



# TEST REPORT

**Application No.:** SZEM2009009876CR  
**Applicant:** Airspan Networks Inc  
**Address of Applicant:** 777 Yamato Rd Suite 310, Boca Raton, Florida 33431, United States  
**Manufacturer:** Airspan Networks Inc  
**Address of Manufacturer:** 777 Yamato Rd Suite 310, Boca Raton, Florida 33431, United States  
**Equipment Under Test (EUT):**  
**EUT Name:** B42H/B43L/B48  
**Model No.:** My-Pro-FC-B42H-43L-48-C12-CB  
**Trade Mark:** Airspan  
**FCC ID:** PIDASPOT5410  
**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:** 2020-07-30  
**Date of Test:** 2020-07-31 to 2020-09-08  
**Date of Issue:** 2020-09-08

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

*Keny Xu*

Keny Xu  
 EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-09-08		Original

<b>Authorized for issue by:</b>			
			
		<hr/> <b>Calvin Weng /Project Engineer</b>	
			
		<hr/> <b>Eric Fu /Reviewer</b>	



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## 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
Registration due to change of an installation parameter	WINNF-TS-0122-V1.0.0	WINNF.FT.C.REG.7	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



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Item	Standard	Test Case ID	Result
Successful Grant Renewal in Heartbeat Test Case	WINNF-TS-0122-V1.0.0	WINNF.FT.C.HBT.11	Pass
Grant Response contains measReportConfig	WINNF-TS-0122-V1.0.0	WINNF.FT.C.MES.3	Pass
Heartbeat Response contains measReportConfig	WINNF-TS-0122-V1.0.0	WINNF.FT.C.MES.4	Pass
Successful Relinquishment	WINNF-TS-0122-V1.0.0	WINNF.FT.C.RLQ.1	Pass
Unsuccessful Relinquishment, responseCode=102	WINNF-TS-0122-V1.0.0	WINNF.FT.C.RLQ.3	Pass
Unsuccessful Relinquishment, responseCode=103	WINNF-TS-0122-V1.0.0	WINNF.FT.C.RLQ.5	Pass
Successful Deregistration	WINNF-TS-0122-V1.0.0	WINNF.FT.C.DRG.1	Pass
Deregistration responseCode=102	WINNF-TS-0122-V1.0.0	WINNF.FT.C.DRG.3	Pass
Deregistration responseCode=103	WINNF-TS-0122-V1.0.0	WINNF.FT.C.DRG.5	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**



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## 4 General Information

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

Power supply:	Adapter Model NO.: G0720-480-050 Input: 100-240V~50/60Hz, 0.75A Output: 48.0V, 0.5A
Cable:	AC cable: 0.6m unshielded
Sample Type:	Mobile device
CBSD Class:	B (Outdoor CPE)
Transmitter Frequency Band:	LTE Band 48
Transmitter Frequency Range:	3550~3700MHz
Hardware Version:	HW2.0
Software Version:	R1.0.14-2-20.09.03
Test sample:	T99B12300
Antenna Gain:	18 dBi

### 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.	Y
C6	Mandatory for UUT which supports parameter change being made at the UUT and prior to sending a deregistration.	Y

Y: Supported

N: Not supported



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### 4.3 Summary of Test Results

WINNF-TS-0122			
Classes	Test Case Items	Pass Items	Pass Rate (%)
FT (CBSD, DP/CBSD)	33	33	100
PT (CBSD, DP/CBSD)	1	1	100
Total	34	34	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”



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#### 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.



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## 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	R&S	FSP	SEM004-06	2019-09-24	2020-09-23
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	2019-09-27	2020-09-26



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## 6 Test Method and Environment

### 6.1 CBSD/DP Conformance and Performance

Test Requirement: CBRS CBSB Test Specification WINNF-TS-0122-V1.0.0  
Test Method: CBRS CBSB 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 CBSB Test Procedure

- Connect the UUT to SAS Test Harness system and RF Test instruments via the CBSB 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 TestHarness.
- 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.



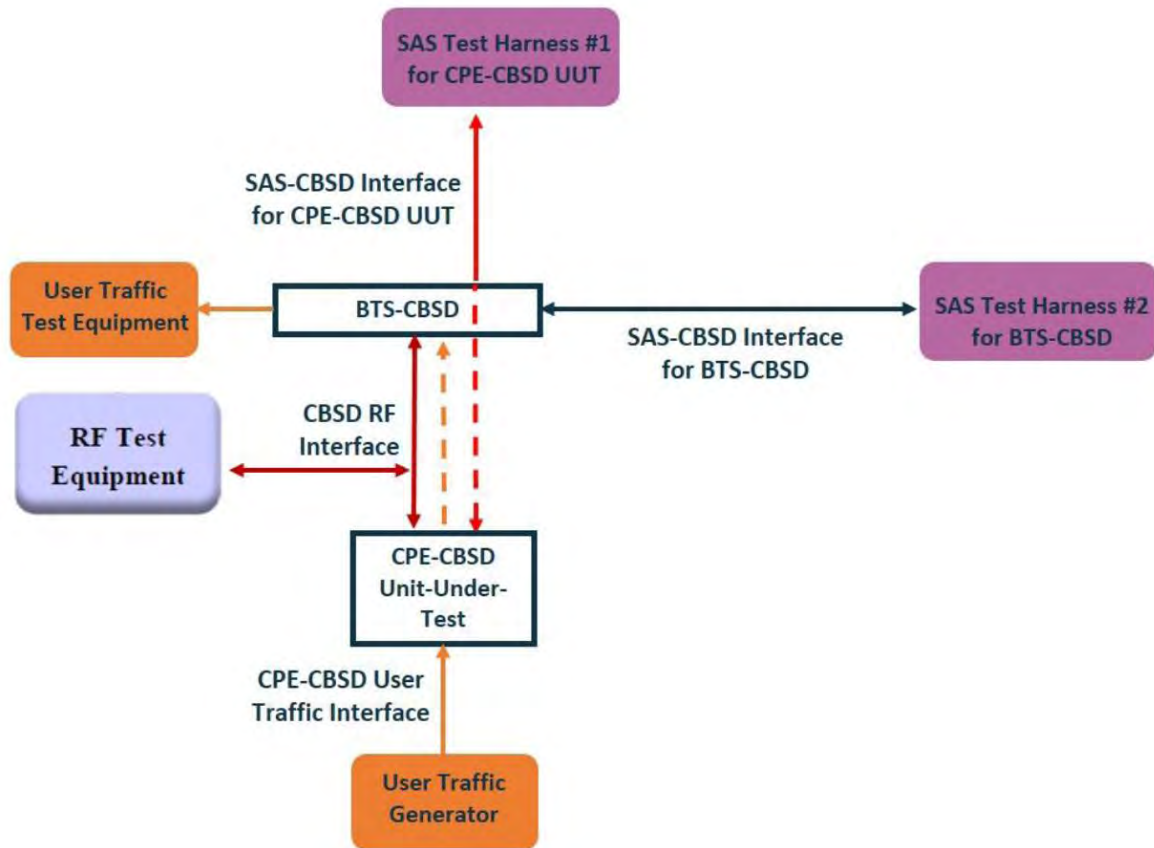
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### 6.6 Test Environment

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



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## 7 Test Data

### 7.1 CBSD Registration Process

#### 7.1.1 WINNF.FT.C.REG.1

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



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**7.1.2 WINNF.FT.C.REG.5**

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>UUT is in the Unregistered state</li> <li>All of the required and REG-Conditional parameters shall be configured and CPI signature provided</li> </ul>	--	--
2	<p>CBSD sends Registration request to the SAS Test Harness:</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
3	<p>SAS Test Harness sends a CBSD Registration Response as follows:</p> <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>measReportConfig shall not be included.</li> <li>responseCode = 0</li> </ul>	--	--
4	<p>After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.</p>	--	--
5	<p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> <li>UUT shall not transmit RF</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.1.3 WINNF.FT.C.REG.7**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> </ul>	--	--
2	UUT has successfully registered with SAS Test Harness	--	--
3	Change an installation parameters at the UUT (time T) <ul style="list-style-type: none"> <li>Tester needs to record the current time at which the parameter change is executed.</li> </ul>	--	--
4	Monitor the SAS-CBSD interface. <ul style="list-style-type: none"> <li>UUT sends a deregistrationRequest to the SAS Test Harness The deregistration request shall be sent within (T + 60 seconds) from step 3.</li> </ul>	■ Pass	□ Fail



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**7.1.4 WINNF.FT.C.REG.8**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT is in the Unregistered state</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>- SAS response does not include cbsdId</li> <li>- responseCode = R</li> </ul>	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> <li>● UUT shall not transmit RF</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.1.5 WINNF.FT.C.REG.10**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT is in the Unregistered state</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>- SAS response does not include cbsdId</li> <li>- responseCode = R</li> </ul>	--	--
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	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.1.6 WINNF.FT.C.REG.12**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT is in the Unregistered state</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>- SAS response does not include cbsdId</li> <li>- responseCode = R</li> </ul>	--	--
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	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.1.7 WINNF.FT.C.REG.14**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT is in the Unregistered state</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>- SAS response does not include cbsdId</li> <li>- responseCode = R</li> </ul>	--	--
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	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.1.8 WINNF.FT.C.REG.16**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT is in the Unregistered state</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>- SAS response does not include cbsdId</li> <li>- responseCode = R</li> </ul>	--	--
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	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.1.9 WINNF.FT.C.REG.18**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT is in the Unregistered state</li> </ul>	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSID Registration Response as follows: <ul style="list-style-type: none"> <li>- SAS response does not include cbsId</li> <li>- responseCode = R</li> </ul>	--	--
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	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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## 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: <ul style="list-style-type: none"> <li>UUT has registered successfully with SAS Test Harness, with cbsdId = C</li> </ul>	--	--
2	UUT sends valid Grant Request.	■ Pass	□ Fail
3	SAS Test Harness sends a Grant Response message, including <ul style="list-style-type: none"> <li>cbsdId=C</li> <li>responseCode = R</li> </ul>	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: <ul style="list-style-type: none"> <li>UUT shall not transmit RF</li> </ul>	■ Pass	□ Fail

### 7.2.2 WINNF.FT.C.GRA.2

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>UUT has registered successfully with SAS Test Harness, with cbsdId = C</li> </ul>	--	--
2	UUT sends valid Grant Request.	■ Pass	□ Fail
3	SAS Test Harness sends a Grant Response message, including <ul style="list-style-type: none"> <li>cbsdId=C</li> <li>responseCode = R</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>UUT shall not transmit RF</li> </ul>	■ Pass	□ Fail



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### 7.3 CBSD HeartBeat Process

#### 7.3.1 WINNF.FT.C.HBT.1

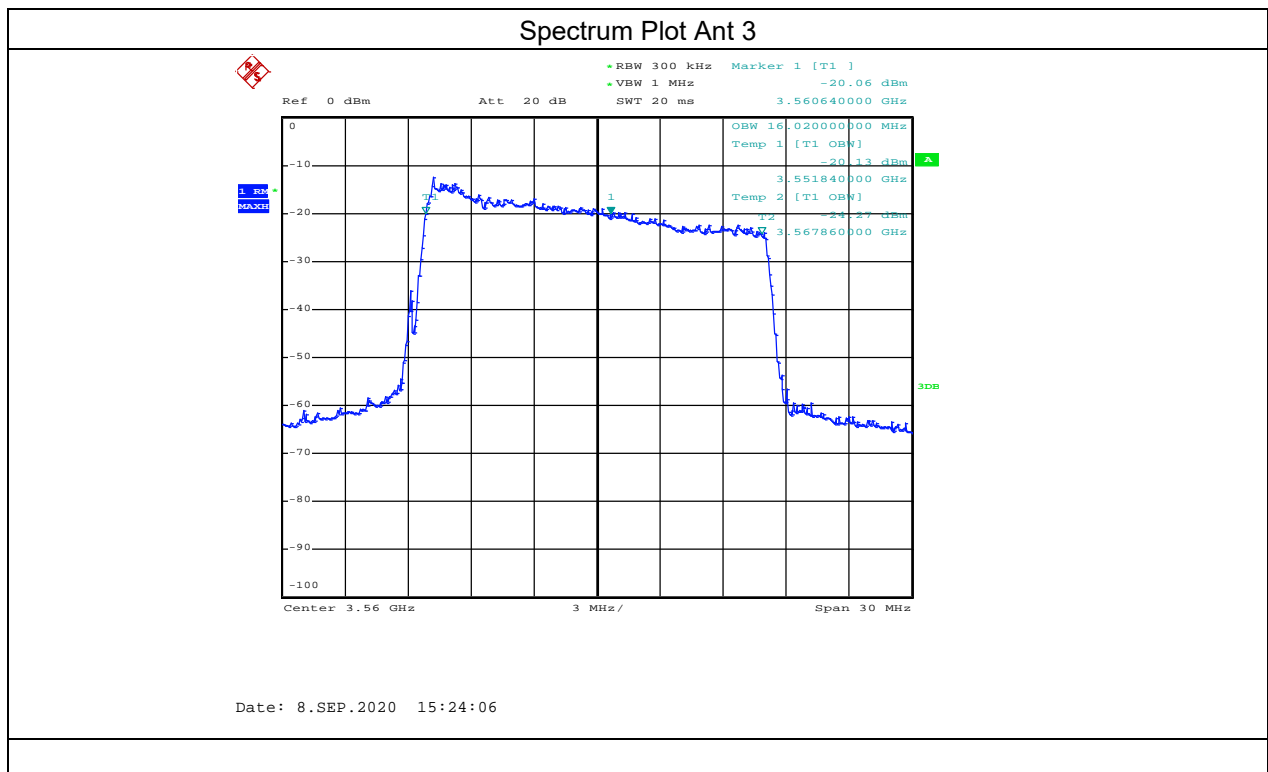
#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>UUT has registered successfully with SAS Test Harness, with cbsdId = C</li> </ul>	--	--
2	UUT sends a message: <ul style="list-style-type: none"> <li>If message is type Spectrum Inquiry Request, go to step 3, or</li> <li>If message is type Grant Request, go to step 5</li> </ul>	--	--
3	UUT sends Spectrum Inquiry Request. Validate: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>List of frequencyRange objects sent by UUT are within the CBRS frequency range</li> </ul>	■ Pass	□ Fail
4	SAS Test Harness sends a Spectrum Inquiry Response message, including the following parameters: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>availableChannel is an array of availableChannel objects</li> <li>responseCode = 0</li> </ul>	--	--
5	UUT sends Grant Request message. Validate: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>maxEIRP is at or below the limit appropriate for CBSD category as defined by Part 96</li> <li>operationFrequencyRange, F, sent by UUT is a valid range within the CBRS band</li> </ul>	■ Pass	□ Fail
6	SAS Test Harness sends a Grant Response message, including the parameters: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>grantId = G = a valid grant ID</li> <li>grantExpireTime = UTC time greater than duration of the test</li> <li>responseCode = 0</li> </ul>	--	--
7	UUT sends a first Heartbeat Request message. Verify Heartbeat Request message is formatted correctly, including: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>grantId = G</li> <li>operationState = "GRANTED"</li> </ul>	■ Pass	□ Fail
8	SAS Test Harness sends a Heartbeat Response message, with the following parameters: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>grantId = G</li> <li>transmitExpireTime = current UTC time + 200 seconds</li> <li>responseCode = 0</li> </ul>	--	--



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9	For further Heartbeat Request messages sent from UUT after completion of step 8, validate message is sent within latest specified heartbeatInterval, and: <ul style="list-style-type: none"> <li>● cbsdd = C</li> <li>● grantId = G</li> <li>● operationState = "AUTHORIZED"</li> </ul> and SAS Test Harness responds with a Heartbeat Response message including the following parameters: <ul style="list-style-type: none"> <li>● cbsdd = C</li> <li>● grantId = G</li> <li>● transmitExpireTime = current UTC time + 200 seconds</li> <li>● responseCode = 0</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
10	Monitor the RF output of the UUT from start of test until UUT transmission commences. Verify: <ul style="list-style-type: none"> <li>● UUT does not transmit at any time prior to completion of the first heartbeat response</li> <li>● UUT transmits after step 8 is complete, and its transmission is limited to within the bandwidth range F.</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.3.2 WINNF.FT.C.HBT.3**

