



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 1 of 58

TEST REPORT

Application No.: SZCR2409003392AT
Applicant: Comba Telecom Network Systems Limited
Address of Applicant: Flat/Rm 10, 3/F, Bio-Informatics Ctr, 2 Science Park West Avenue, HK Science Park, Pak Shek Kok, N.T. Hong Kong
Manufacturer: Flexlink Telecom Ltd
Address of Manufacturer: No. 12, Dinghu 3rd St., Guishan Dist., Taoyuan, 333, Taiwan
Equipment Under Test (EUT):
EUT Name: Remote Radio Unit
Model No.: MRU1000
Trade Mark: Comba
FCC ID: PX8MRU1000
Standard(s) : CBRSA-TS-9001-V1.2.1
WINNF-TS-0122-V1.0.2
FCC 47 CFR Part 96
KDB 940660 D01 V03
Date of Receipt: 2024-09-02
Date of Test: 2024-09-04 to 2024-09-09
Date of Issue: 2024-10-06

| | |
|---------------------|--------------|
| Test Result: | Pass* |
|---------------------|--------------|

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

Keny Xu
EMC Laboratory Manager



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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) 83071443, or email: CN.Doccheck@sgs.com

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



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 2 of 58

Revision Record

| Version | Chapter | Date | Modifier | Remark |
|---------|---------|------------|----------|----------|
| 01 | | 2024-09-16 | | Original |
| | | | | |
| | | | | |

Authorized for issue by:

Charlie Dai/Project Engineer

Eric Fu/Reviewer

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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 | SGS Inspection & Testing Services Co., Ltd.

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



2 Test Summary

| Item | Standard | Test Case ID | Result |
|---|----------------------|-------------------|--------|
| Domain Proxy Multi-Step registration | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.2 | Pass |
| Domain Proxy Single-Step registration for Cat A CBSD | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.4 | Pass |
| Domain Proxy Single-Step registration for CBSD with CPI signed data | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.6 | Pass |
| Registration due to change of an installation parameter | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.REG.7 | Pass |
| Domain Proxy Missing Required parameters (responseCode 102) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.9 | Pass |
| Domain Proxy Pending registration (responseCode 200) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.11 | Pass |
| Domain Proxy Invalid parameters (responseCode 103) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.13 | Pass |
| Domain Proxy Blacklisted CBSD (responseCode 101) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.15 | Pass |
| Domain Proxy Unsupported SAS protocol version responseCode 100) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.17 | Pass |
| Domain Proxy Group Error (responseCode 201) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.REG.19 | Pass |
| Category B CBSD location update | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.REG.20 | Pass |
| Unsuccessful Grant responseCode=400 (INTERFERENCE) | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.GRA.1 | Pass |
| Unsuccessful Grant responseCode=401 (GRANT_CONFLICT) | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.GRA.2 | Pass |
| Domain Proxy Heartbeat Success Case (first Heartbeat Response) | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.HBT.2 | Pass |
| Heartbeat responseCode=105 (DREGISTER) | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.3 | Pass |
| Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.5 | Pass |
| Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.6 | Pass |
| Heartbeat responseCode=502 (UNSYNC_OP_PARAM) | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.7 | Pass |

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 4 of 58

| Item | Standard | Test Case ID | Result |
|---|----------------------|-------------------|--------|
| Domain Proxy Heartbeat responseCode=500 (TERMINATED_GRANT) | WINNF-TS-0122-V1.0.0 | WINNF.FT.D.HBT.8 | Pass |
| Heartbeat Response Absent (First Heartbeat) | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.9 | Pass |
| Heartbeat Response Absent (Subsequent Heartbeat) | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.10 | Pass |
| Successful Grant Renewal in Heartbeat Test Case | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.HBT.11 | Pass |
| Domain Proxy Registration Response contains measReportConfig | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.MES.2 | Pass |
| Grant Response contains measReportConfig | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.MES.3 | Pass |
| Domain Proxy Heartbeat Response contains measReportConfig | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.MES.5 | Pass |
| Domain Proxy Successful Relinquishment | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.RLQ.2 | Pass |
| Domain Proxy Unsuccessful Relinquishment, responseCode=102 | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.RLQ.4 | Pass |
| Domain Proxy Unsuccessful Relinquishment, responseCode=103 | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.RLQ.6 | Pass |
| Domain Proxy Successful Deregistration | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.DRG.2 | Pass |
| Domain Proxy Deregistration responseCode=102 | WINNF-TS-0122-V1.0.2 | WINNF.FT.D.DRG.4 | Pass |
| Deregistration responseCode=103 | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.DRG.5 | Pass |
| Successful TLS connection between UUT and SAS Test Harness | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.SCS.1 | Pass |
| TLS failure due to revoked certificate | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.SCS.2 | Pass |
| TLS failure due to expired server certificate | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.SCS.3 | Pass |
| TLS failure when SAS Test Harness certificate is issued by unknown CA | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.SCS.4 | Pass |
| TLS failure when certificate at the SAS Test Harness is corrupted | WINNF-TS-0122-V1.0.2 | WINNF.FT.C.SCS.5 | Pass |
| UUT RF Transmit Power Measurement | WINNF-TS-0122-V1.0.2 | WINNF.PT.C.HBT.1 | Pass |
| SAS Version: 1.0.0.3 | | | |



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 | Shenzhen SGS 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

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 5 of 58

The UUT is a CBSD with Domain Proxy. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

CBRSA-TS-9001-V1.2.1

CBRS Alliance Certification Test Plan

WINNF-TS-0122-V1.0.2

Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)

KDB 940660 D01 Part 96 CBRS Eqpt v03

Note: WINNF.FT.C.REG.20 test case refer to WINNF.FT.C.REG.7 which changes the location.



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 | Shenzhen SGS EEC 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

3 Contents

| | Page |
|--|-----------|
| 1 Cover Page | 1 |
| 2 Test Summary | 3 |
| 3 Contents | 6 |
| 4 General Information..... | 8 |
| 4.1 Details of E.U.T | 8 |
| 4.2 Description of CBSD/DP Support Features | 9 |
| 4.3 Summary of Test Results | 10 |
| 4.4 Measurement Uncertainty | 10 |
| 4.5 Description of Support Units | 10 |
| 4.6 Test Location | 11 |
| 4.7 Test Facility | 11 |
| 4.8 Deviation from Standards..... | 11 |
| 4.9 Abnormalities from Standard Conditions | 11 |
| 5 Equipment List | 12 |
| 6 Test Method and Environment | 13 |
| 6.1 CBSD/DP Conformance and Performance..... | 13 |
| 6.2 CBSD Test Procedure..... | 13 |
| 6.3 Test Environment | 14 |
| 6.4 Test Setup | 14 |
| 7 Test Data..... | 15 |
| 7.1 CBSD Registration Process | 15 |
| 7.1.1 WINNF.FT.D.REG.2 | 15 |
| 7.1.2 WINNF.FT.D.REG.4 | 16 |
| 7.1.3 WINNF.FT.D.REG.6 | 17 |
| 7.1.4 WINNF.FT.D.REG.7 | 18 |
| 7.1.5 WINNF.FT.D.REG.9 | 19 |
| 7.1.6 WINNF.FT.D.REG.11 | 19 |
| 7.1.7 WINNF.FT.D.REG.13 | 20 |
| 7.1.8 WINNF.FT.D.REG.15 | 20 |
| 7.1.9 WINNF.FT.D.REG.17 | 21 |
| 7.1.10 WINNF.FT.D.REG.19 | 21 |
| 7.2 CBSD Spectrum Grant Process | 22 |
| 7.2.1 WINNF.FT.C.GRA.1 | 22 |
| 7.2.2 WINNF.FT.C.GRA.2 | 22 |
| 7.3 CBSD HeartBeat Process | 23 |
| 7.3.1 WINNF.FT.D.HBT.2 | 23 |

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 7 of 58

| | | |
|-------|---|-----------|
| 7.3.2 | WINNF.FT.C.HBT.3 | 26 |
| 7.3.3 | WINNF.FT.C.HBT.5 | 27 |
| 7.3.4 | WINNF.FT.C.HBT.6 | 28 |
| 7.3.5 | WINNF.FT.C.HBT.7 | 29 |
| 7.3.6 | WINNF.FT.D.HBT.8 | 30 |
| 7.3.7 | WINNF.FT.C.HBT.9 | 32 |
| 7.3.8 | WINNF.FT.C.HBT.10 | 33 |
| 7.3.9 | WINNF.FT.C.HBT.11 | 34 |
| 7.4 | CBSD Measurement Report | 36 |
| 7.4.1 | WINNF.FT.D.MES.2 | 36 |
| 7.4.2 | WINNF.FT.C.MES.3 | 38 |
| 7.4.3 | WINNF.FT.D.MES.5 | 39 |
| 7.5 | CBSD Relinquishment Process | 41 |
| 7.5.1 | WINNF.FT.D.RLQ.2 | 41 |
| 7.5.2 | WINNF.FT.D.RLQ.4 | 42 |
| 7.5.3 | WINNF.FT.D.RLQ.6 | 43 |
| 7.6 | CBSD Deregistration Process | 44 |
| 7.6.1 | WINNF.FT.D.DRG.2 | 44 |
| 7.6.2 | WINNF.FT.D.DRG.4 | 45 |
| 7.6.3 | WINNF.FT.D.DRG.5 | 46 |
| 7.7 | CBSD Security Validation | 47 |
| 7.7.1 | WINNF.FT.C.SCS.1 | 47 |
| 7.7.2 | WINNF.FT.C.SCS.2 | 47 |
| 7.7.3 | WINNF.FT.C.SCS.3 | 48 |
| 7.7.4 | WINNF.FT.C.SCS.4 | 48 |
| 7.7.5 | WINNF.FT.C.SCS.5 | 49 |
| 7.8 | CBSD RF Power Measurement | 50 |
| 7.8.1 | WINNF.PT.C.HBT.1 | 50 |
| 8 | Test Data Log For CBSD Under Control of Domain Proxy | 53 |
| 8.1 | WINNF.FT.C.SCS.1 | 53 |
| 8.2 | WINNF.FT.C.SCS.2 | 54 |
| 8.3 | WINNF.FT.C.SCS.3 | 55 |
| 8.4 | WINNF.FT.C.SCS.4 | 56 |
| 8.5 | WINNF.FT.C.SCS.5 | 57 |
| 9 | Photographs | 58 |
| 9.1 | EUT Constructional Details (EUT Photos) | 58 |



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, Shenzhen, China
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

4 General Information

4.1 Details of E.U.T.

| | |
|--|---|
| Power supply: | Input: 100-240V 50/60Hz |
| Sample Type: | Base Station |
| CBSD Class: | Category B |
| Transmitter Frequency Band: | n48 |
| Transmitter Frequency Range: | 3550~3700MHz |
| Hardware Version: | BBU: HQ3120HU8700 RRU: RRU-5130-V2 |
| Software Version: | BBU: ENB50_A0AAUBBU_SAS_V02.01.02.00_06.07 RRU: RRU5130_A0V01.00.02.00 |
| Test sample: | SN1: FA2483500001 SN2: FA2483500002 |
| Antenna Gain: | Max. 15dBi (Provided by manufacturer) |
| MIMO supported | 4T4R MIMO |
| Antenna Type: | External Antenna |
| Note: The UUT is a BTS-CBSD which can operate under control of Domain Proxy or operate as standalone CBSD. Domain Proxy information show as below: | |
| Model No. of Domain Proxy: IBM 3650M3 | |
| SN: 99W5545 | |
| Software Version of Domain Proxy: v1.8.6.1984 | |



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

4.2 Description of CBSD/DP Support Features

| Condition | Feature Description | Supported |
|-----------|--|-----------|
| C1 | Mandatory for UUT which supports multi-step registration message. | Y |
| C2 | Mandatory for UUT which supports single-step registration with no CPI-signed data in the registration message. By definition, this is a subset of Category A devices which determine all registration information, including location, without CPI intervention. | Y |
| C3 | Mandatory for UUT which supports single-step registration containing CPI-signed data in the registration message. | Y |
| C4 | Mandatory for UUT which supports RECEIVED_POWER_WITHOUT_GRANT measurement report type. | Y |
| C5 | Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type. | Y |
| C6 | Mandatory for UUT which supports parameter change being made at the UUT and prior to sending a deregistration. | Y |

Y: Supported

N: Not supported



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 | Shenzhen EEC 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

4.3 Summary of Test Results

| WINNF-TS-0122 | | | |
|--------------------|-----------------|------------|---------------|
| Classes | Test Case Items | Pass Items | Pass Rate (%) |
| FT (CBSD, DP/CBSD) | 36 | 36 | 100 |
| PT (CBSD, DP/CBSD) | 1 | 1 | 100 |
| Total | 37 | 37 | 100 |

Note:

1. Functional Test (FT): Test to validate the conformance of the Protocols and functionalities implemented in the CBSD/DP UUT to the requirements developed by WINNForum and supporting FCC/DoD requirements.
2. Field/Performance Test (PT): Test to check the capability of the CBSD/DP UUT to support various traffic models and actual operations in the field.

4.4 Measurement Uncertainty

| No. | Item | Measurement Uncertainty |
|-----|--------------------|---------------------------|
| 1 | Radio Frequency | $\pm 7.25 \times 10^{-8}$ |
| 2 | RF conducted power | $\pm 0.75\text{dB}$ |
| 3 | Temperature test | $\pm 1^\circ\text{C}$ |
| 4 | Humidity test | $\pm 3\%$ |
| 5 | Supply voltages | $\pm 1.5\%$ |
| 6 | Time | $\pm 3\%$ |

4.5 Description of Support Units

| Description | Manufacturer | Model No. | Serial No. |
|---------------|--------------|------------|---------------------|
| Router | NOKIA | SW2200.A10 | FA1990002402 |
| 5GC | Comba | CN-50, A01 | F9001CSS103MS93N008 |
| 5G USB Dongle | Askey | NDQ1300-SA | / |

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 11 of 58

4.6 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.

4.7 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.

