



TEST REPORT

Application No.: SZEM2010010497CR
Applicant: Baicells Technologies Co., Ltd.
Address of Applicant: 9-10F, 1stBldg., No.81BeiqingRoad, Haidian District, Beijing, China
Equipment Under Test (EUT):
EUT Name: LTE Outdoor CPE
Model No.: EG8015G-M11
Trade Mark: Baicells
FCC ID: 2AG32EG8015GM11
Standard(s) : CBRSA-TS-9001-V1.0.0
WINNF-19-IN-00033 V1.0
WINNF-TS-0122-V1.0
FCC 47 CFR Part 96
KDB 940660 D01
KDB 940660 D02
Date of Receipt: 2020-10-18
Date of Test: 2020-10-20 to 2020-10-21
Date of Issue: 2020-10-22

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

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

Keny Xu

Keny Xu
EMC Laboratory Manager

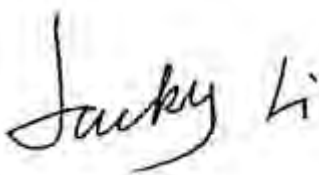


SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, EMC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-10-22		Original

Authorized for issue by:			
			
		Jacky Li /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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

2 Test Summary

Item	Standard	Test Case ID	Result
Multi-Step registration	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.1	Pass
Single-Step registration for CBSD with CPI signed data	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.5	Pass
Missing Required parameters (responseCode 102)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.8	Pass
Pending registration (responseCode 200)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.10	Pass
Invalid parameter (responseCode 103)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.12	Pass
Blacklisted CBSD (responseCode 101)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.14	Pass
Unsupported SAS protocol version (responseCode 100)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.16	Pass
Group Error (responseCode 201)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.18	Pass
Unsuccessful Grant responseCode=400 (INTERFERENCE)	WINNF-TS-0122-V1.0.0	WINNF.FT.D.GRA.1	Pass
Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.GRA.2	Pass
Heartbeat Success Case (first Heartbeat Response)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.1	Pass
Heartbeat responseCode=105 (DEREGISTER)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.3	Pass
Heartbeat responseCode=500 (TERMINATED_GRANT)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.4	Pass
Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.5	Pass
Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.6	Pass
Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.7	Pass
Heartbeat Response Absent (First Heartbeat)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.9	Pass
Heartbeat Response Absent (Subsequent Heartbeat)	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.10	Pass
Successful Relinquishment	WINNF-TS-0122-V1.0.0	WINNF.FT.C.RLQ.1	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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 6307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



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

Report No.: SZEM201001049701

Page: 4 of 209

Item	Standard	Test Case ID	Result
Successful Deregistration	WINNF-TS-0122-V1.0.0	WINNF.FT.C.DRG.1	Pass
Successful TLS connection between UUT and SAS Test Harness	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.1	Pass
TLS failure due to revoked certificate	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.2	Pass
TLS failure due to expired server certificate	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.3	Pass
TLS failure when SAS Test Harness certificate is issue by unknown CA	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.4	Pass
TLS failure when certificate at the SAS Test Harness is corrupted	WINNF-TS-0122-V1.0.0	WINNF.FT.C.SCS.5	Pass
UUT RF Transmit Power Measurement	WINNF-TS-0122-V1.0.0	WINNF.PT.C.HBT	Pass
SAS Version: 1.0.0.3			

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

Test standards:

CBRSA-TS-9001-V1.0.0

CBRS Alliance Certification Test Plan

WINNF-TS-0122-V1.0.0

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

WINNF-19-IN-00033 V1.0

CBRS CPE-CBSD as UUT Test Guidelines

KDB 940660 D01 Part 96 CBRS Eqpt v02

KDB 940660 D02 CPE-CBSD Handshake Procedures v02



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

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

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

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



3 Contents

	Page
1 COVER PAGE	1
2 TEST SUMMARY	3
3 CONTENTS	5
4 GENERAL INFORMATION	7
4.1 DETAILS OF E.U.T.	7
4.2 DESCRIPTION OF CBSD/DP SUPPORT FEATURES	7
4.3 SUMMARY OF TEST RESULTS	8
4.4 MODIFICATION RECORD	8
4.5 MEASUREMENT UNCERTAINTY	9
4.6 DESCRIPTION OF SUPPORT UNITS	9
4.7 TEST LOCATION	9
5 EQUIPMENT LIST	10
6 TEST METHOD AND ENVIRONMENT	11
6.1 CBSD/DP CONFORMANCE AND PERFORMANCE	11
6.2 CPE-CBSD HANDSHAKE PROCEDURES	11
6.3 CBSD TEST PROCEDURE	11
6.4 DURATION AND DUTY CYCLE MEASUREMENT	11
6.5 DURATION AND DUTY CYCLE TEST PROCEDURE	11
6.6 TEST ENVIRONMENT	12
6.7 TEST SETUP	12
7 TEST DATA	13
7.1 CBSD REGISTRATION PROCESS	13
7.1.1 WINNF.FT.C.REG.1	13
7.1.2 WINNF.FT.C.REG.5	14
7.1.3 WINNF.FT.C.REG.8	15
7.1.4 WINNF.FT.C.REG.10	16
7.1.5 WINNF.FT.C.REG.12	17
7.1.6 WINNF.FT.C.REG.14	18
7.1.7 WINNF.FT.C.REG.16	19
7.1.8 WINNF.FT.C.REG.18	20
7.2 CBSD SPECTRUM GRANT PROCESS	21
7.2.1 WINNF.FT.C.GRA.1	21
7.2.2 WINNF.FT.C.GRA.2	21
7.3 CBSD HEARTBEAT PROCESS	22
7.3.1 WINNF.FT.C.HBT.1	22
7.3.2 WINNF.FT.C.HBT.3	24
7.3.3 WINNF.FT.C.HBT.4	25
7.3.4 WINNF.FT.C.HBT.5	26



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7.3.5	WINNF.FT.C.HBT.6.....	27
7.3.6	WINNF.FT.C.HBT.7.....	28
7.3.7	WINNF.FT.C.HBT.9.....	29
7.3.8	WINNF.FT.C.HBT.10.....	30
7.4	CBSD RELINQUISHMENT PROCESS.....	31
7.4.1	WINNF.FT.C.RLQ.1.....	31
7.5	CBSD DEREGISTRATION PROCESS.....	32
7.5.1	WINNF.FT.C.DRG.1.....	32
7.6	CBSD SECURITY VALIDATION.....	33
7.6.1	WINNF.FT.C.SCS.1.....	33
7.6.2	WINNF.FT.C.SCS.2.....	33
7.6.3	WINNF.FT.C.SCS.3.....	34
7.6.4	WINNF.FT.C.SCS.4.....	34
7.6.5	WINNF.FT.C.SCS.5.....	35
7.7	CBSD RF POWER MEASUREMENT.....	36
7.7.1	WINNF.PT.C.HBT.....	36
7.8	DURATION AND DUTY CYCLE.....	39
7.9	VERIFY THAT THE DEVICE WILL REGISTER WITH A SAS WHEN OPERATING BELOW 23 DBM	41
8	TEST DATA LOG.....	42
8.1	WINNF.FT.C.REG.1.....	42
8.2	WINNF.FT.C.REG.5.....	45
8.3	WINNF.FT.C.REG.8.....	48
8.4	WINNF.FT.C.REG.10.....	51
8.5	WINNF.FT.C.REG.12.....	54
8.6	WINNF.FT.C.REG.14.....	57
8.7	WINNF.FT.C.REG.16.....	60
8.8	WINNF.FT.C.REG.18.....	63
8.9	WINNF.FT.C.GRA.1.....	66
8.10	WINNF.FT.C.GRA.2.....	74
8.11	WINNF.FT.C.HBT.1.....	82
8.12	WINNF.FT.C.HBT.3.....	93
8.13	WINNF.FT.C.HBT.4.....	103
8.14	WINNF.FT.C.HBT.5.....	114
8.15	WINNF.FT.C.HBT.6.....	123
8.16	WINNF.FT.C.HBT.7.....	134
8.17	WINNF.FT.C.HBT.9.....	145
8.18	WINNF.FT.C.HBT.10.....	153
8.19	WINNF.FT.C.RLQ.1.....	163
8.20	WINNF.FT.C.DRG.1.....	175
8.21	WINNF.PT.C.HBT.....	186
8.22	WINNF.FT.C.SCS.1.....	204
8.23	WINNF.FT.C.SCS.2.....	205
8.24	WINNF.FT.C.SCS.3.....	206
8.25	WINNF.FT.C.SCS.4.....	207
8.26	WINNF.FT.C.SCS.5.....	208
9	PHOTOGRAPHS.....	209
9.1	EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS).....	209



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



4 General Information

4.1 Details of E.U.T.

Power supply:	Adapter Model NO.: JT-H050200 Input: 100-240V~50/60Hz Output: 5.0V, 2A
Cable:	DC cable: 100cm unshielded
Sample Type:	Fixed device
CBSD Class:	B (Outdoor CPE)
Transmitter Frequency Band:	LTE Band 48
Transmitter Frequency Range:	3550~3700MHz
Hardware Version:	A
Software Version:	0.0.0-DBG
Test sample:	1203000116209CQ0070 (S/N)
Antenna Gain:	18dBi

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.	N
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.	N
C5	Mandatory for UUT which supports RECEIVED_POWER_WITH_GRANT measurement report type.	N
C6	Mandatory for UUT which supports parameter change being made at the UUT and prior to sending a deregistration.	N

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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



4.3 Summary of Test Results

WINNF-TS-0122			
Classes	Test Case Items	Pass Items	Pass Rate (%)
FT (CBSD, DP/CBSD)	25	25	100
PT (CBSD, DP/CBSD)	1	1	100
Total	25	25	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.

Duration and Duty Cycle		
Period	Limit	Test Result
10-second	1-second	Pass
300-second	10-second	Pass
3600-second	20-second	Pass

Note: Limited in duration and duty cycle to the minimum time necessary to get a grant from the SAS.
This time should not exceed 1 second within any 10-second period, 10seconds within any 300-second period, or 20 seconds within any 3600-second period.

4.4 Modification Record

1. The Pass/Fail criteria "UUT shall not transmit RF" is replaced by "CPE-CBSD UUT shall not transmit user traffic".
2. The Pass/Fail criteria "UUT shall stop transmission" is replaced by CPE-CBSD UUT shall stop transmitting user traffic"



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

or email: CN.Doccheck@sgs.com

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

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

4.5 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	$\pm 3\%$

4.6 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
EPC	Lanner Electronics Inc.	LICA-1513A	LR202002004052
Router	TP-LINK	TL-R860+	1175379002425
Base station	Baicells	mBS105 (FCC ID: 2AG32MBS110596)	120200007219BSP0001

4.7 Test Location

All tests were performed at:

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

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

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

No tests were sub-contracted.



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司

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



5 Equipment List

Test Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Laptop (With SAS Test harness)	Lenovo	Pro-13API 2019	REF. No.SEA1800	/	/
Spectrum Analyzer	Keysight	N9020A	SEM004-17	2020-05-21	2021-05-20
Shield Room	SAEMC	MSR433	SEM001-11	2018-03-13	2021-03-12
Coaxial Cable	SGS	N/A	SEM031-01	2020-07-11	2021-07-10
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2020-09-27	2021-09-26



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

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

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

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



6 Test Method and Environment

6.1 CBSD/DP Conformance and Performance

Test Requirement: CBRS CBSD Test Specification WINNF-TS-0122-V1.0.0
Test Method: CBRS CBSD Test Specification WINNF-TS-0122-V1.0.0
WINNF-IN-0156_WinnForum_SAS_Test_Harness_CBSD_UUT_Tutorial_v1_0_0_1

6.2 CPE-CBSD Handshake Procedures

Test Requirement: KDB 940660 D02 CPE-CBSD Handshake Procedures v02
Test Method: WINNF-19-IN-00033 V1.0
KDB 940660 D02 CPE-CBSD Handshake Procedures v02

6.3 CBSD Test Procedure

- Connect the UUT to SAS Test Harness system and RF Test instruments via the CBSD interface and RF components. The highest level is set to test configuration.
- UUT shall be UTC time synchronized
- 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.
- Each test case results was recorded and validated by SAS Test Harness system and RF instruments test cases was recorded test results from SAS Test Harness system.

6.4 Duration and Duty Cycle Measurement

The CPE-CBSD shall validate and ensure that limited in duration and duty cycle to the minimum time necessary to get a grant from the SAS.

6.5 Duration and Duty Cycle Test Procedure

- CPE-CBSD as UUT does not receive any RF signal from its "Compatible BTS-CBSD" (FCC ID: 2AG32MBS110596), so CPE-CBSD as UUT does not transmit. UUT shall be UTC time synchronized.
- Use the WinnForum SAS Harness #1 for CPE-CBSD as UUT and run test case WINNF.FT.C.GRA.1 for CPE-CBSD as UUT.
- CPE-CBSD as UUT starts to receive the RF signal from its "Compatible BTS-CBSD", so CPE-CBSD can start communicating with the WinnForum SAS Harness #1. Make note of the time when RF Test equipment logs the first transmission from CPE-CBSD which is above 23dBm/10MHz – this is the start time of the {X time out of Y time}.
- When the test case WINNF.FT.C.GRA.1 finishes and the questions appear on the WinnForum SAS Harness #1 console, do NOT answer the questions. Wait until Y time has passed from step #3. During this Y time, the RF test equipment is logging the amount of time CPE-CBSD as UUT transmitted EIRP above 23dBm/10MHz. The amount of time logged for transmitting EIRP above 23dBm/10MHz is the X time.
- Answer the questions on the WinnForum SAS Harness #1 console so the WinnForum SAS Harness #1 is ready for the next test.



