U.S. Serial No. 87/835,033

WINNF-TS-0122 TEST REPORT

FCC ID	:	S9GQ710US00
Equipment	:	Q710 LTE Access Point
Brand Name	:	Ruckus
Model Name	:	Q710-US00
Applicant	:	Ruckus Wireless, Inc. 350 West Java Drive Sunnyvale California 94089 USA
Manufacturer	:	Ruckus Wireless, Inc. 350 West Java Drive Sunnyvale California 94089 USA
Standard	:	WINNF-TS-0122 Version V1.0.0

The product was received on May 10, 2018, and testing was started from Jun. 04, 2018 and completed on Jul. 03, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in WINNF-TS-0122 Version V1.0.0 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Jordan Hsiao

Approved by: Jordan Hsiao

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Report Template No.: HE1-U2 Ver1.0

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History of this test report

Report No.	Version	Description	Issued Date
FG850948AA	01	Initial issue of report	Jul. 16, 2018
FG850948AA	02	Add the Appendix E. WInnForum Approved CBSD Test Labs Add the WInnForum Approved logo	Jul. 23, 2018
FG850948AA	03	Revise the section “Summary of Test Result”.	Aug. 02, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	CBSD	DP	Required for Cert.	Test Case ID	Test Case Title	Result (PASS/FAIL)	Remark
3.1	6.1.4.1.1	X	-	C1	WINNF.FT.C.REG.1	Multi-Step registration	PASS	-
-	6.1.4.1.2	-	X	C1	WINNF.FT.D.REG.2	Domain Proxy Multi-Step registration	N/A	-
-	6.1.4.1.3	X	-	C2	WINNF.FT.C.REG.3	Single-Step registration for Category A CBSD	N/A	-
-	6.1.4.1.4	-	X	C2	WINNF.FT.D.REG.4	Domain Proxy Single-Step registration for Cat A CBSD	N/A	-
-	6.1.4.1.5	X	-	C3	WINNF.FT.C.REG.5	Single-Step registration for CBSD with CPI signed data	N/A	-
-	6.1.4.1.6	-	X	C3	WINNF.FT.D.REG.6	Domain Proxy Single-Step registration for CBSD with CPI signed data	N/A	-
-	6.1.4.1.7	X	X	C6	WINNF.FT.C.REG.7	Registration due to change of an installation parameter	N/A	-
3.2	6.1.4.2.1	X	-	M	WINNF.FT.C.REG.8	Missing Required parameters (responseCode 102)	PASS	-
-	6.1.4.2.2	-	X	M	WINNF.FT.D.REG.9	Domain Proxy Missing Required parameters (responseCode 102)	N/A	-
3.3	6.1.4.2.3	X	-	M	WINNF.FT.C.REG.10	Pending registration (responseCode 200)	PASS	-
-	6.1.4.2.4	-	X	M	WINNF.FT.D.REG.11	Domain Proxy Pending registration (responseCode 200)	N/A	-
3.4	6.1.4.2.5	X	-	M	WINNF.FT.C.REG.12	Invalid parameter (responseCode 103)	PASS	-
-	6.1.4.2.6	-	X	M	WINNF.FT.D.REG.13	Domain Proxy Invalid parameters (responseCode 103)	N/A	-
3.5	6.1.4.2.7	X	-	M	WINNF.FT.C.REG.14	Blacklisted CBSD (responseCode 101)	PASS	-
-	6.1.4.2.8	-	X	M	WINNF.FT.D.REG.15	Domain Proxy Blacklisted CBSD (responseCode 101)	N/A	-
3.6	6.1.4.2.9	X	-	M	WINNF.FT.C.REG.16	Unsupported SAS protocol version (responseCode 100)	PASS	-
-	6.1.4.2.10	-	X	M	WINNF.FT.D.REG.17	Domain Proxy Unsupported SAS protocol version responseCode 100)	N/A	-
3.7	6.1.4.2.11	X	-	M	WINNF.FT.C.REG.18	Group Error (responseCode 201)	PASS	-
-	6.1.4.2.12	-	X	M	WINNF.FT.D.REG.19	Domain Proxy Group Error (responseCode 201)	N/A	-

-	6.1.4.3.1	X	X	C2	WINNF.FT.C.REG.20	Category A CBSD location Update	N/A	-
3.8	6.3.4.2.1	X	X	M	WINNF.FT.C.GRA.1	Unsuccessful Grant responseCode=400 (INTERFERENCE)	PASS	-
3.9	6.3.4.2.2	X	X	M	WINNF.FT.C.GRA.2	Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)	PASS	-
3.10	6.4.4.1.1	X	-	M	WINNF.FT.C.HBT.1	Heartbeat Success Case (first Heartbeat Response)	PASS	-
-	6.4.4.1.2	-	X	M	WINNF.FT.D.HBT.2	Domain Proxy Heartbeat Success Case (first Heartbeat Response)	N/A	-
3.11	6.4.4.2.1	X	X	M	WINNF.FT.C.HBT.3	Heartbeat responseCode=105 (DEREGISTER)	PASS	-
3.12	6.4.4.2.2	X	-	M	WINNF.FT.C.HBT.4	Heartbeat responseCode=500 (TERMINATED_GRANT)	PASS	-
3.13	6.4.4.2.3	X	X	M	WINNF.FT.C.HBT.5	Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response	PASS	-
3.14	6.4.4.2.4	X	X	M	WINNF.FT.C.HBT.6	Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response	PASS	-
3.15	6.4.4.2.5	X	X	M	WINNF.FT.C.HBT.7	Heartbeat responseCode=502 (UNSYNC_OP_PARAM)	PASS	-
-	6.4.4.2.6	-	X	M	WINNF.FT.D.HBT.8	Domain Proxy Heartbeat responseCode=500 (TEMINATED_GRANT)	N/A	-
3.16	6.4.4.3.1	X	X	M	WINNF.FT.C.HBT.9	Heartbeat Response Absent (First Heartbeat)	PASS	-
3.17	6.4.4.3.2	X	X	M	WINNF.FT.C.HBT.10	Heartbeat Response Absent (Subsequent Heartbeat)	PASS	-
3.18	6.4.4.4.1	X	X	O	WINNF.FT.C.HBT.11	SuccessfulGrantRenewalin HeartbeatTestCase	PASS	-
3.19	6.5.4.2.1	X	-	C4	WINNF.FT.C.MES.1	Registration Response contains measReportConfig	PASS	-
-	6.5.4.2.2	-	X	C4	WINNF.FT.D.MES.2	Domain Proxy Registration Response contains measReportConfig	N/A	-
3.20	6.5.4.2.3	X	X	C5	WINNF.FT.C.MES.3	Grant Response contains measReportConfig	PASS	-
3.21	6.5.4.2.4	X	-	C5	WINNF.FT.C.MES.4	Heartbeat Response contains measReportConfig	PASS	-
-	6.5.4.2.5	-	X	C5	WINNF.FT.D.MES.5	Domain Proxy Heartbeat Response contains measReportConfig	N/A	-
3.22	6.6.4.1.1	X	-	M	WINNF.FT.C.RLQ.1	Successful Relinquishment	PASS	-

-	6.6.4.1.2	-	X	M	WINNF.FT.D.RLQ.2	Domain Proxy Successful Relinquishment	N/A	-
3.23	6.6.4.2.1	X	-	O	WINNF.FT.C.RLQ.3	Unsuccessful Relinquishment, responseCode=102	PASS	-
-	6.6.4.2.2	-	X	O	WINNF.FT.D.RLQ.4	Domain Proxy Unsuccessful Relinquishment, responseCode=102	N/A	-
3.24	6.6.4.3.1	X	-	O	WINNF.FT.C.RLQ.5	Unsuccessful Relinquishment, responseCode=103	PASS	-
-	6.6.4.3.2	-	X	O	WINNF.FT.D.RLQ.6	Domain Proxy Unsuccessful Relinquishment, responseCode=103	N/A	-
3.25	6.7.4.1.1	X	-	M	WINNF.FT.C.DRG.1	Successful Deregistration	PASS	-
-	6.7.4.1.2	-	X	M	WINNF.FT.D.DRG.2	Domain Proxy Successful Deregistration	N/A	-
3.26	6.7.4.2.1	X	-	O	WINNF.FT.C.DRG.3	Deregistration responseCode=102	PASS	-
-	6.7.4.2.2	-	X	O	WINNF.FT.D.DRG.4	Domain Proxy Deregistration responseCode=102	N/A	-
3.27	6.7.4.3.1	X	X	O	WINNF.FT.C.DRG.5	Deregistration responseCode=103	PASS	-
3.28	6.8.4.1.1	X	X	M	WINNF.FT.C.SCS.1	Successful TLS connection between UUT and SAS Test Harness	PASS	-
3.29	6.8.4.2.1	X	X	M	WINNF.FT.C.SCS.2	TLS failure due to revoked certificate	PASS	-
3.30	6.8.4.2.2	X	X	M	WINNF.FT.C.SCS.3	TLS failure due to expired server certificate	PASS	-
3.31	6.8.4.2.3	X	X	M	WINNF.FT.C.SCS.4	TLS failure when SAS Test Harness certificate is issue by unknown CA	PASS	-
3.32	6.8.4.2.4	X	X	M	WINNF.FT.C.SCS.5	TLS failure when certificate at the SAS Test Harness is corrupted	PASS	-
3.33	7.1.4.1.1	X	X	M	WINNF.PT.C.HBT	UUT RF Transmit Power Measurement	PASS	-

Note1:
♦ M: Mandatory for certification
♦ O: Optional. Not required for certification.
♦ C: Conditional. Mandatory if CBSD supports relevant functionality.
Note2: The unit under test type is CBSD without Domain Proxy and Conditional Test Case Definitions are C1, C4 and C5.

Reviewed by: Jordan Hsiao

Report Producer: Sharon Jiang

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature of Equipment Under Test	
FCC ID	S9GQ710US00
Equipment	Q710 LTE Access Point
Brand Name	Ruckus
Model Name	Q710-US00
Power Type	From power adapter or PoE
Category of CBSD	☒ Category A ☐ Category B
Professional Installation	☒ Yes ☐ No
Unit Under Test in Test ID	☐ CBSD with Domain Proxy ☒ CBSD without Domain Proxy
Firmware Version	02.00.02.0018.71afd7c96a35
Hardware Version	02
Software Version	02.00.02.0018.71afd7c96a35

1.2 Conditional Test Case

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

1.3 Accessories

Accessories				
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Rating**
1	Power Adapter	LEI	MU24-Y120200-A1	INPUT: 100-240Vac ~ 50/60Hz , 0.7A OUTPUT: 12Vdc, 2A
Other				
2	Wall-mounted rack*2 (Material: Metal*1, Plastics*1)			

1.4 Support Equipment

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E4300	N/A
2	WLAN AP	NETGEAR	WNDR3300v2	PY309300116
3	EPC(mme)	Ruckus	N/A	N/A
4	UE	HUAWEI	N/A	N/A

1.5 Testing Location

Testing Location					
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973			
☐	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085			
Test Condition		**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
RF Conducted		TH01-HY	Abner Tsai	25°C / 60%	Jun. 04, 2018~Jul. 03, 2018

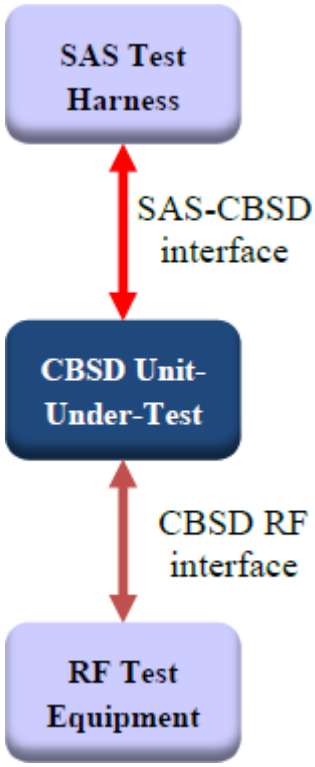
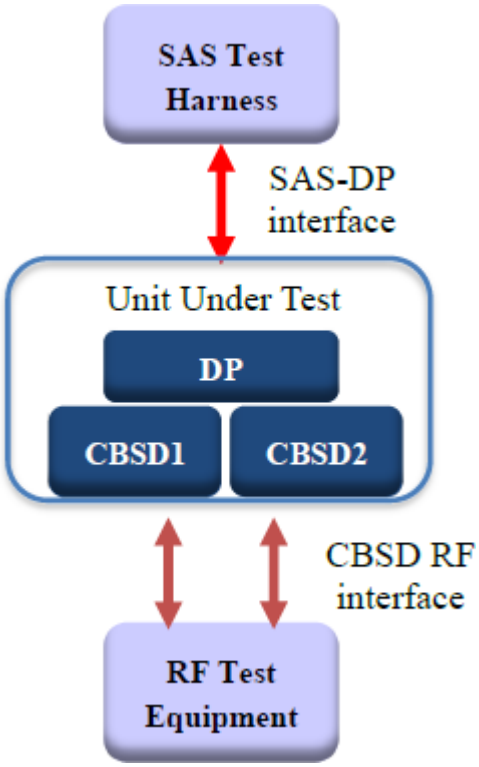
Test site Designation No. TW1190 with FCC.

Test site registered number IC 4086B-1 with Industry Canada.

2 Measurement Environment

Measurement Environment	
Test Harness version	v1.0.0.2
Operating System	Microsoft Windows 7
TLS version	1.2
Python	2.7.14

2.1 Test configuration

Test configuration without Domain Proxy	Test configuration with Domain Proxy
	

3 Test Results

The test parameter (e.g. C for cbsdid) used shall be refer to the test log file in appendix A. Some test case need to monitor RF interface and the measurement plots are in Appendix B. Some test case need to monitor security validation process which are in appendix C and D.

3.1 WINNF.FT.C.REG.1 - Multi-Step registration

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with the SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends correct Registration request information, as specified in [n.5], to the SAS Test Harness: • The required userId, fccId and cbsdSerialNumber registration parameters shall be sent from the CBSD and conform to proper format and acceptable ranges. • Any REG-conditional or optional registration parameters that may be included in the message shall be verified that they conform to proper format and are within acceptable ranges. Note: It is outside the scope of this document to test the Registration information that is supplied via another means.	PASS	-
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 does not provide any further response messages to 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	-

3.2 WINNF.FT.C.REG.8 - Missing Required parameters (responseCode 102)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: – SAS response does not include *cbsdId* – *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.3 WINNF.FT.C.REG.10 - Pending registration (responseCode 200)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: – SAS response does not include *cbsdId* – *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.4 WINNF.FT.C.REG.12 - Invalid parameter (responseCode 103)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: – SAS response does not include *cbsdId* – *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.5 WINNF.FT.C.REG.14 - Blacklisted CBSD (responseCode 101)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: – SAS response does not include *cbsdId* – *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.6 WINNF.FT.C.REG.16 - Unsupported SAS protocol version (responseCode 100)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT is in the Unregistered state	--	--
2	CBSD sends a Registration request to SAS Test Harness.	--	--
3	SAS Test Harness rejects the request by sending a CBSD Registration Response as follows: – SAS response does not include *cbsdId* – *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.7 WINNF.FT.C.REG.18 - Group Error (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 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 does not provide any further response messages to 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	--

3.8 WINNF.FT.C.GRA.1 - Unsuccessful Grant responseCode=400 (INTERFERENCE)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness, with *cbsdId* = C	--	--
2	UUT sends valid Grant Request.	--	--
3	SAS Test Harness sends a Grant Response message, including • *cbsdId*=C • *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.9 WINNF.FT.C.GRA.2 - Unsuccessful Grant responseCode=401 (GRANT_CONFLICT)

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has registered successfully with SAS Test Harness, with *cbsdId* = C	--	--
2	UUT sends valid Grant Request.	--	--
3	SAS Test Harness sends a Grant Response message, including • *cbsdId*=C • *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness does not provide any further response messages to 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	-

3.10 WINNF.FT.C.HBT.1 - Heartbeat Success Case (first Heartbeat Response)

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

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

3.11 WINNF.FT.C.HBT.3 - Heartbeat responseCode=105 (DEREGISTER)

#	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: 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"	PASS	-
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = *T* = *Current UTC time* • *responseCode* = 105 (DEREGISTER)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the RF output of the UUT. Verify: • UUT shall stop transmission within (T + 60 seconds) of completion of step 3	PASS	-

3.12 WINNF.FT.C.HBT.4 - Heartbeat responseCode=500 (TERMINATED_GRANT)

#	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: 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 latest specified heartbeatInterval, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	PASS	-
3	SAS Test Harness sends a Heartbeat Response message, including the following parameters: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = T = current UTC time • *responseCode* = 500 (TERMINATED_GRANT)	--	--
4	After completion of step 3, SAS Test Harness shall not allow any further grants to the UUT.	--	--
5	Monitor the RF output of the UUT. Verify: • UUT shall stop transmission within (T + 60 seconds) of completion of step 3	PASS	-

3.13 WINNF.FT.C.HBT.5 - Heartbeat responseCode=501 (SUSPENDED_GRANT) in First Heartbeat Response

#	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: 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. Verify HeartbeatRequest message is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED"	PASS	-
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: • *cbdsId* = C • *grantId* = G Monitor the RF output of the UUT. Verify: • UUT does not transmit at any time	PASS	-

3.14 WINNF.FT.C.HBT.6 - Heartbeat responseCode=501 (SUSPENDED_GRANT) in Subsequent Heartbeat Response

#	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: 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 latest specified heartbeatInterval, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	PASS	-
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: • *cbdsId* = C • *grantId* = G Monitor the RF output of the UUT. Verify: • UUT shall stop transmission within (*T* + 60 seconds) of completion of step 3	PASS	-

3.15 WINNF.FT.C.HBT.7 - Heartbeat responseCode=502 (UNSYNC_OP_PARAM)

#	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: 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 latest specified *heartbeatInterval*, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	PASS	-
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: o *cbdsId* = C o *grantId* = G Monitor the RF output of the UUT. Verify: • UUT shall stop transmission within (T+60) seconds of completion of step 3.	PASS	-

3.16 WINNF.FT.C.HBT.9 - Heartbeat Response Absent (First Heartbeat)

#	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: 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"	PASS	-
3	After completion of Step 2, SAS Test Harness does not respond to any further messages from UUT to simulate loss of network connection	--	--
4	Monitor the RF output of the UUT from start of test to 60 seconds after step 3. Verify: • At any time during the test, UUT shall not transmit on RF interface	PASS	-

3.17 WINNF.FT.C.HBT.10 - Heartbeat Response Absent (Subsequent Heartbeat)

#	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: 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 HeartbeatRequest message is sent within the latest specified *heartbeatInterval*, and is formatted correctly, including: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	PASS	-
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.	PASS	-

3.18 WINNF.FT.C.HBT.11 - Successful Grant Renewal in Heartbeat Test Case

#	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: o valid *cbsdId* = C o valid *grantId* = G o 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: o *grantExpireTime* = UTC time equal to time at start of test + 300 seconds = Tgrant_expire o *transmitExpireTime* = UTC time equal to time at start of test + 200 seconds o *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	-
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	-

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	--	--
8	Continue to respond to any subsquent Heartbeat Request from CBSD with Heartbeat Response with the following parameters: • *cbsdId* = C • *grantId* = G • *transmitExpireTime* = same as Step 7 • *responseCode* = 0	--	--
9	Monitor RF transmission of UUT from start of test until Tgrant_expire + 60 seconds and ensure UUT continues to transmit throughout the time period.	PASS	-