4.8 Deviation from Standards

None

4.9 Abnormalities from Standard Conditions

None



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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 | Shenzhen EMC 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

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 12 of 58

5 Equipment List

| Test Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
|-----------------------------------|----------------------|------------------|---------------|------------|--------------|
| Laptop (With SAS Test harness) | HP | HP ProBook 6450b | CNU1103KOF | / | / |
| Spectrum Analyzer | Keysight | N9020A | SEM004-21 | 2024-03-15 | 2025-03-14 |
| Shield Room | SAEMC | MSR433 | SEM001-11 | 2024-05-11 | 2027-05-10 |
| Coaxial Cable | SGS | N/A | SEM031-01 | 2024-07-01 | 2025-06-30 |
| Attenuator | Weinschel Associates | WA41 | SEM021-09 | N/A | N/A |
| Splitter | MACOM | 2090-6214-00 | N/A | N/A | N/A |
| Humidity/ Temperature Indicator | deli | 8838 | SEM002-32 | 2024-07-24 | 2025-07-23 |



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

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 Test Method and Environment

6.1 CBSD/DP Conformance and Performance

Test Requirement: CBRS CBSD Test Specification WINNF-TS-0122-V1.0.2

Test Method: CBRS CBSD Test Specification WINNF-TS-0122-V1.0.2

WINNF-IN-0156_WInnForum_SAS_Test_Harness_CBSD_UUT_Tutorial_v1_0_0_1

6.2 CBSD Test Procedure

- a. Connect the UUT to SAS Test Harness system and RF Test instruments via the DP interface and RF components. The highest level is set to test configuration.
- b. UUT shall be UTC time synchronized
- c. The frequency band is granted and set as UUT supported Modulation and Channels, transmitted power of the UUT according to it granted parameters from the SAS Test Harness.
- d. Each test case results were recorded and validated by SAS Test Harness system and RF instruments test cases was recorded test results from SAS Test Harness system.

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

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,

For additional information or to request a copy of the inspection report, please contact us at telephone: (609-555-8887) 1443, or email: CN_Doccheck@sgs.com

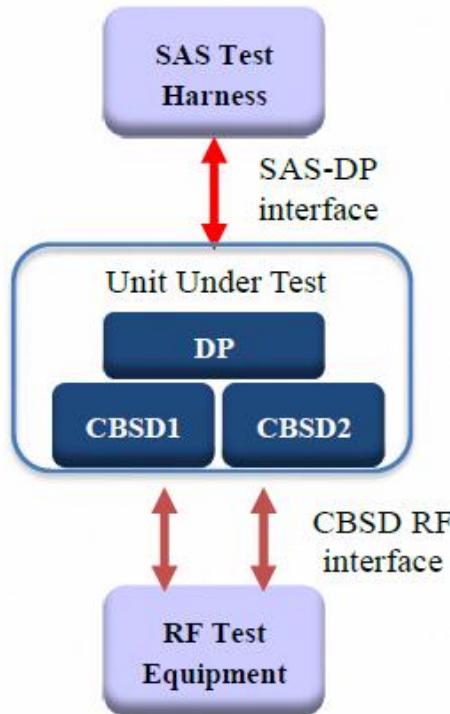
SGS-CSTC Standards Technical Services Co.,Ltd
Shenzhen Branch, SinoLab Centers, ETL Laboratory

6.3 Test Environment

| | |
|---------------------------|----------------------|
| Test Harness Version: | V1.0.0.3 |
| Operating System: | Microsoft Windows 10 |
| TLS Version: | 1.2 |
| Python Version: | 2.7.13 |
| Environmental Conditions: | 25deg. C, 65%RH |
| Input Power: | 120Vac, 60Hz |

6.4 Test Setup

- 1) DP is deployed on the network management, and the registration of DP to SAS is to register with SAS according to the granularity of CBSD ID;
- 2) The DP and the network element communicate messages according to the cell granularity, and each CBSDID corresponds to a cell of an RRU which belongs to a base station.



DP/CBSD as UUT, BTS-CBSD communication with Domain Proxy



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

7 Test Data

7.1 CBSD Registration Process

7.1.1 WINNF.FT.D.REG.2

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | <p>DP with two CBSD sends correct Registration request information, as specified in [n.5], in the form of one 2-element Array or as individual messages to the SAS Test Harness:</p> <ul style="list-style-type: none"> ● The required userId, fcId and cbsdSerialNumber registration parameters shall be sent for each CBSD and conform to proper format and acceptable ranges. ● Any REG-conditional or optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges. <p>Note: It is outside the scope of this document to test the Registration information that is supplied via another means.</p> | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <ul style="list-style-type: none"> ● SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or individual messages as follows: <ul style="list-style-type: none"> - cbsdId = Ci - measReportConfig shall not be included - responseCode = 0 for each CBSD | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.1.2 WINNF.FT.D.REG.4

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | DP with two CBSD sends correct Registration request information, as specified in the form of one 2-element Array or as individual messages to the SAS Test Harness: <ul style="list-style-type: none"> ● The required userId, fcId and cbidSerialNumber and REG-Conditional cbidCategory, airInterface, installationParam, and measCapability registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. ● Any optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | ● SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or individual messages as follows: <ul style="list-style-type: none"> - cbidId = Ci - measReportConfig shall not be included - responseCode = 0 for each CBSD | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.1.3 WINNF.FT.D.REG.6

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness ● UUT is in the Unregistered state ● All of the required and REG-Conditional parameters shall be configured and CPI signature provided | -- | -- |
| 2 | DP with two CBSD sends correct Registration request information, as specified in [n.5], in the form of one 2-element Array or as individual messages to the SAS Test Harness: <ul style="list-style-type: none"> ● The required userId, fcId and cbsdSerialNumber and REG-Conditional cbsdCategory, airInterface, measCapability and cpiSignatureData registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. ● Any optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <ul style="list-style-type: none"> ● SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or individual messages as follows: <ul style="list-style-type: none"> - cbsdId = Ci - measReportConfig shall not be included - responseCode = 0 for each CBSD | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 18 of 58

7.1.4 WINNF.FT.D.REG.7

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: ● UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness | -- | -- |
| 2 | UUT has successfully registered with SAS Test Harness | -- | -- |
| 3 | Change an installation parameters at the UUT (time T) Tester needs to record the current time at which the parameter change is executed. | -- | -- |
| 4 | Monitor the SAS-CBSD interface. UUT sends a deregistrationRequest to the SAS Test Harness The deregistration request shall be sent within (T + 60 seconds) from step 3. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

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

7.1.5 WINNF.FT.D.REG.9

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness. | -- | -- |
| 3 | SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: <ul style="list-style-type: none"> - SAS response does not include a cbsId - responseCode = 102 for CBSD1 and CBSD2 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |

7.1.6 WINNF.FT.D.REG.11

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness. | -- | -- |
| 3 | SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: <ul style="list-style-type: none"> - SAS response does not include a cbsId - responseCode = 200 for CBSD1 and CBSD2 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.1.7 WINNF.FT.D.REG.13

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness. | -- | -- |
| 3 | SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: <ul style="list-style-type: none"> - SAS response does not include a cbsdId. - responseCode = 0 for CBSD1 - responseCode = 103 for CBSD2 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |

7.1.8 WINNF.FT.D.REG.15

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness. | -- | -- |
| 3 | SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: <ul style="list-style-type: none"> - SAS response does not include a cbsdId. - responseCode = 0 for CBSD1 - responseCode = 101 for CBSD2 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.1.9 WINNF.FT.D.REG.17

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness. | -- | -- |
| 3 | SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: <ul style="list-style-type: none"> - SAS response does not include a cbsId - responseCode = 100 for CBSD1 and CBSD2 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |

7.1.10 WINNF.FT.D.REG.19

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT is in the Unregistered state | -- | -- |
| 2 | The DP with two CBSDs sends a Registration request in the form of one 2-element Array or as individual messages to SAS Test Harness. | -- | -- |
| 3 | SAS Test Harness sends a CBSD Registration Response in the form of one 2-element Array or as individual messages as follows: <ul style="list-style-type: none"> - SAS response does not include a cbsId - responseCode = 0 for CBSD1 - responseCode = 201 for CBSD2 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.2 CBSD Spectrum Grant Process

7.2.1 WINNF.FT.C.GRA.1

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C | -- | -- |
| 2 | UUT sends valid Grant Request. | -- | -- |
| 3 | SAS Test Harness sends a Grant Response message, including - cbsdId=C - responseCode = 400 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |

7.2.2 WINNF.FT.C.GRA.2

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C | -- | -- |
| 2 | UUT sends valid Grant Request. | -- | -- |
| 3 | SAS Test Harness sends a Grant Response message, including - cbsdId=C - responseCode = 400 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.3 CBSD HeartBeat Process

7.3.1 WINNF.FT.D.HBT.2

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has two CBSD registered successfully with SAS Test Harness, with cbsId = Ci, i={1,2} | -- | -- |
| 2 | <p>DP sends a message:</p> <ul style="list-style-type: none"> ● If message is type Spectrum Inquiry Request, go to step 3, or ● If message is type Grant Request, go to step 5 | -- | -- |
| 3 | <p>DP sends a Spectrum Inquiry Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Spectrum Inquiry Request message is formatted correctly for each CBSD, including for CBSDi, i={1,2}:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● List of frequencyRange objects sent by DP are within the CBRS frequency range | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 4 | <p>If a separate Spectrum Inquiry Request message was sent for each CBSD, the SAS Test Harness shall respond to each Spectrum Inquiry Request message with a separate Spectrum Inquiry Response message.</p> <p>If a single Spectrum Inquiry Request message was sent containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Spectrum Inquiry Response message containing a 2-object array.</p> <p>Verify parameters for each CBSD within the Spectrum Inquiry Response message are as follows, for CBSDi, i={1,2}:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● availableChannel is an array of availableChannel objects ● responseCode = 0 | -- | -- |
| 5 | <p>DP sends a Grant Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Grant Request message is formatted correctly for each CBSD, including for CBSDi, i={1,2}:</p> <ul style="list-style-type: none"> ● cbsId = C ● maxEIRP is at or below the limit appropriate for CBSD category as defined by Part 96 ● operationFrequencyRange, Fi, sent by UUT is a valid range within the CBRS band | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 6 | <p>If a separate Grant Request message was sent for each CBSD, the SAS Test Harness shall respond to each Grant Request message with a separate Grant Response message.</p> <p>If a single Grant Request message was sent containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Grant Response message containing a 2-object array.</p> <p>Verify parameters for each CBSD within the Grant Response message are as</p> | -- | -- |



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 24 of 58

| | | | |
|----|--|--|-------------------------------|
| | follows, for CBSDi, i={1,2}: <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi = a valid grant ID ● grantExpireTime = UTC time greater than duration of the test ● responseCode = 0 | | |
| 7 | Ensure DP sends first Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Heartbeat Request message is formatted correctly for each CBSD, including, for CBSDi i={1,2}: <ul style="list-style-type: none"> ● cbsdId = Ci, i={1,2} ● grantId = Gi, i={1,2} ● operationState = "GRANTED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 8 | If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Verify parameters for each CBSD within the Heartbeat Response message are as follows, for CBSDi: <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0 | -- | -- |
| 9 | For further Heartbeat Request messages sent from DP after completion of step 8, validate message is sent within latest specified heartbeatInterval for CBSDi: <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi ● operationState = "AUTHORIZED" and SAS Test Harness responds with a Heartbeat Response message including the following parameters, for CBSDi <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0 | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 10 | Monitor the RF output of the UUT from start of test until UUT transmission commences. Monitor the RF output of the UUT from start of test until RF transmission commences. Verify: <ul style="list-style-type: none"> ● UUT does not transmit at any time prior to completion of the first heartbeat response ● UUT transmits after step 8 is complete, and its transmission is limited to within the bandwidth range Fi. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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) 8309 1443, or email: CN_Doccheck@sgs.com

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

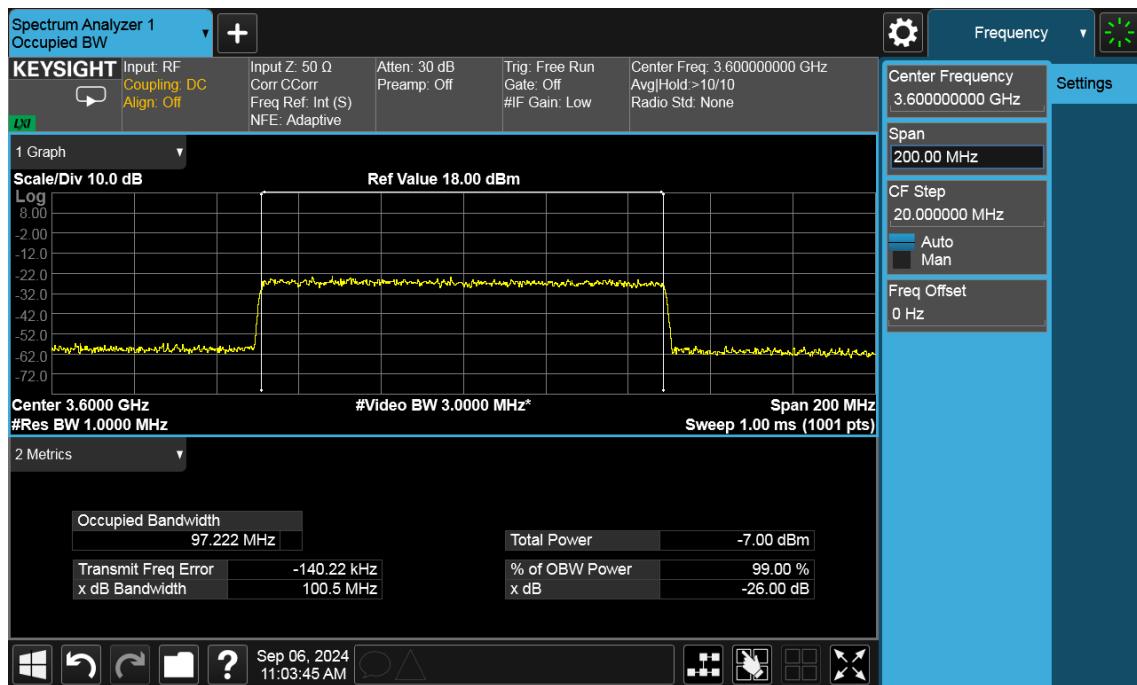


SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 25 of 58



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 | Shenzhen SGS EEC 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

