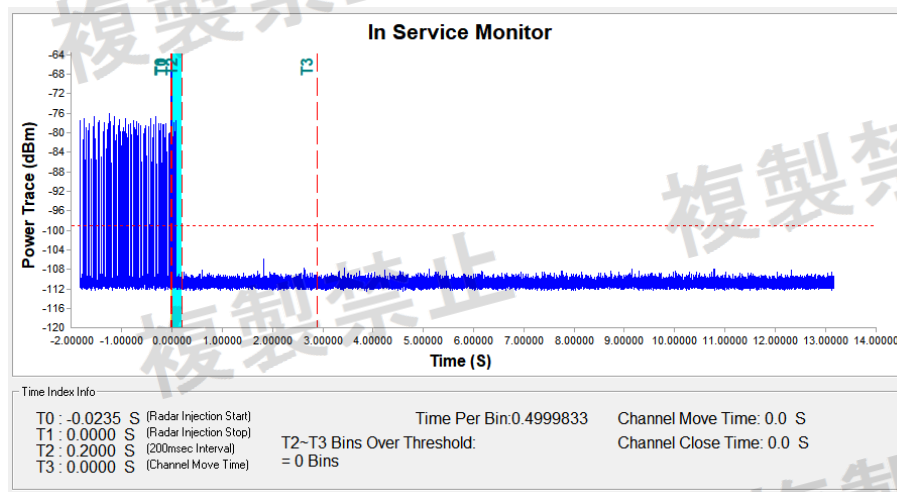
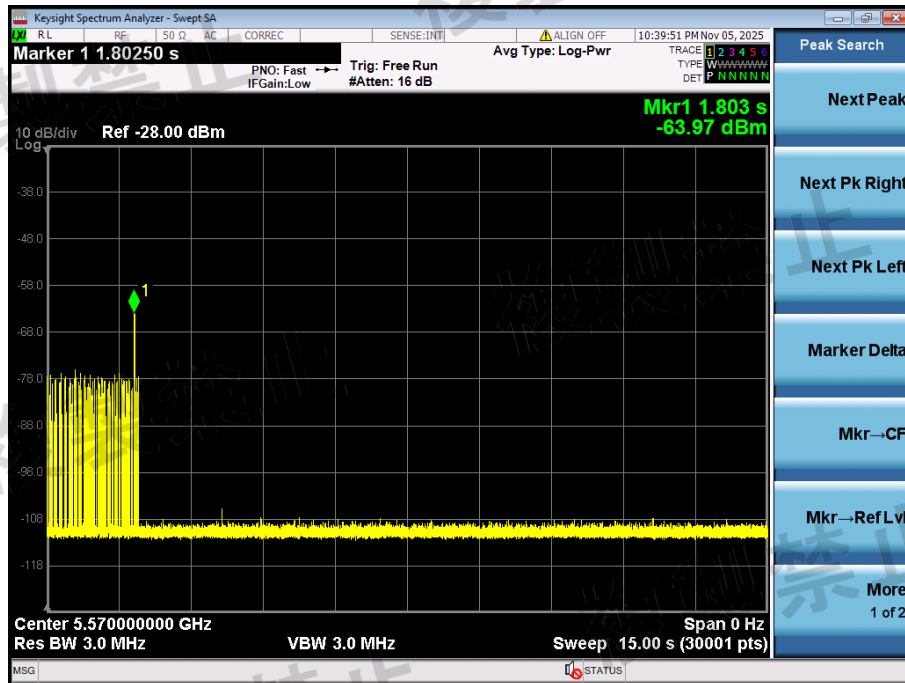
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

Member of the SGS Group (SGS SA)

### Channel Move Time and Channel Closing Transmission Time (W56:5570MHz)



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

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

Member of the SGS Group (SGS SA)

### Measurement Data for Probability of detection

| Trial No.                 | Radar Signal Type (W53) |       |       |       |       |       |       |       |
|---------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|
|                           | 1                       | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
| 0                         | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 1                         | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 2                         | Y                       | Y     | Y     | Y     | N     | Y     | Y     | Y     |
| 3                         | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 4                         | Y                       | N     | Y     | Y     | Y     | Y     | Y     | Y     |
| 5                         | Y                       | Y     | Y     | Y     | Y     | Y     | N     | Y     |
| 6                         | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 7                         | Y                       | Y     | Y     | N     | Y     | Y     | Y     | Y     |
| 8                         | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | N     |
| 9                         | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 10                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 11                        | N                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 12                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 13                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 14                        | Y                       | Y     | Y     | Y     | Y     | N     | Y     | Y     |
| 15                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 16                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 17                        | Y                       | Y     | N     | Y     | Y     | Y     | Y     | Y     |
| 18                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| 19                        | Y                       | Y     | Y     | Y     | Y     | Y     | Y     | Y     |
| Detection Probability (%) | 95.00                   | 95.00 | 95.00 | 95.00 | 95.00 | 95.00 | 95.00 | 95.00 |
| Limit (%)                 | > 60.00                 |       |       |       |       |       |       |       |
| Result                    | PASS                    | PASS  | PASS  | PASS  | PASS  | PASS  | PASS  | PASS  |



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

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

|                                               | Radar Signal Type (w56) |        |       |       |       |       |         |         |
|-----------------------------------------------|-------------------------|--------|-------|-------|-------|-------|---------|---------|
| Trial No.                                     | 1                       | 2      | 3     | 4     | 5     | 6     | Chirp   | HOPPING |
| 0                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 1                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 2                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 3                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 4                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 5                                             | Y                       | Y      | Y     | Y     | Y     | N     | Y       | Y       |
| 6                                             | Y                       | Y      | N     | Y     | Y     | Y     | Y       | Y       |
| 7                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 8                                             | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 9                                             | N                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 10                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 11                                            | Y                       | Y      | Y     | N     | Y     | Y     | Y       | Y       |
| 12                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 13                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 14                                            | Y                       | Y      | Y     | Y     | N     | Y     | Y       | Y       |
| 15                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 16                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 17                                            | Y                       | Y      | Y     | Y     | Y     | Y     | N       | Y       |
| 18                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| 19                                            | Y                       | Y      | Y     | Y     | Y     | Y     | Y       | Y       |
| Detection Probability (%)                     | 95.00                   | 100.00 | 95.00 | 95.00 | 95.00 | 95.00 | 95.00   | 100.00  |
| Limit (%)                                     | > 60.00                 |        |       |       |       |       | > 80.00 | > 70.00 |
| Result                                        | PASS                    | PASS   | PASS  | PASS  | PASS  | PASS  | PASS    | PASS    |
| Aggregating detection probability of type 1~6 | 95.83                   |        |       |       |       |       |         |         |
| Limit (%)                                     | > 80.00                 |        |       |       |       |       |         |         |
| Result                                        | PASS                    |        |       |       |       |       |         |         |

-End of Appendix-