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



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**7.3.3 WINNF.FT.C.HBT.4**

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>● UUT has registered successfully with SAS Test Harness</li> <li>● UUT has a valid single grant as follows: <ul style="list-style-type: none"> <li>○ valid cbsdId = C</li> <li>○ valid grantId = G</li> <li>○ grant is for frequency range F, power P</li> <li>○ grantExpireTime = UTC time greater than duration of the test</li> </ul> </li> <li>● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface</li> </ul>	--	--
2	<p>UUT sends a Heartbeat Request message.  Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● operationState = "AUTHORIZED"</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
3	<p>SAS Test Harness sends a Heartbeat Response message, including the following parameters:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● transmitExpireTime = T = current UTC time</li> <li>● responseCode = 500 (TERMINATED GRANT)</li> </ul>	--	--
4	<p>After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.</p>	--	--
5	<p>Monitor the RF output of the UUT. Verify:</p> <ul style="list-style-type: none"> <li>● UUT shall stop transmission within (T + 60 seconds) of completion of step 3</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.3.4 WINNF.FT.C.HBT.5**

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



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**7.3.5 WINNF.FT.C.HBT.6**

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



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**7.3.6 WINNF.FT.C.HBT.7**

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



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**7.3.7 WINNF.FT.C.HBT.9**

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



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**7.3.8 WINNF.FT.C.HBT.10**

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



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**7.3.9 WINNF.FT.C.HBT.11**

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



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



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## 7.4 CBSD Measurement Report

### 7.4.1 WINNF.FT.C.MES.3

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



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**7.4.2 WINNF.FT.C.MES.4**

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C and measCapability = "RECEIVED_POWER_WITH_GRANT"</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> <li>● Grant has heartbeatInterval = 60 seconds</li> </ul>	--	--
2	<p>UUT sends a Grant Request message.  Verify Grant Request message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● operationState = "AUTHORIZED"</li> </ul>	■ Pass	□ Fail
3	<p>SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● measReportConfig= "RECEIVED_POWER_WITH_GRANT"</li> <li>● responseCode = 0</li> </ul>	--	--
4	<p>UUT sends a Heartbeat Request message. Verify message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● operationState = "AUTHORIZED"</li> </ul>	■ Pass	□ Fail
5	<p>If Heartbeat Request message (step 4) contains measReport object, then:</p> <ul style="list-style-type: none"> <li>● verify measReport is properly formatted as object rcvdPowerMeasReport</li> <li>● end test, with PASS result</li> </ul> <p>else, if Heartbeat Request message (step 4) does not contain measReport object, then:</p> <ul style="list-style-type: none"> <li>● If number of Heartbeat Requests sent by UUT after Step 3 is = 5, then stop test with result of FAIL</li> </ul>	■ Pass	□ Fail
6	<p>SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● responseCode = 0</li> </ul> <p>Go to Step 4, above</p>	--	--



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## 7.5 CBSD Relinquishment Process

### 7.5.1 WINNF.FT.C.RLQ.1

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> </ul> <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p>	--	--
2	<p>UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
3	<p>SAS Test Harness shall approve the request with a Relinquishment Response message with parameters:</p> <ul style="list-style-type: none"> <li>- cbsdId = C</li> <li>- grantId = G</li> <li>● responseCode = 0</li> </ul>	--	--
4	<p>After completion of step 3, SAS Test Harness will not provide any additional positive</p> <ul style="list-style-type: none"> <li>● response (responseCode=0) to further request messages from the UUT</li> </ul>	--	--
5	<p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> <li>● UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.5.2 WINNF.FT.C.RLQ.3**

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> </ul> <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p>	--	--
2	<p>UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> </ul>	--	--
3	<p>SAS Test Harness shall approve the request with a Relinquishment Response message with parameters:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● No grantId</li> <li>● responseCode = 102</li> </ul>	--	--
4	<p>After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.</p>	--	--
5	<p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> <li>● UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.5.3 WINNF.FT.C.RLQ.5**

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> </ul> <p>Invoke trigger to relinquish UUT Grant from the SAS Test Harness</p>	--	--
2	<p>UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> </ul>	--	--
3	<p>SAS Test Harness shall approve the request with a Relinquishment Response message with parameters:</p> <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● grantId = G</li> <li>● responseCode = 103</li> </ul>	--	--
4	<p>After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.</p>	--	--
5	<p>Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify:</p> <ul style="list-style-type: none"> <li>● UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request</li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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## 7.6 CBSD Deregistration Process

### 7.6.1 WINNF.FT.C.DRG.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> </ul> Invoke trigger to deregister UUT from the SAS Test Harness	--	--
2	UUT sends a Relinquishment request and receives Relinquishment response with <ul style="list-style-type: none"> <li>● responseCode=0</li> </ul>	--	--
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C.	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
4	SAS Test Harness shall approve the request with a Deregistration Response message with parameters: <ul style="list-style-type: none"> <li>● cbsdId = C</li> <li>● responseCode = 0</li> </ul>	--	--
5	After completion of step 3, SAS Test Harness will not provide any additional positive <ul style="list-style-type: none"> <li>● response (responseCode=0) to further request messages from the UUT.</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs:               <ol style="list-style-type: none"> <li>A. UUT sending a Registration Request message, as this is not mandatory</li> <li>B. UUT sending a Deregistration Request message</li> </ol> </li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.6.2 WINNF.FT.C.DRG.3**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> </ul> Invoke trigger to deregister UUT from the SAS Test Harness	--	--
2	UUT sends a Relinquishment request and receives Relinquishment response with <ul style="list-style-type: none"> <li>● responseCode=0</li> </ul>	--	--
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C.	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
4	SAS Test Harness shall approve the request with a Deregistration Response message with parameters: <ul style="list-style-type: none"> <li>● no cbsdId</li> <li>● responseCode = 102</li> </ul>	--	--
5	After completion of step 3, SAS Test Harness will not provide any additional positive <ul style="list-style-type: none"> <li>● response (responseCode=0) to further request messages from the UUT.</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs:               <ul style="list-style-type: none"> <li>A. UUT sending a Registration Request message, as this is not mandatory</li> <li>B. UUT sending a Deregistration Request message</li> </ul> </li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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**7.6.3 WINNF.FT.C.DRG.5**

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: <ul style="list-style-type: none"> <li>● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness</li> <li>● UUT has successfully registered with SAS Test Harness, with cbsdId=C</li> <li>● UUT has received a valid grant with grantId = G</li> <li>● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant.</li> </ul> Invoke trigger to deregister UUT from the SAS Test Harness	--	--
2	UUT sends a Relinquishment request and receives Relinquishment response with <ul style="list-style-type: none"> <li>● responseCode=0</li> </ul>	--	--
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C.	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail
4	SAS Test Harness shall approve the request with a Deregistration Response message with parameters: <ul style="list-style-type: none"> <li>● cbsdId=C</li> <li>● responseCode = 103</li> </ul>	--	--
5	After completion of step 3, SAS Test Harness will not provide any additional positive <ul style="list-style-type: none"> <li>● response (responseCode=0) to further request messages from the UUT.</li> </ul>	--	--
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: <ul style="list-style-type: none"> <li>● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs:               <ul style="list-style-type: none"> <li>A. UUT sending a Registration Request message, as this is not mandatory</li> <li>B. UUT sending a Deregistration Request message</li> </ul> </li> </ul>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



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## 7.7 CBSD Security Validation

### 7.7.1 WINNF.FT.C.SCS.1

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

### 7.7.2 WINNF.FT.C.SCS.2

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



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**7.7.3 WINNF.FT.C.SCS.3**

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

**7.7.4 WINNF.FT.C.SCS.4**

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



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**7.7.5 WINNF.FT.C.SCS.5**

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



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## 7.8 CBSD RF Power Measurement

### 7.8.1 WINNF.PT.C.HBT

#	Test Execution Steps	Results	
1	<p>Ensure the following conditions are met for test entry:</p> <ul style="list-style-type: none"> <li>UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness</li> <li>UUT has registered with the SAS, with CBSD ID = C</li> <li>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</li> </ul> <p>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</p>	--	--
2	<p>UUT and SAS Test Harness perform a series of Heartbeat Request/Response cycles, which continues until the other test steps are complete. Messaging for each cycle is as follows:</p> <ul style="list-style-type: none"> <li>UUT sends Heartbeat Request, including: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>grantId = G</li> </ul> </li> <li>SAS Test Harness responds with Heartbeat Response, including: <ul style="list-style-type: none"> <li>cbsdId = C</li> <li>grantId = G</li> <li>transmitExpireTime = current UTC time + 200 seconds</li> <li>responseCode = 0</li> </ul> </li> </ul>	--	--
3	<p>Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method.</p> <p>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.</p>	<input checked="" type="checkbox"/> Pass	<input type="checkbox"/> Fail



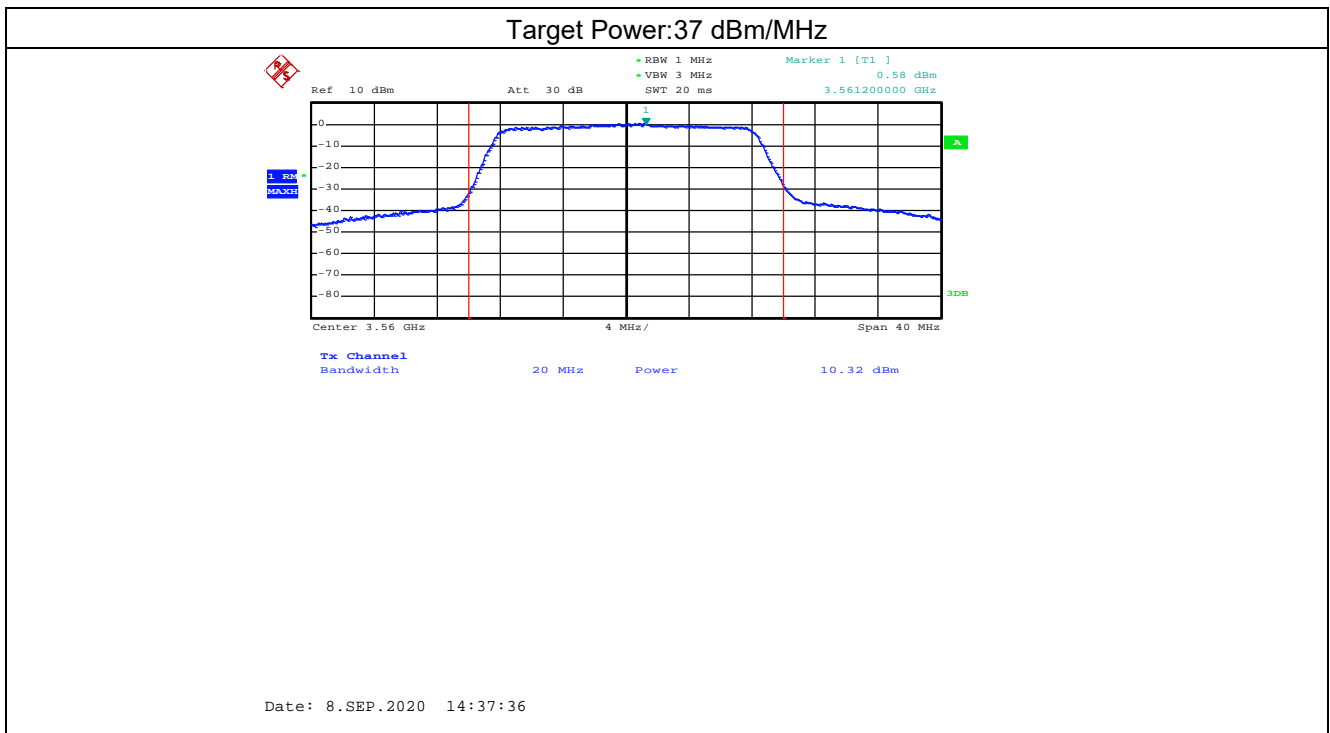
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RF measurement plot for Test Case :

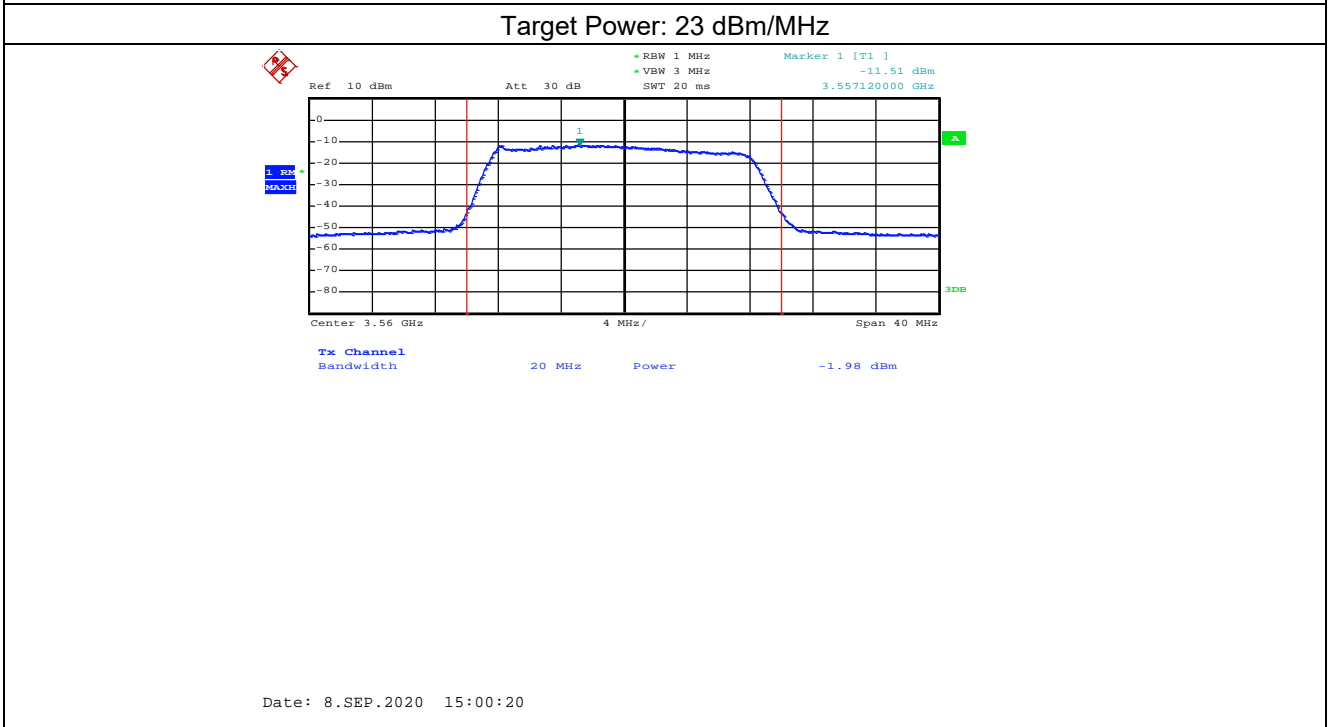
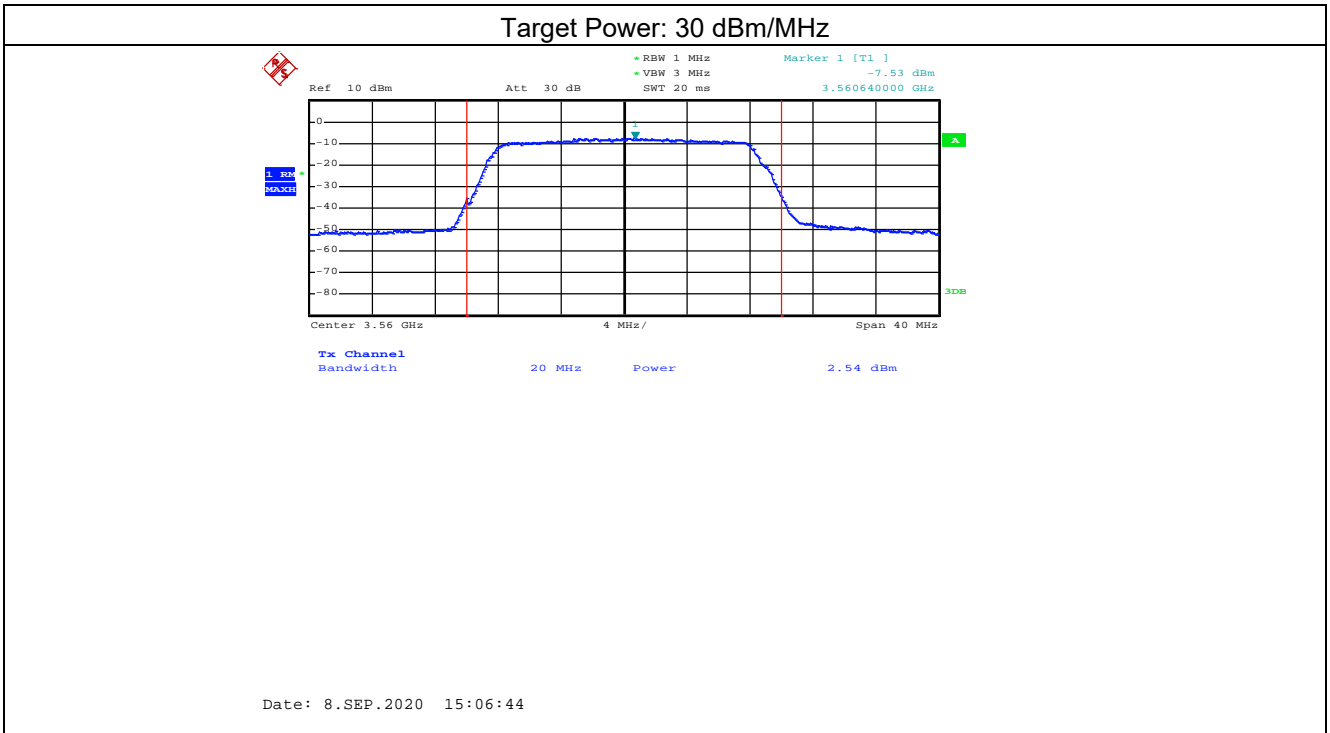
- Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method.