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

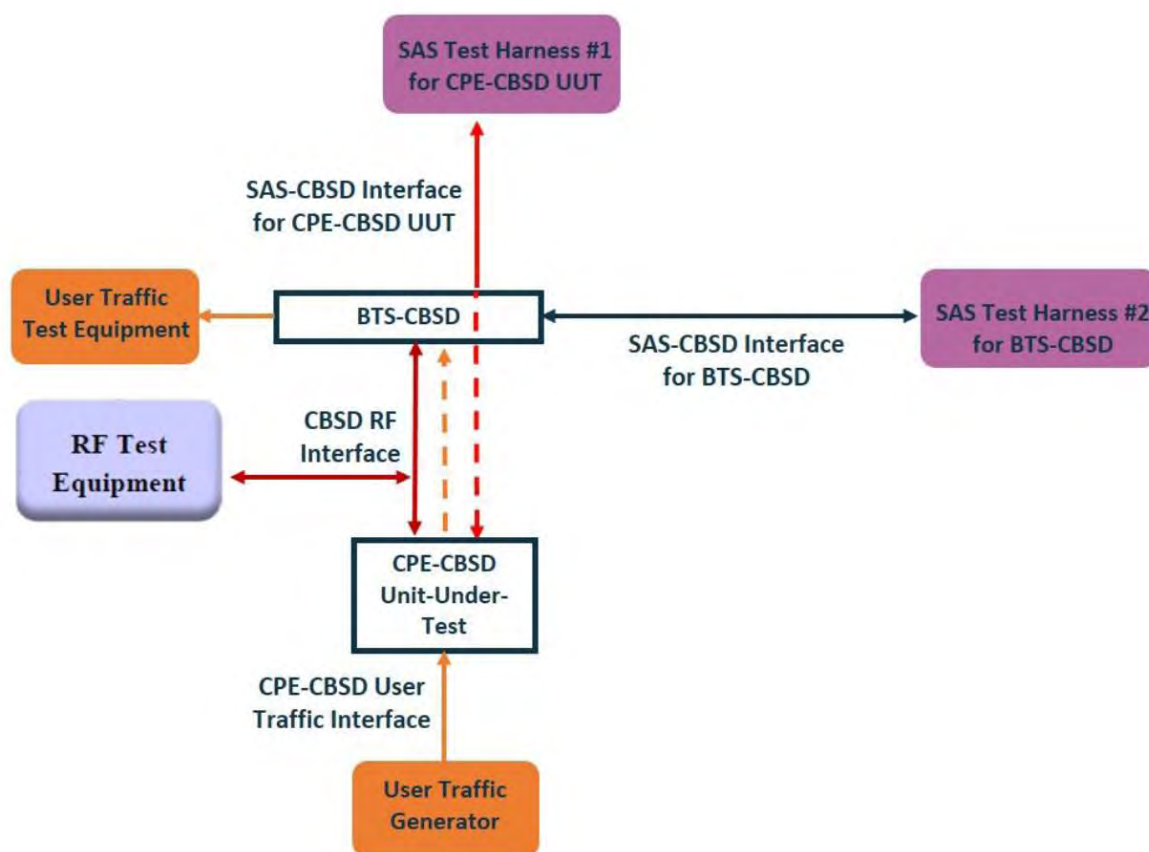
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



6.6 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

6.7 Test Setup



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

7 Test Data

7.1 CBSD Registration Process

7.1.1 WINNF.FT.C.REG.1

#	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 - UUT is in the Unregistered state	--	--
2	CBSD sends correct Registration request information, as specified in [n.5], to the SAS Test Harness: - The required userId, fcld and cbsdSerialNumber registration parameters shall be sent from the 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. Note: It is outside the scope of this document to test the Registration information that is supplied via another means.	■ Pass	□ Fail
3	SAS Test Harness sends a CBSD Registration Response as follows: - cbsdId = C - measReportConfig shall not be included - responseCode = 0	--	--
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	■ Pass	□ Fail

7.1.2 WINNF.FT.C.REG.5

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with 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	CBSD sends Registration request to the SAS Test Harness: - The required userId, fcld 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.	☒ Pass	☐ Fail
3	SAS Test Harness sends a CBSD Registration Response as follows: - cbsdId = C - measReportConfig shall not be included. - responseCode = 0	--	--
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	☒ Pass	☐ Fail

7.1.3 WINNF.FT.C.REG.8

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = 102	--	--
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	☒ Pass	☐ Fail



7.1.4 WINNF.FT.C.REG.10

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = 200	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=200) 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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

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



7.1.5 WINNF.FT.C.REG.12

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = 103	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=103) 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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

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



7.1.6 WINNF.FT.C.REG.14

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = 101	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=101) 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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

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



7.1.7 WINNF.FT.C.REG.16

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = 100	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=100) 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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7.1.8 WINNF.FT.C.REG.18

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = 201	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=201) 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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

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

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.	■ Pass	□ Fail
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	■ Pass	□ 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.	■ Pass	□ Fail
3	SAS Test Harness sends a Grant Response message, including - cbsdId=C - responseCode = 401	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=401) 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	■ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

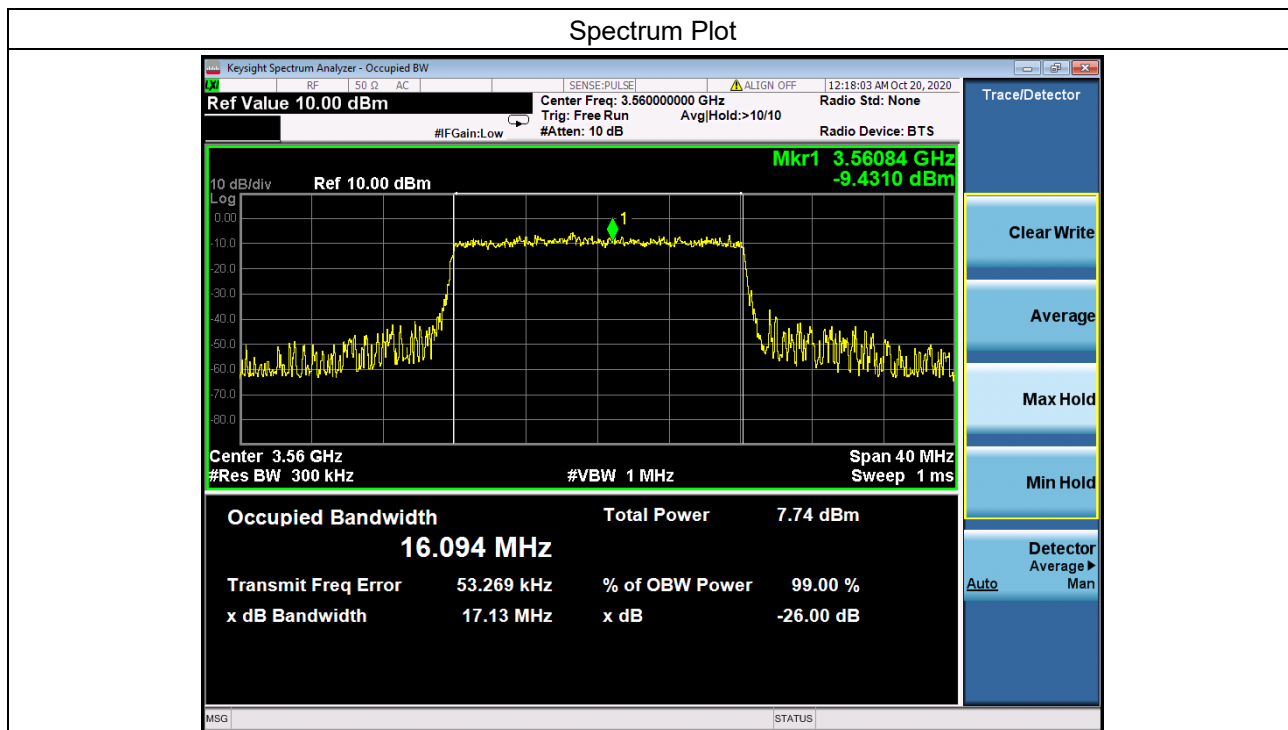
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

7.3 CBSD HeartBeat Process

7.3.1 WINNF.FT.C.HBT.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 a message: ● If message is type Spectrum Inquiry Request, go to step 3, or ● If message is type Grant Request, go to step 5	--	--
3	UUT sends Spectrum Inquiry Request. Validate: ● cbsdId = C ● List of frequencyRange objects sent by UUT are within the CBRS frequency range	■ Pass	□ Fail
4	SAS Test Harness sends a Spectrum Inquiry Response message, including the following parameters: ● cbsdId = C ● availableChannel is an array of availableChannel objects ● responseCode = 0	--	--
5	UUT sends Grant Request message. Validate: ● cbsdId = C ● maxEIRP is at or below the limit appropriate for CBSD category as defined by Part 96 ● operationFrequencyRange, F, sent by UUT is a valid range within the CBRS band	■ Pass	□ Fail
6	SAS Test Harness sends a Grant Response message, including the parameters: ● cbsdId = C ● grantId = G = a valid grant ID ● grantExpireTime = UTC time greater than duration of the test ● responseCode = 0	--	--
7	UUT sends a first Heartbeat Request message. Verify Heartbeat Request message is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "GRANTED"	■ Pass	□ Fail
8	SAS Test Harness sends a Heartbeat Response message, with the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0	--	--
9	For further Heartbeat Request messages sent from UUT after completion of step 8, validate message is sent within latest specified heartbeatInterval, and: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED" and SAS Test Harness responds with a Heartbeat Response message including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0	■ Pass	□ Fail

10	Monitor the RF output of the UUT from start of test until UUT transmission commences. Verify: - 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 F.	☒ Pass	☐ Fail
----	--	--	-------------------------------



7.3.2 WINNF.FT.C.HBT.3

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ 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	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within Heartbeat Interval specified in the latest Heartbeat Response, and formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED"	--	--
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = 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	Monitor the RF output of the UUT. Verify: ● UUT shall stop transmission within (T + 60 seconds) of completion of step 3	Pass	Fail

7.3.3 WINNF.FT.C.HBT.4

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ 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	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED"	■ Pass	□ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = T = current UTC time ● responseCode = 500 (TERMINATED GRANT)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the RF output of the UUT. Verify: ● UUT shall stop transmission within (T + 60 seconds) of completion of step 3	■ Pass	□ Fail

7.3.4 WINNF.FT.C.HBT.5

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ 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: ● cbsdId = C ● grantId = G ● operationState = "GRANTED"	■ Pass	□ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● 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: A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: ● cbsdId = C ● grantId = G ● operationState = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: ● cbsdId = C ● grantId = G Monitor the RF output of the UUT. Verify: ● UUT does not transmit at any time	■ Pass	□ Fail

7.3.5 WINNF.FT.C.HBT.6

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has registered successfully with SAS Test Harness - UUT has a valid single grant as follows: - 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	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: - 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: A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: - cbsdId = C - grantId = G - operationState = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: - cbsdId = C - grantId = G Monitor the RF output of the UUT. Verify: - UUT shall stop transmission within (T+60) seconds of completion of step 3	☒ Pass	☐ Fail

7.3.6 WINNF.FT.C.HBT.7

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ 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	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED"	■ Pass	□ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = 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	Monitor the SAS-CBSD interface. Verify: ● UUT sends a Grant Relinquishment Request message. Verify message is correctly formatted with parameters: ○ cbsdId = C ○ grantId = G Monitor the RF output of the UUT. Verify: ● UUT shall stop transmission within (T+60) seconds of completion of step 3	■ Pass	□ Fail

7.3.7 WINNF.FT.C.HBT.9

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ 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. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "GRANTED"	☒ Pass	☐ Fail
3	After completion of step 2, SAS Test Harness does not respond to any further ● 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: At any time during the test, UUT shall not transmit on RF interface	☒ Pass	☐ Fail

7.3.8 WINNF.FT.C.HBT.10

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has registered successfully with SAS Test Harness - UUT has a valid single grant as follows: - 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	UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: - 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	Monitor the RF output of the UUT. Verify: UUT shall stop all transmission on RF interface within (transmitExpireTime + 60 seconds), using the transmitExpireTime sent in Step 3.	☒ Pass	☐ Fail

7.4 CBSD Relinquishment Process

7.4.1 WINNF.FT.C.RLQ.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT has successfully registered with SAS Test Harness, with cbsdId=C ● UUT has received a valid grant with grantId = G ● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to relinquish UUT Grant from the SAS Test Harness	--	--
2	UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically: ● cbsdId = C ● grantId = G	☒ Pass	☐ Fail
3	SAS Test Harness shall approve the request with a Relinquishment Response message with parameters: - cbsdId = C - grantId = G ● 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	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 stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒ Pass	☐ Fail

7.5 CBSD Deregistration Process

7.5.1 WINNF.FT.C.DRG.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT has successfully registered with SAS Test Harness, with cbsdId=C - UUT has received a valid grant with grantId = G - UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to deregister UUT from the SAS Test Harness	--	--
2	UUT sends a Relinquishment request and receives Relinquishment response with responseCode=0	--	--
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C.	☒ Pass	☐ Fail
4	SAS Test Harness shall approve the request with a Deregistration Response message with parameters: - cbsdId = C - responseCode = 0	--	--
5	After completion of step 3, SAS Test Harness will not provide any additional positive response (responseCode=0) to further request messages from the UUT.	--	--
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: - UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	☒ Pass	☐ Fail

7.6 CBSD Security Validation

7.6.1 WINNF.FT.C.SCS.1

#	Test Execution Steps	Results	
1	- 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	☒ Pass	☐ Fail
2	- 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, - 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	☒ Pass	☐ Fail
3	A successful registration is accomplished using one of the test cases described in section 6.1.4.1, depending on CBSD capability. UUT sends a registration request to the SAS Test Harness and the SAS Test Harness sends a Registration Response with responseCode = 0 and cbsdId.	☒ Pass	☐ Fail
4	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	☒ Pass	☐ Fail

7.6.2 WINNF.FT.C.SCS.2

#	Test Execution Steps	Results	
1	UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	- 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	UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	SAS Test-Harness shall not receive any Registration request or any application data.	--	--
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	☒ Pass	☐ Fail

7.6.3 WINNF.FT.C.SCS.3

#	Test Execution Steps	Results	
1	UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	- 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	UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	SAS Test-Harness shall not receive any Registration request or any application data.	--	--
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	☒ Pass	☐ Fail

7.6.4 WINNF.FT.C.SCS.4

#	Test Execution Steps	Results	
1	UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	- 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	UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	SAS Test-Harness shall not receive any Registration request or any application data.	--	--
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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7.6.5 WINNF.FT.C.SCS.5

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	● 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	● UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	● SAS Test-Harness shall not receive any Registration request or any application data.	--	--
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	☒ 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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

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

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

7.7 CBSD RF Power Measurement

7.7.1 WINNF.PT.C.HBT

#	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 - UUT has registered with the SAS, with CBSID = 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	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: - UUT sends Heartbeat Request, including: - cbsdId = C - grantId = G - SAS Test Harness responds with Heartbeat Response, including: - cbsdId = C - grantId = G - transmitExpireTime = current UTC time + 200 seconds - responseCode = 0	--	--
3	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. 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.	☒ Pass	☐ Fail

RF measurement plot for Test Case :

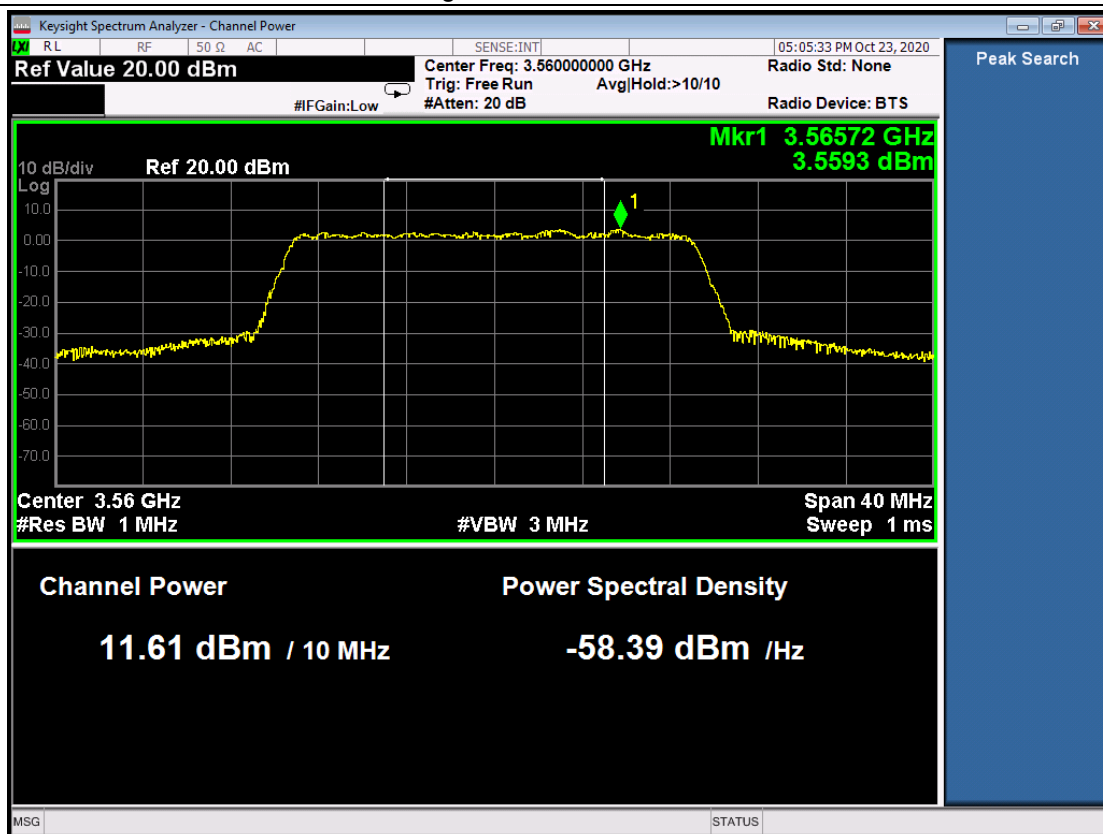
- Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method.

