



Wireless test report – 390909-2TRFWL

Applicant:

J Plus, Inc.

Product name:

CAT-A Indoor CBSD

Model:

JLT622P (CBRS)

Model variant:

N/A

FCC ID:

2AVGPJLT622P

Specifications:

WINNF-TS-0122, Version 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-IN-00129, Version V1.0.0.0

WInnForum CBSD/DP UUT Security Test 6 Cases Tutorial

Date of issue: February 8, 2019

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ISED Test Site	2040B-3

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of WINNF-TS-0122 [Test and Certification for Citizens Broadband Radio Service (CBRS); Conformance and Performance Test Technical Specification; CBSD/DP as Unit Under Test (UUT)] .

Nemko San Diego has successfully completed the requirements to become a WinnForum CBRS Approved Lab and a CBRS Alliance Authorized Test Lab: <https://cbrs.wirelessinnovation.org/cbsd-certification-program>.

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Section 1. Report summary

1.1 Applicant and manufacturer

Company name	J Plus, Inc
Address	14788 NE 95 th St
City	Redmond
Province/State	Washington
Postal/Zip code	98052
Country	USA

1.2 Test specifications

WINNF-TS-0122 Version 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-IN-00129, Version V1.0.0.0	WInnForum CBSD/DP UUT Security Test 6 Cases Tutorial

1.3 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was performed against all relevant requirements of the test standard except as noted in section 1.4 below. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See "Summary of test results" for full details.

1.4 Exclusions

None

1.5 Test report revision history

Revision #	Date of issue	Details of changes made to test report
2TRFWL	January 4, 2019	Original report issued

Section 2. Summary of test results

2.1 WINNF-TS-0122 requirements test results

Section	Test case ID	Test case title	Applicable	Verdict
6.1.4.1.1	WINNF.FT.C.REG.1	Multi-Step registration	M	Pass
6.1.4.1.3	WINNF.FT.C.REG.3	Single-Step registration for Category A CBSD	M	Pass
6.1.4.1.5	WINNF.FT.C.REG.5	Single-Step registration for CBSD with CPI signed data	M	Pass
6.1.4.1.7	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	M	Pass
6.1.4.2.1	WINNF.FT.C.REG.8	Missing Required parameters (responseCode 102)	M	Pass
6.1.4.2.3	WINNF.FT.C.REG.10	Pending registration (responseCode 200)	M	Pass
6.1.4.2.5	WINNF.FT.C.REG.12	Invalid parameter (responseCode 103)	M	Pass
6.1.4.2.7	WINNF.FT.C.REG.14	Blacklisted CBSD (responseCode 101)	M	Pass
6.1.4.2.9	WINNF.FT.C.REG.16	Unsupported SAS protocol version (responseCode 100)	M	Pass
6.1.4.2.11	WINNF.FT.C.REG.18	Group Error (responseCode 201)	M	Pass
6.1.4.3.1	WINNF.FT.C.REG.20	Category A CBSD location update	M	Pass
6.3.4.2.1	WINNF.FT.C.GRA.1	Unsuccessful Grant responseCode=400 (INTERFERENCE	M	Pass
6.3.4.2.2	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401	M	Pass
6.4.4.1.1	WINNF.FT.C.HBT.1	Heartbeat Success Case (first Heartbeat Response)	M	Pass
6.4.4.2.1	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	M	Pass
6.4.4.2.2	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)	M	Pass
6.4.4.2.3	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	M	Pass
6.4.4.2.4	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	M	Pass
6.4.4.2.5	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	M	Pass
6.4.4.3.1	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	M	Pass
6.4.4.3.2	WINNF.FT.C.HBT.10	Heartbeat Response Absent (Subsequent Heartbeat)	M	Pass
6.4.4.4.1	WINNF.FT.C.HBT.11	Successful Grant Renewal in Heartbeat Test Case	O	Pass
6.5.4.2.1	WINNF.FT.C.MES.1	Registration Response contains measReportConfig	M	Pass
6.5.4.2.3	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	M	Pass
6.5.4.2.4	WINNF.FT.C.MES.4	WINNF.FT.C.MES.4	M	Pass
6.6.4.1.1	WINNF.FT.C.RLQ.1	Successful Relinquishment	M	Pass
6.6.4.2.1	WINNF.FT.C.RLQ.3	Unsuccessful Relinquishment, responseCode=102	O	Pass
6.6.4.3.1	WINNF.FT.C.RLQ.5	Unsuccessful Relinquishment, responseCode=103	O	Pass
6.7.4.1.1	WINNF.FT.C.DRG.1	Successful Deregistration	M	Pass
6.7.4.2.1	WINNF.FT.C.DRG.3	Deregistration responseCode=102	O	Pass
6.7.4.3.1	WINNF.FT.C.DRG.5	Deregistration responseCode=103	O	Pass
6.8.4.1.1	WINNF.FT.C.SCS.1	Successful TLS connection between UUT and SAS Test Harness	M	Pass
6.8.4.2.1	WINNF.FT.C.SCS.2	TLS failure due to revoked certificate	M	Pass
6.8.4.2.2	WINNF.FT.C.SCS.3	TLS failure due to expired server certificate	M	Pass
6.8.4.2.3	WINNF.FT.C.SCS.4	TLS failure when SAS Test Harness certificate is issue by unknown CA	M	Pass
6.8.4.2.4	WINNF.FT.C.SCS.5	TLS failure when certificate at the SAS Test Harness is corrupted	M	Pass
7.1.4.1.1	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	M	Pass

Notes:

Report reference ID: 390909-2TRFWL(CBRS_WINNF-TS-0122_SAS)

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Section 3. Equipment under test (EUT) details

3.1 Sample information

Receipt date	November 28, 2018
Nemko sample ID number	390909

3.2 EUT information

Product name	CAT-A Indoor CBSD		
Model	JLT622P (CBRS)		
Model variant	N/A		
FCC ID	2AVGPJLT622P		
Serial number	6MT010181000001		
Software Details of UUT	Version	: 6.4.0	Ver. Suffix : g50-lt621ct-CBRS_CERT-9726 Build Date : Wed Dec 5 08:35:48 KST 2018

3.3 Technical information

Frequency band	CBRS band: 3550–3700 MHz
Type of modulation	QPSK, QAM16, QAM64
BW	10 and 20 MHz
Power requirements	12 VDC AND PoE

3.4 Product description and theory of operation

The UUT is a Category A CBSD.

3.5 UUT exercise details

The UUT was loaded with software Version: 6.4.0 Ver. Suffix: g50-lt621ct-CBRS_CERT-9726 Build Date: Wed Dec 5 08:35:48 KST 2018 for all testing.
All testing was performed with WinnForum SAS test harness version 1.0.0.2

3.6 EUT setup diagram

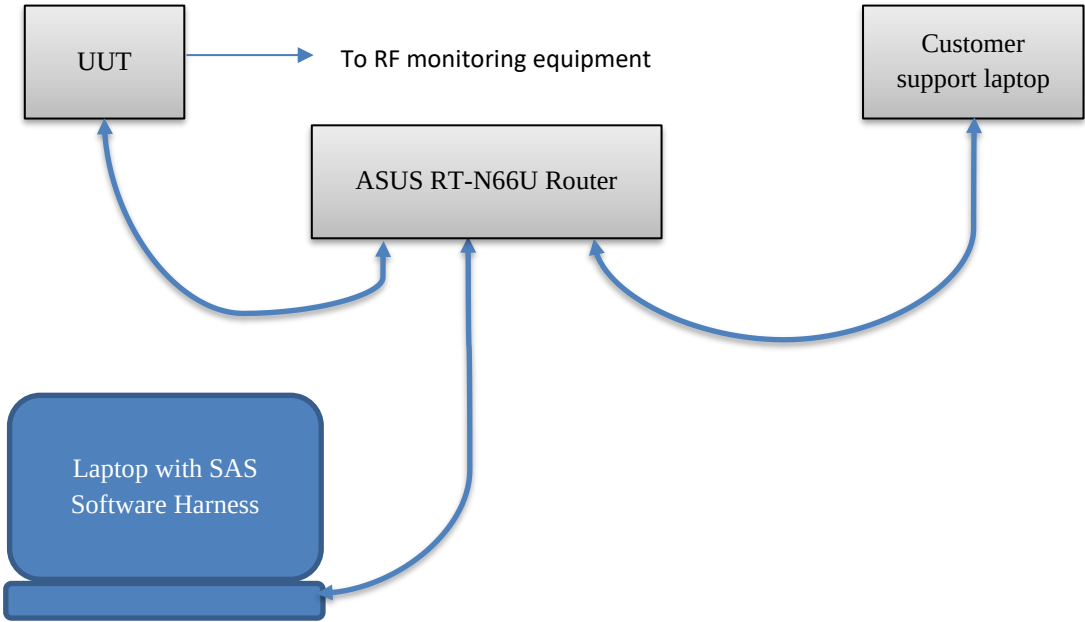


Figure 3.6-1: Setup diagram

3.7 EUT sub assemblies

Table 3.7-1: EUT sub assemblies + Auxiliary Equipment

Description	Brand name	Model/Part number	Serial number
Wireless Router	ASUS	RT-N66U	E4IA08020580
Support Laptop	Lenovo	PS2	XU100308-18062A

Section 4. Engineering considerations

4.1 Modifications incorporated in the EUT

There were no modifications performed to the EUT during this assessment.

4.2 Technical judgment

None

4.3 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 5. Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	860–1060 mbar

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages $\pm 5\%$, for which the equipment was designed.

Section 6. Measurement uncertainty

6.1 Uncertainty of measurement

UKAS Lab 34 and TIA-603-B have been used as guidance for measurement uncertainty reasonable estimations with regards to previous experience and validation of data. Nemko Canada, Inc. follows these test methods in order to satisfy ISO/IEC 17025 requirements for estimation of uncertainty of measurement for wireless products.

Measurement uncertainty budgets for the tests are detailed below. Measurement uncertainty calculations assume a coverage factor of $K = 2$ with 95% certainty.

Table 6.1-1: Measurement uncertainty

Test name	Measurement uncertainty, dB
All antenna port measurements	0.55

Section 7. Test equipment

7.1 Test equipment list

Table 7.1-1: Equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
Spectrum Analyzer	Rohde & Schwarz	ESU 40	E1131	1 year	8/23/19
SAS Test Harness Test Bed Computer	DELL	E5430	DALL0009	N/A	N/A
SAS Test Harness Software	WinnForumq	1.0.0.2		N/A	N/A

Note: NCR - no calibration required, VOI - verify on use

Section 8. Testing data

8.1 6.1 CBSD Registration Process

8.1.1 Definitions and limits

Upon a successful response from the SAS, the CBSD will generate its next message to the SAS. The SAS Test Harness, when configured for verification of a particular CBSD-SAS protocol procedure (i.e. registration), will / may not respond to any subsequent messages sent by the CBSD once the procedure being tested is complete.

8.1.2 6.1.4.1.1 [WINNF.FT.C.REG.1] Multi-step registration:

8.1.2.1 Test date

Start date December 4, 2018

8.1.2.2 Observations, settings and special notes

None

8.1.2.3 Test data

#	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	-	-
	CBSD sends correct Registration request information, as specified in [n.5], to the SAS Test Harness:		
2	- 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.	☒ 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 during monitoring time	☒ Pass	☐ Fail

8.1.3 6.1.4.1.3 [WINNF.FT.C.REG.3] Single-Step registration for Category A CBSD:

8.1.3.1 *Test date*

Start date December 4, 2018

8.1.3.2 *Observations, settings and special notes*

None

8.1.3.3 *Test data*

#	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	-	-
	CBSD sends Registration request to SAS Test Harness: all required and REG-Conditional parameter included (userId, fcclid, cbsdSerialNumber, cbsdCategory, airInterface, installationParam, measCapability) for a Category A CBSD.:		
2	• The required userId, fcclid and cbsdSerialNumber and REG-Conditional cbsdCategory, airInterface, installationParam, and measCapability registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. • Any optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges.	☒ 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

8.1.4 6.1.4.1.5 [WINNF.FT.C.REG.5] Single-Step registration for CBSD with CPI signed data

All Category B devices, and Category A devices not able to determine its own location require installation by a CPI. This test is for devices where the CPI enters data into the CBSD and this information along with the CPI signature are sent in the request message. Excluded from this test are devices which require the CPI to enter the information into a SAS interface. These devices would use the multiple step registration test [WINNF.FT.C.REG.1].

If a waiver for the measurement capability has been obtained from the FCC for the CBSD, the WINNF.FT.C.REG.5_waiver test case shall be executed which is the same as above, but where measCapability is not required in the request message.

8.1.4.1 Test date

Start date	December 4, 2018
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8.1.4.2 Observations, settings and special notes

None

8.1.4.3 Test data

#	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 - All of the required and REG-Conditional parameters shall be configured and CPI signature provided	-	-
	CBSD sends Registration request to SAS Test Harness:		
2	- The required userId, fcId and cbsdSerialNumber and REG-Conditional cbsdCategory, airInterface, measCapability and cpiSignatureData registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. - Any optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges.	☒ 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 during monitoring time	☒ Pass	☐ Fail

8.1.5 6.1.4.1.7 [WINNF.FT.C.REG.7] Registration due to change of an installation parameter

8.1.5.1 Test date

Start date December 4, 2018

8.1.5.2 Observations, settings and special notes

None

8.1.5.3 Test data

Step	Test Execution Steps	Pass	Fail
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.	☒	☐

8.1.6 6.1.4.2.1 [WINNF.FT.C.REG.8] Missing Required parameters (responseCode 102)

8.1.6.1 Test date

Start date December 4, 2018

8.1.6.2 Observations, settings and special notes

None

8.1.6.3 Test data

#	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 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

8.1.7 6.1.4.2.3 [WINNF.FT.C.REG.10] Pending registration (responseCode 200)

8.1.7.1 Test date

Start date December 4, 2018

8.1.7.2 Observations, settings and special notes

None

8.1.7.3 Test data

#	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 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)= 200	-	-
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

8.1.8 6.1.4.2.5 [WINNF.FT.C.REG.12] Invalid parameter (responseCode 103)

8.1.8.1 Test date

Start date December 4, 2018

8.1.8.2 Observations, settings and special notes

None

8.1.8.3 Test data

#	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 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)= 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 not transmit RF	☒ Pass	☐ Fail

8.1.9 6.1.4.2.7 [WINNF.FT.C.REG.14] Blacklisted CBSD (responseCode 101)

8.1.9.1 Test date

Start date December 4, 2018

8.1.9.2 Observations, settings and special notes

None

8.1.9.3 Test data

#	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 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) = 101	-	-
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

8.1.10 6.1.4.2.9 [WINNF.FT.C.REG.16] Unsupported SAS protocol version (responseCode 100)

8.1.10.1 Test date

Start date December 4, 2018

8.1.10.2 Observations, settings and special notes

None

8.1.10.3 Test data

#	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 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) = 100	-	-
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

8.1.11 6.1.4.2.11 [WINNF.FT.C.REG.18] Group Error (responseCode 201)

8.1.11.1 Test date

Start date December 4, 2018

8.1.11.2 Observations, settings and special notes

None

8.1.11.3 Test data

The registrationRequest groupingParam is an optional field and will be validated by the SAS Test Harness if provided in the Registration Request message. This test will validate that the CBSD will remain Unregistered after receiving responseCode 201.

#	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 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) = 201	-	-
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

8.1.12 6.1.4.3.1 [WINNF.FT.C.REG.20] Category A CBSD location update

8.1.12.1 Test date

Start date December 4, 2018

8.1.12.2 Observations, settings and special notes

WINNF.FT.C.REG20 test case was verified using WINNF.FT.C.REG7 : Installation Parameter Changed (Location) then CBSD rebooted to apply parameter change, then CBSD deregister and registered before 60 seconds with new parameter. JLT622P stop transmissions when deregister.

8.1.12.3 Test data

The test case ID is provided as a means to ensure that evidence is provided showing compliance to this requirement.

#	Test Execution Steps	Results
1	This section is specific to Category A CBSDs that do not require professional installation. The requirement is for the Category A (non-professionally installed) to report to the SAS any location change exceeding a distance of 50m horizontally or 3m vertically within a 60 second window. It is left to the CBSD vendor and certification lab to generate the required evidence showing the UUT meets the requirement.	☒ Pass ☐ Fail

8.2 6.3 CBSD Spectrum Grant Process

8.2.1 Definitions and limits

The test cases in this section are for verifying the handling of CBSD for various responseCodes in response from the-SAS Test Harness. The actions taken in response of any responseCode are beyond the scope of this document unless mentioned in the test procedure.