Frequency (MHz)	Channel Bandwidth (MHz)	Granted maxEIRP (dBm/MHz)	Conducted PSD (dBm/MHz)		Antenna Gain (dBi)	Cable loss (dB)	maxEIRP (dBm/MHz)
			Ant 3	Ant 2			
3560	20	37	0.58	/	21.01	5	29.60
3560	20	30	-7.53	/	21.01	5	21.49
3560	20	23	-11.51	/	21.01	5	17.51

Note: maxEIRP= Conducted PSD+ Direction Gain + Cable loss+10log(n);  
 Antenna gain=18 dBi;  
 Direction Gain= Antenna gain + Array Gain= 18+10log(2)=21.01dB;  
 10log(n)=3.01, n= Antenna number;  
 Cable loss=5dB



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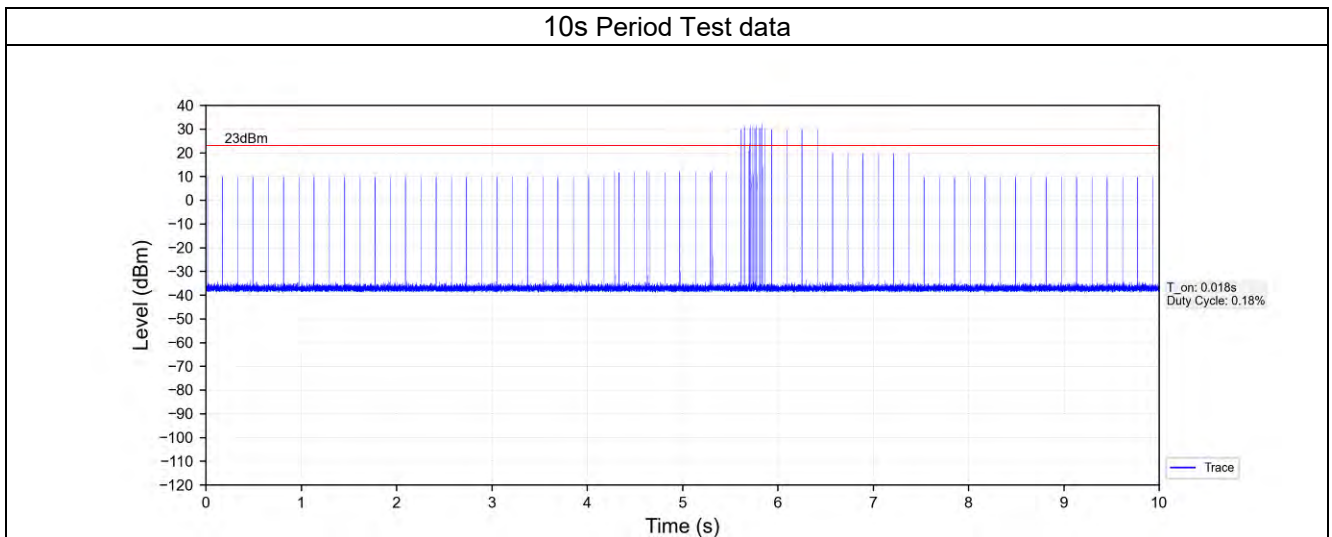


### 7.9 Duration and Duty Cycle

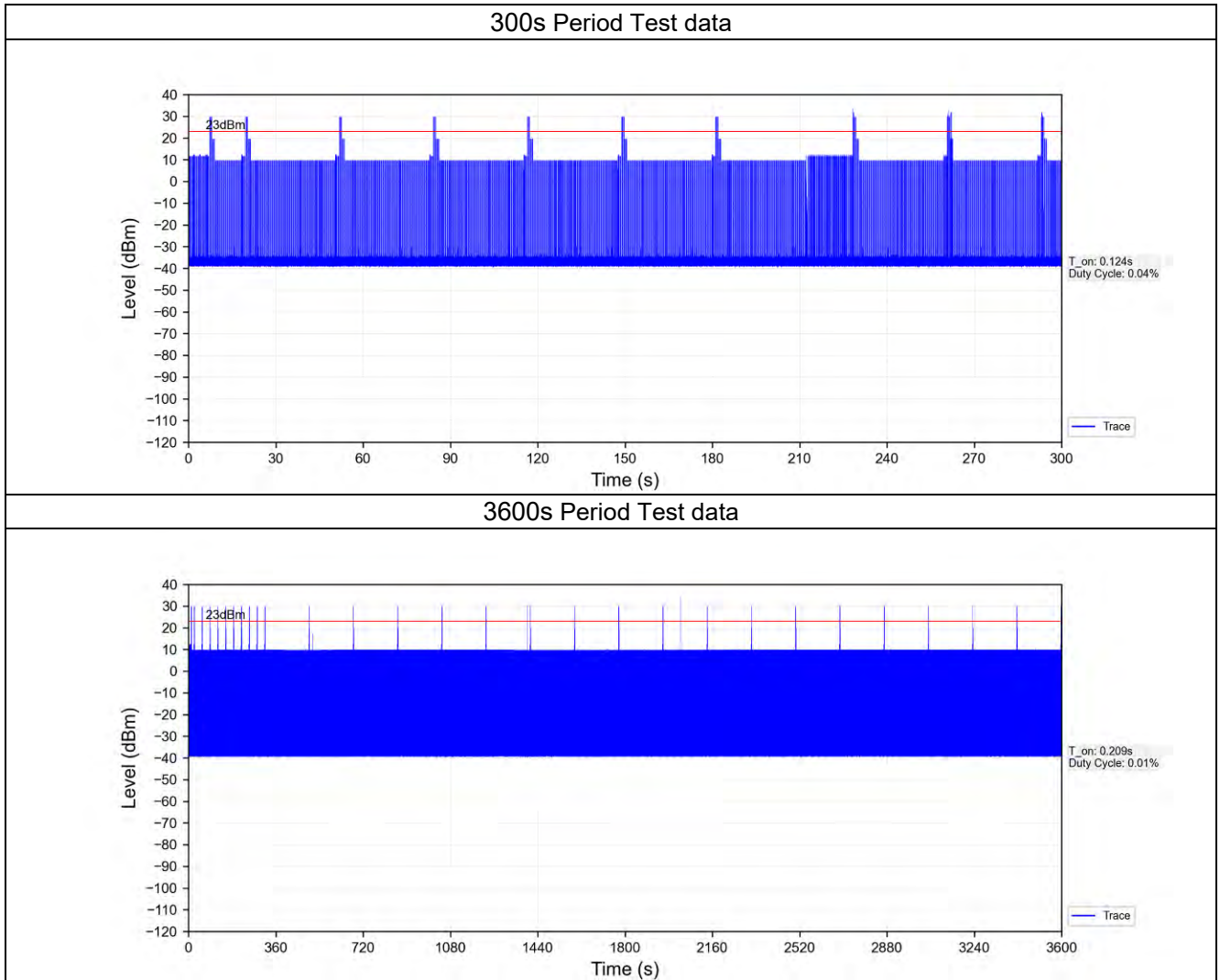
Duration and Duty Cycle			
Period	Minimum Time (s)	Limit (s)	Pass / Fail
10-second	0.018	1-second	Pass
300-second	0.124	10-second	Pass
3600-second	0.209	20-second	Pass

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.
- Pass = Minimum Time < Limit



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**Note:**

1. Red color line in above plot represents the 23 dBm.



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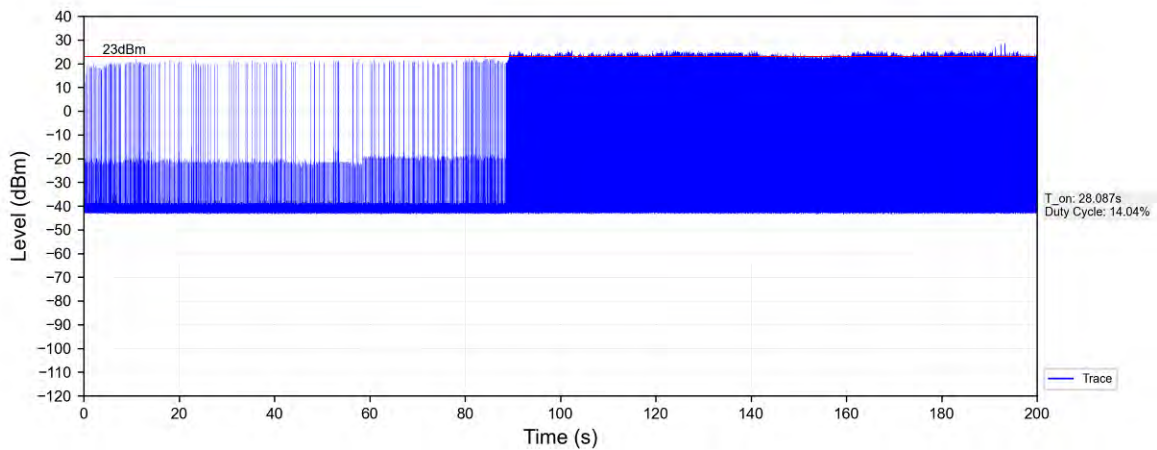
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### 7.10 Verify that the device will register with a SAS when operating below 23 dBm

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:

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



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Shenzhen Branch

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## 8 Test Data Log

### 8.1 WINNF.FT.C.REG.1

2020-07-31T02:07:41.486Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T02:07:41.486Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

2020-07-31T03:26:59.905Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature":
"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlflL8AjauvcmGll5wfr2Ydh6ByeilwySe
Mg6pZhYJk6WlxSCDeJIOZ1c9LiGoiLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
VEtswanaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhky_S
xxRaopbMzP0lI0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
wuPzj85Gg6uw",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlIjo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJlYXxY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYjY1aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMD
mV4dGVybmlFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSi6ewoiY3BpS
WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",

```



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```

    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}

```

2020-07-31T03:26:59.930Z - INFO - Registration message contains cpiSignatureData  
 2020-07-31T03:26:59.930Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}  
 2020-07-31T03:26:59.930Z - INFO - encodedCpiSignedData contents = {

```

"installationParam": {
  "eirpCapability": 41,
  "antennaAzimuth": 60,
  "heightType": "AGL",
  "antennaModel": "external antenna on",
  "longitude": 100.0,
  "height": 848.5,
  "indoorDeployment": false,
  "antennaBeamwidth": 6,
  "horizontalAccuracy": 33.0,
  "antennaDowntilt": 1,
  "latitude": 88.0,

```



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```

"antennaGain": 5,
"verticalAccuracy": 2.0
},
"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T03:27:00.292Z - INFO - verified signature on cpiSignatureData
2020-07-31T03:27:00.293Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T03:27:00.296Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T03:27:00.298Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-07-31T03:27:01.476Z - INFO - arrived to nstep starting question answer session with the technician
2020-07-31T03:27:01.476Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2020-07-31T03:28:10.134Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2020-07-31T03:28:11.966Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is - passed and :the additional comments for the current test are : n
  
```



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**8.2 WINNF.FT.C.REG.5**

2020-07-31T03:29:36.658Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T03:29:36.658Z - INFO - the selected test from the user : WINNF.FT.C.REG.5 is starting now

2020-07-31T03:29:55.572Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E\_UTRA"

},

"cbssCategory": "B",

"cbssInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbss",

"vendor": "vendor-FII"

},

"cbssSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v\_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmGll5wfr2Ydh6ByeilwySeMg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1\_c7HdThAVetsulaNQDu0KRJy\_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY\_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo\_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6M4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpMZWxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWluljo1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6MmV4dGVybmFslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpSbWQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGllmaWNhdGlvbIRpbWUiOiIiCn0KfQ==",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclid": "PIDASPOT5410",

"groupingParam": [

{

"groupid": "FOXCONN",

"groupType": "INTERFERENCE\_COORDINATION"

},

{



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:29:55.585Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:29:55.585Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:29:55.585Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 88.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
  
```

2020-07-31T03:29:55.619Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:29:55.621Z - INFO - cbstdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:29:55.625Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:29:55.628Z - INFO - engine sent successfully, the response to CBRS : {

```

"registrationResponse": [
  {
    "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
    "response": {
      "responseCode": 0
    }
  }
]
}
  
```

2020-07-31T03:29:56.674Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:29:56.674Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:30:09.763Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:30:11.354Z - INFO - The final result of the test : WINNF.FT.C.REG.5 is - passed and :the additional comments for the current test are : n



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### 8.3 WINNF.FT.C.REG.7

2020-07-31T03:31:53.651Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T03:31:53.651Z - INFO - the selected test from the user : WINNF.FT.C.REG.7 is starting now

2020-07-31T03:32:15.516Z - INFO - registration request from CBRS : {

"registrationRequest": {

{

"airInterface": {

"radioTechnology": "E\_UTRA"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v\_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmlGll5wfr2Ydh6ByeilwySeMg6pZhyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1\_c7HdThAVEtsulaNQDu0KRJy\_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY\_SxxRaopbMzP0lI0Qmz62iLRKqn2po2yo\_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RtZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpYVWxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWluljo1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6ImV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpSbWQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmawWNhdGlvbIRpbWUiOiIiCn0KfQ==",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclId": "PIDASPO75410",

"groupingParam": {

{

"groupId": "FOXCONN",

"groupType": "INTERFERENCE\_COORDINATION"

},

}



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:32:15.539Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:32:15.539Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:32:15.539Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 88.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T03:32:15.575Z - INFO - verified signature on cpiSignatureData
2020-07-31T03:32:15.576Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T03:32:15.579Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T03:32:15.581Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T03:32:17.427Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

    ]
  }
2020-07-31T03:32:17.446Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T03:32:19.447Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T03:32:19.466Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T03:32:19Z",
      "grantId": "707510233",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T03:32:21.467Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "707510233",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "GRANTED"
  ]
}

```

```

}
2020-07-31T03:32:21.486Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "707510233",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T03:35:41Z"
  }
]
}
}
2020-07-31T03:33:20.572Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "707510233",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T03:33:20.573Z - INFO - Time interval between two heartbeat request messages is: 59.104, limit is: 65.0
2020-07-31T03:33:20.581Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "707510233",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T03:36:40Z"
    }
  ]
}
}
}
2020-07-31T03:34:20.690Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "707510233",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T03:34:20.693Z - INFO - Time interval between two heartbeat request messages is: 60.119, limit is: 65.0

2020-07-31T03:34:20.700Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "707510233",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T03:37:40Z"
  }
]
```

2020-07-31T03:35:01.786Z - INFO - deregistration request from CBRS : {

```
"deregistrationRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300"
  }
]
```

2020-07-31T03:35:01.796Z - INFO - engine sent successfully, the response to CBRS : {

```
"deregistrationResponse": [
  {
```



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```
"cbsdId": "PIDASPOT5410Mock-SAST99B12300",  
"response": {  
  "responseCode": 0  
}  
}  
]  
}
```

2020-07-31T03:35:03.778Z - INFO - arrived to nstep starting question answer session with the technician  
2020-07-31T03:35:03.778Z - 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 :

2020-07-31T03:35:27.490Z - 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

2020-07-31T03:35:29.006Z - INFO - The final result of the test : WINNF.FT.C.REG.7 is - passed and :the additional comments for the current test are : n



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#### 8.4 WINNF.FT.C.REG.8

2020-07-31T03:47:22.279Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T03:47:22.279Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now

2020-07-31T03:47:45.928Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E\_UTRA"

},

"cbssCategory": "B",

"cbssInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbss",

"vendor": "vendor-FII"

},

"cbssSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v\_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmGll5wfr2Ydh6ByeilwySeMg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDwJ1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1\_c7HdThAVetsulaNQDu0KRJy\_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY\_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo\_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mj4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50lpmYWxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj01LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6ImV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiiliCn0KfQ=="

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclid": "PIDASPOT5410",

"groupingParam": [

{

"groupid": "FOXCONN",

"groupType": "INTERFERENCE\_COORDINATION"