3.19 WINNF.FT.C.MES.1 - Registration Response contains measReportConfig

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness	--	--
2	UUT sends a Registration Request message. Validate the Registration Request message is formatted correctly, including: • *userId* is present and correct • *fccId* is present and correct • *cbsdSerialNumber* is present and correct • *measCapability* = "RECEIVED_POWER_WITHOUT_GRANT"	PASS	-
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 message is type 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	-
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 a properly formatted *rcvdPowerMeasReport.*	PASS	-

3.20 WINNF.FT.C.MES.3 - Grant Response contains measReportConfig

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, with *cbsdId*=C and *measCapability* = "RECEIVED_POWER_WITH_GRANT"	--	--
2	UUT sends a Grant Request message. Verify Grant Request message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *operationParam* is present and format is valid	PASS	-
3	SAS Test Harness sends a Grant Response message, with the following parameters: • *cbsdId* = C • *grantId* = G = valid grant ID • *grantExpireTime* = UTC time in the future • *heartbeatInterval* = 60 seconds • *measReportConfig*="RECEIVED_POWER_WITH_GRANT" • *operationParam* is set to valid operating parameters • *channelType* = "GAA" • *responseCode* = 0	--	--
4	UUT sends a Heartbeat Request message. Verify message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *grantId* = G • *operationState* = "GRANTED"	PASS	-
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	-
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	--	--

3.21 WINNF.FT.C.MES.4 - Heartbeat Response contains measReportConfig

#	Test Execution Steps	Results	
1	Ensure the following conditions are met for test entry: • UUT has successfully completed SAS Discovery and Authentication with SAS Test Harness • UUT has successfully registered with SAS Test Harness, with *cbsdId*=C and *measCapability* = "RECEIVED_POWER_WITH_GRANT" • UUT has received a valid grant with *grantId* = G • UUT is in Grant State AUTHORIZED and is actively transmitting within the bounds of its grant. • Grant has *heartbeatInterval* = 60 seconds	--	--
2	UUT sends a Heartbeat Request message. Verify Heartbeat Request message contains all required parameters properly formatted, and specifically: • *cbsdId* = C • *grantId* = G • *operationState* = "AUTHORIZED"	PASS	-
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	-
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	-
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	--	--

3.22 WINNF.FT.C.RLQ.1 - Successful Relinquishment

#	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	-
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	-

3.23 WINNF.FT.C.RLQ.3 - Unsuccessful Relinquishment, responseCode=102

#	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 • No *grantId* • *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	-

3.24 WINNF.FT.C.RLQ.5 - Unsuccessful Relinquishment, responseCode=103

#	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 • No *grantId* • *responseCode* = R	--	--
4	After completion of step 3, SAS Test Harness will not provide any positive response (*responseCode*=103) to further request messages from the UUT.	--	--
5	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT stopped RF transmission at any time between triggering the relinquishment and UUT sending the relinquishment request	PASS	-

3.25 WINNF.FT.C.DRG.1 - Successful Deregistration

#	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	-
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	-

3.26 WINNF.FT.C.DRG.3 - Deregistration responseCode=102

#	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: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	PASS	-

3.27 WINNF.FT.C.DRG.5 - Deregistration responseCode=103

#	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	--	--
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: A. UUT sending a Registration Request message, as this is not mandatory B. UUT sending a Deregistration Request message	PASS	-

3.28 WINNF.FT.C.SCS.1 - Successful TLS connection between UUT and SAS Test Harness

#	Test Execution Steps	Results	
1	• UUT shall start CBSD-SAS communication with the security procedure • The UUT shall establish a TLS handshake with the SAS Test Harness using configured certificate. • Configure the SAS Test Harness to accept the security procedure and establish the connection	PASS	-

2	• Make sure that Mutual authentication happens between UUT and the SAS Test Harness.
	• Make sure that UUT uses TLS v1.2
	• Make sure that cipher suites from one of the following is selected,
	  • TLS_RSA_WITH_AES_128_GCM_SHA256
	  • TLS_RSA_WITH_AES_256_GCM_SHA384
	  • TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256
	  • TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384
	  • TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256
		PASS	-

3	A successful registration is accomplished using one of the test cases described in section 6.1.4.1, depending on CBSD capability. • UUT sends a registration request to the SAS Test Harness and the SAS Test Harness sends a Registration Response with *responseCode* = 0 and *cbsdId*.	PASS	-
4	Monitor the RF output of the UUT from start of test until 60 seconds after Step 3 is complete. This is the end of the test. Verify: • UUT shall not transmit RF	PASS	-

3.29 WINNF.FT.C.SCS.2 - TLS failure due to revoked certificate

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

3.30 WINNF.FT.C.SCS.3 - TLS failure due to expired server certificate

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

3.31 WINNF.FT.C.SCS.4 - TLS failure when SAS Test Harness certificate is issued by an unknown CA

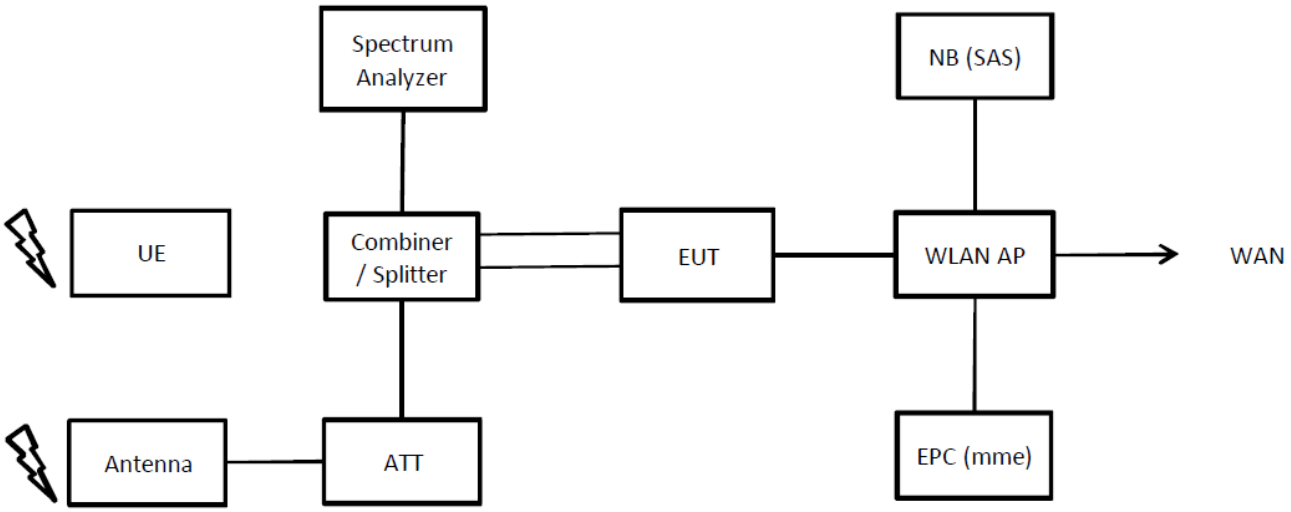
#	Test Execution Steps	Results	
1	• UUT shall start CBSD-SAS communication with the security procedures	PASS	-
2	• Make sure that UUT uses TLS v1.2 for security establishment. • Make sure UUT selects the correct cipher suite. • UUT shall use CRL or OCSP to verify the validity of the server certificate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

3.32 WINNF.FT.C.SCS.5 - TLS failure when certificate at the SAS Test Harness is corrupted

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

3.33 WINNF.PT.C.HBT - UUT RF Transmit Power Measurement

Items	Parameters
Maximum rated power (EIRP, dBm/MHz)	17dBm/MHz for OBW 20MHz 20dBM/MHz for OBW 10MHz
Transmit dynamic range (EIRP, dBm/MHz)	8~17dBm/MHz for OBW 20MHz 10~20dBM/MHz for OBW 10MHz
Occupied bandwidth (OBW)	20MHz 10MHz
maxEirp values	8, 10, 12, 14, 16, 17dBm/MHz for OBW 20MHz 10, 12, 14, 16, 18, 20dBM/MHz for OBW 10MHz



Note: To ensure EUT transmits with full power across the Bandwidth during the on duration of duty cycle, attached UE is running maximum traffic during the test.

Spectrum Analyzer Setting	Parameters
Center Frequency	3625MHz
Freqency Span	40MHz for OBW 20MHz 20MHz for OBW 10MHz
RBW / VBW	1 MHz / 3MHz
Channel Power Meas Bandwidth	20MHz for OBW 20MHz 10MHz for OBW 10MHz
Sweep Time	51s

#	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 = F_L, highFrequency = F_H, maxEirp = P_i}, with grant in AUTHORIZED state, and grantExpireTime set to a value far past the duration of this test case *Note: in order for the UUT to request a grant with the parameters {lowFrequency, highFrequency, maxEirp), the SAS Test Harness may need to provide appropriate guidance in the availableChannel object of the spectrumInquiry response message, and the operationParam object of the grant response message. Alternately, the UUT vendor may provide the ability to set those parameters on the UUT so that the UUT will request a grant with those parameters.*	--	--
2	UUT and SAS Test Harness perform a series of Heartbeat Request/Response cycles, which continues until the other test steps are complete. Messaging for each cycle is as follows: • UUT sends Heartbeat Request, including: o *cbsdId* = C o *grantId* = G • SAS Test Harness responds with Heartbeat Response, including: o *cbsdId* = C o *grantId* = G o *transmitExpireTime* = current UTC time + 200 seconds o *responseCode* = 0	--	--

3	Tester performs power measurement on RF interface(s) of UUT, and verifies it complies with the maxEirp setting, P_i. 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	-

Frequency	Bandwidth	Antenna Gain	Grant maxEirp	Conducted PSD	maxEirp	Result
	(MHz)	(dBi)	(dBm/MHz)	(dBm/MHz)	(dBm/MHz)	
3625MHz	20	3	17	10.28	13.28	PASS
3625MHz	20	3	16	9.393	12.393	PASS
3625MHz	20	3	14	7.424	10.424	PASS
3625MHz	20	3	12	4.966	7.966	PASS
3625MHz	20	3	10	3.145	6.145	PASS
3625MHz	20	3	8	1.57	4.57	PASS
3625MHz	10	3	20	14.02	17.02	PASS
3625MHz	10	3	18	12	15	PASS
3625MHz	10	3	16	10.18	13.18	PASS
3625MHz	10	3	14	8.211	11.211	PASS
3625MHz	10	3	12	6.246	9.246	PASS
3625MHz	10	3	10	3.975	6.975	PASS

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Signal analyzer	Agilent	N9010A	MY52220519	10kHz~44GHz	Mar. 20, 2018	Mar. 19, 2019	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-HY)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 11, 2017	Oct. 10, 2018	Conducted (TH01-HY)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 20, 2017	Nov. 19, 2018	Conducted (TH01-HY)
MW Analog Signal Generator	Keysight	N5183A	MY50142965	100kHz~20GHz	Nov. 24, 2017	Nov. 23, 2018	Conducted (TH01-HY)
Vector Signal Generator	Keysight	N5182B	MY53052408	9kHz~6GHz	Jan. 02, 2018	Jan. 01, 2019	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Conducted Emission	1.3 dB	Confidence levels of 95%

Test Log for WINNF.FT.C.REG.1 Test Case ID

2018-06-07T06:48:29.996Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T06:48:29.997Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now
2018-06-07T06:48:35.224Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T06:48:35.263Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T06:48:37.002Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T06:48:37.003Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T06:50:06.240Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T06:50:08.466Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is – passed

Test Log for WINNF.FT.C.REG.8 Test Case ID

2018-06-07T06:50:28.355Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T06:50:28.358Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now
2018-06-07T06:50:34.413Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T06:50:34.492Z - INFO - engine sent successfully, the response to CBRS : {


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


2018-06-07T06:50:36.362Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T06:50:36.368Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T06:51:54.440Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T06:51:56.426Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed

Test Log for WINNF.FT.C.REG.10 Test Case ID

2018-06-07T06:52:17.868Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T06:52:17.871Z - INFO - the selected test from the user : WINNF.FT.C.REG.10 is starting now
2018-06-07T06:52:23.842Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T06:52:23.907Z - INFO - engine sent successfully, the response to CBRS : {


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


2018-06-07T06:52:25.872Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T06:52:25.875Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T06:53:37.970Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T06:53:39.838Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed

Test Log for WINNF.FT.C.REG.12 Test Case ID

2018-06-07T06:54:19.186Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T06:54:19.187Z - INFO - the selected test from the user : WINNF.FT.C.REG.12 is starting now
2018-06-07T06:54:24.578Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T06:54:24.632Z - INFO - engine sent successfully, the response to CBRS : {


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


2018-06-07T06:54:26.190Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T06:54:26.191Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T06:55:46.512Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T06:55:47.821Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed

Test Log for WINNF.FT.C.REG.14 Test Case ID

2018-06-07T06:56:03.729Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T06:56:03.730Z - INFO - the selected test from the user : WINNF.FT.C.REG.14 is starting now
2018-06-07T06:56:09.226Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T06:56:09.289Z - INFO - engine sent successfully, the response to CBRS : {


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


2018-06-07T06:56:10.733Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T06:56:10.734Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T06:57:23.150Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T06:57:24.558Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed

Test Log for WINNF.FT.C.REG.16 Test Case ID

2018-06-07T06:57:45.546Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T06:57:45.548Z - INFO - the selected test from the user : WINNF.FT.C.REG.16 is starting now
2018-06-07T06:57:51.157Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T06:57:51.210Z - INFO - engine sent successfully, the response to CBRS : {


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


2018-06-07T06:57:52.552Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T06:57:52.555Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T06:59:08.303Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T06:59:08.973Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed

Test Log for WINNF.FT.C.REG.18 Test Case ID

2018-07-03T07:17:47.183Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-07-03T07:17:47.184Z - INFO - the selected test from the user : WINNF.FT.C.REG.18 is starting now
2018-07-03T07:17:56.773Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-07-03T07:17:56.809Z - INFO - engine sent successfully, the response to CBRS : {


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


2018-07-03T07:17:58.186Z - INFO - arrived to nstep starting question answer session with the technician
2018-07-03T07:17:58.187Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-07-03T07:21:32.390Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-07-03T07:21:33.926Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed

Test Log for WINNF.FT.C.GRA.1 Test Case ID

2018-06-07T07:00:08.641Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:00:08.642Z - INFO - the selected test from the user : WINNF.FT.C.GRA.1 is starting now
2018-06-07T07:00:15.599Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:00:15.661Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:00:15.687Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T07:00:15.696Z - INFO - engine sent successfully, the response to CBRS : {


```
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
```


2018-06-07T07:00:15.802Z - INFO - grant request from CBRS : {


```
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3690000000,
                    "lowFrequency": 3670000000
                }
            }
        }
    ]
}
```


2018-06-07T07:00:15.825Z - INFO - engine sent successfully, the response to CBRS : {


```
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 400
            }
        }
    ]
}
```


2018-06-07T07:00:17.645Z - INFO - arrived to nstep starting question answer session with the technician

2018-06-07T07:00:17.647Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2018-06-07T07:02:08.094Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2018-06-07T07:02:08.905Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed

Test Log for WINNF.FT.C.GRA.2 Test Case ID

2018-06-07T07:10:02.993Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:10:02.996Z - INFO - the selected test from the user : WINNF.FT.C.GRA.2 is starting now
2018-06-07T07:10:08.934Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:10:09.009Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:10:09.052Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T07:10:09.061Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:10:10.119Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3630000000,
"lowFrequency": 3610000000
}
}
}
]
}
2018-06-07T07:10:10.128Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 401
}
}
]
}
2018-06-07T07:10:12.000Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T07:10:12.005Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-07T07:11:50.263Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-07T07:11:51.953Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed

Test Log for WINNF.FT.C.HBT.1 Test Case ID

2018-06-07T07:12:18.267Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:12:18.269Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now
2018-06-07T07:12:23.486Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:12:23.551Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:12:23.582Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T07:12:23.589Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:12:24.696Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3570000000,
                        "lowFrequency": 3550000000
                    }
                }
            }
        ]
    }
    2018-06-07T07:12:24.703Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T07:12:24Z",
                "grantId": "133214186",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:12:24.759Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "133214186",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T07:12:24.766Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:15:44Z"
}
]
}
2018-06-07T07:13:21.801Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:13:21.805Z - INFO - Time interval between two heartbeat request messages is: 57.042, limit is: 65.0
2018-06-07T07:13:21.819Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:16:41Z"
}
]
}
2018-06-07T07:14:18.846Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:14:18.851Z - INFO - Time interval between two heartbeat request messages is: 57.045, limit is: 65.0
2018-06-07T07:14:18.865Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:17:38Z"
}
]
}
2018-06-07T07:15:16.795Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:15:16.798Z - INFO - Time interval between two heartbeat request messages is: 57.948, limit is: 65.0
2018-06-07T07:15:16.805Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:18:36Z"
}
]
}
2018-06-07T07:16:13.819Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:16:13.822Z - INFO - Time interval between two heartbeat request messages is: 57.024, limit is: 65.0
2018-06-07T07:16:13.838Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"response": {
"responseCode": 0
},

"transmitExpireTime": "2018-06-07T07:19:33Z"
}
]
}
2018-06-07T07:17:10.859Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:17:10.864Z - INFO - Time interval between two heartbeat request messages is: 57.042, limit is: 65.0
2018-06-07T07:17:10.880Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "133214186",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:20:30Z"
}
]
}
2018-06-07T07:17:12.289Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T07:17:12.292Z - INFO - the question is : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? please choose one of the answers :
2018-06-07T07:18:50.874Z - INFO - for the question : Did the CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n
2018-06-07T07:21:53.118Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed and :the additional comments for the current test are : start transmission at T07:12:31 , Bandwidth range 3550-3569.75MHz

Test Log for WINNF.FT.C.HBT.3 Test Case ID

2018-06-07T07:22:40.605Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:22:40.608Z - INFO - the selected test from the user : WINNF.FT.C.HBT.3 is starting now
2018-06-07T07:22:45.423Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:22:45.494Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:22:45.533Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T07:22:45.552Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:22:46.641Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3570000000,
"lowFrequency": 3550000000
}
}
}
]
}
2018-06-07T07:22:46.648Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T07:22:46Z",
"grantId": "639657230",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:22:46.681Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "639657230",
"operationState": "GRANTED"
}
]
}
2018-06-07T07:22:46.687Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:26:06Z"
}
]
}
2018-06-07T07:23:43.733Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:23:43.737Z - INFO - Time interval between two heartbeat request messages is: 57.052, limit is: 65.0
2018-06-07T07:23:43.753Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:27:03Z"
}
]
}
2018-06-07T07:24:40.773Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:24:40.778Z - INFO - Time interval between two heartbeat request messages is: 57.041, limit is: 65.0
2018-06-07T07:24:40.792Z - INFO - engine sent successfully, the response to CBRS : {

"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:28:00Z"
}
]
}

2018-06-07T07:25:37.805Z - INFO - heartbeat request from CBRS : {

"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"operationState": "AUTHORIZED"
}
]
}

2018-06-07T07:25:37.809Z - INFO - Time interval between two heartbeat request messages is: 57.032, limit is: 65.0

2018-06-07T07:25:37.826Z - INFO - engine sent successfully, the response to CBRS : {

"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "639657230",
"response": {
"responseCode": 105
},
"transmitExpireTime": "2018-06-07T07:25:37Z"
}
]
}

2018-06-07T07:25:39.621Z - INFO - arrived to nstep starting question answer session with the technician

2018-06-07T07:25:39.622Z - 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 :

2018-06-07T07:25:54.332Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2018-06-07T07:26:20.724Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed and :the additional comments for the current test are : stop transmission at T07:25:39

