



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

Test Result:	Pass*
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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

Authorized for issue by:				
				
		Calvin Weng /Project Engineer		
				
		Eric Fu /Reviewer		



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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:

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518057.

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

6.2 CPE-CBSD Handshake Procedures

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

6.3 CBSD Test Procedure

- Connect the UUT to SAS Test Harness system and RF Test instruments via the CBSD interface and RF components. The highest level is set to test configuration.
- UUT shall be UTC time synchronized
- The frequency band is granted and set as UUT supported Modulation and Channels, transmitted power of the UUT according to it granted parameters from the SAS 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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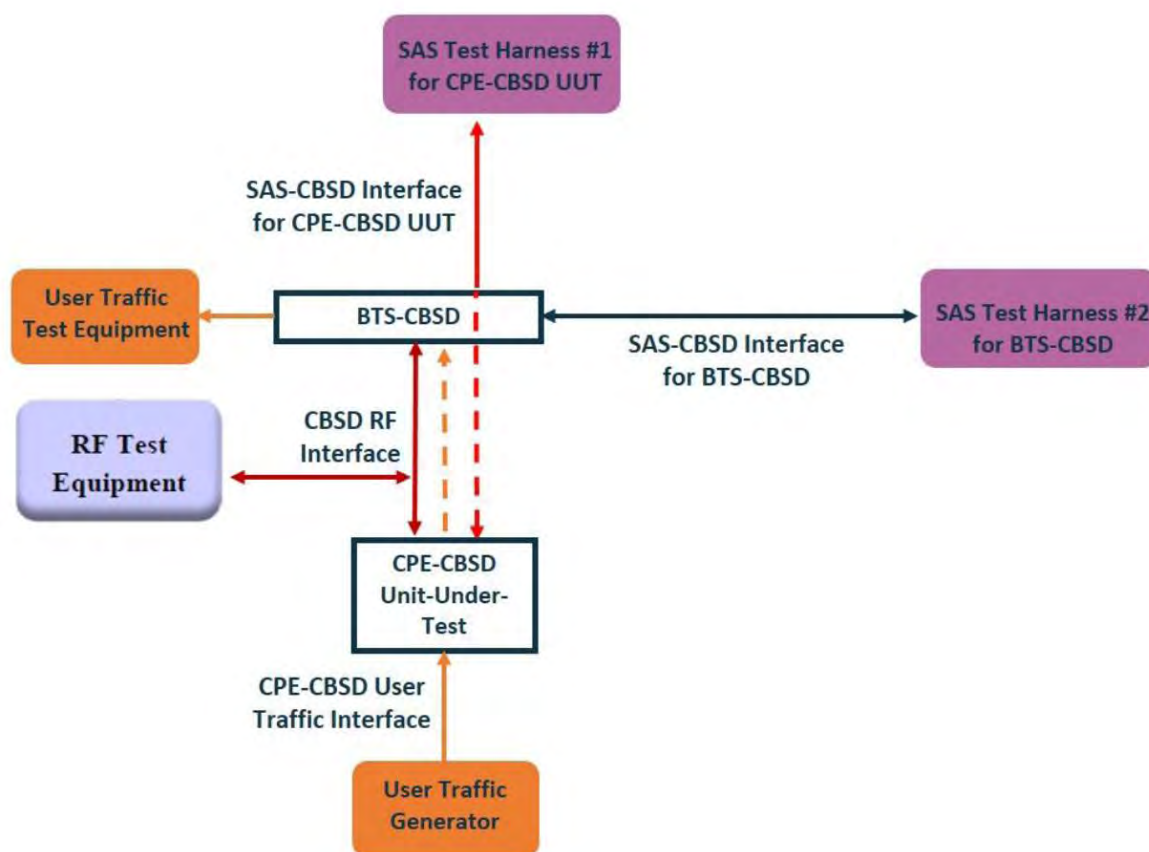
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6.6 Test Environment

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

7 Test Data

7.1 CBSD Registration Process

7.1.1 WINNF.FT.C.REG.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends correct Registration request information, as specified in [n.5], to the SAS Test Harness: - The required userId, fcld and cbsdSerialNumber registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. - Any REG-conditional or optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges. Note: It is outside the scope of this document to test the Registration information that is supplied via another means.	■ Pass	□ Fail
3	SAS Test Harness sends a CBSD Registration Response as follows: - cbsdId = C - measReportConfig shall not be included - responseCode = 0	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	■ Pass	□ Fail

7.1.2 WINNF.FT.C.REG.5

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state - All of the required and REG-Conditional parameters shall be configured and CPI signature provided	--	--
2	CBSD sends Registration request to the SAS Test Harness: - The required userId, fcld and cbsdSerialNumber and REG-Conditional cbsdCategory, airInterface, measCapability and cpiSignatureData registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. - Any optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges.	☒ Pass	☐ Fail
3	SAS Test Harness sends a CBSD Registration Response as follows: - cbsdId = C - measReportConfig shall not be included. - responseCode = 0	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



7.1.3 WINNF.FT.C.REG.7

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness	--	--
2	UUT has successfully registered with SAS Test Harness	--	--
3	Change an installation parameters at the UUT (time T) Tester needs to record the current time at which the parameter change is executed.	--	--
4	Monitor the SAS-CBSD interface. UUT sends a deregistrationRequest to the SAS Test Harness The deregistration request shall be sent within (T + 60 seconds) from step 3.	☒ 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: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



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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: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=200) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



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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: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=103) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



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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: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=101) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail

7.1.8 WINNF.FT.C.REG.16

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=100) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



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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: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: - SAS response does not include cbsdId - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=201) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



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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: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C	--	--
2	UUT sends valid Grant Request.	■ Pass	□ Fail
3	SAS Test Harness sends a Grant Response message, including ● cbsdId=C - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail

7.2.2 WINNF.FT.C.GRA.2

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C	--	--
2	UUT sends valid Grant Request.	■ Pass	□ Fail
3	SAS Test Harness sends a Grant Response message, including - cbsdId=C - responseCode = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=401) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail



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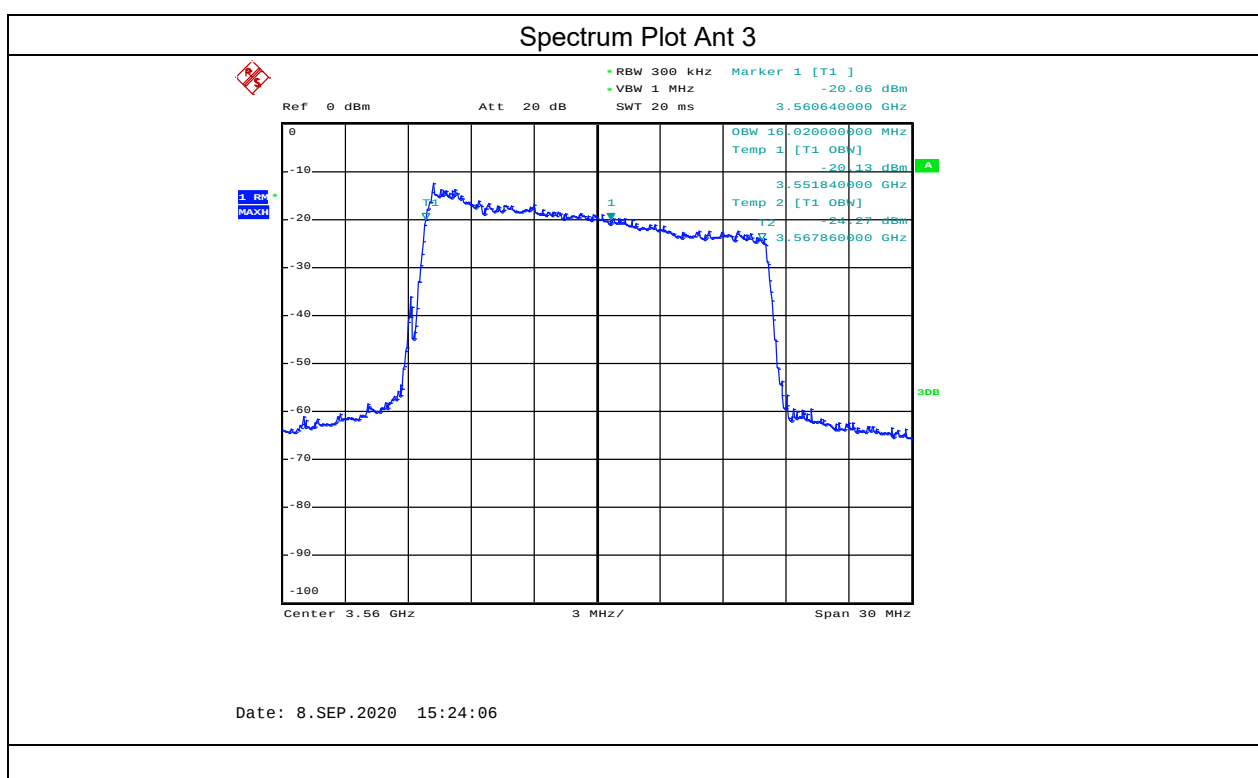
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7.3 CBSD HeartBeat Process

7.3.1 WINNF.FT.C.HBT.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness, with cbsdId = C	--	--
2	UUT sends a message: ● If message is type Spectrum Inquiry Request, go to step 3, or ● If message is type Grant Request, go to step 5	--	--
3	UUT sends Spectrum Inquiry Request. Validate: ● cbsdId = C ● List of frequencyRange objects sent by UUT are within the CBRS frequency range	■ Pass	□ Fail
4	SAS Test Harness sends a Spectrum Inquiry Response message, including the following parameters: ● cbsdId = C ● availableChannel is an array of availableChannel objects ● responseCode = 0	--	--
5	UUT sends Grant Request message. Validate: ● cbsdId = C ● maxEIRP is at or below the limit appropriate for CBSD category as defined by Part 96 ● operationFrequencyRange, F, sent by UUT is a valid range within the CBRS band	■ Pass	□ Fail
6	SAS Test Harness sends a Grant Response message, including the parameters: ● cbsdId = C ● grantId = G = a valid grant ID ● grantExpireTime = UTC time greater than duration of the test ● responseCode = 0	--	--
7	UUT sends a first Heartbeat Request message. Verify Heartbeat Request message is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "GRANTED"	■ Pass	□ Fail
8	SAS Test Harness sends a Heartbeat Response message, with the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0	--	--

9	For further Heartbeat Request messages sent from UUT after completion of step 8, validate message is sent within latest specified heartbeatInterval, and: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED" and SAS Test Harness responds with a Heartbeat Response message including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = current UTC time + 200 seconds ● responseCode = 0	☒ Pass	☐ Fail
10	Monitor the RF output of the UUT from start of test until UUT transmission commences. Verify: ● UUT does not transmit at any time prior to completion of the first heartbeat response ● UUT transmits after step 8 is complete, and its transmission is limited to within the bandwidth range F.	☒ Pass	☐ Fail



7.3.2 WINNF.FT.C.HBT.3

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface	--	--
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within Heartbeat Interval specified in the latest Heartbeat Response, and formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED"	--	--
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = T = Current UTC time ● responseCode = 105 (DEREGISTER)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the RF output of the UUT. Verify: ● UUT shall stop transmission within (T + 60 seconds) of completion of step 3	Pass	Fail