},

{



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```

        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    }
],
"measCapability": [
    "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:47:45.950Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:47:45.950Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:47:45.950Z - INFO - encodedCpiSignedData contents = {
    "installationParam": {
        "eirpCapability": 41,
        "antennaAzimuth": 60,
        "heightType": "AGL",
        "antennaModel": "external antenna on",
        "longitude": 100.0,
        "height": 848.5,
        "indoorDeployment": false,
        "antennaBeamwidth": 6,
        "horizontalAccuracy": 33.0,
        "antennaDowntilt": 1,
        "latitude": 88.0,
        "antennaGain": 5,
        "verticalAccuracy": 2.0
    },
}
    
```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbbsdSerialNumber": "T99B12300"
}
  
```

2020-07-31T03:47:45.987Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:47:45.989Z - INFO - cbbsdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:47:45.992Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:47:45.993Z - INFO - engine sent successfully, the response to CBRS : {

```

"registrationResponse": [
  {
    "response": {
      "responseCode": 102
    }
  }
]
}
  
```

2020-07-31T03:47:47.296Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:47:47.296Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:48:00.658Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:48:08.864Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed and :the additional comments for the current test are : n



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**8.5 WINNF.FT.C.REG.10**

2020-07-31T03:48:41.322Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T03:48:41.323Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now  
 2020-07-31T03:48:58.217Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbbsdCategory": "B",
    "cbbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature":
      "ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmGll5wfr2Ydh6ByeilwySe
      Mg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
      VEtsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
      xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
      wuPzj85Gg6uw",
      "encodedCpiSignedData":
      "ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
      0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
      JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
      zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6M4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
      WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
      o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
      mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
      WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbI0RpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:48:58.244Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:48:58.244Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:48:58.244Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 88.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```
"fcclId": "PIDASPOT5410",  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "",  
  "cpild": ""  
},  
"cbsdSerialNumber": "T99B12300"  
}
```

2020-07-31T03:48:58.280Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:48:58.282Z - INFO - cbsdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:48:58.285Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:48:58.286Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [  
  {  
    "response": {  
      "responseCode": 200  
    }  
  }  
]
```

2020-07-31T03:48:59.342Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:48:59.342Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:49:11.388Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:49:21.630Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed and :the additional comments for the current test are : n



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**8.6 WINNF.FT.C.REG.12**

2020-07-31T03:50:14.430Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T03:50:14.430Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now  
 2020-07-31T03:50:36.773Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbbsdCategory": "B",
    "cbbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature":
      "ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmGll5wfr2Ydh6ByeilwySe
      Mg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDwj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
      VEtsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
      xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
      wuPzj85Gg6uw",
      "encodedCpiSignedData":
      "ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
      0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
      JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
      zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
      WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
      o1LAoiZWlycENhcGFiaWxpdkhkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnI6
      mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
      WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbnlRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:50:36.798Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:50:36.798Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:50:36.798Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 88.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbbsdSerialNumber": "T99B12300"
}
  
```

2020-07-31T03:50:36.835Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:50:36.835Z - INFO - cbbsdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:50:36.839Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:50:36.842Z - INFO - engine sent successfully, the response to CBRS : {

```

"registrationResponse": [
  {
    "response": {
      "responseCode": 103
    }
  }
]
}
  
```

2020-07-31T03:50:38.447Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:50:38.447Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:50:46.276Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:50:47.908Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed and :the additional comments for the current test are : n



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**8.7 WINNF.FT.C.REG.14**

2020-07-31T03:51:22.575Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T03:51:22.576Z - INFO - the selected test from the user : WINNF.FT.C.REG.14 is starting now  
 2020-07-31T03:51:47.255Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature":
      "ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmGll5wfr2Ydh6ByeilwySe
      Mg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
      VEtsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
      xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
      wuPzj85Gg6uw",
      "encodedCpiSignedData":
      "ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
      0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
      JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
      zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6M4wMDAwMDAsCiJpbmRvb3JJEZXBsb3ltZW50lpmY
      WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
      o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
      mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
      WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbnN0YWxsQ2VydGImaWNhdGlvbI6RpbWUiOiIiCn0KfQ=="
    },
    "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
  },
  {
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    }
],
"measCapability": [
    "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:51:47.276Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:51:47.276Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:51:47.276Z - INFO - encodedCpiSignedData contents = {
    "installationParam": {
        "eirpCapability": 41,
        "antennaAzimuth": 60,
        "heightType": "AGL",
        "antennaModel": "external antenna on",
        "longitude": 100.0,
        "height": 848.5,
        "indoorDeployment": false,
        "antennaBeamwidth": 6,
        "horizontalAccuracy": 33.0,
        "antennaDowntilt": 1,
        "latitude": 88.0,
        "antennaGain": 5,
        "verticalAccuracy": 2.0
    },

```



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```

"fcld": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
  
```

2020-07-31T03:51:47.312Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:51:47.312Z - INFO - cbstdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:51:47.315Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:51:47.316Z - INFO - engine sent successfully, the response to CBRS : {

```

"registrationResponse": [
  {
    "response": {
      "responseCode": 101
    }
  }
]
}
  
```

2020-07-31T03:51:48.595Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:51:48.595Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:51:59.677Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:52:00.553Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed and :the additional comments for the current test are : n



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**8.8 WINNF.FT.C.REG.16**

2020-07-31T03:52:14.157Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T03:52:14.157Z - INFO - the selected test from the user : WINNF.FT.C.REG.16 is starting now  
 2020-07-31T03:52:46.515Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature":
      "ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8Ajauvcml5wfr2Ydh6ByeilwySe
      Mg6pZhyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
      VEtsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
      xxRaopbMzP0lI0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
      wuPzj85Gg6uw",
      "encodedCpiSignedData":
      "ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RRTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
      0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
      JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxvY2N1cmFjeSI6M
      zMuMDAwMDAwLAoidmVydGJlYXVxY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpjY
      WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
      o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYjY1aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
      mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
      WQiOiiliLAoiY3BpTmFtZSI6liisCiJpbmN0YWxsQ2VydGlmawWnhdGlvbIRpbWUuOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:52:46.536Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:52:46.536Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:52:46.536Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 88.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
  
```

2020-07-31T03:52:46.572Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:52:46.572Z - INFO - cbstdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:52:46.575Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:52:46.576Z - INFO - engine sent successfully, the response to CBRS : {

```

"registrationResponse": [
  {
    "response": {
      "responseCode": 100
    }
  }
]
}
  
```

2020-07-31T03:52:48.184Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:52:48.184Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:53:15.595Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:53:17.308Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed and :the additional comments for the current test are : n



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**8.9 WINNF.FT.C.REG.18**

2020-07-31T03:54:44.171Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T03:54:44.171Z - INFO - the selected test from the user : WINNF.FT.C.REG.18 is starting now  
 2020-07-31T03:55:04.799Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbidCategory": "B",
    "cbidInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbid",
      "vendor": "vendor-FII"
    },
    "cbidSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature":
      "ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlL8AjauvcmGll5wfr2Ydh6ByeilwySe
      Mg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDwJ1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
      VEtsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
      xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
      wuPzj85Gg6uw",
      "encodedCpiSignedData":
      "ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
      0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
      JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
      zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6M4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpM
      WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
      o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnI6
      mV4dGVybmFslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
      WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbnI6RpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:55:04.821Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:55:04.822Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:55:04.822Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 88.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbbsdSerialNumber": "T99B12300"
}
  
```

2020-07-31T03:55:04.857Z - INFO - verified signature on cpiSignatureData

2020-07-31T03:55:04.858Z - INFO - cbbsdCategory= 'B', removing optional param from cpi\_schema

2020-07-31T03:55:04.859Z - INFO - cpiSignatureData data successfully validated against jsonschema

2020-07-31T03:55:04.861Z - INFO - engine sent successfully, the response to CBRS : {

```

"registrationResponse": [
  {
    "response": {
      "responseCode": 201
    }
  }
]
}
  
```

2020-07-31T03:55:06.187Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T03:55:06.187Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2020-07-31T03:55:21.318Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2020-07-31T03:55:23.007Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed and :the additional comments for the current test are : n



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**8.10 WINNF.FT.C.GRA.1**

2020-07-31T03:56:19.612Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T03:56:19.612Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now

2020-07-31T03:56:39.846Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "E\_UTRA"

},

"cbssCategory": "B",

"cbssInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbss",

"vendor": "vendor-FII"

},

"cbssSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v\_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlfl8AjauvcmGll5wfr2Ydh6ByeilwySeMg6pZHyJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1\_c7HdThAVetsulaNQDu0KRJy\_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY\_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo\_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6M4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50IjpmYWxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj01LAoiZWlycENhcGFiaWxpdkHiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnCI6ImV4dGVybmlGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpSbWQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbnI6RpbWUiOiIiCn0KfQ==",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclid": "PIDASPOT5410",

"groupingParam": [

{

"groupid": "FOXCONN",

"groupType": "INTERFERENCE\_COORDINATION"

},

{



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```
"groupId": "FOXCONN",
"groupType": "INTERFERENCE_COORDINATION"
},
{
"groupId": "FOXCONN",
"groupType": "INTERFERENCE_COORDINATION"
},
{
"groupId": "FOXCONN",
"groupType": "INTERFERENCE_COORDINATION"
},
{
"groupId": "FOXCONN",
"groupType": "INTERFERENCE_COORDINATION"
}
],
"measCapability": [
"RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T03:56:39.875Z - INFO - Registration message contains cpiSignatureData
2020-07-31T03:56:39.877Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T03:56:39.877Z - INFO - encodedCpiSignedData contents = {
"installationParam": {
"eirpCapability": 41,
"antennaAzimuth": 60,
"heightType": "AGL",
"antennaModel": "external antenna on",
"longitude": 100.0,
"height": 848.5,
"indoorDeployment": false,
"antennaBeamwidth": 6,
"horizontalAccuracy": 33.0,
"antennaDowntilt": 1,
"latitude": 88.0,
"antennaGain": 5,
"verticalAccuracy": 2.0
},
},
```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T03:56:39.911Z - INFO - verified signature on cpiSignatureData
2020-07-31T03:56:39.911Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T03:56:39.915Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T03:56:39.917Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T03:56:41.733Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T03:56:41.742Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T03:56:43.744Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```
}  
}  
]  
}  
2020-07-31T03:56:43.753Z - INFO - engine sent successfully, the response to CBRS : {  
  "grantResponse": [  
    {  
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",  
      "response": {  
        "responseCode": 400  
      }  
    }  
  ]  
}
```

2020-07-31T03:56:45.631Z - INFO - arrived to nstep starting question answer session with the technician  
2020-07-31T03:56:45.631Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :  
2020-07-31T03:57:36.033Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n  
2020-07-31T03:57:39.359Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed and :the additional comments for the current test are : n



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**8.11 WINNF.FT.C.GRA.2**

2020-07-31T03:57:58.599Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T03:57:58.599Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now

2020-07-31T04:03:19.210Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoeS
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOIM56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJjOjEwMDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50lpmY
WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMDAw
mV4dGVybmFslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJkV1Q1LjhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T04:03:19.240Z - INFO - Registration message contains cpiSignatureData
2020-07-31T04:03:19.240Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T04:03:19.240Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T04:03:19.282Z - INFO - verified signature on cpiSignatureData
2020-07-31T04:03:19.282Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T04:03:19.286Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T04:03:19.288Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T04:03:21.181Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T04:03:21.188Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T04:03:23.200Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```
}  
}  
]  
}  
2020-07-31T04:03:23.210Z - INFO - engine sent successfully, the response to CBRS : {  
  "grantResponse": [  
    {  
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",  
      "response": {  
        "responseCode": 401  
      }  
    }  
  ]  
}
```

2020-07-31T04:03:24.822Z - INFO - arrived to nstep starting question answer session with the technician  
2020-07-31T04:03:24.822Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :  
2020-07-31T04:03:45.398Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n  
2020-07-31T04:03:46.693Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed and :the additional comments for the current test are : n



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### 8.12 WINNF.FT.C.HBT.1

2020-09-08T07:20:03.042Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-09-08T07:20:03.042Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2020-09-08T07:22:36.684Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbbsdCategory": "B",
    "cbbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbbsdSerialNumber": "T99B12300",
    "fccId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



```

    ],
    "installationParam": {
      "antennaAzimuth": 60,
      "antennaBeamwidth": 6,
      "antennaDowntilt": 1,
      "antennaGain": 5,
      "antennaModel": "external antenna on",
      "eirpCapability": 41,
      "height": 848.5,
      "heightType": "AGL",
      "horizontalAccuracy": 33.0,
      "indoorDeployment": false,
      "latitude": 88.0,
      "longitude": 100.0,
      "verticalAccuracy": 2.0
    },
  },
  "measCapability": [
    "RECEIVED_POWER_WITH_GRANT"
  ],
},
"userId": "FOXCONN"
}
]
}
}
2020-09-08T07:22:36.753Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}
}
2020-09-08T07:22:38.740Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
}
}

```



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```
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
]
}
]
}
2020-09-08T07:22:38.759Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbid": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-09-08T07:22:40.845Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbid": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
```





```

    "measBandwidth": 10000000,
    "measFrequency": 3550000000,
    "measRcvdPower": -100
  }
]
},
"operationParam": {
  "maxEirp": 20.0,
  "operationFrequencyRange": {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
}
}
}
]
}
}

```

2020-09-08T07:22:40.861Z - INFO - engine sent successfully, the response to CBRS : {

```

"grantResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "channelType": "GAA",
    "grantExpireTime": "2020-09-15T07:22:40Z",
    "grantId": "736811535",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
}

```

2020-09-08T07:22:42.940Z - INFO - heartbeat request from CBRS : {

```

"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "736811535",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,

```



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```

    "measRcvdPower": -100
  }
]
},
"operationState": "GRANTED"
}
]
}

```

2020-09-08T07:22:42.957Z - INFO - engine sent successfully, the response to CBRS : {

```

"heartbeatResponse": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "736811535",
  "response": {
    "responseCode": 0
  },
  "transmitExpireTime": "2020-09-08T07:26:02Z"
}
]
}

```

2020-09-08T07:23:42.414Z - INFO - heartbeat request from CBRS : {

```

"heartbeatRequest": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "736811535",
  "grantRenew": false,
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}

```

2020-09-08T07:23:42.417Z - INFO - Time interval between two heartbeat request messages is: 59.474, limit is: 65.0

2020-09-08T07:23:42.433Z - INFO - engine sent successfully, the response to CBRS : {



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```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "736811535",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-09-08T07:27:02Z"
  }
]
```

2020-09-08T07:24:42.578Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "736811535",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-09-08T07:24:42.582Z - INFO - Time interval between two heartbeat request messages is: 60.164, limit is: 65.0

2020-09-08T07:24:42.598Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "736811535",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-09-08T07:28:02Z"
  }
]
```



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```

]
}
2020-09-08T07:25:42.582Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "736811535",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "AUTHORIZED"
  ]
}
]
}

```

2020-09-08T07:25:42.586Z - INFO - Time interval between two heartbeat request messages is: 60.004, limit is: 65.0

2020-09-08T07:25:42.601Z - INFO - engine sent successfully, the response to CBRS : {

```

"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "736811535",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-09-08T07:29:02Z"
  }
]
}

```

2020-09-08T07:26:42.753Z - INFO - heartbeat request from CBRS : {

```

"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "736811535",
    "grantRenew": false,
    "measReport": {

```



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```

"rcvdPowerMeasReports": [
  {
    "measBandwidth": 10000000,
    "measFrequency": 3550000000,
    "measRcvdPower": -100
  }
],
"operationState": "AUTHORIZED"
}
]
}
2020-09-08T07:26:42.756Z - INFO - Time interval between two heartbeat request messages is: 60.17, limit is: 65.0
2020-09-08T07:26:42.772Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "736811535",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T07:30:02Z"
    }
  ]
}
}
2020-09-08T07:27:43.016Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "736811535",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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```

}
]
}
2020-09-08T07:27:43.019Z - INFO - Time interval between two heartbeat request messages is: 60.264, limit
is: 65.0
2020-09-08T07:27:43.038Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "736811535",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T07:31:03Z"
    }
  ]
}
}
2020-09-08T07:27:44.336Z - INFO - arrived to nstep starting question answer session with the technician
2020-09-08T07:27:44.338Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state
(first successful HBT response)? please choose one of the answers :
2020-09-08T07:27:48.693Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED
state (first successful HBT response)? , the user choose n
2020-09-08T07:27:48.694Z - INFO - the question is : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? please choose one of the answers :
2020-09-08T07:27:51.177Z - INFO - for the question : Did CBSD1 transmit only within the frequency range
specified in its grantRequest message? , the user choose y
2020-09-08T07:27:52.769Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed and :the
additional comments for the current test are : n

```



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**8.13 WINNF.FT.C.HBT.3**

2020-07-31T06:34:33.704Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T06:34:33.706Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now