8.2.2 6.3.4.2.1 [WINNF.FT.C.GRA.1] Unsuccessful Grant responseCode=400 (INTERFERENCE)

8.2.2.1 Test date

Start date December 4, 2018

8.2.2.2 Observations, settings and special notes

None

8.2.2.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness, with cbsdId = C	–	–
2	UUT sends valid Grant Request.	–	–
3	SAS Test Harness sends a Grant Response message, including • cbsdId=C • responseCode = 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	☒	☐

8.2.3 6.3.4.2.2 [WINNF.FT.C.GRA.2] Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)

8.2.3.1 Test date

Start date December 4, 2018

8.2.3.2 Observations, settings and special notes

None

8.2.3.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness, with cbsdId = C	–	–
2	UUT sends valid Grant Request.	–	–
3	SAS Test Harness sends a Grant Response message, including • cbsdId=C • responseCode (R) = 401	–	–
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	☒	☐

8.3 6.4 CBSD Heart Beat Process

8.3.1 Definitions and limits

The test cases in this section test the success path for the Heartbeat process. The SAS Test Harness shall use a heartBeatInterval of 60 seconds, unless specifically provided in the test case.

This test case incorporates validation of successful Spectrum Inquiry messaging (if present) and successful Grant messaging into the Heartbeat Success case.

8.3.2 6.4.4.1.1 [WINNF.FT.D.HBT.1] Heartbeat Success Case (first Heartbeat Response)

8.3.2.1 Test date

Start date December 4, 2018

8.3.2.2 Observations, settings and special notes

None

8.3.2.3 Test data

Step	Test Execution Steps	Pass	Fail
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 a Spectrum Inquiry Request, go to step 3 • If message is a Grant Request, go to step 5	–	–
3	UUT sends a Spectrum Inquiry Request. Validate: Verify Spectrum Inquiry Request message is formatted correctly for each CBSDi, i={1,2}: • cbsdId = C • List of frequencyRange objects sent by UUT are within the CBRS frequency range	☒	☐
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 a Grant Request. Validate: • cbsdId = C • maxEIRP is at or below the limit appropriate for CBSDi category as defined by Part 96 • operationFrequencyRange, Fi, sent by UUT is a valid range within the CBRS band	☒	☐
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"	☒	☐
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: • cbsdId = C • grantId = G • operationState = "AUTHORIZED" and SAS Test Harness responds with a Heartbeat Response message including the following parameters, for CBSDi • cbsdId = C • grantId = G • transmitExpireTime = current UTC time + 200 seconds • responseCode = 0	☒	☐
10	Monitor the RF output of the UUT from start of test until UUT transmission commences. Monitor the RF output of the UUT from start of test until RF transmission commences. Verify: • UUT does not transmit at any time prior to completion of the first heartbeat response • UUT transmits after step 8 is complete, and its transmission is limited to within the bandwidth range Fi.	☒	☐

8.3.3 6.4.4.2.1 [WINNF.FT.C.HBT.3] Heartbeat responseCode=105 (DEREGISTER)

8.3.3.1 Test date

Start date December 4, 2018

8.3.3.2 Observations, settings and special notes

None

8.3.3.3 Test data

Step	Test Execution Steps	Pass	Fail
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: - o valid cbsdId = C - o valid grantId = G - o grant is for frequency range F, power P - o 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	☒	☐

8.3.4 6.4.4.2.2 [WINNF.FT.C.HBT.4] Heartbeat responseCode=500 (TERMINATED_GRANT)

8.3.4.1 Test date

Start date December 4, 2018

8.3.4.2 Observations, settings and special notes

None

8.3.4.3 Test data

#	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 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:	-	-
2	• 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 = 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 from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall stop transmission within (T + 60 seconds) of completion of step 3	☒ Pass	☐ Fail

8.3.5 6.4.4.2.3 [WINNF.FT.C.HBT.5] Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response

8.3.5.1 Test date

Start date December 4, 2018

8.3.5.2 Observations, settings and special notes

None

8.3.5.3 Test data

#	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) UUT sends a Heartbeat Request message. Ensure Heartbeat Request message is formatted correctly, including:	-	-
2	• 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 = 105 (DEREGISTER)	-	-
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 from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT does not transmit at any time	☒ Pass	☐ Fail

8.3.6 6.4.4.2.4 [WINNF.FT.C.HBT.6] Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response

8.3.6.1 Test date

Start date December 4, 2018

8.3.6.2 Observations, settings and special notes

None

8.3.6.3 Test data

#	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 , power P UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:	-	-
2	• 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 from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall stop transmission within (T + 60 seconds) of completion of step 3	☒ Pass	☐ Fail

8.3.7 6.4.4.2.5 [WINNF.FT.C.HBT.7] Heartbeat responseCode=502 (UNSYNC_OP_PARAM)

8.3.7.1 Test date

Start date December 4, 2018

8.3.7.2 Observations, settings and special notes

None

8.3.7.3 Test data

#	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 , power P UUT sends a Heartbeat Request message. Verify Heartbeat Request message is sent within latest specified heartbeatInterval, and is formatted correctly, including:	-	-
2	- 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 from start of test until 60 seconds after Step 3 is complete. This is the end of the test. - UUT shall stop transmission within (T + 60 seconds) of completion of step 3	☒ Pass	☐ Fail

8.3.8 6.4.4.3.1 [WINNF.FT.C.HBT.9] Heartbeat Response Absent (First Heartbeat)

8.3.8.1 Test date

Start date December 4, 2018

8.3.8.2 Observations, settings and special notes

None

8.3.8.3 Test data

Step	Test Execution Steps	Pass	Fail
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: - o valid cbsdId = C - o valid grantId = G - o grant is for frequency range F, power P - o 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"	☒	☐
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	☒	☐

8.3.9 6.4.4.3.2 [WINNF.FT.C.HBT.10] Heartbeat Response Absent (Subsequent Heartbeat)

8.3.9.1 Test date

Start date December 4, 2018

8.3.9.2 Observations, settings and special notes

None

8.3.9.3 Test data

Step	Test Execution Steps	Pass	Fail
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: - o valid cbsdId = C - o valid grantId = G - o grant is for frequency range F, power P - o 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 the latest specified heartbeatInterval, and is formatted correctly, including: • cbsdId = C • grantId = G • operationState = "AUTHORIZED"	☒	☐
3	SAS Test Harness sends a Heartbeat Response message, with the following parameters: • cbsdId = C • grantId = G • transmitExpireTime = current UTC time + 200 seconds • responseCode = 0	–	–
4	After completion of Step 3, SAS Test Harness does not respond to any further messages from 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.	☒	☐

8.3.10 6.4.4.4.1 [WINNF.FT.C.HBT.11] Successful Grant Renewal in Heartbeat Test Case

8.3.10.1 Test date

Start date December 4, 2018

8.3.10.2 Observations, settings and special notes

None

8.3.10.3 Test data

#	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 • 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
6		-	-
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	☒ Pass	☐ Fail
8	Continue to respond to any subsequentHeartbeat Request from CBSD with Heartbeat Response with the following parameters: cbsdID=C grantID=G transmitExpireTime=same as Step 7	-	-
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

8.4 6.5 CBSD Measurement Report

8.4.1 Definitions and limits

This section explains test steps/condition/procedure for CBSD behavior for Measurement Reports.

8.4.2 6.5.4.2.1 [WINNF.FT.C.MES.1] Registration Response contains measReportConfig

8.4.2.1 Test date

Start date December 4, 2018

8.4.2.2 Observations, settings and special notes

None

8.4.2.3 Test data

#	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 sends a Registration Request message. Validate the Registration Request message is formatted correctly, including:	-	-
2	- userId is present and correct - ffid is present and correct - cbsdSerialNumber is present and correct - measCapability= "RECEIVED_POWER_WITHOUT_GRANT"	☒ Pass	☐ Fail
3	SAS Test Harness sends a Registration Response message, with the following parameters: - cbsdId = C=valid cbsdId for this UUT - measReportConfig="RECEIVED_POWER_WITHOUT_GRANT" - responseCode=0	-	-
4	UUT sends a message: - If type message is Spectrum Inquiry Request, go to step 5, or - If message is type Grant Request, go to step 7	-	-
5	UUT sends message type Spectrum Inquiry Request. Verify message contains all required parameters properly formatted, and specifically: - cbsdId=C - measReport is present, and is a properly formatted rcvdPowerMeasReport.	☒ Pass	☐ Fail
6	SAS Test Harness sends a Spectrum Inquiry Response, with the following parameters:: - cbsdId=C - availableChannel is an array of availableChannel objects - responseCode=0.	-	-
7	UUT sends message type Grant Request message. Verify message contains all required parameters properly formatted, and specifically: - cbsdId=C - measReport is present, and is properly formatted rcvdPowerMeasReport.	☒ Pass	☐ Fail

8.4.3 6.5.4.2.3 [WINNF.FT.C.MES.3] Grant Response contains measReportConfig

8.4.3.1 Test date

Start date December 4, 2018

8.4.3.2 Observations, settings and special notes

None

8.4.3.3 Test data

Step	Test Execution Steps	Pass	Fail
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	☒	☐
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"	☒	☐
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	☒	☐
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	–	–

8.4.4 6.5.4.2.4 [WINNF.FT.C.MES.4] Heartbeat Response contains measReportConfig

8.4.4.1 Test date

Start date December 4, 2018

8.4.4.2 Observations, settings and special notes

None

8.4.4.3 Test data

#	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 UUT sends a Heartbeat Request message.	-	-
2	Verify Heartbeat 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	-	-

8.5 6.6 CBSD Relinquishment Process

8.5.1 Definitions and limits

This section provides test steps, condition and procedures to test the conformance of the CBSD implementation for the CBSD Relinquishment Procedure. A precondition is the CBSD has successfully discovered the SAS it wants to communicate with.

8.5.2 6.6.4.1.1 [WINNF.FT.C.RLQ.1] Successful Relinquishment

8.5.2.1 Test date

Start date December 5, 2018

8.5.2.2 Observations, settings and special notes

None

8.5.2.3 Test data

#	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

8.5.3 6.6.4.2.1 [WINNF.FT.C.RLQ.3] Unsuccessful Relinquishment, responseCode=102

8.5.3.1 Test date

Start date December 5, 2018

8.5.3.2 Observations, settings and special notes

None

8.5.3.3 Test data

#	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 send a Relinquishment Response message with parameters: • cbsdId = C • grantId = G • 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 stopped RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒ Pass	☐ Fail

8.5.4 6.6.4.3.1 [WINNF.FT.C.RLQ.5] Unsuccessful Relinquishment, responseCode=103

8.5.4.1 Test date

Start date December 5, 2018

8.5.4.2 Observations, settings and special notes

None

8.5.4.3 Test data

#	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 send a Relinquishment Response message with parameters: • cbsdId = C • grantId = G • responseCode = 103 • responseData = "grantId"	-	-
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 stopped RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	☒ Pass	☐ Fail

8.6 6.7 CBSD Deregistration Process

8.6.1 Definitions and limits

A Deregistration request is issued by a CBSD to request a SAS to deregister the CBSD from the SAS. A Deregistration Request Message issued by a CBSD is provided in [n.5], Section 10.11.

In the Deregistration Response message, the SAS should echo back an array of DeregistrationResponse object. Each deregistrationResponse object consists of a cbsdId and a responseCode. If the deregistration request was successful, the responseCode should be set to 0, otherwise responseCode is set to appropriate error value. The deregistrationResponse Message and the deregistrationResponse object are provided in [n.5], Section 10.12.

Each test generates a CBSD deregistration request and validates the CBSD takes the appropriate actions following the SAS deregistration response.

These deregistration test cases assume the CBSD is the source (operator initiated, for instance reset site). Deregistrations triggered by the SAS in a response message with a responseCode of 105 are covered in other test cases.

8.6.1 6.7.4.1.1 [WINNF.FT.DRG.1] Successful Deregistration

8.6.1.1 Test date

Start date December 5, 2018

8.6.1.2 Observations, settings and special notes

None

8.6.1.3 Test data

#	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

8.6.2 6.7.4.2.1 [WINNF.FT.C.DRG.3] Deregistration responseCode=102

8.6.2.1 Test date

Start date December 5, 2018

8.6.2.2 Observations, settings and special notes

None

8.6.2.3 Test data

#	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.	-	-
4	The SAS Test Harness sends the Deregistration Response Message to UUT with: - No cbsdId - responseCode = 102	-	-
5	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	-	-
6	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: C. UUT sending a Registration Request message, as this is not mandatory D. UUT sending a Deregistration Request message	☒ Pass	☐ Fail

8.6.3 6.7.4.3.1 [WINNF.FT.C.DRG.5] Deregistration responseCode=103

8.6.3.1 Test date

Start date December 5, 2018

8.6.3.2 Observations, settings and special notes

None

8.6.3.3 Test data

#	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.	-	-
4	The SAS Test Harness sends the Deregistration Response Message to UUT with: • No cbsdId • responseCode = 103 • responseData = "cbsdId"	-	-
5	After completion of step 3, SAS Test Harness will not provide any positive response (responseCode=0) to further request messages from the UUT.	-	-
6	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: E. UUT sending a Registration Request message, as this is not mandatory F. UUT sending a Deregistration Request message	☒ Pass	☐ Fail

8.7 6.8 CBSD Security Validation

8.7.1 Definitions and limits

This section provides test steps, condition and procedures to test the conformance of the CBSD implementation for the Security Establishment Procedure. A precondition is the CBSD has successfully discovered the SAS it wants to communicate with. In all test cases under this category, the TLS connection is established successfully between the SAS Test Harness and CBSD. A pre-condition for these tests is that Certificates at CBSD and SAS Test Harness are correct and valid. The security procedure is irrespective of the procedures defined for the SAS Test Harness to CBSD communication.

8.7.2 6.8.4.1.1 [WINNF.FT.C.SCS.1] Successful TLS connection between UUT and SAS Test Harness

8.7.2.1 *Test date*

Start date December 5, 2018

8.7.2.2 *Observations, settings and special notes*

None

8.7.2.3 *Test data*

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: - Wireshark "Protocol" column shows "TLSv1.2" - CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. - The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. - Verify the "Cipher Suite" shown in Wireshark is one of the following: 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 "Application Data" messages are exchanged between WInnForum SAS Test Harness and CBSD/DP UUT.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt shows Registration Request Message from CBSD/DP UUT	☒	☐

8.7.3 6.8.4.2.1 [WINNF.FT.C.SCS.2] TLS failure due to revoked certificate

8.7.3.1 *Test date*

Start date December 5, 2018

8.7.3.2 *Observations, settings and special notes*

None

8.7.3.3 *Test data*

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: - Wireshark "Protocol" column shows "TLSv1.2" - CBSD/DP UUT sends "Client Hello" message to WinnForum SAS Test Harness - WinnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. - The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. - Verify the "Cipher Suite" shown in Wireshark is one of the following: 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 - CBSD/DP UUT performs DNS resolution for the FQDN of the CRL server, or OCSP server, or both listed in the X.509v3 extensions described above for the X.509 certificate of SAS Test Harness. - CBSD/DP UUT: - Download the CRL file according to the full URI listed in X.509v3 extension of "CRL Distribution Points" described above. OR - Send to the OCSP server an OCSP "Request" message containing the certificate serial number, and OCSP server replies. OR - Both CRL file download and OCSP transaction as described above. "Application Data" messages are not seen between WinnForum SAS Test Harness and CBSD/DP UUT. - CBSD/DP UUT may send a TLS "Alert" message to WinnForum SAS Test Harness notifying of rejecting the TLS connection before attempting to establish the TLS connection again.	☒	☐
2	Verify that WinnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.7.4 6.8.4.2.2 [WINNF.FT.C.SCS.3] TLS failure due to expired server certificate

8.7.4.1 Test date

Start date December 5, 2018

8.7.4.2 Observations, settings and special notes

None

8.7.4.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: - Wireshark "Protocol" column shows "TLSv1.2" - CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness - WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. - The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. - Verify the "Cipher Suite" shown in Wireshark is one of the following: - 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 "Application Data" messages are exchanged between WInnForum SAS Test Harness and CBSD/DP UUT.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

Section 8	Testing data
Test name	6.8.4.2.3 [WINNF.FT.C.SCS.4] TLS failure when SAS Test Harness certificate is issued by an unknown CA
Specification	WINNF-TS-0122-V1.0.0 and WINNF-IN-00129-V1.0.0.0



8.7.5 6.8.4.2.3 [WINNF.FT.C.SCS.4] TLS failure when SAS Test Harness certificate is issued by an unknown CA

8.7.5.1 Test date

Start date December 5, 2018

8.7.5.2 Observations, settings and special notes

None

8.7.5.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: - Wireshark "Protocol" column shows "TLSv1.2" - CBSD/DP UUT sends "Client Hello" message to WInnForum SAS Test Harness - WInnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. - The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. - Verify the "Cipher Suite" shown in Wireshark is one of the following: - 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 "Application Data" messages are not seen between WInnForum SAS Test Harness and CBSD/DP UUT. - CBSD/DP UUT may send a TLS "Alert" message to WInnForum SAS Test Harness notifying of rejecting the TLS connection before attempting to establish the TLS connection again.	☒	☐
2	Verify that WInnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.7.6 6.8.4.2.4 [WINNF.FT.C.SCS.5] TLS failure when certificate at the SAS Test Harness is corrupted

8.7.6.1 Test date

Start date December 5, 2018

8.7.6.2 Observations, settings and special notes

None

8.7.6.3 Test data

Step	Test Execution Steps	Pass	Fail
1	Verify in Wireshark the following in the captured packets: - Wireshark "Protocol" column shows "TLSv1.2" - CBSD/DP UUT sends "Client Hello" message to WinnForum SAS Test Harness - WinnForum SAS Test Harness sends "Server Hello" message to CBSD/DP UUT. - The "Server Hello" message "Handshake Protocol" IE includes the "Cipher Suite" IE. - Verify the "Cipher Suite" shown in Wireshark is one of the following: 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 "Application Data" messages are not seen between WinnForum SAS Test Harness and CBSD/DP UUT. - CBSD/DP UUT may send a TLS "Alert" message to WinnForum SAS Test Harness notifying of rejecting the TLS connection before attempting to establish the TLS connection again.	☒	☐
2	Verify that WinnForum SAS Test Harness Command Prompt does not show any Request Message from CBSD/DP UUT	☒	☐

8.8 7.1 CBSD RF Power Measurement

8.8.1 Definitions and limits

This section provides test steps, condition and procedures to demonstrate conformance of the CBSD to limitations on transmit power due to maxEirp setting of AUTHORIZED grants for that CBSD.