Frequency (MHz)	Channel Bandwidth (MHz)	Granted maxEIRP (dBm/MHz)	Conducted PSD (dBm/MHz)		Antenna Gain (dBi)	Directional Gain (dB)	Cable Loss (dB)	maxEIRP (dBm/MHz)
			Ant. 0	Ant. 1				
3560	20	32	3.5593	/	18	3.01	5	29.5693
3560	20	23	-6.1896	/	18	3.01	5	19.8204

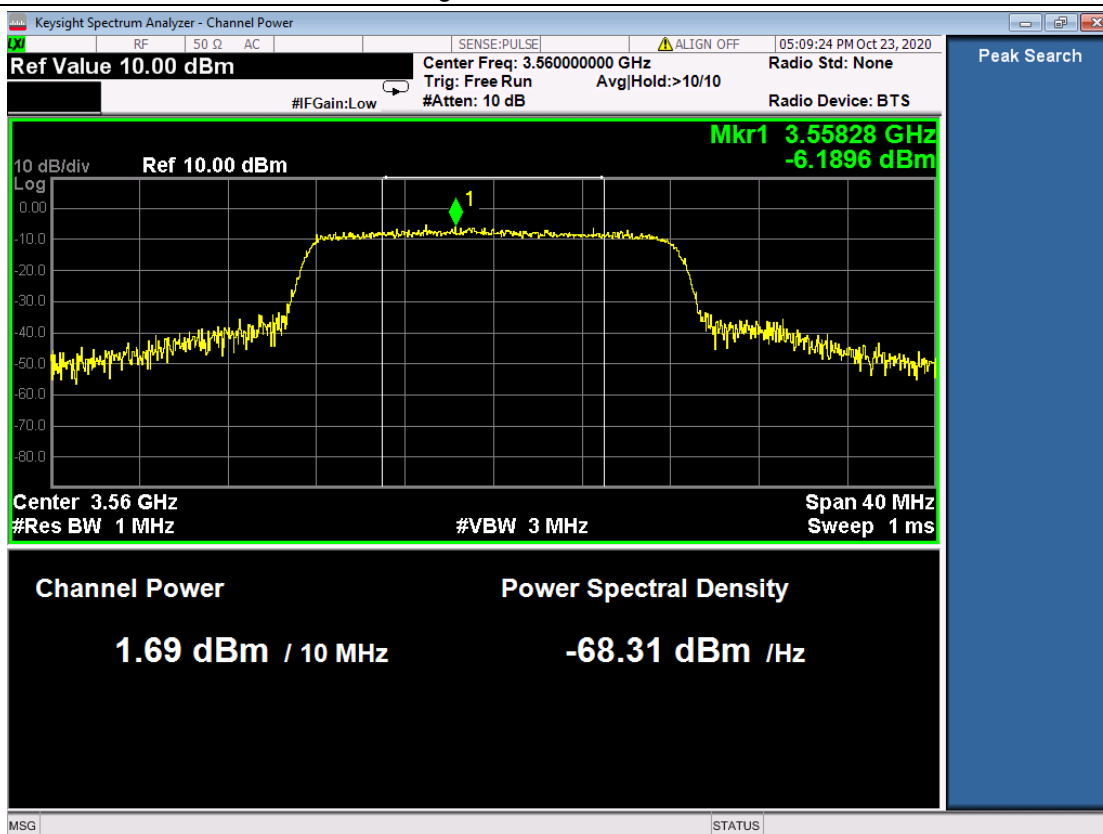
Note:

- maxEIRP= Conducted PSD+ Antenna Gain+ Directional Gain+ Cable loss
- Directional Gain=10log(n), n=2 for this product

Target Power:32 dBm/MHz



Target Power: 23 dBm/MHz



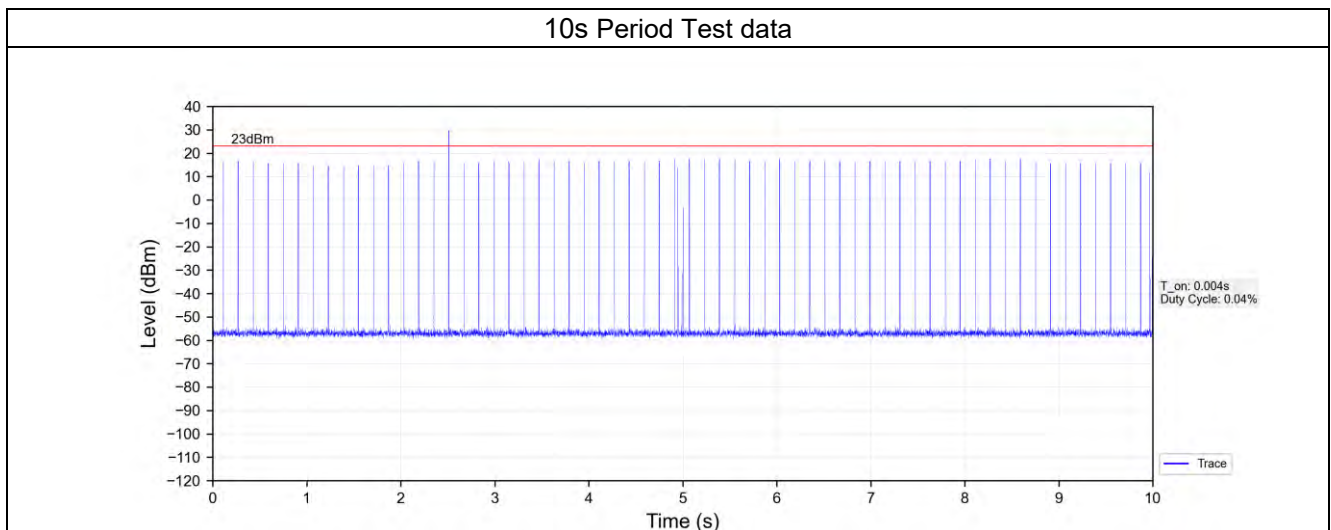


7.8 Duration and Duty Cycle

Duration and Duty Cycle			
Period	Minimum Time (s)	Limit (s)	Pass / Fail
10-second	0.004	1-second	Pass
300-second	0.061	10-second	Pass
3600-second	0.088	20-second	Pass

Note:

1. Limited in duration and duty cycle to the minimum time necessary to get a grant from the SAS. This time should not exceed 1 second within any 10-second period, 10seconds within any 300-second period, or 20 seconds within any 3600-second period.
2. Pass = Minimum Time < Limit



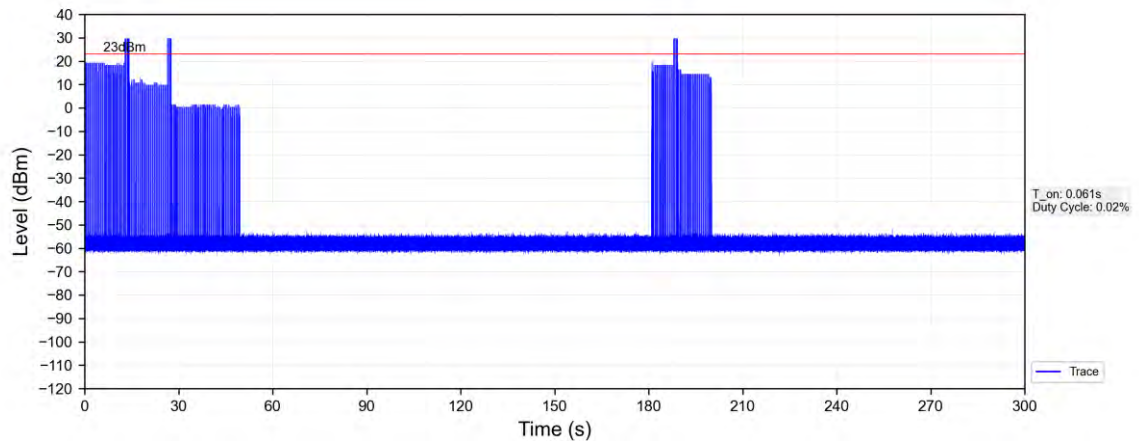
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

or email: CN.Doccheck@sgs.com

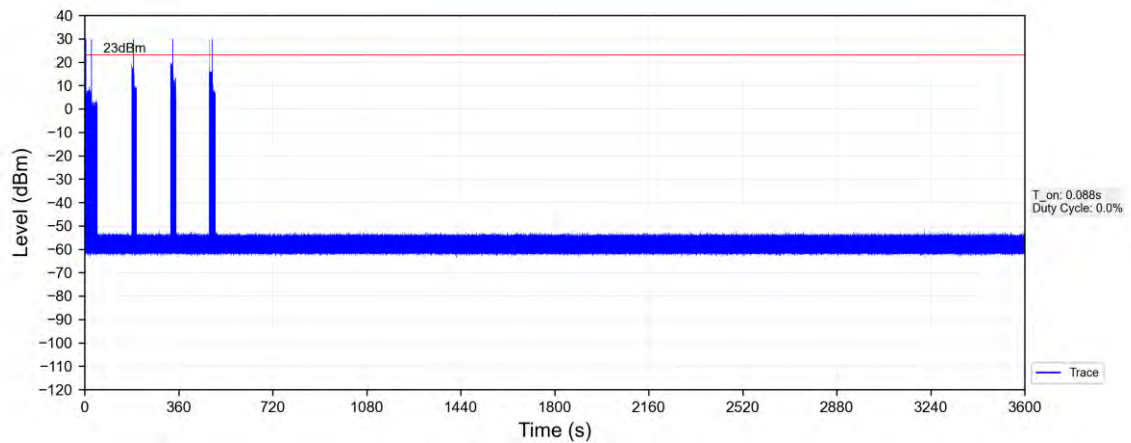
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



300s Period Test data



3600s Period Test data



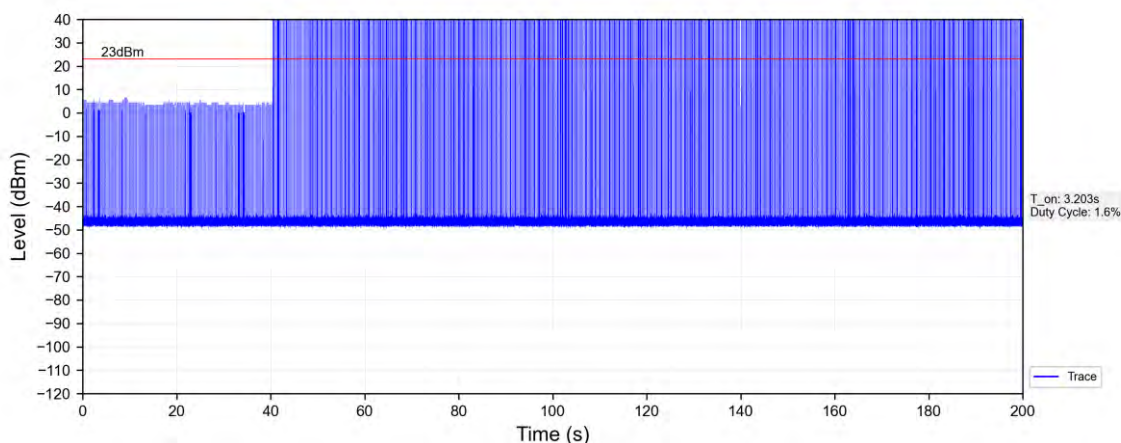
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



7.9 Verify that the device will register with a SAS when operating below 23 dBm

Verified in test case WINNF.PT.C.HBT.1, the CPE-CBSD as UUT default EIRP is under 23 dBm and can register success with SAS. After granted, the CPE-CBSD UUT will adjust the EIRP by maxEirp.



Note:

1. Red color line in above plot represents the 23 dBm.
2. When Granted the product will transmit at power level above 23dBm.
3. Only when the product sends packets the product will work at max EIRP.



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

8 Test Data Log

8.1 WINNF.FT.C.REG.1

2020-10-20T03:22:18.779Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T03:22:18.779Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

2020-10-20T03:32:56.901Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E-UTRA"
```

 $\}$

```
"callSign": "baicells",
```

"cbsdCategory": "B",

"cbsdSerialNumber": "1203000116209CQ0070",

```
"cpiSignatureData": {
```

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllLuLQwR8WtYDYPLXis2trblcUmodelx3H258FFIXvGQ2en-oomhbySd9rAC3-KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZhNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s qGUzkDWi4x2lp2NPP0lt2BKI0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ q9vqUL3zAQRZv0QwNDCSJziYzbclyIJmS_FUTFx7lQU3gRg",

```
"encodedCpiSignedData":
```

"eyJjYnNkU2VyaWFsTnVtYmVlYjoiMTlwMzAwMDExNjIwOUNRMDA3MCIslmZjY0IkljoiMkFHMzJFRzgwMTVHTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLClJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh 0ZXJuYWwiLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkhFTClslmhvcml6b250YWxkY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCl6ZmFsc2UsImxhdGl0dWRlljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj UzOTcyLClJ2ZXJ0aWNhbEFjY3VyYWN5IjozfSwicHJvZmVzc2lbnmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlJZ Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUeIFVXNlcl8xMjMiLCJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUi OiIvMDIwLlTEwLTE5VDExOjUvOjI0WiJ9fQ".