Test Log for WINNF.FT.C.HBT.4 Test Case ID

2018-06-07T07:26:46.855Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:26:46.858Z - INFO - the selected test from the user : WINNF.FT.C.HBT.4 is starting now
2018-06-07T07:26:53.348Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:26:53.411Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:26:53.454Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T07:26:53.479Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:26:54.520Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3570000000,
                        "lowFrequency": 3550000000
                    }
                }
            }
        ]
    }
    2018-06-07T07:26:54.538Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T07:26:54Z",
                "grantId": "738471389",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:26:54.575Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "738471389",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T07:26:54.611Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "738471389",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:30:14Z"
}
]
}
2018-06-07T07:27:51.676Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "738471389",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:27:51.680Z - INFO - Time interval between two heartbeat request messages is: 57.102, limit is: 65.0
2018-06-07T07:27:51.694Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "738471389",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:31:11Z"
}
]
}
2018-06-07T07:28:48.713Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "738471389",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:28:48.717Z - INFO - Time interval between two heartbeat request messages is: 57.037, limit is: 65.0
2018-06-07T07:28:48.732Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

```
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "738471389",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-07T07:32:08Z"
            }
        ]
    }
    2018-06-07T07:29:45.752Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "738471389",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-07T07:29:45.756Z - INFO - Time interval between two heartbeat request messages is: 57.038,
    limit is: 65.0
    2018-06-07T07:29:45.770Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "738471389",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-07T07:33:05Z"
            }
        ]
    }
    2018-06-07T07:30:42.799Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "738471389",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-07T07:30:42.803Z - INFO - Time interval between two heartbeat request messages is: 57.048,
    limit is: 65.0
    2018-06-07T07:30:42.819Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "738471389",
                "response": {
                    "responseCode": 0
                },
```

"transmitExpireTime": "2018-06-07T07:34:02Z"
}
]
}
2018-06-07T07:31:39.844Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "738471389",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:31:39.848Z - INFO - Time interval between two heartbeat request messages is: 57.044, limit is: 65.0
2018-06-07T07:31:39.865Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "738471389",
"response": {
"responseCode": 500
},
"transmitExpireTime": "2018-06-07T07:31:39Z"
}
]
}
2018-06-07T07:31:40.878Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T07:31:40.880Z - 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 :
2018-06-07T07:32:00.091Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 500? , the user choose y
2018-06-07T07:32:20.105Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed and :the additional comments for the current test are : stop transmission at T07:31:45

Test Log for WINNF.FT.C.HBT.5 Test Case ID

2018-06-07T07:32:52.415Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:32:52.417Z - INFO - the selected test from the user : WINNF.FT.C.HBT.5 is starting now
2018-06-07T07:32:58.746Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```

2018-06-07T07:32:58.812Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```

2018-06-07T07:32:58.845Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T07:32:58.851Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:32:58.892Z - INFO - spectrumInquiry request from CBRS    : {
        "spectrumInquiryRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "inquiredSpectrum": [
                    {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    }
                ]
            }
        ]
    }
    2018-06-07T07:32:58.901Z - INFO - engine sent successfully, the response to CBRS    : {
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
```

2018-06-07T07:32:58.946Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3690000000,
"lowFrequency": 3670000000
}
}
}
]
}
2018-06-07T07:32:58.967Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T07:32:58Z",
"grantId": "505892378",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:32:59.071Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "505892378",
"operationState": "GRANTED"
}
]
}
2018-06-07T07:32:59.088Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "505892378",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2018-06-07T07:32:59Z"
}
]
}
2018-06-07T07:33:56.003Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{

"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "505892378",
"operationState": "GRANTED"
}
]
}
2018-06-07T07:33:56.009Z - INFO - Time interval between two heartbeat request messages is: 56.933, limit is: 65.0
2018-06-07T07:33:56.026Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "505892378",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2018-06-07T07:33:56Z"
}
]
}
2018-06-07T07:33:57.423Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T07:33:57.424Z - INFO - the question is : Did the CBSD transmit at any time during the test? please choose one of the answers :
2018-06-07T07:36:43.176Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the user choose n
2018-06-07T07:36:48.614Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed

Test Log for WINNF.FT.C.HBT.6 Test Case ID

2018-06-07T07:39:16.842Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:39:16.845Z - INFO - the selected test from the user : WINNF.FT.C.HBT.6 is starting now
2018-06-07T07:39:22.494Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:39:22.562Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:39:22.608Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T07:39:22.622Z - INFO - engine sent successfully, the response to CBRS : {

"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:39:23.700Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3590000000,
"lowFrequency": 3570000000
}
}
}
]
}
2018-06-07T07:39:23.720Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T07:39:23Z",
"grantId": "826974031",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:39:23.769Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",

"operationState": "GRANTED"
}
]
}
2018-06-07T07:39:23.779Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:42:43Z"
}
]
}
2018-06-07T07:40:20.805Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:40:20.809Z - INFO - Time interval between two heartbeat request messages is: 57.037, limit is: 65.0
2018-06-07T07:40:20.825Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:43:40Z"
}
]
}
2018-06-07T07:41:17.838Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:41:17.842Z - INFO - Time interval between two heartbeat request messages is: 57.032, limit is: 65.0
2018-06-07T07:41:17.858Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:44:37Z"
}
]
}
2018-06-07T07:42:14.868Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:42:14.872Z - INFO - Time interval between two heartbeat request messages is: 57.031, limit is: 65.0
2018-06-07T07:42:14.888Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2018-06-07T07:42:14Z"
}
]
}
2018-06-07T07:43:11.934Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"operationState": "GRANTED"
}
]
}
2018-06-07T07:43:11.940Z - INFO - Time interval between two heartbeat request messages is: 57.064, limit is: 65.0
2018-06-07T07:43:11.957Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "826974031",
"response": {
"responseCode": 501
},

"transmitExpireTime": "2018-06-07T07:43:11Z"
}
]
}

2018-06-07T07:43:13.861Z - INFO - arrived to nstep starting question answer session with the technician

2018-06-07T07:43:13.862Z - 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 :

2018-06-07T07:43:26.723Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y

2018-06-07T07:44:09.351Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed and :the additional comments for the current test are : stop transmission at T07:42:17

Test Log for WINNF.FT.C.HBT.7 Test Case ID

2018-06-07T07:44:51.013Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:44:51.015Z - INFO - the selected test from the user : WINNF.FT.C.HBT.7 is starting now
2018-06-07T07:44:56.381Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:44:56.437Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:44:56.461Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T07:44:56.470Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:44:57.581Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3570000000,
                        "lowFrequency": 3550000000
                    }
                }
            }
        ]
    }
    2018-06-07T07:44:57.588Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T07:44:57Z",
                "grantId": "301960449",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T07:44:57.621Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "301960449",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T07:44:57.627Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "301960449",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:48:17Z"
}
]
}
2018-06-07T07:45:54.686Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "301960449",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:45:54.690Z - INFO - Time interval between two heartbeat request messages is: 57.066, limit is: 65.0
2018-06-07T07:45:54.704Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "301960449",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:49:14Z"
}
]
}
2018-06-07T07:46:51.719Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "301960449",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:46:51.723Z - INFO - Time interval between two heartbeat request messages is: 57.033, limit is: 65.0
2018-06-07T07:46:51.737Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [

```
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "301960449",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-07T07:50:11Z"
            }
        ]
    }
    2018-06-07T07:47:48.759Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "301960449",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-07T07:47:48.763Z - INFO - Time interval between two heartbeat request messages is: 57.039,
    limit is: 65.0
    2018-06-07T07:47:48.778Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "301960449",
                "response": {
                    "responseCode": 502
                },
                "transmitExpireTime": "2018-06-07T07:47:48Z"
            }
        ]
    }
    2018-06-07T07:47:50.321Z - INFO - relinquishment request from CBRS    : {
        "relinquishmentRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "301960449"
            }
        ]
    }
    2018-06-07T07:47:50.338Z - INFO - engine sent successfully, the response to CBRS    : {
        "relinquishmentResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "301960449",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
```

2018-06-07T07:47:52.029Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T07:47:52.030Z - 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 :
2018-06-07T07:48:06.121Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 502? , the user choose y
2018-06-07T07:48:36.903Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed and :the additional comments for the current test are : stop transmission at T07:47:50

Test Log for WINNF.FT.C.HBT.9 Test Case ID

2018-06-07T08:56:15.502Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:56:15.503Z - INFO - the selected test from the user : WINNF.FT.C.HBT.9 is starting now
2018-06-07T08:56:24.048Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:56:24.130Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:56:24.161Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T08:56:24.167Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:56:25.269Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3570000000,
                        "lowFrequency": 3550000000
                    }
                }
            }
        ]
    }
    2018-06-07T08:56:25.278Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T08:56:25Z",
                "grantId": "845472851",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:56:25.326Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "845472851",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T08:57:46.028Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "845472851",
"operationState": "GRANTED"
}
]
}
2018-06-07T08:57:46.029Z - INFO - request message received while HBT is absent, sleep 124 sec before responding
2018-06-07T08:59:03.683Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "845472851",
"operationState": "GRANTED"
}
]
}
2018-06-07T08:59:03.683Z - INFO - request message received while HBT is absent, sleep 46 sec before responding
2018-06-07T08:59:45.344Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "845472851",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2018-06-07T08:59:45Z"
}
]
}
2018-06-07T08:59:46.526Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:59:46.528Z - INFO - the question is : Were there RF transmissions from the CBSD during the test? please choose one of the answers :
2018-06-07T08:59:49.686Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2018-06-07T08:59:50.030Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2018-06-07T09:00:33.267Z - INFO - for the question : Were there RF transmissions from the CBSD during the test? , the user choose n
2018-06-07T09:00:43.128Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed

Test Log for WINNF.FT.C.HBT.10 Test Case ID

2018-06-07T09:02:30.232Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T09:02:30.233Z - INFO - the selected test from the user : WINNF.FT.C.HBT.10 is starting now
2018-06-07T09:02:36.865Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T09:02:36.930Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T09:02:36.969Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T09:02:36.976Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T09:02:38.040Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3630000000,
"lowFrequency": 3610000000
}
}
}
]
}
2018-06-07T09:02:38.049Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T09:02:38Z",
"grantId": "697479121",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T09:02:38.091Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "697479121",
"operationState": "GRANTED"
}
]
}
2018-06-07T09:02:38.098Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T09:05:58Z"
}
]
}
2018-06-07T09:03:35.109Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T09:03:35.114Z - INFO - Time interval between two heartbeat request messages is: 57.019, limit is: 65.0
2018-06-07T09:03:35.131Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T09:06:55Z"
}
]
}
2018-06-07T09:04:32.148Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T09:04:32.153Z - INFO - Time interval between two heartbeat request messages is: 57.039, limit is: 65.0
2018-06-07T09:04:32.161Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME

WAS AT: 2018-06-07 09:03:35.111000
2018-06-07T09:05:52.775Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T09:05:52.775Z - INFO - request message received while HBT is absent, sleep 124 sec before responding
2018-06-07T09:07:11.026Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"operationState": "GRANTED"
}
]
}
2018-06-07T09:07:11.026Z - INFO - request message received while HBT is absent, sleep 46 sec before responding
2018-06-07T09:07:52.174Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "697479121",
"response": {
"responseCode": 501
},
"transmitExpireTime": "2018-06-07T09:07:52Z"
}
]
}
2018-06-07T09:07:53.256Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T09:07:53.257Z - INFO - the question is : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :
2018-06-07T09:07:56.776Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2018-06-07T09:07:57.029Z - INFO - engine sent successfully, the response to CBRS : "list index out of range"
2018-06-07T09:08:32.700Z - INFO - for the question : Did the CBSD stop RF transmissions within (transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y
2018-06-07T09:09:01.789Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed and :the additional comments for the current test are : stop transmission at T09:06:55

Test Log for WINNF.FT.C.HBT.11 Test Case ID

2018-06-07T07:54:06.760Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T07:54:06.763Z - INFO - the selected test from the user : WINNF.FT.C.HBT.11 is starting now
2018-06-07T07:54:15.842Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T07:54:15.903Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T07:54:15.961Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T07:54:15.984Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:54:16.111Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3690000000,
"lowFrequency": 3670000000
}
}
}
]
}
2018-06-07T07:54:16.132Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-07T08:00:16Z",
"grantId": "423270758",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T07:54:16.197Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

```
            "grantId": "423270758",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-07T07:54:16.214Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T07:57:36Z"
        }
    ]
}
2018-06-07T07:55:13.269Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T07:55:13.273Z - INFO - Time interval between two heartbeat request messages is: 57.072,
limit is: 65.0
2018-06-07T07:55:13.288Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T07:58:33Z"
        }
    ]
}
2018-06-07T07:56:11.174Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T07:56:11.177Z - INFO - Time interval between two heartbeat request messages is: 57.904,
limit is: 65.0
2018-06-07T07:56:11.194Z - INFO - engine sent successfully, the response to CBRS   : {
```

"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "423270758",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T07:59:31Z"
}
]
}
2018-06-07T07:57:08.203Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "423270758",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:57:08.207Z - INFO - Time interval between two heartbeat request messages is: 57.03, limit is: 65.0
2018-06-07T07:57:08.220Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "423270758",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:00:16Z"
}
]
}
2018-06-07T07:58:05.234Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "423270758",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T07:58:05.237Z - INFO - Time interval between two heartbeat request messages is: 57.031, limit is: 65.0
2018-06-07T07:58:05.252Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "423270758",
"response": {
"responseCode": 0

```
            },
            "transmitExpireTime": "2018-06-07T08:00:16Z"
        }
    ]
}
2018-06-07T07:58:10.091Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "grantRenew": true,
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T07:58:10.095Z - INFO - Time interval between two heartbeat request messages is: 4.856,
limit is: 65.0
2018-06-07T07:58:10.111Z - INFO - grantRenew received in HBT request message
2018-06-07T07:58:10.115Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantExpireTime": "2018-06-07T08:04:10Z",
            "grantId": "423270758",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T08:01:30Z"
        }
    ]
}
2018-06-07T07:59:07.125Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T07:59:07.130Z - INFO - Time interval between two heartbeat request messages is: 57.036,
limit is: 65.0
2018-06-07T07:59:07.147Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "423270758",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T08:02:27Z"
        }
```

]
}
2018-06-07T07:59:08.782Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T07:59:08.785Z - INFO - the question is : Did the CBSD renew its grant successfully? please choose one of the answers :
2018-06-07T08:00:30.448Z - INFO - for the question : Did the CBSD renew its grant successfully? , the user choose y
2018-06-07T08:01:02.621Z - INFO - The final result of the test : WINNF.FT.C.HBT.11 is - passed

Test Log for WINNF.FT.C.MES.1 Test Case ID

2018-06-07T08:04:54.286Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:04:54.289Z - INFO - the selected test from the user : WINNF.FT.C.MES.1 is starting now
2018-06-07T08:05:05.750Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:05:05.816Z - INFO - Response message contains measReportConfig
2018-06-07T08:05:05.818Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "measReportConfig": [
            "RECEIVED_POWER_WITHOUT_GRANT"
        ],
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:05:05.855Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
```

```
],
"measReport": {
    "rcvdPowerMeasReports": [
        {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3600000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3610000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3620000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3630000000,
            "measRcvdPower": -100
        },
        {
            "measBandwidth": 10000000,
            "measFrequency": 3640000000,
            "measRcvdPower": -100
```

```
                        },
                        {
                            "measBandwidth": 10000000,
                            "measFrequency": 3650000000,
                            "measRcvdPower": -100
                        },
                        {
                            "measBandwidth": 10000000,
                            "measFrequency": 3660000000,
                            "measRcvdPower": -100
                        },
                        {
                            "measBandwidth": 10000000,
                            "measFrequency": 3670000000,
                            "measRcvdPower": -100
                        },
                        {
                            "measBandwidth": 10000000,
                            "measFrequency": 3680000000,
                            "measRcvdPower": -100
                        },
                        {
                            "measBandwidth": 10000000,
                            "measFrequency": 3690000000,
                            "measRcvdPower": -100
                        }
                    ]
                }
            }
        ]
}
2018-06-07T08:05:05.880Z - INFO - engine sent successfully, the response to CBRS    : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-07T08:05:05.961Z - INFO - grant request from CBRS    : {
```

```
"grantRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "measReport": {
            "rcvdPowerMeasReports": [
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3550000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3560000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3570000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3580000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3590000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3600000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3610000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3620000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
                    "measFrequency": 3630000000,
                    "measRcvdPower": -100
                },
                {
                    "measBandwidth": 10000000,
```

```
                        "measFrequency": 3640000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3650000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3660000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3670000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3680000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3690000000,
                        "measRcvdPower": -100
                    }
                ]
            },
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3570000000,
                    "lowFrequency": 3550000000
                }
            }
        }
    ]
}
2018-06-07T08:05:05.976Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-14T08:05:05Z",
            "grantId": "934751454",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
```

]
}
2018-06-07T08:05:07.292Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:09:16.967Z - INFO - The final result of the test : WINNF.FT.C.MES.1 is - passed

Test Log for WINNF.FT.C.MES.3 Test Case ID

2018-06-07T08:10:26.727Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:10:26.730Z - INFO - the selected test from the user : WINNF.FT.C.MES.3 is starting now
2018-06-07T08:10:32.316Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:10:32.385Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:10:32.421Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T08:10:32.428Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:10:32.513Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3630000000,
"lowFrequency": 3610000000
}
}
}
]
}
2018-06-07T08:10:32.523Z - INFO - Response message contains measReportConfig
2018-06-07T08:10:32.526Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T08:10:32Z",
"grantId": "159433321",
"heartbeatInterval": 60,
"measReportConfig": [
"RECEIVED_POWER_WITH_GRANT"
],
"response": {
"responseCode": 0
}
}
]
}

2018-06-07T08:10:32.582Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "159433321",
"measReport": {
"rcvdPowerMeasReports": [
{
"measBandwidth": 10000000,
"measFrequency": 3600000000,
"measRcvdPower": -100
},
{
"measBandwidth": 10000000,
"measFrequency": 3610000000,
"measRcvdPower": -100
},
{
"measBandwidth": 10000000,
"measFrequency": 3620000000,
"measRcvdPower": -100
},
{
"measBandwidth": 10000000,
"measFrequency": 3630000000,
"measRcvdPower": -100
}
]
},
"operationState": "GRANTED"
}
]
}
2018-06-07T08:10:32.589Z - INFO - measReport received in heartbeat message
2018-06-07T08:10:32.605Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "159433321",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:13:52Z"
}
]
}
2018-06-07T08:11:29.517Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "159433321",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-07T08:11:29.523Z - INFO - Time interval between two heartbeat request messages is: 56.936,
    limit is: 65.0
    2018-06-07T08:11:29.539Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "159433321",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-07T08:14:49Z"
            }
        ]
    }
    2018-06-07T08:12:26.562Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "159433321",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-07T08:12:26.566Z - INFO - Time interval between two heartbeat request messages is: 57.045,
    limit is: 65.0
    2018-06-07T08:12:26.584Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "159433321",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-07T08:15:46Z"
            }
        ]
    }
    2018-06-07T08:13:23.601Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "159433321",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-07T08:13:23.605Z - INFO - Time interval between two heartbeat request messages is: 57.037,
    limit is: 65.0
    2018-06-07T08:13:23.621Z - INFO - engine sent successfully, the response to CBRS    : {
```

"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "159433321",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:16:43Z"
}
]
}
2018-06-07T08:14:20.638Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "159433321",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:14:20.644Z - INFO - Time interval between two heartbeat request messages is: 57.038, limit is: 65.0
2018-06-07T08:14:20.661Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "159433321",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:17:40Z"
}
]
}
2018-06-07T08:14:21.746Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:14:26.069Z - INFO - The final result of the test : WINNF.FT.C.MES.3 is - passed

Test Log for WINNF.FT.C.MES.4 Test Case ID

2018-06-07T08:14:41.509Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:14:41.512Z - INFO - the selected test from the user : WINNF.FT.C.MES.4 is starting now
2018-06-07T08:14:46.753Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:14:46.815Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:14:46.858Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T08:14:46.882Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:14:46.944Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3570000000,
"lowFrequency": 3550000000
}
}
}
]
}
2018-06-07T08:14:46.964Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T08:14:46Z",
"grantId": "492845945",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:14:46.990Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