2020-07-31T06:34:54.424Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoe3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJjOjEwMDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mj4wMDAwMDAsCiJpbmRvb3JEZXB3S3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbnN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T06:34:54.477Z - INFO - Registration message contains cpiSignatureData
2020-07-31T06:34:54.479Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T06:34:54.479Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T06:34:54.549Z - INFO - verified signature on cpiSignatureData
2020-07-31T06:34:54.552Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T06:34:54.556Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T06:34:54.559Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T06:34:56.335Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T06:34:56.355Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T06:34:58.351Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T06:34:58.371Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T06:34:58Z",
      "grantId": "780838242",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T06:35:00.371Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "780838242",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T06:35:00.385Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

"grantId": "780838242",
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-07-31T06:38:20Z"
}
]
}
}
2020-07-31T06:35:59.444Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "780838242",
  "grantRenew": false,
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
}
2020-07-31T06:35:59.447Z - INFO - Time interval between two heartbeat request messages is: 59.075, limit is: 65.0
2020-07-31T06:35:59.459Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "780838242",
  "response": {
    "responseCode": 0
  },
  "transmitExpireTime": "2020-07-31T06:39:19Z"
}
]
}
}
}
2020-07-31T06:36:59.545Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "780838242",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T06:36:59.546Z - INFO - Time interval between two heartbeat request messages is: 60.099, limit is: 65.0

2020-07-31T06:36:59.556Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "780838242",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T06:40:19Z"
  }
]
```

2020-07-31T06:37:59.578Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "780838242",
    "grantRenew": true,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
```



```

    "measFrequency": 3550000000,
    "measRcvdPower": -100
  }
]
},
"operationState": "AUTHORIZED"
}
]
}

```

2020-07-31T06:37:59.581Z - INFO - Time interval between two heartbeat request messages is: 60.034, limit is: 65.0

2020-07-31T06:37:59.592Z - INFO - grantRenew received in HBT request message

2020-07-31T06:37:59.592Z - INFO - engine sent successfully, the response to CBRS : {

```

  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantExpireTime": "2020-08-07T06:37:59Z",
      "grantId": "780838242",
      "response": {
        "responseCode": 105
      },
      "transmitExpireTime": "2020-07-31T06:37:59Z"
    }
  ]
}

```

2020-07-31T06:38:00.881Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T06:38:00.882Z - 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 :

2020-07-31T06:38:20.197Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2020-07-31T06:38:24.529Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current test are : n



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**8.14 WINNF.FT.C.HBT.4**

2020-07-31T06:39:06.944Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T06:39:06.946Z - INFO - the selected test from the user : WINNF.FT.C.HBT.4 is starting now  
 2020-07-31T06:39:32.252Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbssCategory": "B",
    "cbssInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbssSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoe3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJjOjEwMDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXB33ltZW50lpmY
WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYjY1MjEzZW50aWwKImFudGVubmFNb2RlbnI6M
mV4dGVybmFslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T06:39:32.332Z - INFO - Registration message contains cpiSignatureData
2020-07-31T06:39:32.334Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T06:39:32.335Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T06:39:32.411Z - INFO - verified signature on cpiSignatureData
2020-07-31T06:39:32.413Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T06:39:32.418Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T06:39:32.421Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T06:39:34.247Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T06:39:34.263Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T06:39:36.239Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T06:39:36.259Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T06:39:36Z",
      "grantId": "825040288",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T06:39:38.308Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "GRANTED"
  ]
}

```

```

2020-07-31T06:39:38.325Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "825040288",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T06:42:58Z"
  }
]
}
}
2020-07-31T06:40:37.519Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T06:40:37.522Z - INFO - Time interval between two heartbeat request messages is: 59.211, limit is: 65.0
2020-07-31T06:40:37.535Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T06:43:57Z"
    }
  ]
}
}
}
2020-07-31T06:41:37.611Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "825040288",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T06:41:37.614Z - INFO - Time interval between two heartbeat request messages is: 60.092, limit is: 65.0

2020-07-31T06:41:37.628Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "825040288",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T06:44:57Z"
  }
]
```

2020-07-31T06:42:37.676Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "825040288",
    "grantRenew": true,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
```



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```

    "measFrequency": 3550000000,
    "measRcvdPower": -100
  }
]
},
"operationState": "AUTHORIZED"
}
]
}
2020-07-31T06:42:37.677Z - INFO - Time interval between two heartbeat request messages is: 60.064, limit
is: 65.0
2020-07-31T06:42:37.690Z - INFO - grantRenew received in HBT request message
2020-07-31T06:42:37.690Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantExpireTime": "2020-08-07T06:42:37Z",
      "grantId": "825040288",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T06:45:57Z"
    }
  ]
}
2020-07-31T06:43:37.736Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}

```



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```

    ]
  }
2020-07-31T06:43:37.740Z - INFO - Time interval between two heartbeat request messages is: 60.061, limit
is: 65.0
2020-07-31T06:43:37.759Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T06:46:57Z"
    }
  ]
}
2020-07-31T06:44:37.815Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-07-31T06:44:37.821Z - INFO - Time interval between two heartbeat request messages is: 60.079, limit
is: 65.0
2020-07-31T06:44:37.842Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "825040288",
    }
  ]
}

```



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```
"response": {
  "responseCode": 500
},
"transmitExpireTime": "2020-07-31T06:44:37Z"
}
]
```

2020-07-31T06:44:39.141Z - INFO - arrived to nstep starting question answer session with the technician  
 2020-07-31T06:44:39.142Z - 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 :  
 2020-07-31T06:44:49.621Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y  
 2020-07-31T06:44:54.548Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed and :the additional comments for the current test are : n



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**8.15 WINNF.FT.C.HBT.5**

2020-07-31T06:47:51.059Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T06:47:51.061Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now

2020-07-31T06:48:02.155Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoe3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJjOjEwMDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcm16b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXB3b3ltZW50lpmY
WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYjY1MjE3aWR0aCI6Ni4wMDAwMDAwMDAwMDAw
mV4dGVybmF0IGFudGVubmEgbi24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    }
],
"measCapability": [
    "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T06:48:02.201Z - INFO - Registration message contains cpiSignatureData
2020-07-31T06:48:02.201Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T06:48:02.203Z - INFO - encodedCpiSignedData contents = {
    "installationParam": {
        "eirpCapability": 41,
        "antennaAzimuth": 60,
        "heightType": "AGL",
        "antennaModel": "external antenna on",
        "longitude": 100.0,
        "height": 848.5,
        "indoorDeployment": false,
        "antennaBeamwidth": 6,
        "horizontalAccuracy": 33.0,
        "antennaDowntilt": 1,
        "latitude": 85.0,
        "antennaGain": 5,
        "verticalAccuracy": 2.0
    },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T06:48:02.273Z - INFO - verified signature on cpiSignatureData
2020-07-31T06:48:02.273Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T06:48:02.279Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T06:48:02.280Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T06:48:04.108Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T06:48:04.132Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T06:48:06.148Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T06:48:06.161Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T06:48:06Z",
      "grantId": "196808765",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T06:48:08.167Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "196808765",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T06:48:08.180Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

"grantId": "196808765",
"response": {
  "responseCode": 501
},
"transmitExpireTime": "2020-07-31T06:48:08Z"
}
]
}
}
2020-07-31T06:48:18.177Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "196808765"
}
]
}
}
2020-07-31T06:48:18.187Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "196808765",
  "response": {
    "responseCode": 0
  }
}
]
}
}
2020-07-31T06:48:20.081Z - INFO - arrived to nstep starting question answer session with the technician
2020-07-31T06:48:20.081Z - INFO - the question is : Did the CBSD transmit at any time during the test?
please choose one of the answers :
2020-07-31T06:48:26.292Z - INFO - for the question : Did the CBSD transmit at any time during the test? ,
the user choose n
2020-07-31T06:48:29.986Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed and :the
additional comments for the current test are : n

```



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**8.16 WINNF.FT.C.HBT.6**

2020-07-31T06:48:52.630Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T06:48:52.631Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now

2020-07-31T06:49:05.036Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0i5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RtZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBs3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmawWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QlLChhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T06:49:05.082Z - INFO - Registration message contains cpiSignatureData
2020-07-31T06:49:05.082Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T06:49:05.082Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T06:49:05.154Z - INFO - verified signature on cpiSignatureData
2020-07-31T06:49:05.155Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T06:49:05.161Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T06:49:05.163Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T06:49:07.017Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T06:49:07.030Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T06:49:09.016Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T06:49:09.029Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T06:49:09Z",
      "grantId": "261836277",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T06:49:11.131Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "261836277",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T06:49:11.148Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

"grantId": "261836277",
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-07-31T06:52:31Z"
}
]
}
}
2020-07-31T06:50:10.111Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbid": "PIDASPOT5410Mock-SAST99B12300",
"grantId": "261836277",
"grantRenew": false,
"measReport": {
"rcvdPowerMeasReports": [
{
"measBandwidth": 10000000,
"measFrequency": 3550000000,
"measRcvdPower": -100
}
]
},
"operationState": "AUTHORIZED"
}
]
}
}
2020-07-31T06:50:10.115Z - INFO - Time interval between two heartbeat request messages is: 58.98, limit is: 65.0
2020-07-31T06:50:10.128Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbid": "PIDASPOT5410Mock-SAST99B12300",
"grantId": "261836277",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2020-07-31T06:53:30Z"
}
]
}
}
}
2020-07-31T06:51:10.210Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "261836277",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T06:51:10.213Z - INFO - Time interval between two heartbeat request messages is: 60.099, limit is: 65.0

2020-07-31T06:51:10.226Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "261836277",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T06:54:30Z"
  }
]
```

2020-07-31T06:52:10.270Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "261836277",
    "grantRenew": true,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
```



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```

    "measFrequency": 3550000000,
    "measRcvdPower": -100
  }
]
},
"operationState": "AUTHORIZED"
}
]
}
2020-07-31T06:52:10.273Z - INFO - Time interval between two heartbeat request messages is: 60.059, limit
is: 65.0
2020-07-31T06:52:10.289Z - INFO - grantRenew received in HBT request message
2020-07-31T06:52:10.289Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantExpireTime": "2020-08-07T06:52:10Z",
      "grantId": "261836277",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2020-07-31T06:52:10Z"
    }
  ]
}
2020-07-31T06:52:20.289Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "261836277"
    }
  ]
}
2020-07-31T06:52:20.302Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "261836277",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```



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] }  
}

2020-07-31T06:52:21.795Z - INFO - arrived to nstep starting question answer session with the technician  
2020-07-31T06:52:21.796Z - 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 :  
2020-07-31T06:52:33.463Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y  
2020-07-31T06:52:44.793Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current test are : n



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**8.17 WINNF.FT.C.HBT.7**

2020-07-31T06:53:27.328Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T06:53:27.329Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now  
 2020-07-31T06:54:00.434Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbbsdCategory": "B",
    "cbbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoeE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJjOjEwMDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXB3S3ltZW50lJpmY
WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMDAw
mV4dGVybmF0IGFudGVubmEgY24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmYWVhdGlvbIRpbWUjOiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJkV1Q1LjhbGciOiJSUzI1NiJ9"
    },
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupid": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T06:54:00.492Z - INFO - Registration message contains cpiSignatureData
2020-07-31T06:54:00.492Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T06:54:00.493Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T06:54:00.562Z - INFO - verified signature on cpiSignatureData
2020-07-31T06:54:00.563Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T06:54:00.568Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T06:54:00.569Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T06:54:02.349Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T06:54:02.365Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T06:54:04.344Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T06:54:04.355Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T06:54:04Z",
      "grantId": "671117238",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T06:54:06.384Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "671117238",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T06:54:06.401Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "671117238",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T06:57:26Z"
  }
]
}
}
2020-07-31T06:55:05.434Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "671117238",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T06:55:05.437Z - INFO - Time interval between two heartbeat request messages is: 59.05, limit is: 65.0
2020-07-31T06:55:05.448Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "671117238",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T06:58:25Z"
    }
  ]
}
}
}
2020-07-31T06:56:05.539Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "671117238",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T06:56:05.542Z - INFO - Time interval between two heartbeat request messages is: 60.104, limit is: 65.0

2020-07-31T06:56:05.559Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "671117238",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T06:59:25Z"
  }
]
```

2020-07-31T06:57:05.568Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "671117238",
    "grantRenew": true,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
```



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```

    "measFrequency": 3550000000,
    "measRcvdPower": -100
  }
]
},
"operationState": "AUTHORIZED"
}
]
}
2020-07-31T06:57:05.572Z - INFO - Time interval between two heartbeat request messages is: 60.03, limit is: 65.0
2020-07-31T06:57:05.589Z - INFO - grantRenew received in HBT request message
2020-07-31T06:57:05.591Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantExpireTime": "2020-08-07T06:57:05Z",
      "grantId": "671117238",
      "response": {
        "responseCode": 502
      },
      "transmitExpireTime": "2020-07-31T06:57:05Z"
    }
  ]
}
2020-07-31T06:57:07.588Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "671117238"
    }
  ]
}
2020-07-31T06:57:07.604Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "671117238",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```



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] }  
}

2020-07-31T06:57:09.456Z - INFO - arrived to nstep starting question answer session with the technician  
2020-07-31T06:57:09.456Z - 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 :  
2020-07-31T06:57:19.440Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y



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**8.18 WINNF.FT.C.HBT.9**

2020-07-31T06:58:00.634Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T06:58:00.635Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now

2020-07-31T06:58:18.236Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTRZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJ0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMDAw
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QlLChhbGciOiJSUz11NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T06:58:18.298Z - INFO - Registration message contains cpiSignatureData
2020-07-31T06:58:18.298Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T06:58:18.299Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T06:58:18.375Z - INFO - verified signature on cpiSignatureData
2020-07-31T06:58:18.375Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T06:58:18.384Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T06:58:18.385Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T06:58:20.177Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T06:58:20.193Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T06:58:22.213Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T06:58:22.232Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T06:58:22Z",
      "grantId": "670105343",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T06:58:24.252Z - INFO - heartbeat request from CBRS : {

```

```

  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "670105343",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }
  ]
}

```

```

}
2020-07-31T07:01:44.275Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```
"grantId": "670105343",
"response": {
  "responseCode": 501
},
"transmitExpireTime": "2020-07-31T07:01:44Z"
}
]
}
```

2020-07-31T07:01:45.829Z - INFO - arrived to nstep starting question answer session with the technician  
 2020-07-31T07:01:45.831Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the answers :  
 2020-07-31T07:02:48.375Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n  
 2020-07-31T07:02:55.829Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed and :the additional comments for the current test are : n



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**8.19 WINNF.FT.C.HBT.10**

2020-07-31T07:04:08.392Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
 2020-07-31T07:04:08.394Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now  
 2020-07-31T07:04:27.970Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbssCategory": "B",
    "cbssInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbss",
      "vendor": "vendor-FII"
    },
    "cbssSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoe3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJjOjEwMDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50lpmY
WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWUlj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnI6M
mV4dGVybmFslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbnRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcid": "PIDASPO75410",
    "groupingParam": [
      {
        "groupID": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T07:04:28.022Z - INFO - Registration message contains cpiSignatureData
2020-07-31T07:04:28.022Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T07:04:28.023Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T07:04:28.094Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:04:28.095Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T07:04:28.101Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T07:04:28.105Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:04:29.924Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T07:04:29.946Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T07:04:31.937Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T07:04:31.954Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T07:04:31Z",
      "grantId": "11781669",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T07:04:33.970Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "11781669",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T07:04:33.986Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "11781669",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:07:53Z"
  }
]
}
}
2020-07-31T07:05:33.042Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "11781669",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T07:05:33.046Z - INFO - Time interval between two heartbeat request messages is: 59.074, limit is: 65.0
2020-07-31T07:05:33.055Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "11781669",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:08:53Z"
    }
  ]
}
}
}
2020-07-31T07:06:33.101Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "11781669",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T07:06:33.105Z - INFO - Time interval between two heartbeat request messages is: 60.058, limit is: 65.0

2020-07-31T07:06:33.108Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT\_EXPIRE\_TIME WAS AT: 2020-07-31 07:05:33.044000

2020-07-31T07:09:53.121Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "11781669",
    "response": {
      "responseCode": 501
    },
    "transmitExpireTime": "2020-07-31T07:09:53Z"
  }
]
```

2020-07-31T07:09:54.602Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T07:09:54.604Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :

2020-07-31T07:10:02.835Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y

2020-07-31T07:10:08.821Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed and :the additional comments for the current test are : n