```
"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
```

 $\}$

"fccId": "2AG32EG8015GM11",

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [],
```

"userId": "Baicells 01"

}



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sqs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sqs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have accepted the Terms and Conditions of the Company and the 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 strictly prohibited and may result in severe civil or criminal penalties, including damages and/or imprisonment. 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
or email: CN.Doccheck@sps.com

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

```

    ]
  }
2020-10-20T03:32:56.930Z - INFO - Registration message contains cpiSignatureData
2020-10-20T03:32:56.930Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T03:32:56.930Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T03:32:57.517Z - INFO - verified signature on cpiSignatureData
2020-10-20T03:32:57.528Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T03:32:57.528Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T03:32:58.908Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T03:32:58.908Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

```



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

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

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

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



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

Report No.: SZEM201001049701

Page: 44 of 209

2020-10-20T03:33:06.351Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-10-20T03:33:12.213Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is - passed and :the additional comments for the current test are : n



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

or email: CN.Doccheck@sgs.com

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

8.2 WINNF.FT.C.REG.5

2020-10-20T04:00:43.418Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:00:43.418Z - INFO - the selected test from the user : WINNF.FT.C.REG.5 is starting now

2020-10-20T04:00:45.569Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E_UTRA"
```

}

```
"callSign": "baicells",
```

"cbsdCategory": "B".

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrlluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-KS2eiBqc8x58ARpml4sJFKuhoU7vT1nI7avwbd1PQokF6tF VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZhNWiSeSQZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s
qGUzkDWi4x2lp2NPP0lt2BKI0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ
g9vqUL3zAQRZv0QwNDCSJziYzbclyIJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJYnNkU2VyaWFsTnVtYmVlYjoiMTIwMzAwMDExNjIwOUNRMDA3MCIslmZjY0IkljoiMkFHMzJFRzgwMTVHTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFtd2lk dGgiOjkwLCJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh 0ZXJuYWwiLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTCIsImhvcml6b250YWxkY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCI6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj UzOTcyLCJ2ZXJ0aWNhbEFjY3VyYWN5IjozfSwicHJvZmVzc2lbnmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlZ Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUeIFVXNlcl8xMjMiLCJpbnN0YWxsQ2VydGlmaWNhdGlvbiRpbWUi OiilyMDIwLTewLTE5VDExOjUyOjI0WiJ9fQ".

"protectedHeader": "evJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

}

"fccId": "2AG32EG8015GM11".

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"

1.

```
"userId": "Baicells 01"
```

}



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have accepted the Terms and Conditions of the Company and to have agreed to follow the instructions of the Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or expiration date of this document will render it void and null and void. 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@sqs.com

No.1 Workshop, M-10, Middle-Section, Science & Technology Park, Shenzhen, China	518057	t (86-755) 26012053	f (86-755) 26710594	www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一厂房	邮编: 518057	t (86-755) 26012053	f (86-755) 26710594	sgs.china@sqs.com

```

}
2020-10-20T04:00:45.579Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:00:45.579Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:00:45.579Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:00:45.619Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:00:45.619Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:00:45.619Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T04:00:47.437Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:00:47.437Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch - Central Science & Technology Laboratory

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



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

Report No.: SZEM201001049701
Page: 47 of 209

2020-10-20T04:00:54.638Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-10-20T04:00:59.487Z - INFO - The final result of the test : WINNF.FT.C.REG.5 is - passed and :the additional comments for the current test are : n



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, General Service 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

8.3 WINNF.FT.C.REG.8

2020-10-20T04:03:39.252Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:03:39.252Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now

2020-10-20T04:04:18.253Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZv0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWVtd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh



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

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

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

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


```
}
2020-10-20T04:04:18.270Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:04:18.270Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:04:18.270Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:04:18.321Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:04:18.321Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:04:18.321Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 102
      }
    }
  ]
}
2020-10-20T04:04:19.499Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:04:19.499Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-10-20T04:04:40.828Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch - Central Science & Technology Laboratory

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



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

Report No.: SZEM201001049701

Page: 50 of 209

2020-10-20T04:04:43.233Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed and :the additional comments for the current test are : n



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

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

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

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

8.4 WINNF.FT.C.REG.10

2020-10-20T04:05:31.405Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:05:31.405Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now

2020-10-20T04:05:50.226Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E_UTRA"
```

}

```
"callSign": "baicells",
```

"cbsdCategory": "B".

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrlluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-KS2eiBqc8x58ARpml4sJFKuhoU7vT1nI7avwbd1PQokF6tF VX7OV-

LFEXMB81Z1e0ZEHnaQERJEHKOCAYOZhNWiSeSQZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s
qGUzkDWi4x2lp2NPP0lt2BKI0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ
g9vqUL3zAQRZv0QwNDCSJziYzbclyIJmS_FUTFx7lQU3gRg",

```
"encodedCpiSignedData":
```

"eyJjYnNkU2VyaWFsTnVtYmVljoIMTlwMzAwMDExNjIwOUNRMDA3MCIslmZjY0IkljoiMkFHMzJFRzgwMTVHTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLClJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh 0ZXJuYWwiLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTCIsImhvcml6b250YWxkY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCl6ZmFsc2UsImxhdGl0dWRlljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj UzOTcyLClJ2ZXJ0aWNhbEFjY3VyYWN5IjozfSwicHJvZmVzc2lbnmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlJZ Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUeIFVXNlcl8xMjMiLCJpbnN0YWxsQ2VydGlmaWNhdGlvbIRpbWUi OiilyMDIwLTewLTE5VDExOjUyOjI0WiJ9fQ".

```
"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
```

 $\}$

"fccId": "2AG32EG8015GM11".

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"

1.

```
"userId": "Baicells 01"
```

}



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have read, understood and accepted the Terms and Conditions of the Company and to have agreed to follow the 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 strictly prohibited and may result in severe civil or criminal penalties. The Company 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@sqs.com

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China	518057	t (86-755) 26012053	f (86-755) 26710594	www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一厂房	邮编: 518057	t (86-755) 26012053	f (86-755) 26710594	sgs.china@sqs.com

```

}
2020-10-20T04:05:50.246Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:05:50.246Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:05:50.246Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:05:50.286Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:05:50.296Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:05:50.296Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 200
      }
    }
  ]
}
2020-10-20T04:05:51.447Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:05:51.447Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-10-20T04:05:55.688Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

```




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

Report No.: SZEM201001049701

Page: 53 of 209

2020-10-20T04:05:58.036Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed and :the additional comments for the current test are : n



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

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

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

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

8.5 WINNF.FT.C.REG.12

2020-10-20T04:08:18.924Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:08:18.924Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now

2020-10-20T04:08:28.263Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWVtd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

ImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us



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

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

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

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

```

}
2020-10-20T04:08:28.282Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:08:28.282Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:08:28.282Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:08:28.328Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:08:28.332Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:08:28.334Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 103
      }
    }
  ]
}
2020-10-20T04:08:29.971Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:08:29.971Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-10-20T04:08:46.237Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

```



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

Report No.: SZEM201001049701
Page: 56 of 209

2020-10-20T04:08:47.792Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed and :the additional comments for the current test are : n



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

8.6 WINNF.FT.C.REG.14

2020-10-20T04:09:35.434Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:09:35.434Z - INFO - the selected test from the user : WINNF.FT.C.REG.14 is starting now

2020-10-20T04:09:54.881Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllLuLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbD1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFD2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5ljozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMlLCJpbmN0YXxsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDIwLjTEwLjTE5VDEExOjUyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupid": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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

```

}
2020-10-20T04:09:54.907Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:09:54.907Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:09:54.907Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:09:54.953Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:09:54.963Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:09:54.963Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 101
      }
    }
  ]
}
2020-10-20T04:09:56.536Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:09:56.536Z - INFO - the question is : Were there RF transmissions from the CBS1 during the test? please choose one of the answers :
2020-10-20T04:10:06.792Z - INFO - for the question : Were there RF transmissions from the CBS1 during the test? , the user choose n

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



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

Report No.: SZEM201001049701
Page: 59 of 209

2020-10-20T04:10:09.015Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed and :the additional comments for the current test are : n



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

8.7 WINNF.FT.C.REG.16

2020-10-20T04:10:46.308Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:10:46.308Z - INFO - the selected test from the user : WINNF.FT.C.REG.16 is starting now

2020-10-20T04:11:03.101Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDEwNjIwOUNRMDA3MCIslmZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWVtd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudC16ZmFsc2UsImxhdG10dWRlljo2OC41MzUzNCwibG9uZ2l0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5ljozfSwicHJvZmVzc2l2bWVFsSW5zdGFsbGVyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMlCjpbN0YwXsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDIwLTEwLTE5VDE5OjUyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupId": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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


```

}
2020-10-20T04:11:03.131Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:11:03.131Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:11:03.131Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:11:03.171Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:11:03.171Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:11:03.171Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 100
      }
    }
  ]
}
2020-10-20T04:11:04.417Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:11:04.417Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-10-20T04:11:13.704Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



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

Report No.: SZEM201001049701

Page: 62 of 209

2020-10-20T04:11:16.895Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed and :the additional comments for the current test are : n



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

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

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

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

8.8 WINNF.FT.C.REG.18

2020-10-20T04:12:02.927Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:12:02.927Z - INFO - the selected test from the user : WINNF.FT.C.REG.18 is starting now

2020-10-20T04:12:20.658Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllUQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZv0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlWmZAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLiCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudC16ZmFsc2UsImxhdG10dWRlljo2OC41MzUzNCwibG9uZ2l0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5IjozfSwicHJvZmVzc2l2bWbFsSW5zdGFsbGFyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMlLCJpbmN0YXxsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDlWLTTE5VDEExOjUyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupid": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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

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

```

}
2020-10-20T04:12:20.678Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:12:20.678Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:12:20.678Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:12:20.729Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:12:20.729Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:12:20.739Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 201
      }
    }
  ]
}
2020-10-20T04:12:21.970Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:12:21.970Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-10-20T04:12:33.654Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



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

Report No.: SZEM201001049701

Page: 65 of 209

2020-10-20T04:12:34.934Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed and :the additional comments for the current test are : n



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

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

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

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

8.9 WINNF.FT.C.GRA.1

2020-10-20T04:13:20.502Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:13:20.502Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now

2020-10-20T04:13:51.457Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZv0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWVtd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh



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

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

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

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

```

}
2020-10-20T04:13:51.496Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:13:51.496Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:13:51.496Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:13:51.536Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:13:51.546Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:13:51.546Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T04:14:53.216Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,




```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    "measRcvdPower": -76
  }
]
}
}
]
}
}
2020-10-20T04:14:53.236Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

2020-10-20T04:15:08.914Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -90
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000.
```



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a dispute. The Company's findings are based on the information provided to it and its own inspection. The Company's report is prepared, 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.

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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



```
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T04:15:08.940Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司 / 实验室

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



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

Report No.: SZEM201001049701
Page: 73 of 209

```
"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",  
"response": {  
  "responseCode": 400  
}  
}  
]  
}
```

2020-10-20T04:15:10.844Z - INFO - arrived to nstep starting question answer session with the technician

2020-10-20T04:15:10.845Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-10-20T04:15:28.176Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-10-20T04:15:29.607Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed and :the additional comments for the current test are : n



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, General Service 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 <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

8.10 WINNF.FT.C.GRA.2

2020-10-20T04:17:15.351Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T04:17:15.361Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now

2020-10-20T04:17:29.908Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllUQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFD2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2l0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5ljozfSwicHJvZmVzc2l0bWVzSW5zdGFsbGVyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMiLCJpbmN0YXxsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDIwLjTEwLjTE5VDEExOjUyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupId": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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

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

```

}
2020-10-20T04:17:29.947Z - INFO - Registration message contains cpiSignatureData
2020-10-20T04:17:29.947Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T04:17:29.947Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T04:17:30.002Z - INFO - verified signature on cpiSignatureData
2020-10-20T04:17:30.006Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T04:17:30.006Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T04:17:37.569Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch - Central Science & Technology Laboratory

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

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


```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T04:17:37.576Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T04:17:48.864Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
```



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T04:17:48.874Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
```



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

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

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

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



```
"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",  
"response": {  
  "responseCode": 401  
}  
}  
]  
}
```

2020-10-20T04:17:50.486Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T04:17:50.486Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-10-20T04:18:05.644Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2020-10-20T04:18:07.381Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed and :the additional comments for the current test are : n



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

8.11 WINNF.FT.C.HBT.1

2020-10-20T05:52:15.223Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T05:52:15.223Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2020-10-20T05:52:37.410Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E_UTRA"
```

}

```
"callSign": "baicells",
```

"cbsdCategory": "B".

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrlluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-KS2eiBac8x58ARpml4sJFKuhoU7vT1nI7avwbd1PQokF6tF VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZhNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s
qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ
g9vgUL3zAQRZv0QwNDCSJzjYzbclyIJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlwMzAwMDExNjIwOUNRMDA3MCIslmZjY0IkljoiMkFHMzJFRzgwMTVHTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLClJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh 0ZXJuYWwiLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkhFTClslmhvcml6b250YWxkY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCl6ZmFsc2UsImxhdGl0dWRlljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj UzOTcyLCJ2ZXJ0aWNhbEFjY3VyYWN5IjozfSwicHJvZmVzc2lbnmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlJZ Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUeIUFVNcl8xMjMiLCJpbnN0YWxsQ2VydGlmaWNhdGlvbIRpbWUi OiIvMDIwLTewLTE5VDExOjUyOjI0WiJ9fQ".

"protectedHeader": "evJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

}

"fccId": "2AG32EG8015GM11".

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"

1.

```
"userId": "Baicells 01"
```

}



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have read, understood and accepted the Terms and Conditions of the Company and the 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 strictly prohibited and may result in severe civil or criminal penalties. The Company 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
or email: CN.Doccheck@sps.com

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

中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057

† (86-755) 26012053 f (86-755) 26710594

sgs.china@sgs.com

Member of the SGS Group (SGS SA)

```

}
2020-10-20T05:52:37.444Z - INFO - Registration message contains cpiSignatureData
2020-10-20T05:52:37.444Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T05:52:37.444Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T05:52:37.500Z - INFO - verified signature on cpiSignatureData
2020-10-20T05:52:37.505Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T05:52:37.506Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T05:52:53.006Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch - Central Science & Technology Laboratory

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

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


```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```
"measRcvdPower": -76  
    }  
  ]  
}  
  
]`
```

2020-10-20T05:52:53.015Z - INFO - engine sent successfully, the response to CBRS : {

```
  "spectrumInquiryResponse": [  
    {  
      "availableChannel": [  
        {  
          "channelType": "GAA",  
          "frequencyRange": {  
            "highFrequency": 3570000000,  
            "lowFrequency": 3550000000  
          },  
          "ruleApplied": "FCC_PART_96"  
        }  
      ],  
      "cbsId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}
```

2020-10-20T05:53:07.141Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -90
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000,

```



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed in full or available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>, and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a dispute. This document is not to be used as evidence in any legal proceedings. 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 1448.