```
            "grantId": "492845945",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-07T08:14:47.000Z - INFO - Response message contains measReportConfig
2018-06-07T08:14:47.000Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "492845945",
            "measReportConfig": [
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T08:18:07Z"
        }
    ]
}
2018-06-07T08:15:43.971Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "492845945",
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -100
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -100
                    }
                ]
            },
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T08:15:43.976Z - INFO - Time interval between two heartbeat request messages is: 56.981,
limit is: 65.0
2018-06-07T08:15:43.980Z - INFO - measReport received in heartbeat message
```

2018-06-07T08:15:43.994Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "492845945",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:19:03Z"
}
]
}
2018-06-07T08:16:41.017Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "492845945",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:16:41.022Z - INFO - Time interval between two heartbeat request messages is: 57.046, limit is: 65.0
2018-06-07T08:16:41.036Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "492845945",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:20:01Z"
}
]
}
2018-06-07T08:17:38.048Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "492845945",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:17:38.052Z - INFO - Time interval between two heartbeat request messages is: 57.03, limit is: 65.0
2018-06-07T08:17:38.069Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "492845945",
"response": {

```
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T08:20:58Z"
        }
    ]
}
2018-06-07T08:18:35.092Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "492845945",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T08:18:35.096Z - INFO - Time interval between two heartbeat request messages is: 57.045,
limit is: 65.0
2018-06-07T08:18:35.112Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "492845945",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T08:21:55Z"
        }
    ]
}
2018-06-07T08:19:32.134Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "492845945",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-07T08:19:32.141Z - INFO - Time interval between two heartbeat request messages is: 57.043,
limit is: 65.0
2018-06-07T08:19:32.158Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "492845945",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-07T08:22:52Z"
        }
    ]
}
```

2018-06-07T08:19:33.532Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:20:09.674Z - INFO - The final result of the test : WINNF.FT.C.MES.4 is - passed

Test Log for WINNF.FT.C.RLQ.1 Test Case ID

2018-06-07T08:21:31.345Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:21:31.348Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now
2018-06-07T08:21:42.571Z - INFO - registration request from CBRS : {

```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```

2018-06-07T08:21:42.621Z - INFO - engine sent successfully, the response to CBRS : {

```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```

2018-06-07T08:21:42.697Z - INFO - spectrumInquiry request from CBRS : {

```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T08:21:42.717Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:21:42.826Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3610000000
                    }
                }
            }
        ]
    }
    2018-06-07T08:21:42.846Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T08:21:42Z",
                "grantId": "486160404",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:21:42.891Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "486160404",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T08:21:42.907Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "486160404",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:25:02Z"
}
]
}
2018-06-07T08:22:40.002Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "486160404",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:22:40.006Z - INFO - Time interval between two heartbeat request messages is: 57.112, limit is: 65.0
2018-06-07T08:22:40.022Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "486160404",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:26:00Z"
}
]
}
2018-06-07T08:22:53.128Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "486160404"
}
]
}
2018-06-07T08:22:53.144Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "486160404",

"response": {
"responseCode": 0
}
}
]
}

2018-06-07T08:22:54.355Z - INFO - arrived to nstep starting question answer session with the technician

2018-06-07T08:22:54.357Z - INFO - the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :

2018-06-07T08:24:06.859Z - INFO - for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y

2018-06-07T08:25:02.351Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed and :the additional comments for the current test are : stop transmission at T08:22:44

Test Log for WINNF.FT.C.RLQ.3 Test Case ID

2018-06-07T08:25:23.177Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:25:23.178Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.3 is starting now
2018-06-07T08:25:28.799Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:25:28.881Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:25:28.903Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T08:25:28.911Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:25:28.993Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3570000000,
                        "lowFrequency": 3550000000
                    }
                }
            }
        ]
    }
    2018-06-07T08:25:29.009Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T08:25:29Z",
                "grantId": "379455763",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:25:29.075Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "379455763",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T08:25:29.094Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "379455763",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:28:49Z"
}
]
}
2018-06-07T08:26:26.069Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "379455763",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:26:26.072Z - INFO - Time interval between two heartbeat request messages is: 56.995, limit is: 65.0
2018-06-07T08:26:26.088Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "379455763",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:29:46Z"
}
]
}
2018-06-07T08:26:55.013Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "379455763"
}
]
}
2018-06-07T08:26:55.029Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {

"responseCode": 102,
"responseData": [
"grantId"
]
}
}
]
}

2018-06-07T08:26:56.187Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:26:56.190Z - INFO - the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :
2018-06-07T08:28:09.002Z - INFO - for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y
2018-06-07T08:28:55.252Z - INFO - The final result of the test : WINNF.FT.C.RLQ.3 is - passed and :the additional comments for the current test are : stop transmission at T08:26:51

Test Log for WINNF.FT.C.RLQ.5 Test Case ID

2018-06-07T08:32:05.578Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:32:05.581Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.5 is starting now
2018-06-07T08:32:12.290Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:32:12.346Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:32:12.384Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```


2018-06-07T08:32:12.407Z - INFO - engine sent successfully, the response to CBRS : {

```
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "GAA",
                        "frequencyRange": {
                            "highFrequency": 3700000000,
                            "lowFrequency": 3550000000
                        },
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:32:13.506Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 17,
                    "operationFrequencyRange": {
                        "highFrequency": 3570000000,
                        "lowFrequency": 3550000000
                    }
                }
            }
        ]
    }
    2018-06-07T08:32:13.513Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-14T08:32:13Z",
                "grantId": "691025839",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-07T08:32:13.575Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "691025839",
```

"operationState": "GRANTED"
}
]
}
2018-06-07T08:32:13.584Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "691025839",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:35:33Z"
}
]
}
2018-06-07T08:33:10.612Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "691025839",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:33:10.617Z - INFO - Time interval between two heartbeat request messages is: 57.039, limit is: 65.0
2018-06-07T08:33:10.632Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "691025839",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:36:30Z"
}
]
}
2018-06-07T08:33:34.701Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "691025839"
}
]
}
2018-06-07T08:33:34.717Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {

"responseCode": 103,
"responseData": [
"grantId"
]
}
}
]
}

2018-06-07T08:33:36.589Z - INFO - arrived to nstep starting question answer session with the technician

2018-06-07T08:33:36.592Z - INFO - the question is : Did the CBSD1 stop RF transmission upon sending Relinquishment request? please choose one of the answers :

2018-06-07T08:34:46.221Z - INFO - for the question : Did the CBSD1 stop RF transmission upon sending Relinquishment request? , the user choose y

2018-06-07T08:35:12.466Z - INFO - The final result of the test : WINNF.FT.C.RLQ.5 is - passed and :the additional comments for the current test are : stop transmission at T08:33:30

Test Log for WINNF.FT.C.DRG.1 Test Case ID

2018-06-07T08:35:47.960Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:35:47.961Z - INFO - the selected test from the user : WINNF.FT.C.DRG.1 is starting now
2018-06-07T08:35:52.529Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:35:52.592Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:35:52.640Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T08:35:52.648Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:35:52.703Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3570000000,
"lowFrequency": 3550000000
}
}
}
]
}
2018-06-07T08:35:52.714Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T08:35:52Z",
"grantId": "605579033",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:35:52.763Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "605579033",
"operationState": "GRANTED"
}
]
}
2018-06-07T08:35:52.772Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "605579033",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:39:12Z"
}
]
}
2018-06-07T08:36:49.789Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "605579033",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:36:49.790Z - INFO - Time interval between two heartbeat request messages is: 57.026, limit is: 65.0
2018-06-07T08:36:49.799Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "605579033",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:40:09Z"
}
]
}
2018-06-07T08:36:57.859Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "605579033"
}
]
}
2018-06-07T08:36:57.874Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "605579033",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:36:58.114Z - INFO - deregistration request from CBRS : {
"deregistrationRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017"
}
]
}
2018-06-07T08:36:58.128Z - INFO - engine sent successfully, the response to CBRS : {
"deregistrationResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:36:59.969Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:36:59.970Z - INFO - the question is : Did the CBSD stop RF transmissions upon sending the Deregister request? please choose one of the answers :
2018-06-07T08:38:05.072Z - INFO - for the question : Did the CBSD stop RF transmissions upon sending the Deregister request? , the user choose y
2018-06-07T08:38:31.836Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed and :the additional comments for the current test are : stop transmission at T08:36:55

Test Log for WINNF.FT.C.DRG.3 Test Case ID

2018-06-07T08:43:17.115Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:43:17.118Z - INFO - the selected test from the user : WINNF.FT.C.DRG.3 is starting now
2018-06-07T08:43:25.841Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:43:25.894Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:43:25.918Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T08:43:25.926Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:43:26.035Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3570000000,
"lowFrequency": 3550000000
}
}
}
]
}
2018-06-07T08:43:26.045Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T08:43:26Z",
"grantId": "986335663",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:43:26.095Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "986335663",
"operationState": "GRANTED"
}
]
}
2018-06-07T08:43:26.112Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "986335663",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:46:46Z"
}
]
}
2018-06-07T08:44:23.009Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "986335663",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:44:23.039Z - INFO - Time interval between two heartbeat request messages is: 56.942, limit is: 65.0
2018-06-07T08:44:23.055Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "986335663",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:47:43Z"
}
]
}
2018-06-07T08:45:14.479Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "986335663"
}
]
}
2018-06-07T08:45:14.493Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "986335663",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:45:14.720Z - INFO - deregistration request from CBRS : {
"deregistrationRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017"
}
]
}
2018-06-07T08:45:14.733Z - INFO - engine sent successfully, the response to CBRS : {
"deregistrationResponse": [
{
"response": {
"responseCode": 102
}
}
]
}
2018-06-07T08:45:16.130Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:45:16.131Z - INFO - the question is : Did the CBSD stop RF transmissions upon sending the Deregister request? please choose one of the answers :
2018-06-07T08:47:59.058Z - INFO - for the question : Did the CBSD stop RF transmissions upon sending the Deregister request? , the user choose y
2018-06-07T08:48:45.198Z - INFO - The final result of the test : WINNF.FT.C.DRG.3 is - passed and :the additional comments for the current test are : stop transmission at T08:45:10

Test Log for WINNF.FT.C.DRG.5 Test Case ID

2018-06-07T08:49:36.801Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-07T08:49:36.802Z - INFO - the selected test from the user : WINNF.FT.C.DRG.5 is starting now
2018-06-07T08:49:43.983Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-07T08:49:44.032Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-07T08:49:44.069Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
]
}
```

2018-06-07T08:49:44.091Z - INFO - engine sent successfully, the response to CBRS : {
"spectrumInquiryResponse": [
{
"availableChannel": [
{
"channelType": "GAA",
"frequencyRange": {
"highFrequency": 3700000000,
"lowFrequency": 3550000000
},
"ruleApplied": "FCC_PART_96"
}
],
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:49:45.191Z - INFO - grant request from CBRS : {
"grantRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"operationParam": {
"maxEirp": 17,
"operationFrequencyRange": {
"highFrequency": 3570000000,
"lowFrequency": 3550000000
}
}
}
]
}
2018-06-07T08:49:45.209Z - INFO - engine sent successfully, the response to CBRS : {
"grantResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"channelType": "GAA",
"grantExpireTime": "2018-06-14T08:49:45Z",
"grantId": "712143880",
"heartbeatInterval": 60,
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:49:45.272Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "712143880",
"operationState": "GRANTED"
}
]
}
2018-06-07T08:49:45.278Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "712143880",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:53:05Z"
}
]
}
2018-06-07T08:50:42.328Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "712143880",
"operationState": "AUTHORIZED"
}
]
}
2018-06-07T08:50:42.332Z - INFO - Time interval between two heartbeat request messages is: 57.058, limit is: 65.0
2018-06-07T08:50:42.348Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "712143880",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-07T08:54:02Z"
}
]
}
2018-06-07T08:51:07.362Z - INFO - relinquishment request from CBRS : {
"relinquishmentRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "712143880"
}
]
}
2018-06-07T08:51:07.377Z - INFO - engine sent successfully, the response to CBRS : {
"relinquishmentResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",

"grantId": "712143880",
"response": {
"responseCode": 0
}
}
]
}
2018-06-07T08:51:07.549Z - INFO - deregistration request from CBRS : {
"deregistrationRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017"
}
]
}
2018-06-07T08:51:07.562Z - INFO - engine sent successfully, the response to CBRS : {
"deregistrationResponse": [
{
"response": {
"responseCode": 103,
"responseData": [
"cbsdId"
]
}
}
]
}
2018-06-07T08:51:08.811Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-07T08:51:08.812Z - INFO - the question is : Did the CBSD stop RF transmissions upon sending the Deregister request? please choose one of the answers :
2018-06-07T08:53:04.216Z - INFO - for the question : Did the CBSD stop RF transmissions upon sending the Deregister request? , the user choose y
2018-06-07T08:54:12.697Z - INFO - The final result of the test : WINNF.FT.C.DRG.5 is - passed and :the additional comments for the current test are : stop transmission at T08:51:03

Test Log for WINNF.FT.C.SCS.1 Test Case ID

2018-06-13T05:43:21.457Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T05:43:21.459Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now
2018-06-13T05:44:14.632Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T05:44:14.684Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T05:44:16.466Z - INFO - arrived to nstep starting question answer session with the technician
2018-06-13T05:44:16.467Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :
2018-06-13T05:45:30.059Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n
2018-06-13T05:45:31.400Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is - passed

Test Log for WINNF.FT.C.SCS.2 Test Case ID

2018-06-13T05:54:40.651Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T05:54:40.653Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

Test Log for WINNF.FT.C.SCS.3 Test Case ID

2018-06-13T06:02:37.983Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-242018-06-13T06:02:37.986Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

Test Log for WINNF.FT.C.SCS.4 Test Case ID

2018-06-13T06:21:37.940Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T06:21:37.941Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

Test Log for WINNF.FT.C.SCS.5 Test Case ID

2018-06-13T06:25:33.868Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T06:25:33.869Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

Test Log for WINNF.PT.C.HBT Test Case ID_ BW20M-Grant maxEirp 8

2018-06-13T01:45:21.295Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T01:45:21.298Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}
2018-06-13T01:45:21.299Z - INFO - Granted Spectrum Max Eirp = 8dBm/MHz
2018-06-13T01:45:21.305Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-13T01:45:46.224Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T01:45:46.288Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T01:45:46.362Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-13T01:45:46.381Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-13T01:45:46.382Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "maxEirp": 8,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T01:45:46.506Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T01:45:46.522Z - INFO - The requested maxEirp value is too high
2018-06-13T01:45:46.526Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-13T01:45:46.530Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 8,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
```

```
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-13T01:48:46.565Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 8,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T01:48:46.582Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-20T01:48:46Z",
            "grantId": "753053498",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T01:48:46.631Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "753053498",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-13T01:48:46.651Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "753053498",
            "response": {
                "responseCode": 0
            },
```

"transmitExpireTime": "2018-06-13T01:52:06Z"
}
]
}
2018-06-13T01:49:43.703Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "753053498",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T01:49:43.721Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "753053498",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T01:53:03Z"
}
]
}
2018-06-13T01:50:40.740Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "753053498",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T01:50:40.760Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "753053498",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T01:54:00Z"
}
]
}
2018-06-13T01:51:37.783Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "753053498",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-13T01:51:37.802Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "753053498",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T01:54:57Z"
            }
        ]
    }
    2018-06-13T01:52:34.819Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "753053498",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T01:52:34.839Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "753053498",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T01:55:54Z"
            }
        ]
    }
    2018-06-13T01:53:31.859Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "753053498",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T01:53:31.880Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "753053498",
                "response": {
                    "responseCode": 0
```

```
            },
            "transmitExpireTime": "2018-06-13T01:56:51Z"
        }
    ]
}
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW20M-Grant maxEirp 10

2018-06-13T02:08:51.336Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T02:08:51.341Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}
2018-06-13T02:08:51.344Z - INFO - Granted Spectrum Max Eirp = 10dBm/MHz
2018-06-13T02:08:51.349Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-13T02:09:00.262Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T02:09:00.326Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T02:09:00.411Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-13T02:09:00.438Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-13T02:09:00.440Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "maxEirp": 10,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T02:09:00.503Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T02:09:00.517Z - INFO - The requested maxEirp value is too high
2018-06-13T02:09:00.519Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-13T02:09:00.523Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 10,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
```

```
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-13T02:12:00.545Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 10,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T02:12:00.561Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-20T02:12:00Z",
            "grantId": "607755191",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T02:12:00.608Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-13T02:12:00.628Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
```

"transmitExpireTime": "2018-06-13T02:15:20Z"
}
]
}
2018-06-13T02:12:57.647Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:12:57.664Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:16:17Z"
}
]
}
2018-06-13T02:13:54.680Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:13:54.698Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:17:14Z"
}
]
}
2018-06-13T02:14:51.713Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-13T02:14:51.732Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T02:18:11Z"
            }
        ]
    }
    2018-06-13T02:15:48.753Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T02:15:48.772Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T02:19:08Z"
            }
        ]
    }
    2018-06-13T02:16:45.798Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T02:16:45.816Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "response": {
                    "responseCode": 0
```

```
            },
            "transmitExpireTime": "2018-06-13T02:20:05Z"
        }
    ]
}
2018-06-13T02:17:42.831Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:17:42.848Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:21:02Z"
        }
    ]
}
2018-06-13T02:18:39.858Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:18:39.877Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:21:59Z"
        }
    ]
}
2018-06-13T02:19:36.900Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
```

"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:19:36.918Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:22:56Z"
}
]
}
2018-06-13T02:20:33.934Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:20:33.951Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:23:53Z"
}
]
}
2018-06-13T02:21:30.963Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:21:30.983Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {

```
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:24:50Z"
        }
    ]
}
2018-06-13T02:22:28.002Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:22:28.020Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:25:48Z"
        }
    ]
}
2018-06-13T02:23:25.036Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:23:25.055Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:26:45Z"
        }
    ]
}
2018-06-13T02:24:22.075Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
```

"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:24:22.092Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:27:42Z"
}
]
}
2018-06-13T02:25:19.112Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:25:19.131Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:28:39Z"
}
]
}
2018-06-13T02:26:16.201Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:26:16.220Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "607755191",

```
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:29:36Z"
        }
    ]
}
2018-06-13T02:26:17.667Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:26:17.686Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:29:37Z"
        }
    ]
}
2018-06-13T02:27:13.243Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:27:13.262Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:30:33Z"
        }
    ]
}
2018-06-13T02:28:10.275Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
```

```
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:28:10.293Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:31:30Z"
        }
    ]
}
2018-06-13T02:29:07.308Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:29:07.326Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:32:27Z"
        }
    ]
}
2018-06-13T02:30:04.341Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "607755191",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:30:04.359Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
```

```
                "grantId": "607755191",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T02:33:24Z"
            }
        ]
    }
    2018-06-13T02:31:01.421Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T02:31:01.440Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "607755191",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T02:34:21Z"
            }
        ]
    }
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW20M-Grant maxEirp 12

2018-06-13T02:32:03.730Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T02:32:03.733Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}
2018-06-13T02:32:03.734Z - INFO - Granted Spectrum Max Eirp = 12dBm/MHz
2018-06-13T02:32:03.739Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-13T02:32:14.046Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T02:32:14.101Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T02:32:14.173Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-13T02:32:14.191Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-13T02:32:14.193Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "maxEirp": 12,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T02:32:14.256Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T02:32:14.270Z - INFO - The requested maxEirp value is too high
2018-06-13T02:32:14.273Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-13T02:32:14.275Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 12,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
```

```
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-13T02:35:14.364Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 12,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T02:35:14.380Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-20T02:35:14Z",
            "grantId": "635675867",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T02:35:14.457Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-13T02:35:14.474Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
            "response": {
                "responseCode": 0
            },
```