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 26 of 58

7.3.2 WINNF.FT.C.HBT.3

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface | -- | -- |
| 2 | <p>UUT sends a Heartbeat Request message.</p> <p>Ensure Heartbeat Request message is sent within Heartbeat Interval specified in the latest Heartbeat Response, and formatted correctly, including:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● operationState = "AUTHORIZED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>SAS Test Harness sends a Heartbeat Response message, including the following parameters:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● transmitExpireTime = T = Current UTC time ● responseCode = 105 (DEREGISTER) | -- | -- |
| 4 | After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT. Verify:</p> <ul style="list-style-type: none"> ● UUT shall stop transmission within (T + 60 seconds) of completion of step 3 | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

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

7.3.3 WINNF.FT.C.HBT.5

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in GRANTED, but not AUTHORIZED state (i.e. has not performed its first Heartbeat Request) | -- | -- |
| 2 | UUT sends a Heartbeat Request message. Verify Heartbeat Request message is formatted correctly, including: <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● operationState = "GRANTED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | SAS Test Harness sends a Heartbeat Response message, including the following parameters: <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● transmitExpireTime = T = current UTC time ● responseCode = 501 (SUSPENDED_GRANT) | -- | -- |
| 4 | After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. | -- | -- |
| 5 | Monitor the SAS-CBSD interface. Verify either A OR B occurs: <ol style="list-style-type: none"> A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● operationState = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G Monitor the RF output of the UUT. Verify: <ul style="list-style-type: none"> ● UUT does not transmit at any time | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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.Dcccheck@sgs.com



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 28 of 58

7.3.4 WINNF.FT.C.HBT.6

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface | -- | -- |
| 2 | <p>UUT sends a Heartbeat Request message.</p> <p>Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● operationState = "AUTHORIZED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>SAS Test Harness sends a Heartbeat Response message, including the following parameters:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● transmitExpireTime = T = current UTC time ● responseCode = 501 (SUSPENDED_GRANT) | -- | -- |
| 4 | After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. | -- | -- |
| 5 | <p>Monitor the SAS-CBSD interface. Verify either A OR B occurs:</p> <p>A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● operationState = "GRANTED" <p>B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G <p>Monitor the RF output of the UUT. Verify:</p> <ul style="list-style-type: none"> ● UUT shall stop transmission within (T+60) seconds of completion of step 3 | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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) 83071443, or email: CN.Dcccheck@sgs.com

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

7.3.5 WINNF.FT.C.HBT.7

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface | -- | -- |
| 2 | <p>UUT sends a Heartbeat Request message.</p> <p>Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● operationState = "AUTHORIZED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>SAS Test Harness sends a Heartbeat Response message, including the following parameters:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● transmitExpireTime = T = current UTC time ● responseCode = 502 (UNSYNC_OP_PARAM) | -- | -- |
| 4 | After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. | -- | -- |
| 5 | <p>Monitor the SAS-CBSD interface. Verify:</p> <ul style="list-style-type: none"> ● UUT sends a Grant Relinquishment Request message. Verify message is correctly formatted with parameters: <ul style="list-style-type: none"> ○ cbsId = C ○ grantId = G <p>Monitor the RF output of the UUT. Verify:</p> <ul style="list-style-type: none"> ● UUT shall stop transmission within (T+60) seconds of completion of step 3 | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.3.6 WINNF.FT.D.HBT.8

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has two CBSD registered successfully with SAS Test Harness ● Each CBSD {1,2} has a valid single grant as follows <ul style="list-style-type: none"> ○ valid cbsdId = Ci, i={1,2} ○ valid grantId = Gi, i={1,2} ○ grant is for frequency range Fi, power Pi ○ grantExpireTime = UTC time greater than duration of the test ● Both CBSD are in AUTHORIZED state and transmitting within their granted bandwidth on RF interface | -- | -- |
| 2 | <p>DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of size 2. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly for each CBSD, including, for CBSDi i={1,2}:</p> <ul style="list-style-type: none"> ● cbsdId = Ci, i = {1,2} ● grantId = Gi, i = {1,2} ● operationState = "AUTHORIZED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>If separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message.</p> <p>If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Heartbeat Response message should be as follows, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi ● For CBSD1: <ul style="list-style-type: none"> ○ transmitExpireTime = current UTC time + 200 seconds ○ responseCode = 0 ● For CBSD2: <ul style="list-style-type: none"> ○ transmitExpireTime = T = current UTC time ○ responseCode = 500 (TERMINATED_GRANT) | -- | -- |
| 4 | <p>After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.</p> <p>If CBSD sends further Heartbeat Request messages for CBSD1, SAS Test Harness shall respond with a Heartbeat Response message with parameters:</p> <ul style="list-style-type: none"> ● cbsdId = C1 ● grantId = G1 ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0 ● Heartbeat Request message is within heartbeatInterval of previous Heartbeat Request message | -- | -- |



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 31 of 58

| | | | |
|---|--|--|-------------------------------|
| 5 | Monitor the RF output of CBSD2. Verify: ● CBSD2 shall stop transmission within bandwidth F2 within (T + 60 seconds) of completion of step 3 | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

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

7.3.7 WINNF.FT.C.HBT.9

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in GRANTED, but not AUTHORIZED state(i.e. has not performed its first Heartbeat Request) | -- | -- |
| 2 | UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● operationState = "GRANTED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | After completion of step 2, SAS Test Harness does not respond to any further <ul style="list-style-type: none"> ● messages from UUT to simulate loss of network connection | -- | -- |
| 4 | Monitor the RF output of the UUT from start of test to 60 seconds after step 3. Verify: <ul style="list-style-type: none"> ● At any time during the test, UUT shall not transmit on RF interface | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 33 of 58