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T05:53:07.151Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
```



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

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

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

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


```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T05:53:07Z",
    "grantId": "932660205",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T05:53:20.696Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T05:53:20.710Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T05:56:40Z"
    }
  ]
}
2020-10-20T05:54:22.160Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    ]
  }
2020-10-20T05:54:22.164Z - INFO - Time interval between two heartbeat request messages is: 61.465, limit
is: 65.0
2020-10-20T05:54:22.170Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T05:57:42Z"
    }
  ]
}
2020-10-20T05:55:23.460Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T05:55:23.461Z - INFO - Time interval between two heartbeat request messages is: 61.299, limit
is: 65.0
2020-10-20T05:55:23.467Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T05:58:43Z"
    }
  ]
}
2020-10-20T05:56:24.878Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



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

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

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

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

```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "932660205",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T05:56:24.881Z - INFO - Time interval between two heartbeat request messages is: 61.42, limit is: 65.0

2020-10-20T05:56:24.887Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "932660205",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-10-20T05:59:44Z"
  }
]
```

2020-10-20T05:57:26.160Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "932660205",
    "grantRenew": false,
    "operationState": "AUTHORIZED"
  }
]
```

2020-10-20T05:57:26.163Z - INFO - Time interval between two heartbeat request messages is: 61.28, limit is: 65.0

2020-10-20T05:57:26.171Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "932660205",
    "response": {
      "responseCode": 0
    },
  },
]
```



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

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

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

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

```

    "transmitExpireTime": "2020-10-20T06:00:46Z"
  }
}
}
2020-10-20T05:58:27.459Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-10-20T05:58:27.460Z - INFO - Time interval between two heartbeat request messages is: 61.299, limit
is: 65.0
2020-10-20T05:58:27.467Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "932660205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T06:01:47Z"
    }
  ]
}
}
2020-10-20T05:58:28.546Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T05:58:28.546Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state
(first successful HBT response)? please choose one of the answers :
2020-10-20T05:59:05.243Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED
state (first successful HBT response)? , the user choose n
2020-10-20T05:59:05.243Z - INFO - the question is : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? please choose one of the answers :
2020-10-20T05:59:15.009Z - INFO - for the question : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? , the user choose y
2020-10-20T05:59:18.779Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed and :the
additional comments for the current test are : n

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

8.12 WINNF.FT.C.HBT.3

2020-10-20T07:19:14.365Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T07:19:14.367Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now

2020-10-20T07:19:50.101Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWVtd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh



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

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

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

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

```

}
2020-10-20T07:19:50.138Z - INFO - Registration message contains cpiSignatureData
2020-10-20T07:19:50.138Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T07:19:50.138Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T07:19:50.388Z - INFO - verified signature on cpiSignatureData
2020-10-20T07:19:50.392Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T07:19:50.394Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T07:19:57.782Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司实验室

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

```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T07:19:57.790Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T07:20:07.282Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T07:20:07.290Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
"channelType": "GAA",
"grantExpireTime": "2020-10-27T07:20:07Z",
"grantId": "886913172",
"heartbeatInterval": 60,
"response": {
  "responseCode": 0
}
}
]
}
2020-10-20T07:20:19.921Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "886913172",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T07:20:19.933Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "886913172",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:23:39Z"
    }
  ]
}
2020-10-20T07:21:21.690Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "886913172",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
Shenzhen Branch, Laboratory 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com


```

    ]
  }
2020-10-20T07:21:21.691Z - INFO - Time interval between two heartbeat request messages is: 61.77, limit is:
65.0
2020-10-20T07:21:21.697Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "886913172",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:24:41Z"
    }
  ]
}
2020-10-20T07:22:24.164Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "886913172",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T07:22:24.165Z - INFO - Time interval between two heartbeat request messages is: 62.473, limit
is: 65.0
2020-10-20T07:22:24.171Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "886913172",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:25:44Z"
    }
  ]
}
2020-10-20T07:23:25.904Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司实验室

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

```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "886913172",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T07:23:25.907Z - INFO - Time interval between two heartbeat request messages is: 61.741, limit is: 65.0

2020-10-20T07:23:25.913Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "886913172",
    "response": {
      "responseCode": 105
    },
    "transmitExpireTime": "2020-10-20T07:23:25Z"
  }
]
```

2020-10-20T07:23:27.522Z - INFO - arrived to nstep starting question answer session with the technician

2020-10-20T07:23:27.523Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? please choose one of the answers :

2020-10-20T07:23:41.418Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2020-10-20T07:23:49.066Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current test are : n



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

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

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

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

8.13 WINNF.FT.C.HBT.4

2020-10-20T07:31:35.677Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T07:31:35.677Z - INFO - the selected test from the user : WINNF.FT.C.HBT.4 is starting now

2020-10-20T07:31:47.674Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwb1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5IjozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMlCjpbN0YVWxsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDIwLjTEwLjTE5VDEExOjUyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupId": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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

```

}
2020-10-20T07:31:47.746Z - INFO - Registration message contains cpiSignatureData
2020-10-20T07:31:47.746Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T07:31:47.746Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fcclId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T07:31:47.848Z - INFO - verified signature on cpiSignatureData
2020-10-20T07:31:47.857Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T07:31:47.857Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-10-20T07:32:01.289Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司实验室

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

```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

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

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

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



```
        "measRcvdPower": -76
      }
    ]
  }
}
]
}
```

2020-10-20T07:32:01.305Z - INFO - engine sent successfully, the response to CBRS : {
 "spectrumInquiryResponse": [
 {
 "availableChannel": [
 {
 "channelType": "GAA",
 "frequencyRange": {
 "highFrequency": 3570000000,
 "lowFrequency": 3550000000
 },
 "ruleApplied": "FCC_PART_96"
 }
],
 "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
 "response": {
 "responseCode": 0
 }
 }
]
}

2020-10-20T07:32:10.744Z - INFO - grant request from CBRS : {
 "grantRequest": [
 {
 "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
 "measReport": {
 "rcvdPowerMeasReports": [
 {
 "measBandwidth": 10000000,
 "measFrequency": 3550000000,
 "measRcvdPower": -90
 },
 {
 "measBandwidth": 10000000,
 "measFrequency": 3560000000,



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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



```
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T07:32:10.760Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司 / 实验室

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

```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T07:32:10Z",
    "grantId": "31255188",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T07:32:26.335Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T07:32:26.351Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:35:46Z"
    }
  ]
}
2020-10-20T07:33:27.732Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
Shenzhen Branch: 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
]
}
2020-10-20T07:33:27.732Z - INFO - Time interval between two heartbeat request messages is: 61.397, limit
is: 65.0
2020-10-20T07:33:27.747Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:36:47Z"
    }
  ]
}
2020-10-20T07:34:29.108Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T07:34:29.115Z - INFO - Time interval between two heartbeat request messages is: 61.376, limit
is: 65.0
2020-10-20T07:34:29.131Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:37:49Z"
    }
  ]
}
2020-10-20T07:35:30.371Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
```



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

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

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

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

```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "31255188",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T07:35:30.371Z - INFO - Time interval between two heartbeat request messages is: 61.263, limit is: 65.0

2020-10-20T07:35:30.387Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "31255188",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-10-20T07:38:50Z"
  }
]
```

2020-10-20T07:36:32.390Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "31255188",
    "grantRenew": false,
    "operationState": "AUTHORIZED"
  }
]
```

2020-10-20T07:36:32.390Z - INFO - Time interval between two heartbeat request messages is: 62.019, limit is: 65.0

2020-10-20T07:36:32.405Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "31255188",
    "response": {
      "responseCode": 0
    },
  },
]
```



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

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

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

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


```

    "transmitExpireTime": "2020-10-20T07:39:52Z"
  }
}
}
2020-10-20T07:37:33.710Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-10-20T07:37:33.717Z - INFO - Time interval between two heartbeat request messages is: 61.32, limit is: 65.0
2020-10-20T07:37:33.724Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "31255188",
      "response": {
        "responseCode": 500
      },
      "transmitExpireTime": "2020-10-20T07:37:33Z"
    }
  ]
}
}
2020-10-20T07:37:35.431Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T07:37:35.431Z - INFO - the question is : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? please choose one of the answers :
2020-10-20T07:37:41.255Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y
2020-10-20T07:38:00.894Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed and :the additional comments for the current test are : n

```

8.14 WINNF.FT.C.HBT.5

2020-10-20T07:46:16.095Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T07:46:16.095Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now

2020-10-20T07:46:28.221Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllUQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDEwNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWVtd2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2UsImxhdGloZWVudCjE6ZmFsc2Us

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh



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

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

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

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

```

}
2020-10-20T07:46:28.302Z - INFO - Registration message contains cpiSignatureData
2020-10-20T07:46:28.302Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T07:46:28.302Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T07:46:28.404Z - INFO - verified signature on cpiSignatureData
2020-10-20T07:46:28.413Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T07:46:28.421Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-10-20T07:47:05.845Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,




```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T07:47:05.875Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T07:47:17.332Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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



```
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T07:47:17.348Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
```



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

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

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

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


```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T07:47:17Z",
    "grantId": "41734929",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T07:47:28.838Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "41734929",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T07:47:28.845Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "41734929",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-10-20T07:47:28Z"
    }
  ]
}
2020-10-20T07:48:24.447Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "41734929",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    ]
  }
2020-10-20T07:48:24.447Z - INFO - Time interval between two heartbeat request messages is: 55.609, limit
is: 65.0
2020-10-20T07:48:24.463Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "41734929",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-10-20T07:48:24Z"
    }
  ]
}
2020-10-20T07:48:25.815Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T07:48:25.815Z - INFO - the question is : Did the CBSD transmit at any time during the test?
please choose one of the answers :
2020-10-20T07:48:34.727Z - INFO - for the question : Did the CBSD transmit at any time during the test? ,
the user choose n
2020-10-20T07:48:37.253Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed and :the
additional comments for the current test are : n

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

8.15 WINNF.FT.C.HBT.6

2020-10-20T07:54:27.795Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T07:54:27.795Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now

2020-10-20T07:55:09.915Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E_UTRA"
```

}

```
"callSign": "baicells",
```

"cbsdCategory": "B",

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrlluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-KS2eiBac8x58ARpml4sJFKuhoU7vT1nI7avwbd1PQokF6tF VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZhNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s
qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ
g9vgUL3zAQRZv0QwNDCSJziYzbclyIJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVTYmVyljoiMTlwMzAwMDExNjlwOUNRMDA3MCIsImZjY0IkljoiMkFHMzMJRzgwMTVHTTEgliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLCJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYYWUljoOCwiYW50ZW5uYU1vZGVsljoiRXh0ZXJuYWwiLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTCIsImhvcmI6b250YWxBY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCI6ZmFsc2UsImxhdGl0dWRlljo2OC41MzUzNCwicG9uZ2I0dWRlljotMTU4Lj UzOTcyLCJ2ZXJ0aWNhbEFfY3VyYWN5IjozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eYjcGIJZ Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElfXNlcl8xMjMiLCJpbnN0YWxsQ2VydGlmaWNhdGlvbIRpbWUi OiIvMDIwLTcwLTE5VDExOjUyOjE0WiJ9fQ".

```
"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
```

 $\}$

"fccId": "2AG32EG8015GM11".

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"

1.

```
"userId": "Baicells 01"
```

}



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sqs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sqs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have read, understood and accepted the Terms and Conditions of the Company's General Conditions of Service and the 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 strictly prohibited and may result in severe civil or criminal penalties. The Company has not 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
or email: CN.Doccheck@sqs.com

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

中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057

† (86-755) 26012053 f (86-755) 26710594

sgs.china@sgs.com

Member of the SGS Group (SGS SA)

```

}
2020-10-20T07:55:09.996Z - INFO - Registration message contains cpiSignatureData
2020-10-20T07:55:09.996Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T07:55:09.996Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T07:55:10.068Z - INFO - verified signature on cpiSignatureData
2020-10-20T07:55:10.075Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T07:55:10.075Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-10-20T07:55:19.543Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

}
]
}
]
}
"measRcvdPower": -76
}

```

2020-10-20T07:55:19.568Z - INFO - engine sent successfully, the response to CBRS : {

```

"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        },
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "response": {
      "responseCode": 0
    }
  }
]
}

```

2020-10-20T07:55:26.967Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -90
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000,

```



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a dispute. The Company cannot be held responsible for any loss or damage, including consequential loss or damage, that may be incurred, 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 1444.

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T07:55:26.976Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T07:55:26Z",
    "grantId": "167686829",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T07:55:36.377Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "167686829",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T07:55:36.392Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "167686829",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:58:56Z"
    }
  ]
}
2020-10-20T07:56:37.740Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "167686829",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
Shenzhen Branch: 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    ]
  }
2020-10-20T07:56:37.740Z - INFO - Time interval between two heartbeat request messages is: 61.363, limit
is: 65.0
2020-10-20T07:56:37.755Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "167686829",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T07:59:57Z"
    }
  ]
}
2020-10-20T07:57:39.039Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "167686829",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T07:57:39.039Z - INFO - Time interval between two heartbeat request messages is: 61.299, limit
is: 65.0
2020-10-20T07:57:39.055Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "167686829",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T08:00:59Z"
    }
  ]
}
2020-10-20T07:58:40.319Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "167686829",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T07:58:40.319Z - INFO - Time interval between two heartbeat request messages is: 61.281, limit is: 65.0

2020-10-20T07:58:40.335Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "167686829",
    "response": {
      "responseCode": 501
    },
    "transmitExpireTime": "2020-10-20T07:58:40Z"
  }
]
```

2020-10-20T07:58:55.897Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "167686829",
    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
```

2020-10-20T07:58:55.904Z - INFO - Time interval between two heartbeat request messages is: 15.577, limit is: 65.0

2020-10-20T07:58:55.921Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "167686829",
    "response": {
      "responseCode": 501
    },
  },
]
```



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

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

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

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



"transmitExpireTime": "2020-10-20T07:58:55Z"

}

]

}

2020-10-20T07:58:57.296Z - INFO - arrived to nstep starting question answer session with the technician

2020-10-20T07:58:57.296Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? please choose one of the answers :

2020-10-20T07:59:10.440Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y

2020-10-20T07:59:12.624Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current test are : n



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

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

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

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


```

}
2020-10-20T08:10:48.441Z - INFO - Registration message contains cpiSignatureData
2020-10-20T08:10:48.441Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T08:10:48.441Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T08:10:48.542Z - INFO - verified signature on cpiSignatureData
2020-10-20T08:10:48.551Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T08:10:48.559Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T08:11:22.017Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com


```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T08:11:22.033Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T08:11:53.476Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T08:11:53.492Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com


```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T08:11:53Z",
    "grantId": "579337346",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T08:12:08.890Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "579337346",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T08:12:08.905Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "579337346",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T08:15:28Z"
    }
  ]
}
2020-10-20T08:13:10.213Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "579337346",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
Shenzhen Branch: 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    ]
  }
2020-10-20T08:13:10.213Z - INFO - Time interval between two heartbeat request messages is: 61.323, limit
is: 65.0
2020-10-20T08:13:10.229Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "579337346",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T08:16:30Z"
    }
  ]
}
2020-10-20T08:14:11.915Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "579337346",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T08:14:11.924Z - INFO - Time interval between two heartbeat request messages is: 61.703, limit
is: 65.0
2020-10-20T08:14:11.931Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "579337346",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T08:17:31Z"
    }
  ]
}
2020-10-20T08:15:13.538Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



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

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

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

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

```
{
  "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "579337346",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T08:15:13.538Z - INFO - Time interval between two heartbeat request messages is: 61.622, limit is: 65.0

2020-10-20T08:15:13.553Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "579337346",
    "response": {
      "responseCode": 502
    },
    "transmitExpireTime": "2020-10-20T08:15:13Z"
  }
]
```