"transmitExpireTime": "2018-06-13T02:38:34Z"
}
]
}
2018-06-13T02:36:11.502Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:36:11.519Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:39:31Z"
}
]
}
2018-06-13T02:37:08.535Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:37:08.553Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:40:28Z"
}
]
}
2018-06-13T02:38:05.579Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-13T02:38:05.598Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "635675867",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T02:41:25Z"
            }
        ]
    }
    2018-06-13T02:39:02.619Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "635675867",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T02:39:02.638Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "635675867",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T02:42:22Z"
            }
        ]
    }
    2018-06-13T02:39:59.658Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "635675867",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T02:39:59.677Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "635675867",
                "response": {
                    "responseCode": 0
```

```
            },
            "transmitExpireTime": "2018-06-13T02:43:19Z"
        }
    ]
}
2018-06-13T02:40:56.691Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:40:56.710Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:44:16Z"
        }
    ]
}
2018-06-13T02:41:53.726Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T02:41:53.744Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T02:45:13Z"
        }
    ]
}
2018-06-13T02:42:50.760Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "635675867",
```

"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:42:50.779Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:46:10Z"
}
]
}
2018-06-13T02:43:47.796Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T02:43:47.813Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "635675867",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T02:47:07Z"
}
]
}

Test Log for WINNF.PT.C.HBT Test Case ID_ BW20M-Grant maxEirp 14

2018-06-13T03:17:05.671Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T03:17:05.673Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}
2018-06-13T03:17:05.674Z - INFO - Granted Spectrum Max Eirp = 14dBm/MHz
2018-06-13T03:17:05.677Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-13T03:17:30.470Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T03:17:30.536Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T03:17:30.605Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-13T03:17:30.627Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-13T03:17:30.628Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "maxEirp": 14,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T03:17:30.763Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T03:17:30.778Z - INFO - The requested maxEirp value is too high
2018-06-13T03:17:30.779Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-13T03:17:30.782Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 14,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
```

```
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-13T03:20:30.819Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 14,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T03:20:30.835Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-20T03:20:30Z",
            "grantId": "308184277",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T03:20:30.898Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-13T03:20:30.917Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "response": {
                "responseCode": 0
            },
```

"transmitExpireTime": "2018-06-13T03:23:50Z"
}
]
}
2018-06-13T03:21:27.937Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "308184277",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T03:21:27.956Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "308184277",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:24:47Z"
}
]
}
2018-06-13T03:22:24.980Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "308184277",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T03:22:25.000Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "308184277",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:25:44Z"
}
]
}
2018-06-13T03:23:22.013Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "308184277",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-13T03:23:22.032Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:26:42Z"
            }
        ]
    }
    2018-06-13T03:24:19.042Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:24:19.061Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:27:39Z"
            }
        ]
    }
    2018-06-13T03:25:16.088Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:25:16.105Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "response": {
                    "responseCode": 0
```

```
            },
            "transmitExpireTime": "2018-06-13T03:28:36Z"
        }
    ]
}
2018-06-13T03:26:13.128Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:26:13.147Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:29:33Z"
        }
    ]
}
2018-06-13T03:27:10.161Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:27:10.180Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:30:30Z"
        }
    ]
}
2018-06-13T03:28:07.236Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
```

```
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:28:07.256Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:31:27Z"
            }
        ]
    }
    2018-06-13T03:29:04.276Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:29:04.293Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:32:24Z"
            }
        ]
    }
    2018-06-13T03:30:01.312Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:30:01.331Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "308184277",
                "response": {
```

```
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:33:21Z"
        }
    ]
}
2018-06-13T03:30:58.345Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:30:58.364Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:34:18Z"
        }
    ]
}
2018-06-13T03:31:55.371Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:31:55.392Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:35:15Z"
        }
    ]
}
2018-06-13T03:32:12.973Z - INFO - relinquishment request from CBRS    : {
    "relinquishmentRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
```

```
            "grantId": "308184277"
        }
    ]
}
2018-06-13T03:32:12.986Z - INFO - engine sent successfully, the response to CBRS    : {
    "relinquishmentResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "308184277",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T03:32:13.306Z - INFO - deregistration request from CBRS    : {
    "deregistrationRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017"
        }
    ]
}
2018-06-13T03:32:13.316Z - INFO - engine sent successfully, the response to CBRS    : {
    "deregistrationResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW20M-Grant maxEirp 16

2018-06-13T03:32:33.311Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T03:32:33.312Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}
2018-06-13T03:32:33.315Z - INFO - Granted Spectrum Max Eirp = 16dBm/MHz
2018-06-13T03:32:33.319Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-13T03:32:40.171Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T03:32:40.217Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T03:32:40.276Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-13T03:32:40.286Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-13T03:32:40.286Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "maxEirp": 16,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T03:32:40.427Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T03:32:40.441Z - INFO - The requested maxEirp value is too high
2018-06-13T03:32:40.444Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-13T03:32:40.447Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 16,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
```

```
                },
                "response": {
                    "responseCode": 400
                }
            }
        ]
    }
    2018-06-13T03:35:40.467Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 16,
                    "operationFrequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    }
                }
            }
        ]
    }
    2018-06-13T03:35:40.483Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-20T03:35:40Z",
                "grantId": "974264585",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-13T03:35:40.562Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "operationState": "GRANTED"
            }
        ]
    }
    2018-06-13T03:35:40.582Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "response": {
                    "responseCode": 0
                },
```

"transmitExpireTime": "2018-06-13T03:39:00Z"
}
]
}
2018-06-13T03:36:37.609Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "974264585",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T03:36:37.627Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "974264585",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:39:57Z"
}
]
}
2018-06-13T03:37:34.647Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "974264585",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T03:37:34.665Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "974264585",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:40:54Z"
}
]
}
2018-06-13T03:38:31.683Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "974264585",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-13T03:38:31.701Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:41:51Z"
            }
        ]
    }
    2018-06-13T03:39:28.719Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:39:28.736Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:42:48Z"
            }
        ]
    }
    2018-06-13T03:40:25.756Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:40:25.775Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "974264585",
                "response": {
                    "responseCode": 0
```

```
            },
            "transmitExpireTime": "2018-06-13T03:43:45Z"
        }
    ]
}
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW20M-Grant maxEirp 17

2018-06-13T03:41:31.365Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-13T03:41:31.367Z - INFO - Selected spectrum frequency is {'lowFrequency': 3615000000L, 'highFrequency': 3635000000L}
2018-06-13T03:41:31.368Z - INFO - Granted Spectrum Max Eirp = 17dBm/MHz
2018-06-13T03:41:31.371Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-13T03:41:40.846Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-13T03:41:40.924Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-13T03:41:41.006Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-13T03:41:41.032Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-13T03:41:41.032Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3635000000,
                        "lowFrequency": 3615000000
                    },
                    "maxEirp": 17,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-13T03:41:41.191Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 17,
                "operationFrequencyRange": {
                    "highFrequency": 3635000000,
                    "lowFrequency": 3615000000
                }
            }
        }
    ]
}
2018-06-13T03:41:41.207Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-20T03:41:41Z",
            "grantId": "237955557",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
```

```
}
2018-06-13T03:41:41.246Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-13T03:41:41.265Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:45:01Z"
        }
    ]
}
2018-06-13T03:42:38.328Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:42:38.346Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:45:58Z"
        }
    ]
}
2018-06-13T03:43:35.361Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "operationState": "AUTHORIZED"
        }
    ]
}
```

2018-06-13T03:43:35.378Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "237955557",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:46:55Z"
}
]
}
2018-06-13T03:44:32.391Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "237955557",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T03:44:32.410Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "237955557",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:47:52Z"
}
]
}
2018-06-13T03:45:29.424Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "237955557",
"operationState": "AUTHORIZED"
}
]
}
2018-06-13T03:45:29.443Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "237955557",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-13T03:48:49Z"
}

```
        ]
    }
    2018-06-13T03:46:26.464Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:46:26.483Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:49:46Z"
            }
        ]
    }
    2018-06-13T03:47:23.505Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:47:23.523Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:50:43Z"
            }
        ]
    }
    2018-06-13T03:48:20.536Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
```

```
}
2018-06-13T03:48:20.555Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:51:40Z"
        }
    ]
}
2018-06-13T03:49:17.569Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:49:17.588Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:52:37Z"
        }
    ]
}
2018-06-13T03:50:14.611Z - INFO - heartbeat request from CBRS   : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-13T03:50:14.630Z - INFO - engine sent successfully, the response to CBRS   : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "237955557",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-13T03:53:34Z"
```

```
            }
        ]
    }
    2018-06-13T03:51:11.657Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:51:11.674Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:54:31Z"
            }
        ]
    }
    2018-06-13T03:52:08.691Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:52:08.710Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:55:28Z"
            }
        ]
    }
    2018-06-13T03:53:05.732Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
```

```
        ]
    }
    2018-06-13T03:53:05.750Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:56:25Z"
            }
        ]
    }
    2018-06-13T03:54:02.770Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:54:02.789Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-13T03:57:22Z"
            }
        ]
    }
    2018-06-13T03:54:59.808Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-13T03:54:59.825Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "237955557",
                "response": {
                    "responseCode": 0
                },
```

"transmitExpireTime": "2018-06-13T03:58:19Z"
}
]
}

Test Log for WINNF.PT.C.HBT Test Case ID_ BW10M-Grant maxEirp 10

2018-06-20T09:33:29.592Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-20T09:33:29.592Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2018-06-20T09:33:29.601Z - INFO - Granted Spectrum Max Eirp = 10dBm/MHz
2018-06-20T09:33:29.601Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-20T09:33:38.371Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-20T09:33:38.421Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-20T09:33:38.492Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-20T09:33:38.512Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T09:33:38.512Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 10,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T09:33:38.582Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 10,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T09:33:38.592Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-27T09:33:38Z",
            "grantId": "62834036",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
```

}
2018-06-20T09:33:38.691Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"operationState": "GRANTED"
}
]
}
2018-06-20T09:33:38.701Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T09:36:58Z"
}
]
}
2018-06-20T09:34:35.743Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"operationState": "AUTHORIZED"
}
]
}
2018-06-20T09:34:35.753Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T09:37:55Z"
}
]
}
2018-06-20T09:35:32.779Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"operationState": "AUTHORIZED"
}
]
}

2018-06-20T09:35:32.789Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T09:38:52Z"
}
]
}
2018-06-20T09:36:29.803Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"operationState": "AUTHORIZED"
}
]
}
2018-06-20T09:36:29.813Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T09:39:49Z"
}
]
}
2018-06-20T09:37:26.828Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"operationState": "AUTHORIZED"
}
]
}
2018-06-20T09:37:26.848Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "62834036",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T09:40:46Z"
}

```
        ]
    }
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW10M-Grant maxEirp 12

2018-06-20T09:21:10.035Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-20T09:21:10.035Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2018-06-20T09:21:10.035Z - INFO - Granted Spectrum Max Eirp = 12dBm/MHz
2018-06-20T09:21:10.035Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-20T09:23:03.346Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-20T09:23:03.397Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-20T09:23:03.476Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-20T09:23:03.486Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T09:23:03.496Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 12,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T09:23:03.596Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T09:23:03.607Z - INFO - The requested maxEirp value is too high
2018-06-20T09:23:03.617Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-20T09:23:03.617Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 12,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
```

```
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-20T09:26:03.638Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 12,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T09:26:03.648Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-27T09:26:03Z",
            "grantId": "986264084",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T09:26:03.707Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "986264084",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-20T09:26:03.717Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "986264084",
            "response": {
                "responseCode": 0
            },
```

```
            "transmitExpireTime": "2018-06-20T09:29:23Z"
        }
    ]
}
2018-06-20T09:27:00.747Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "986264084",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-20T09:27:00.757Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "986264084",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-20T09:30:20Z"
        }
    ]
}
2018-06-20T09:27:57.769Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "986264084",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-20T09:27:57.779Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "986264084",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-20T09:31:17Z"
        }
    ]
}
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW10M-Grant maxEirp 14

2018-06-20T09:03:17.148Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-20T09:03:17.157Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2018-06-20T09:03:17.157Z - INFO - Granted Spectrum Max Eirp = 14dBm/MHz
2018-06-20T09:03:17.157Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-20T09:03:31.723Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-20T09:03:31.769Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-20T09:03:31.849Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-20T09:03:31.869Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T09:03:31.869Z - INFO - engine sent successfully, the response to CBRS    : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 14,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T09:03:31.940Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T09:03:31.950Z - INFO - The requested maxEirp value is too high
2018-06-20T09:03:31.950Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-20T09:03:31.950Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 14,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
```

```
                },
                "response": {
                    "responseCode": 400
                }
            }
        ]
    }
    2018-06-20T09:06:31.973Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 14,
                    "operationFrequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    }
                }
            }
        ]
    }
    2018-06-20T09:06:31.983Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-27T09:06:31Z",
                "grantId": "115830737",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-20T09:06:32.052Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "115830737",
                "operationState": "GRANTED"
            }
        ]
    }
    2018-06-20T09:06:32.062Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "115830737",
                "response": {
                    "responseCode": 0
                },
```

```
                "transmitExpireTime": "2018-06-20T09:09:52Z"
            }
        ]
    }
    2018-06-20T09:07:29.115Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "115830737",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-20T09:07:29.125Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "115830737",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T09:10:49Z"
            }
        ]
    }
    2018-06-20T09:08:26.144Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "115830737",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-20T09:08:26.154Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "115830737",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T09:11:46Z"
            }
        ]
    }
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW10M-Grant maxEirp 16

2018-06-20T08:38:26.496Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-20T08:38:26.496Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2018-06-20T08:38:26.496Z - INFO - Granted Spectrum Max Eirp = 16dBm/MHz
2018-06-20T08:38:26.506Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-20T08:38:43.519Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-20T08:38:43.569Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-20T08:38:43.638Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-20T08:38:43.658Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T08:38:43.658Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 16,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T08:38:43.789Z - INFO - deregistration request from CBRS  : {
    "deregistrationRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017"
        }
    ]
}
2018-06-20T08:38:43.819Z - INFO - engine sent successfully, the response to CBRS  : {
    "deregistrationResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T08:38:43.848Z - INFO - registration request from CBRS  : {
    "registrationRequest": [
        {
            "airInterface": {
                "radioTechnology": "E_UTRA"
            },
            "callSign": "WAA206",
            "cbsdCategory": "A",
            "cbsdInfo": {
                "firmwareVersion": "02.00.02.0018.71afd7c96a35",
```

```
                "hardwareVersion": "02",
                "model": "SKU B48: P01-Q710-US01",
                "softwareVersion": "02.00.02.0018.71afd7c96a35",
                "vendor": "Ruckus"
            },
            "cbsdSerialNumber": "981829000017",
            "fccId": "S9GQ710US00",
            "measCapability": [
                "RECEIVED_POWER_WITHOUT_GRANT",
                "RECEIVED_POWER_WITH_GRANT"
            ],
            "userId": "Ruckus_IDC"
        }
    ]
}
2018-06-20T08:38:43.918Z - INFO - engine sent successfully, the response to CBRS    : {
    "registrationResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T08:38:43.999Z - INFO - spectrumInquiry request from CBRS    : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2018-06-20T08:38:44.009Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T08:38:44.009Z - INFO - engine sent successfully, the response to CBRS    : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 16,
                    "ruleApplied": "FCC_PART_96"
```

```
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
}
2018-06-20T08:38:44.078Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T08:38:44.088Z - INFO - The requested maxEirp value is too high
2018-06-20T08:38:44.088Z - INFO - The Grant response code is not 0, applicable spectrum parameters
have been sent out.
2018-06-20T08:38:44.088Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 16,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-20T08:41:43.848Z - INFO - spectrumInquiry request from CBRS    : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
```

```
                ]
            }
        ]
    }
    2018-06-20T08:41:43.868Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
    2018-06-20T08:41:43.868Z - INFO - engine sent successfully, the response to CBRS    : {
        "spectrumInquiryResponse": [
            {
                "availableChannel": [
                    {
                        "channelType": "PAL",
                        "frequencyRange": {
                            "highFrequency": 3630000000,
                            "lowFrequency": 3620000000
                        },
                        "maxEirp": 16,
                        "ruleApplied": "FCC_PART_96"
                    }
                ],
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "response": {
                    "responseCode": 0
                }
            }
        ]
    }
    2018-06-20T08:41:43.937Z - INFO - grant request from CBRS    : {
        "grantRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "operationParam": {
                    "maxEirp": 16,
                    "operationFrequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    }
                }
            }
        ]
    }
    2018-06-20T08:41:43.947Z - INFO - engine sent successfully, the response to CBRS    : {
        "grantResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "channelType": "GAA",
                "grantExpireTime": "2018-06-27T08:41:43Z",
                "grantId": "563533982",
                "heartbeatInterval": 60,
                "response": {
                    "responseCode": 0
                }
```

```
            }
        ]
    }
    2018-06-20T08:41:44.028Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "operationState": "GRANTED"
            }
        ]
    }
    2018-06-20T08:41:44.038Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T08:45:04Z"
            }
        ]
    }
    2018-06-20T08:42:41.092Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-20T08:42:41.111Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T08:46:01Z"
            }
        ]
    }
    2018-06-20T08:43:38.125Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "operationState": "AUTHORIZED"
            }
```

```
        ]
    }
    2018-06-20T08:43:38.135Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T08:46:58Z"
            }
        ]
    }
    2018-06-20T08:44:35.180Z - INFO - heartbeat request from CBRS    : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-20T08:44:35.190Z - INFO - engine sent successfully, the response to CBRS    : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "563533982",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T08:47:55Z"
            }
        ]
    }
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW10M-Grant maxEirp 18

2018-06-20T08:15:20.822Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-20T08:15:20.822Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2018-06-20T08:15:20.832Z - INFO - Granted Spectrum Max Eirp = 18dBm/MHz
2018-06-20T08:15:20.832Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-20T08:15:29.301Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-20T08:15:29.369Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-20T08:15:29.424Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

```
    ]
}
2018-06-20T08:15:29.434Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T08:15:29.444Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 18,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T08:15:29.523Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T08:15:29.533Z - INFO - The requested maxEirp value is too high
2018-06-20T08:15:29.543Z - INFO - The Grant response code is not 0, applicable spectrum parameters have been sent out.
2018-06-20T08:15:29.543Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 18,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
```

```
            },
            "response": {
                "responseCode": 400
            }
        }
    ]
}
2018-06-20T08:18:29.631Z - INFO - grant request from CBRS    : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 18,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T08:18:29.641Z - INFO - engine sent successfully, the response to CBRS    : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-27T08:18:29Z",
            "grantId": "928190238",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T08:18:29.721Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "928190238",
            "operationState": "GRANTED"
        }
    ]
}
2018-06-20T08:18:29.732Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "928190238",
            "response": {
                "responseCode": 0
            },
```