8.8.2 7.1.4.1.1 [WINNF.PT.C.HBT.1] UUT RF Transmit Power Measurement

8.8.2.1 Test date

Start date	December 5, 2018
------------	------------------

8.8.2.2 Observations, settings and special notes

None

8.8.2.3 Test data

8.8.2.4 Observations, settings and special notes

CBSD Vendor declaration of parameters:

Maximum rated power of UUT (EIRP, dBm/MHz)	EIRP:30dBm/10MHz , PSD:20dBm/MHz
Transmit dynamic range of UUT (EIRP, dBm/MHz)	20 dB dynamic range (-3 dBm to +17 dBm)
Occupied bandwidth for the test case	20 MHz
maxEirp values for the test case	30
Antenna gain	7dBi +10Log(2)

8.8.2.5 Test data

To demonstrate compliance, the following parameters shall be chosen:

- lowFrequency, highFrequency of the grant. These values should correspond to the bandwidth of operation for the test, appropriate to the OBW of signal under test. Where a UUT is capable of multiple bandwidth operation modes, a single bandwidth operation mode shall be chosen for this test.

The test case below shall be performed for each of the maxEirp values: {P1, P2, ... PN}, determining a pass or fail for each. The UUT must comply with the grant maxEirp parameter for each test. Choice of maxEirp values {P1, P2, ... PN} should be made with knowledge of any limitations on UUT power control steps.

The UUT should be configured during the test to apply the maxEirp values to the entire occupied bandwidth and is implicitly expected to not exceed the dBm/MHz grant requirement.

The test execution steps below will yield a single measurement case. The test steps are to be repeated for each power measurement step, Pi, i = {1...N}.

#	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 <i>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.</i> 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:	-
2	- 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 fulfil 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

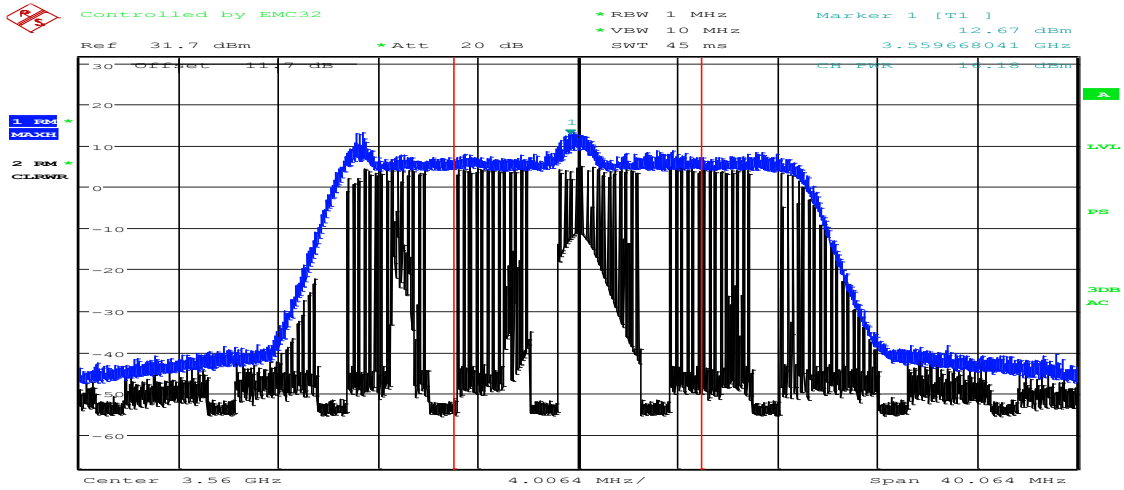
☐ Fail

Power measurement results - lowFrequency

maxEIRP	Measured power (dBm)	Antenna gain (dBi)	EIRP (dBm)	EIRP (mW)
P3	+3.64	7 +10Log(2)	13.64	23.12
P1	+16.18	7 +10Log(2)	26.18	414.95

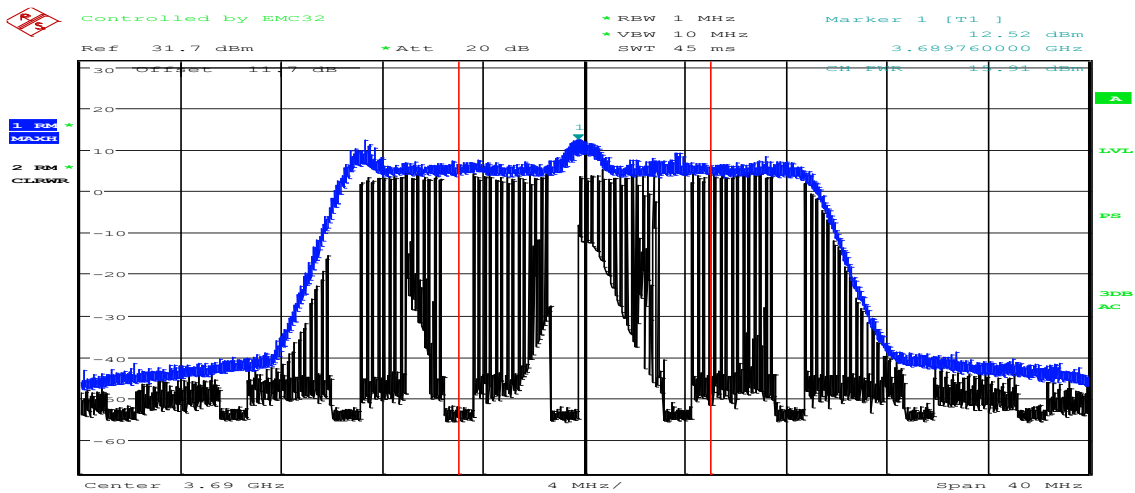
Power measurement results - highFrequency

maxEIRP	Measured power (dBm)	Antenna gain (dBi)	EIRP (dBm)	EIRP (mW)
P4	+2.68	7 +10Log(2)	12.68	18.53
P2	+15.91	7 +10Log(2)	25.91	389.94



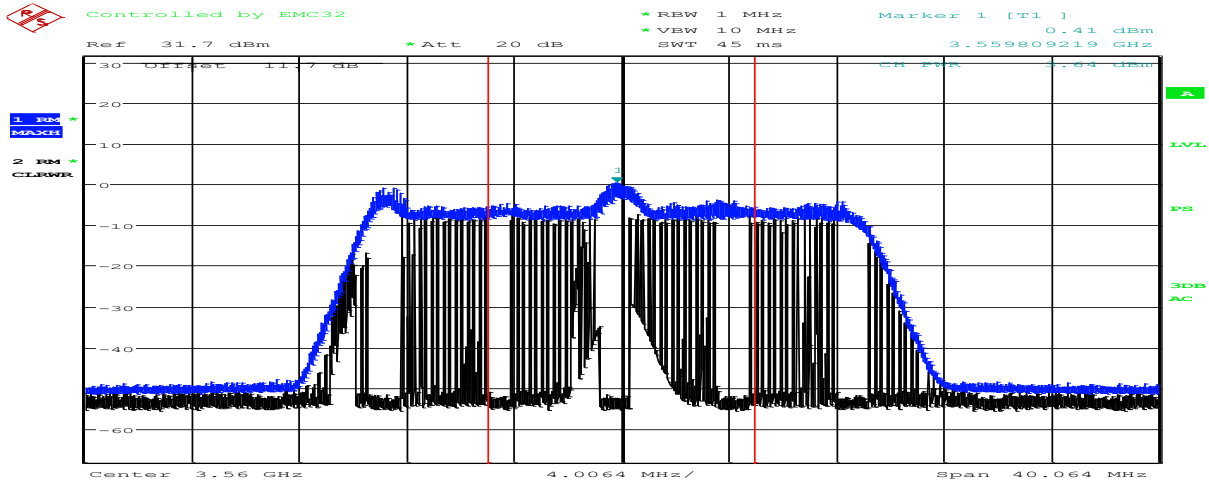
Date: 5.DEC.2018 21:50:16

Plot 1 - Low Channel, PL2



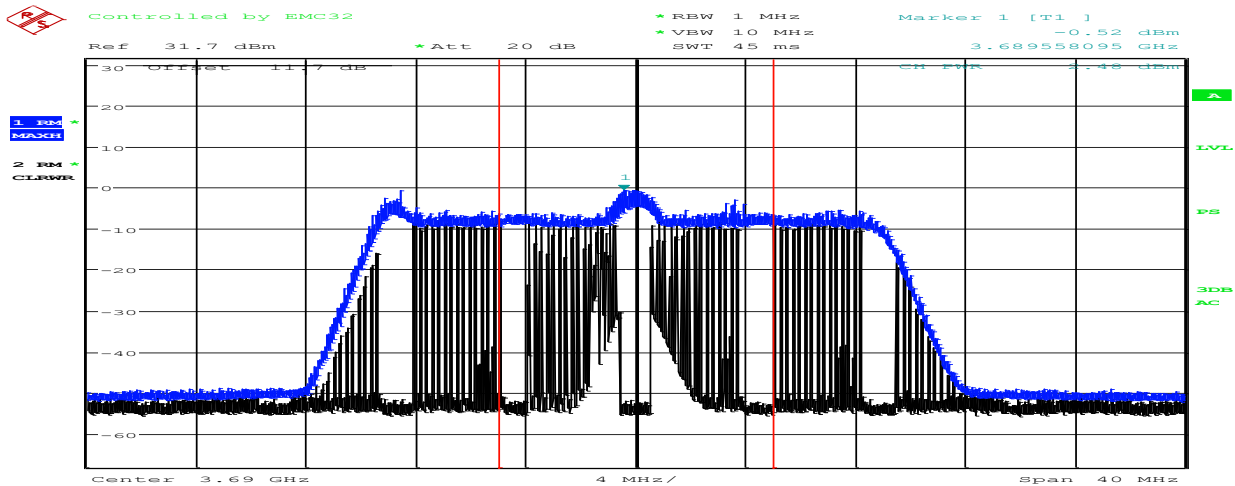
Date: 5.DEC.2018 23:35:28

Plot 2 - High Channel, PL2



Date: 5.DEC.2018 22:48:16

Plot 3 - Low Channel, PL1

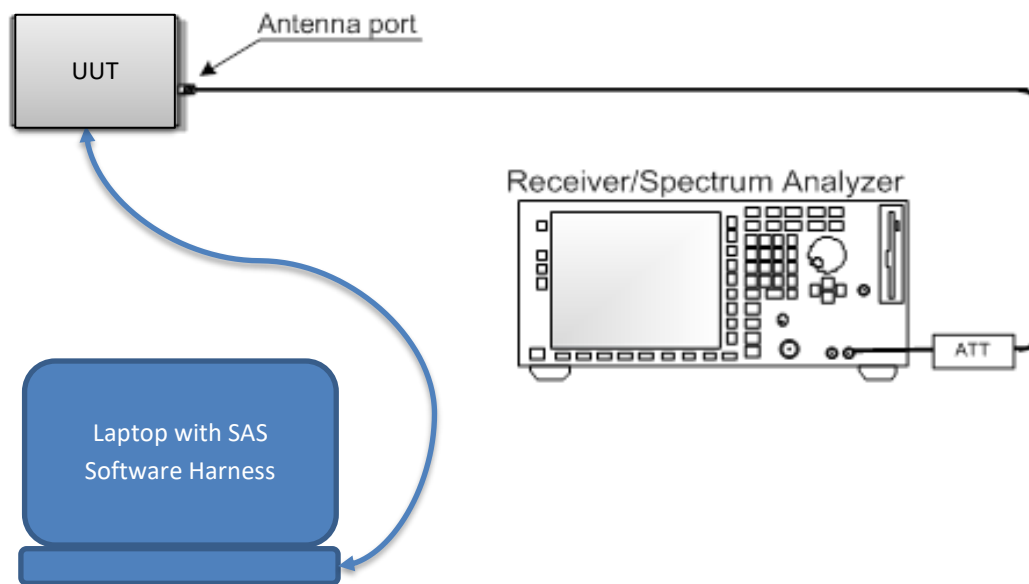


Date: 5.DEC.2018 23:41:01

Plot 4 - High Channel, PL1

Section 9. Block diagrams of test set-ups

9.1 Test equipment set-up



Section 10. Log files library

10.1 Log file for test case ID: WINNF.FT.C.REG.1

```

2018-12-04T16:27:45.651Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T16:27:45.651Z - INFO - the selected test from the user :
WINNF.FT.C.REG.1 is starting now
2018-12-04T16:27:56.713Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T16:27:56.776Z - INFO - engine sent successfully, the response to
CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```
]
}
2018-12-04T16:27:58.778Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T16:27:58.778Z - INFO - the question is : Were there RF
transmissions from the CBSD1 during the test? please choose one of the
answers :
2018-12-04T16:36:24.826Z - INFO - for the question : Were there RF
transmissions from the CBSD1 during the test? , the user choose n
2018-12-04T16:36:54.269Z - INFO - The final result of the test :
WINNF.FT.C.REG.1 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx from JLT622P
```

10.2 Log file for test case ID: WINNF.FT.C.REG.3

```

2018-12-04T16:38:05.723Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T16:38:05.723Z - INFO - the selected test from the user :
WINNF.FT.C.REG.3 is starting now
2018-12-04T16:39:33.934Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.602145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T16:39:33.964Z - INFO - engine sent successfully, the response to
CBRS : {

```



```
"registrationResponse": [  
  {  
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",  
    "response": {  
      "responseCode": 0  
    }  
  }  
]  
}  
2018-12-04T16:39:35.561Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T16:39:35.561Z - INFO - the question is : Were there RF  
transmissions from the CBSD1 during the test? please choose one of the  
answers :  
2018-12-04T16:40:23.736Z - INFO - for the question : Were there RF  
transmissions from the CBSD1 during the test? , the user choose n  
2018-12-04T16:40:37.661Z - INFO - The final result of the test :  
WINNF.FT.C.REG.3 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx from JLT622P
```

10.3 Log file for test case ID: WINNF.FT.C.REG.5

```

2018-12-04T16:48:25.859Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T16:48:25.859Z - INFO - the selected test from the user :
WINNF.FT.C.REG.5 is starting now
2018-12-04T16:49:41.256Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "cpiSignatureData": {
        "digitalSignature":
          "iVmDmNrxeZ_2l4cuS6MP5ihbytLT7NYRC8pGYnIz1I9O-
          QHaYQw4T5KgTvP9DuMdlFJqbYAz9aN1G5UzMwKDVcIE-D2S1BsBfAWSf-
          2PWe2uC3RkiroHk6iT3hMnyIQE6vupDaQEDgIncRDfwF8t-5zNPYzhRfjWGBBmA-
          4Qm2Ykz0B40yxW7V5IWZwmu54WtQfiK99CZLl15tC2-
          Avpz06Vby8eT6zTR9G11SiClv3U5r2J6NwIiLUy3mX3T6uxf5tAna2kjpMUeBSAQGOroWCBGt-
          pvAd2c_nJx3XPRPANgefzp6HmA5i1dO-o_tQxRidzrFAA4i60JYA8cu-lg",
        "encodedCpiSignedData":
          "eyJjYnNkU2VyaWFsTnVtYmVyIjoInjRBODM3MjYwMUI5IiwizMnJySWQiOiJmY2NJZFRlc3QiLCJp
          bnN0YWxsYXRpb25QYXJhbSI6eyJhbnRlbn5hQXppbXV0aCI6MCwiYW50ZW5uYUJlYW13aWR0aCI6M
          zYwLCJhbnRlbn5hRG93bnRpbHQiOiJAsImFudGVubmFHYWluIjoYLCJhbnRlbn5hTW9kZWwiOiJVbm
          tub3duIiwiaGVpZ2h0IjowLjAsImhlaWdodFR5cGUiOiJBR0wiLCJpbmRvb3JEZXBSb3ltZW50Ijp
          0cnVlLCJsYXRpdHVkZSI6MzguNjAyMTQ1LCJsb25naXR1ZGUiOi0xMDQuODkwNTE2MDAwMDAwMDF9
          LCJwcm9mZXNzaW9uYWwJbnN0YWxsZXJlYXRoIjpw7ImNwaUlkljoidGVzdF9jcGlfaWQiLCJjcGlOY
          WllIjoidGVzdF9jcGlfbmFtZSI6ImIuc3RhbmGxZDZXJ0aWZpY2F0aW9uVGltZSI6IjIwMTg0MDgtMj
          BUMTI6MDA6MDBaIn19",
        "protectedHeader": "eyJhbnRlbn5hQXppbXV0aCI6MCwiYW50ZW5uYUJlYW13aWR0aCI6M
      },
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ]
    }
  ]
}