7.3.3 WINNF.FT.C.HBT.4

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

7.3.4 WINNF.FT.C.HBT.5

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in GRANTED, but not AUTHORIZED state (i.e. has not performed its first Heartbeat Request)	--	--
2	UUT sends a Heartbeat Request message. Verify Heartbeat Request message is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "GRANTED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = T = current UTC time ● ?responseCode = 501 (SUSPENDED_GRANT)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the SAS-CBSD interface. Verify either A OR B occurs: A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: ● cbsdId = C ● grantId = G ● operationState = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: ● cbsdId = C ● grantId = G Monitor the RF output of the UUT. Verify: ● UUT does not transmit at any time	☒ Pass	☐ Fail

7.3.5 WINNF.FT.C.HBT.6

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface	--	--
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "AUTHORIZED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = T = current UTC time ● responseCode = 501 (SUSPENDED GRANT)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the SAS-CBSD interface. Verify either A OR B occurs: A. UUT sends a Heartbeat Request message. Ensure message is sent within latest specified heartbeatInterval, and is correctly formatted with parameters: ● cbsdId = C ● grantId = G ● operationState = "GRANTED" B. UUT sends a Relinquishment request message. Ensure message is correctly formatted with parameters: ● cbsdId = C ● grantId = G Monitor the RF output of the UUT. Verify: ● UUT shall stop transmission within (T+60) seconds of completion of step 3	☒ Pass	☐ Fail

7.3.6 WINNF.FT.C.HBT.7

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has registered successfully with SAS Test Harness - UUT has a valid single grant as follows: - valid cbsdId = C - valid grantId = G - grant is for frequency range F, power P - grantExpireTime = UTC time greater than duration of the test - UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface	--	--
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: - cbsdId = C - grantId = G - transmitExpireTime = T = current UTC time - responseCode = 502 (UNSYNC_OP_PARAM)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the SAS-CBSD interface. Verify: - UUT sends a Grant Relinquishment Request message. Verify message is correctly formatted with parameters: - cbsdId = C - grantId = G Monitor the RF output of the UUT. Verify: - UUT shall stop transmission within (T+60) seconds of completion of step 3	☒ Pass	☐ Fail

7.3.7 WINNF.FT.C.HBT.9

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has registered successfully with SAS Test Harness ● UUT has a valid single grant as follows: ○ valid cbsdId = C ○ valid grantId = G ○ grant is for frequency range F, power P ○ grantExpireTime = UTC time greater than duration of the test ● UUT is in GRANTED, but not AUTHORIZED state(i.e. has not performed its first Heartbeat Request)	--	--
2	UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: ● cbsdId = C ● grantId = G ● operationState = "GRANTED"	☒ Pass	☐ Fail
3	After completion of step 2, SAS Test Harness does not respond to any further ● messages from UUT to simulate loss of network connection	--	--
4	Monitor the RF output of the UUT from start of test to 60 seconds after step 3. Verify: At any time during the test, UUT shall not transmit on RF interface	☒ Pass	☐ Fail

7.3.8 WINNF.FT.C.HBT.10

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has registered successfully with SAS Test Harness - UUT has a valid single grant as follows: - valid cbsdId = C - valid grantId = G - grant is for frequency range F, power P - grantExpireTime = UTC time greater than duration of the test - UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface	--	--
2	UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: - cbsdId = C - grantId = G - transmitExpireTime = T = current UTC time + 200 seconds - responseCode = 0	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the RF output of the UUT. Verify: UUT shall stop all transmission on RF interface within (transmitExpireTime + 60 seconds), using the transmitExpireTime sent in Step 3.	☒ Pass	☐ Fail

7.3.9 WINNF.FT.C.HBT.11

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has registered successfully with SAS Test Harness - UUT has a valid single grant as follows: - valid cbsdId = C - valid grantId = G - grant is for frequency range F, power P - grantExpireTime = UTC time greater than duration of the test - UUT is in AUTHORIZED state and is transmitting within the grant bandwidth F on RF interface - Grant has the following parameters at the start of the test: - grantExpireTime = UTC time equal to time at start of test + 300 seconds = Tgrant_expire - transmitExpireTime = UTC time equal to time at start of test + 200 seconds - heartbeatInterval = 60 seconds	--	--
2	UUT sends a Heartbeat Request message. If Heartbeat Request message contains grantRenew = TRUE, go to Step 6, else go to Step 3.	--	--
3	Verify Heartbeat Request message is sent within the latest specified heartbeatInterval, and is formatted correctly, including: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
4	SAS Test Harness sends a Heartbeat Response message, with the following parameters: - cbsdId = C - grantId = G - transmitExpireTime = current UTC + 200 seconds - grantExpireTime = same as Step 1 - responseCode = 0	--	--
5	Go to Step 2	--	--
6	Verify Heartbeat Request message is sent within the latest specified heartbeatInterval, and is formatted correctly, including: - cbsdId = C - grantId = G - operationState = "AUTHORIZED" - grantRenew = TRUE	☒ Pass	☐ Fail
7	SAS Test Harness sends a Heartbeat Response message, with the following parameters: - cbsdId = C - grantId = G - grantExpireTime = UTC time set far in the future - transmitExpireTime = current UTC time + 200 seconds - responseCode = 0	--	--



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8	Continue to respond to any subsequent Heartbeat Request from CBSD with Heartbeat Response with the following parameters: ● cbsdId = C ● grantId = G ● transmitExpireTime = same as Step 7 ● responseCode = 0	--	--
9	Monitor RF transmission of UUT from start of test until Tgrant_expire + 60 seconds and ensure UUT continues to transmit throughout the time period.	☒ Pass	☐ 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: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT has successfully registered with SAS Test Harness, with cbsdId=C and measCapability = "RECEIVED_POWER_WITH_GRANT"	--	--
2	UUT sends a Grant Request message. Verify Grant Request message contains all required parameters properly formatted, and specifically: - cbsdId = C - operationParam is present and format is valid	■ Pass	□ Fail
3	SAS Test Harness sends a Grant Response message, with the following parameters: - cbsdId = C - grantId = G = valid grant ID - grantExpireTime = UTC time in the future - heartbeatInterval = 60 seconds - measReportConfig= "RECEIVED_POWER_WITH_GRANT" - operationParam is set to valid operating parameters - channelType = "GAA" - responseCode = 0	--	--
4	UUT sends a Heartbeat Request message. Verify message contains all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G - operationState = "GRANTED"	■ Pass	□ Fail
5	If Heartbeat Request message (step 4) contains measReport object, then: - verify measReport is properly formatted as object rcvdPowerMeasReport - end test, with PASS result else, if Heartbeat Request message (step 4) does not contain measReport object, then: - If number of Heartbeat Requests sent by UUT after Step 3 is = 5, then stop test with result of FAIL	■ Pass	□ Fail
6	SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G - transmitExpireTime = current UTC time + 200 seconds - responseCode = 0 Go to Step 4, above	--	--

7.4.2 WINNF.FT.C.MES.4

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT has successfully registered with SAS Test Harness, with cbsdId=C and measCapability = "RECEIVED_POWER_WITH_GRANT" - UUT has received a valid grant with grantId = G - UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. - Grant has heartbeatInterval = 60 seconds	--	--
2	UUT sends a Grant Request message. Verify Grant Request message contains all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G - measReportConfig= "RECEIVED_POWER_WITH_GRANT" - responseCode = 0	--	--
4	UUT sends a Heartbeat Request message. Verify message contains all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G - operationState = "AUTHORIZED"	☒ Pass	☐ Fail
5	If Heartbeat Request message (step 4) contains measReport object, then: - verify measReport is properly formatted as object rcvdPowerMeasReport - end test, with PASS result else, if Heartbeat Request message (step 4) does not contain measReport object, then: - If number of Heartbeat Requests sent by UUT after Step 3 is = 5, then stop test with result of FAIL	☒ Pass	☐ Fail
6	SAS Test Harness sends a Heartbeat Response message, containing all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G - responseCode = 0 Go to Step 4, above	--	--

7.5 CBSD Relinquishment Process

7.5.1 WINNF.FT.C.RLQ.1

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT has successfully registered with SAS Test Harness, with cbsdId=C ● UUT has received a valid grant with grantId = G ● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to relinquish UUT Grant from the SAS Test Harness	--	--
2	UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically: ● cbsdId = C ● grantId = G	■ Pass	□ Fail
3	SAS Test Harness shall approve the request with a Relinquishment Response message with parameters: - cbsdId = C - grantId = G ● responseCode = 0	--	--
4	After completion of step 3, SAS Test Harness will not provide any additional positive ● response (responseCode=0) to further request messages from the UUT	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	■ Pass	□ Fail

7.5.2 WINNF.FT.C.RLQ.3

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT has successfully registered with SAS Test Harness, with cbsdId=C - UUT has received a valid grant with grantId = G - UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to relinquish UUT Grant from the SAS Test Harness	--	--
2	UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G	--	--
3	SAS Test Harness shall approve the request with a Relinquishment Response message with parameters: - cbsdId = C - No grantId - responseCode = 102	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒ Pass	☐ Fail

7.5.3 WINNF.FT.C.RLQ.5

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness - UUT has successfully registered with SAS Test Harness, with cbsdId=C - UUT has received a valid grant with grantId = G - UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to relinquish UUT Grant from the SAS Test Harness	--	--
2	UUT sends a Relinquishment Request message. Verify message contains all required parameters properly formatted, and specifically: - cbsdId = C - grantId = G	--	--
3	SAS Test Harness shall approve the request with a Relinquishment Response message with parameters: - cbsdId = C - grantId = G - responseCode = 103	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall stop RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒ Pass	☐ Fail

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

7.6.2 WINNF.FT.C.DRG.3

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: ● UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness ● UUT has successfully registered with SAS Test Harness, with cbsdId=C ● UUT has received a valid grant with grantId = G ● UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to deregister UUT from the SAS Test Harness	--	--
2	UUT sends a Relinquishment request and receives Relinquishment response with ● responseCode=0	--	--
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C.	■ Pass	□ Fail
4	SAS Test Harness shall approve the request with a Deregistration Response message with parameters: ● no cbsdId ● responseCode = 102	--	--
5	After completion of step 3, SAS Test Harness will not provide any additional positive ● response (responseCode=0) to further request messages from the UUT.	--	--
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: ● UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	■ Pass	□ Fail

7.6.3 WINNF.FT.C.DRG.5

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, with cbsdId=C • UUT has received a valid grant with grantId = G • UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. Invoke trigger to deregister UUT from the SAS Test Harness	--	--
2	UUT sends a Relinquishment request and receives Relinquishment response with • responseCode=0	--	--
3	UUT sends Deregistration Request to SAS Test Harness with cbsdId = C.	■ Pass	□ Fail
4	SAS Test Harness shall approve the request with a Deregistration Response message with parameters: • cbsdId=C • responseCode = 103	--	--
5	After completion of step 3, SAS Test Harness will not provide any additional positive • response (responseCode=0) to further request messages from the UUT.	--	--
6	Monitor the RF output of the UUT from start of test until 60 seconds after Step 4 is complete. This is the end of the test. Verify: • UUT stopped RF transmission at any time between triggering the deregistration and either A OR B occurs: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	■ Pass	□ Fail