"transmitExpireTime": "2018-06-20T08:21:49Z"
}
]
}
2018-06-20T08:19:26.765Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "928190238",
"operationState": "AUTHORIZED"
}
]
}
2018-06-20T08:19:26.785Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "928190238",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T08:22:46Z"
}
]
}
2018-06-20T08:20:23.812Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "928190238",
"operationState": "AUTHORIZED"
}
]
}
2018-06-20T08:20:23.832Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "928190238",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T08:23:43Z"
}
]
}
2018-06-20T08:21:20.852Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "928190238",
"operationState": "AUTHORIZED"

```
            }
        ]
    }
    2018-06-20T08:21:20.862Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "928190238",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T08:24:40Z"
            }
        ]
    }
    2018-06-20T08:22:17.871Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "928190238",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-20T08:22:17.891Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "928190238",
                "response": {
                    "responseCode": 0
                },
                "transmitExpireTime": "2018-06-20T08:25:37Z"
            }
        ]
    }
    2018-06-20T08:23:14.901Z - INFO - heartbeat request from CBRS   : {
        "heartbeatRequest": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "928190238",
                "operationState": "AUTHORIZED"
            }
        ]
    }
    2018-06-20T08:23:14.911Z - INFO - engine sent successfully, the response to CBRS   : {
        "heartbeatResponse": [
            {
                "cbsdId": "S9GQ710US00Mock-SAS981829000017",
                "grantId": "928190238",
                "response": {
                    "responseCode": 0
```

```
            },
            "transmitExpireTime": "2018-06-20T08:26:34Z"
        }
    ]
}
2018-06-20T08:24:11.934Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "928190238",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-20T08:24:11.944Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "928190238",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-20T08:27:31Z"
        }
    ]
}
2018-06-20T08:25:08.957Z - INFO - heartbeat request from CBRS    : {
    "heartbeatRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "928190238",
            "operationState": "AUTHORIZED"
        }
    ]
}
2018-06-20T08:25:08.977Z - INFO - engine sent successfully, the response to CBRS    : {
    "heartbeatResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "grantId": "928190238",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2018-06-20T08:28:28Z"
        }
    ]
}
```

Test Log for WINNF.PT.C.HBT Test Case ID_ BW10M-Grant maxEirp 20

2018-06-20T08:32:09.977Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.2 - 2018-May-24
2018-06-20T08:32:09.977Z - INFO - Selected spectrum frequency is {'lowFrequency': 3620000000L, 'highFrequency': 3630000000L}
2018-06-20T08:32:09.977Z - INFO - Granted Spectrum Max Eirp = 20dBm/MHz
2018-06-20T08:32:09.987Z - INFO - the selected test from the user : PowerMeasTest is starting now
2018-06-20T08:32:56.622Z - INFO - registration request from CBRS : {


```
"registrationRequest": [
    {
        "airInterface": {
            "radioTechnology": "E_UTRA"
        },
        "callSign": "WAA206",
        "cbsdCategory": "A",
        "cbsdInfo": {
            "firmwareVersion": "02.00.02.0018.71afd7c96a35",
            "hardwareVersion": "02",
            "model": "SKU B48: P01-Q710-US01",
            "softwareVersion": "02.00.02.0018.71afd7c96a35",
            "vendor": "Ruckus"
        },
        "cbsdSerialNumber": "981829000017",
        "fccId": "S9GQ710US00",
        "measCapability": [
            "RECEIVED_POWER_WITHOUT_GRANT",
            "RECEIVED_POWER_WITH_GRANT"
        ],
        "userId": "Ruckus_IDC"
    }
]
}
```


2018-06-20T08:32:56.703Z - INFO - engine sent successfully, the response to CBRS : {


```
"registrationResponse": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "response": {
            "responseCode": 0
        }
    }
]
}
```


2018-06-20T08:32:56.782Z - INFO - spectrumInquiry request from CBRS : {


```
"spectrumInquiryRequest": [
    {
        "cbsdId": "S9GQ710US00Mock-SAS981829000017",
        "inquiredSpectrum": [
            {
                "highFrequency": 3700000000,
                "lowFrequency": 3550000000
            }
        ]
    }
```

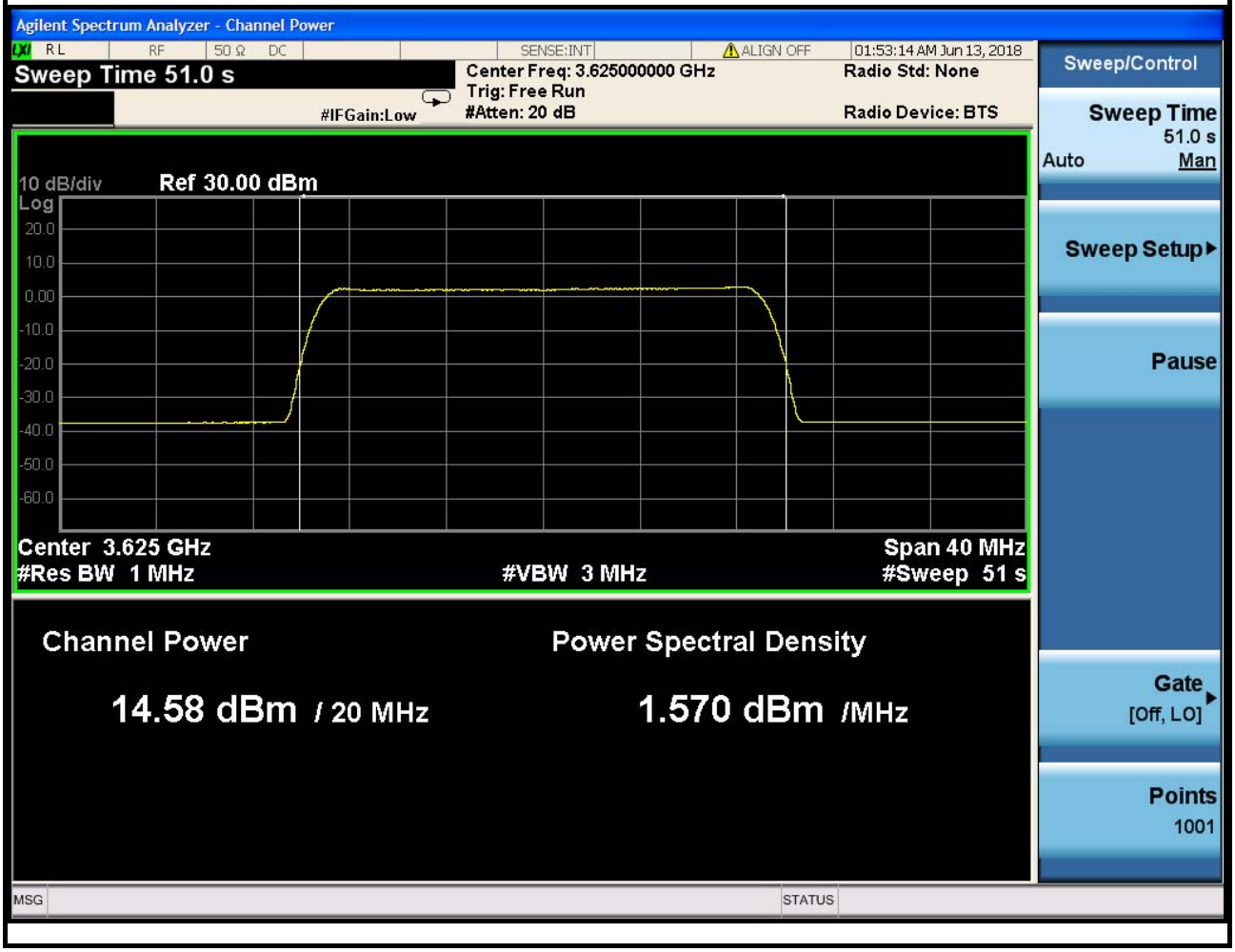
```
    ]
}
2018-06-20T08:32:56.792Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2018-06-20T08:32:56.802Z - INFO - engine sent successfully, the response to CBRS  : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "PAL",
                    "frequencyRange": {
                        "highFrequency": 3630000000,
                        "lowFrequency": 3620000000
                    },
                    "maxEirp": 20,
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2018-06-20T08:32:56.903Z - INFO - grant request from CBRS  : {
    "grantRequest": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "operationParam": {
                "maxEirp": 20,
                "operationFrequencyRange": {
                    "highFrequency": 3630000000,
                    "lowFrequency": 3620000000
                }
            }
        }
    ]
}
2018-06-20T08:32:56.913Z - INFO - engine sent successfully, the response to CBRS  : {
    "grantResponse": [
        {
            "cbsdId": "S9GQ710US00Mock-SAS981829000017",
            "channelType": "GAA",
            "grantExpireTime": "2018-06-27T08:32:56Z",
            "grantId": "166288480",
            "heartbeatInterval": 60,
            "response": {
                "responseCode": 0
            }
        }
    ]
```

}
2018-06-20T08:32:56.983Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "166288480",
"operationState": "GRANTED"
}
]
}
2018-06-20T08:32:56.993Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "166288480",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T08:36:16Z"
}
]
}
2018-06-20T08:33:54.039Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "166288480",
"operationState": "AUTHORIZED"
}
]
}
2018-06-20T08:33:54.059Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "166288480",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T08:37:14Z"
}
]
}
2018-06-20T08:34:51.072Z - INFO - heartbeat request from CBRS : {
"heartbeatRequest": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "166288480",
"operationState": "AUTHORIZED"
}
]
}

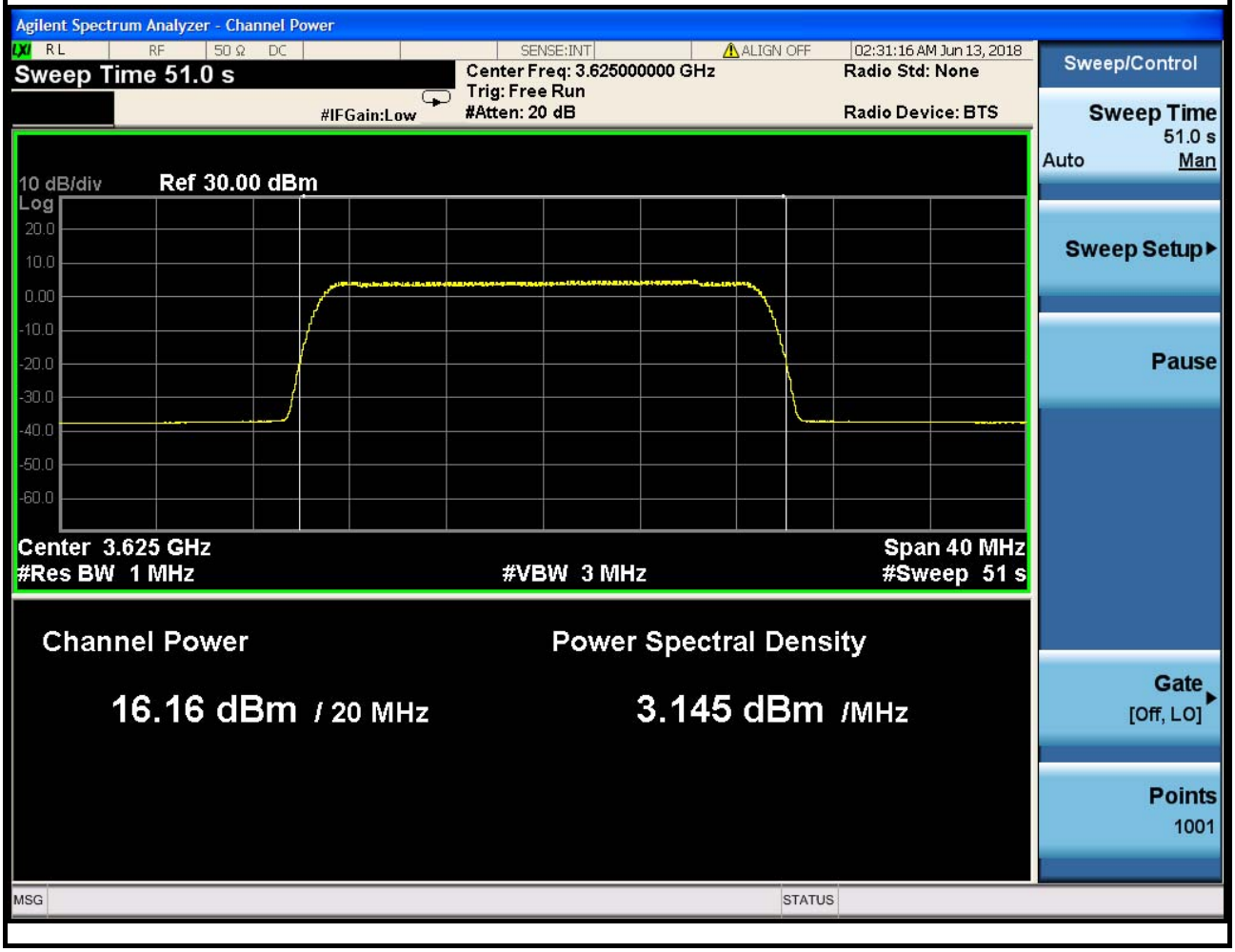
2018-06-20T08:34:51.082Z - INFO - engine sent successfully, the response to CBRS : {
"heartbeatResponse": [
{
"cbsdId": "S9GQ710US00Mock-SAS981829000017",
"grantId": "166288480",
"response": {
"responseCode": 0
},
"transmitExpireTime": "2018-06-20T08:38:11Z"
}
]
}

RF measurement plot for WINNF.FT.C.HBT.1 Test Case ID

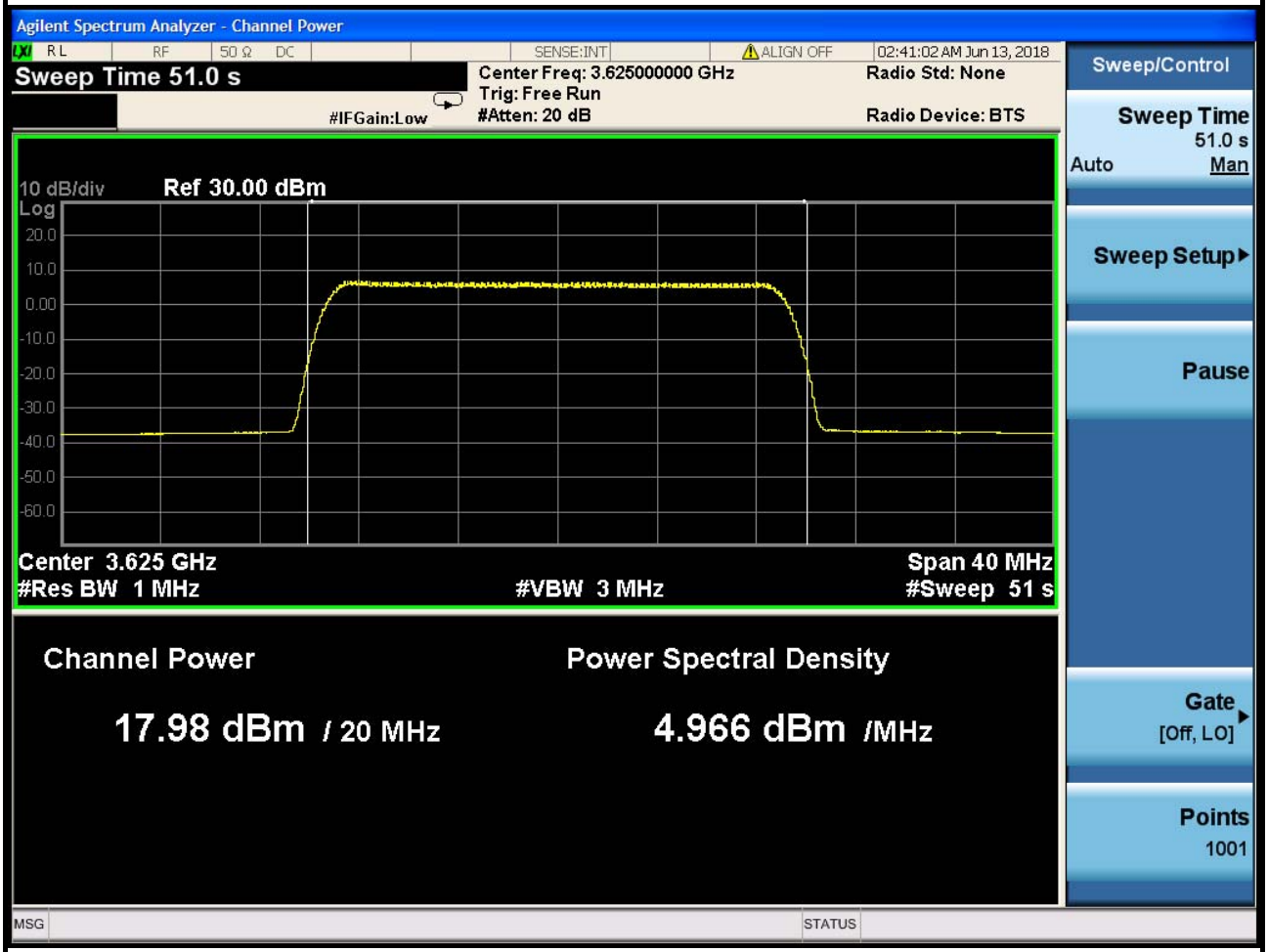
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW20M-Grant maxEirp 8



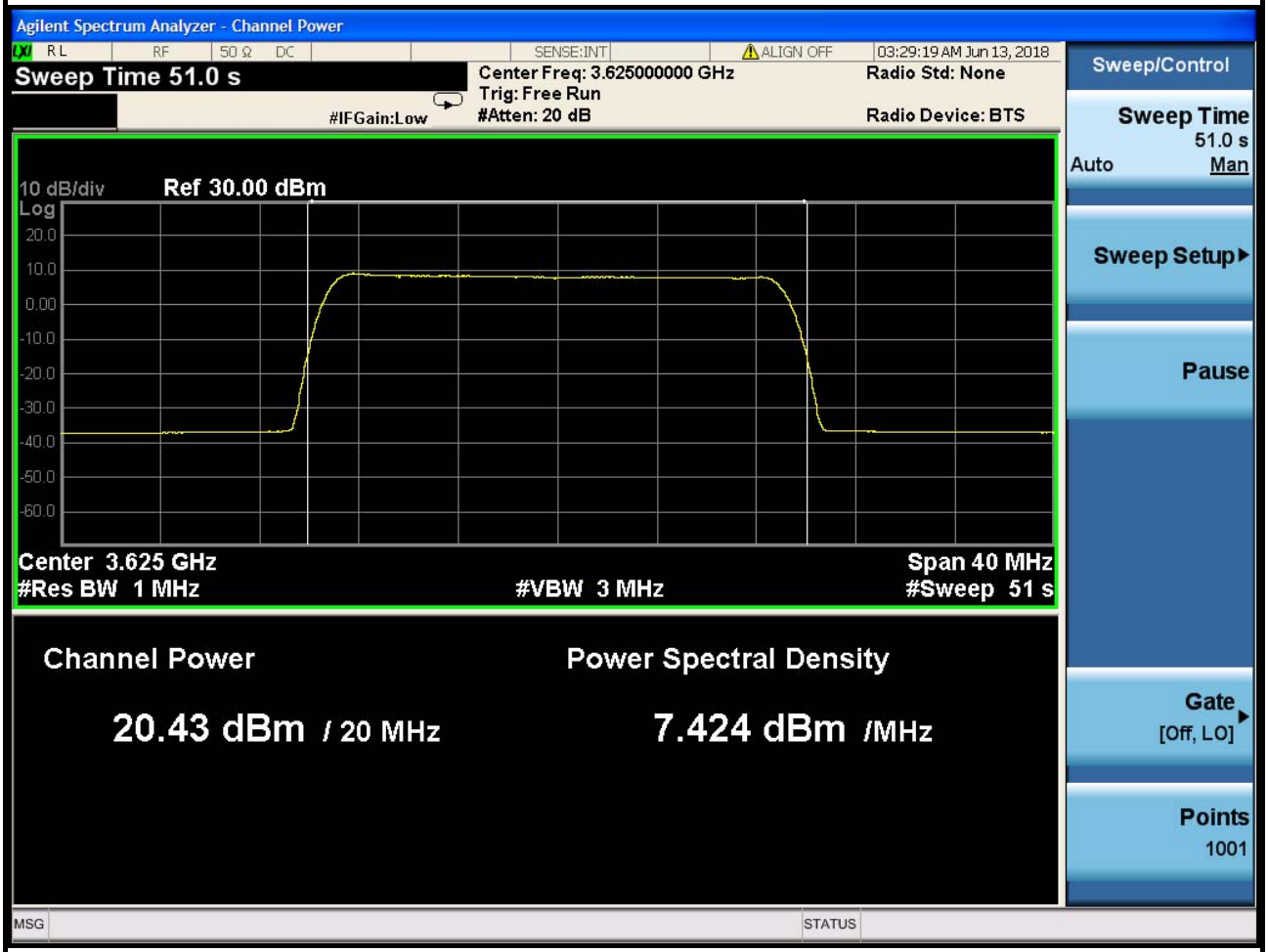
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW20M-Grant maxEirp 10