7.3.8 WINNF.FT.C.HBT.10

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface | -- | -- |
| 2 | <p>UUT sends a Heartbeat Request message.</p> <p>Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:</p> <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>SAS Test Harness sends a Heartbeat Response message, including the following parameters:</p> <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● transmitExpireTime = T = current UTC time + 200 seconds ● responseCode = 0 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT. Verify:</p> <ul style="list-style-type: none"> ● UUT shall stop all transmission on RF interface within (transmitExpireTime + 60 seconds), using the transmitExpireTime sent in Step 3. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch | IEC62368-1:2020 | IEC62368-2-22:2020 | IEC62368-2-12:2020 | IEC62368-2-13:2020 | IEC62368-2-14:2020 | IEC62368-2-15:2020 | IEC62368-2-16:2020 | IEC62368-2-17:2020 | IEC62368-2-18:2020 | IEC62368-2-19:2020 | IEC62368-2-20:2020 | IEC62368-2-21:2020 | IEC62368-2-22:2020 | IEC62368-2-23:2020 | IEC62368-2-24:2020 | IEC62368-2-25:2020 | IEC62368-2-26:2020 | IEC62368-2-27:2020 | IEC62368-2-28:2020 | IEC62368-2-29:2020 | IEC62368-2-30:2020 | IEC62368-2-31:2020 | IEC62368-2-32:2020 | IEC62368-2-33:2020 | IEC62368-2-34:2020 | IEC62368-2-35:2020 | IEC62368-2-36:2020 | IEC62368-2-37:2020 | IEC62368-2-38:2020 | IEC62368-2-39:2020 | IEC62368-2-40:2020 | IEC62368-2-41:2020 | IEC62368-2-42:2020 | IEC62368-2-43:2020 | IEC62368-2-44:2020 | IEC62368-2-45:2020 | IEC62368-2-46:2020 | IEC62368-2-47:2020 | IEC62368-2-48:2020 | IEC62368-2-49:2020 | IEC62368-2-50:2020 | IEC62368-2-51:2020 | IEC62368-2-52:2020 | IEC62368-2-53:2020 | IEC62368-2-54:2020 | IEC62368-2-55:2020 | IEC62368-2-56:2020 | IEC62368-2-57:2020 | IEC62368-2-58:2020 | IEC62368-2-59:2020 | IEC62368-2-60:2020 | IEC62368-2-61:2020 | IEC62368-2-62:2020 | IEC62368-2-63:2020 | IEC62368-2-64:2020 | IEC62368-2-65:2020 | IEC62368-2-66:2020 | IEC62368-2-67:2020 | IEC62368-2-68:2020 | IEC62368-2-69:2020 | IEC62368-2-70:2020 | IEC62368-2-71:2020 | IEC62368-2-72:2020 | IEC62368-2-73:2020 | IEC62368-2-74:2020 | IEC62368-2-75:2020 | IEC62368-2-76:2020 | IEC62368-2-77:2020 | IEC62368-2-78:2020 | IEC62368-2-79:2020 | IEC62368-2-80:2020 | IEC62368-2-81:2020 | IEC62368-2-82:2020 | IEC62368-2-83:2020 | IEC62368-2-84:2020 | IEC62368-2-85:2020 | IEC62368-2-86:2020 | IEC62368-2-87:2020 | IEC62368-2-88:2020 | IEC62368-2-89:2020 | IEC62368-2-90:2020 | IEC62368-2-91:2020 | IEC62368-2-92:2020 | IEC62368-2-93:2020 | IEC62368-2-94:2020 | IEC62368-2-95:2020 | IEC62368-2-96:2020 | IEC62368-2-97:2020 | IEC62368-2-98:2020 | IEC62368-2-99:2020 | IEC62368-2-100:2020 | IEC62368-2-101:2020 | IEC62368-2-102:2020 | IEC62368-2-103:2020 | IEC62368-2-104:2020 | IEC62368-2-105:2020 | IEC62368-2-106:2020 | IEC62368-2-107:2020 | IEC62368-2-108:2020 | IEC62368-2-109:2020 | IEC62368-2-110:2020 | IEC62368-2-111:2020 | IEC62368-2-112:2020 | IEC62368-2-113:2020 | IEC62368-2-114:2020 | IEC62368-2-115:2020 | IEC62368-2-116:2020 | IEC62368-2-117:2020 | IEC62368-2-118:2020 | IEC62368-2-119:2020 | IEC62368-2-120:2020 | IEC62368-2-121:2020 | IEC62368-2-122:2020 | IEC62368-2-123:2020 | IEC62368-2-124:2020 | IEC62368-2-125:2020 | IEC62368-2-126:2020 | IEC62368-2-127:2020 | IEC62368-2-128:2020 | IEC62368-2-129:2020 | IEC62368-2-130:2020 | IEC62368-2-131:2020 | IEC62368-2-132:2020 | IEC62368-2-133:2020 | IEC62368-2-134:2020 | IEC62368-2-135:2020 | IEC62368-2-136:2020 | IEC62368-2-137:2020 | IEC62368-2-138:2020 | IEC62368-2-139:2020 | IEC62368-2-140:2020 | IEC62368-2-141:2020 | IEC62368-2-142:2020 | IEC62368-2-143:2020 | IEC62368-2-144:2020 | IEC62368-2-145:2020 | IEC62368-2-146:2020 | IEC62368-2-147:2020 | IEC62368-2-148:2020 | IEC62368-2-149:2020 | IEC62368-2-150:2020 | IEC62368-2-151:2020 | IEC62368-2-152:2020 | IEC62368-2-153:2020 | IEC62368-2-154:2020 | IEC62368-2-155:2020 | IEC62368-2-156:2020 | IEC62368-2-157:2020 | IEC62368-2-158:2020 | IEC62368-2-159:2020 | IEC62368-2-160:2020 | IEC62368-2-161:2020 | IEC62368-2-162:2020 | IEC62368-2-163:2020 | IEC62368-2-164:2020 | IEC62368-2-165:2020 | IEC62368-2-166:2020 | IEC62368-2-167:2020 | IEC62368-2-168:2020 | IEC62368-2-169:2020 | IEC62368-2-170:2020 | IEC62368-2-171:2020 | IEC62368-2-172:2020 | IEC62368-2-173:2020 | IEC62368-2-174:2020 | IEC62368-2-175:2020 | IEC62368-2-176:2020 | IEC62368-2-177:2020 | IEC62368-2-178:2020 | IEC62368-2-179:2020 | IEC62368-2-180:2020 | IEC62368-2-181:2020 | IEC62368-2-182:2020 | IEC62368-2-183:2020 | IEC62368-2-184:2020 | IEC62368-2-185:2020 | IEC62368-2-186:2020 | IEC62368-2-187:2020 | IEC62368-2-188:2020 | IEC62368-2-189:2020 | IEC62368-2-190:2020 | IEC62368-2-191:2020 | IEC62368-2-192:2020 | IEC62368-2-193:2020 | IEC62368-2-194:2020 | IEC62368-2-195:2020 | IEC62368-2-196:2020 | IEC62368-2-197:2020 | IEC62368-2-198:2020 | IEC62368-2-199:2020 | IEC62368-2-200:2020 | IEC62368-2-201:2020 | IEC62368-2-202:2020 | IEC62368-2-203:2020 | IEC62368-2-204:2020 | IEC62368-2-205:2020 | IEC62368-2-206:2020 | IEC62368-2-207:2020 | IEC62368-2-208:2020 | IEC62368-2-209:2020 | IEC62368-2-210:2020 | IEC62368-2-211:2020 | IEC62368-2-212:2020 | IEC62368-2-213:2020 | IEC62368-2-214:2020 | IEC62368-2-215:2020 | IEC62368-2-216:2020 | IEC62368-2-217:2020 | IEC62368-2-218:2020 | IEC62368-2-219:2020 | IEC62368-2-220:2020 | IEC62368-2-221:2020 | IEC62368-2-222:2020 | IEC62368-2-223:2020 | IEC62368-2-224:2020 | IEC62368-2-225:2020 | IEC62368-2-226:2020 | IEC62368-2-227:2020 | IEC62368-2-228:2020 | IEC62368-2-229:2020 | IEC62368-2-230:2020 | IEC62368-2-231:2020 | IEC62368-2-232:2020 | IEC62368-2-233:2020 | IEC62368-2-234:2020 | IEC62368-2-235:2020 | IEC62368-2-236:2020 | IEC62368-2-237:2020 | IEC62368-2-238:2020 | IEC62368-2-239:2020 | IEC62368-2-240:2020 | IEC62368-2-241:2020 | IEC62368-2-242:2020 | IEC62368-2-243:2020 | IEC62368-2-244:2020 | IEC62368-2-245:2020 | IEC62368-2-246:2020 | IEC62368-2-247:2020 | IEC62368-2-248:2020 | IEC62368-2-249:2020 | IEC62368-2-250:2020 | IEC62368-2-251:2020 | IEC62368-2-252:2020 | IEC62368-2-253:2020 | IEC62368-2-254:2020 | IEC62368-2-255:2020 | IEC62368-2-256:2020 | IEC62368-2-257:2020 | IEC62368-2-258:2020 | IEC62368-2-259:2020 | IEC62368-2-260:2020 | IEC62368-2-261:2020 | IEC62368-2-262:2020 | IEC62368-2-263:2020 | IEC62368-2-264:2020 | IEC62368-2-265:2020 | IEC62368-2-266:2020 | IEC62368-2-267:2020 | IEC62368-2-268:2020 | IEC62368-2-269:2020 | IEC62368-2-270:2020 | IEC62368-2-271:2020 | IEC62368-2-272:2020 | IEC62368-2-273:2020 | IEC62368-2-274:2020 | IEC62368-2-275:2020 | IEC62368-2-276:2020 | IEC62368-2-277:2020 | IEC62368-2-278:2020 | IEC62368-2-279:2020 | IEC62368-2-280:2020 | IEC62368-2-281:2020 | IEC62368-2-282:2020 | IEC62368-2-283:2020 | IEC62368-2-284:2020 | IEC62368-2-285:2020 | IEC62368-2-286:2020 | IEC62368-2-287:2020 | IEC62368-2-288:2020 | IEC62368-2-289:2020 | IEC62368-2-290:2020 | IEC62368-2-291:2020 | IEC62368-2-292:2020 | IEC62368-2-293:2020 | IEC62368-2-294:2020 | IEC62368-2-295:2020 | IEC62368-2-296:2020 | IEC62368-2-297:2020 | IEC62368-2-298:2020 | IEC62368-2-299:2020 | IEC62368-2-300:2020 | IEC62368-2-301:2020 | IEC62368-2-302:2020 | IEC62368-2-303:2020 | IEC62368-2-304:2020 | IEC62368-2-305:2020 | IEC62368-2-306:2020 | IEC62368-2-307:2020 | IEC62368-2-308:2020 | IEC62368-2-309:2020 | IEC62368-2-310:2020 | IEC62368-2-311:2020 | IEC62368-2-312:2020 | IEC62368-2-313:2020 | IEC62368-2-314:2020 | IEC62368-2-315:2020 | IEC62368-2-316:2020 | IEC62368-2-317:2020 | IEC62368-2-318:2020 | IEC62368-2-319:2020 | IEC62368-2-320:2020 | IEC62368-2-321:2020 | IEC62368-2-322:2020 | IEC62368-2-323:2020 | IEC62368-2-324:2020 | IEC62368-2-325:2020 | IEC62368-2-326:2020 | IEC62368-2-327:2020 | IEC62368-2-328:2020 | IEC62368-2-329:2020 | IEC62368-2-330:2020 | IEC62368-2-331:2020 | IEC62368-2-332:2020 | IEC62368-2-333:2020 | IEC62368-2-334:2020 | IEC62368-2-335:2020 | IEC62368-2-336:2020 | IEC62368-2-337:2020 | IEC62368-2-338:2020 | IEC62368-2-339:2020 | IEC62368-2-340:2020 | IEC62368-2-341:2020 | IEC62368-2-342:2020 | IEC62368-2-343:2020 | IEC62368-2-344:2020 | IEC62368-2-345:2020 | IEC62368-2-346:2020 | IEC62368-2-347:2020 | IEC62368-2-348:2020 | IEC62368-2-349:2020 | IEC62368-2-350:2020 | IEC62368-2-351:2020 | IEC62368-2-352:2020 | IEC62368-2-353:2020 | IEC62368-2-354:2020 | IEC62368-2-355:2020 | IEC62368-2-356:2020 | IEC62368-2-357:2020 | IEC62368-2-358:2020 | IEC62368-2-359:2020 | IEC62368-2-360:2020 | IEC62368-2-361:2020 | IEC62368-2-362:2020 | IEC62368-2-363:2020 | IEC62368-2-364:2020 | IEC62368-2-365:2020 | IEC62368-2-366:2020 | IEC62368-2-367:2020 | IEC62368-2-368:2020 | IEC62368-2-369:2020 | IEC62368-2-370:2020 | IEC62368-2-371:2020 | IEC62368-2-372:2020 | IEC62368-2-373:2020 | IEC62368-2-374:2020 | IEC62368-2-375:2020 | IEC62368-2-376:2020 | IEC62368-2-377:2020 | IEC62368-2-378:2020 | IEC62368-2-379:2020 | IEC62368-2-380:2020 | IEC62368-2-381:2020 | IEC62368-2-382:2020 | IEC62368-2-383:2020 | IEC62368-2-384:2020 | IEC62368-2-385:2020 | IEC62368-2-386:2020 | IEC62368-2-387:2020 | IEC62368-2-388:2020 | IEC62368-2-389:2020 | IEC62368-2-390:2020 | IEC62368-2-391:2020 | IEC62368-2-392:2020 | IEC62368-2-393:2020 | IEC62368-2-394:2020 | IEC62368-2-395:2020 | IEC62368-2-396:2020 | IEC62368-2-397:2020 | IEC62368-2-398:2020 | IEC62368-2-399:2020 | IEC62368-2-400:2020 | IEC62368-2-401:2020 | IEC62368-2-402:2020 | IEC62368-2-403:2020 | IEC62368-2-404:2020 | IEC62368-2-405:2020 | IEC62368-2-406:2020 | IEC62368-2-407:2020 | IEC62368-2-408:2020 | IEC62368-2-409:2020 | IEC62368-2-410:2020 | IEC62368-2-411:2020 | IEC62368-2-412:2020 | IEC62368-2-413:2020 | IEC62368-2-414:2020 | IEC62368-2-415:2020 | IEC62368-2-416:2020 | IEC62368-2-417:2020 | IEC62368-2-418:2020 | IEC62368-2-419:2020 | IEC62368-2-420:2020 | IEC62368-2-421:2020 | IEC62368-2-422:2020 | IEC62368-2-423:2020 | IEC62368-2-424:2020 | IEC62368-2-425:2020 | IEC62368-2-426:2020 | IEC62368-2-427:2020 | IEC62368-2-428:2020 | IEC62368-2-429:2020 | IEC62368-2-430:2020 | IEC62368-2-431:2020 | IEC62368-2-432:2020 | IEC62368-2-433:2020 | IEC62368-2-434:2020 | IEC62368-2-435:2020 | IEC62368-2-436:2020 | IEC62368-2-437:2020 | IEC62368-2-438:2020 | IEC62368-2-439:2020 | IEC62368-2-440:2020 | IEC62368-2-441:2020 | IEC62368-2-442:2020 | IEC62368-2-443:2020 | IEC62368-2-444:2020 | IEC62368-2-445:2020 | IEC62368-2-446:2020 | IEC62368-2-447:2020 | IEC62368-2-448:2020 | IEC62368-2-449:2020 | IEC62368-2-450:2020 | IEC62368-2-451:2020 | IEC62368-2-452:2020 | IEC62368-2-453:2020 | IEC62368-2-454:2020 | IEC62368-2-455:2020 | IEC62368-2-456:2020 | IEC62368-2-457:2020 | IEC62368-2-458:2020 | IEC62368-2-459:2020 | IEC62368-2-460:2020 | IEC62368-2-461:2020 | IEC62368-2-462:2020 | IEC62368-2-463:2020 | IEC62368-2-464:2020 | IEC62368-2-465:2020 | IEC62368-2-466:2020 | IEC62368-2-467:2020 | IEC62368-2-468:2020 | IEC62368-2-469:2020 | IEC62368-2-470:2020 | IEC62368-2-471:2020 | IEC62368-2-472:2020 | IEC62368-2-473:2020 | IEC62368-2-474:2020 | IEC62368-2-475:2020 | IEC62368-2-476:2020 | IEC62368-2-477:2020 | IEC62368-2-478:2020 | IEC62368-2-479:2020 | IEC62368-2-480:2020 | IEC62368-2-481:2020 | IEC62368-2-482:2020 | IEC62368-2-483:2020 | IEC62368-2-484:2020 | IEC62368-2-485:2020 | IEC62368-2-486:2020 | IEC62368-2-487:2020 | IEC62368-2-488:2020 | IEC62368-2-489:2020 | IEC62368-2-490:2020 | IEC62368-2-491:2020 | IEC62368-2-492:2020 | IEC62368-2-493:2020 | IEC62368-2-494:2020 | IEC62368-2-495:2020 | IEC62368-2-496:2020 | IEC62368-2-497:2020 | IEC62368-2-498:2020 | IEC62368-2-499:2020 | IEC62368-2-500:2020 | IEC62368-2-501:2020 | IEC62368-2-502:2020 | IEC62368-2-503:2020 | IEC62368-2-504:2020 | IEC62368-2-505:2020 | IEC62368-2-506:2020 | IEC62368-2-507:2020 | IEC62368-2-508:2020 | IEC62368-2-509:2020 | IEC62368-2-510:2020 | IEC62368-2-511:2020 | IEC62368-2-512:2020 | IEC62368-2-513:2020 | IEC62368-2-514:2020 | IEC62368-2-515:2020 | IEC62368-2-516:2

7.3.9 WINNF.FT.C.HBT.11

| # | Test Execution Steps | Results | |
|---|--|-----------|-----------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: <ul style="list-style-type: none"> ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface ● Grant has the following parameters at the start of the test: <ul style="list-style-type: none"> ○ grantExpireTime = UTC time equal to time at start of test + 300 seconds = Tgrant_expire ○ transmitExpireTime = UTC time equal to time at start of test + 200 seconds ○ heartbeatInterval = 60 seconds | -- | -- |
| 2 | <p>UUT sends a Heartbeat Request message.</p> <p>If Heartbeat Request message contains grantRenew = TRUE, go to Step 6, else go to Step 3.</p> | -- | -- |
| 3 | <p>Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:</p> <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED" | █ Pass | □ Fail |
| 4 | <p>SAS Test Harness sends a Heartbeat Response message, with the following parameters:</p> <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● transmitExpireTime = current UTC + 200 seconds ● grantExpireTime = same as Step 1 ● responseCode = 0 | -- | -- |
| 5 | Go to Step 2 | -- | -- |
| 6 | <p>Verify Heartbeat Request message is sent within the latest specified heartbeatInterval, and is formatted correctly, including:</p> <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED" ● grantRenew = TRUE | █ Pass | □ Fail |
| 7 | <p>SAS Test Harness sends a Heartbeat Response message, with the following parameters:</p> <ul style="list-style-type: none"> ● cbsdId = C ● grantId = G ● grantExpireTime = UTC time set far in the future ● transmitExpireTime = current UTC time + 200 seconds | -- | -- |

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 35 of 58

| | | | |
|---|--|----|----|
| | <ul style="list-style-type: none">● responseCode = 0 | | |
| 8 | <p>Continue to respond to any subsequentHeartbeat Request from CBSD with Heartbeat Response with the following parameters:</p> <ul style="list-style-type: none">● cbsdId = C● grantId = G● transmitExpireTime = same as Step 7● responseCode = 0 | -- | -- |
| 9 | Monitor RF transmission of UUT from start of test until Tgrant_expire + 60 seconds and ensure UUT continues to transmit throughout the time 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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch | Shenzhen SGS EEC 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 CBSD Measurement Report

7.4.1 WINNF.FT.D.MES.2

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness | -- | -- |
| 2 | <p>DP sends a Registration Request message for each of two CBSD. This may occur in a separate Request message per CBSD, or together in a single Request message with array of 2.</p> <p>Verify Registration Request message contains all required parameters properly formatted for CBSD<i>i</i>, <i>i</i>={1,2}, and specifically:</p> <ul style="list-style-type: none"> ● userId is present and correct ● fcId is present and correct ● cbsdSerialNumber is present and correct ● measCapability = "RECEIVED_POWER_WITHOUT_GRANT" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>If a separate Registration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Registration Request message with a separate Registration Response message.</p> <p>If a single Registration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Registration Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Registration Response message should be as follows, for CBSD<i>i</i>:</p> <ul style="list-style-type: none"> ● cbsdId = <i>Ci</i> ● measReportConfig= "RECEIVED_POWER_WITHOUT_GRANT" ● responseCode = 0 | -- | -- |
| 4 | <p>UUT sends a message:</p> <ul style="list-style-type: none"> ● If message is type Spectrum Inquiry Request, go to step 5, or ● If message is type Grant Request, go to step 7 | -- | -- |
| 5 | <p>UUT sends message type Spectrum Inquiry Request. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify Spectrum Inquiry Request message contains all required parameters properly formatted for CBSD<i>i</i>, <i>i</i>={1,2}, and specifically:</p> <ul style="list-style-type: none"> ● cbsdId = <i>Ci</i> ● measReport is present, and is a properly formatted rcvdPowerMeasReport. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 6 | <p>If a separate Spectrum Inquiry Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Spectrum Inquiry Request message with a separate Spectrum Inquiry Response message.</p> <p>If a single Spectrum Inquiry Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Spectrum Inquiry Response message containing a 2-object array.</p> | -- | -- |