7.7 CBSD Security Validation

7.7.1 WINNF.FT.C.SCS.1

#	Test Execution Steps	Results	
1	- UUT shall start CBSD-SAS communication with the security procedure - The UUT shall establish a TLS handshake with the SAS Test Harness using configured certificate. - Configure the SAS Test Harness to accept the security procedure and establish the connection	☒ Pass	☐ Fail
2	- Make sure that Mutual authentication happens between UUT and the SAS Test Harness. - Make sure that UUT uses TLS v1.2 - Make sure that cipher suites from one of the following is selected, - TLS_RSA_WITH_AES_128_GCM_SHA256 - TLS_RSA_WITH_AES_256_GCM_SHA384 - TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 - TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 - TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256	☒ Pass	☐ Fail
3	A successful registration is accomplished using one of the test cases described in section 6.1.4.1, depending on CBSD capability. UUT sends a registration request to the SAS Test Harness and the SAS Test Harness sends a Registration Response with responseCode = 0 and cbsdId.	☒ Pass	☐ Fail
4	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail

7.7.2 WINNF.FT.C.SCS.2

#	Test Execution Steps	Results	
1	UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	- Make sure that UUT uses TLS v1.2 for security establishment. - Make sure UUT selects the correct cipher suite. - UUT shall use CRL or OCSP to verify the validity of the server certificate. - Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	☒ Pass	☐ Fail
3	UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail

7.7.3 WINNF.FT.C.SCS.3

#	Test Execution Steps	Results	
1	UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	- Make sure that UUT uses TLS v1.2 for security establishment. - Make sure UUT selects the correct cipher suite. - UUT shall use CRL or OCSP to verify the validity of the server certificate. - Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	☒ Pass	☐ Fail
3	UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail

7.7.4 WINNF.FT.C.SCS.4

#	Test Execution Steps	Results	
1	UUT shall start CBSD-SAS communication with the security procedures	☒ Pass	☐ Fail
2	- Make sure that UUT uses TLS v1.2 for security establishment. - Make sure UUT selects the correct cipher suite. - UUT shall use CRL or OCSP to verify the validity of the server certificate - Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	☒ Pass	☐ Fail
3	UUT may retry for the security procedure which shall fail.	☒ Pass	☐ Fail
4	SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: UUT shall not transmit RF	☒ Pass	☐ Fail



7.7.5 WINNF.FT.C.SCS.5

#	Test Execution Steps	Results	
1	● UUT shall start CBSD-SAS communication with the security procedures	■ Pass	□ Fail
2	● Make sure that UUT uses TLS v1.2 for security establishment. ● Make sure UUT selects the correct cipher suite. ● UUT shall use CRL or OCSP to verify the validity of the server certificate ● Make sure that Mutual authentication does not happen between UUT and the SAS Test Harness.	■ Pass	□ Fail
3	● UUT may retry for the security procedure which shall fail.	■ Pass	□ Fail
4	● SAS Test-Harness shall not receive any Registration request or any application data.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: ● UUT shall not transmit RF	■ Pass	□ Fail



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7.8 CBSD RF Power Measurement

7.8.1 WINNF.PT.C.HBT

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: - UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness - UUT has registered with the SAS, with CBSD ID = C - UUT has a single valid grant G with parameters {lowFrequency = FL, highFrequency = FH, maxEirp = Pi}, with grant in AUTHORIZED state, and grantExpireTime set to a value far past the duration of this test case Note: in order for the UUT to request a grant with the parameters {lowFrequency, highFrequency, maxEirp}, the SAS Test Harness may need to provide appropriate guidance in the availableChannel object of the spectrumInquiry response message, and the operationParam object of the grant response message. Alternately, the UUT vendor may provide the ability to set those parameters on the UUT so that the UUT will request a grant with those parameters	--	--
2	UUT and SAS Test Harness perform a series of Heartbeat Request/Response cycles, which continues until the other test steps are complete. Messaging for each cycle is as follows: - UUT sends Heartbeat Request, including: - cbsdId = C - grantId = G - SAS Test Harness responds with Heartbeat Response, including: - cbsdId = C - grantId = G - transmitExpireTime = current UTC time + 200 seconds - responseCode = 0	--	--
3	Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, Pi. The RF measurement method is out of scope of this document, but may include additional configuration of the UUT, as required, to fulfill the requirements of the power measurement method. Note: it may be required for the vendor to provide a method or configuration to bring the UUT to a mode which is required by the measurement methodology. Any such mode is vendor-specific and depends upon UUT behavior and the measurement methodology.	☒ Pass	☐ Fail

RF measurement plot for Test Case :

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

Frequency (MHz)	Channel Bandwidth (MHz)	Granted maxEIRP (dBm/MHz)	Conducted PSD (dBm/MHz)		Antenna Gain (dBi)	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

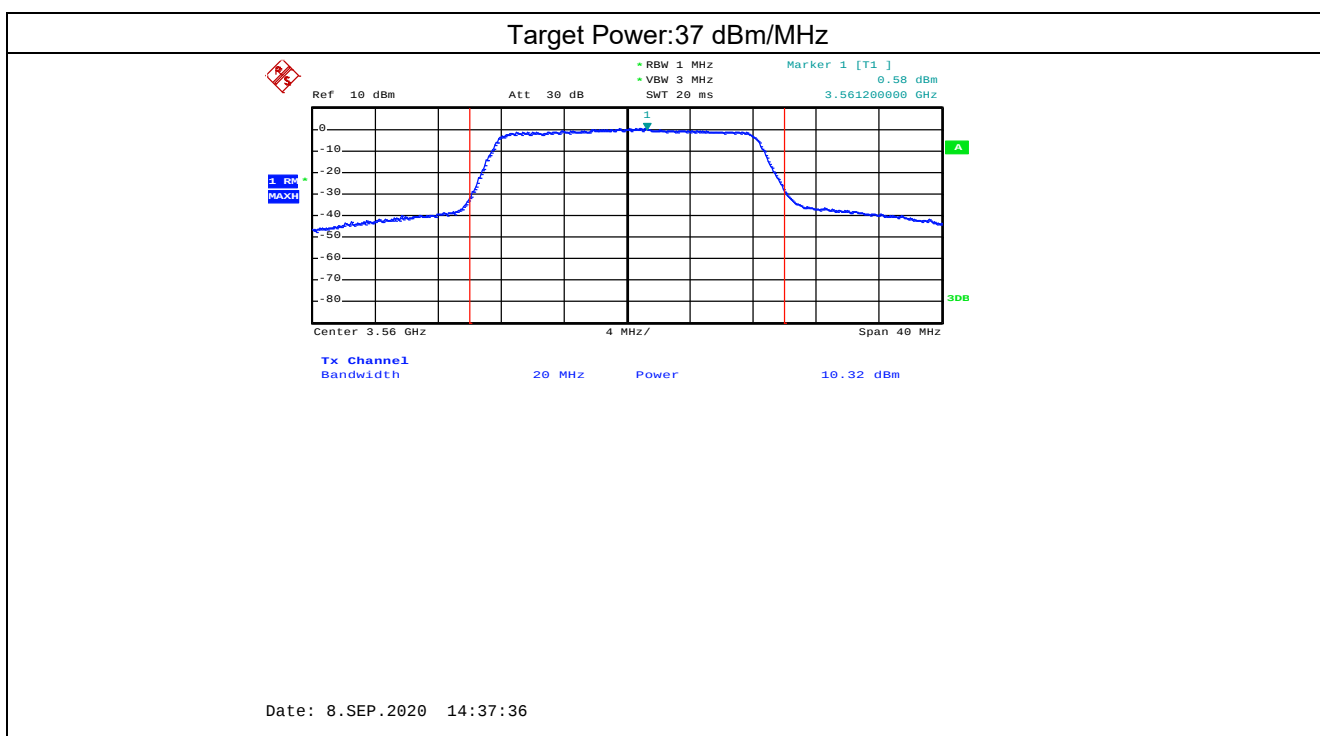
Note: maxEIRP= Conducted PSD+ Direction Gain + Cable loss+10log(n);

Antenna gain=18 dBi;

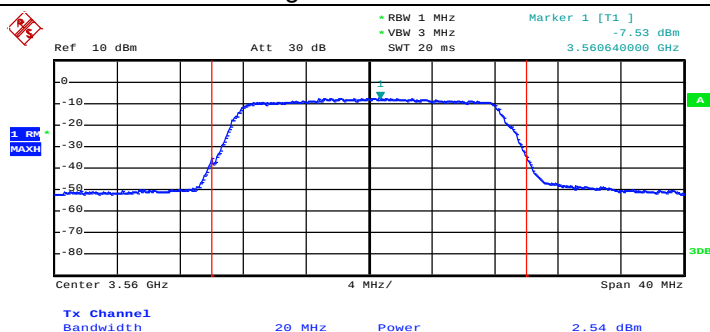
Direction Gain= Antenna gain + Array Gain= 18+10log(2)=21.01dB;

10log(n)=3.01, n= Antenna number;

Cable loss=5dB

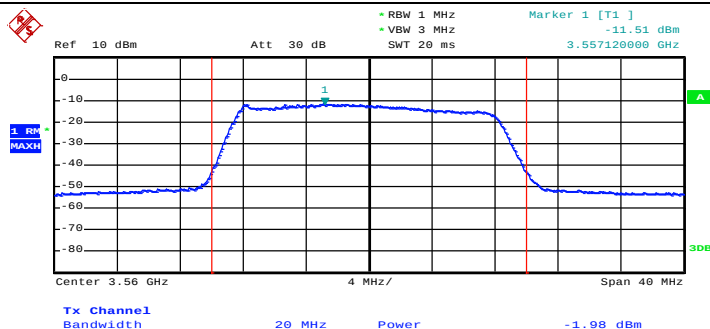


Target Power: 30 dBm/MHz



Date: 8.SEP.2020 15:06:44

Target Power: 23 dBm/MHz



Date: 8.SEP.2020 15:00:20



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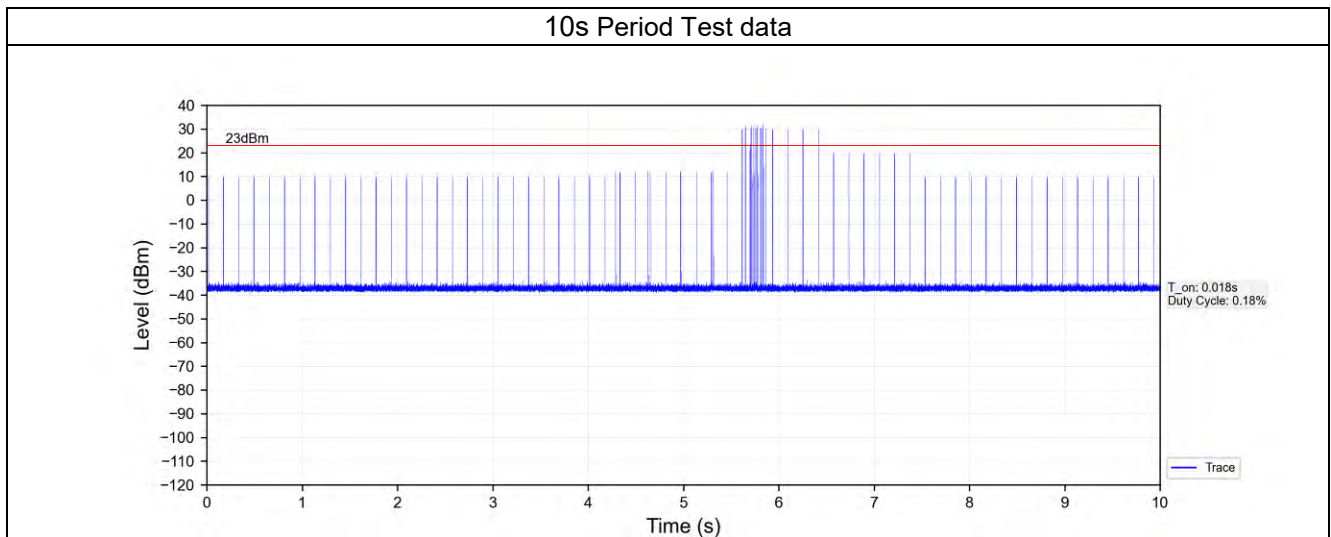