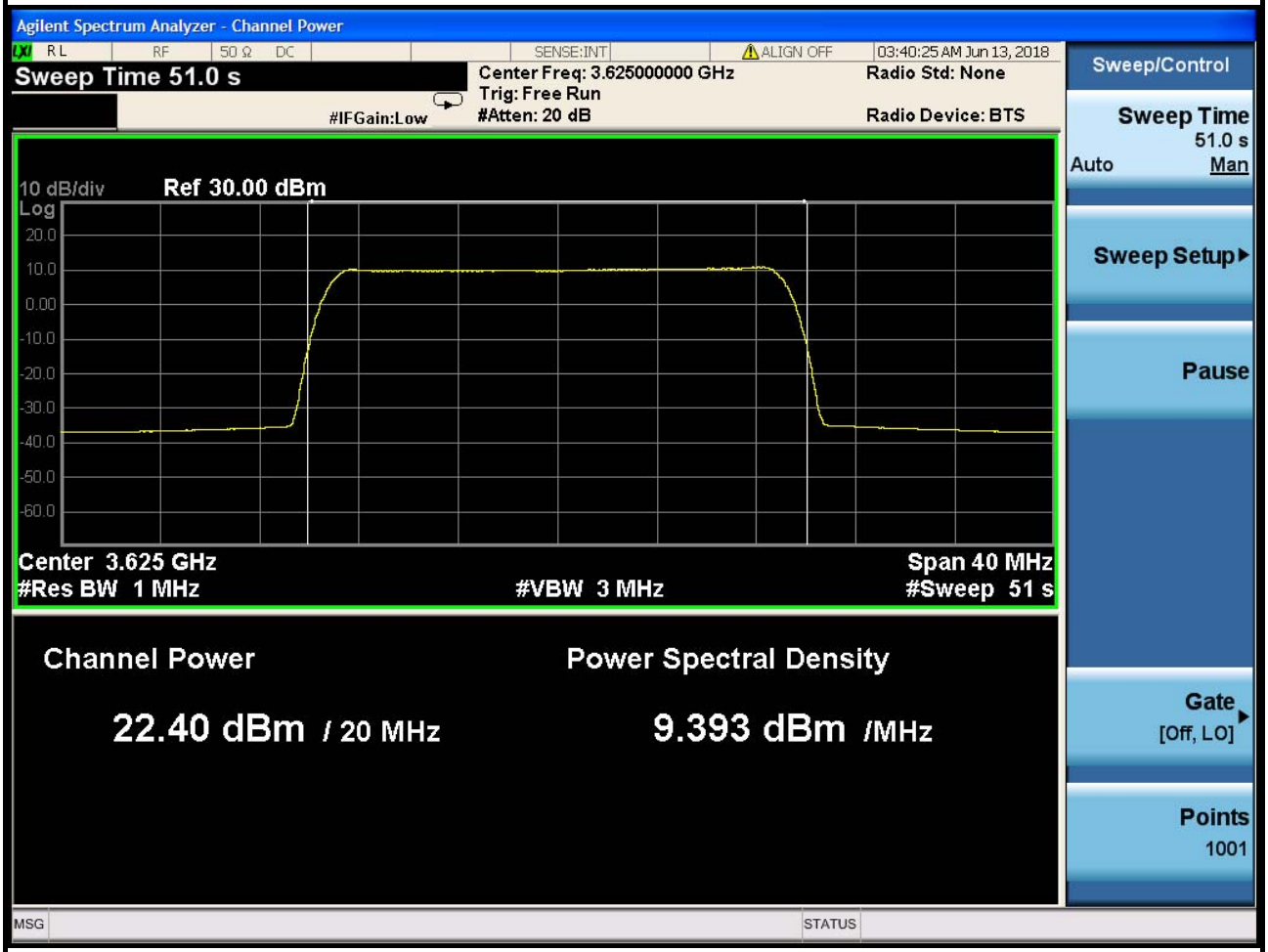
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW20M-Grant maxEirp 12



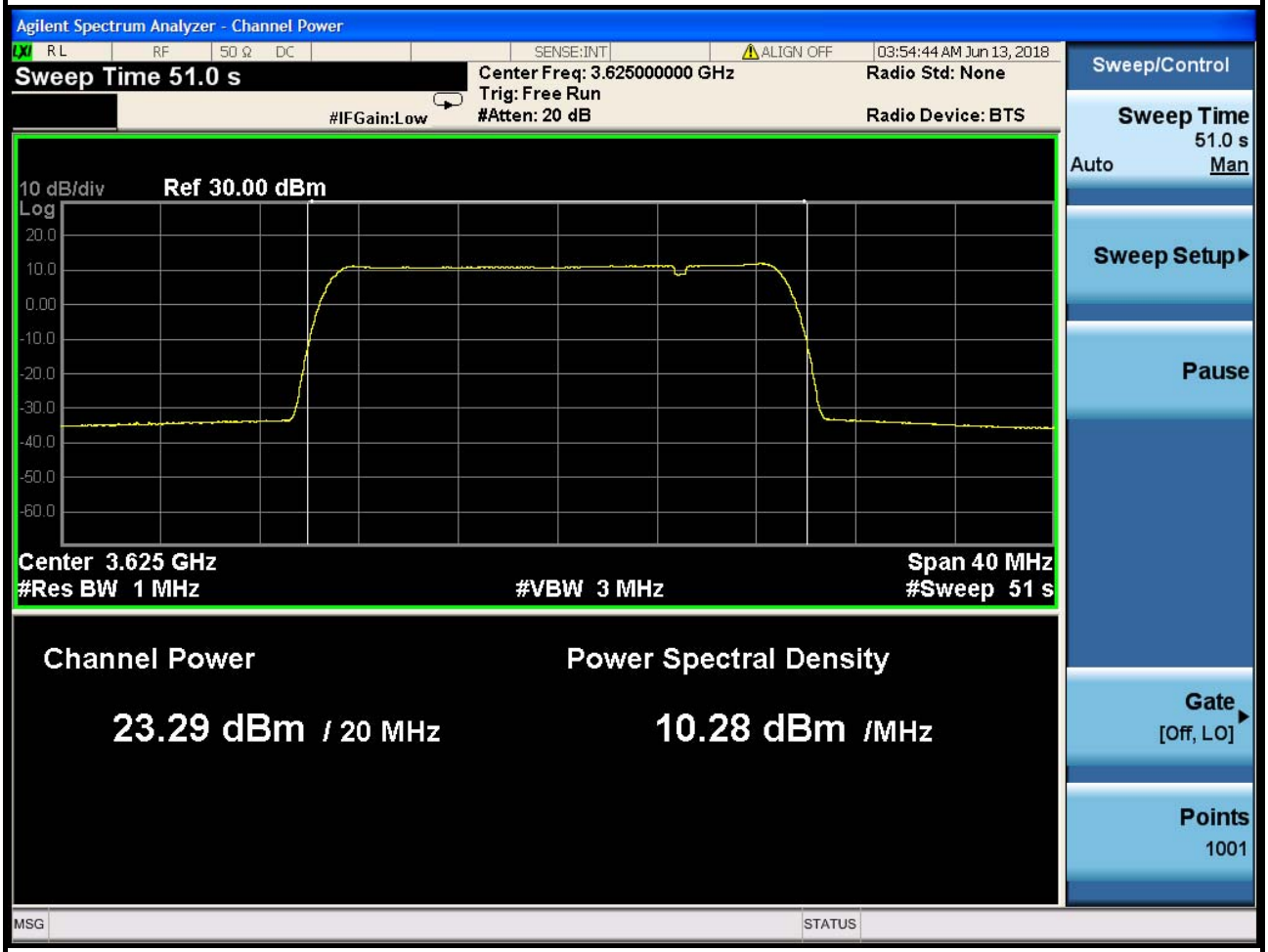
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW20M-Grant maxEirp 14



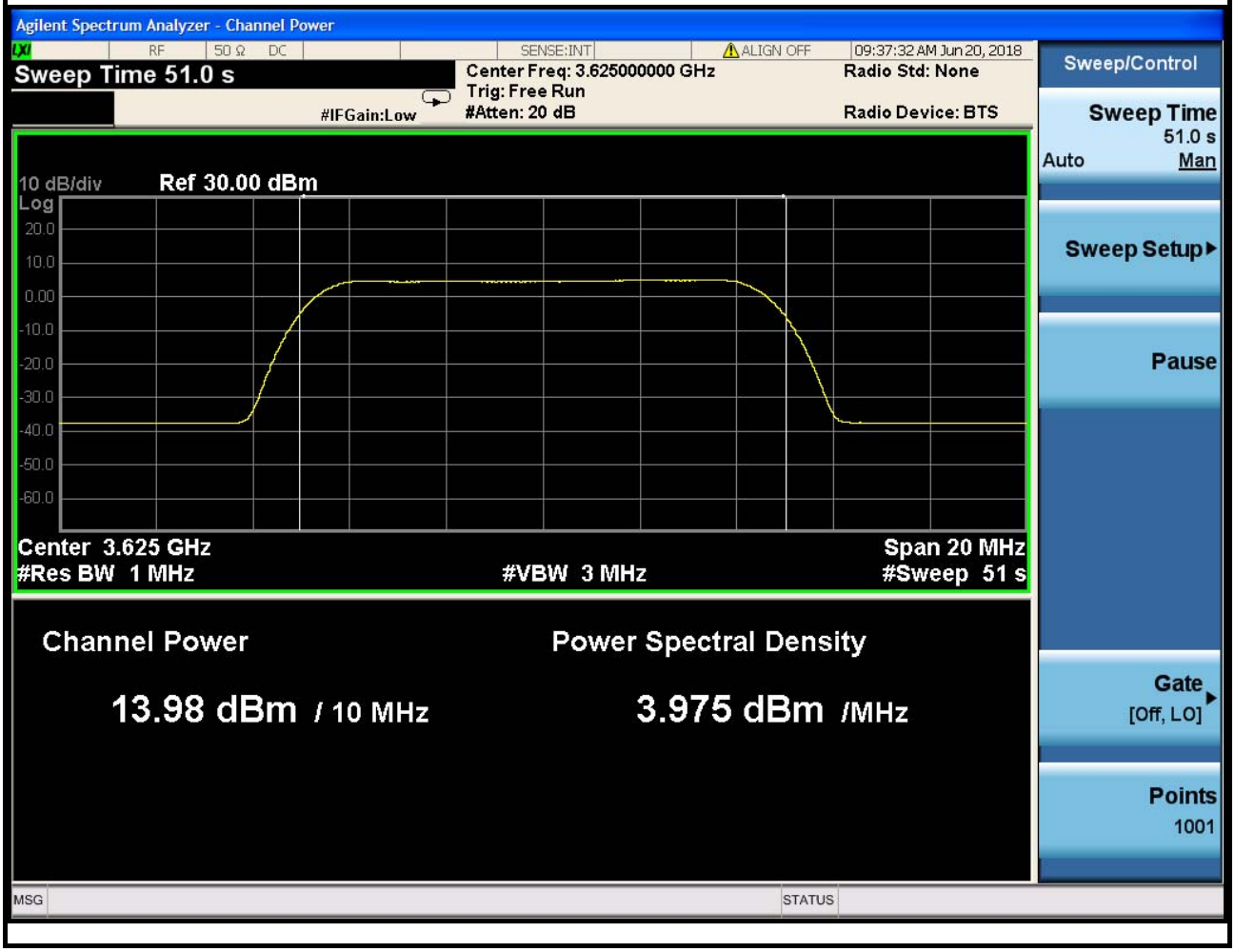
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW20M-Grant maxEirp 16



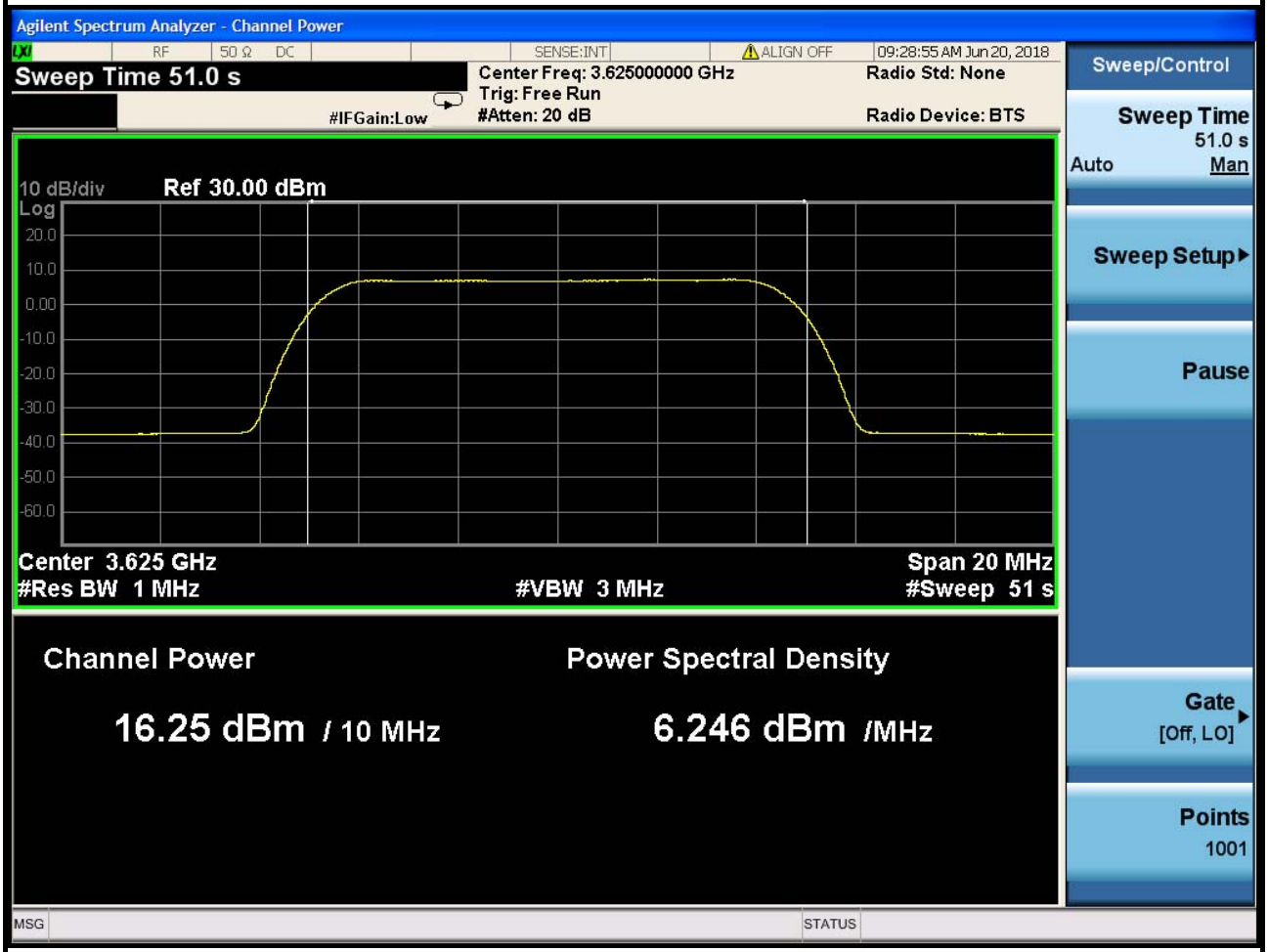
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW20M-Grant maxEirp 17



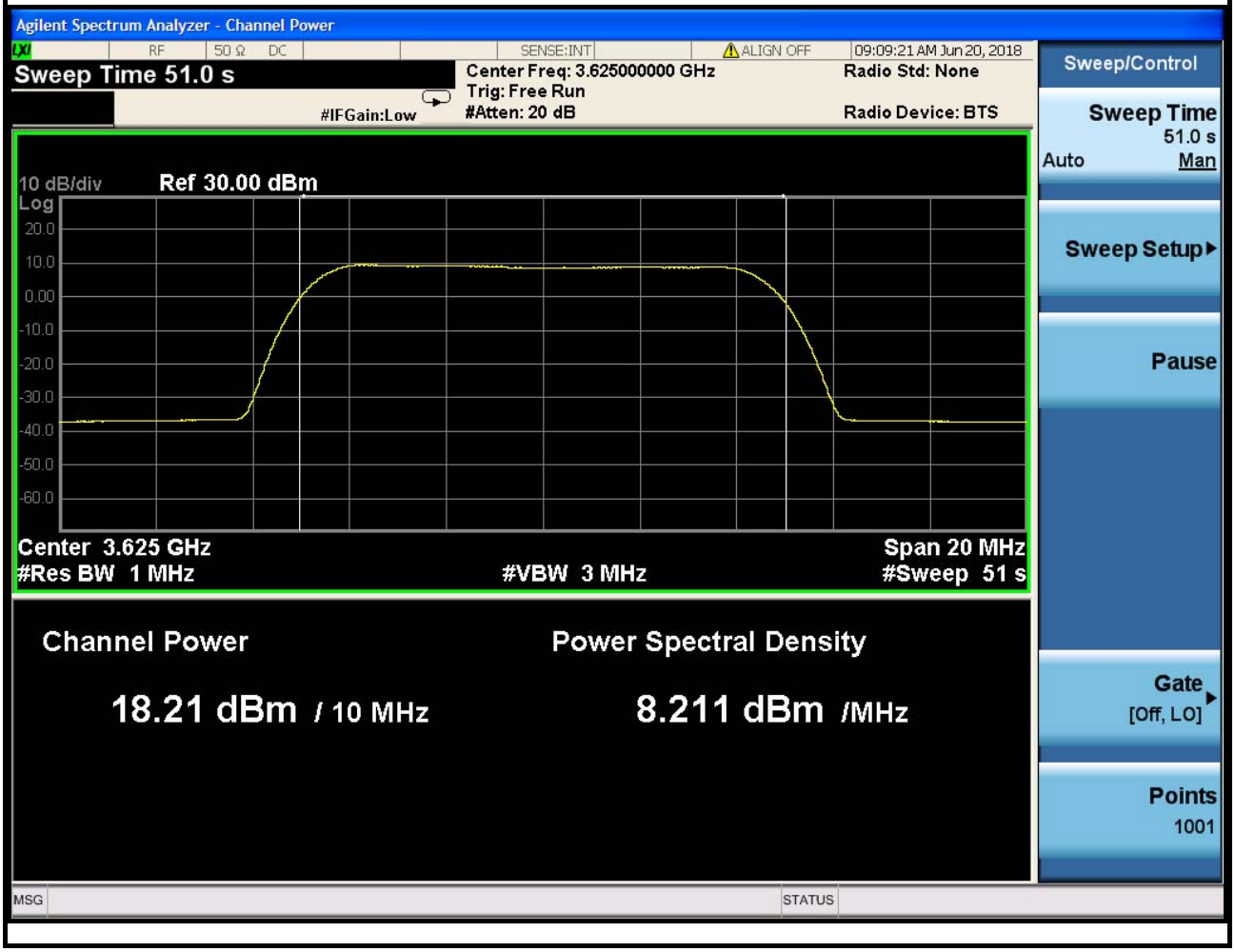
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW10M-Grant maxEirp 10