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 37 of 58

| | | | |
|---|---|--|-------------------------------|
| | Parameters for each CBSD within the Spectrum Inquiry Response message should be as follows: <ul style="list-style-type: none">● cbsId = Ci● availableChannel is an array of availableChannel objects● responseCode = 0 | | |
| 7 | UUT sends message type Grant Request message. This may occur in a separate message per CBSD, or together in a single message with array of 2. Verify the Grant Request message contains all required parameters properly formatted for CBSD <i>i</i> , <i>i</i> = {1,2}, and specifically: <ul style="list-style-type: none">● cbsId = Ci● measReport is present, and is a properly formatted rcvdPowerMeasReport. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch | Shenzhen SGS EEC 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 WINNF.FT.C.MES.3

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT has successfully registered with SAS Test Harness, with cbsId=C and measCapability = "RECEIVED_POWER_WITH_GRANT" | -- | -- |
| 2 | <p>UUT sends a Grant Request message. Verify Grant Request message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> ● cbsId = C ● operationParam is present and format is valid | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>SAS Test Harness sends a Grant Response message, with the following parameters:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G = valid grant ID ● grantExpireTime = UTC time in the future ● heartbeatInterval = 60 seconds ● measReportConfig= "RECEIVED_POWER_WITH_GRANT" ● operationParam is set to valid operating parameters ● channelType = "GAA" ● responseCode = 0 | -- | -- |
| 4 | <p>UUT sends a Heartbeat Request message. Verify message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● operationState = "GRANTED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 5 | <p>If Heartbeat Request message (step 4) contains measReport object, then:</p> <ul style="list-style-type: none"> ● verify measReport is properly formatted as object rcvdPowerMeasReport ● end test, with PASS result <p>else, if Heartbeat Request message (step 4) does not contain measReport object, then:</p> <ul style="list-style-type: none"> ● If number of Heartbeat Requests sent by UUT after Step 3 is = 5, then stop test with result of FAIL | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 6 | <p>SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> ● cbsId = C ● grantId = G ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0 <p>Go to Step 4, above</p> | -- | -- |



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) 83071443, or email: CN.Doccheck@sgs.com

7.4.3 WINNF.FT.D.MES.5

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with cbsId=Ci, i={1,2} and measCapability = "RECEIVED_POWER_WITH_GRANT" ● DP has received a valid grant with grantId = Gi, i={1,2} for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. ● Grants have heartbeatInterval =60 seconds | -- | -- |
| 2 | <p>Verify DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Heartbeat Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● grantId = Gi ● operationState = "AUTHORIZED" | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message.</p> <p>If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Heartbeat Response message containing all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● grantId = Gi ● measReportConfig= "RECEIVED_POWER_WITH_GRANT" ● responseCode = 0 | -- | -- |
| 4 | <p>Verify DP sends a Heartbeat Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Heartbeat Request message contains all required parameters properly formatted for each CBSD, and specifically, for CBSDi, i = {1,2}:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● grantId = Gi ● operationState = "AUTHORIZED" ● Check whether measReport is present, and if present, ensure it is a properly formatted rcvPowerMeasReport object, and record its reception for each CBSDi, i = {1,2}. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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.Dcccheck@sgs.com

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 40 of 58

| | | | |
|---|---|--|-------------------------------|
| | If Heartbeat Request message (step 4) contains measReport object, then: <ul style="list-style-type: none"> Verify measReport is properly formatted as object rcvdPowerMeasReport record which CBSD have successfully sent a measReport object | | |
| 5 | If all CBSD _i , $i = \{1,2\}$ have successfully sent a measReport object, then <ul style="list-style-type: none"> end test, with PASS result else, if the number of Heartbeat Requests sent per CBSD is 5 or more, then stop test with result of FAIL | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 6 | If a separate Heartbeat Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each Heartbeat Request message with a separate Heartbeat Response message. If a single Heartbeat Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Heartbeat Response message containing a 2-object array. Parameters for each CBSD within the Heartbeat Response message containing all required parameters properly formatted, and specifically: <ul style="list-style-type: none"> cbsdId = Ci grantId = Gi responseCode = 0 Go to Step 4, above. | -- | -- |



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 | SGS-CSTC 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

7.5 CBSD Relinquishment Process

7.5.1 WINNF.FT.D.RLQ.2

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with cbsdId=Ci, i={1,2} ● DP has received a valid grant with grantId = Gi, i={1,2} for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p> | -- | -- |
| 2 | <p>Verify DP sends a Relinquishment Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Relinquishment Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <p>If a separate Relinquishment Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message.</p> <p>If a single Relinquishment Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Relinquishment Response shall be as follows:</p> <ul style="list-style-type: none"> ● cbsdId = Ci ● grantId = Gi ● responseCode = 0 | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any additional positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | <p>Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall stop RF transmission at any time between triggering the relinquishments and UUT sending the relinquishment requests for each CBSD. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 42 of 58

7.5.2 WINNF.FT.D.RLQ.4

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with <code>cbsId=Ci, i={1,2}</code> ● DP has received a valid grant with <code>grantId = Gi, i={1,2}</code> for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p> | -- | -- |
| 2 | <p>DP with two CBSDs sends Relinquishment Request with two objects to the SAS Test Harness.</p> <p>This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify DP sends a Relinquishment Request message for each CBSD.</p> <p>This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Relinquishment Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSD<i>i</i>:</p> <ul style="list-style-type: none"> ● <code>cbsId = Ci</code> ● <code>grantId = Gi</code> | -- | -- |
| 3 | <p>If a separate Relinquishment Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message.</p> <p>If a single Relinquishment Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Relinquishment Response shall be as follows:</p> <ul style="list-style-type: none"> ● <code>cbsId = Ci</code> ● <code>grantId = Gi</code> ● <code>responseCode = 102</code> | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (<code>responseCode=0</code>) to further request messages from the UUT. | -- | -- |
| 5 | <p>Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT stopped RF transmission at any time between triggering the relinquishments and UUT sending the relinquishment requests for each CBSD. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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) 83071443, or email: CN_Doccheck@sgs.com

7.5.3 WINNF.FT.D.RLQ.6

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with cbsId=Ci, i={1,2} ● DP has received a valid grant with grantId = Gi, i={1,2} for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p> | -- | -- |
| 2 | <p>DP with two CBSDs sends Relinquishment Request with two objects to the SAS Test Harness.</p> <p>This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify DP sends a Relinquishment Request message for each CBSD.</p> <p>This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Relinquishment Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● grantId = Gi | -- | -- |
| 3 | <p>If a separate Relinquishment Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message.</p> <p>If a single Relinquishment Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Relinquishment Response shall be as follows:</p> <ul style="list-style-type: none"> ● cbsId = Ci ● grantId = Gi ● responseCode = 103 ● responseData = "grantId" for each CBSD | -- | -- |
| 4 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 5 | <p>Monitor the RF output of each UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT stopped RF transmission at any time between triggering the relinquishments and UUT sending the relinquishment requests for each CBSD. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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) 83071443,

or email: CN_Doccheck@sgs.com

7.6 CBSD Deregistration Process

7.6.1 WINNF.FT.D.DRG.2

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● Each UUT has successfully registered with SAS Test Harness ● Each UUT is in the authorized state ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with cbsdId=Ci, i={1,2} ● DP has received a valid grant with grantId = Gi, i={1,2} for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p> | -- | -- |
| 2 | UUT sends a Relinquishment request and receives Relinquishment response with responseCode=0 | -- | -- |
| 3 | <p>Verify DP sends a Deregistration Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Deregistration Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsdId = Ci | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 4 | <p>If a separate Deregistration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message.</p> <p>If a single Deregistration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Deregistration Response shall be as follows:</p> <ul style="list-style-type: none"> ● cbsdId = Ci ● responseCode = 0 | -- | -- |
| 5 | After completion of step 4, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 6 | <p>Monitor the RF output of each UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: <p>A. UUT sending a Registration Request message, as this is not mandatory</p> <p>B. UUT sending a Deregistration Request message</p> | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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) 83071443, or email: CN.Doccheck@sgs.com

7.6.2 WINNF.FT.D.DRG.4

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with cbsdId=Ci, i={1,2} ● DP has received a valid grant with grantId = Gi, i={1,2} for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p> | -- | -- |
| 2 | UUT sends a Relinquishment request and receives Relinquishment response with responseCode=0 for each CBSD | -- | -- |
| 3 | <p>Verify DP sends a Deregistration Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Deregistration Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsdId = Ci | -- | -- |
| 4 | <p>If a separate Deregistration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message.</p> <p>If a single Deregistration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Deregistration Response shall be as follows:</p> <ul style="list-style-type: none"> ● No cbsdId in either response ● responseCode = 102 | -- | -- |
| 5 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 6 | <p>Monitor the RF output of each UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: <p>A. UUT sending a Registration Request message, as this is not mandatory.</p> <p>B. UUT sending a Deregistration Request message</p> | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

7.6.3 WINNF.FT.D.DRG.5

| # | Test Execution Steps | Results | |
|---|--|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● DP has successfully completed SAS Discovery and Authentication with SAS Test Harness ● DP has successfully registered 2 CBSD with SAS Test Harness, each with cbsId=Ci, i={1,2} ● DP has received a valid grant with grantId = Gi, i={1,2} for each CBSD ● Both CBSD are in Grant State AUTHORIZED and actively transmitting within the bounds of their grants. <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p> | -- | -- |
| 2 | UUT sends a Relinquishment request and receives Relinquishment response with responseCode=0 for each CBSD | -- | -- |
| 3 | <p>Verify DP sends a Deregistration Request message for each CBSD. This may occur in a separate message per CBSD, or together in a single message with array of 2.</p> <p>Verify Deregistration Request message contains all required parameters properly formatted for each CBSD, specifically, for CBSDi:</p> <ul style="list-style-type: none"> ● cbsId = Ci | -- | -- |
| 4 | <p>If a separate Deregistration Request message was sent for each CBSD by the DP, the SAS Test Harness shall respond to each request message with a separate response message.</p> <p>If a single Deregistration Request message was sent by the DP containing a 2-object array (one per CBSD), the SAS Test Harness shall respond with a single Response message containing a 2-object array.</p> <p>Parameters for each CBSD within the Deregistration Response shall be as follows:</p> <ul style="list-style-type: none"> ● No cbsId in either response ● responseCode = 103 ● responseData = "cbsId" | -- | -- |
| 5 | After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT. | -- | -- |
| 6 | <p>Monitor the RF output of each UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: <p>A. UUT sending a Registration Request message, as this is not mandatory.</p> <p>B. UUT sending a Deregistration Request message</p> | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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) 83071443, or email: CN_Doccheck@sgs.com

7.7 CBSD Security Validation

7.7.1 WINNF.FT.C.SCS.1

| # | Test Execution Steps | Results | |
|---|--|-------------------------------------|--------------------------|
| 1 | <ul style="list-style-type: none"> ● UUT shall start CBSD-SAS communication with the security procedure ● The UUT shall establish a TLS handshake with the SAS Test Harness using configured certificate. ● Configure the SAS Test Harness to accept the security procedure and establish the connection | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2 | <ul style="list-style-type: none"> ● Make sure that Mutual authentication happens between UUT and the SAS Test Harness. ● Make sure that UUT uses TLS v1.2 ● Make sure that cipher suites from one of the following is selected, <ul style="list-style-type: none"> ● TLS_RSA_WITH_AES_128_GCM_SHA256 ● TLS_RSA_WITH_AES_256_GCM_SHA384 ● TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 ● TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 ● TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3 | <p>A successful registration is accomplished using one of the test cases described in section 6.1.4.1, depending on CBSD capability.</p> <ul style="list-style-type: none"> ● UUT sends a registration request to the SAS Test Harness and the SAS Test Harness sends a Registration Response with responseCode = 0 and cbsdId. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4 | <p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

7.7.2 WINNF.FT.C.SCS.2

| # | Test Execution Steps | Results | |
|---|--|-------------------------------------|--------------------------|
| 1 | <ul style="list-style-type: none"> ● UUT shall start CBSD-SAS communication with the security procedures | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2 | <ul style="list-style-type: none"> ● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate. ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3 | <ul style="list-style-type: none"> ● UUT may retry for the security procedure which shall fail. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4 | <ul style="list-style-type: none"> ● SAS Test-Harness shall not receive any Registration request or any application data. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 48 of 58

7.7.3 WINNF.FT.C.SCS.3

| # | Test Execution Steps | Results | |
|---|--|-----------|-----------|
| 1 | <ul style="list-style-type: none"> ● UUT shall start CBSD-SAS communication with the security procedures | ■ Pass | □ Fail |
| 2 | <ul style="list-style-type: none"> ● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate. ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness. | ■ Pass | □ Fail |
| 3 | <ul style="list-style-type: none"> ● UUT may retry for the security procedure which shall fail. | ■ Pass | □ Fail |
| 4 | <ul style="list-style-type: none"> ● SAS Test-Harness shall not receive any Registration request or any application data. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall not transmit RF | ■ Pass | □ Fail |

7.7.4 WINNF.FT.C.SCS.4

| # | Test Execution Steps | Results | |
|---|---|-----------|-----------|
| 1 | <ul style="list-style-type: none"> ● UUT shall start CBSD-SAS communication with the security procedures | ■ Pass | □ Fail |
| 2 | <ul style="list-style-type: none"> ● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness. | ■ Pass | □ Fail |
| 3 | <ul style="list-style-type: none"> ● UUT may retry for the security procedure which shall fail. | ■ Pass | □ Fail |
| 4 | <ul style="list-style-type: none"> ● SAS Test-Harness shall not receive any Registration request or any application data. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall not transmit RF | ■ Pass | □ 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) 83071443, or email: CN_Doccheck@sgs.com

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

7.7.5 WINNF.FT.C.SCS.5

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <ul style="list-style-type: none"> ● UUT shall start CBSD-SAS communication with the security procedures | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 2 | <ul style="list-style-type: none"> ● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 3 | <ul style="list-style-type: none"> ● UUT may retry for the security procedure which shall fail. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> Fail |
| 4 | <ul style="list-style-type: none"> ● SAS Test-Harness shall not receive any Registration request or any application data. | -- | -- |
| 5 | <p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> ● UUT shall not transmit RF | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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 used.

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.