7.9 Duration and Duty Cycle

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:

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

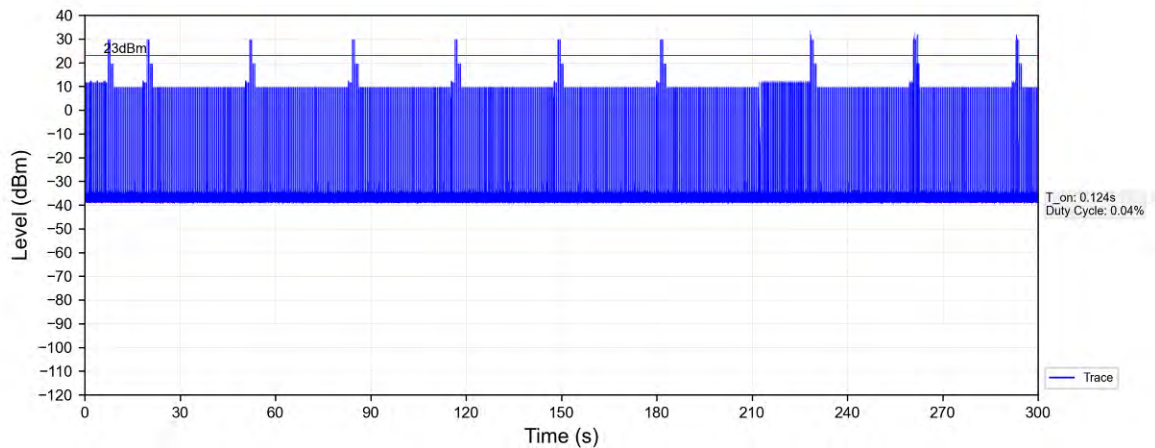


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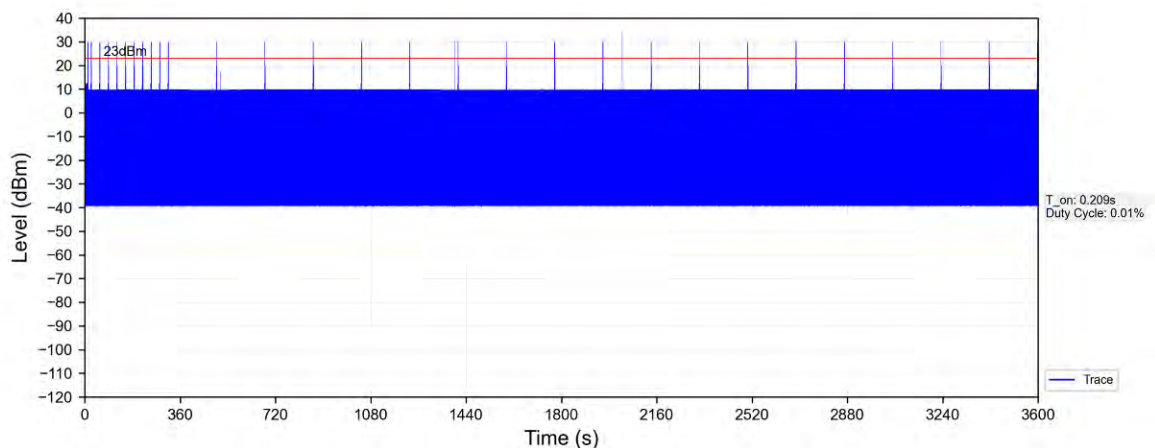
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300s Period Test data



3600s Period Test data



Note:

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



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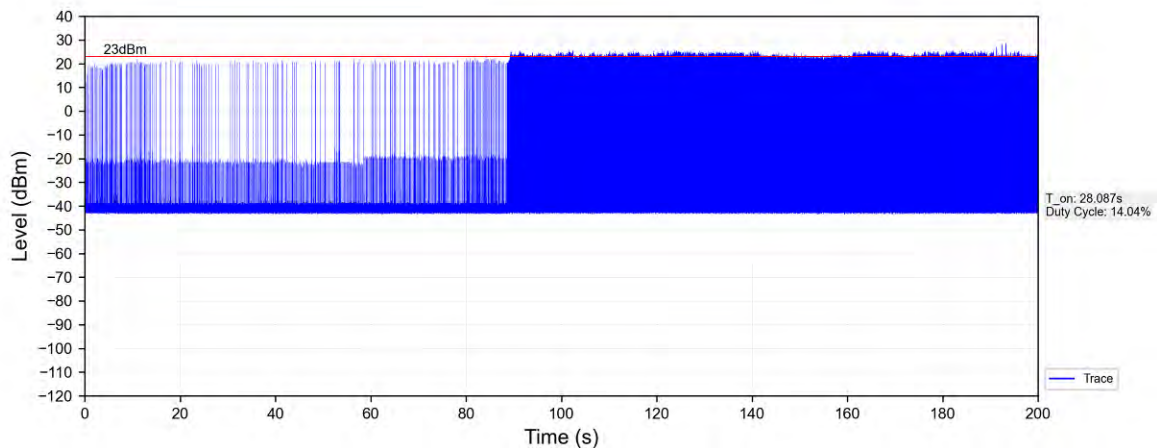
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7.10 Verify that the device will register with a SAS when operating below 23 dBm

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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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"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKLfL8AjauvcmGll5wfr2Ydh6ByeilwySe
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VEtsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhky_S
xxRaopbMzP0lI0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
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JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGljYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXR0ljo2MCwKImFudGVubmFEb3dudGlscI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
mV4dGVybmlGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiIiCn0KfQ==",

"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"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKLfL8AjauvcmGll5wfr2Ydh6ByeilwySe
Mg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHy6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
VEtsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRud4BSJhK0nLWDohid2DwSb-
wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljojQudMliwKlImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnCI6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmZWlnbGVblRpbWUiOiIiCn0KFQ==",

"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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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": "testversionforbsd",
```

```
"vendor": "vendor-FII"
```

 $\}$

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKLfL8AjaouvcmGll5wfr2Ydh6ByeilwySeMg6pZhYJk6WixSCDeJlOZ1c9LiGoiJLdmXHyt6yZSiDwJ1bel0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThAVetsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhK_Y_SxxRaopbMzP0ll0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzh85Ga6uw"

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT050liwKlMNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAilAoiW5zdGFsbGF0aW9uUGFyYW0iOnsKlMxhdGlo0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKlMhvcml6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGljYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpY WxzZSwKlMfudGVubmFBemltdXRoljo2MCwKlMfudGVubmFEb3dudGlsdCI6MSwKlMfudGVubmFHYWluj o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKlMfudGVubmFNb2RlbCI6I mV4dGVybmfslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvmfFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YXxsQ2VydGlmaWNhdGlvblRpbWUiOiiliCn0KfQ=="

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

}

"fccld": "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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T03:32:19.447Z - 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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```
}  
}  
]  
}  
}
```

2020-07-31T03:32:19.466Z - 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"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKLfL8AjauvcmGII5wfr2Ydh6ByeilwySe
Mg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
VEtsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_S
xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-
wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUioJEwMC4wMDAwMDAsCi
JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGljYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlscI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbiCl6I
mV4dGVybmFslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmaWNhdGlubmRpbWUiOiLiCn0KfQ==",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclid": "PIDASPOT5410",

"groupingParam": {

{

"groupid": "FOXCONN",

"groupType": "INTERFERENCE_COORDINATION"

},

{



```

    "groupId": "FOXCONN",
    "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"
}
]
}

```

2020-07-31T03:47:45.950Z - 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": ""
},
"cbsdSerialNumber": "T99B12300"
}
```

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

2020-07-31T03:47:45.989Z - INFO - cbsdCategory= '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"
```

}

"cbsdCategory": "B",

```
"cbsdInfo": {
```

```
"firmwareVersion": "".
```

```
"hardwareVersion": "",
```

```
"model": "model-DTU",
```

```
"softwareVersion": "testversionforcbsd",
```

```
"vendor": "vendor-FII"
```

}

"cbsdSerialNumber": "T99B12300",

```
"cpiSignatureData": {
```

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLZ0MagYd5zs7kKLfL8AjaouvcmGII5wfr2Ydh6ByeilwySeMg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDwJ1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdTThAVetsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzi85Gg6uw".

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT050liwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOnsKImxhdGl0dWRlIjo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpY WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlscCI6MSwKImFudGVubmFHYWluj o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2Rl bCI6I mV4dGVybmfSI6FudGVubmEgb24iCn0KLAoicHJvZmVzc2lvmfFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VvdGlmaWNhdGlybIRpbWUiOiiliCn0KfQ==".

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

 $\}$

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

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKLfL8AjauvcmGll5wfr2Ydh6ByeilwySeMg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThAVetsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkbFco52eDhkY_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRud4BSJhK0nLWDohid2DwSb-wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCiJoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljojQudMliwKImhvcmli6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGljYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpYVWxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlscI6MSwKImFudGVubmFHYWluljo1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbiCI6ImV4dGVybmlGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpSWQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIjRpbWUiOiLiCn0KfQ==",

"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"
  },
  {
    "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": ""
},
"cbsdSerialNumber": "T99B12300"
}
```

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

2020-07-31T03:50:36.835Z - INFO - cbsdCategory= '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"
```

}

"cbsdCategory": "B",

```
"cbsdInfo": {
```

```
"firmwareVersion": "".
```

```
"hardwareVersion": "",
```

```
"model": "model-DTU".
```

```
"softwareVersion": "testversionforcbsd",
```

```
"vendor": "vendor-FII"
```

}

"cbsdSerialNumber": "T99B12300",

```
"cpiSignatureData": {
```

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLZ0MagYd5zs7kKLfL8AjaucvmGII5wfr2Ydh6ByeilwySeMg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDwJ1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdTThAVetsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzi85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT050liwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMdAIaAoiaW5zdGFsbGF0aW9uUGFyYW0iOnsKImxhdGlo0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSl6MzMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSl6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpY WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlCl6l mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2l2bWFnSw5zdGFsbGVyRGF0YSI6ewoiY3BpS WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VvdGlmaWNhdGlybGRpbWUiOiiliCn0KfQ==".