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**8.20 WINNF.FT.C.HBT.11**

2020-07-31T07:11:05.894Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13  
2020-07-31T07:11:05.894Z - INFO - the selected test from the user : WINNF.FT.C.HBT.11 is starting now  
2020-07-31T07:11:24.266Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTRZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJ0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiHJvZmVzc2l2bWVsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T07:11:24.332Z - INFO - Registration message contains cpiSignatureData
2020-07-31T07:11:24.332Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T07:11:24.332Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbdsdSerialNumber": "T99B12300"
}
2020-07-31T07:11:24.403Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:11:24.404Z - INFO - cbdsdCategory= 'B', removing optional param from cpi_schema
2020-07-31T07:11:24.408Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T07:11:24.411Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbdsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:11:26.190Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbdsdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T07:11:26.213Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T07:11:28.223Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T07:11:28.240Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-07-31T07:17:28Z",
      "grantId": "437178933",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T07:11:30.230Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "grantRenew": true,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T07:11:30.253Z - INFO - grantRenew received in HBT request message
2020-07-31T07:11:30.253Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {

```



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```

"cbstdId": "PIDASPOT5410Mock-SAST99B12300",
"grantExpireTime": "2020-07-31T07:17:30Z",
"grantId": "437178933",
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-07-31T07:14:50Z"
}
]
}
2020-07-31T07:12:29.301Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T07:12:29.303Z - INFO - Time interval between two heartbeat request messages is: 59.071, limit is: 65.0
2020-07-31T07:12:29.315Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:15:49Z"
    }
  ]
}
}

```



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```

}
2020-07-31T07:13:29.378Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "AUTHORIZED"
  ]
}
}

```

2020-07-31T07:13:29.382Z - INFO - Time interval between two heartbeat request messages is: 60.079, limit is: 65.0

```

2020-07-31T07:13:29.400Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:16:49Z"
    }
  ]
}
}

```

```

2020-07-31T07:14:29.437Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [

```



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```

    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "AUTHORIZED"
}
]
}
2020-07-31T07:14:29.440Z - INFO - Time interval between two heartbeat request messages is: 60.058, limit
is: 65.0
2020-07-31T07:14:29.450Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:17:30Z"
    }
  ]
}
}
2020-07-31T07:15:29.516Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "grantRenew": true,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}

```



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```

]
}
2020-07-31T07:15:29.519Z - INFO - Time interval between two heartbeat request messages is: 60.079, limit
is: 65.0
2020-07-31T07:15:29.530Z - INFO - grantRenew received in HBT request message
2020-07-31T07:15:29.532Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantExpireTime": "2020-07-31T07:21:29Z",
      "grantId": "437178933",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:18:49Z"
    }
  ]
}
]
}
2020-07-31T07:16:29.596Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "437178933",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
]
}
2020-07-31T07:16:29.599Z - INFO - Time interval between two heartbeat request messages is: 60.081, limit
is: 65.0
2020-07-31T07:16:29.614Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {

```



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```

    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "437178933",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:19:49Z"
  }
]
}

```

2020-07-31T07:16:31.099Z - INFO - arrived to nstep starting question answer session with the technician  
 2020-07-31T07:16:31.099Z - INFO - the question is : Did the CBSD renew its grant successfully? please choose one of the answers :

2020-07-31T07:17:09.785Z - INFO - for the question : Did the CBSD renew its grant successfully? , the user choose y

2020-07-31T07:17:17.061Z - INFO - The final result of the test : WINNF.FT.C.HBT.11 is - passed and :the additional comments for the current test are : n



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**8.21 WINNF.FT.C.MES.3**

2020-07-31T07:17:58.898Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T07:17:58.900Z - INFO - the selected test from the user : WINNF.FT.C.MES.3 is starting now

2020-07-31T07:18:14.599Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RtZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojO0C41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiCHJvZmVzc2l2bWVsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}

```

2020-07-31T07:18:14.654Z - INFO - Registration message contains cpiSignatureData

2020-07-31T07:18:14.655Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2020-07-31T07:18:14.655Z - INFO - encodedCpiSignedData contents = {

```

"installationParam": {
  "eirpCapability": 41,
  "antennaAzimuth": 60,
  "heightType": "AGL",
  "antennaModel": "external antenna on",
  "longitude": 100.0,
  "height": 848.5,
  "indoorDeployment": false,
  "antennaBeamwidth": 6,
  "horizontalAccuracy": 33.0,
  "antennaDowntilt": 1,
  "latitude": 85.0,
  "antennaGain": 5,
  "verticalAccuracy": 2.0
},

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T07:18:14.730Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:18:14.732Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T07:18:14.736Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T07:18:14.737Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:18:16.522Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T07:18:16.543Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T07:18:18.561Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T07:18:18.575Z - INFO - Response message contains measReportConfig
2020-07-31T07:18:18.575Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T07:18:18Z",
      "grantId": "816243534",
      "heartbeatInterval": 60,
      "measReportConfig": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}
2020-07-31T07:18:20.625Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "816243534",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ],
  "operationState": "GRANTED"
}
]
}

```



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2020-07-31T07:18:20.630Z - INFO - measReport received in heartbeat message

2020-07-31T07:18:20.641Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "816243534",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:21:40Z"
  }
]
```

2020-07-31T07:19:19.661Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "816243534",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T07:19:19.665Z - INFO - Time interval between two heartbeat request messages is: 59.036, limit is: 65.0

2020-07-31T07:19:19.680Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "816243534",
    "response": {
      "responseCode": 0
    },
  },
]
```



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```

    "transmitExpireTime": "2020-07-31T07:22:39Z"
  }
]
}
2020-07-31T07:20:19.714Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "816243534",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}

```

2020-07-31T07:20:19.717Z - INFO - Time interval between two heartbeat request messages is: 60.053, limit is: 65.0

```

2020-07-31T07:20:19.727Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "816243534",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:23:39Z"
    }
  ]
}

```

```

2020-07-31T07:21:19.793Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "816243534",

```



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```

"grantRenew": true,
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "AUTHORIZED"
}
]
}
}
2020-07-31T07:21:19.796Z - INFO - Time interval between two heartbeat request messages is: 60.079, limit is: 65.0
2020-07-31T07:21:19.806Z - INFO - grantRenew received in HBT request message
2020-07-31T07:21:19.808Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantExpireTime": "2020-08-07T07:21:19Z",
      "grantId": "816243534",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:24:39Z"
    }
  ]
}
}
2020-07-31T07:22:19.874Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "816243534",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ]
}

```



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```

    }
  ]
},
"operationState": "AUTHORIZED"
}
]
}
2020-07-31T07:22:19.877Z - INFO - Time interval between two heartbeat request messages is: 60.08, limit is:
65.0
2020-07-31T07:22:19.888Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "816243534",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:25:39Z"
    }
  ]
}
2020-07-31T07:22:21.091Z - INFO - arrived to nstep starting question answer session with the technician
2020-07-31T07:25:59.075Z - INFO - The final result of the test : WINNF.FT.C.MES.3 is - passed and :the
additional comments for the current test are : n

```



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**8.22 WINNF.FT.C.MES.4**

2020-07-31T07:27:07.365Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T07:27:07.367Z - INFO - the selected test from the user : WINNF.FT.C.MES.4 is starting now

2020-07-31T07:27:23.144Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoeE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBs3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QlLChhbGciOiJSUz11NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    },
    {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    }
    ],
    "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
    ],
    "userId": "FOXCONN"
}
]
}
2020-07-31T07:27:23.198Z - INFO - Registration message contains cpiSignatureData
2020-07-31T07:27:23.198Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T07:27:23.200Z - INFO - encodedCpiSignedData contents = {
    "installationParam": {
        "eirpCapability": 41,
        "antennaAzimuth": 60,
        "heightType": "AGL",
        "antennaModel": "external antenna on",
        "longitude": 100.0,
        "height": 848.5,
        "indoorDeployment": false,
        "antennaBeamwidth": 6,
        "horizontalAccuracy": 33.0,
        "antennaDowntilt": 1,
        "latitude": 85.0,
        "antennaGain": 5,
        "verticalAccuracy": 2.0
    },
}
    
```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T07:27:23.272Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:27:23.273Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T07:27:23.279Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T07:27:23.282Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:27:25.051Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

    ]
  }
2020-07-31T07:27:25.068Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T07:27:27.046Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T07:27:27.062Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T07:27:27Z",
      "grantId": "316133051",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T07:27:29.036Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "316133051",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "GRANTED"
  ]
}

```

```

}
2020-07-31T07:27:29.049Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

"grantId": "316133051",
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-07-31T07:30:49Z"
}
]
}
}
2020-07-31T07:28:28.091Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "316133051",
  "grantRenew": false,
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
}
2020-07-31T07:28:28.094Z - INFO - Time interval between two heartbeat request messages is: 59.055, limit is: 65.0
2020-07-31T07:28:28.104Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "316133051",
  "response": {
    "responseCode": 0
  },
  "transmitExpireTime": "2020-07-31T07:31:48Z"
}
]
}
}
}
2020-07-31T07:29:28.194Z - INFO - heartbeat request from CBRS : {

```



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```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T07:29:28.197Z - INFO - Time interval between two heartbeat request messages is: 60.103, limit is: 65.0

2020-07-31T07:29:28.207Z - INFO - Response message contains measReportConfig

2020-07-31T07:29:28.207Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": {
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "measReportConfig": [
      "RECEIVED_POWER_WITH_GRANT"
    ],
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:32:48Z"
  }
}
```

2020-07-31T07:30:28.229Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": {
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "grantRenew": true,
  }
}
```



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```
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "AUTHORIZED"
}
]
```

2020-07-31T07:30:28.232Z - INFO - Time interval between two heartbeat request messages is: 60.035, limit is: 65.0

2020-07-31T07:30:28.233Z - INFO - measReport received in heartbeat message

2020-07-31T07:30:28.242Z - INFO - grantRenew received in HBT request message

2020-07-31T07:30:28.243Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantExpireTime": "2020-08-07T07:30:28Z",
    "grantId": "316133051",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:33:48Z"
  }
]
```

2020-07-31T07:31:28.309Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    }
  }
]
```



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```

    }
  ]
},
"operationState": "AUTHORIZED"
}
]
}
2020-07-31T07:31:28.315Z - INFO - Time interval between two heartbeat request messages is: 60.081, limit
is: 65.0
2020-07-31T07:31:28.336Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "316133051",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:34:48Z"
    }
  ]
}
}
2020-07-31T07:32:28.388Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "316133051",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T07:32:28.391Z - INFO - Time interval between two heartbeat request messages is: 60.078, limit
is: 65.0

```



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2020-07-31T07:32:28.401Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:35:48Z"
  }
]
```

2020-07-31T07:33:28.447Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-07-31T07:33:28.450Z - INFO - Time interval between two heartbeat request messages is: 60.059, limit is: 65.0

2020-07-31T07:33:28.460Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "316133051",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:36:48Z"
  }
]
```



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```

}
]
}
2020-07-31T07:34:28.526Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "316133051",
      "grantRenew": true,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "AUTHORIZED"
  ]
}
]
}

```

2020-07-31T07:34:28.529Z - INFO - Time interval between two heartbeat request messages is: 60.08, limit is: 65.0

2020-07-31T07:34:28.539Z - INFO - grantRenew received in HBT request message

2020-07-31T07:34:28.540Z - INFO - engine sent successfully, the response to CBRS : {

```

"heartbeatResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantExpireTime": "2020-08-07T07:34:28Z",
    "grantId": "316133051",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:37:48Z"
  }
]
}

```

2020-07-31T07:34:29.641Z - INFO - arrived to nstep starting question answer session with the technician

2020-07-31T07:35:00.667Z - INFO - The final result of the test : WINNF.FT.C.MES.4 is - passed and :the additional comments for the current test are : y



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**8.23 WINNF.FT.C.RLQ.1**

2020-07-31T07:35:27.846Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T07:35:27.848Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now

2020-07-31T07:36:02.194Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzp17A",
      "encodedCpiSignedData":
"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKlmxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojO0C41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMD
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2l2b250ZW50ZW50ZW50ZW50ZW50ZW50ZW50
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YXxsQ2VydGlmYWVhdGlvbIRpbWUioiLiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T07:36:02.237Z - INFO - Registration message contains cpiSignatureData
2020-07-31T07:36:02.237Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T07:36:02.239Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T07:36:02.313Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:36:02.315Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T07:36:02.321Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T07:36:02.322Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:36:04.095Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

    ]
  }
2020-07-31T07:36:04.115Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T07:36:06.115Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T07:36:06.132Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T07:36:06Z",
      "grantId": "856298546",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T07:36:08.141Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "856298546",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T07:36:08.165Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "856298546",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:39:28Z"
  }
]
}
}
2020-07-31T07:37:07.206Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "856298546",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T07:37:07.209Z - INFO - Time interval between two heartbeat request messages is: 59.064, limit is: 65.0
2020-07-31T07:37:07.223Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "856298546",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:40:27Z"
    }
  ]
}
}
}
2020-07-31T07:37:40.243Z - INFO - relinquishment request from CBRS : {

```



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```
"relinquishmentRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "856298546"
  }
]
```

```
2020-07-31T07:37:40.253Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "856298546",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

2020-07-31T07:37:41.944Z - INFO - arrived to nstep starting question answer session with the technician  
 2020-07-31T07:37:41.944Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :  
 2020-07-31T07:37:56.203Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y  
 2020-07-31T07:38:03.779Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed and :the additional comments for the current test are : y



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**8.24 WINNF.FT.C.RLQ.3**

2020-07-31T07:48:55.180Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T07:48:55.183Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.3 is starting now

2020-07-31T07:49:20.740Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsGyFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpM
WxzZSwKImFudGVubmFbemtldXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMD
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T07:49:20.779Z - INFO - Registration message contains cpiSignatureData
2020-07-31T07:49:20.779Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T07:49:20.780Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T07:49:20.851Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:49:20.851Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T07:49:20.857Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T07:49:20.858Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:49:23.015Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T07:49:23.038Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T07:49:25.038Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T07:49:25.049Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T07:49:25Z",
      "grantId": "745230791",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T07:49:27.053Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "745230791",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "GRANTED"
  ]
}

```

```

}
2020-07-31T07:49:27.072Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "745230791",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T07:52:47Z"
  }
]
}
}
2020-07-31T07:50:26.118Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "745230791",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T07:50:26.122Z - INFO - Time interval between two heartbeat request messages is: 59.065, limit is: 65.0
2020-07-31T07:50:26.134Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "745230791",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T07:53:46Z"
    }
  ]
}
}
}
2020-07-31T07:51:08.177Z - INFO - relinquishment request from CBRS : {

```



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```
"relinquishmentRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "745230791"
  }
]
```

2020-07-31T07:51:08.186Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "response": {
      "responseCode": 102,
      "responseData": [
        "grantId"
      ]
    }
  }
]
```

2020-07-31T07:51:09.276Z - INFO - arrived to nstep starting question answer session with the technician  
 2020-07-31T07:51:09.278Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :  
 2020-07-31T07:51:19.138Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y  
 2020-07-31T07:51:33.128Z - INFO - The final result of the test : WINNF.FT.C.RLQ.3 is - passed and :the additional comments for the current test are : n



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**8.25 WINNF.FT.C.RLQ.5**

2020-07-31T08:01:42.686Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T08:01:42.687Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.5 is starting now

2020-07-31T08:02:04.375Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RtZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpjY
WxzZSwKImFudGVubmFbemtldXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMDAw
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QlLChhbGciOiJSUz11NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T08:02:04.411Z - INFO - Registration message contains cpiSignatureData
2020-07-31T08:02:04.411Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T08:02:04.413Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T08:02:04.483Z - INFO - verified signature on cpiSignatureData
2020-07-31T08:02:04.484Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T08:02:04.490Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T08:02:04.493Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T08:02:06.301Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T08:02:06.313Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T08:02:08.325Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T08:02:08.345Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T08:02:08Z",
      "grantId": "185043388",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T08:02:10.351Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "185043388",
      "grantRenew": true,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T08:02:10.368Z - INFO - grantRenew received in HBT request message
2020-07-31T08:02:10.369Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {

```



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```

    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantExpireTime": "2020-08-07T08:02:10Z",
    "grantId": "185043388",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T08:05:30Z"
  }
}
}
2020-07-31T08:03:09.410Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "185043388",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T08:03:09.413Z - INFO - Time interval between two heartbeat request messages is: 59.058, limit is: 65.0
2020-07-31T08:03:09.424Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "185043388",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T08:06:29Z"
    }
  ]
}
}

```



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```

}
2020-07-31T08:03:16.430Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "185043388"
    }
  ]
}
2020-07-31T08:03:16.444Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 103,
        "responseData": [
          "grantId"
        ]
      }
    }
  ]
}
2020-07-31T08:03:17.767Z - INFO - arrived to nstep starting question answer session with the technician
2020-07-31T08:03:17.769Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? please choose one of the answers :
2020-07-31T08:03:34.096Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of Relinquishment Request by Test Harness? , the user choose y
2020-07-31T08:03:38.706Z - INFO - The final result of the test : WINNF.FT.C.RLQ.5 is - passed and :the additional comments for the current test are : n
  
```



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**8.26 WINNF.FT.C.DRG.1**

2020-07-31T08:04:46.513Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T08:04:46.515Z - INFO - the selected test from the user : WINNF.FT.C.DRG.1 is starting now

2020-07-31T08:05:53.388Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTRZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QlLChhbGciOiJSUz11NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T08:05:53.436Z - INFO - Registration message contains cpiSignatureData
2020-07-31T08:05:53.436Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T08:05:53.437Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T08:05:53.506Z - INFO - verified signature on cpiSignatureData
2020-07-31T08:05:53.507Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T08:05:53.513Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T08:05:53.513Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T08:05:55.378Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T08:05:55.391Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T08:05:57.424Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T08:05:57.436Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T08:05:57Z",
      "grantId": "696422588",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T08:05:59.444Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "696422588",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }

```