SGS-CSTC Standards Technical Services Co.,Ltd
Shenzhen Branch (SCEC) Seminar Center Laboratory

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 83071443, or email: CN_Doccheck@sgs.com

7.8 CBSD RF Power Measurement

7.8.1 WINNF.PT.C.HBT.1

| # | Test Execution Steps | Results | |
|---|---|--|-------------------------------|
| 1 | <p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> ● UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness ● UUT has registered with the SAS, with CBSD ID = C ● UUT has a single valid grant G with parameters {lowFrequency = FL, highFrequency = FH, maxEirp = Pi}, with grant in AUTHORIZED state, and grantExpireTime set to a value far past the duration of this test case ● Note: in order for the UUT to request a grant with the parameters {lowFrequency, highFrequency, maxEirp}, the SAS Test Harness may need to provide appropriate guidance in the availableChannel object of the spectrumInquiry response message, and the operationParam object of the grant response message. Alternately, the UUT vendor may provide the ability to set those parameters on the UUT so that the UUT will request a grant with those parameters | -- | -- |
| 2 | <p>UUT and SAS Test Harness perform a series of Heartbeat Request/Response cycles, which continues until the other test steps are complete. Messaging for each cycle is as follows:</p> <ul style="list-style-type: none"> ● UUT sends Heartbeat Request, including: <ul style="list-style-type: none"> ○ cbsId = C ○ grantId = G ● SAS Test Harness responds with Heartbeat Response, including: <ul style="list-style-type: none"> ○ cbsId = C ○ grantId = G ○ transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0 | -- | -- |
| 3 | <p>Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method.</p> <ul style="list-style-type: none"> ● Note: it may be required for the vendor to provide a method or configuration to bring the UUT to a mode which is required by the measurement methodology. Any such mode is vendor-specific and depends upon UUT behavior and the measurement methodology. | <input checked="" type="checkbox"/> Pass | <input type="checkbox"/> 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

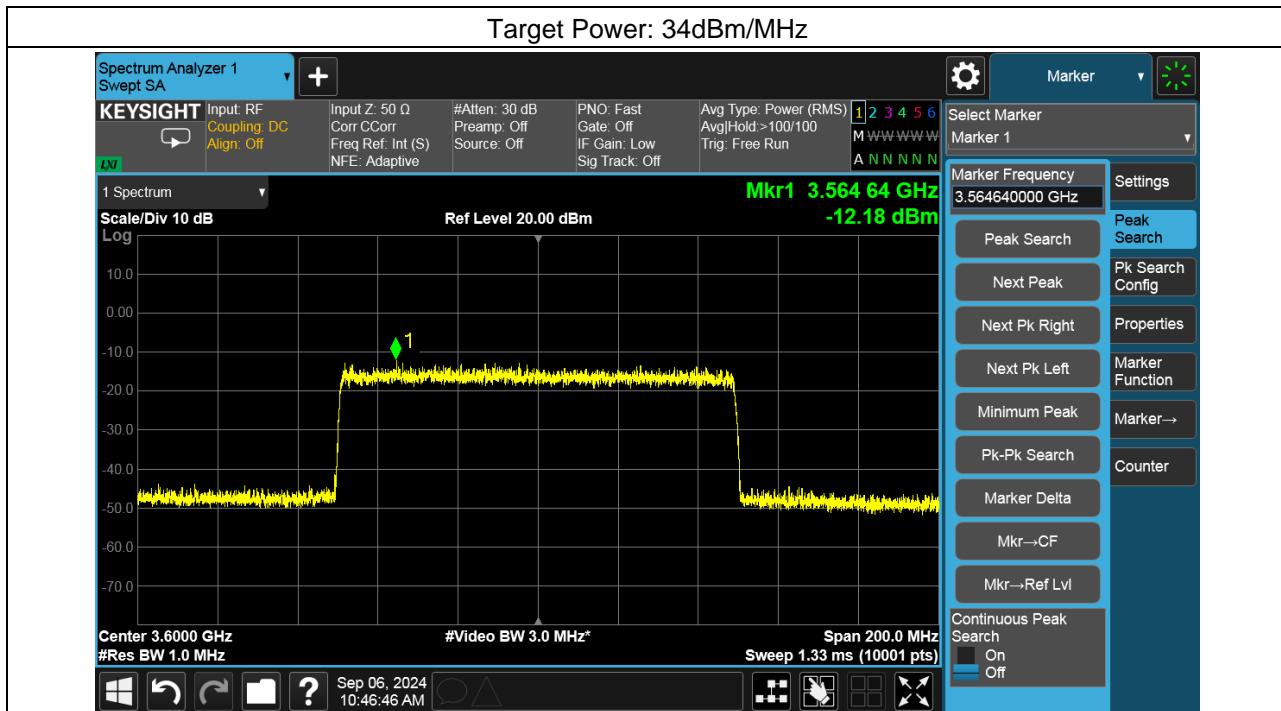
RF measurement plot for Test Case:

- Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method.

| Freq. (MHz) | Conducted PSD (dBm/MHz) | Antenna Gain (dBi) | Loss (dB) | Array Gain (dB) | EIRP PSD (dBm/MHz) | Limit (dBm/MHz) | Verdict |
|-------------|-------------------------|--------------------|-----------|-----------------|--------------------|-----------------|---------|
| 3600 | -12.18 | 15 | 25 | 6.02 | 33.84 | 34 | Pass |
| 3600 | -30.828 | 15 | 25 | 6.02 | 15.192 | 16 | Pass |

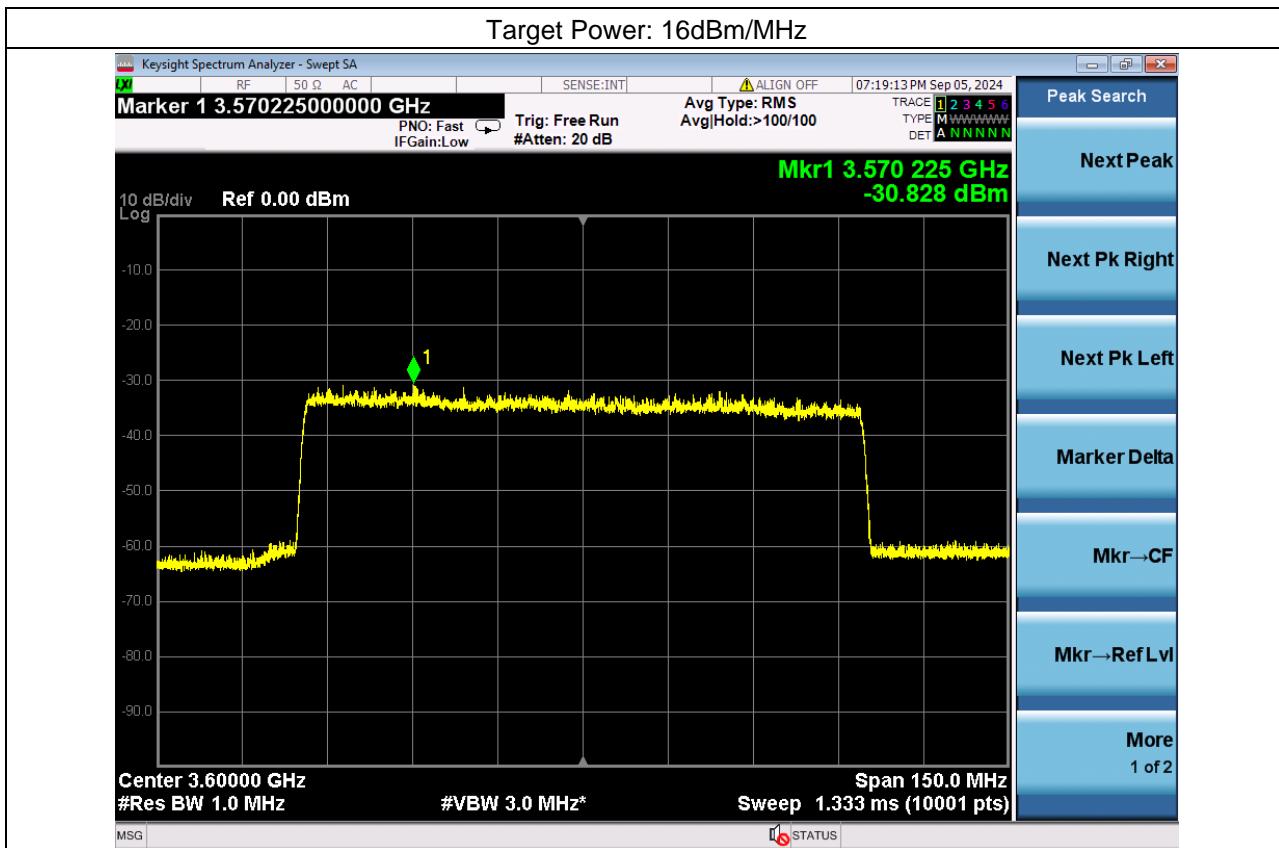
Note:

1. Array Gain=10log(n), n is the antenna number, for this test the n=4
2. EIRP PSD= Conducted PSD+ Antenna Gain+ Array Gain
3. Loss includes cable loss and loss of attenuator



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



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

8 Test Data Log For CBSD Under Control of Domain Proxy

Test data log refer to log files (Log files appendix) except for securitytest cases which shows below.

8.1 WINNF.FT.C.SCS.1

The screenshot shows the Wireshark interface with a list of network captures and a detailed analysis pane. The list pane shows 1300 captures, with the 1098th capture selected. The analysis pane displays the following details for the selected capture:

> Frame 1093: 1859 bytes on wire (14872 bits), 1859 bytes captured (14872 bits)
> Ethernet II, Src: 00:02:69:1b:68:ea (00:02:69:1b:68:ea), Dst: IBM_e61c:4c (5c:f3:fc:e6:1c:4c)
> Internet Protocol Version 4, Src: 10.10.223.251, Dst: 10.10.223.253
> Transmission Control Protocol, Src Port: 5000, Dst Port: 47892, Seq: 1, Ack: 228, Len: 1793

Transport Layer Security

- TLSv1.2 Record Layer: Handshake Protocol: Server Hello
 - Content Type: Handshake (22)
 - Version: TLS 1.2 (0x0303)
 - Length: 89
- Handshake Protocol: Server Hello
 - Handshake Type: Server Hello (2)
 - Length: 85
 - Version: TLS 1.2 (0x0303)
 - Random: 7a3dc45235e67007ed3a1152c60dd5a18920048f87741387b96e06a2e5d1436
 - GMT Unix Time: Dec 28, 2034 05:38:26.000000000 中国标准时间
 - Random Bytes: 35e67007ed3a1152c60dd5a18920048f87741387b96e06a2e5d1436
 - Session ID Length: 32
 - Session ID: 36217404a8fa3aeb8ef43c3e0e7061a335b635751bb48267ed362225644fed92
 - Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)
 - Compression Method: null (0)
 - Extensions Length: 13
 - Extension: renegotiation_info (len=1)
 - Extension: ec_point_formats (len=4)
 - [3A3] Fullstring: 771,49199,65281-11]

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

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 83071443, or email: CN.Beecheck@zg.com.

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

SGS-CSTS Standards Technical Services Co.,Ltd.
Shenzhen Branch Technical Service LLC Laboratory.
No.1 Workshop, M-10, Middle Section, Technology & Progress Park, Nanshan District, Shenzhen, Guangdong, China 518057
中国·广东·深圳市南山区科技园中区-10栋1号厂房 邮编:518057
For any further information or certificate, please contact us at 267011688, 14450, or email: CN.Doccheck@sgs.com



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 54 of 58

8.2 WINNF.FT.C.SCS.2

Frame 957: 3457 bytes on wire (27656 bits), 3457 bytes captured (27656 bits)
Ethernet II, Src: GitHub (10:18:23:25:00:00), Dst: Intel(R) Dual Band Wireless-AC (5c:f3:fc:e8:1c:4c)
Internet Protocol Version 4, Src: 10.18.23.251, Dst: 10.18.23.253
Transmission Control Protocol, Src Port: 50800, Dst Port: 49324, Seq: 1, Ack: 231, Len: 3301

Transport Layer Security

 TLSv1.2 Record Layer: Handshake Protocol: Server Hello

 Content Type: Handshake (22)
 Version: TLS 1.2 (0x0303)
 Length: 89

 Handshake Protocol: Server Hello

 Handshake Type: Server Hello (2)

 Length: 85

 Version: TLS 1.2 (0x0303)

 Random: 908fa5a0b2c6e56690b5c63af6690bdic831f93afcfaf1636163f0d16e0

 Session ID Length: 32

 Session ID: 10:18:23:25:00:00:10:18:23:25:00:00:10:18:23:25:00:00:10:18:23:25:00:00

 Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)

 Compression Method: null (0)

 Extensions Length: 13

 Extension: ec_point_formats (len=1)

 [SASL FullString: 72,49399,65261-11]

 [IA3S: 389951934459efb2e99165225a6f02b1]

 TLSv1.2 Record Layer: Handshake Protocol: Certificate

 Content Type: Handshake (22)
 Version: TLS 1.2 (0x0303)
 Length: 2903

 Handshake Protocol: Certificate

 Handshake Type: Certificate (11)

 Length: 2896

 Certificates Length: 2896

 Certificates (2896 bytes)

 TLSv1.2 Record Layer: Handshake Protocol: Server Key Exchange

Type of handshake message (tlshandshake.type), 1 byte(s)

Wireshark Screenshot showing network traffic analysis. The top part displays a list of captured frames with columns: No., Time, Source, Destination, Protocol, Length, and Info. The bottom part provides a detailed description of frame 19, including its structure and content.