```

```

    ],
    "userId": "userIdTest"
  }
]
}
2018-12-04T16:49:41.319Z - INFO - Registration message contains
cpiSignatureData
2018-12-04T16:49:41.319Z - INFO - protectedHeader = {u'alg': u'RS256',
u'typ': u'JWT'}
2018-12-04T16:49:41.319Z - INFO - encodedCpiSignedData contents = {
  "installationParam": {
    "antennaAzimuth": 0,
    "heightType": "AGL",
    "antennaModel": "Unknown",
    "longitude": -104.890516,
    "height": 0.0,
    "indoorDeployment": true,
    "latitude": 38.602145,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 360,
    "antennaGain": 2
  },
  "fccId": "fccIdTest",
  "professionalInstallerData": {
    "cpiName": "test_cpi_name",
    "installCertificationTime": "2018-08-20T12:00:00Z",
    "cpiId": "test_cpi_id"
  },
  "cbsdSerialNumber": "64A8372601B9"
}
2018-12-04T16:49:42.414Z - INFO - verified signature on cpiSignatureData
2018-12-04T16:49:42.430Z - INFO - cbsdCategory= 'A', removing optional param
from cpi_schema
2018-12-04T16:49:42.430Z - INFO - cpiSignatureData data successfully
validated against jsonschema
2018-12-04T16:49:42.430Z - INFO - engine sent successfully, the response to
CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-04T16:49:43.648Z - INFO - arrived to nstep starting question answer
session with the technician

```

2018-12-04T16:49:43.648Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2018-12-04T16:49:59.707Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2018-12-04T16:50:07.303Z - INFO - The final result of the test : WINNF.FT.C.REG.5 is - passed and :the additional comments for the current test are : Antenna port Verified No RF Tx from JLT622P

10.4 Log file for test case ID: WINNF.FT.C.REG.7

```

2018-12-04T16:51:22.351Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T16:51:22.351Z - INFO - the selected test from the user :
WINNF.FT.C.REG.7 is starting now
2018-12-04T16:53:05.115Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.602145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T16:53:05.178Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T16:53:05.226Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T16:53:05.226Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T16:53:05.601Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```



```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T16:53:05.631Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T16:53:05Z",
            "grantId": "563169925",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T16:53:05.976Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "563169925",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T16:53:05.990Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "563169925",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T16:56:25Z"
        }
    ]
}
}

```

```

    }
  ]
}
2018-12-04T16:54:05.996Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "563169925",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T16:54:06.012Z - INFO - Time interval between two heartbeat request
messages is: 60.021, limit is: 65.0
2018-12-04T16:54:06.012Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "563169925",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T16:57:26Z"
    }
  ]
}
2018-12-04T16:55:51.362Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "563169925"
    }
  ]
}
2018-12-04T16:55:51.394Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "563169925",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T16:55:51.440Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [

```

```
{
  "cbsdId": "fccIdTestMock-SAS64A8372601B9"
}
]
}
2018-12-04T16:55:51.471Z - INFO - engine sent successfully, the response to
CBRS : {
  "deregistrationResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-04T16:55:52.724Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T16:55:52.724Z - INFO - the question is : Did the CBSD stop RF
transmissions upon sending the Deregister request? please choose one of the
answers :
2018-12-04T16:57:00.040Z - INFO - for the question : Did the CBSD stop RF
transmissions upon sending the Deregister request? , the user choose y
2018-12-04T17:03:28.529Z - INFO - The final result of the test :
WINNF.FT.C.REG.7 is - passed and :the additional comments for the current
test are : Installation Parameter Changed (Location) then CBSD rebooted to
apply parameter change, then CBSD deregister and registered before 60 seconds
with new parameter. JLT622P stop transmissions when deregister.
```

10.5 Log file for test case ID: WINNF.FT.C.REG.8

```

2018-12-04T17:05:02.505Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T17:05:02.505Z - INFO - the selected test from the user :
WINNF.FT.C.REG.8 is starting now
2018-12-04T17:06:43.160Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T17:06:43.503Z - INFO - engine sent successfully, the response to
CBRS : {

```

```
"registrationResponse": [  
  {  
    "response": {  
      "responseCode": 102  
    }  
  }  
]  
}  
2018-12-04T17:06:45.426Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T17:06:45.426Z - INFO - the question is : Were there RF  
transmissions from the CBSD1 during the test? please choose one of the  
answers :  
2018-12-04T17:07:17.753Z - INFO - for the question : Were there RF  
transmissions from the CBSD1 during the test? , the user choose n  
2018-12-04T17:07:36.911Z - INFO - The final result of the test :  
WINNF.FT.C.REG.8 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx from JLT622P
```

10.6 Log file for test case ID: WINNF.FT.C.REG.10

```

2018-12-04T17:08:33.546Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T17:08:33.546Z - INFO - the selected test from the user :
WINNF.FT.C.REG.10 is starting now
2018-12-04T17:10:16.377Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T17:10:16.690Z - INFO - engine sent successfully, the response to
CBRS : {

```

```
"registrationResponse": [  
  {  
    "response": {  
      "responseCode": 200  
    }  
  }  
]  
}  
2018-12-04T17:10:18.526Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T17:10:18.526Z - INFO - the question is : Were there RF  
transmissions from the CBSD1 during the test? please choose one of the  
answers :  
2018-12-04T17:12:24.596Z - INFO - for the question : Were there RF  
transmissions from the CBSD1 during the test? , the user choose n  
2018-12-04T17:12:34.403Z - INFO - The final result of the test :  
WINNF.FT.C.REG.10 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx from JLT622P
```


10.7 Log file for test case ID: WINNF.FT.C.REG.12

```

2018-12-04T17:15:25.980Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T17:15:25.980Z - INFO - the selected test from the user :
WINNF.FT.C.REG.12 is starting now
2018-12-04T17:17:09.256Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T17:17:09.319Z - INFO - engine sent successfully, the response to
CBRS : {

```

```
"registrationResponse": [  
  {  
    "response": {  
      "responseCode": 103  
    }  
  }  
]  
}  
2018-12-04T17:17:10.990Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T17:17:10.990Z - INFO - the question is : Were there RF  
transmissions from the CBSD1 during the test? please choose one of the  
answers :  
2018-12-04T17:18:19.364Z - INFO - for the question : Were there RF  
transmissions from the CBSD1 during the test? , the user choose n  
2018-12-04T17:18:27.473Z - INFO - The final result of the test :  
WINNF.FT.C.REG.12 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx from JLT622P
```

10.8 Log file for test case ID: WINNF.FT.C.REG.14

```

2018-12-04T17:19:14.296Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T17:19:14.296Z - INFO - the selected test from the user :
WINNF.FT.C.REG.14 is starting now
2018-12-04T17:20:48.234Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T17:20:48.312Z - INFO - engine sent successfully, the response to
CBRS : {

```

```
"registrationResponse": [  
  {  
    "response": {  
      "responseCode": 101  
    }  
  }  
]  
}  
2018-12-04T17:20:49.924Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T17:20:49.924Z - INFO - the question is : Were there RF  
transmissions from the CBSD1 during the test? please choose one of the  
answers :  
2018-12-04T17:22:04.440Z - INFO - for the question : Were there RF  
transmissions from the CBSD1 during the test? , the user choose n  
2018-12-04T17:22:10.026Z - INFO - The final result of the test :  
WINNF.FT.C.REG.14 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx from JLT622P
```

10.9 Log file for test case ID: WINNF.FT.C.REG.16

```

2018-12-04T17:22:55.273Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T17:22:55.273Z - INFO - the selected test from the user :
WINNF.FT.C.REG.16 is starting now
2018-12-04T17:24:19.197Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}

```

```
2018-12-04T17:24:19.259Z - INFO - engine sent successfully, the response to
CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 100
      }
    }
  ]
}
2018-12-04T17:24:20.950Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T17:24:20.950Z - INFO - the question is : Were there RF
transmissions from the CBSD1 during the test? please choose one of the
answers :
2018-12-04T17:25:39.789Z - INFO - for the question : Were there RF
transmissions from the CBSD1 during the test? , the user choose n
2018-12-04T17:25:52.615Z - INFO - The final result of the test :
WINNF.FT.C.REG.16 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx from JLT622P
```

10.10 Log file for test case ID: WINNF.FT.C.REG.18

```

2018-12-04T17:27:01.025Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T17:27:01.025Z - INFO - the selected test from the user :
WINNF.FT.C.REG.18 is starting now
2018-12-04T17:28:44.362Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T17:28:44.676Z - INFO - engine sent successfully, the response to
CBRS : {

```

```
"registrationResponse": [  
  {  
    "response": {  
      "responseCode": 201  
    }  
  }  
]  
}  
2018-12-04T17:28:45.940Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T17:28:45.940Z - INFO - the question is : Were there RF  
transmissions from the CBSD1 during the test? please choose one of the  
answers :  
2018-12-04T17:30:05.576Z - INFO - for the question : Were there RF  
transmissions from the CBSD1 during the test? , the user choose n  
2018-12-04T17:30:11.914Z - INFO - The final result of the test :  
WINNF.FT.C.REG.18 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx from JLT622P
```


10.11 Log file for test case ID: WINNF.FT.C.REG.20 (reference Log)

-----For Reference only-----

WINNF.FT.C.REG20 test case was verified by below WINNF.FT.C.REG7 (This log is for REFERENCE ONLY)

2018-12-04T16:51:22.351Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24

2018-12-04T16:51:22.351Z - INFO - the selected test from the user :
WINNF.FT.C.REG.7 is starting now

2018-12-04T16:53:05.115Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
  {
    "airInterface": {
      "radioTechnology": "E_UTRA",
      "supportedSpec": "FFS"
    },
    "callSign": "WL9XKH",
    "cbsdCategory": "A",
    "cbsdInfo": {
      "firmwareVersion": "0.7.0.6",
      "hardwareVersion": "V0.2",
      "model": "JLT622",
      "softwareVersion": "6.4.0",
      "vendor": "Fujitsu"
    },
    "cbsdSerialNumber": "64A8372601B9",
    "fccId": "fccIdTest",
    "groupingParam": [
      {
        "groupId": "userIdTest",
        "groupType": "INTERFERENCE_COORDINATION"
      }
    ],
    "installationParam": {
      "antennaAzimuth": 0,
      "antennaBeamwidth": 360,
      "antennaDowntilt": 0,
      "antennaGain": 2,
      "antennaModel": "Unknown",
      "height": 0.0,
      "heightType": "AGL",
      "indoorDeployment": true,
      "latitude": 38.602145,
      "longitude": -104.890516
    },
    "measCapability": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "userId": "userIdTest"
  }
]
```

```

    }
  ]
}
2018-12-04T16:53:05.178Z - INFO - engine sent successfully, the response to
CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T16:53:05.226Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}

```

```

    }
  ]
}
}
2018-12-04T16:53:05.226Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-04T16:53:05.601Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          }
        ],
        {
          "measBandwidth": 10000000,

```

```

        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
      "highFrequency": 3650000000,
      "lowFrequency": 3640000000
    }
  }
}
]
}
2018-12-04T16:53:05.631Z - INFO - engine sent successfully, the response to
CBRS : {
  "grantResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "channelType": "GAA",
      "grantExpireTime": "2018-12-11T16:53:05Z",
      "grantId": "563169925",
      "heartbeatInterval": 60,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-04T16:53:05.976Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "563169925",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2018-12-04T16:53:05.990Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",

```

```

        "grantId": "563169925",
        "response": {
            "responseCode": 0
        },
        "transmitExpireTime": "2018-12-04T16:56:25Z"
    }
]
}
2018-12-04T16:54:05.996Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "563169925",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-12-04T16:54:06.012Z - INFO - Time interval between two heartbeat request
messages is: 60.021, limit is: 65.0
2018-12-04T16:54:06.012Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "563169925",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T16:57:26Z"
        }
    ]
}
}
2018-12-04T16:55:51.362Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "563169925"
        }
    ]
}
}
2018-12-04T16:55:51.394Z - INFO - engine sent successfully, the response to
CBRS : {
    "relinquishmentResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "563169925",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T16:55:51.440Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbbsdId": "fccIdTestMock-SAS64A8372601B9"
    }
  ]
}
2018-12-04T16:55:51.471Z - INFO - engine sent successfully, the response to
CBRS : {
  "deregistrationResponse": [
    {
      "cbbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T16:55:52.724Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T16:55:52.724Z - INFO - the question is : Did the CBSD stop RF
transmissions upon sending the Deregister request? please choose one of the
answers :
2018-12-04T16:57:00.040Z - INFO - for the question : Did the CBSD stop RF
transmissions upon sending the Deregister request? , the user choose y
2018-12-04T17:03:28.529Z - INFO - The final result of the test :
WINNF.FT.C.REG.7 is - passed and :the additional comments for the current
test are : Installation Parameter Changed (Location) then CBSD rebooted to
apply parameter change, then CBSD deregister and registered before 60 seconds
with new parameter. JLT622P stop transmissions when deregister.

```


10.12 Log file for test case ID: WINNF.FT.C.GRA.1

```

2018-12-04T18:20:19.430Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T18:20:19.430Z - INFO - the selected test from the user :
WINNF.FT.C.GRA.1 is starting now
2018-12-04T18:21:56.770Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T18:21:56.848Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T18:21:56.895Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T18:21:56.911Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T18:21:57.305Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T18:21:57.321Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
}
2018-12-04T18:21:59.309Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T18:21:59.309Z - INFO - the question is : Were there RF
transmissions from the CBSD1 during the test? please choose one of the
answers :
2018-12-04T18:24:02.415Z - INFO - for the question : Were there RF
transmissions from the CBSD1 during the test? , the user choose n
2018-12-04T18:24:12.790Z - INFO - The final result of the test :
WINNF.FT.C.GRA.1 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx from JLT622P

```

10.13 Log file for test case ID: WINNF.FT.C.GRA.2

```

2018-12-04T18:25:30.279Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T18:25:30.279Z - INFO - the selected test from the user :
WINNF.FT.C.GRA.2 is starting now
2018-12-04T18:27:10.901Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T18:27:10.947Z - INFO - engine sent successfully, the response to
CBRS : {

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"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T18:27:10.994Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```



```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T18:27:10.994Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T18:27:11.369Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          }
        ],
        {
          "measBandwidth": 10000000,

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        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T18:27:11.401Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "response": {
                "responseCode": 401
            }
        }
    ]
}
}
2018-12-04T18:27:13.095Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T18:27:13.095Z - INFO - the question is : Were there RF
transmissions from the CBSD1 during the test? please choose one of the
answers :
2018-12-04T18:30:10.438Z - INFO - for the question : Were there RF
transmissions from the CBSD1 during the test? , the user choose n
2018-12-04T18:30:20.778Z - INFO - The final result of the test :
WINNF.FT.C.GRA.2 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx from JLT622P

```

10.14 Log file for test case ID: WINNF.FT.C.HBT.1

```

2018-12-04T18:44:55.875Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T18:44:55.875Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.1 is starting now
2018-12-04T18:46:19.901Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T18:46:19.963Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T18:46:20.013Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
]

```

```

}
2018-12-04T18:46:20.013Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T18:46:20.388Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```



```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T18:46:20.418Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T18:46:20Z",
            "grantId": "132943658",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T18:46:20.763Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "132943658",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T18:46:20.779Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "132943658",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T18:49:40Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T18:47:20.783Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T18:47:20.799Z - INFO - Time interval between two heartbeat request
messages is: 60.021, limit is: 65.0
2018-12-04T18:47:20.815Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T18:50:40Z"
    }
  ]
}
2018-12-04T18:48:20.819Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T18:48:20.819Z - INFO - Time interval between two heartbeat request
messages is: 60.036, limit is: 65.0
2018-12-04T18:48:20.835Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T18:51:40Z"
    }
  ]
}

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    }
  ]
}
2018-12-04T18:49:20.845Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T18:49:20.861Z - INFO - Time interval between two heartbeat request
messages is: 60.025, limit is: 65.0
2018-12-04T18:49:20.861Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T18:52:40Z"
    }
  ]
}
2018-12-04T18:50:20.885Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T18:50:20.885Z - INFO - Time interval between two heartbeat request
messages is: 60.041, limit is: 65.0
2018-12-04T18:50:20.901Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T18:53:40Z"
    }
  ]
}

```

```

    }
  ]
}
2018-12-04T18:51:20.915Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T18:51:20.915Z - INFO - Time interval between two heartbeat request
messages is: 60.03, limit is: 65.0
2018-12-04T18:51:20.930Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "132943658",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T18:54:40Z"
    }
  ]
}
2018-12-04T18:51:21.986Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T18:51:21.986Z - INFO - the question is : Did the CBSD1 transmit
power prior to AUTHORIZED state (first successful HBT response)? please
choose one of the answers :
2018-12-04T18:51:51.604Z - INFO - for the question : Did the CBSD1 transmit
power prior to AUTHORIZED state (first successful HBT response)? , the user
choose n
2018-12-04T18:52:38.059Z - INFO - The final result of the test :
WINNF.FT.C.HBT.1 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx prior the first successful HBT
response from JLT622P