```

  ]
}
2020-07-31T08:05:59.463Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

"grantId": "696422588",
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-07-31T08:09:19Z"
}
]
}
}
2020-07-31T08:06:58.509Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "696422588",
  "grantRenew": false,
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
}
2020-07-31T08:06:58.512Z - INFO - Time interval between two heartbeat request messages is: 59.064, limit is: 65.0
2020-07-31T08:06:58.529Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "grantId": "696422588",
  "response": {
    "responseCode": 0
  },
  "transmitExpireTime": "2020-07-31T08:10:18Z"
}
]
}
}
}
2020-07-31T08:07:06.529Z - INFO - relinquishment request from CBRS : {

```



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```
"relinquishmentRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "696422588"
  }
]
```

2020-07-31T08:07:06.536Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "696422588",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-07-31T08:07:08.572Z - INFO - deregistration request from CBRS : {

```
"deregistrationRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300"
  }
]
```

2020-07-31T08:07:08.581Z - INFO - engine sent successfully, the response to CBRS : {

```
"deregistrationResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-07-31T08:07:09.607Z - INFO - arrived to nstep starting question answer session with the technician  
2020-07-31T08:07:09.608Z - 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 :

2020-07-31T08:07:17.696Z - 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



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

Report No.: SZEM200900987604  
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2020-07-31T08:07:23.450Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed and :the additional comments for the current test are : n



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**8.27 WINNF.FT.C.DRG.3**

2020-07-31T08:07:48.759Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T08:07:48.760Z - INFO - the selected test from the user : WINNF.FT.C.DRG.3 is starting now

2020-07-31T08:09:37.453Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAwMDAw
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiCHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T08:09:37.516Z - INFO - Registration message contains cpiSignatureData
2020-07-31T08:09:37.516Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T08:09:37.516Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T08:09:37.619Z - INFO - verified signature on cpiSignatureData
2020-07-31T08:09:37.621Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T08:09:37.630Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T08:09:37.632Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T08:09:39.451Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T08:09:39.471Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T08:09:41.421Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T08:09:41.431Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T08:09:41Z",
      "grantId": "446686294",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T08:09:43.413Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "446686294",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    },
    "operationState": "GRANTED"
  ]
}

```

```

2020-07-31T08:09:43.426Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "446686294",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T08:13:03Z"
  }
]
}
}
2020-07-31T08:10:42.446Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "446686294",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
}
2020-07-31T08:10:42.448Z - INFO - Time interval between two heartbeat request messages is: 59.033, limit is: 65.0
2020-07-31T08:10:42.464Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "446686294",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T08:14:02Z"
    }
  ]
}
}
}
2020-07-31T08:10:49.466Z - INFO - relinquishment request from CBRS : {

```



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```
"relinquishmentRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "446686294"
  }
]
}
2020-07-31T08:10:49.474Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "446686294",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T08:10:51.490Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300"
    }
  ]
}
}
2020-07-31T08:10:51.497Z - INFO - engine sent successfully, the response to CBRS : {
  "deregistrationResponse": [
    {
      "response": {
        "responseCode": 102
      }
    }
  ]
}
}
2020-07-31T08:10:52.875Z - INFO - arrived to nstep starting question answer session with the technician
2020-07-31T08:10:52.877Z - 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 :
2020-07-31T08:11:01.232Z - 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
2020-07-31T08:11:05.109Z - INFO - The final result of the test : WINNF.FT.C.DRG.3 is - passed and :the additional comments for the current test are : n
```



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**8.28 WINNF.FT.C.DRG.5**

2020-07-31T08:13:45.552Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-07-31T08:13:45.553Z - INFO - the selected test from the user : WINNF.FT.C.DRG.5 is starting now

2020-07-31T08:14:05.092Z - INFO - registration request from CBRS : {

```
"registrationRequest": {
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbdsCategory": "B",
    "cbdsInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbdsSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3esz6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0I5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOnsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpM
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbcCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2l2bWVzSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlnaWNhdGlvbIRpbWUiOiiliCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJKV1QlLChhbGciOiJSUz11NiJ9"
    },
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
}
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-07-31T08:14:05.130Z - INFO - Registration message contains cpiSignatureData
2020-07-31T08:14:05.131Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}
2020-07-31T08:14:05.131Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "eirpCapability": 41,
    "antennaAzimuth": 60,
    "heightType": "AGL",
    "antennaModel": "external antenna on",
    "longitude": 100.0,
    "height": 848.5,
    "indoorDeployment": false,
    "antennaBeamwidth": 6,
    "horizontalAccuracy": 33.0,
    "antennaDowntilt": 1,
    "latitude": 85.0,
    "antennaGain": 5,
    "verticalAccuracy": 2.0
  },

```



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```

"fcclId": "PIDASPOT5410",
"professionalInstallerData": {
  "cpiName": "",
  "installCertificationTime": "",
  "cpild": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T08:14:05.200Z - INFO - verified signature on cpiSignatureData
2020-07-31T08:14:05.201Z - INFO - cbstdCategory= 'B', removing optional param from cpi_schema
2020-07-31T08:14:05.207Z - INFO - cpiSignatureData data successfully validated against jsonschema
2020-07-31T08:14:05.209Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T08:14:07.049Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [
        {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ],
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  }
}
}
}

```



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```

]
}
2020-07-31T08:14:07.062Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3570000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}

```

```

2020-07-31T08:14:09.063Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationParam": {
        "maxEirp": 20.0,
        "operationFrequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}

```



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```

    }
  }
]
}
2020-07-31T08:14:09.075Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-08-07T08:14:09Z",
      "grantId": "779652030",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }

```

```

  ]
}
2020-07-31T08:14:11.128Z - INFO - heartbeat request from CBRS : {

```

```

  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "779652030",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "GRANTED"
    }
  ]
}

```

```

}
2020-07-31T08:14:11.141Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [

```

```

    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```

    "grantId": "779652030",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-07-31T08:17:31Z"
  }
]
}
2020-07-31T08:15:10.138Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "779652030",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      },
      "operationState": "AUTHORIZED"
    }
  ]
}
2020-07-31T08:15:10.141Z - INFO - Time interval between two heartbeat request messages is: 59.01, limit is: 65.0
2020-07-31T08:15:10.153Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "779652030",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-07-31T08:18:30Z"
    }
  ]
}
2020-07-31T08:16:10.219Z - INFO - relinquishment request from CBRS : {

```



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```
"relinquishmentRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "779652030"
  }
]
```

2020-07-31T08:16:10.232Z - INFO - engine sent successfully, the response to CBRS : {

```
"relinquishmentResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "779652030",
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-07-31T08:16:12.237Z - INFO - deregistration request from CBRS : {

```
"deregistrationRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300"
  }
]
```

2020-07-31T08:16:12.250Z - INFO - engine sent successfully, the response to CBRS : {

```
"deregistrationResponse": [
  {
    "response": {
      "responseCode": 103,
      "responseData": [
        "cbsdId"
      ]
    }
  }
]
```

2020-07-31T08:16:13.640Z - INFO - arrived to nstep starting question answer session with the technician  
 2020-07-31T08:16:13.640Z - 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 :



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2020-07-31T08:16:21.342Z - 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

2020-07-31T08:16:24.266Z - INFO - The final result of the test : WINNF.FT.C.DRG.5 is - passed and :the additional comments for the current test are : n



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## 8.29 WINNF.PT.C.HBT

### PSD: 37dBm/MHz

2020-09-08T06:11:43.878Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-09-08T06:11:43.878Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3570000000L}

2020-09-08T06:11:43.878Z - INFO - Granted Spectrum Max Eirp = 37dBm/MHz

2020-09-08T06:11:43.880Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-09-08T06:33:29.471Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbstdCategory": "B",
    "cbstdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbstd",
      "vendor": "vendor-FII"
    },
    "cbstdSerialNumber": "T99B12300",
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```





```

    },
    {
      "groupId": "FOXCONN",
      "groupType": "INTERFERENCE_COORDINATION"
    }
  ],
  "installationParam": {
    "antennaAzimuth": 60,
    "antennaBeamwidth": 6,
    "antennaDowntilt": 1,
    "antennaGain": 5,
    "antennaModel": "external antenna on",
    "eirpCapability": 41,
    "height": 848.5,
    "heightType": "AGL",
    "horizontalAccuracy": 33.0,
    "indoorDeployment": false,
    "latitude": 88.0,
    "longitude": 100.0,
    "verticalAccuracy": 2.0
  },
  "measCapability": [
    "RECEIVED_POWER_WITH_GRANT"
  ],
  "userId": "FOXCONN"
}
]
}
}
2020-09-08T06:33:29.536Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
]
}
2020-09-08T06:33:31.457Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {

```



```
"cbsId": "PIDASPOT5410Mock-SAST99B12300",
"inquiredSpectrum": [
  {
    "highFrequency": 3570000000,
    "lowFrequency": 3550000000
  }
],
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
}
]
```

2020-09-08T06:33:31.471Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2020-09-08T06:33:31.473Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        },
        "maxEirp": 37,
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsId": "PIDASPOT5410Mock-SAST99B12300",
    "response": {
      "responseCode": 0
    }
  }
]
```



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2020-09-08T06:33:33.572Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationParam": {
      "maxEirp": 37.0,
      "operationFrequencyRange": {
        "highFrequency": 3570000000,
        "lowFrequency": 3550000000
      }
    }
  }
]
```

2020-09-08T06:33:33.582Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "channelType": "GAA",
    "grantExpireTime": "2020-09-15T06:33:33Z",
    "grantId": "30602610",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-09-08T06:33:35.645Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
```



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```

"grantId": "30602610",
"grantRenew": false,
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "GRANTED"
}
]
}
2020-09-08T06:33:35.660Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T06:36:55Z"
    }
  ]
}
2020-09-08T06:34:34.780Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ]
}

```



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```

    },
    "operationState": "AUTHORIZED"
  }
]
}
}
2020-09-08T06:34:34.796Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T06:37:54Z"
    }
  ]
}
}
2020-09-08T06:35:34.970Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ],
  "operationState": "AUTHORIZED"
}
}
}
2020-09-08T06:35:34.984Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",

```



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```
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-09-08T06:38:54Z"
}
]
```

2020-09-08T06:36:35.140Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "30602610",
    "grantRenew": false,
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100
        }
      ]
    },
    "operationState": "AUTHORIZED"
  }
]
```

2020-09-08T06:36:35.154Z - INFO - engine sent successfully, the response to CBRS : {

```
"heartbeatResponse": [
  {
    "cbsId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "30602610",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2020-09-08T06:39:55Z"
  }
]
```

2020-09-08T06:37:35.293Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
```



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```

"cbstdId": "PIDASPOT5410Mock-SAST99B12300",
"grantId": "30602610",
"grantRenew": false,
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "AUTHORIZED"
}
]
}
}
2020-09-08T06:37:35.308Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T06:40:55Z"
    }
  ]
}
}
}
2020-09-08T06:38:35.453Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ]
}
}

```



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```

    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2020-09-08T06:38:35.467Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T06:41:55Z"
    }
  ]
}
2020-09-08T06:39:35.598Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "30602610",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ],
  "operationState": "AUTHORIZED"
}
]
}
2020-09-08T06:39:35.612Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",

```



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```
"grantId": "30602610",
"response": {
  "responseCode": 0
},
"transmitExpireTime": "2020-09-08T06:42:55Z"
}
]
}
```



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**PSD: 30dBm/MHz**

2020-09-08T07:05:08.378Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-09-08T07:05:08.380Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3570000000L}

2020-09-08T07:05:08.380Z - INFO - Granted Spectrum Max Eirp = 30dBm/MHz

2020-09-08T07:05:08.381Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-09-08T07:05:19.819Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"installationParam": {
  "antennaAzimuth": 60,
  "antennaBeamwidth": 6,
  "antennaDowntilt": 1,
  "antennaGain": 5,
  "antennaModel": "external antenna on",
  "eirpCapability": 41,
  "height": 848.5,
  "heightType": "AGL",
  "horizontalAccuracy": 33.0,
  "indoorDeployment": false,
  "latitude": 88.0,
  "longitude": 100.0,
  "verticalAccuracy": 2.0
},
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-09-08T07:05:19.871Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-09-08T07:05:21.915Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [

```



```
{
  "highFrequency": 3570000000,
  "lowFrequency": 3550000000
},
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
}
]
```

2020-09-08T07:05:21.931Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2020-09-08T07:05:21.933Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        },
        "maxEirp": 30,
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "response": {
      "responseCode": 0
    }
  }
]
}
```

2020-09-08T07:05:23.990Z - INFO - grant request from CBRS : {

```
"grantRequest": [
```





```
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  },
  "operationParam": {
    "maxEirp": 30.0,
    "operationFrequencyRange": {
      "highFrequency": 3570000000,
      "lowFrequency": 3550000000
    }
  }
}
```

2020-09-08T07:05:24.002Z - INFO - engine sent successfully, the response to CBRS : {

```
"grantResponse": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "channelType": "GAA",
    "grantExpireTime": "2020-09-15T07:05:24Z",
    "grantId": "167508839",
    "heartbeatInterval": 60,
    "response": {
      "responseCode": 0
    }
  }
]
```

2020-09-08T07:05:26.089Z - INFO - heartbeat request from CBRS : {

```
"heartbeatRequest": [
  {
    "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
    "grantId": "167508839",
    "grantRenew": false,
  }
]
```



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```

"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "GRANTED"
}
]
}
2020-09-08T07:05:26.104Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "167508839",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T07:08:46Z"
    }
  ]
}
}
2020-09-08T07:06:25.265Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "167508839",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ],
  "operationState": "AUTHORIZED"
}

```



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```

}
]
}
2020-09-08T07:06:25.279Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "167508839",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T07:09:45Z"
    }
  ]
}
}

```



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**PSD: 23dBm/MHz**

2020-09-08T06:57:22.283Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2020-09-08T06:57:22.286Z - INFO - Selected spectrum frequency is {'lowFrequency': 3550000000L, 'highFrequency': 3570000000L}

2020-09-08T06:57:22.286Z - INFO - Granted Spectrum Max Eirp = 23dBm/MHz

2020-09-08T06:57:22.288Z - INFO - the selected test from the user : PowerMeasTest is starting now

2020-09-08T06:59:36.839Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "fcclId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
    }
],
"installationParam": {
    "antennaAzimuth": 60,
    "antennaBeamwidth": 6,
    "antennaDowntilt": 1,
    "antennaGain": 5,
    "antennaModel": "external antenna on",
    "eirpCapability": 41,
    "height": 848.5,
    "heightType": "AGL",
    "horizontalAccuracy": 33.0,
    "indoorDeployment": false,
    "latitude": 88.0,
    "longitude": 100.0,
    "verticalAccuracy": 2.0
},
"measCapability": [
    "RECEIVED_POWER_WITH_GRANT"
],
"userId": "FOXCONN"
}
]
}
2020-09-08T06:59:36.898Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsId": "PIDASPOT5410Mock-SAST99B12300",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-09-08T06:59:38.940Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsId": "PIDASPOT5410Mock-SAST99B12300",
            "inquiredSpectrum": [
    
```



```
{
  "highFrequency": 3570000000,
  "lowFrequency": 3550000000
}
],
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
}
]
}
]
}
```

2020-09-08T06:59:38.956Z - INFO - The requested spectrum is in the range, SpectrumInquiry response code is 0

2020-09-08T06:59:38.956Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3570000000,
          "lowFrequency": 3550000000
        },
        "maxEirp": 23,
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
    "response": {
      "responseCode": 0
    }
  }
]
}
```

2020-09-08T06:59:41.029Z - INFO - grant request from CBRS : {

```
"grantRequest": [
```



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```

"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100
    }
  ]
},
"operationState": "GRANTED"
}
]
}
2020-09-08T06:59:43.154Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "435810299",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T07:03:03Z"
    }
  ]
}
}
2020-09-08T07:00:42.388Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "435810299",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
          }
        ]
      }
    }
  ],
  "operationState": "AUTHORIZED"
}

```



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```

}
]
}
2020-09-08T07:00:42.403Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "435810299",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2020-09-08T07:04:02Z"
    }
  ]
}
}