Frame 19: 694 bytes on wire (5552 bits), 694 bytes captured (5552 bits)
Ethernet II, Src: IBM_661c:4c (5c:ff:fc:66:1c:4c), Dst: HuaqinTechno_02:bf:2a (b0:a3:f2:02:bf:2a)
Internet Protocol Version 4, Src: 10.10.226.253, Dst: 10.10.226.120
Transmission Control Protocol, Src Port: 8001, Dst Port: 22058, Seq#: 589, Ack#: 4866, Len: 628
Hypertext Transfer Protocol
extensible Markup Language

| No. | Time | Source | Destination | Protocol | Length | Info |
|-----|-----------|---------------|---------------|-----------|--------|------------------------------|
| 14 | 2.009207 | 10.10.226.120 | 10.10.226.253 | HTTP/X... | 3637 | POST /ACS/MSServlet HTTP/1.1 |
| 16 | 2.012913 | 10.10.226.253 | 10.10.226.120 | HTTP/X... | 654 | HTTP/1.1 200 OK |
| 17 | 2.013247 | 10.10.226.120 | 10.10.226.253 | HTTP/X... | 153 | HTTP/1.1 200 OK |
| 19 | 2.022487 | 10.10.226.253 | 10.10.226.120 | HTTP/X... | 694 | HTTP/1.1 200 OK |
| 20 | 2.023267 | 10.10.226.120 | 10.10.226.253 | HTTP | 191 | POST /ACS/MSServlet HTTP/1.1 |
| 21 | 2.023746 | 10.10.226.253 | 10.10.226.120 | HTTP | 136 | HTTP/1.1 204 No Content |
| 918 | 15.737759 | 10.10.223.253 | 10.10.223.251 | HTTP | 167 | GET /rclserver.rcl HTTP/1.1 |
| 922 | 15.739233 | 10.10.223.251 | 10.10.223.253 | HTTP | 1207 | HTTP/1.1 200 OK |

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 test report is valid for 30 days from the date of issue.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 83071443, or email: CN_Peacock@zscs.com.



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

中国 广东 深圳市南山区科技园西区南油二路1081号1号房 邮编:518057 | (0755)26972666 | (0755)26971664 | logisticschina@sgs.com



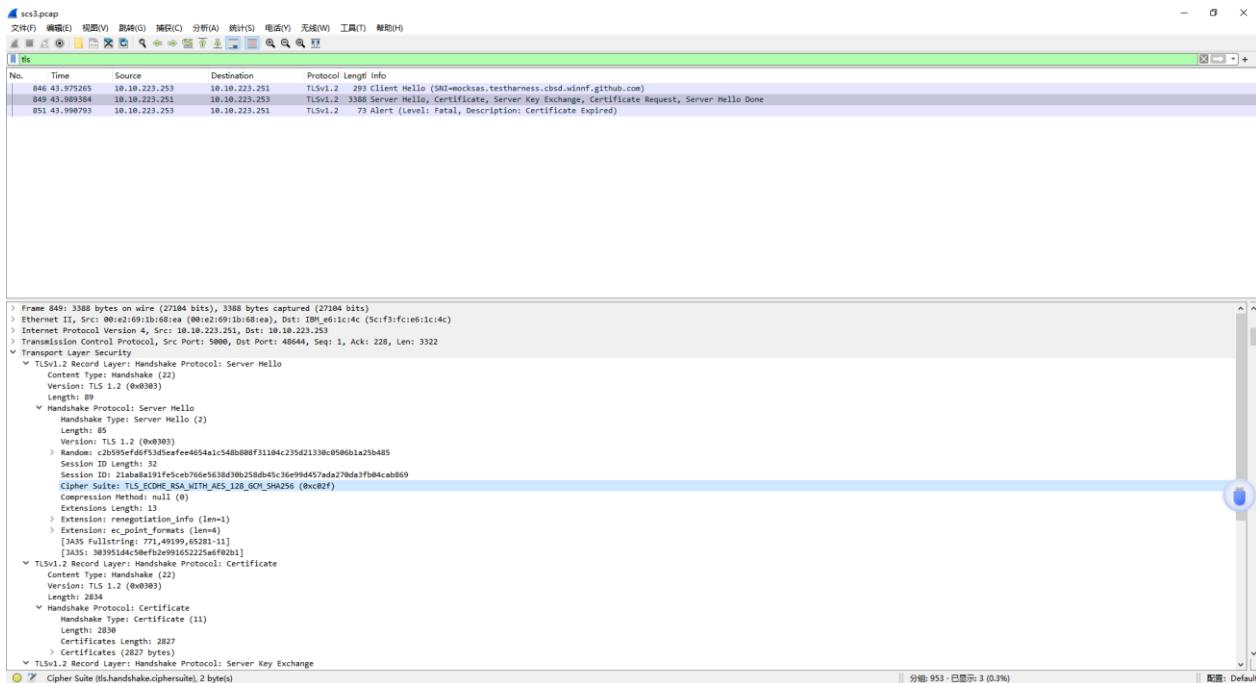
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 55 of 58

8.3 WINNF.FT.C.SCS.3



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 / SGS-CSTC 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



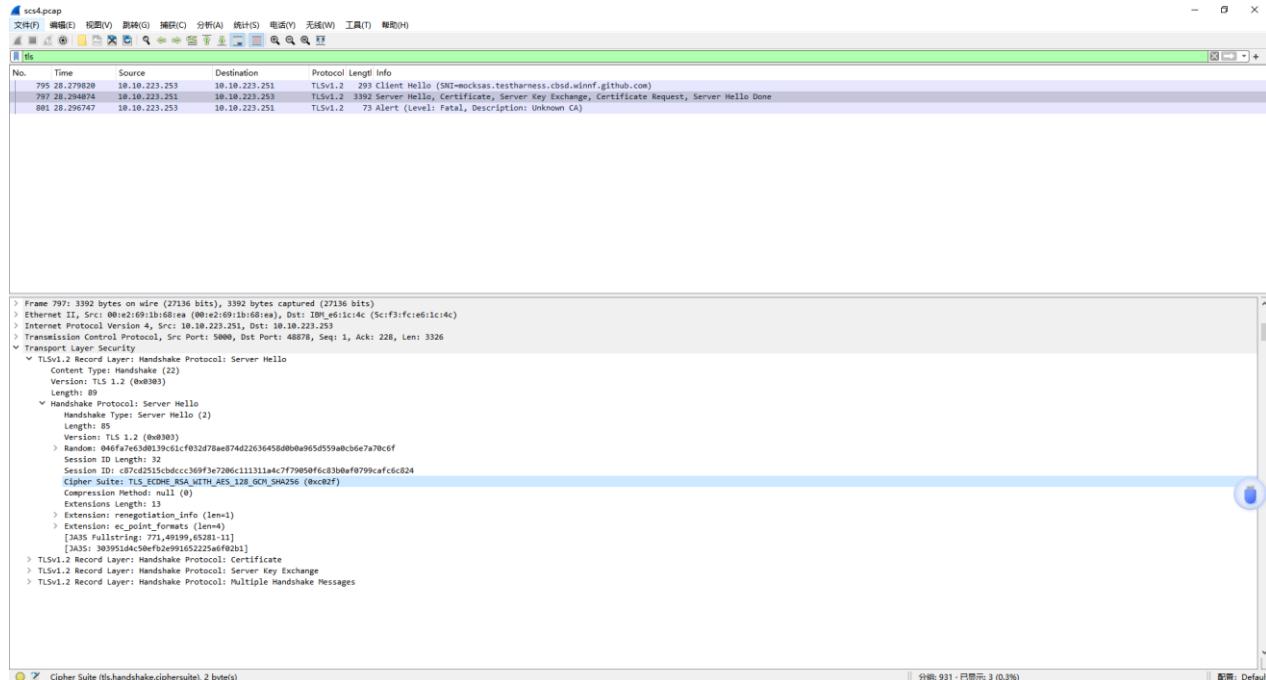
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203

Page: 56 of 58

8.4 WINNF.FT.C.SCS.4



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 / SGS-CSTC 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



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR240900339203
Page: 57 of 58

8.5 WINNF.FT.C.SCS.5

scs5.pcap

File(F) 编辑(E) 视图(V) 列表(G) 捕获(C) 分析(A) 统计(S) 电话(Y) 无线(W) 工具(T) 帮助(H)

File

No. Time Source Destination Protocol Length Info

784 16.382220 18.10.223.253 18.10.223.251 TLSv1.2 388 Client Hello (SNI=mocksas.tetharness.cbsd.wlnmf.github.com)

789 16.396451 18.10.223.251 18.10.223.253 TLSv1.2 3388 Server Hello, Certificate, Server Key Exchange, Certificate Request, Server Hello Done

793 16.399425 18.10.223.253 18.10.223.251 TLSv1.2 73 Alert (Level: Fatal, Description: Decrypt Error)

> Frame 789: 3388 bytes on wire (27104 bits), 3388 bytes captured (27104 bits)
Ethernet II, Src: SGS-CSTC (08:00:27:10:b1:06) (ether), Dst: IBM_61c1c4c (5c:f3:fc:e6:1c:4c)
> Internet Protocol Version 4, Src: 18.10.223.251, Dst: 18.10.223.253
> Transmission Control Protocol, Src Port: 5000, Dst Port: 498849, Seq: 1, Ack: 518, Len: 3322
Transport Layer Security
 TLSv1.2 Record Layer: Handshake Protocol: Server Hello
 Content Type: Handshake (22)
 Version: TLS 1.2 (0x0303)
 Length: 89
 Handshake Protocol: Server Hello (2)
 Length: 89
 Version: TLS 1.2 (0x0303)
 Random: 51198a1199f099812965dd711cb180ff267cc0bf6ee4ea802f412d5522:04c3
 Session ID Length: 32
 Session ID: 3039516445a0fb2e991052225aef02b1
 Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)
 Compression Method: null (0)
 Extensions Length: 13
 Extensions: renegotiation_info (len=1)
 [3A35: 771,49399,65281-11]
 [3A35: 3039516445a0fb2e991052225aef02b1]
 TLSv1.2 Record Layer: Handshake Protocol: Certificate
 Content Type: Handshake (22)
 Version: TLS 1.2 (0x0303)
 Length: 2834
 Handshake Protocol: Certificate (11)
 Length: 2830
 Content Length: 2827
 Certificates (2827 bytes)
 TLSv1.2 Record Layer: Handshake Protocol: Server Key Exchange
 Transport Layer Security: Protocol

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) 83071443, or email: CN.Doccheck@sgs.com