```

10.15 Log file for test case ID: WINNF.FT.C.HBT.3

```

2018-12-04T18:57:51.062Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T18:57:51.062Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.3 is starting now
2018-12-04T19:00:23.901Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T19:00:23.979Z - INFO - engine sent successfully, the response to
CBRS : {

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"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T19:00:24.026Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```



```

}
2018-12-04T19:00:24.026Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:00:24.401Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

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        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T19:00:24.433Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T19:00:24Z",
            "grantId": "360436769",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T19:00:24.776Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "360436769",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T19:00:24.792Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "360436769",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T19:03:44Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T19:01:24.802Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "360436769",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:01:24.802Z - INFO - Time interval between two heartbeat request
messages is: 60.027, limit is: 65.0
2018-12-04T19:01:24.819Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "360436769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:04:44Z"
    }
  ]
}
2018-12-04T19:02:24.832Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "360436769",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:02:24.832Z - INFO - Time interval between two heartbeat request
messages is: 60.03, limit is: 65.0
2018-12-04T19:02:24.848Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "360436769",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:05:44Z"
    }
  ]
}

```

```

    }
  ]
}
2018-12-04T19:03:24.855Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "360436769",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:03:24.855Z - INFO - Time interval between two heartbeat request
messages is: 60.023, limit is: 65.0
2018-12-04T19:03:24.871Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "360436769",
      "response": {
        "responseCode": 105
      },
      "transmitExpireTime": "2018-12-04T19:03:24Z"
    }
  ]
}
2018-12-04T19:03:26.141Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T19:03:26.141Z - 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 :
2018-12-04T19:04:57.052Z - INFO - for the question : Did the CBSD stop RF
transmission within 60 seconds of receiving Heartbeat response with
responseCode = 105? , the user choose y
2018-12-04T19:06:28.930Z - INFO - The final result of the test :
WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx within 60 seconds of receiving HB
response 105 from JLT622P

```

10.16 Log file for test case ID:WINNF.FT.C.HBT.4

```

2018-12-04T19:07:20.908Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T19:07:20.908Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.4 is starting now
2018-12-04T19:09:00.591Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T19:09:00.684Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T19:09:00.730Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```



```

}
2018-12-04T19:09:00.746Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:09:01.121Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

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```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T19:09:01.138Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T19:09:01Z",
            "grantId": "349857175",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T19:09:01.480Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "349857175",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T19:09:01.496Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "349857175",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T19:12:21Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T19:10:01.506Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:10:01.523Z - INFO - Time interval between two heartbeat request
messages is: 60.026, limit is: 65.0
2018-12-04T19:10:01.523Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:13:21Z"
    }
  ]
}
2018-12-04T19:11:01.540Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:11:01.540Z - INFO - Time interval between two heartbeat request
messages is: 60.034, limit is: 65.0
2018-12-04T19:11:01.556Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:14:21Z"
    }
  ]
}

```

```

    }
  ]
}
2018-12-04T19:12:01.572Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:12:01.572Z - INFO - Time interval between two heartbeat request
messages is: 60.031, limit is: 65.0
2018-12-04T19:12:01.588Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:15:21Z"
    }
  ]
}
2018-12-04T19:13:01.588Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:13:01.604Z - INFO - Time interval between two heartbeat request
messages is: 60.017, limit is: 65.0
2018-12-04T19:13:01.604Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:16:21Z"
    }
  ]
}

```

```

    }
  ]
}
2018-12-04T19:14:01.621Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:14:01.621Z - INFO - Time interval between two heartbeat request
messages is: 60.033, limit is: 65.0
2018-12-04T19:14:01.638Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "349857175",
      "response": {
        "responseCode": 500
      },
      "transmitExpireTime": "2018-12-04T19:14:01Z"
    }
  ]
}
2018-12-04T19:14:03.325Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T19:14:03.325Z - 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 :
2018-12-04T19:14:26.683Z - INFO - for the question : Did the CBSD1 stop RF
transmission within 60 seconds of receiving Heartbeat response with
responseCode = 500? , the user choose y
2018-12-04T19:14:48.529Z - INFO - The final result of the test :
WINNF.FT.C.HBT.4 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx within 60 seconds of receiving HB
response 500 from JLT622P

```

10.17 Log file for test case ID: WINNF.FT.C.HBT.5

```

2018-12-04T19:16:43.075Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T19:16:43.075Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.5 is starting now
2018-12-04T19:19:06.049Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T19:19:06.111Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T19:19:06.157Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```



```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T19:19:06.188Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:19:06.563Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T19:19:06.579Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T19:19:06Z",
            "grantId": "899602575",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T19:19:06.938Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "899602575",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T19:19:06.954Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "899602575",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2018-12-04T19:19:06Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T19:20:06.956Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "899602575",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2018-12-04T19:20:06.971Z - INFO - Time interval between two heartbeat request
messages is: 60.017, limit is: 65.0
2018-12-04T19:20:06.971Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "899602575",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2018-12-04T19:20:06Z"
    }
  ]
}
2018-12-04T19:20:08.851Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T19:20:08.851Z - INFO - the question is : Did the CBSD transmit at
any time during the test? please choose one of the answers :
2018-12-04T19:21:07.002Z - INFO - for the question : Did the CBSD transmit at
any time during the test? , the user choose n
2018-12-04T19:22:10.549Z - INFO - The final result of the test :
WINNF.FT.C.HBT.5 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx during all testing and after HB
response 501 from JLT622P

```

10.18 Log file for test case ID: WINNF.FT.C.HBT.6

```

2018-12-04T19:24:19.595Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T19:24:19.595Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.6 is starting now
2018-12-04T19:25:32.344Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}

```

2018-12-04T19:25:32.437Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
```

2018-12-04T19:25:32.484Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "inquiredSpectrum": [
      {
        "highFrequency": 3700000000,
        "lowFrequency": 3550000000
      }
    ],
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3570000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3580000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3590000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
```

```

        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
]
}

```



```

    }
  ]
}
2018-12-04T19:25:32.500Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:25:32.875Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},

```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ],
    },
    "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {
            "highFrequency": 3650000000,
            "lowFrequency": 3640000000
        }
    }
}
]
}
2018-12-04T19:25:32.891Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T19:25:32Z",
            "grantId": "864281418",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T19:25:33.250Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "864281418",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T19:25:33.266Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "864281418",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}

```

```

        },
        "transmitExpireTime": "2018-12-04T19:28:53Z"
    }
]
}
2018-12-04T19:26:33.273Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "864281418",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-12-04T19:26:33.273Z - INFO - Time interval between two heartbeat request
messages is: 60.023, limit is: 65.0
2018-12-04T19:26:33.289Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "864281418",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T19:29:53Z"
        }
    ]
}
}
2018-12-04T19:27:33.303Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "864281418",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
}
2018-12-04T19:27:33.303Z - INFO - Time interval between two heartbeat request
messages is: 60.03, limit is: 65.0
2018-12-04T19:27:33.319Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "864281418",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    },
    "transmitExpireTime": "2018-12-04T19:30:53Z"
  }
]
}
2018-12-04T19:28:33.328Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "864281418",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:28:33.328Z - INFO - Time interval between two heartbeat request
messages is: 60.024, limit is: 65.0
2018-12-04T19:28:33.342Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "864281418",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2018-12-04T19:28:33Z"
    }
  ]
}
}
2018-12-04T19:29:33.358Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "864281418",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2018-12-04T19:29:33.358Z - INFO - Time interval between two heartbeat request
messages is: 60.03, limit is: 65.0
2018-12-04T19:29:33.372Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "864281418",
      "response": {
        "responseCode": 501
      }
    }
  ]
}

```

```
    },  
    "transmitExpireTime": "2018-12-04T19:29:33Z"  
  }  
]  
}  
2018-12-04T19:29:35.339Z - INFO - arrived to nstep starting question answer  
session with the technician  
2018-12-04T19:29:35.339Z - 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 :  
2018-12-04T19:30:09.358Z - INFO - for the question : Did the CBSD stop RF  
transmission within 60 seconds of receiving Heartbeat response with  
responseCode = 501? , the user choose y  
2018-12-04T19:30:40.384Z - INFO - The final result of the test :  
WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current  
test are : Antenna port Verified No RF Tx after HB response 501 from JLT622P
```

10.19 Log file for test case ID: WINNF.FT.C.HBT.7

```

2018-12-04T19:41:35.229Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T19:41:35.229Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.7 is starting now
2018-12-04T19:43:20.562Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T19:43:20.655Z - INFO - engine sent successfully, the response to
CBRS : {

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"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T19:43:20.687Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```



```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T19:43:20.703Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:43:21.078Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T19:43:21.094Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T19:43:21Z",
            "grantId": "958134289",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T19:43:21.453Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "958134289",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T19:43:21.469Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "958134289",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T19:46:41Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T19:44:21.483Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:44:21.483Z - INFO - Time interval between two heartbeat request
messages is: 60.03, limit is: 65.0
2018-12-04T19:44:21.499Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:47:41Z"
    }
  ]
}
2018-12-04T19:45:21.499Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:45:21.515Z - INFO - Time interval between two heartbeat request
messages is: 60.016, limit is: 65.0
2018-12-04T19:45:21.546Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T19:48:41Z"
    }
  ]
}

```

```

    }
  ]
}
2018-12-04T19:46:21.563Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T19:46:21.563Z - INFO - Time interval between two heartbeat request
messages is: 60.065, limit is: 65.0
2018-12-04T19:46:21.579Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "response": {
        "responseCode": 502
      },
      "transmitExpireTime": "2018-12-04T19:46:21Z"
    }
  ]
}
2018-12-04T19:46:21.595Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289"
    }
  ]
}
2018-12-04T19:46:21.611Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "958134289",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:46:22.642Z - INFO - arrived to nstep starting question answer
session with the technician

```

2018-12-04T19:46:22.642Z - 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 :
2018-12-04T19:46:50.352Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y
2018-12-04T19:48:01.221Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed and :the additional comments for the current test are : Antenna port Verified No RF Tx within 60 seconds after receiving HB response 502 from JLT622P

10.20 Log file for test case ID: WINNF.FT.C.HBT.9

```

2018-12-04T19:50:59.855Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T19:50:59.855Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.9 is starting now
2018-12-04T19:51:52.098Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T19:51:52.161Z - INFO - engine sent successfully, the response to
CBRS : {

```



```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T19:51:52.207Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T19:51:52.240Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T19:51:52.615Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

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```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T19:51:52.630Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T19:51:52Z",
            "grantId": "584722815",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T19:51:52.973Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "584722815",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T19:53:03.052Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "584722815",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}

```

```

2018-12-04T19:53:03.052Z - INFO - request message received while HBT is
absent, sleep 134 sec before responding
2018-12-04T19:54:13.052Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "584722815",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2018-12-04T19:54:13.052Z - INFO - request message received while HBT is
absent, sleep 64 sec before responding
2018-12-04T19:55:13.002Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "584722815",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2018-12-04T19:55:13Z"
    }
  ]
}
2018-12-04T19:55:14.894Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T19:55:14.894Z - INFO - the question is : Were there RF
transmissions from the CBSD during the test? please choose one of the answers
:
2018-12-04T19:55:17.072Z - INFO - engine sent successfully, the response to
CBRS : "list index out of range"
2018-12-04T19:55:17.072Z - INFO - engine sent successfully, the response to
CBRS : "list index out of range"
2018-12-04T19:56:28.369Z - INFO - for the question : Were there RF
transmissions from the CBSD during the test? , the user choose n
2018-12-04T19:58:31.926Z - INFO - The final result of the test :
WINNF.FT.C.HBT.9 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx before and after first HB and loss
of network from JLT622P

```

10.21 Log file for test case ID: WINNF.FT.C.HBT.10

```

2018-12-04T21:13:53.630Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T21:13:53.630Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.10 is starting now
2018-12-04T21:15:33.444Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T21:15:33.523Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T21:15:33.555Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```



```

    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
]
}
]

```

```

}
2018-12-04T21:15:33.585Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T21:15:33.957Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T21:15:33.970Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T21:15:33Z",
            "grantId": "416955596",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T21:15:34.315Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "416955596",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T21:15:34.331Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "416955596",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T21:18:54Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T21:16:34.352Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "416955596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:16:34.352Z - INFO - Time interval between two heartbeat request
messages is: 60.038, limit is: 65.0
2018-12-04T21:16:34.352Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "416955596",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T21:19:54Z"
    }
  ]
}
2018-12-04T21:17:34.371Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "416955596",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:17:34.371Z - INFO - Time interval between two heartbeat request
messages is: 60.018, limit is: 65.0
2018-12-04T21:17:34.385Z - INFO - LAST HBT RESPONSE THAT SET
TRANSMIT_EXPIRE_TIME WAS AT: 2018-12-04 21:16:34.353000
2018-12-04T21:18:44.440Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "416955596",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}

```

```

    ]
  }
2018-12-04T21:18:44.440Z - INFO - request message received while HBT is
absent, sleep 134 sec before responding
2018-12-04T21:19:54.444Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "416955596",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2018-12-04T21:19:54.444Z - INFO - request message received while HBT is
absent, sleep 64 sec before responding
2018-12-04T21:20:54.400Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "416955596",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2018-12-04T21:20:54Z"
    }
  ]
}
2018-12-04T21:20:56.253Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T21:20:56.253Z - INFO - the question is : Did the CBSD stop RF
transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat
response? please choose one of the answers :
2018-12-04T21:20:58.453Z - INFO - engine sent successfully, the response to
CBRS : "list index out of range"
2018-12-04T21:20:58.453Z - INFO - engine sent successfully, the response to
CBRS : "list index out of range"
2018-12-04T21:22:21.278Z - INFO - for the question : Did the CBSD stop RF
transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat
response? , the user choose y
2018-12-04T21:23:31.177Z - INFO - The final result of the test :
WINNF.FT.C.HBT.10 is - passed and :the additional comments for the current
test are : Antenna port Verified No RF Tx within transmitExpireTime from
JLT622P

```

10.22 Log file for test case ID: WINNF.FT.C.HBT.11

2018-12-04T21:40:09.387Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24

2018-12-04T21:40:09.387Z - INFO - the selected test from the user :
WINNF.FT.C.HBT.11 is starting now

2018-12-04T21:42:18.901Z - INFO - registration request from CBRS : {

```
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
```

2018-12-04T21:42:19.030Z - INFO - engine sent successfully, the response to
CBRS : {

```

"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
}
2018-12-04T21:42:19.062Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ],
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```



```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}
]

```

```

}
2018-12-04T21:42:19.078Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T21:42:19.453Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
}
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T21:42:19.467Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-04T21:48:19Z",
            "grantId": "55099205",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T21:42:19.812Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "55099205",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
}
2018-12-04T21:42:19.828Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "55099205",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T21:45:39Z"
        }
    ]
}

```

```

    }
  ]
}
2018-12-04T21:43:19.836Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:43:19.851Z - INFO - Time interval between two heartbeat request
messages is: 60.025, limit is: 65.0
2018-12-04T21:43:19.868Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T21:46:39Z"
    }
  ]
}
2018-12-04T21:44:19.881Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:44:19.881Z - INFO - Time interval between two heartbeat request
messages is: 60.044, limit is: 65.0
2018-12-04T21:44:19.895Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T21:47:39Z"
    }
  ]
}

```

```

    }
  ]
}
2018-12-04T21:45:19.897Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:45:19.913Z - INFO - Time interval between two heartbeat request
messages is: 60.016, limit is: 65.0
2018-12-04T21:45:19.913Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T21:48:19Z"
    }
  ]
}
2018-12-04T21:46:19.930Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "grantRenew": true,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:46:19.930Z - INFO - Time interval between two heartbeat request
messages is: 60.034, limit is: 65.0
2018-12-04T21:46:19.947Z - INFO - grantRenew received in HBT request message
2018-12-04T21:46:19.947Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantExpireTime": "2018-12-04T21:52:19Z",
      "grantId": "55099205",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

    },
    "transmitExpireTime": "2018-12-04T21:49:39Z"
  }
]
}
2018-12-04T21:47:19.956Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2018-12-04T21:47:19.970Z - INFO - Time interval between two heartbeat request
messages is: 60.025, limit is: 65.0
2018-12-04T21:47:19.970Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "55099205",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T21:50:39Z"
    }
  ]
}
2018-12-04T21:47:21.446Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T21:47:21.446Z - INFO - the question is : Did the CBSD renew its
grant successfully? please choose one of the answers :
2018-12-04T21:47:31.232Z - INFO - for the question : Did the CBSD renew its
grant successfully? , the user choose y
2018-12-04T21:49:15.361Z - INFO - The final result of the test :
WINNF.FT.C.HBT.11 is - passed and :the additional comments for the current
test are : CBSD Grant renewed within GrantExpiredTime and JLT622P Tx during
all testing after Authorized

```

10.23 Log file for test case ID: WINNF.FT.C.MES.1

```

2018-12-04T21:54:20.388Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T21:54:20.388Z - INFO - the selected test from the user :
WINNF.FT.C.MES.1 is starting now
2018-12-04T21:54:38.665Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITHOUT_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T21:54:38.743Z - INFO - Response message contains measReportConfig

```


2018-12-04T21:54:38.743Z - INFO - engine sent successfully, the response to
CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "measReportConfig": [
      "RECEIVED_POWER_WITHOUT_GRANT"
    ],
    "response": {
      "responseCode": 0
    }
  }
]
```