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

 $\}$

"fccId": "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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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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```
"fcclId": "PIDASPOT5410",  
"professionalInstallerData": {  
  "cpiName": "",  
  "installCertificationTime": "",  
  "cpild": ""  
},  
"cbsdSerialNumber": "T99B12300"  
}
```

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

2020-07-31T03:51:47.312Z - INFO - cbsdCategory= '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_xprHiU3aSn21sWzxMLz0MagYd5zs7kKlLf8AjaouvcmGll5wfr2Ydh6ByeilwySeMg6pZhYJk6WixSCDeJlOZ1c9LiGoiJLdmXhyt6yZSiDwJ1bel0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThAVetsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2s0J9qKgtdBUTkqbFco52eDhKY_SxxRaopbmZp0lI0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEb1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPz185Ga6uw"

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT050IiwKImNic2RTZXJpYWxOdWw1ZlXIIiOiJUOTICMTIzMDAiLAoiaW5zdGFsbGFG
0aW9uUGFyYW0iOnsKI mxhdGl0dWRlljo4OC4wMDAwMDAsCiJs b25naXR1ZGU iOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcm l6b250YWx BY2N1cm FjeSl6M
zM uMDAwMDAwLAoidmVydGljY WxBY2N1cm FjeSl6Mi4wMDAwMDAsC iJpbmRvb3JEZXBsb3ltZW50Ijpm Y
WxzZWskImFudGVubmFBemltdXRoljo2MCwKI mFudGVubmFEb3dudGlsdCI6MSwKI mFudGVubmFH YWlu j
o1LAoiZWlycENhcGFiaWxp dHkiOjQxLAoiYW50ZW5uYUJJYW13aWR0aCI6Ni wKI mFudGVubmFNb2RlbCI6I
mV4dGVyb mFsIGFudGVubmEgb24iCn0KLAoic HJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiili LAoiY3BpTmFtZSI6IilsCiJpb nN0Y WxsQ2VydGlmaWNhdGlvbl RpbWUiOiili Cn0KFq=="

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

}

"fccId": "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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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": ""
},
"cbsdSerialNumber": "T99B12300"
}
```

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

2020-07-31T03:52:46.572Z - INFO - cbsdCategory= '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"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLz0MagYd5zs7kKLfL8AjauvcmGll5wfr2Ydh6ByeilwySe
Mg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHy6yZSiDWj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdThA
VEtsulaNQDu0KRJy_YzBNmCsMyeCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkbFco52eDhkY_S
xxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRud4BSJhK0nLWDohid2DwSb-
wuPzj85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKlmxhdGI0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGljYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlscI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbiCl6I
mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmaWNhdGlubmRpbWUiOiLiCn0KfQ==",

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclid": "PIDASPOT5410",

"groupingParam": {

{

"groupid": "FOXCONN",

"groupType": "INTERFERENCE_COORDINATION"

},

{



```

    "groupId": "FOXCONN",
    "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"
}
]
}

```

2020-07-31T03:55:04.821Z - 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": ""
},
"cbsdSerialNumber": "T99B12300"
}

```

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

2020-07-31T03:55:04.858Z - INFO - cbsdCategory= '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"
```

}

"cbsdCategory": "B",

```
"cbsdInfo": {
```

```
"firmwareVersion": "".
```

```
"hardwareVersion": "",
```

```
"model": "model-DTU",
```

```
"softwareVersion": "testversionforcbsd",
```

```
"vendor": "vendor-FII"
```

}

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature":

"ZZYNKnebgfnU0VrsOs7R6v_xprHiU3aSn21sWzxMLZ0MagYd5zs7kKLfL8AjaucvmGII5wfr2Ydh6ByeilwySeMg6pZhYJk6WlxSCDeJIOZ1c9LiGojLDmXHyt6yZSiDwj1beL0asgiBo2Wa96Ucl5Rk5msLHUCN1_c7HdTThAVetsulaNQDu0KRJy_YzBNmCsMycCWUcqAl3gmQkypv7jCX7XQz91irx2sOj9qKgtdBUTkqbFco52eDhkY_SxxRaopbMzP0II0Qmz62iLRKqn2po2yo_B0A88ouv1JA8mOEB1SeL5NRUd4BSJhK0nLWDohid2DwSb-wuPzi85Gg6uw",

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT050liwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOnsKImxhdGlo0dWRlljo4OC4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGJjYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpY WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWluj o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwwKImFudGVubmFNb2Rl bCI6I mV4dGVybmfslGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvmfFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbpbN0YWxsQ2VvdGlmaWNhdGlybIRpbWUiOiiliCn0KfQ==".

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

 $\}$

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

```

```

  2020-07-31T03:56:43.744Z - 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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```

    }
  }
]
}
2020-07-31T03:56:43.753Z - 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"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsgYFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtZpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljojQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbiCl6I
mV4dGVybmFslIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiiliLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmYWVhdGlvbIiRpbWUiOiiliCn0KfQ==",
      "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"
  },
  {
    "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"
          }
        ],
        "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}

```

```

  2020-07-31T04:03:23.200Z - 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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```

    }
  }
]
}
2020-07-31T04:03:23.210Z - 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"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "fccId": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupId": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ]
  }
]
```



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```

    ],
    "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"
        }
      ],
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-09-08T07:22:40.845Z - INFO - grant request from CBRS : {
  "grantRequest": {
    {
      "cbsId": "PIDASPOT5410Mock-SAST99B12300",
      "measReport": {
        "rcvdPowerMeasReports": [
          {

```



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```

    "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-

tzmM6IUHan7wxEtrcngp_l2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dlP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3

bL_ZF2SEIj1Kpb911SaYSy2Ystr1pSlz6pgUIM56ybV6ap1ZJtsGyFB0BUV1Zl-
5A0U0-12-11D015i0-M-16-U3QD0V0105-DW4-13A"

IA908ueKZpWtID01313yMWKI03QD6v8193IRVVLZp17A ,

"encodedCpiSignedData":

"ewoiZmNjSWQiOiJGT1hDT050liwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF0aW9uUGFyYW0iOnsKImxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCiJoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6MzMuMDAwMDAwLAoidmVydGJjYWxwBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50ljpYWxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlscCI6MSwKImFudGVubmFHYWluljo1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlCl6lmV4dGVybmlsGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpSWQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VvdGlmaWNhdGlvbiRpbWUiOiIiCn0KfQ=="

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

 $\}$

"fccId": "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,
```



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```

    "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"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtcnrgp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsgYFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtZpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljojQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbnCI6I
mV4dGVybmFfSGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmYWVhdGlvbI6RpbWUiOiLiCn0KfQ=="
    },
    "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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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"

},

"cbsdCategory": "B",

"cbsdInfo": {

"firmwareVersion": "",

"hardwareVersion": "",

"model": "model-DTU",

"softwareVersion": "testversionforcbsd",

"vendor": "vendor-FII"

},

"cbsdSerialNumber": "T99B12300",

"cpiSignatureData": {

"digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-

tzM6IUhAn7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3eszb6UW0WF2J0

IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3

bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOim56ybv6ap1ZjtsgYFBoBUv12l-

fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtZpl7A",

"encodedCpiSignedData":

"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF

0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi

JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoQUdMliwKImhvcmli6b250YWxBY2N1cmFjeSI6M

zMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50lpmY

WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj

o1LAoiZWlycENhcGFiaWxpdHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6NiwKImFudGVubmFNb2RlbiCI6I

mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoiCHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS

WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGImaWNhdGlvbiRpbWUiOiIiCn0KfQ=="

"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"

},

"fcclid": "PIDASPOT5410",

"groupingParam": {

{

"groupid": "FOXCONN",

"groupType": "INTERFERENCE_COORDINATION"

},

}



```

    "groupId": "FOXCONN",
    "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"
],
"userld": "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"
          }
        ],
        "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }

```

```

  2020-07-31T06:48:06.148Z - 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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```

    }
  }
]
}

```

2020-07-31T06:48:06.161Z - 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"
```

}

"cbsdCategory": "B",

```
"cbsdInfo": {
```

```
"firmwareVersion": "".
```

```
"hardwareVersion": "",
```

```
"model": "model-DTU".
```

```
"softwareVersion": "testversionforbsd",
```

"vendor": "vendor-FII"

 $\}$

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G BKV8wZD4Kiwj14-2uH1-

tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFIz5hcZCdkHtV9hy9g986dlPUQBSWA1JISpZuG32KYOKYJluRf63VIGUXyedUzJ32JMoeE3

BL_ZFZSEljTKpb9fI3a1SyZfslI1pSlz0pgOIM50ybV0apIzJts9fFB0BOVfzi-fA9lI8uek2pwbbD0l5i3vMwKrlI3QD8V8l95rBW/tzpI7A"

```
"encodedCpiSignedData":
```

NiSWQjOjJGT1hDT05OliwK

0aW9uUGFyYW0iOnsKIImxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcmI6b250YWxBY2N1cmFjeSI6M

ZMuMDAwMDAwLAoidmVydGJlYWxkY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JlZXBs63ltZW50IjpmY
Ww=32-klE-F-ldQV/t-h-EP-mltYXB-ji-3MQ-klE-F-ldQV/t-h-FFh3-ldQV/t-h-Cl6MQ-klE-F-ldQV/t-h-FLh3A/t-h-

VXZZSWKlml udGvubml BmltdXK0j0ZM0WKRlml udGvubml Eb3duuGlsuGlsM0WKRlml udGvubml TTT Wldj
o1l AoiZWlycENhcGEiaWxpdHkiOiQxI AoiYW50ZW5uYlI IYVW13aWR0aCI6NiwiKlmeEudGVubmENb2BlbCI6I

mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lybmFsSW5zdGFsbGVvRGF0YSI6ewoiY3BpS

WQiOiliLAoiY3BpTmFtZSI6IilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

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

```

```

  2020-07-31T06:49:09.016Z - 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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```
}  
}  
]  
}  
2020-07-31T06:49:09.029Z - 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",  
      "channelType": "GAA",  
      "grantExpireTime": "2020-08-07T06:49:09Z",  
      "grantId": "261836277",  
      "heartbeatInterval": 60,  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}
```



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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": [
    {
      "cbsdId": "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": [
    {
      "cbsdId": "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"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtrngp_l2be5PO8ww5U040RD3yg654cBcSDKCxH3DwpoD1jvv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsgYFBoBUv12l-
fA9U8uek2pwhbD015i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQioiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiojEwMC4wMDAwMDAsCi
JoZWlnaHQiojg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljojQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGllYWxBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYW13aWR0aCI6Ni4wMDAwMDAwMDAwMDAw
mV4dGVybmFfSGFudGVubmEgb24iCn0KLAoiCHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQioiLiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmYWVhdGlvbIRpbWUioiLiCn0KfQ=="
    },
    "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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T06:54:04.344Z - 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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```

    }
  }
]
}

```

2020-07-31T06:54:04.355Z - 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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```

    "groupId": "FOXCONN",
    "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"
],
"userld": "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"
          }
        ],
        "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }

```