2020-10-20T08:15:28.720Z - INFO - relinquishment request from CBRS : {

```
"relinquishmentRequest": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "579337346"
  }
]
```

2020-10-20T08:15:28.736Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "579337346",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-10-20T08:15:30.227Z - INFO - arrived to nstep starting question answer session with the technician



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



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

Report No.: SZEM201001049701

Page: 144 of 209

2020-10-20T08:15:30.229Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? please choose one of the answers :

2020-10-20T08:15:35.374Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y

2020-10-20T08:15:37.144Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed and :the additional comments for the current test are : n



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

8.17 WINNF.FT.C.HBT.9

2020-10-20T08:16:14.223Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T08:16:14.223Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now

2020-10-20T08:16:40.371Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFD2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudC16ZmFsc2UsImxhdG10dWRlljo2OC41MzUzNCwibG9uZ2l0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5IjozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMlLCJpbmN0YWxsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDIwLTEwLTE5VDE5X0JyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupid": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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

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

```

}
2020-10-20T08:16:40.453Z - INFO - Registration message contains cpiSignatureData
2020-10-20T08:16:40.453Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T08:16:40.453Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T08:16:40.556Z - INFO - verified signature on cpiSignatureData
2020-10-20T08:16:40.572Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T08:16:40.572Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T08:16:54.092Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch - Central Service & Laboratory

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T08:16:54.125Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T08:17:05.533Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, Central Science & Technology Laboratory

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T08:17:05.549Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

"cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
"channelType": "GAA",
"grantExpireTime": "2020-10-27T08:17:05Z",
"grantId": "137231126",
"heartbeatInterval": 60,
"response": {
  "responseCode": 0
}
]
}
}
2020-10-20T08:17:14.950Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "137231126",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2020-10-20T08:20:34.967Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "137231126",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-10-20T08:20:34Z"
    }
  ]
}
}
2020-10-20T08:20:36.322Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T08:20:36.322Z - INFO - the question is : Were there RF transmissions from the CBSD during the
test? please choose one of the answers :
2020-10-20T08:20:44.522Z - INFO - for the question : Were there RF transmissions from the CBSD during
the test? , the user choose n
2020-10-20T08:20:46.434Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed and :the
additional comments for the current test are : n

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

8.18 WINNF.FT.C.HBT.10

2020-10-20T08:25:09.584Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T08:25:09.584Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now

2020-10-20T08:25:56.657Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllUQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFD2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudC16ZmFsc2UsImxhdG10dWRlljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLCJ2ZXJ0aWNhbnEFjY3VyYWN5IjozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eyJjcGljZ

Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUElFVXNlcl8xMjMiLCJpbmN0YXxsQ2VydGlmaWNhdGlvbiRpbWUi

OilyMDIwLjTEwLjTE5VDEExOjUyOjI0WiJ9fQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclid": "2AG32EG8015GM11",

"groupingParam": {

{

"groupId": "Baicells_01",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": {

"RECEIVED_POWER_WITHOUT_GRANT"

},

"userId": "Baicells_01"

}

]



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

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

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

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

```

}
2020-10-20T08:25:56.729Z - INFO - Registration message contains cpiSignatureData
2020-10-20T08:25:56.729Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T08:25:56.729Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T08:25:57.355Z - INFO - verified signature on cpiSignatureData
2020-10-20T08:25:57.364Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T08:25:57.364Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T08:26:06.769Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T08:26:06.786Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T08:26:16.193Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T08:26:16.209Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T08:26:16Z",
    "grantId": "880711952",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T08:26:25.586Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "880711952",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T08:26:25.602Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "880711952",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T08:29:45Z"
    }
  ]
}
2020-10-20T08:27:27.683Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "880711952",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
Shenzhen Branch: 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com


```

    ]
  }
2020-10-20T08:27:27.690Z - INFO - Time interval between two heartbeat request messages is: 62.096, limit
is: 65.0
2020-10-20T08:27:27.697Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "880711952",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T08:30:47Z"
    }
  ]
}
2020-10-20T08:28:29.953Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "880711952",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T08:28:29.953Z - INFO - Time interval between two heartbeat request messages is: 62.27, limit is:
65.0
2020-10-20T08:28:29.960Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS
AT: 2020-10-20 08:27:27.683000
2020-10-20T08:31:49.986Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "880711952",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-10-20T08:31:49Z"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



2020-10-20T08:31:51.364Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T08:31:51.364Z - INFO - the question is : Did the CBSD stop RF transmissions within
(transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :
2020-10-20T08:32:10.961Z - INFO - for the question : Did the CBSD stop RF transmissions within
(transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y
2020-10-20T08:32:12.431Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed and :the
additional comments for the current test are : n



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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

8.19 WINNF.FT.C.RLO.1

2020-10-20T08:57:21.969Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T08:57:21.969Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now

2020-10-20T08:58:12.332Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E_UTRA"
```

}

```
"callSign": "baicells",
```

"cbsdCategory": "B",

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrlluLQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-KS2eiBac8x58ARpml4sJFKuhoU7vT1nI7avwbd1PQokF6tF VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZhNWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s
qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ
g9vqUL3zAQRZv0QwNDCSJzjYzbclyIJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJyJnNkU2VyaWFsTnVTYmVyljoiMTlwMzAwMDExNjlwOUNRMDA3MCIsImZjY0IkljoiMkFHMzMJRzgwMTVHTTEExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLCJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYYWUljoXOCwiYW50ZW5uYU1vZGVsljoiRXh0ZXJuYWwlcCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClSlmhvcml6b250YWxBY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCI6ZmFsc2UsImxhdGl0dWRlljo2OC41MzUzNCwicG9uZ2I0dWRlljotMTU4Lj UzOTcyLCJ2ZXJ0aWNhbEFfY3VyYWN5IjozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlJZ Cl6ImNwaTEyMyIslmNwaU5hbWUiOiJDUeIfXNlcl8xMjMiLCJpbnN0YWxsQ2VydGlmaWNhdGlvbIRpbWUi OiIvMDIwLTewLTE5VDEYOiUyOjI0WiJ9fQ".

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

 $\}$

"fccId": "2AG32EG8015GM11".

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"

1.

```
"userId": "Baicells 01"
```

}



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have read, understood and accepted the Terms and Conditions of the document and the Company's policy. In accordance with the 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 strictly prohibited and may result in severe civil or criminal penalties. The Company has 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
or email: CN.Doccheck@sps.com

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

中国·深圳·科技园中区M-10栋一号厂房

邮编: 518057

† (86-755) 26012053 f (86-755) 26710594

sgs.china@sgs.com

Member of the SGS Group (SGS SA)

```

}
2020-10-20T08:58:12.388Z - INFO - Registration message contains cpiSignatureData
2020-10-20T08:58:12.388Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T08:58:12.388Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T08:58:12.976Z - INFO - verified signature on cpiSignatureData
2020-10-20T08:58:12.983Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T08:58:12.983Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T08:58:24.434Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

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

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

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

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

```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

}
]
}
]
}
"measRcvdPower": -76
}

```

2020-10-20T08:58:24.459Z - INFO - engine sent successfully, the response to CBRS : {

```

"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        },
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "response": {
      "responseCode": 0
    }
  }
]
}

```

2020-10-20T08:58:51.855Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -90
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000.
```



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>, and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a dispute. The Company's findings are based on the information provided to it and its own inspection. The Company's report is prepared, 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.

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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



```
    },  
    {  
      "measBandwidth": 10000000,  
      "measFrequency": 3650000000,  
      "measRcvdPower": -80  
    },  
    {  
      "measBandwidth": 10000000,  
      "measFrequency": 3660000000,  
      "measRcvdPower": -79  
    },  
    {  
      "measBandwidth": 10000000,  
      "measFrequency": 3670000000,  
      "measRcvdPower": -78  
    },  
    {  
      "measBandwidth": 10000000,  
      "measFrequency": 3680000000,  
      "measRcvdPower": -77  
    },  
    {  
      "measBandwidth": 10000000,  
      "measFrequency": 3690000000,  
      "measRcvdPower": -76  
    }  
  ]  
},  
"operationParam": {  
  "maxEirp": 25,  
  "operationFrequencyRange": {  
    "highFrequency": 3570000000,  
    "lowFrequency": 3550000000  
  }  
}  
}  
]  
}  
]  
}  
2020-10-20T08:58:51.871Z - INFO - engine sent successfully, the response to CBRS : {  
  "grantResponse": [  
    {
```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司实验室

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



```
"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
"channelType": "GAA",
"grantExpireTime": "2020-10-27T08:58:51Z",
"grantId": "363345769",
"heartbeatInterval": 60,
"response": {
  "responseCode": 0
}
]
}
}
2020-10-20T08:59:09.282Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2020-10-20T08:59:09.306Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:02:29Z"
    }
  ]
}
}
2020-10-20T09:00:10.605Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
```



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

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

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

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

```

    ]
  }
2020-10-20T09:00:10.612Z - INFO - Time interval between two heartbeat request messages is: 61.314, limit
is: 65.0
2020-10-20T09:00:10.621Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:03:30Z"
    }
  ]
}
2020-10-20T09:01:12.513Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T09:01:12.513Z - INFO - Time interval between two heartbeat request messages is: 61.908, limit
is: 65.0
2020-10-20T09:01:12.529Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:04:32Z"
    }
  ]
}
2020-10-20T09:02:13.842Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



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

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

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

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

```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "363345769",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T09:02:13.849Z - INFO - Time interval between two heartbeat request messages is: 61.329, limit is: 65.0

2020-10-20T09:02:13.858Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "363345769",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-10-20T09:05:33Z"
  }
]
```

2020-10-20T09:03:15.122Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "363345769",
    "grantRenew": false,
    "operationState": "AUTHORIZED"
  }
]
```

2020-10-20T09:03:15.131Z - INFO - Time interval between two heartbeat request messages is: 61.281, limit is: 65.0

2020-10-20T09:03:15.138Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "363345769",
    "response": {
      "responseCode": 0
    },
  },
]
```



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

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

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

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



```
"transmitExpireTime": "2020-10-20T09:06:35Z"
}
]
}
2020-10-20T09:04:16.384Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T09:04:16.384Z - INFO - Time interval between two heartbeat request messages is: 61.261, limit is: 65.0
2020-10-20T09:04:16.400Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:07:36Z"
    }
  ]
}
2020-10-20T09:05:17.700Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769"
    }
  ]
}
2020-10-20T09:05:17.716Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "363345769",
      "response": {
```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"responseCode": 0  
}  
}  
]
```

2020-10-20T09:05:19.119Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T09:05:19.119Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :
2020-10-20T09:05:36.571Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y
2020-10-20T09:05:37.069Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed and :the additional comments for the current test are : n



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, General Service & Laboratory

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

8.20 WINNF.FT.C.DRG.1

2020-10-20T09:23:01.164Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-20T09:23:01.164Z - INFO - the selected test from the user : WINNF.FT.C.DRG.1 is starting now

2020-10-20T09:23:23.970Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E_UTRA"

},

"callSign": "baicells",

"cbssCategory": "B",

"cbssSerialNumber": "1203000116209CQ0070",

"cpiSignatureData": {

"digitalSignature":

"E2z4PMAcgs8_MHhvUB4S1MrllUQwR8WtYDYPLXis2trblcUJx3H258FFIXvGQ2en-oomhbySd9rAC3-

KS2ejBgc8x58ARpml4sJFKuhoU7vT1iN7avwbd1PQokF6tF_VX7OV-

LFEXMB81Z1e0ZEhnaQERJEHKOCAYOZHnWiSeSZK8IE8FS0UFvmSm0p_OFDiNyKPPstxXOPbukRvM_s

qGUzkDWi4x2lp2NPP0lt2BKl0eX8dgNGS3CN4oVtqMUx5hNX1ERo440Jx7akvFRPqlaHAKJOF4cL2Nf5kBQ

g9vqUL3zAQRZV0QwNDCSJzjYzbclylJmS_FUTFx7lQU3gRg",

"encodedCpiSignedData":

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTIwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMzJFRzgwMTV

HTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUJF6aW11dGgiOjAsImFudGVubmFCZWFD2lk

dGgiOjkwLjJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My

wiaW5kb29yRGVwbG95bWVudCjE6ZmFsc2UsImxhdGloZWljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj

UzOTcyLjJ2ZXJ0aWNhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh

0ZXJuYWwLjJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTClslmhvcml6b250YWxBY2N1cmFjeSI6My



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

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

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

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

```

}
2020-10-20T09:23:24.009Z - INFO - Registration message contains cpiSignatureData
2020-10-20T09:23:24.009Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-10-20T09:23:24.009Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Integral",
    "longitude": -158.53972,
    "height": 4.0,
    "indoorDeployment": false,
    "latitude": 68.53534,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 90,
    "antennaGain": 18,
    "verticalAccuracy": 3
  },
  "fccId": "2AG32EG8015GM11",
  "professionalInstallerData": {
    "cpiName": "CPI_User_123",
    "installCertificationTime": "2020-10-19T11:52:24Z",
    "cpild": "cpi123"
  },
  "cbsdSerialNumber": "1203000116209CQ0070"
}
2020-10-20T09:23:24.523Z - INFO - verified signature on cpiSignatureData
2020-10-20T09:23:24.523Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-10-20T09:23:24.532Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-20T09:23:37.964Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": {

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

"cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",

"inquiredSpectrum": [

{

"highFrequency": 3570000000,

"lowFrequency": 3550000000

}

],

"measReport": {

"rcvdPowerMeasReports": [

{

"measBandwidth": 10000000,

"measFrequency": 3550000000,

"measRcvdPower": -90

},

{

"measBandwidth": 10000000,

"measFrequency": 3560000000,

"measRcvdPower": -89

},

{

"measBandwidth": 10000000,

"measFrequency": 3570000000,

"measRcvdPower": -88

},

{

"measBandwidth": 10000000,

"measFrequency": 3580000000,

"measRcvdPower": -87

},

{

"measBandwidth": 10000000,

"measFrequency": 3590000000,

"measRcvdPower": -86

},

{

"measBandwidth": 10000000,

"measFrequency": 3600000000,

"measRcvdPower": -85

},

{

"measBandwidth": 10000000,



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,
"measFrequency": 3690000000,

```



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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
"measRcvdPower": -76
    }
  ]
}
}
}
]
}
}
2020-10-20T09:23:37.987Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```
2020-10-20T09:23:47.381Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```



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

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

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

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

```

"measRcvdPower": -89
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -88
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81

```



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

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

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

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


```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -80
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -79
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -78
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -77
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -76
    }
  ]
},
"operationParam": {
  "maxEirp": 25,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
}
2020-10-20T09:23:47.398Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {

```



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

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

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch / 深圳分公司 / 实验室

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

```

    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-27T09:23:47Z",
    "grantId": "953802761",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
2020-10-20T09:24:02.913Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "953802761",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2020-10-20T09:24:02.927Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "953802761",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:27:22Z"
    }
  ]
}
2020-10-20T09:25:04.680Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "953802761",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
Shenzhen Branch: 科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

    ]
  }
2020-10-20T09:25:04.680Z - INFO - Time interval between two heartbeat request messages is: 61.767, limit
is: 65.0
2020-10-20T09:25:04.696Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "953802761",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:28:24Z"
    }
  ]
}
2020-10-20T09:26:07.094Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "953802761",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-10-20T09:26:07.094Z - INFO - Time interval between two heartbeat request messages is: 62.414, limit
is: 65.0
2020-10-20T09:26:07.109Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "953802761",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-20T09:29:27Z"
    }
  ]
}
2020-10-20T09:27:08.943Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```



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

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

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

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

```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "953802761",
  "grantRenew": false,
  "operationState": "AUTHORIZED"
}
]
```

2020-10-20T09:27:08.943Z - INFO - Time interval between two heartbeat request messages is: 61.849, limit is: 65.0

2020-10-20T09:27:08.959Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "953802761",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-10-20T09:30:28Z"
  }
]
```

2020-10-20T09:28:30.414Z - INFO - relinquishment request from CBRS : {

```
"relinquishmentRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "953802761"
  }
]
```

2020-10-20T09:28:30.423Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "953802761",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-10-20T09:28:31.677Z - INFO - deregistration request from CBRS : {



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com


```
"deregistrationRequest": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070"
  }
]
}
2020-10-20T09:28:31.686Z - INFO - engine sent successfully, the response to CBRS : {
  "deregistrationResponse": [
    {
      "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

2020-10-20T09:28:33.040Z - INFO - arrived to nstep starting question answer session with the technician
2020-10-20T09:28:33.040Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the answers :

2020-10-20T09:28:47.322Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y

2020-10-20T09:28:50.269Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed and :the additional comments for the current test are : n



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

or email: CN.Doccheck@sgs.com

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

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

8.21 WINNF.PT.C.HBT

Granted PSD=32dBm/MHz

2020-10-23T03:02:12.145Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-23T03:02:12.147Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3570000000L}

2020-10-23T03:02:12.147Z - INFO - Granted Spectrum Max Eirp = 32dBm/MHz

2020-10-23T03:02:12.148Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-10-23T03:05:12.509Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

{

```
"airInterface": {
```

```
"radioTechnology": "E-UTRA"
```

 $\}$

```
"callSign": "baicells",
```

"cbsdCategory": "B".

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"OCfSHnvtpXFqGsEDRIAfXSQahJsNRRux01vgyQxjHY70s6YRw4WWaqnLpVLm1SeHXlqZ2VvQzsleZT5T6KSuivFHHMk8D5Pi-

JWHUjQxouVzD4PjCYA0ILHC4S_BBUIjXSrqQ6oderle5A3VhptEKFX1ltTH1aw54i94WLI1HyMJIPpNfBaZut
sWSIDApWHvJAIZ51aDcFcWR0v5WPxHSC7ezS3OfhF6Zk17xxxkfZqQow3uzc0jzhGwGxINKrWEyNbvNT11
6nnYoZTYnl3Q6bpdaxJilivXBBuU62ttC9lnM2PT7Qvj4iddl2itpW ICW7aJdwgDy3auVhpbzd0SpQ".

```
"encodedCpiSignedData":
```

"eyJjYnNkU2VyaWFsTnVtYmVyljoiMTlwMzAwMDExNjIwOUNRMDA3MCIsImZjY0IkljoiMkFHMcZJFRzgwMTVHTTExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLClJhbnRlbn5hRG93bnRpbHQiOjAsImFudGVubmFHYWluljoxOCwiYW50ZW5uYU1vZGVsIjoiRXh0ZXJuYWwiLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTCIsImhvcml6b250YWxkY2N1cmFjeSI6MywiaW5kb29yRGVwbG95bWVudCl6ZmFsc2UsImxhdGl0dWRlljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4LjUzOTcyLCJ2ZXJ0aWNhbEFjY3VyYWN5IjozfSwicHJvZmVzc2lbnmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlZCl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUeIvXNlcl8xMjMiLCJpbmN0YWxsQ2VydGlmaWNhdGlvbiRpbWUiOiIyMDIwLTcwLTExVDEwOjA2OjI3WiJ9fQ",

```
"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
```

}

"fccId": "2AG32EG8015GM11".

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"



Unless otherwise agreed or required in writing, this document is issued by the Company subject to its general Conditions of Service, printed elsewhere, available on request, or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced or further disseminated without the written consent of the Company. Any use of this document in violation 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) 6307 1443.

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

```

    ],
    "userId": "Baicells_01"
  }
]
}
2020-10-23T03:05:12.575Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-10-23T03:05:26.095Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -89
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -88
          }
        ]
      }
    }
  ]
}

```



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

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

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

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

```

},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -87
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -86
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -80
},

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com


```
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -79
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -78
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -77
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3690000000,
  "measRcvdPower": -76
}
}
}
}
}
```

2020-10-23T03:05:26.124Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2020-10-23T03:05:26.124Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        },
        "maxEirp": 32,
        "ruleApplied": "FCC_PART_96"
      }
    ]
  },
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
```



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

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

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

```

    "response": {
      "responseCode": 0
    }
  }
}
]
}
2020-10-23T03:05:43.752Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -89
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -88
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -87
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -86
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -85
          }
        ]
      }
    }
  ]
}

```



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

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

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

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

```

},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -84
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -83
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -82
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -81
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -80
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -79
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -78
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -77
},
},

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```
{
  "measBandwidth": 10000000,
  "measFrequency": 3690000000,
  "measRcvdPower": -76
}
],
"operationParam": {
  "maxEirp": 32,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
]
}
```

2020-10-23T03:05:43.775Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "channelType": "GAA",
    "grantExpireTime": "2020-10-30T03:05:43Z",
    "grantId": "260282510",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}
```

2020-10-23T03:05:51.339Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "260282510",
    "grantRenew": false,
    "operationState": "GRANTED"
  }
]
}
```



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

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

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



2020-10-23T03:05:51.359Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "260282510",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-10-23T03:09:11Z"
  }
]
```

2020-10-23T03:06:52.920Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "260282510",
    "grantRenew": false,
    "operationState": "AUTHORIZED"
  }
]
```

2020-10-23T03:06:52.931Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "260282510",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-10-23T03:10:12Z"
  }
]
```

2020-10-23T03:07:54.509Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbstdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
    "grantId": "260282510",
    "grantRenew": false,
    "operationState": "AUTHORIZED"
  }
]
```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
}
]
}
2020-10-23T03:07:54.522Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "260282510",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-23T03:11:14Z"
    }
  ]
}
```



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

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

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

Granted PSD=23dBm/MHz

2020-10-23T03:10:56.309Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-10-23T03:10:56.311Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3570000000L}

2020-10-23T03:10:56.311Z - INFO - Granted Spectrum Max Eirp = 23dBm/MHz

2020-10-23T03:10:56.312Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-10-23T03:11:06.690Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
```

 $\{$

```
"airInterface": {
```

```
"radioTechnology": "E-UTRA"
```

}

```
"callSign": "baicells".
```

"cbsdCategory": "B",

"cbsdSerialNumber": "1203000116209CQ0070".

```
"cpiSignatureData": {
```

"digitalSignature":

"OCfSHnvtpXFqGsEDRIAfXSQahJsNRRux01vgYQxjHY70s6YRw4WWaqnLpVLm1SeHXlqZ2VvQzsleZT5T6KSuivFHHMk8D5Pj-

JWHUjQxouVzD4PjCYA0ILHC4S_BBUIjXSrqQ6oderle5A3VhptEKFX1ltTH1aw54i94WLI1HyMJIPpNfBaZut
sWSIDApWHvJAIZ51aDcFcWR0v5WPxHSC7ezS3OfhF6Zk17xxxkfZqQow3uzc0jzhGwGxINKrWEyNbvNT11
6nnYoZTYnl3Q6bpdaXjIivXBBuU62ttC9InM2PT7Qy4jddI2itpW ICW7aJdwgDy3auVhpbzd0SpQ".

"encodedCpiSignedData":

"eyJJYnNkU2VyaWFfTnVtYmVyljoiMTlwMzAwMDExNjlwOUNRMDA3MCIsImZjY0IkljoiMkFHMzMJRzgwMTVHTTElExliwiaW5zdGFsbGF0aW9uUGFyYW0iOnsiYW50ZW5uYUF6aW11dGgiOjAsImFudGVubmFCZWFTd2lk dGgiOjkwLClJhb nRlbm5hRG93bnRpbHQiOjAsImFudGVubmFH YWUluljoxOCwiYW50ZW5uYU1vZGVsljoiRXh0ZXJuYWIwLCJoZWlnaHQiOjQuMCwiaGVpZ2h0VHlwZSI6IkFHTCIsImhvcmI6b250YWx BY2N1cmFjeSI6My wiaW5kb29yRGVwbG95bWVudCI6ZmFsc2UsImxhdGI0dWRlljo2OC41MzUzNCwibG9uZ2I0dWRlljotMTU4Lj UzOTcyLClJ2ZXJ0aWNhbEFfY3VyYWN5IjozfSwicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6eyJjcGlJZ Cl6ImNwaTEyMyIsImNwaU5hbWUiOiJDUeIFXNlcl8xMjMiLCJpbnN0YWxsQ2VydGlmaWNhdGlvbiRpbWUi OiilyMDIwLTewLTlxVDEwOjA2OjI3WiJ9fQ".

```
"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"
```

 $\}$

"fccId": "2AG32EG8015GM11",

```
"groupingParam": [
```

{

"groupid": "Baicells 01",

"groupType": "INTERFERENCE COORDINATION"

}

1.

```
"measCapability": [
```

"RECEIVED POWER WITHOUT GRANT"

1.

```
"userId": "Baicells 01"
```



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is deemed to have read, understood and accepted the Terms and Conditions of the Company and the 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 strictly prohibited and may result in severe civil or criminal penalties. The Company 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
or email: CN.Doccheck@sps.com

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

```

    }
  ]
}
2020-10-23T03:11:06.746Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-10-23T03:11:16.089Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -89
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -88
          }
        ]
      }
    }
  ]
}

```



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

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

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

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


```

"measBandwidth": 10000000,
"measFrequency": 3580000000,
"measRcvdPower": -87
},
{
"measBandwidth": 10000000,
"measFrequency": 3590000000,
"measRcvdPower": -86
},
{
"measBandwidth": 10000000,
"measFrequency": 3600000000,
"measRcvdPower": -85
},
{
"measBandwidth": 10000000,
"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```
"measFrequency": 3660000000,  
    "measRcvdPower": -79  
  },  
  {  
    "measBandwidth": 10000000,  
    "measFrequency": 3670000000,  
    "measRcvdPower": -78  
  },  
  {  
    "measBandwidth": 10000000,  
    "measFrequency": 3680000000,  
    "measRcvdPower": -77  
  },  
  {  
    "measBandwidth": 10000000,  
    "measFrequency": 3690000000,  
    "measRcvdPower": -76  
  }  
]  
}  
]  
}
```

2020-10-23T03:11:16.112Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2020-10-23T03:11:16.114Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [  
  {  
    "availableChannel": [  
      {  
        "channelType": "GAA",  
        "frequencyRange": {  
          "highFrequency": 3570000000,  
          "lowFrequency": 3550000000  
        },  
        "maxEirp": 23,  
        "ruleApplied": "FCC_PART_96"  
      }  
    ],  
    "cbsId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",  
    "response": {  
      "responseCode": 0
```



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a dispute. The Company's findings are based on the information provided to it and it is not responsible for a report that is not complete or 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 1448.

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

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



```
}
}
]
}
2020-10-23T03:11:27.513Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -90
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -89
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -88
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -87
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -86
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -85
          }
        ]
      }
    }
  ]
}
```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

```

"measBandwidth": 10000000,
"measFrequency": 3610000000,
"measRcvdPower": -84
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -83
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -82
},
{
"measBandwidth": 10000000,
"measFrequency": 3640000000,
"measRcvdPower": -81
},
{
"measBandwidth": 10000000,
"measFrequency": 3650000000,
"measRcvdPower": -80
},
{
"measBandwidth": 10000000,
"measFrequency": 3660000000,
"measRcvdPower": -79
},
{
"measBandwidth": 10000000,
"measFrequency": 3670000000,
"measRcvdPower": -78
},
{
"measBandwidth": 10000000,
"measFrequency": 3680000000,
"measRcvdPower": -77
},
{
"measBandwidth": 10000000,

```



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


```

    "measFrequency": 3690000000,
    "measRcvdPower": -76
  }
]
},
"operationParam": {
  "maxEirp": 23,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
}
]
}
}
2020-10-23T03:11:27.526Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "channelType": "GAA",
      "grantExpireTime": "2020-10-30T03:11:27Z",
      "grantId": "413886039",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-10-23T03:11:36.877Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "413886039",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2020-10-23T03:11:36.890Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```



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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



```
{
  "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
  "grantId": "413886039",
  "response": {
    "responseCode": 0
  },
  "transmitExpireTime": "2020-10-23T03:14:56Z"
}
]
}
2020-10-23T03:12:38.612Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "413886039",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-10-23T03:12:38.625Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "413886039",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-10-23T03:15:58Z"
    }
  ]
}
}
2020-10-23T03:13:40.572Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",
      "grantId": "413886039",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
}
```



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

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

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

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