}
2018-12-04T21:54:38.790Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "inquiredSpectrum": [
      {
        "highFrequency": 3700000000,
        "lowFrequency": 3550000000
      }
    ],
    "measReport": {
      "rcvdPowerMeasReports": [
        {
          "measBandwidth": 10000000,
          "measFrequency": 3550000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3560000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3570000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3580000000,
          "measRcvdPower": -100.0
        },
        {
          "measBandwidth": 10000000,
          "measFrequency": 3590000000,
          "measRcvdPower": -100.0
        }
      ]
    }
  }
]
```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3680000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3690000000,
      "measRcvdPower": -100.0
    }
  ]
}

```

```

    }
  ]
}
}
2018-12-04T21:54:38.790Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-04T21:54:39.165Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          }
        ],
        {
          "measBandwidth": 10000000,

```

```

        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
]
},
"operationParam": {
    "maxEirp": 17,
    "operationFrequencyRange": {
        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
}
]
}
2018-12-04T21:54:39.197Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T21:54:39Z",
            "grantId": "728202434",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T21:54:40.539Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T21:57:47.638Z - INFO - The final result of the test :
WINNF.FT.C.MES.1 is - passed and :the additional comments for the current
test are : MeasReport RcvdPowerMeasReports verified

```

10.24 Log file for test case ID: WINNF.FT.C.MES.3

```

2018-12-04T21:59:34.838Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T21:59:34.838Z - INFO - the selected test from the user :
WINNF.FT.C.MES.3 is starting now
2018-12-04T22:00:08.042Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T22:00:08.135Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-04T22:00:08.183Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2018-12-04T22:00:08.197Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T22:00:08.244Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

```

```

        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-04T22:00:08.260Z - INFO - Response message contains measReportConfig
2018-12-04T22:00:08.260Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T22:00:08Z",
            "grantId": "486370422",
            "heartbeatInterval": 60,
            "measReportConfig": [
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2018-12-04T22:00:08.979Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "486370422",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```



```

        "measBandwidth": 10000000,
        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {

```

```

        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "GRANTED"
}
]
}
2018-12-04T22:00:08.979Z - INFO - measReport received in heartbeat message
2018-12-04T22:00:08.994Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "486370422",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T22:03:28Z"
    }
  ]
}
2018-12-04T22:01:09.006Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "486370422",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,

```

```

    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3580000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3600000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3610000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3620000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3630000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3640000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3650000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3660000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3670000000,

```

```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:01:09.006Z - INFO - Time interval between two heartbeat request
messages is: 60.027, limit is: 65.0
2018-12-04T22:01:09.020Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "486370422",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T22:04:29Z"
    }
  ]
}
}
2018-12-04T22:02:09.072Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "486370422",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3570000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3580000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3590000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    }
  ]
}

```

```

        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3670000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:02:09.072Z - INFO - Time interval between two heartbeat request
messages is: 60.066, limit is: 65.0
2018-12-04T22:02:09.088Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "486370422",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:05:29Z"
        }
    ]
}
}
2018-12-04T22:03:09.151Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "486370422",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```
{
  "measBandwidth": 10000000,
  "measFrequency": 3560000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
},
```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3660000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3670000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ],
    "operationState": "AUTHORIZED"
}

]
}
2018-12-04T22:03:09.151Z - INFO - Time interval between two heartbeat request
messages is: 60.08, limit is: 65.0
2018-12-04T22:03:09.167Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "486370422",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:06:29Z"
        }
    ]
}
}
2018-12-04T22:04:09.211Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "486370422",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {

```



```

        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3560000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3570000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {

```

```

        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:04:09.227Z - INFO - Time interval between two heartbeat request
messages is: 60.06, limit is: 65.0
2018-12-04T22:04:09.243Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "486370422",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-04T22:07:29Z"
    }
  ]
}
2018-12-04T22:04:11.203Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-04T22:05:06.424Z - INFO - The final result of the test :
WINNF.FT.C.MES.3 is - passed and :the additional comments for the current
test are : MeasReport RcvdPowerMeasReports verified

```

10.25 Log file for test case ID: WINNF.FT.C.MES.4

```

2018-12-04T22:06:47.414Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-04T22:06:47.414Z - INFO - the selected test from the user :
WINNF.FT.C.MES.4 is starting now
2018-12-04T22:08:36.700Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-04T22:08:36.825Z - INFO - engine sent successfully, the response to
CBRS : {

```

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    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-04T22:08:36.857Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2018-12-04T22:08:36.872Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-04T22:08:36.920Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

```

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        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-04T22:08:36.934Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-11T22:08:36Z",
            "grantId": "353401840",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-04T22:08:37.591Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},

```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "GRANTED"
}
]
}
2018-12-04T22:08:37.607Z - INFO - Response message contains measReportConfig
2018-12-04T22:08:37.622Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "measReportConfig": [
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:11:57Z"
        }
    ]
}
2018-12-04T22:09:37.638Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3580000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3590000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    }
  ]
}

```



```

        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:09:37.638Z - INFO - Time interval between two heartbeat request
messages is: 60.048, limit is: 65.0
2018-12-04T22:09:37.638Z - INFO - measReport received in heartbeat message
2018-12-04T22:09:37.654Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:12:57Z"
        }
    ]
}
}
2018-12-04T22:10:37.701Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3570000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3580000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3590000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    }
  ]
}

```

```

        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3670000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:10:37.717Z - INFO - Time interval between two heartbeat request
messages is: 60.063, limit is: 65.0
2018-12-04T22:10:37.733Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:13:57Z"
        }
    ]
}
}
2018-12-04T22:11:37.780Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3560000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3570000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},

```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3660000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3670000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ],
    "operationState": "AUTHORIZED"
}

]
}
2018-12-04T22:11:37.780Z - INFO - Time interval between two heartbeat request
messages is: 60.079, limit is: 65.0
2018-12-04T22:11:37.796Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:14:57Z"
        }
    ]
}
}
2018-12-04T22:12:37.857Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {

```

```

        "measBandwidth": 10000000,
        "measFrequency": 3550000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3560000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3570000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {

```

```

        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:12:37.857Z - INFO - Time interval between two heartbeat request
messages is: 60.076, limit is: 65.0
2018-12-04T22:12:37.871Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:15:57Z"
        }
    ]
}
}
2018-12-04T22:13:37.924Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",

```

```

"grantRenew": false,
"measReport": {
  "rcvdPowerMeasReports": [
    {
      "measBandwidth": 10000000,
      "measFrequency": 3550000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3560000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3570000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3580000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3590000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,

```



```

        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
    }
    ]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-04T22:13:37.924Z - INFO - Time interval between two heartbeat request
messages is: 60.068, limit is: 65.0
2018-12-04T22:13:37.940Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "353401840",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-04T22:16:57Z"
        }
    ]
}
}

```

2018-12-04T22:13:39.240Z - INFO - arrived to nstep starting question answer session with the technician

2018-12-04T22:14:32.782Z - INFO - The final result of the test : WINNF.FT.C.MES.4 is - passed and :the additional comments for the current test are : MeasReport RcvdPowerMeasReports verified

10.26 Log file for test case ID: WINNF.FT.C.RLQ.1

```

2018-12-05T00:44:34.970Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-05T00:44:34.970Z - INFO - the selected test from the user :
WINNF.FT.C.RLQ.1 is starting now
2018-12-05T00:44:52.542Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-05T00:44:52.637Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-05T00:44:52.684Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
}
2018-12-05T00:44:52.684Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-05T00:44:52.734Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

```

```

        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-05T00:44:52.750Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-12T00:44:52Z",
            "grantId": "346458743",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-05T00:44:53.407Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "346458743",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},

```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "GRANTED"
}
]
}
2018-12-05T00:44:53.438Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "346458743",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T00:48:13Z"
        }
    ]
}
2018-12-05T00:45:53.441Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "346458743",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,

```

```

        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,

```



```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T00:45:53.457Z - INFO - Time interval between two heartbeat request
messages is: 60.034, limit is: 65.0
2018-12-05T00:45:53.473Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "346458743",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T00:49:13Z"
    }
  ]
}
}
2018-12-05T00:46:28.668Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "346458743"
    }
  ]
}
}
2018-12-05T00:46:28.684Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "346458743",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-05T00:46:30.059Z - INFO - arrived to nstep starting question answer
session with the technician

```

2018-12-05T00:46:30.059Z - INFO - the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :

2018-12-05T00:46:42.397Z - INFO - for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y

2018-12-05T00:48:58.105Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed and :the additional comments for the current test are : No Tx after triggering and before relinquishment request

10.27 Log file for test case ID: WINNF.FT.C.RLQ.3

```

2018-12-05T00:53:00.434Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-05T00:53:00.434Z - INFO - the selected test from the user :
WINNF.FT.C.RLQ.3 is starting now
2018-12-05T00:53:28.065Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-05T00:53:28.174Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-05T00:53:28.220Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2018-12-05T00:53:28.236Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-05T00:53:28.283Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

```

```

        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-05T00:53:28.299Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-12T00:53:28Z",
            "grantId": "146720256",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-05T00:53:28.674Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "146720256",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},
},
```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "GRANTED"
}
]
}
2018-12-05T00:53:28.704Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "146720256",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T00:56:48Z"
        }
    ]
}
2018-12-05T00:54:28.746Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "146720256",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,

```

```

        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,

```



```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T00:54:28.746Z - INFO - Time interval between two heartbeat request
messages is: 60.073, limit is: 65.0
2018-12-05T00:54:28.763Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "146720256",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T00:57:48Z"
    }
  ]
}
}
2018-12-05T00:54:46.759Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "146720256"
    }
  ]
}
}
2018-12-05T00:54:46.759Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 102,
        "responseData": [
          "grantId"
        ]
      }
    }
  ]
}
]
}
}

```

2018-12-05T00:54:48.382Z - INFO - arrived to nstep starting question answer session with the technician
2018-12-05T00:54:48.382Z - INFO - the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :
2018-12-05T00:54:58.338Z - INFO - for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y
2018-12-05T00:56:58.846Z - INFO - The final result of the test : WINNF.FT.C.RLQ.3 is - passed and :the additional comments for the current test are : No Tx after triggering and before relinquishment request

10.28 Log file for test case ID: WINNF.FT.C.RLQ.5

```

2018-12-05T00:58:39.150Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-05T00:58:39.150Z - INFO - the selected test from the user :
WINNF.FT.C.RLQ.5 is starting now
2018-12-05T01:00:21.454Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-05T01:00:21.517Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-05T01:00:21.549Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2018-12-05T01:00:21.565Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-05T01:00:21.611Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

```

```

        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-05T01:00:21.627Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-12T01:00:21Z",
            "grantId": "918306503",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-05T01:00:22.283Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "918306503",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},

```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "GRANTED"
}
]
}
2018-12-05T01:00:22.315Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "918306503",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T01:03:42Z"
        }
    ]
}
2018-12-05T01:01:22.322Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "918306503",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,

```

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    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3600000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3610000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3620000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3630000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3640000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3650000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3660000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3670000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3680000000,

```



```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:01:22.322Z - INFO - Time interval between two heartbeat request
messages is: 60.038, limit is: 65.0
2018-12-05T01:01:22.338Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "918306503",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:04:42Z"
    }
  ]
}
}
2018-12-05T01:01:36.181Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "918306503"
    }
  ]
}
}
2018-12-05T01:01:36.197Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 103,
        "responseData": [
          "grantId"
        ]
      }
    }
  ]
}
]
}

```

2018-12-05T01:01:37.776Z - INFO - arrived to nstep starting question answer session with the technician
2018-12-05T01:01:37.776Z - INFO - the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :
2018-12-05T01:01:45.216Z - INFO - for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y
2018-12-05T01:02:09.736Z - INFO - The final result of the test : WINNF.FT.C.RLQ.5 is - passed and :the additional comments for the current test are : No Tx after triggering and before relinquishment request

10.29 Log file for test case ID: WINNF.FT.C.DRG.1

```

2018-12-05T01:03:32.696Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-05T01:03:32.711Z - INFO - the selected test from the user :
WINNF.FT.C.DRG.1 is starting now
2018-12-05T01:03:48.973Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-05T01:03:49.098Z - INFO - engine sent successfully, the response to
CBRS : {

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    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-05T01:03:49.144Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
}
2018-12-05T01:03:49.144Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-05T01:03:49.191Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

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        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-05T01:03:49.207Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-12T01:03:49Z",
            "grantId": "525630577",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-05T01:03:49.880Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "525630577",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},

```

```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "GRANTED"
}
]
}
2018-12-05T01:03:49.895Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "525630577",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T01:07:09Z"
        }
    ]
}
2018-12-05T01:04:49.917Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "525630577",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,

```

```

    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3600000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3610000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3620000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3630000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3640000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3650000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3660000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3670000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3680000000,

```



```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:04:49.917Z - INFO - Time interval between two heartbeat request
messages is: 60.037, limit is: 65.0
2018-12-05T01:04:49.933Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "525630577",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:08:09Z"
    }
  ]
}
}
2018-12-05T01:05:49.986Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "525630577",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3580000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3590000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3660000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3670000000,
      "measRcvdPower": -100.0
    }
  ],
  {
    "measBandwidth": 10000000,
    "measFrequency": 3670000000,
    "measRcvdPower": -100.0
  }
]

```

```

        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:05:49.986Z - INFO - Time interval between two heartbeat request
messages is: 60.07, limit is: 65.0
2018-12-05T01:05:50.003Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "525630577",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T01:09:10Z"
        }
    ]
}
}
2018-12-05T01:06:50.413Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "525630577"
        }
    ]
}
}
2018-12-05T01:06:50.413Z - INFO - engine sent successfully, the response to
CBRS : {
    "relinquishmentResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "525630577",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}

```

```

    ]
  }
2018-12-05T01:06:50.460Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9"
    }
  ]
}
2018-12-05T01:06:50.460Z - INFO - engine sent successfully, the response to
CBRS : {
  "deregistrationResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-05T01:06:52.381Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-05T01:06:52.381Z - INFO - the question is : Did the CBSD stop RF
transmissions upon sending the Deregister request? please choose one of the
answers :
2018-12-05T01:07:26.634Z - INFO - for the question : Did the CBSD stop RF
transmissions upon sending the Deregister request? , the user choose y
2018-12-05T01:07:59.964Z - INFO - The final result of the test :
WINNF.FT.C.DRG.1 is - passed and :the additional comments for the current
test are : No Tx after triggering and before deregistration request

```

10.30 Log file for test case ID: WINNF.FT.C.DRG.3

```

2018-12-05T01:08:30.367Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-05T01:08:30.367Z - INFO - the selected test from the user :
WINNF.FT.C.DRG.3 is starting now
2018-12-05T01:08:47.026Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}
2018-12-05T01:08:47.158Z - INFO - engine sent successfully, the response to
CBRS : {

```

```

    "registrationResponse": [
      {
        "cbsdId": "fccIdTestMock-SAS64A8372601B9",
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
2018-12-05T01:08:47.190Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
}
2018-12-05T01:08:47.206Z - INFO - engine sent successfully, the response to
CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-05T01:08:47.253Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "operationParam": {
        "maxEirp": 17,
        "operationFrequencyRange": {

```

```

        "highFrequency": 3650000000,
        "lowFrequency": 3640000000
    }
}
]
}
2018-12-05T01:08:47.253Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-12T01:08:47Z",
            "grantId": "440498193",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-05T01:08:47.930Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "440498193",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,
                        "measRcvdPower": -100.0
                    }
                ]
            }
        }
    ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -100.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -100.0
},

```



```

        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "GRANTED"
}
]
}
2018-12-05T01:08:47.946Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "440498193",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T01:12:07Z"
        }
    ]
}
2018-12-05T01:09:47.960Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "440498193",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,

```

```

    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3590000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3600000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3610000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3620000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3630000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3640000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3650000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3660000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3670000000,
    "measRcvdPower": -100.0
  },
  {
    "measBandwidth": 10000000,
    "measFrequency": 3680000000,

```

```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:09:47.960Z - INFO - Time interval between two heartbeat request
messages is: 60.03, limit is: 65.0
2018-12-05T01:09:47.993Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "440498193",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:13:07Z"
    }
  ]
}
}
2018-12-05T01:10:18.062Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "440498193"
    }
  ]
}
}
2018-12-05T01:10:18.078Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "440498193",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2018-12-05T01:10:18.125Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [

```

```
{
  "cbsdId": "fccIdTestMock-SAS64A8372601B9"
}
]
}
2018-12-05T01:10:18.140Z - INFO - engine sent successfully, the response to
CBRS : {
  "deregistrationResponse": [
    {
      "response": {
        "responseCode": 102
      }
    }
  ]
}
}
2018-12-05T01:10:19.269Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-05T01:10:19.269Z - INFO - the question is : Did the CBSD stop RF
transmissions upon sending the Deregister request? please choose one of the
answers :
2018-12-05T01:10:37.875Z - INFO - for the question : Did the CBSD stop RF
transmissions upon sending the Deregister request? , the user choose y
2018-12-05T01:10:51.596Z - INFO - The final result of the test :
WINNF.FT.C.DRG.3 is - passed and :the additional comments for the current
test are : No Tx after triggering and before deregistration request
```