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

9 Photographs

9.1 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <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 | IEC62368-1:2020 | IEC62368-22:2020 | IEC62368-12:2020 | IEC62368-13:2020 | IEC62368-14:2020 | IEC62368-15:2020 | IEC62368-16:2020 | IEC62368-17:2020 | IEC62368-18:2020 | IEC62368-19:2020 | IEC62368-20:2020 | IEC62368-21:2020 | IEC62368-23:2020 | IEC62368-24:2020 | IEC62368-25:2020 | IEC62368-26:2020 | IEC62368-27:2020 | IEC62368-28:2020 | IEC62368-29:2020 | IEC62368-30:2020 | IEC62368-31:2020 | IEC62368-32:2020 | IEC62368-33:2020 | IEC62368-34:2020 | IEC62368-35:2020 | IEC62368-36:2020 | IEC62368-37:2020 | IEC62368-38:2020 | IEC62368-39:2020 | IEC62368-40:2020 | IEC62368-41:2020 | IEC62368-42:2020 | IEC62368-43:2020 | IEC62368-44:2020 | IEC62368-45:2020 | IEC62368-46:2020 | IEC62368-47:2020 | IEC62368-48:2020 | IEC62368-49:2020 | IEC62368-50:2020 | IEC62368-51:2020 | IEC62368-52:2020 | IEC62368-53:2020 | IEC62368-54:2020 | IEC62368-55:2020 | IEC62368-56:2020 | IEC62368-57:2020 | IEC62368-58:2020 | IEC62368-59:2020 | IEC62368-60:2020 | IEC62368-61:2020 | IEC62368-62:2020 | IEC62368-63:2020 | IEC62368-64:2020 | IEC62368-65:2020 | IEC62368-66:2020 | IEC62368-67:2020 | IEC62368-68:2020 | IEC62368-69:2020 | IEC62368-70:2020 | IEC62368-71:2020 | IEC62368-72:2020 | IEC62368-73:2020 | IEC62368-74:2020 | IEC62368-75:2020 | IEC62368-76:2020 | IEC62368-77:2020 | IEC62368-78:2020 | IEC62368-79:2020 | IEC62368-80:2020 | IEC62368-81:2020 | IEC62368-82:2020 | IEC62368-83:2020 | IEC62368-84:2020 | IEC62368-85:2020 | IEC62368-86:2020 | IEC62368-87:2020 | IEC62368-88:2020 | IEC62368-89:2020 | IEC62368-90:2020 | IEC62368-91:2020 | IEC62368-92:2020 | IEC62368-93:2020 | IEC62368-94:2020 | IEC62368-95:2020 | IEC62368-96:2020 | IEC62368-97:2020 | IEC62368-98:2020 | IEC62368-99:2020 | IEC62368-100:2020 | IEC62368-101:2020 | IEC62368-102:2020 | IEC62368-103:2020 | IEC62368-104:2020 | IEC62368-105:2020 | IEC62368-106:2020 | IEC62368-107:2020 | IEC62368-108:2020 | IEC62368-109:2020 | IEC62368-110:2020 | IEC62368-111:2020 | IEC62368-112:2020 | IEC62368-113:2020 | IEC62368-114:2020 | IEC62368-115:2020 | IEC62368-116:2020 | IEC62368-117:2020 | IEC62368-118:2020 | IEC62368-119:2020 | IEC62368-120:2020 | IEC62368-121:2020 | IEC62368-122:2020 | IEC62368-123:2020 | IEC62368-124:2020 | IEC62368-125:2020 | IEC62368-126:2020 | IEC62368-127:2020 | IEC62368-128:2020 | IEC62368-129:2020 | IEC62368-130:2020 | IEC62368-131:2020 | IEC62368-132:2020 | IEC62368-133:2020 | IEC62368-134:2020 | IEC62368-135:2020 | IEC62368-136:2020 | IEC62368-137:2020 | IEC62368-138:2020 | IEC62368-139:2020 | IEC62368-140:2020 | IEC62368-141:2020 | IEC62368-142:2020 | IEC62368-143:2020 | IEC62368-144:2020 | IEC62368-145:2020 | IEC62368-146:2020 | IEC62368-147:2020 | IEC62368-148:2020 | IEC62368-149:2020 | IEC62368-150:2020 | IEC62368-151:2020 | IEC62368-152:2020 | IEC62368-153:2020 | IEC62368-154:2020 | IEC62368-155:2020 | IEC62368-156:2020 | IEC62368-157:2020 | IEC62368-158:2020 | IEC62368-159:2020 | IEC62368-160:2020 | IEC62368-161:2020 | IEC62368-162:2020 | IEC62368-163:2020 | IEC62368-164:2020 | IEC62368-165:2020 | IEC62368-166:2020 | IEC62368-167:2020 | IEC62368-168:2020 | IEC62368-169:2020 | IEC62368-170:2020 | IEC62368-171:2020 | IEC62368-172:2020 | IEC62368-173:2020 | IEC62368-174:2020 | IEC62368-175:2020 | IEC62368-176:2020 | IEC62368-177:2020 | IEC62368-178:2020 | IEC62368-179:2020 | IEC62368-180:2020 | IEC62368-181:2020 | IEC62368-182:2020 | IEC62368-183:2020 | IEC62368-184:2020 | IEC62368-185:2020 | IEC62368-186:2020 | IEC62368-187:2020 | IEC62368-188:2020 | IEC62368-189:2020 | IEC62368-190:2020 | IEC62368-191:2020 | IEC62368-192:2020 | IEC62368-193:2020 | IEC62368-194:2020 | IEC62368-195:2020 | IEC62368-196:2020 | IEC62368-197:2020 | IEC62368-198:2020 | IEC62368-199:2020 | IEC62368-200:2020 | IEC62368-201:2020 | IEC62368-202:2020 | IEC62368-203:2020 | IEC62368-204:2020 | IEC62368-205:2020 | IEC62368-206:2020 | IEC62368-207:2020 | IEC62368-208:2020 | IEC62368-209:2020 | IEC62368-210:2020 | IEC62368-211:2020 | IEC62368-212:2020 | IEC62368-213:2020 | IEC62368-214:2020 | IEC62368-215:2020 | IEC62368-216:2020 | IEC62368-217:2020 | IEC62368-218:2020 | IEC62368-219:2020 | IEC62368-220:2020 | IEC62368-221:2020 | IEC62368-222:2020 | IEC62368-223:2020 | IEC62368-224:2020 | IEC62368-225:2020 | IEC62368-226:2020 | IEC62368-227:2020 | IEC62368-228:2020 | IEC62368-229:2020 | IEC62368-230:2020 | IEC62368-231:2020 | IEC62368-232:2020 | IEC62368-233:2020 | IEC62368-234:2020 | IEC62368-235:2020 | IEC62368-236:2020 | IEC62368-237:2020 | IEC62368-238:2020 | IEC62368-239:2020 | IEC62368-240:2020 | IEC62368-241:2020 | IEC62368-242:2020 | IEC62368-243:2020 | IEC62368-244:2020 | IEC62368-245:2020 | IEC62368-246:2020 | IEC62368-247:2020 | IEC62368-248:2020 | IEC62368-249:2020 | IEC62368-250:2020 | IEC62368-251:2020 | IEC62368-252:2020 | IEC62368-253:2020 | IEC62368-254:2020 | IEC62368-255:2020 | IEC62368-256:2020 | IEC62368-257:2020 | IEC62368-258:2020 | IEC62368-259:2020 | IEC62368-260:2020 | IEC62368-261:2020 | IEC62368-262:2020 | IEC62368-263:2020 | IEC62368-264:2020 | IEC62368-265:2020 | IEC62368-266:2020 | IEC62368-267:2020 | IEC62368-268:2020 | IEC62368-269:2020 | IEC62368-270:2020 | IEC62368-271:2020 | IEC62368-272:2020 | IEC62368-273:2020 | IEC62368-274:2020 | IEC62368-275:2020 | IEC62368-276:2020 | IEC62368-277:2020 | IEC62368-278:2020 | IEC62368-279:2020 | IEC62368-280:2020 | IEC62368-281:2020 | IEC62368-282:2020 | IEC62368-283:2020 | IEC62368-284:2020 | IEC62368-285:2020 | IEC62368-286:2020 | IEC62368-287:2020 | IEC62368-288:2020 | IEC62368-289:2020 | IEC62368-290:2020 | IEC62368-291:2020 | IEC62368-292:2020 | IEC62368-293:2020 | IEC62368-294:2020 | IEC62368-295:2020 | IEC62368-296:2020 | IEC62368-297:2020 | IEC62368-298:2020 | IEC62368-299:2020 | IEC62368-300:2020 | IEC62368-301:2020 | IEC62368-302:2020 | IEC62368-303:2020 | IEC62368-304:2020 | IEC62368-305:2020 | IEC62368-306:2020 | IEC62368-307:2020 | IEC62368-308:2020 | IEC62368-309:2020 | IEC62368-310:2020 | IEC62368-311:2020 | IEC62368-312:2020 | IEC62368-313:2020 | IEC62368-314:2020 | IEC62368-315:2020 | IEC62368-316:2020 | IEC62368-317:2020 | IEC62368-318:2020 | IEC62368-319:2020 | IEC62368-320:2020 | IEC62368-321:2020 | IEC62368-322:2020 | IEC62368-323:2020 | IEC62368-324:2020 | IEC62368-325:2020 | IEC62368-326:2020 | IEC62368-327:2020 | IEC62368-328:2020 | IEC62368-329:2020 | IEC62368-330:2020 | IEC62368-331:2020 | IEC62368-332:2020 | IEC62368-333:2020 | IEC62368-334:2020 | IEC62368-335:2020 | IEC62368-336:2020 | IEC62368-337:2020 | IEC62368-338:2020 | IEC62368-339:2020 | IEC62368-340:2020 | IEC62368-341:2020 | IEC62368-342:2020 | IEC62368-343:2020 | IEC62368-344:2020 | IEC62368-345:2020 | IEC62368-346:2020 | IEC62368-347:2020 | IEC62368-348:2020 | IEC62368-349:2020 | IEC62368-350:2020 | IEC62368-351:2020 | IEC62368-352:2020 | IEC62368-353:2020 | IEC62368-354:2020 | IEC62368-355:2020 | IEC62368-356:2020 | IEC62368-357:2020 | IEC62368-358:2020 | IEC62368-359:2020 | IEC62368-360:2020 | IEC62368-361:2020 | IEC62368-362:2020 | IEC62368-363:2020 | IEC62368-364:2020 | IEC62368-365:2020 | IEC62368-366:2020 | IEC62368-367:2020 | IEC62368-368:2020 | IEC62368-369:2020 | IEC62368-370:2020 | IEC62368-371:2020 | IEC62368-372:2020 | IEC62368-373:2020 | IEC62368-374:2020 | IEC62368-375:2020 | IEC62368-376:2020 | IEC62368-377:2020 | IEC62368-378:2020 | IEC62368-379:2020 | IEC62368-380:2020 | IEC62368-381:2020 | IEC62368-382:2020 | IEC62368-383:2020 | IEC62368-384:2020 | IEC62368-385:2020 | IEC62368-386:2020 | IEC62368-387:2020 | IEC62368-388:2020 | IEC62368-389:2020 | IEC62368-390:2020 | IEC62368-391:2020 | IEC62368-392:2020 | IEC62368-393:2020 | IEC62368-394:2020 | IEC62368-395:2020 | IEC62368-396:2020 | IEC62368-397:2020 | IEC62368-398:2020 | IEC62368-399:2020 | IEC62368-400:2020 | IEC62368-401:2020 | IEC62368-402:2020 | IEC62368-403:2020 | IEC62368-404:2020 | IEC62368-405:2020 | IEC62368-406:2020 | IEC62368-407:2020 | IEC62368-408:2020 | IEC62368-409:2020 | IEC62368-410:2020 | IEC62368-411:2020 | IEC62368-412:2020 | IEC62368-413:2020 | IEC62368-414:2020 | IEC62368-415:2020 | IEC62368-416:2020 | IEC62368-417:2020 | IEC62368-418:2020 | IEC62368-419:2020 | IEC62368-420:2020 | IEC62368-421:2020 | IEC62368-422:2020 | IEC62368-423:2020 | IEC62368-424:2020 | IEC62368-425:2020 | IEC62368-426:2020 | IEC62368-427:2020 | IEC62368-428:2020 | IEC62368-429:2020 | IEC62368-430:2020 | IEC62368-431:2020 | IEC62368-432:2020 | IEC62368-433:2020 | IEC62368-434:2020 | IEC62368-435:2020 | IEC62368-436:2020 | IEC62368-437:2020 | IEC62368-438:2020 | IEC62368-439:2020 | IEC62368-440:2020 | IEC62368-441:2020 | IEC62368-442:2020 | IEC62368-443:2020 | IEC62368-444:2020 | IEC62368-445:2020 | IEC62368-446:2020 | IEC62368-447:2020 | IEC62368-448:2020 | IEC62368-449:2020 | IEC62368-450:2020 | IEC62368-451:2020 | IEC62368-452:2020 | IEC62368-453:2020 | IEC62368-454:2020 | IEC62368-455:2020 | IEC62368-456:2020 | IEC62368-457:2020 | IEC62368-458:2020 | IEC62368-459:2020 | IEC62368-460:2020 | IEC62368-461:2020 | IEC62368-462:2020 | IEC62368-463:2020 | IEC62368-464:2020 | IEC62368-465:2020 | IEC62368-466:2020 | IEC62368-467:2020 | IEC62368-468:2020 | IEC62368-469:2020 | IEC62368-470:2020 | IEC62368-471:2020 | IEC62368-472:2020 | IEC62368-473:2020 | IEC62368-474:2020 | IEC62368-475:2020 | IEC62368-476:2020 | IEC62368-477:2020 | IEC62368-478:2020 | IEC62368-479:2020 | IEC62368-480:2020 | IEC62368-481:2020 | IEC62368-482:2020 | IEC62368-483:2020 | IEC62368-484:2020 | IEC62368-485:2020 | IEC62368-486:2020 | IEC62368-487:2020 | IEC62368-488:2020 | IEC62368-489:2020 | IEC62368-490:2020 | IEC62368-491:2020 | IEC62368-492:2020 | IEC62368-493:2020 | IEC62368-494:2020 | IEC62368-495:2020 | IEC62368-496:2020 | IEC62368-497:2020 | IEC62368-498:2020 | IEC62368-499:2020 | IEC62368-500:2020 | IEC62368-501:2020 | IEC62368-502:2020 | IEC62368-503:2020 | IEC62368-504:2020 | IEC62368-505:2020 | IEC62368-506:2020 | IEC62368-507:2020 | IEC62368-508:2020 | IEC62368-509:2020 | IEC62368-510:2020 | IEC62368-511:2020 | IEC62368-512:2020 | IEC62368-513:2020 | IEC62368-514:2020 | IEC62368-515:2020 | IEC62368-516:2020 | IEC62368-517:2020 | IEC62368-518:2020 | IEC62368-519:2020 | IEC62368-520:2020 | IEC62368-521:2020 | IEC62368-522:2020 | IEC62368-523:2020 | IEC62368-524:2020 | IEC62368-525:2020 | IEC62368-526:2020 | IEC62368-527:2020 | IEC62368-528:2020 | IEC62368-529:2020 | IEC62368-530:2020 | IEC62368-531:2020 | IEC62368-532:2020 | IEC62368-533:2020 | IEC62368-534:2020 | IEC62368-535:2020 | IEC62368-536:2020 | IEC62368-537:2020 | IEC62368-538:2020 | IEC62368-539:2020 | IEC62368-540:2020 | IEC62368-541:2020 | IEC62368-542:2020 | IEC62368-543:2020 | IEC62368-544:2020 | IEC62368-545:2020 | IEC62368-546:2020 | IEC62368-547:2020 | IEC62368-548:2020 | IEC62368-549:2020 | IEC62368-550:2020 | IEC62368-551:2020 | IEC62368-552:2020 | IEC62368-553:2020 | IEC62368-554:2020 | IEC62368-555:2020 | IEC62368-556:2020 | IEC62368-557:2020 | IEC62368-558:2020 | IEC62368-559:2020 | IEC62368-560:2020 | IEC62368-561:2020 | IEC62368-562:2020 | IEC62368-563:2020 | IEC62368-564:2020 | IEC62368-565:2020 | IEC62368-566:2020 | IEC62368-567:2020 | IEC62368-568:2020 | IEC62368-569:2020 | IEC62368-570:2020 | IEC62368-571:2020 | IEC62368-572:2020 | IEC62368-573:2020 | IEC62368-574:2020 | IEC62368-575:2020 | IEC62368-576:2020 | IEC62368-577:2020 | IEC62368-578:2020 | IEC62368-579:2020 | IEC62368-580:2020 | IEC62368-581:2020 | IEC62368-582:2020 | IEC62368-583:2020 | IEC62368-584:2020 | IEC62368-585:2020 | IEC62368-586:2020 | IEC62368-587:2020 | IEC62368-588:2020 | IEC62368-589:2020 | IEC62368-590:2020 | IEC62368-591:2020 | IEC62368-592:2020 | IEC62368-593:2020 | IEC62368-594:2020 | IEC62368-595:2020 | IEC62368-596:2020 | IEC62368-597:2020 | IEC62368-598:2020 | IEC62368-599:2020 | IEC62368-600:2020 | IEC62368-601:2020 | IEC62368-602:2020 | IEC62368-603:2020 | IEC62368-604:2020 | IEC62368-605:2020 | IEC62368-606:2020 | IEC62368-607:2020 | IEC62368-608:2020 | IEC62368-609:2020 | IEC62368-610:2020 | IEC62368-611:2020 | IEC62368-612:2020 | IEC62368-613:2020 | IEC62368-614:2020 | IEC62368-615:2020 | IEC62368-616:2020 | IEC62368-617:2020 | IEC62368-618:2020 | IEC62368-619:2020 | IEC62368-620:2020 | IEC62368-6