```

  2020-07-31T06:58:22.213Z - 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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```
}  
}  
]  
}  
}
```

2020-07-31T06:58:22.232Z - 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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```
"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": [
```

```
{
  "cbsId": "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": [
{
  "cbsId": "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": [
```

```
{
  "cbsId": "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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```

    "groupId": "FOXCONN",
    "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"
],
"userld": "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": ""
},
"cbstdSerialNumber": "T99B12300"
}
2020-07-31T07:11:24.403Z - INFO - verified signature on cpiSignatureData
2020-07-31T07:11:24.404Z - INFO - cbstdCategory= '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": [
    {
      "cbstdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2020-07-31T07:11:26.190Z - 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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```

    ]
  }
  2020-07-31T07:11:26.213Z - 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": "testversionforbsd".
```

```
"vendor": "vendor-FII"
```

 $\}$

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G BKV8wZD4Kiwj14-2uH1-

tzmM6IUHan7wxEtcrngp_l2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHfV9ny9g986dIP0QBSWA1JiSpZuG32KYOKYjluRr63ViGUxYedOZj32JMoE3

DL_ZFZSEljKpb9lIsaYfSyZfslIpSlz6pgOIM56ybV6apIzJlsgYfFBuBUVIZl-fAQlI8uek2pwbbD0l5i3vMwKrlJ3QD8V8l95rBW/tznI7A"

```
"encodedCpiSignedData":
```

NiSWQjOi.IGT1hDT05QliwI

0aW9uUGFyYW0iOnsKlmxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M

ZMuMDAwMDAwLAoidmVydGJjYWxkYXN0cmFjeSI6Mi4wMDAwMDAsCiIpbnRvb3JEZXBs63ltZW50IjpmY
Ww=ZG9udKlucEudQVktbm9keSBFRS0yLjYyMzQ0dKlucEudQVktbm9keSBFRS0yLjYyMzQ0dKlucEudQVktbm9keSBFRS0yLjYyMzQ0

WxZZSWKlIlIf adGVubIlIf BclIltdXKOlJozMCWKlIlIf adGVubIlIf Eb3duuGIsdCl6MSWKlIlIf adGVubIlIf ITTlWdlJ
o1l AoiZWlvcENhcGEjaWxpdHkiOiQxI AoiYW50ZW5uYlI IYlYW13aWBoaCl6NiwlKlmEudGVubmENb2BlbCl6l

mV4dGVvbmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lybmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS

WQiOiliLAoiY3BpTmFtZSI6lilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvblRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

“f

```
"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"
},
{
"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": [  
  {  
    "cbsId": "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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```

    "groupId": "FOXCONN",
    "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"
],
"userld": "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"
          }
        ],
        "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }

```

```

  2020-07-31T07:27:27.046Z - 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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```
}  
}  
]  
}  
}
```

2020-07-31T07:27:27.062Z - 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.RLO.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_I2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWA1JiSpZuG32KYOKYjluRr63ViGUxyedOZj32JMoE3

pL_ZFZSEljIKpb9tIsaYfSyZfslIpsIz6pgOIM56ybV6apIzJIsyYFBuBUVIZI-
fA9U18uek2pwwbD0I5i3vMwKrl3QD8V8I95rBW/tznI7A"

```
"encodedCpiSignedData":
```

NiSWQjOjJGT1hDT05QliwK

0aW9uUGFyYW0iOnsKIImxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKIImhvcmI6b250YWxBY2N1cmFjeSI6M

ZMuMDAwMDAwLAoidmVydGJlYWxkBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBsb3ltZW50IjpmYWxzZSwwKImFuZGVybmFFBmlldYBic3MCwKImFuZGVybmFFb3dudGlodGI6MSwKImFuZGVybmFFHYWVtiti

WxZZSWKlmlr adGvubmlr BernltdXR0ljoZMwWklmlr adGvubmlr Eb3duduGlsdGlsMwWklmlr adGvubmlr ITT VldlJ
o1l AoiZWlvcENhcGEiaWxpndHkiOiQxI AoiYW50ZW5uYlIuJlYW13aWB0aCI6NiwlKImlEudGVubmENb2BibCI6I

mV4dGVybmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lvbmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS

WQiOiliLAoiY3BpTmFtZSI6IilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

“f

```
"groupingParam": [
```

$$\{$$

```
"groupType": "INTERFE
```

{



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```

    "groupId": "FOXCONN",
    "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"
],
"userld": "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"
          }
        ],
        "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }

```

```

  2020-07-31T07:36:06.115Z - 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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```

    }
  }
]
}

```

2020-07-31T07:36:06.132Z - 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.RLO.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": "testversionforbsd".
```

```
"vendor": "vendor-FII"
```

 $\}$

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G BKV8wZD4Kiwj14-2uH1-

tzmM6IUHan7wxEtcrngp_l2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHfV9ny9g986dIP0QBSWA1JiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3

DL_ZFZSEljKpb9lIsaYfSyZfslIpSlz6pgOIM56ybV6apIzJlsgYfFBuBUVIZf-fAQlI8uek2pwbbD0l5i3vMwKrlJ3QD8V8l95rBW/tznI7A"

```
"encodedCpiSignedData":
```

NiSWQjOi.IGT1hDT05QliwI

0aW9uUGFyYW0iOnsKImxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M

ZMuMDAwMDAwLAoidmVydGJjYWxkYXN0cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JlZlZBsb3ltZW50IjpmY
Ww=ZG90KlkeFndGVkbnE5bWVudGJjYWxkYXN0cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JlZlZBsb3ltZW50IjpmY

WxZZSWKlIlIf adGVubIlIf BeIlItaXKOlJozMCWKlIlIf adGVubIlIf Eb3duuGIsdCl6MSWKlIlIf adGVubIlIf ITTlVIdIj
o1l AoiZWlvcENhcGEJaWxpdHkiOiQyI AoiYW50ZW5uYlI lIYW13aWB0aCI6NiwKIImEudGVubmENb2BlbCI6I

mV4dGVvbmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lybmFsSW5zdGFsbGVyRGF0YSI6ewojY3BpS

WQiOiliLAoiY3BpTmFtZSI6lilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

“f

```
"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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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"
          }
        ],
        "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}

```

```

  2020-07-31T07:49:25.038Z - 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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```

    }
  }
]
}

```

2020-07-31T07:49:25.049Z - 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.RLO.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"
```

}

"cbsdCategory": "B",

```
"cbsdInfo": {
```

```
"firmwareVersion": "",
```

```
"hardwareVersion": "",
```

```
"model": "model-DTU".
```

```
"softwareVersion": "testversionforbsd".
```

```
"vendor": "vendor-FII"
```

 $\}$

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G BKV8wZD4Kiwj14-2uH1-

tzmM6IUHan7wxEtrngp_I2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWA1JiSpZuG32KYOKYjluRr63ViGUxYedOZj32JMoE3

pL_ZFZSEljIKpb9tIsaYfSyZfslItpSlZ6pgOlM56ybV6apIzJlsyYFB0B0VIZI-
fA9lI8uek2pwwbD0l5i3vMwKrlI3QD8V8l95rBW/tznI7A"

```
"encodedCpiSignedData":
```

NiSWQjOjJGT1hPT05OliwK

0aW9uUGFyYW0iOnsKImxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M

[illegible]

WxZZSWKlIIf udGVubIIf BElmItuXKOlJozMcWKlIIf udGVubIIf Eb3duuGIsdClOmsWKlIIf udGVubIIf ITT VIdIj
o1l AoiZWlycENhcGEJaWxpdHkiOiQxI AoiYW50ZW5uYlI IYVW13aWBOaCI6NiWkImEudGVubmENb3BibCI6I

mV4dGVvbmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lybmFsSW5zdGFsbGVyRGF0YSI6ewojY3BpS

WQiOiliLAoiY3BpTmFtZSI6lilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

“f

```
"groupingParam": [
```

{

```
"groupType": "INTERFE
```

{



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```

    "groupId": "FOXCONN",
    "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"
}
]
}

```

2020-07-31T08:02:04.411Z - 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"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T08:02:08.325Z - 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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```

    }
  }
]
}

```

2020-07-31T08:02:08.345Z - INFO - engine sent successfully, the response to CBRS : {

```

  "grantResponse": [
    {
      "cbsdId": "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": [
    {
      "cbsdId": "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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```

"cbstdId": "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": [
    {
      "cbstdId": "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": [
    {
      "cbstdId": "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": "testversionforbsd",
```

```
"vendor": "vendor-FII"
```

 $\}$

"cbsdSerialNumber": "T99B12300".

```
"cpiSignatureData": {
```

"digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G BKV8wZD4Kiwj14-2uH1-

tzmM6IUHan7wxEtcrngp_I2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHfV9ny9g986dIP0QBSWA|JiSpZuG32KYOKYJluRr63ViGUXyedOZj32JMoE3
hL_3F0SE#1K+h0TIS=xG+0Y+fr1nGl+6n+QIM5C+bu6n+1ZitnYED+Dlu+13!

pL_ZFZSEljIKpb9tIsaYfSyZfslIpsIz6pgOIM56ybV6apIzJIsyYFBuBUVIZI-
fA9LI8uek2pwwbD0LI5i3vMwKrlI3QD8V8I95rBW/tznI7A"

```
"encodedCpiSignedData":
```

NiSWQjOjJGT1hDT05OliwK

0aW9uUGFyYW0iOnsKIImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M

ZMuMDAwMDAwLAoidmVydGJjYWxkYXN0cmFjeSI6Mi4wMDAwMDAsCiIpbmRvb3JEZl9Bsb3ltZW50IjpjbW

WxZZSWKlIlIf uduGVubIlIf BclIlItuXKOlJozMcWKlIlIf uduGVubIlIf Eb3duuGIsduClOmsWKlIlIf uduGVubIlIf ITT VIdIj
o1l AoiZWlvcENhcGEiaWxpdHkiOiOxI AoiYW50ZW5uYlI IYIW13aWB0aCl6NiWkImEudGVubmENb3BibCl6l

mV4dGVvbmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lybmFsSW5zdGFsbGVyRGF0YSI6ewojY3BpS

WQiOiliLAoiY3BpTmFtZSI6lilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

“f

```
"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"
  },
  {
    "groupId": "FOXCONN",
    "groupType": "INTERFERENCE_COORDINATION"
  }
],
"measCapability": [
  "RECEIVED_POWER_WITH_GRANT"
],
"userld": "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"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T08:05:57.424Z - 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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```

    }
  }
]
}

```

2020-07-31T08:05:57.436Z - 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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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": "RANifl7YXuvWXa0UKVdLMY6-

fAPNgz9QFhql7Qzt4tpwPWw3G BKV8wZD4Kiwj14-2uH1-

tzmM6IUHan7wxEtcrngp_I2be5PO8ww5U040RD3yg654cB

IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWA1JiSpZuG32KYOKYjluRr63ViGUxYedOZj32JMoE3

pL_ZFZSEljIKpb9tIsaYfSyZfslItpSlZ6pgOlM56ybV6apIzJlsgYfFB0BUVIZf-fAQlI8uek2pwwbD0l5i3vMwKrlI3QD8V8l95rBW/tznI7A"