10.31 Log file for test case ID: WINNF.FT.C.DRG.5

```

2018-12-05T01:11:16.799Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-
May-24
2018-12-05T01:11:16.799Z - INFO - the selected test from the user :
WINNF.FT.C.DRG.5 is starting now
2018-12-05T01:12:10.335Z - INFO - registration request from CBRS : {
  "registrationRequest": [
    {
      "airInterface": {
        "radioTechnology": "E_UTRA",
        "supportedSpec": "FFS"
      },
      "callSign": "WL9XKH",
      "cbsdCategory": "A",
      "cbsdInfo": {
        "firmwareVersion": "0.7.0.6",
        "hardwareVersion": "V0.2",
        "model": "JLT622",
        "softwareVersion": "6.4.0",
        "vendor": "Fujitsu"
      },
      "cbsdSerialNumber": "64A8372601B9",
      "fccId": "fccIdTest",
      "groupingParam": [
        {
          "groupId": "userIdTest",
          "groupType": "INTERFERENCE_COORDINATION"
        }
      ],
      "installationParam": {
        "antennaAzimuth": 0,
        "antennaBeamwidth": 360,
        "antennaDowntilt": 0,
        "antennaGain": 2,
        "antennaModel": "Unknown",
        "height": 0.0,
        "heightType": "AGL",
        "indoorDeployment": true,
        "latitude": 38.702145,
        "longitude": -104.890516
      },
      "measCapability": [
        "RECEIVED_POWER_WITH_GRANT"
      ],
      "userId": "userIdTest"
    }
  ]
}

```

2018-12-05T01:12:10.444Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
```

2018-12-05T01:12:10.490Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "inquiredSpectrum": [
      {
        "highFrequency": 3700000000,
        "lowFrequency": 3550000000
      }
    ]
  }
]
```

2018-12-05T01:12:10.490Z - INFO - engine sent successfully, the response to CBRS : {

```
"spectrumInquiryResponse": [
  {
    "availableChannel": [
      {
        "channelType": "GAA",
        "frequencyRange": {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        },
        "ruleApplied": "FCC_PART_96"
      }
    ],
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "response": {
      "responseCode": 0
    }
  }
]
```

2018-12-05T01:12:10.538Z - INFO - grant request from CBRS : {

```
"grantRequest": [
  {
    "cbsdId": "fccIdTestMock-SAS64A8372601B9",
    "operationParam": {
```

```

        "maxEirp": 17,
        "operationFrequencyRange": {
            "highFrequency": 3650000000,
            "lowFrequency": 3640000000
        }
    }
}
]
}
2018-12-05T01:12:10.553Z - INFO - engine sent successfully, the response to
CBRS : {
    "grantResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "channelType": "GAA",
            "grantExpireTime": "2018-12-12T01:12:10Z",
            "grantId": "402222904",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-12-05T01:12:11.226Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "402222904",
            "grantRenew": false,
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3580000000,

```

```

        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,

```



```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "GRANTED"
}
]
}
2018-12-05T01:12:11.243Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:15:31Z"
    }
  ]
}
2018-12-05T01:13:11.262Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

        "measBandwidth": 10000000,
        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
    },
    {

```

```

        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:13:11.262Z - INFO - Time interval between two heartbeat request
messages is: 60.035, limit is: 65.0
2018-12-05T01:13:11.278Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:16:31Z"
    }
  ]
}
}
2018-12-05T01:14:11.329Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,

```

```

        "measFrequency": 3570000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,

```

```

        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:14:11.329Z - INFO - Time interval between two heartbeat request
messages is: 60.068, limit is: 65.0
2018-12-05T01:14:11.345Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:17:31Z"
    }
  ]
}
}
2018-12-05T01:15:11.388Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,

```

```

        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3570000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3580000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3590000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3600000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3610000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3620000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3630000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3640000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3650000000,
        "measRcvdPower": -100.0
    },
    {
        "measBandwidth": 10000000,
        "measFrequency": 3660000000,

```

```

        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3670000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3680000000,
        "measRcvdPower": -100.0
      },
      {
        "measBandwidth": 10000000,
        "measFrequency": 3690000000,
        "measRcvdPower": -100.0
      }
    ]
  },
  "operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:15:11.403Z - INFO - Time interval between two heartbeat request
messages is: 60.058, limit is: 65.0
2018-12-05T01:15:11.418Z - INFO - engine sent successfully, the response to
CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2018-12-05T01:18:31Z"
    }
  ]
}
}
2018-12-05T01:16:11.457Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "grantRenew": false,
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100.0
          }
        ]
      }
    }
  ]
}

```

```

    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3560000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3570000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3580000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3590000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3600000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3610000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3620000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3630000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3640000000,
      "measRcvdPower": -100.0
    },
    {
      "measBandwidth": 10000000,
      "measFrequency": 3650000000,
      "measRcvdPower": -100.0
    }
  ]
}

```



```

        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3660000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3670000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3680000000,
            "measRcvdPower": -100.0
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3690000000,
            "measRcvdPower": -100.0
        }
    ]
},
"operationState": "AUTHORIZED"
}
]
}
2018-12-05T01:16:11.473Z - INFO - Time interval between two heartbeat request
messages is: 60.069, limit is: 65.0
2018-12-05T01:16:11.489Z - INFO - engine sent successfully, the response to
CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "402222904",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-12-05T01:19:31Z"
        }
    ]
}
}
2018-12-05T01:16:45.894Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "fccIdTestMock-SAS64A8372601B9",
            "grantId": "402222904"
        }
    ]
}
}

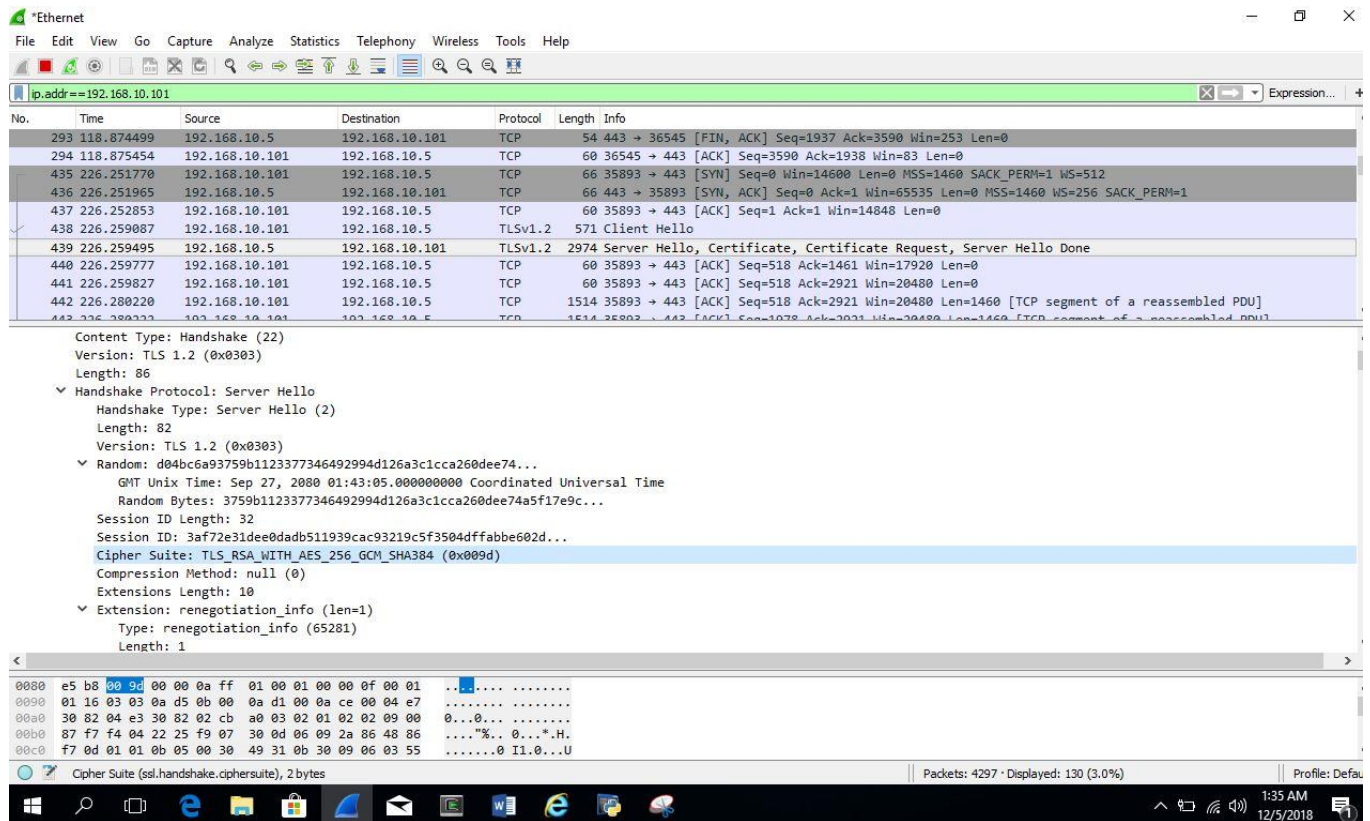
```

```

2018-12-05T01:16:45.911Z - INFO - engine sent successfully, the response to
CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9",
      "grantId": "402222904",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2018-12-05T01:16:45.957Z - INFO - deregistration request from CBRS : {
  "deregistrationRequest": [
    {
      "cbsdId": "fccIdTestMock-SAS64A8372601B9"
    }
  ]
}
2018-12-05T01:16:45.973Z - INFO - engine sent successfully, the response to
CBRS : {
  "deregistrationResponse": [
    {
      "response": {
        "responseCode": 103,
        "responseData": [
          "cbsdId"
        ]
      }
    }
  ]
}
2018-12-05T01:16:47.772Z - INFO - arrived to nstep starting question answer
session with the technician
2018-12-05T01:16:47.772Z - INFO - the question is : Did the CBSD stop RF
transmissions upon sending the Deregister request? please choose one of the
answers :
2018-12-05T01:17:10.877Z - INFO - for the question : Did the CBSD stop RF
transmissions upon sending the Deregister request? , the user choose y
2018-12-05T01:17:21.709Z - INFO - The final result of the test :
WINNF.FT.C.DRG.5 is - passed and :the additional comments for the current
test are : No Tx after triggering and before deregistration request

```

10.32 Wireshark capture screenshot for test case ID: WINNF.FT.C.SCS.1

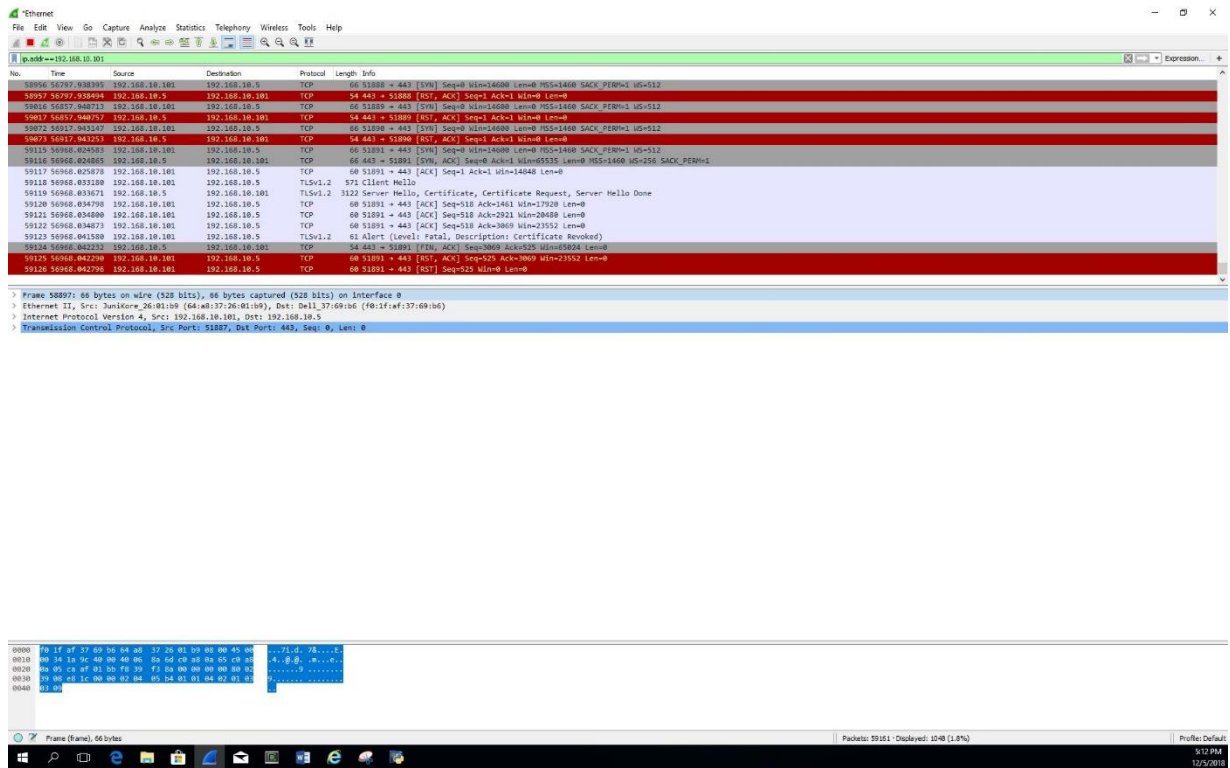


The screenshot shows a Wireshark capture of a TLS handshake between 192.168.10.101 and 192.168.10.5. The packet list shows a series of TCP and TLSv1.2 packets. The selected packet (No. 438) is a TLSv1.2 Client Hello. The packet details pane shows the following structure:

- Content Type: Handshake (22)
- Version: TLS 1.2 (0x0303)
- Length: 86
- Handshake Protocol: Server Hello
 - Handshake Type: Server Hello (2)
 - Length: 82
 - Version: TLS 1.2 (0x0303)
 - Random: d04bc6a93759b1123377346492994d126a3c1cca260dee74...
 - GMT Unix Time: Sep 27, 2080 01:43:05.000000000 Coordinated Universal Time
 - Random Bytes: 3759b1123377346492994d126a3c1cca260dee74a5f17e9c...
 - Session ID Length: 32
 - Session ID: 3af72e31dee0dad511939cac93219c5f3504dffabbe602d...
 - Cipher Suite: TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d)
 - Compression Method: null (0)
 - Extensions Length: 10
- Extension: renegotiation_info (len=1)
 - Type: renegotiation_info (65281)
 - Length: 1

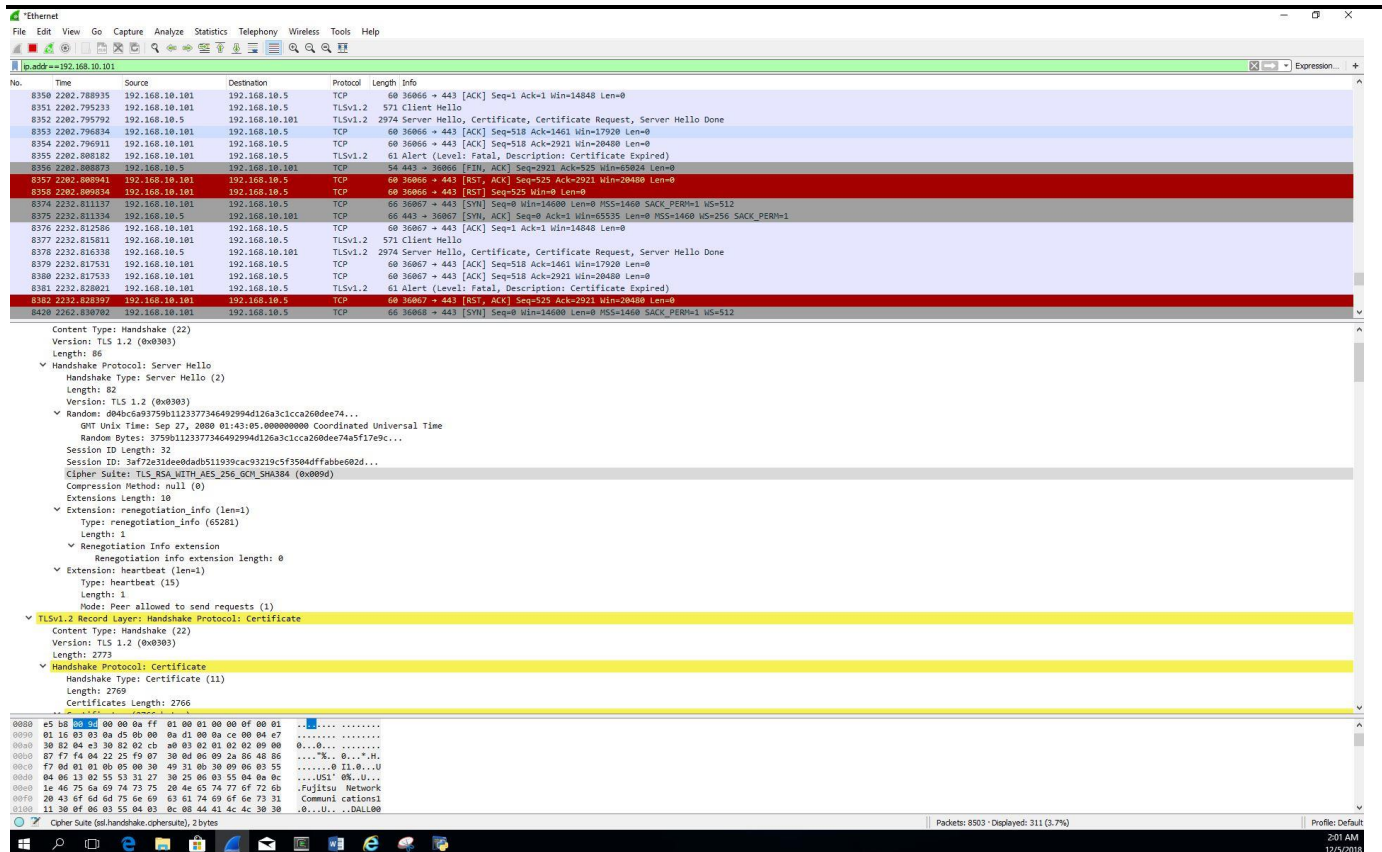
The packet bytes pane shows the raw data in hexadecimal and ASCII. The status bar at the bottom indicates 4297 packets displayed (3.0%) and the profile is Default.