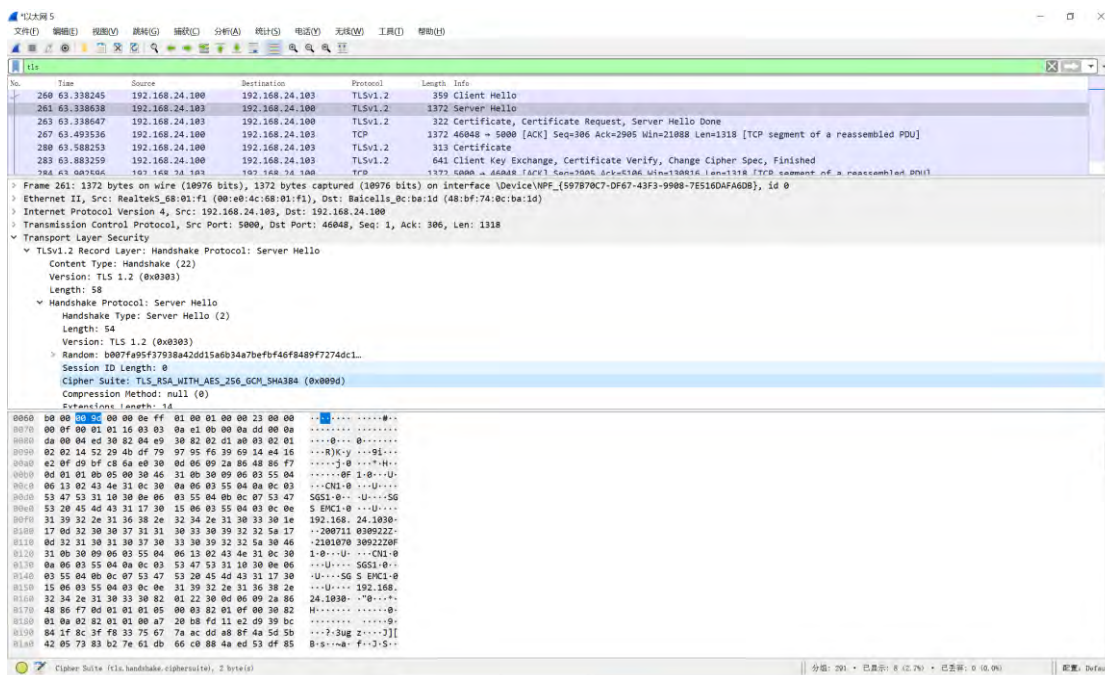
```



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**8.30 WINNF.FT.C.SCS.1**

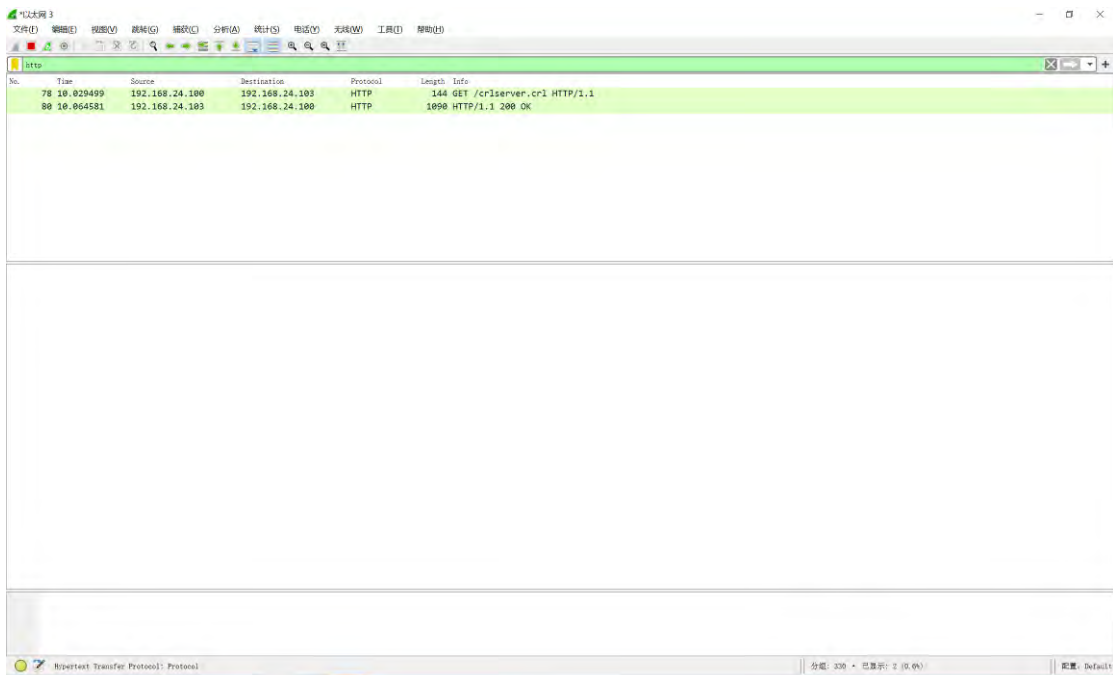
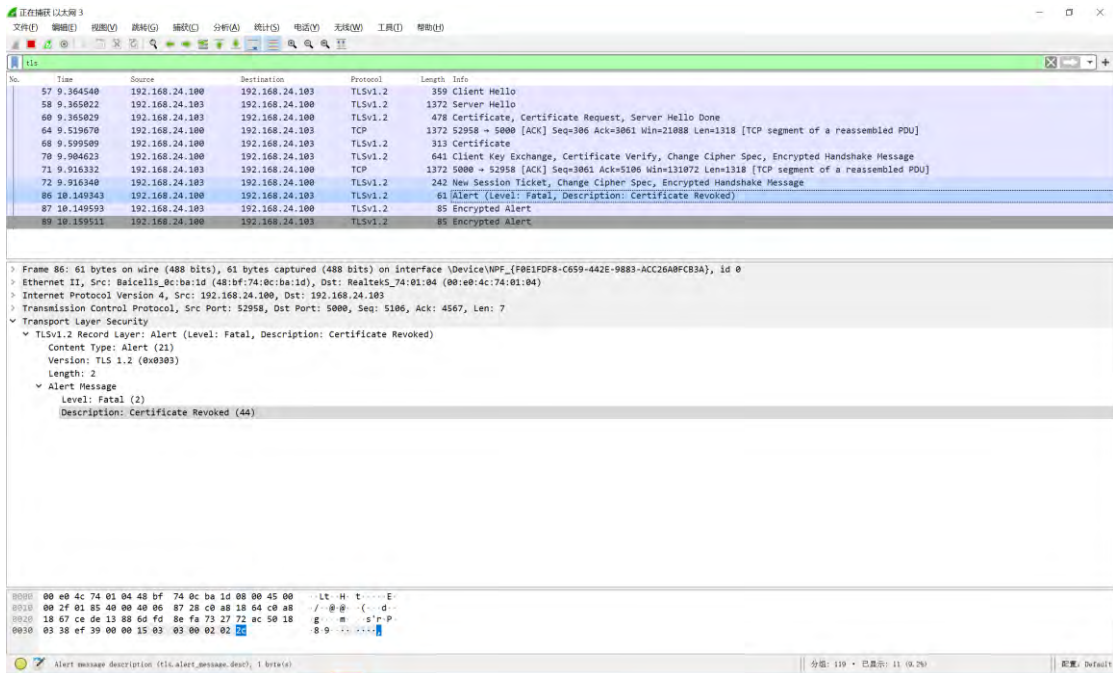


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**8.31 WINNF.FT.C.SCS.2**



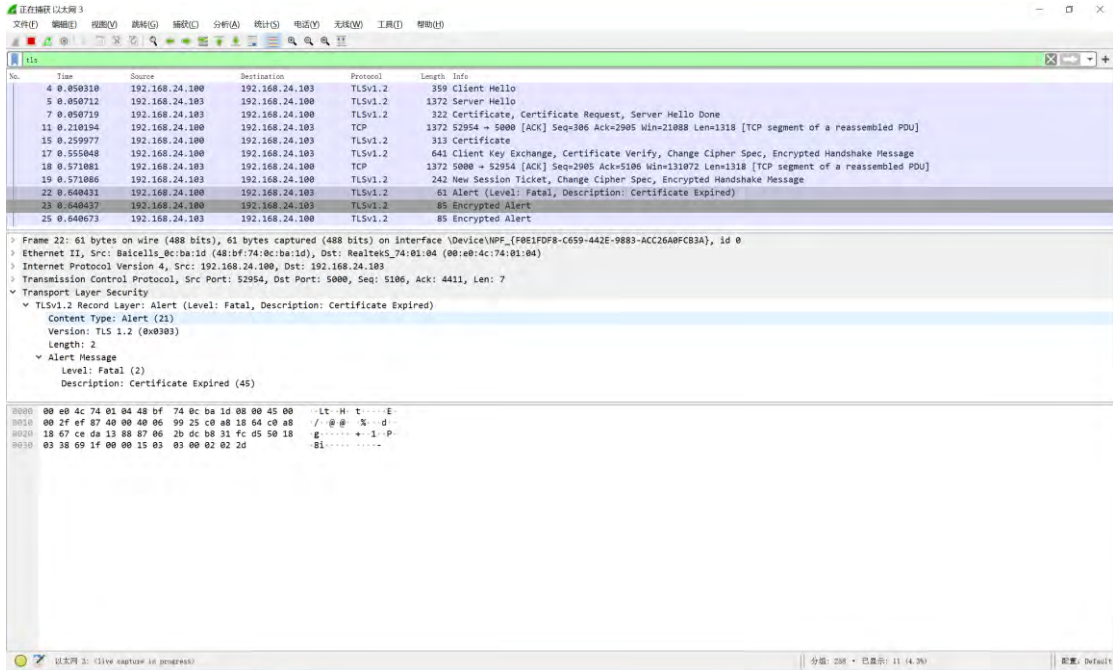
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**8.32 WINNF.FT.C.SCS.3**



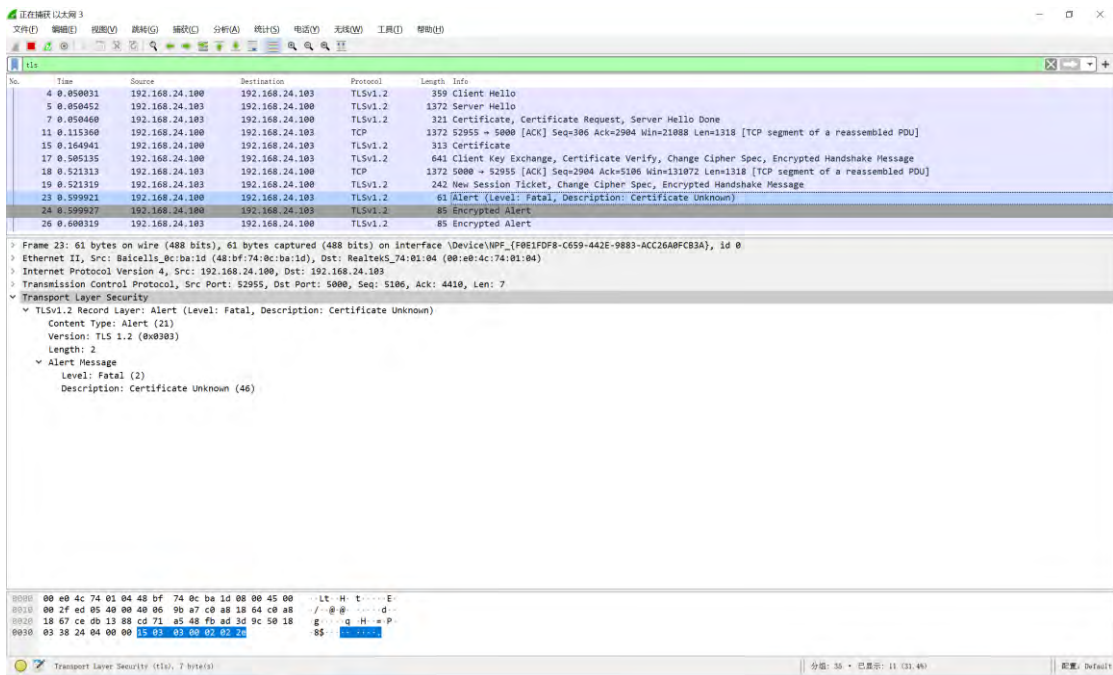
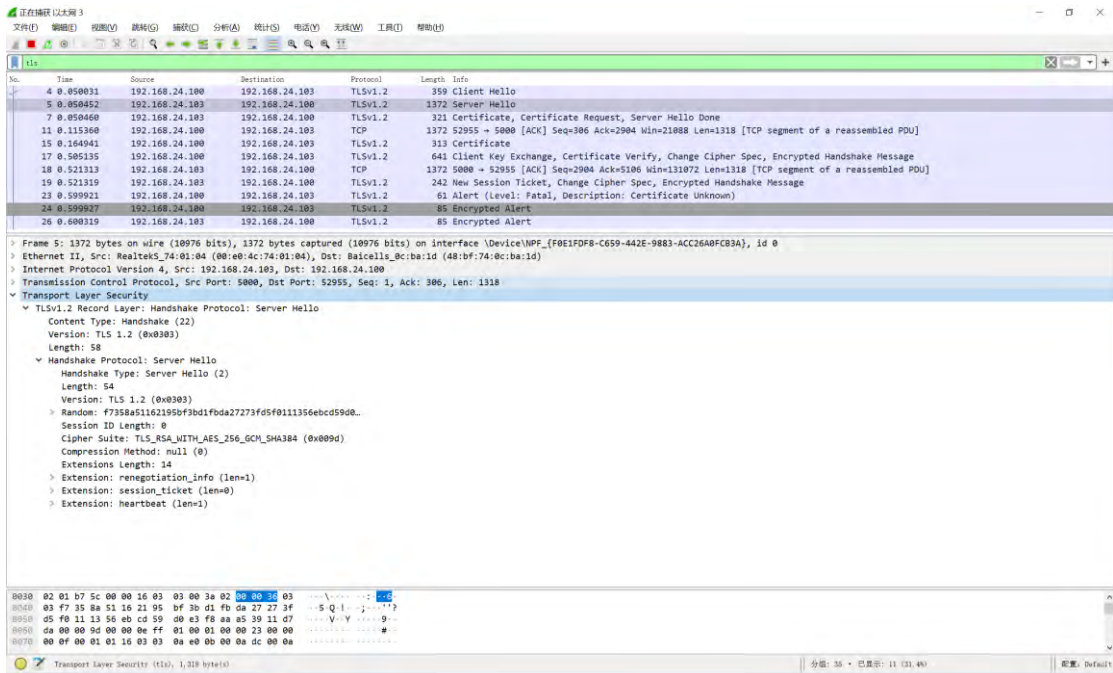
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**8.33 WINNF.FT.C.SCS.4**



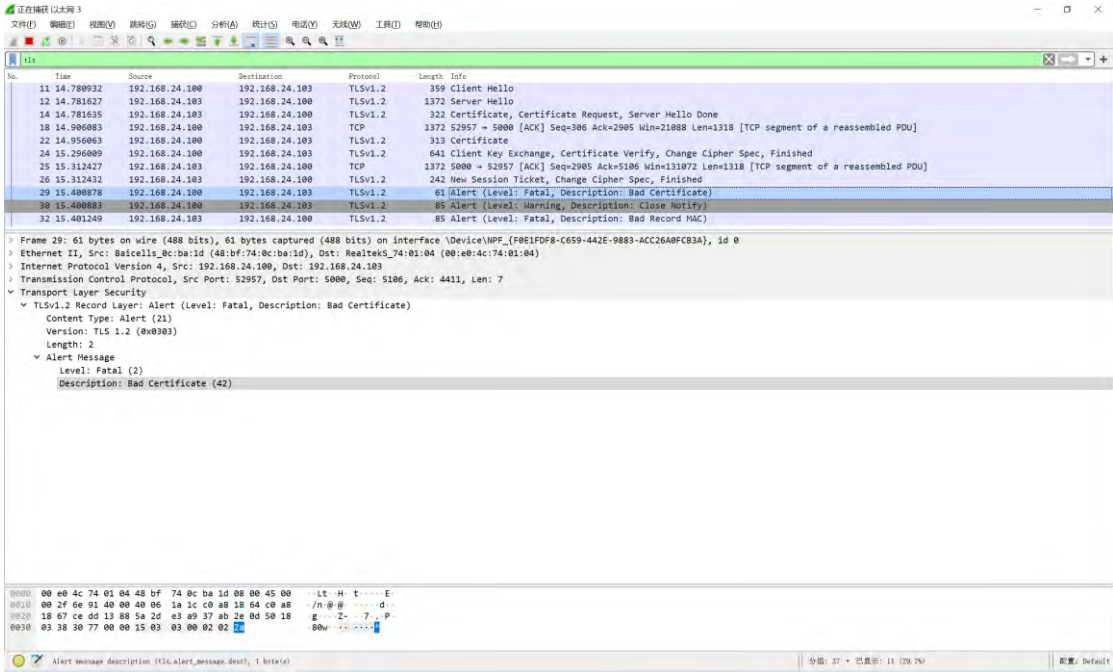
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**8.34 WINNF.FT.C.SCS.5**



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## 9 Photographs

### 9.1 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -



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