```
"encodedCpiSignedData":
```

NiSWQiOiJGT1hDT05QIiwK

0aW9uUGFyYW0iOnsKImxhdGl0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi

JoZWlnaHQiOjg0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M

[illegible]

WxZZSWKlIlIf uduGVubIlIf BclIlItuXKOlJozMcWKlIlIf uduGVubIlIf Eb3duuGIsduClOmsWKlIlIf uduGVubIlIf I I I VIdIj
o1I AoiZWlvcENhcGEJaWxpdHkiOiQxI AoiYW50ZW5uYlI I I YW13aWB0aCI6NiwKIImEudGVubmENb2BlbCI6I

mV4dGVvbmFsIGFudGVubmEgb24iCn0KLAoicHJvZmVzc2lybmFsSW5zdGFsbGVyRGF0YSI6ewojY3BpS

WQiOiliLAoiY3BpTmFtZSI6lilsCiJpbmN0YWxsQ2VydGlmaWNhdGlvbIRpbWUiOiliCn0KfQ==",

```
"protectedHeader": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9"
```

“f

```
"groupingParam": [
```

{

```
"groupType": "INTERFE
```

{



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```

    "groupId": "FOXCONN",
    "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"
}
]
}

```

2020-07-31T08:09:37.516Z - 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"
        }
      ],
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

2020-07-31T08:09:41.421Z - 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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```

    }
  }
]
}

```

2020-07-31T08:09:41.431Z - 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"
    },
    "cbsdCategory": "B",
    "cbsdInfo": {
      "firmwareVersion": "",
      "hardwareVersion": "",
      "model": "model-DTU",
      "softwareVersion": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbsdSerialNumber": "T99B12300",
    "cpiSignatureData": {
      "digitalSignature": "RANjfl7YXuyWXq0UKVdLMY6-
fAPNgz9QFhql7Qzt4tpwPWw3G_BKV8wZD4Kiwj14-2uH1-
tzmM6IUHan7wxEtcnrgp_I2be5PO8ww5U040RD3yg654cBcSDKcXh3DwpoD1jvv_P7G_3eszb6UW0WF2J0
IPdE5CHhBfMrPGFiZ5ncZCdkHtV9ny9g986dIP0QBSWATJiSpZuG32KYOKYjluRr63ViGUXyedOZj32JMoE3
bL_ZF2SEij1Kpb9TISaYSy2Ysfr1pSlz6pgOiM56ybv6ap1ZjtsG YFBoBUv12l-
fA9U8uek2pwhbD0i5i3yMwKrU3QD8V8I95rRWtzpl7A",
      "encodedCpiSignedData":
"ewoiZmNjSWQiOiJGT1hDT05OliwKImNic2RTZXJpYWxOdW1iZXliOiJUOTICMTIzMDAiLAoiaW5zdGFsbGF
0aW9uUGFyYW0iOmsKImxhdGI0dWRlljo4NS4wMDAwMDAsCiJsb25naXR1ZGUiOjEwMC4wMDAwMDAsCi
JoZWlnaHQiOiJ0OC41MDAwMDAsCiJoZWlnaHRUeXBlljoiQUdMliwKImhvcml6b250YWxBY2N1cmFjeSI6M
zMuMDAwMDAwLAoidmVydGJlYXVBY2N1cmFjeSI6Mi4wMDAwMDAsCiJpbmRvb3JEZXBSb3ltZW50ljpY
WxzZSwKImFudGVubmFBemltdXRoljo2MCwKImFudGVubmFEb3dudGlsdCI6MSwKImFudGVubmFHYWlulj
o1LAoiZWlycENhcGFiaWxpdkHkiOjQxLAoiYW50ZW5uYUJlYXV13aWR0aCI6Ni4wMDAwMDAwMDAwMDAw
mV4dGVybmFslIGFudGVubmEgb24iCn0KLAoiCHJvZmVzc2l2bmFsSW5zdGFsbGVyRGF0YSI6ewoiY3BpS
WQiOiIiLAoiY3BpTmFtZSI6IiIsCiJpbmN0YWxsQ2VydGlmYWVhdGlvbIRpbWUiOiIiCn0KfQ==",
      "protectedHeader": "eyJ0eXAiOiJlKV1QlCJhbGciOiJSUzI1NiJ9"
    },
    "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"
  },
  {
    "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": "testversionforcbsd",
      "vendor": "vendor-FII"
    },
    "cbstdSerialNumber": "T99B12300",
    "fcclid": "PIDASPOT5410",
    "groupingParam": [
      {
        "groupld": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupld": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      },
      {
        "groupld": "FOXCONN",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "groupld": "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"
}
]
}
}
2020-09-08T06:33:29.536Z - 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": [

```



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```

    "cbsdId": "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"
        }
      ],
      "cbsdId": "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": [
    {
      "cbsdId": "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": [
    {
      "cbsdId": "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": [
    {
      "cbsdId": "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": [
    {
      "cbsdId": "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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```
"cbsdId": "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": [
{
"cbsdId": "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": [
{
  "cbsdId": "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": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2020-09-08T07:05:21.915Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "inquiredSpectrum": [

```



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```
{
  "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": [
```



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```
{
  "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": [
        {
            "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2020-09-08T06:59:38.940Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
            "inquiredSpectrum": [

```



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

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

```
"grantRequest": [
```



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```
{
  "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
  "measReport": {
    "rcvdPowerMeasReports": [
      {
        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100
      }
    ]
  },
  "operationParam": {
    "maxEirp": 23.0,
    "operationFrequencyRange": {
      "highFrequency": 3570000000,
      "lowFrequency": 3550000000
    }
  }
}

]
}

}

2020-09-08T06:59:41.039Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "channelType": "GAA",
      "grantExpireTime": "2020-09-15T06:59:41Z",
      "grantId": "435810299",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}

}

2020-09-08T06:59:43.138Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",
      "grantId": "435810299",
      "grantRenew": false,