10.33 Wireshark capture screenshot for test case ID: WINNF.FT.C.SCS.2

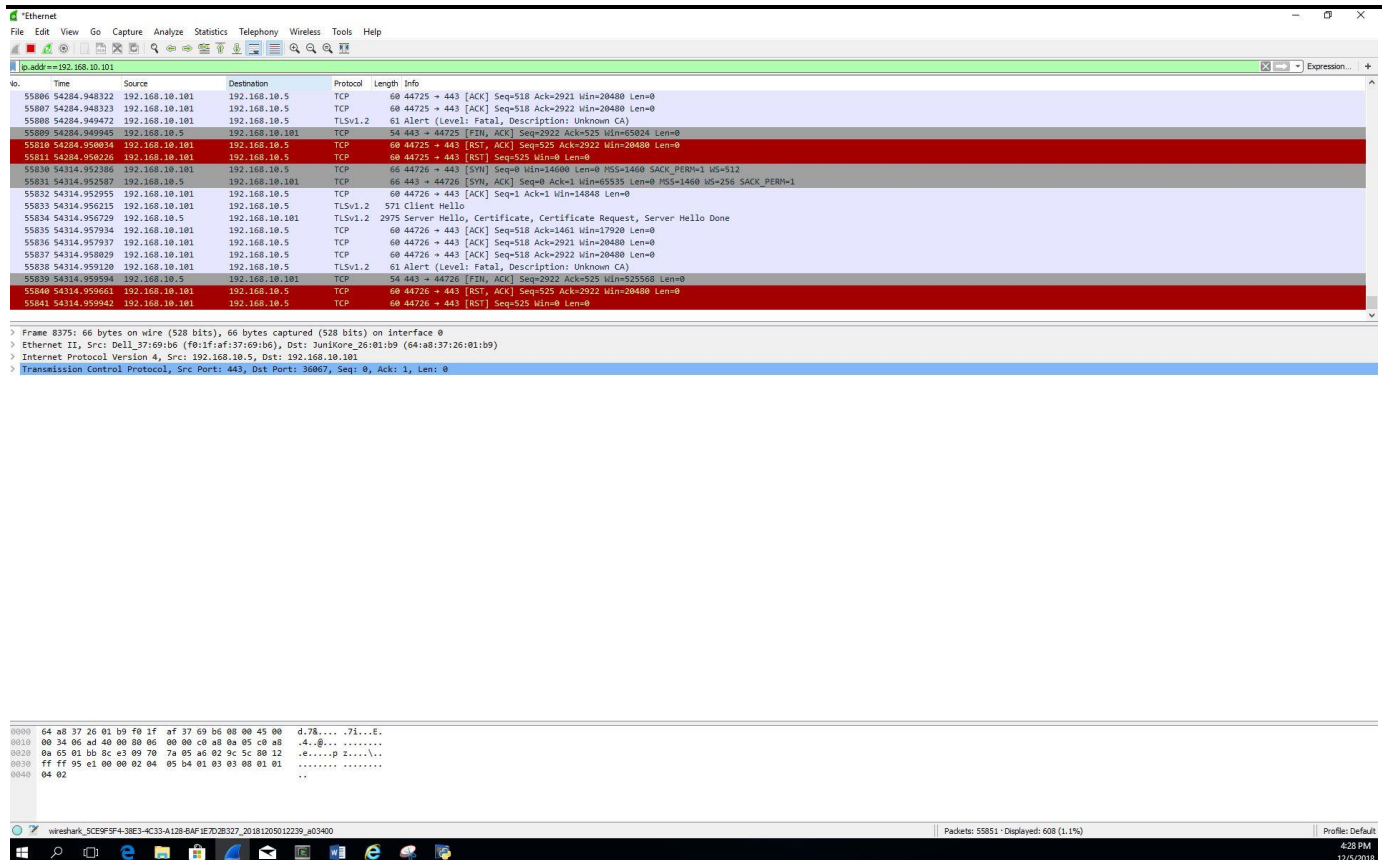


The screenshot displays a Wireshark network traffic capture on the 'Ethernet' interface. The packet list pane shows a series of TCP and TLSv1.2 packets between source IP 192.168.10.101 and destination IP 192.168.10.5. The packets include a SYN sequence, followed by several ACKs and a FIN sequence, indicating a connection termination. The packet details pane for packet 50897 shows the Ethernet II, Internet Protocol Version 4, and Transmission Control Protocol headers. The packet bytes pane shows the raw data in hexadecimal and ASCII. The status bar at the bottom indicates that 66 bytes of data were captured on interface 0.

10.34 Wireshark capture screenshot for test case ID: WINNF.FT.C.SCS.3



10.35 Wireshark capture screenshot for test case ID: WINNF.FT.C.SCS.4



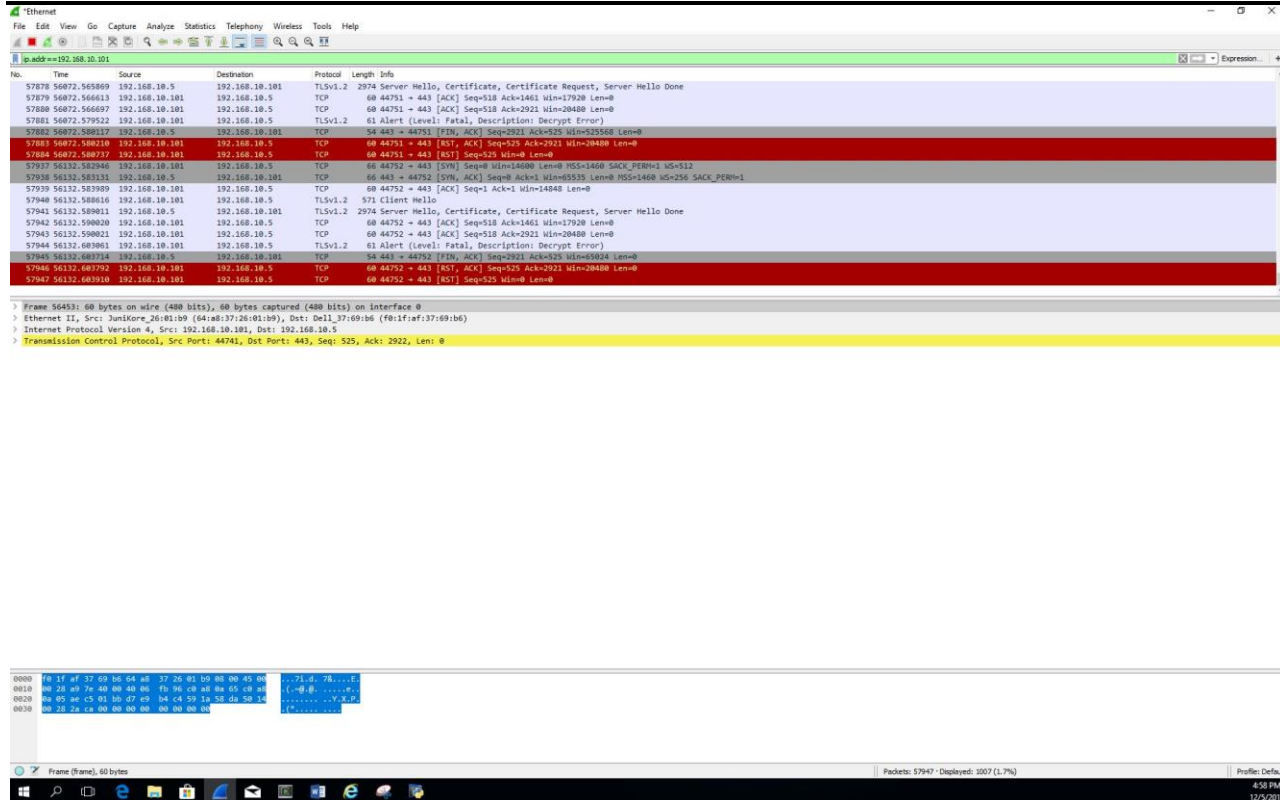
The screenshot displays a Wireshark network capture of an SSL/TLS session between a client and a server. The packet list on the left shows various messages including TCP resets, TLS alerts, and handshake messages. The packet details pane on the right shows the structure of a TLS alert message (Alert 1, Level: Fatal, Description: Unknown CA). The packet bytes pane at the bottom shows the raw hex and ASCII data of the captured packet.

No.	Time	Source	Destination	Protocol	Length	Info
55806	54284.948322	192.168.10.101	192.168.10.5	TCP	60	44725 → 443 [ACK] Seq=518 Ack=2921 Win=20480 Len=0
55807	54284.948323	192.168.10.101	192.168.10.5	TCP	60	44725 → 443 [ACK] Seq=518 Ack=2922 Win=20480 Len=0
55808	54284.949472	192.168.10.101	192.168.10.5	TLSv1.2	61	Alert (Level: Fatal, Description: Unknown CA)
55809	54284.949445	192.168.10.5	192.168.10.101	TCP	54	443 → 44725 [FIN, ACK] Seq=2922 Ack=525 Win=65824 Len=0
55810	54284.950034	192.168.10.101	192.168.10.5	TCP	60	44725 → 443 [RST, ACK] Seq=525 Ack=2922 Win=20480 Len=0
55811	54284.950226	192.168.10.101	192.168.10.5	TCP	60	44725 → 443 [RST] Seq=525 Win=0 Len=0
55830	54314.952386	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK_PERM=1 U=512
55831	54314.952587	192.168.10.5	192.168.10.101	TCP	60	443 → 44726 [SYN, ACK] Seq=0 Ack=1 Win=5535 Len=0 MSS=1460 U=256 SACK_PERM=1
55832	54314.952955	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [ACK] Seq=1 Ack=1 Win=14848 Len=0
55833	54314.956215	192.168.10.101	192.168.10.5	TLSv1.2	571	Client Hello
55834	54314.956729	192.168.10.5	192.168.10.101	TLSv1.2	2975	Server Hello, Certificate, Certificate Request, Server Hello Done
55835	54314.957934	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [ACK] Seq=518 Ack=1461 Win=17920 Len=0
55836	54314.957937	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [ACK] Seq=518 Ack=2921 Win=20480 Len=0
55837	54314.958829	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [ACK] Seq=518 Ack=2922 Win=20480 Len=0
55838	54314.959120	192.168.10.101	192.168.10.5	TLSv1.2	61	Alert (Level: Fatal, Description: Unknown CA)
55839	54314.959594	192.168.10.5	192.168.10.101	TCP	54	443 → 44726 [FIN, ACK] Seq=2922 Ack=525 Win=52568 Len=0
55840	54314.959601	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [RST, ACK] Seq=525 Ack=2922 Win=20480 Len=0
55841	54314.959642	192.168.10.101	192.168.10.5	TCP	60	44726 → 443 [RST] Seq=525 Win=0 Len=0

Frame 8375: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 0
> Ethernet II, Src: Dell_37:69:b6 (f0:1f:af:37:69:b6), Dst: Junikore_26:01:b9 (64:a8:37:26:01:b9)
> Internet Protocol Version 4, Src: 192.168.10.5, Dst: 192.168.10.101
> Transmission Control Protocol, Src Port: 443, Dst Port: 30807, Seq: 0, Ack: 1, Len: 0

```
0000  64 a8 37 26 01 b9 f0 1f af 37 69 b6 08 00 45 00  d.78....7i...E.
0010  00 34 06 ad 40 00 06 00 00 c0 a8 0a 05 c0 a8    .4..8...
0020  0a 05 01 b0 8c e3 09 70 7a 05 a6 02 9c 5c 00 12  .6....p 2....
0030  ff ff 95 e1 00 00 02 04 05 b4 01 03 03 08 01 01  .....
0040  04 02 ..
```

10.36 Wireshark capture screenshot for test case ID: WINNF.FT.C.SCS.5



The screenshot displays the Wireshark network protocol analyzer interface. The top pane shows a list of captured packets, with the selected packet (No. 57947) highlighted in red. The middle pane shows the details of the selected packet, which is a TCP Reset (RST) segment. The bottom pane shows the raw packet data in hexadecimal and ASCII format.

Packets List:

No.	Time	Source	Destination	Protocol	Length	Info
57878	56072.565869	192.168.10.5	192.168.10.101	TLSPv1.2	2974	Server Hello, Certificate, Certificate Request, Server Hello Done
57879	56072.566613	192.168.10.101	192.168.10.5	TCP	60	44751 → 443 [ACK] Seq=518 Ack=1461 Win=17920 Len=0
57880	56072.566697	192.168.10.101	192.168.10.5	TCP	60	44751 → 443 [ACK] Seq=518 Ack=2921 Win=20480 Len=0
57881	56072.579522	192.168.10.101	192.168.10.5	TLSPv1.2	61	Alert (Level: Fatal, Description: Decrypt Error)
57882	56072.580117	192.168.10.5	192.168.10.101	TCP	54	443 → 44751 [FIN, ACK] Seq=2921 Ack=525 Win=525568 Len=0
57883	56072.580810	192.168.10.101	192.168.10.5	TCP	60	44751 → 443 [RST, ACK] Seq=525 Ack=2921 Win=20480 Len=0
57884	56072.580797	192.168.10.101	192.168.10.5	TCP	60	44751 → 443 [RST] Seq=525 Win=0 Len=0
57937	56132.582946	192.168.10.101	192.168.10.5	TCP	66	44752 → 443 [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK_PERM=1 WS=512
57938	56132.583131	192.168.10.5	192.168.10.101	TCP	66	443 → 44752 [SYN, ACK] Seq=0 Ack=1 Win=5535 Len=0 MSS=1460 WS=256 SACK_PERM=1
57939	56132.583380	192.168.10.101	192.168.10.5	TCP	60	44752 → 443 [ACK] Seq=1 Ack=1 Win=14848 Len=0
57940	56132.588616	192.168.10.101	192.168.10.5	TLSPv1.2	571	Client Hello
57941	56132.589011	192.168.10.5	192.168.10.101	TLSPv1.2	2974	Server Hello, Certificate, Certificate Request, Server Hello Done
57942	56132.590020	192.168.10.101	192.168.10.5	TCP	60	44752 → 443 [ACK] Seq=518 Ack=1461 Win=17920 Len=0
57943	56132.590021	192.168.10.101	192.168.10.5	TCP	60	44752 → 443 [ACK] Seq=518 Ack=2921 Win=20480 Len=0
57944	56132.603061	192.168.10.101	192.168.10.5	TLSPv1.2	61	Alert (Level: Fatal, Description: Decrypt Error)
57945	56132.603714	192.168.10.5	192.168.10.101	TCP	54	443 → 44752 [FIN, ACK] Seq=2921 Ack=525 Win=55824 Len=0
57946	56132.603792	192.168.10.101	192.168.10.5	TCP	60	44752 → 443 [RST, ACK] Seq=525 Ack=2921 Win=20480 Len=0
57947	56132.603910	192.168.10.101	192.168.10.5	TCP	60	44752 → 443 [RST] Seq=525 Win=0 Len=0

Packet Details:

- Frame 56453: 60 bytes on wire (480 bits), 60 bytes captured (480 bits) on interface 0
- Ethernet II, Src: Juniper_26:01:09 (04:a0:37:26:01:09), Dst: Dell_37:69:b6 (f0:1f:a7:37:69:b6)
- Internet Protocol Version 4, Src: 192.168.10.101, Dst: 192.168.10.5
- Transmission Control Protocol, Src Port: 44741, Dst Port: 443, Seq: 525, Ack: 2922, Len: 0

Raw Data:

```
0000  f0 1f a7 37 69 b6 04 a0 37 26 01 09 00 00 00 00  ..:d:78...f
0010  00 20 a0 7e 40 00 40 00 f0 9a c0 a0 05 c0 a0 00  0000000000000000
0020  00 05 a0 c0 00 00 00 00 00 c0 00 00 00 00 00 00  0000000000000000
0030  00 25 2a ca 00 00 00 00 00 00 00 00 00 00 00 00  0000000000000000
```

Thank you for choosing