```
}  
2020-10-23T03:13:40.585Z - INFO - engine sent successfully, the response to CBRS : {  
  "heartbeatResponse": [  
    {  
      "cbsdId": "2AG32EG8015GM11Mock-SAS1203000116209CQ0070",  
      "grantId": "413886039",  
      "response": {  
        "responseCode": 0  
      },  
      "transmitExpireTime": "2020-10-23T03:17:00Z"  
    }  
  ]  
}
```



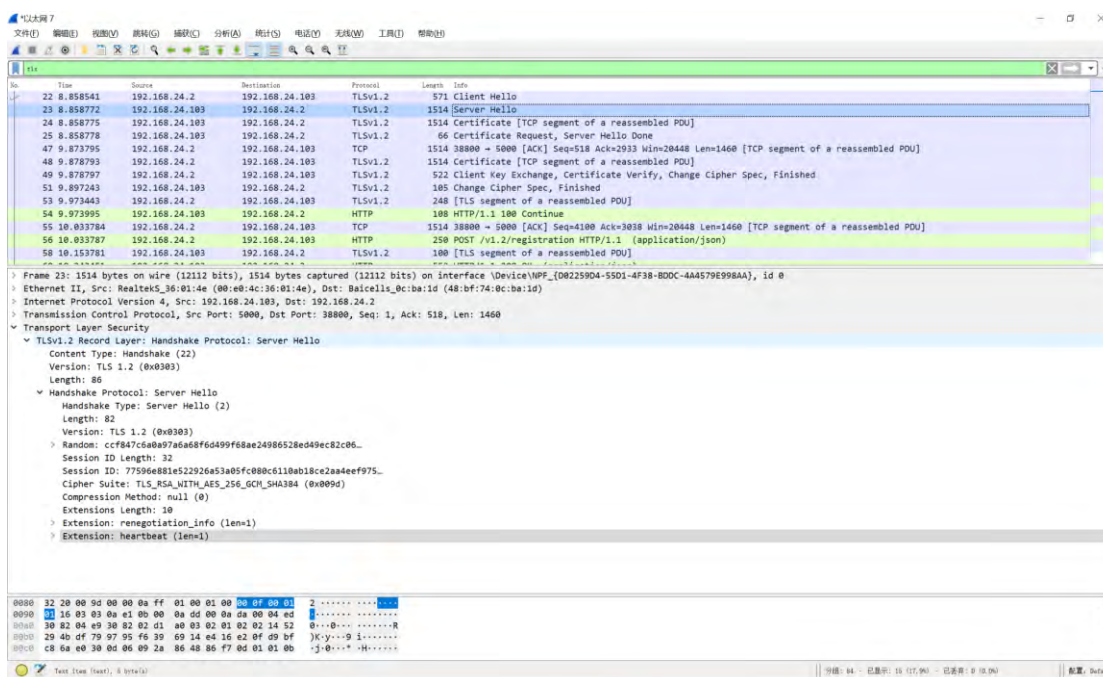
SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch, General Service Laboratory

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

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



8.22 WINNF.FT.C.SCS.1



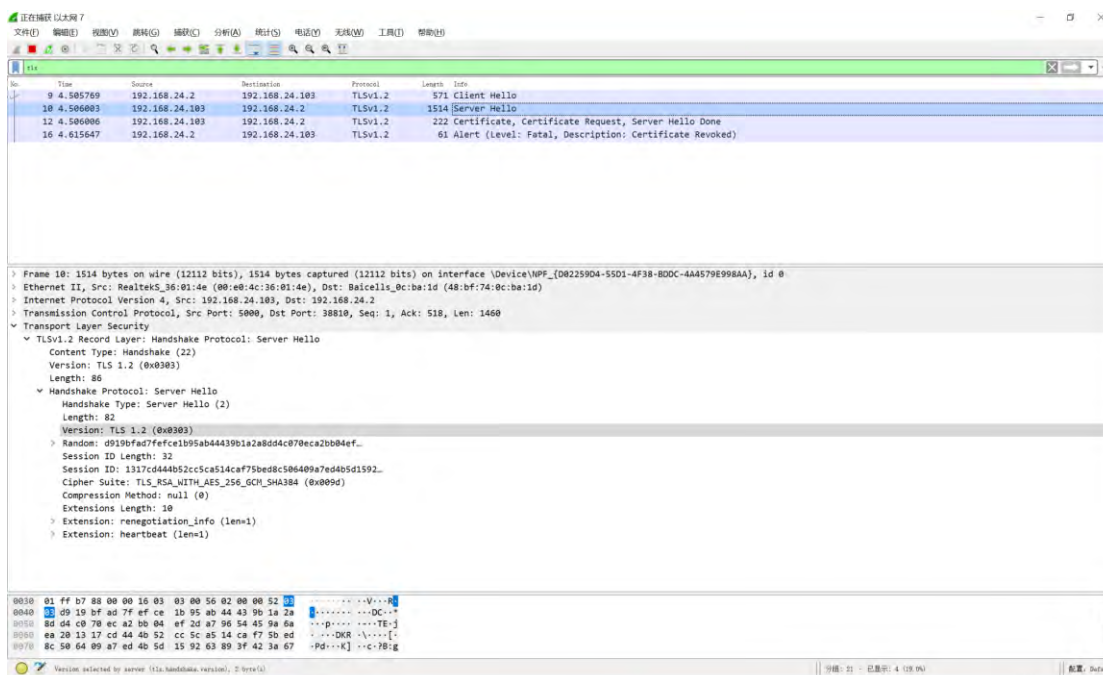
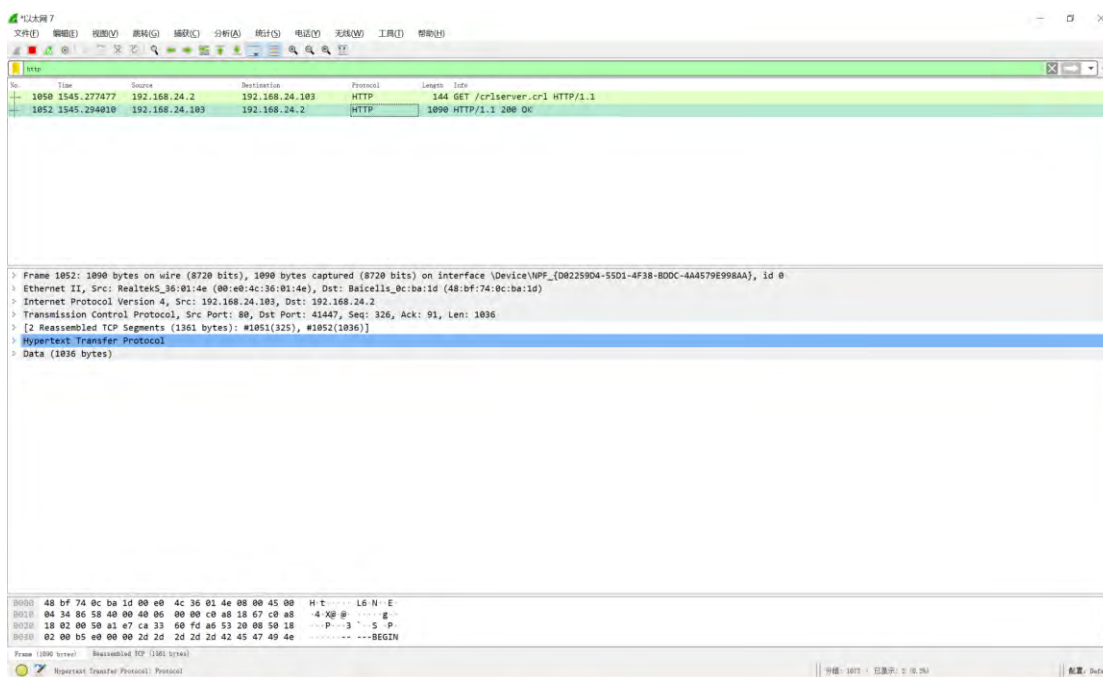
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

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

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



8.23 WINNF.FT.C.SCS.2



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

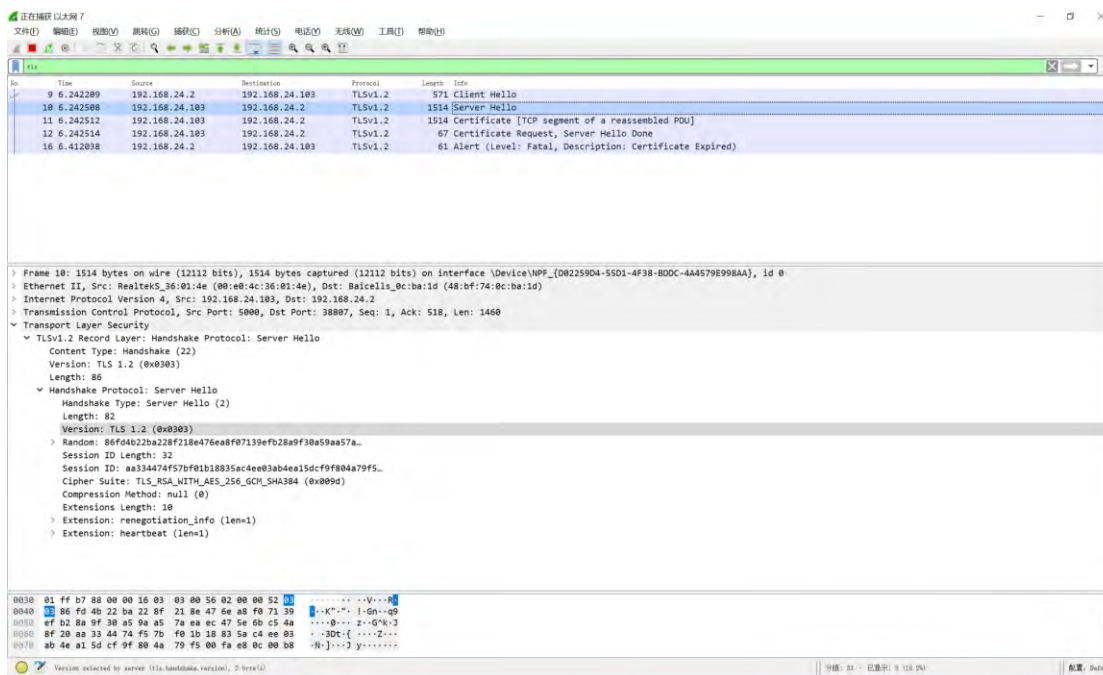
Attention: To check the authenticity of testing/inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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

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



8.24 WINNF.FT.C.SCS.3

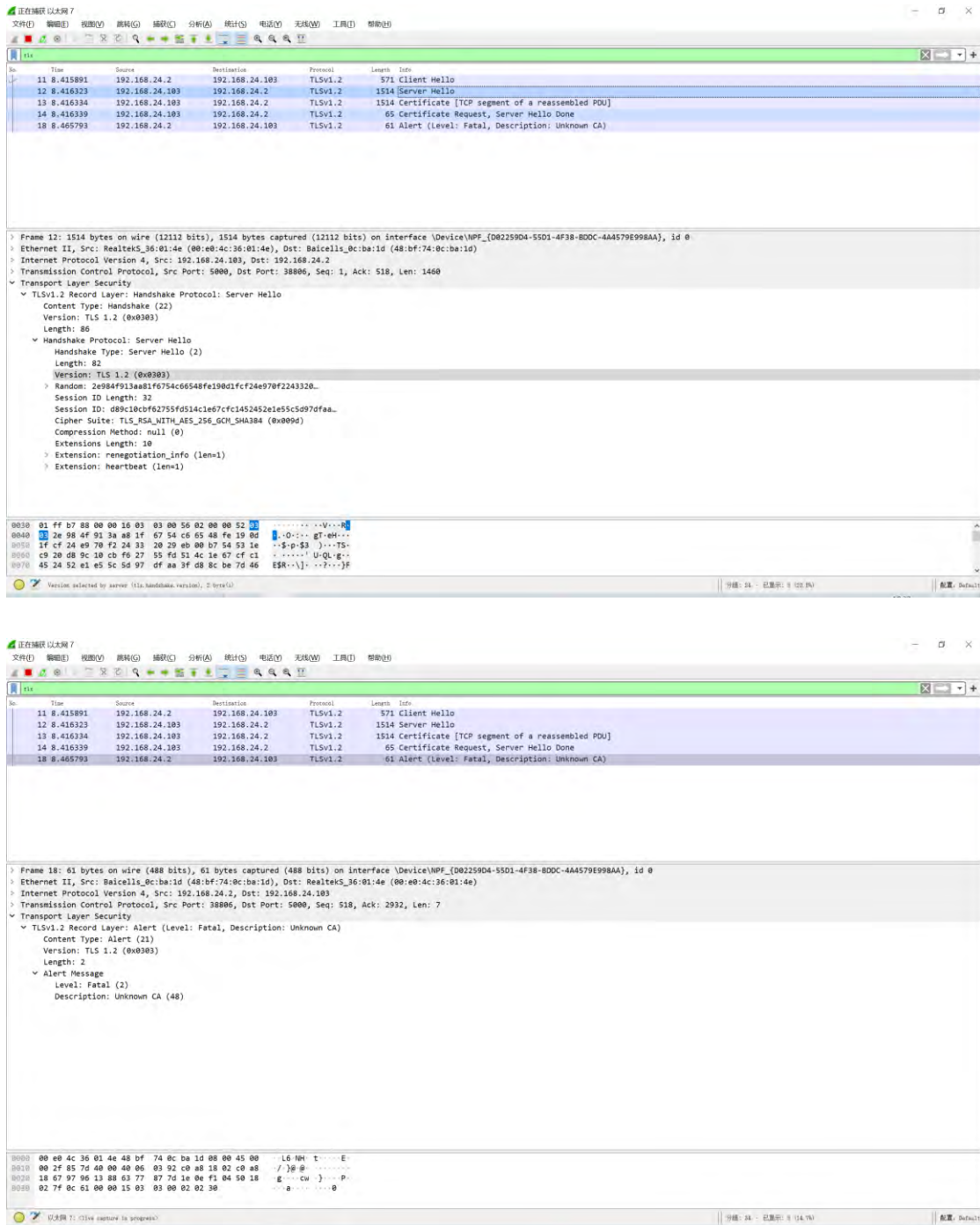


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



8.25 WINNF.FT.C.SCS.4

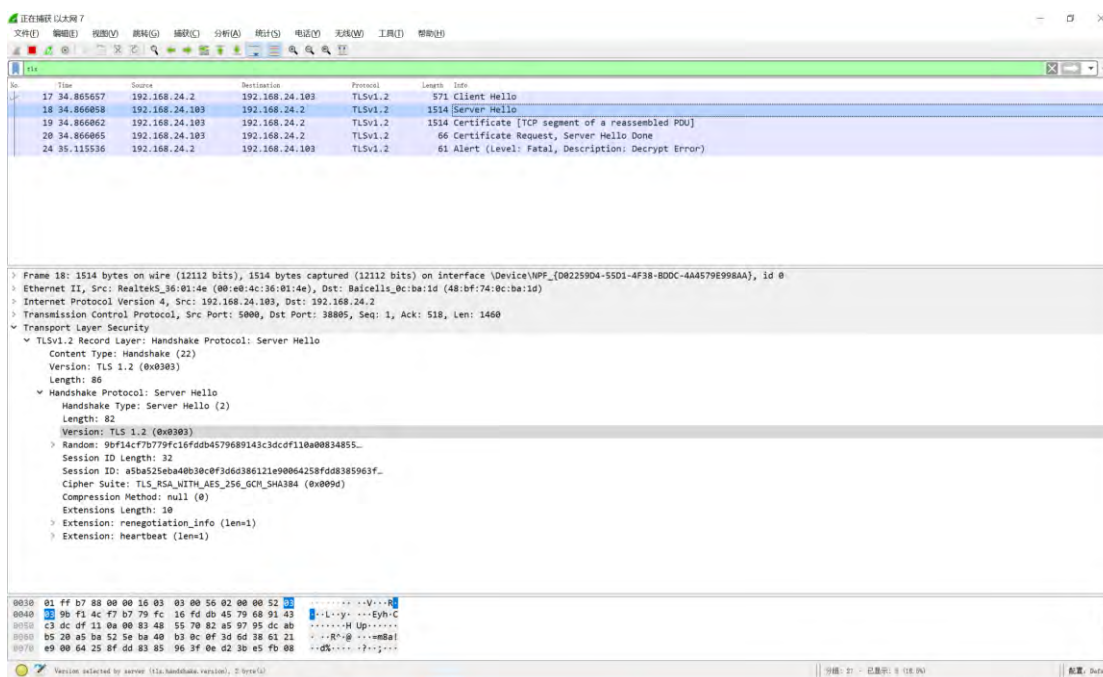


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic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

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



8.26 WINNF.FT.C.SCS.5



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

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

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

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



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

or email: CN.Doccheck@sgs.com

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

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