```



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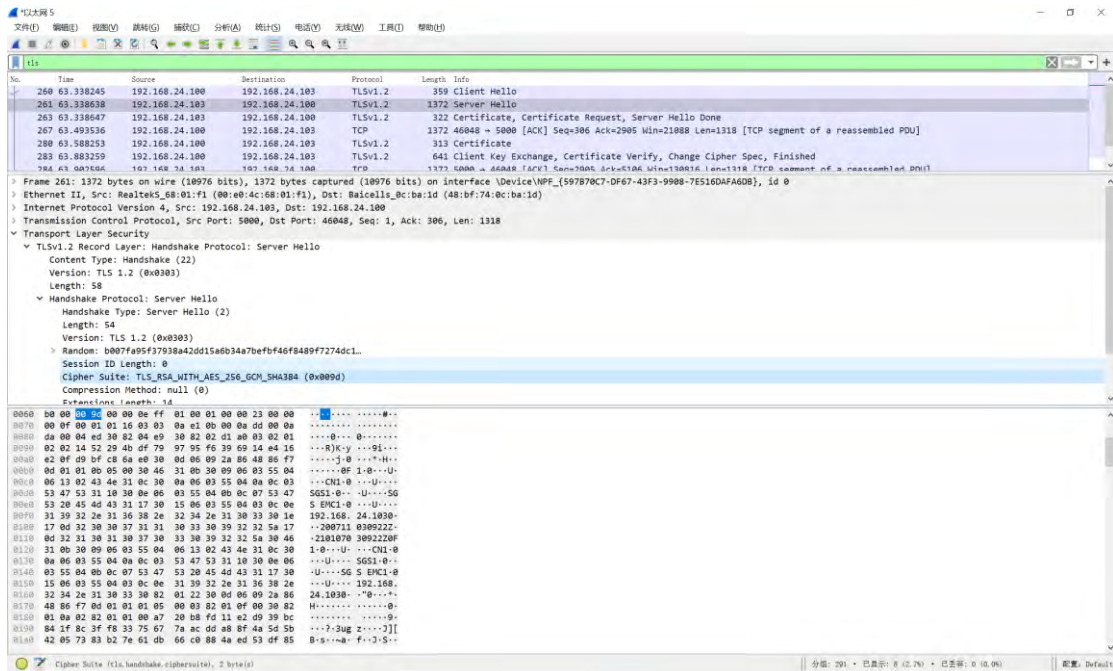
```
}  
]  
}  
2020-09-08T07:00:42.403Z - INFO - engine sent successfully, the response to CBRS : {  
  "heartbeatResponse": [  
    {  
      "cbsdId": "PIDASPOT5410Mock-SAST99B12300",  
      "grantId": "435810299",  
      "response": {  
        "responseCode": 0  
      },  
      "transmitExpireTime":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



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8.30 WINNF.FT.C.SCS.1

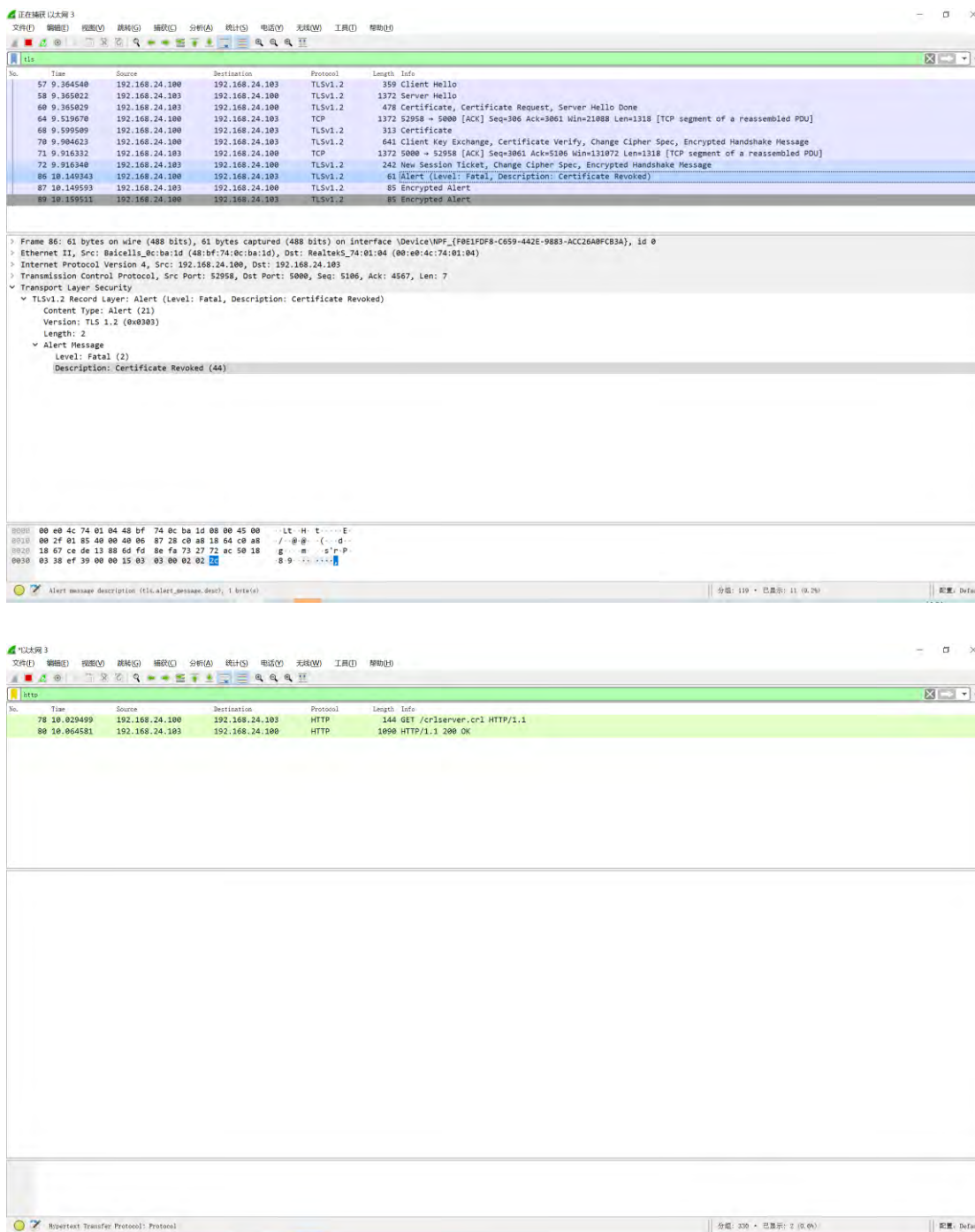


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8.31 WINNF.FT.C.SCS.2



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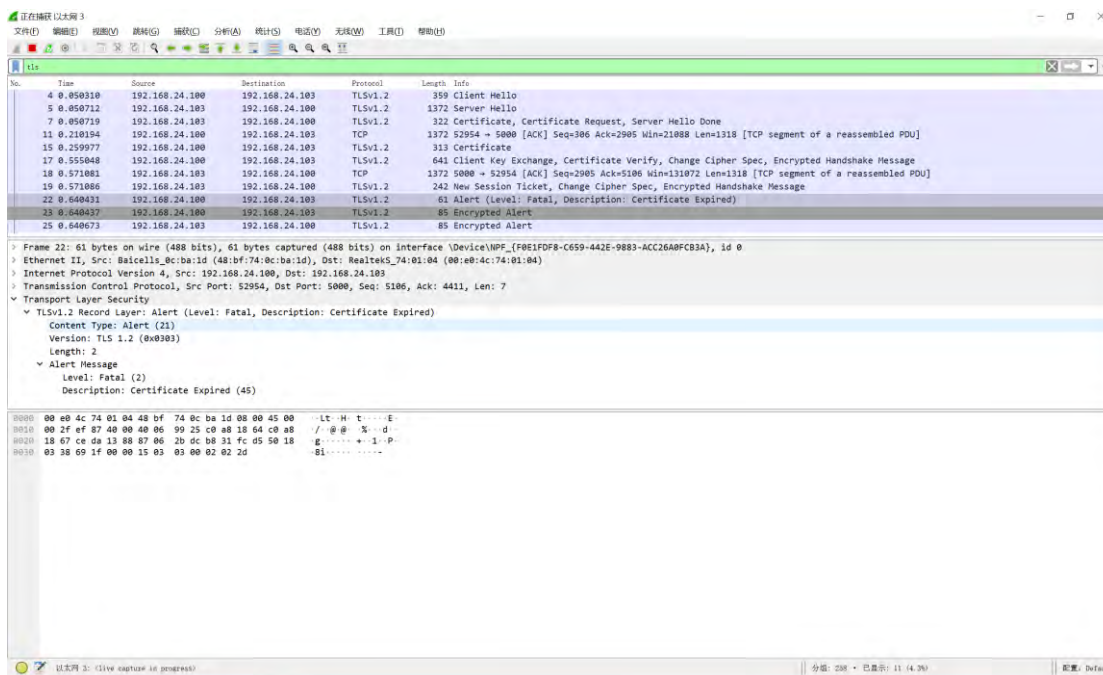
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8.32 WINNF.FT.C.SCS.3



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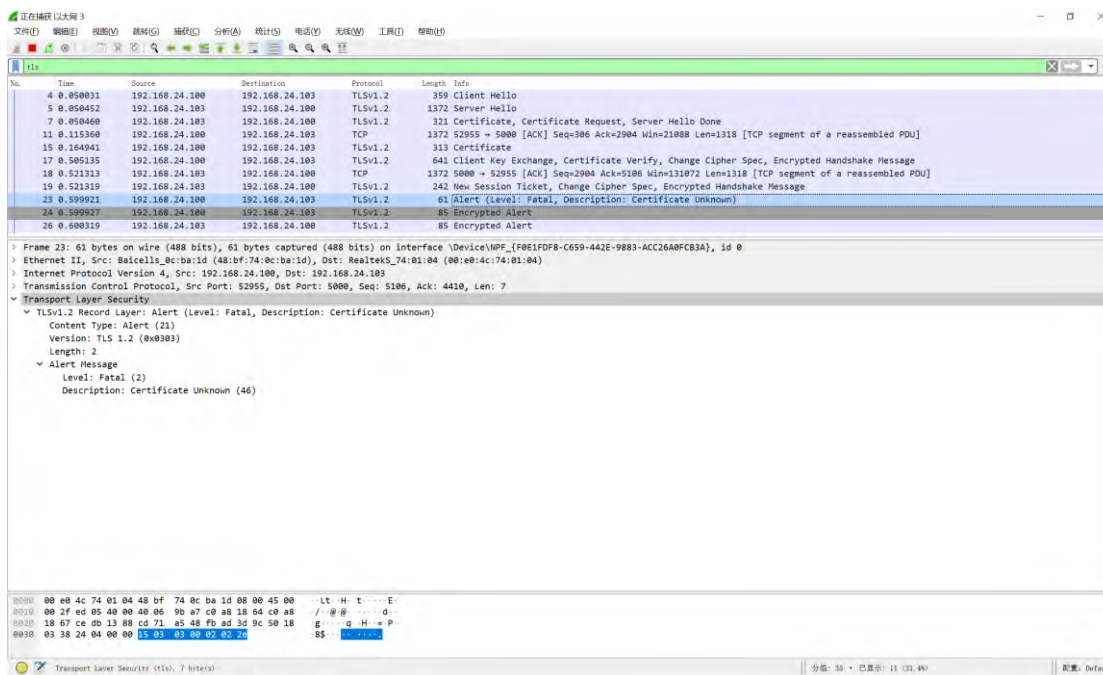
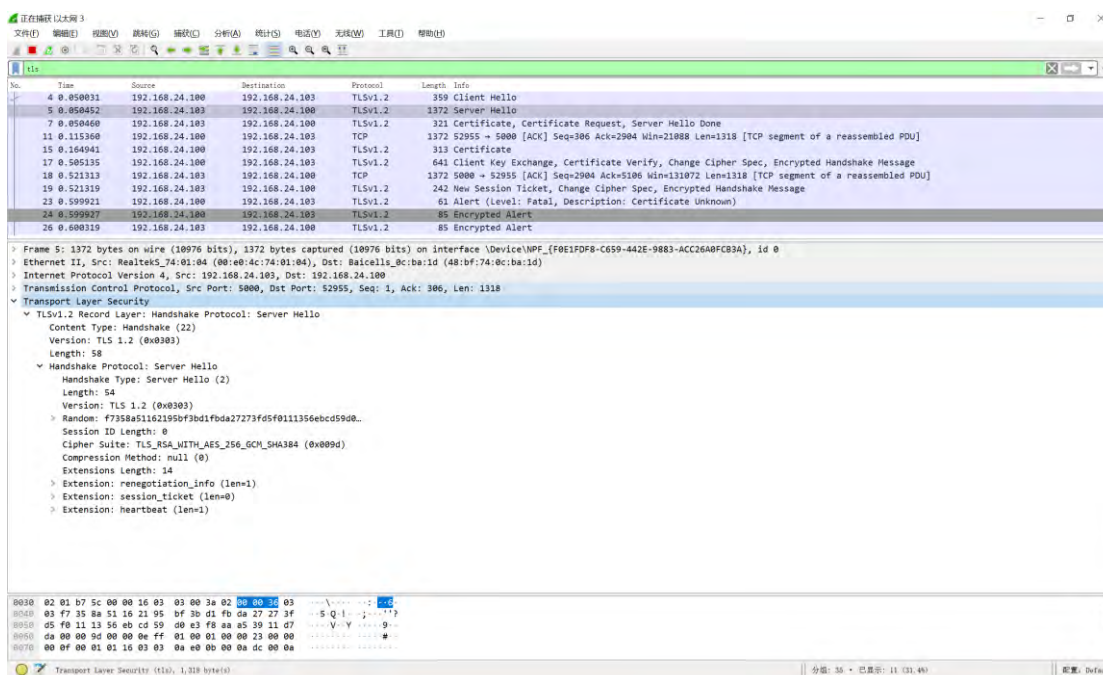
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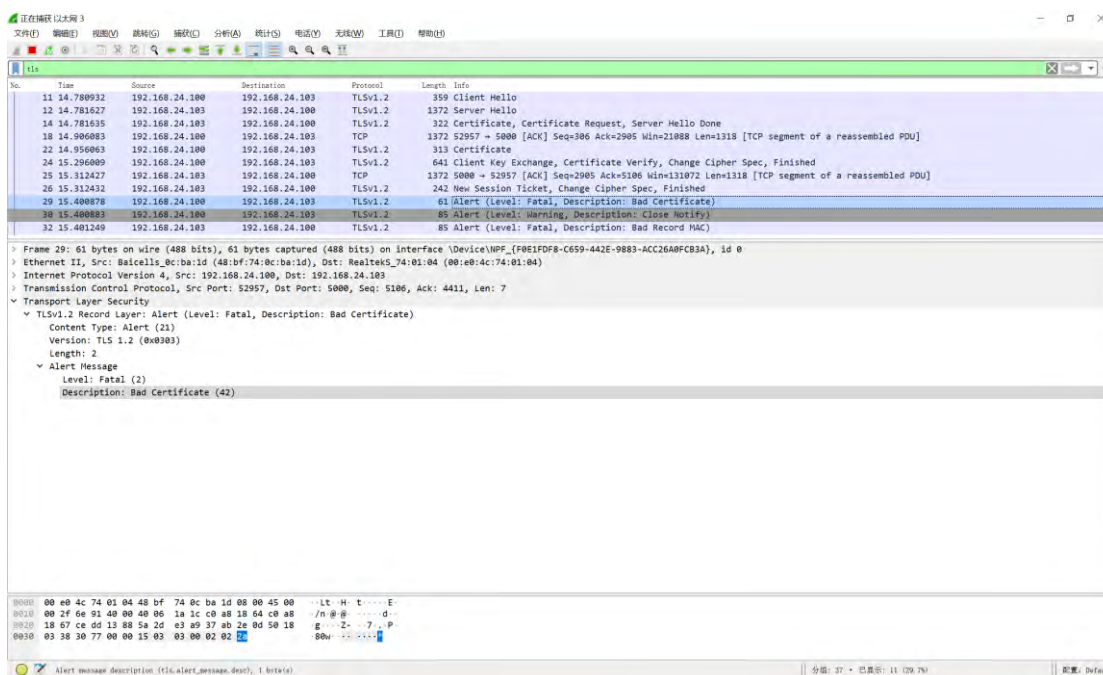


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9 Photographs

9.1 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.

- End of the Report -



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