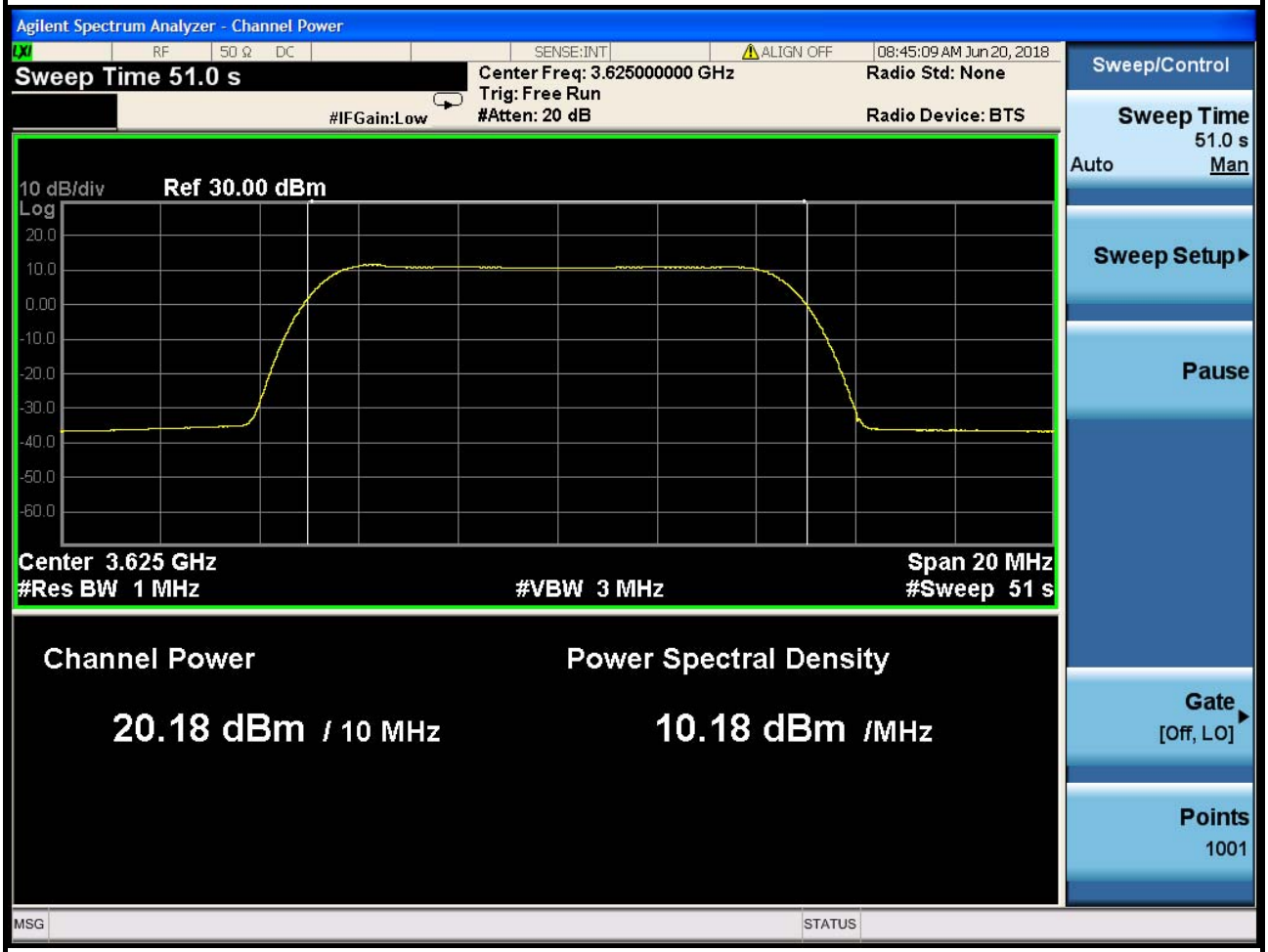
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW10M-Grant maxEirp 12



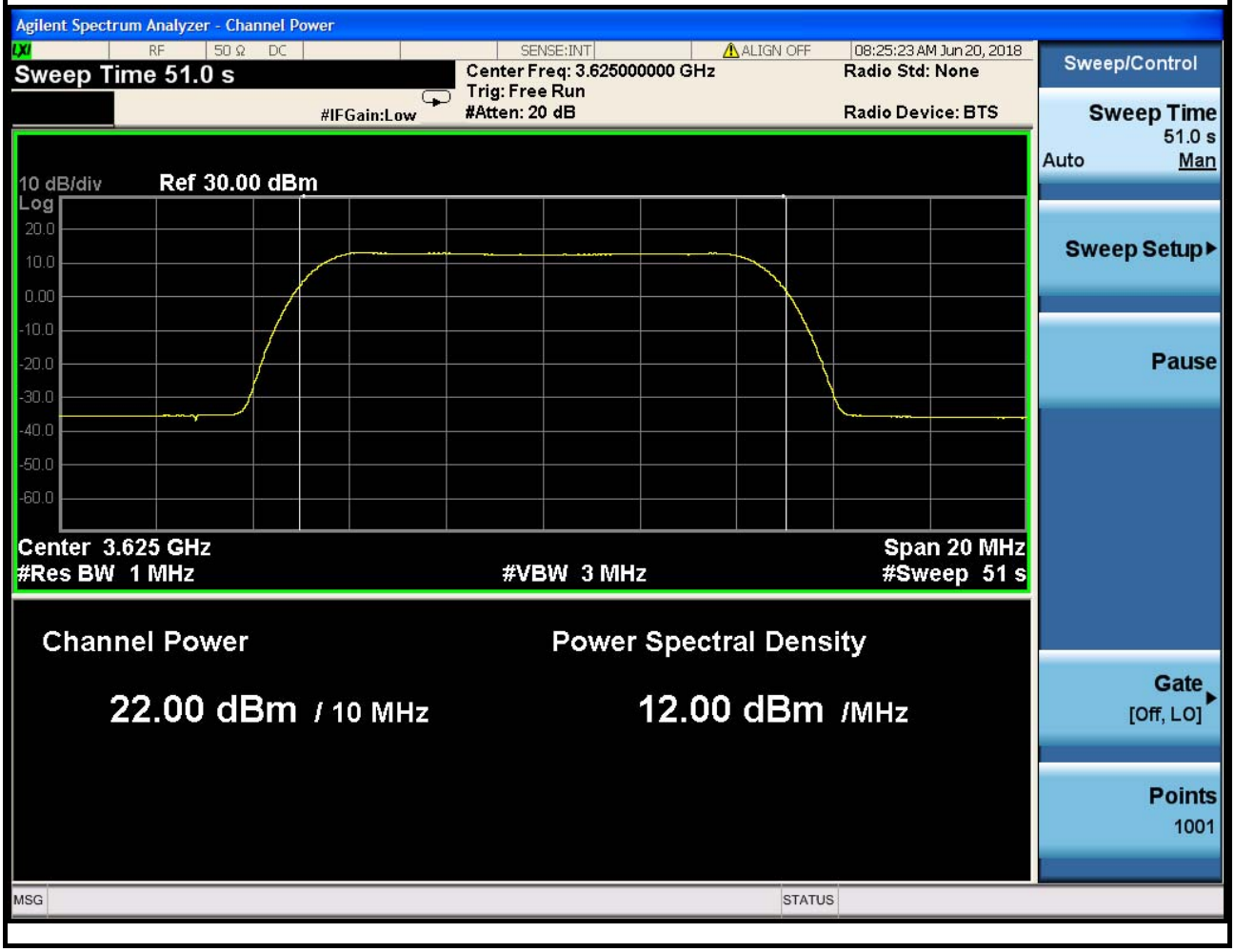
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW10M-Grant maxEirp 14



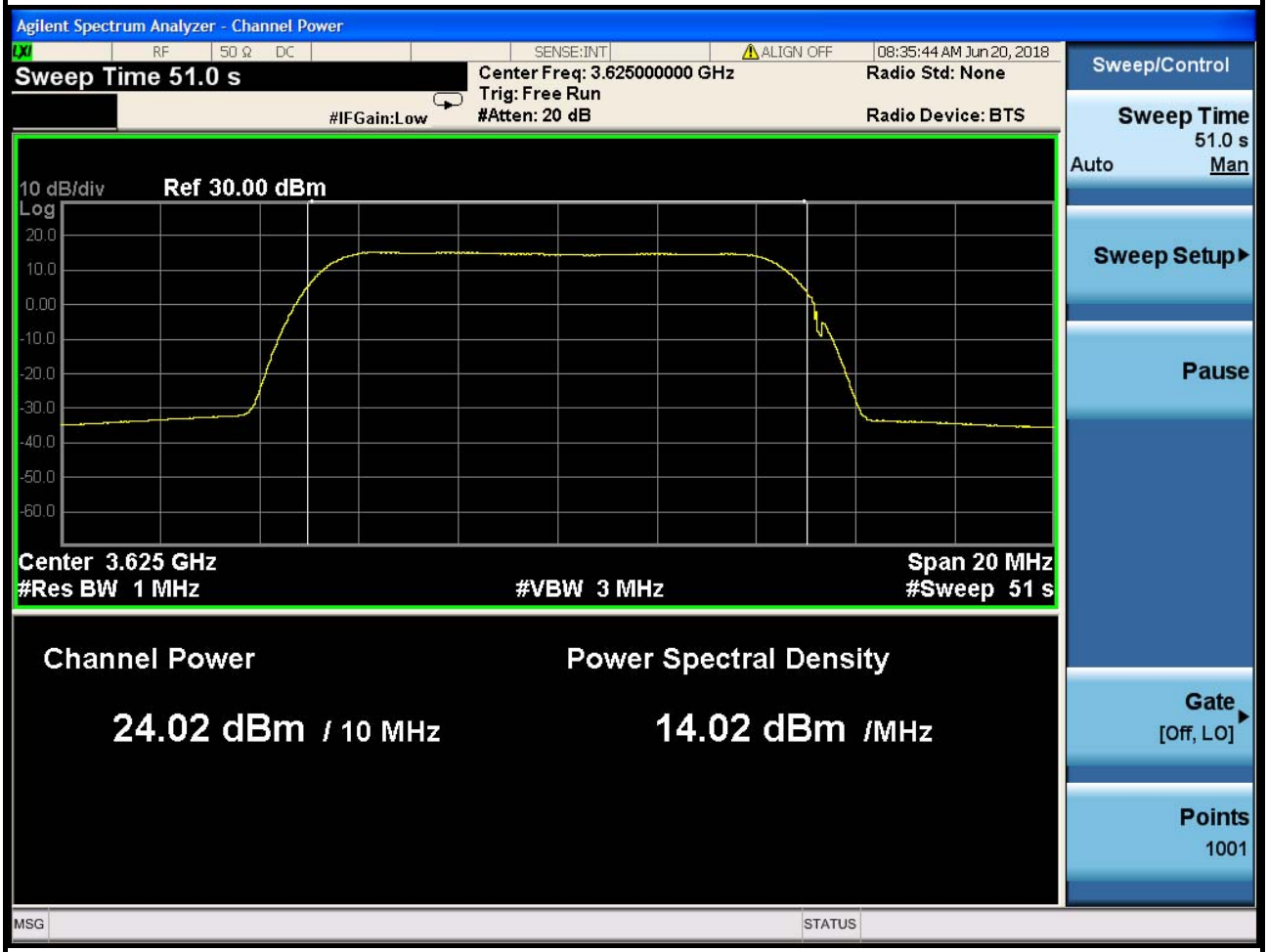
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW10M-Grant maxEirp 16



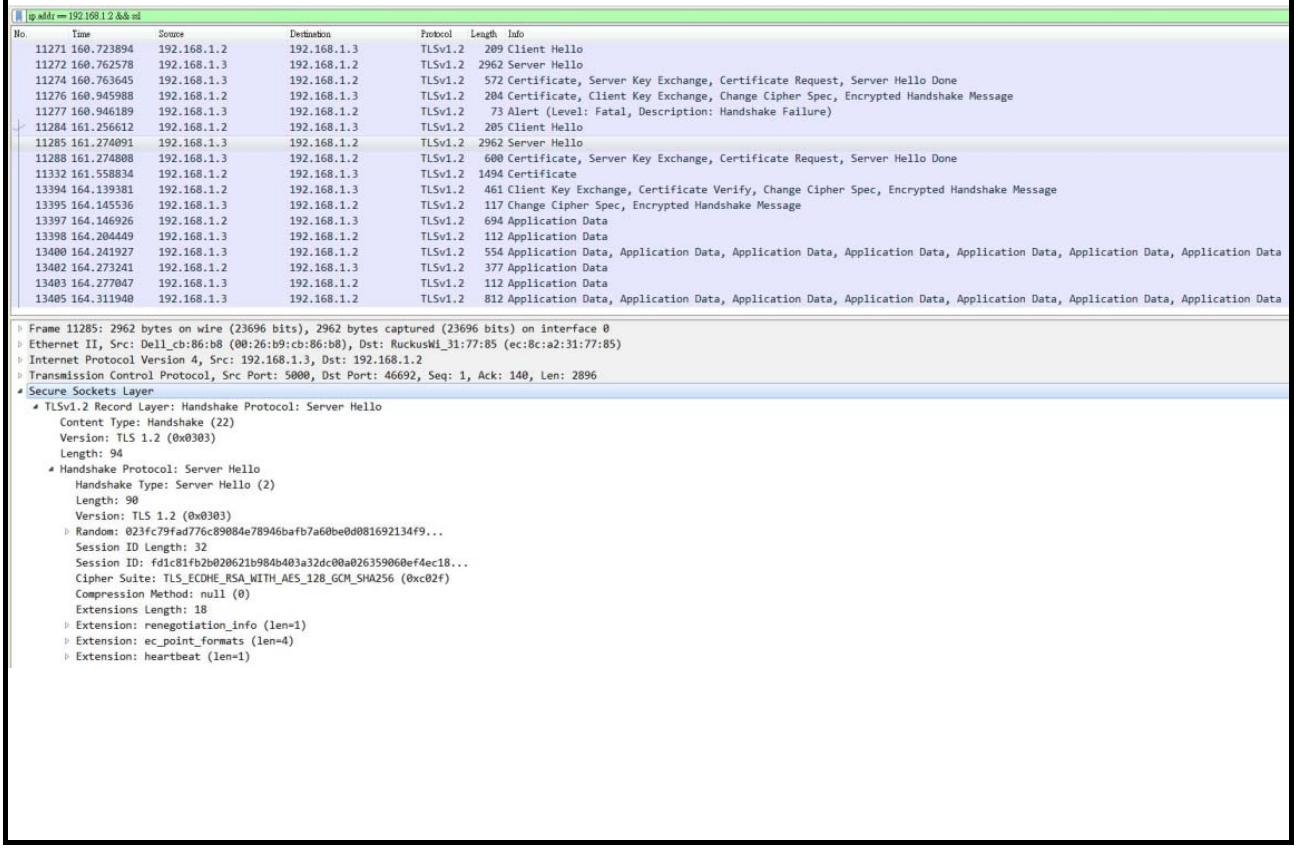
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW10M-Grant maxEirp 18



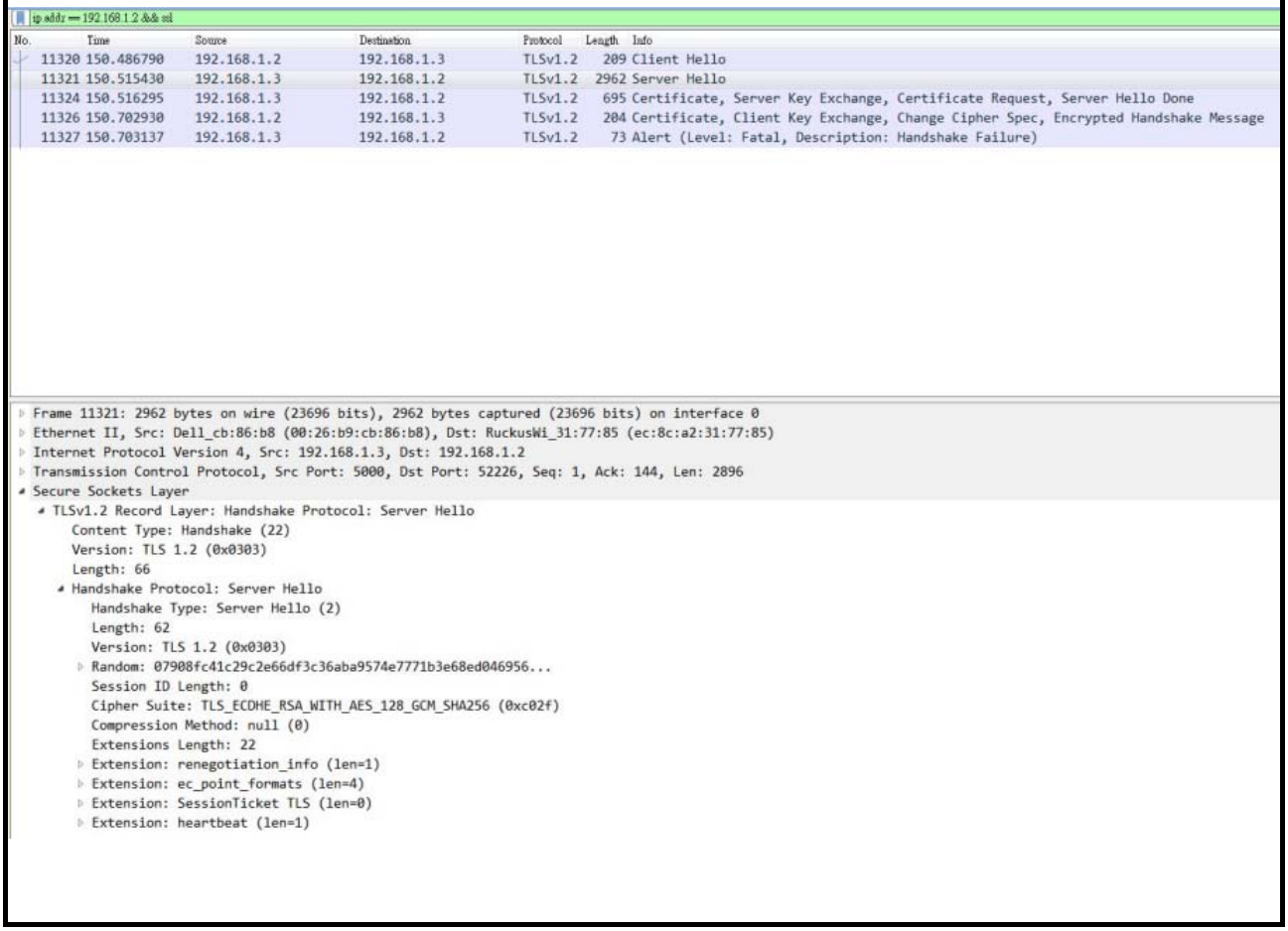
RF measurement plot for WINNF.PT.C.HBT Test Case ID_BW10M-Grant maxEirp 20



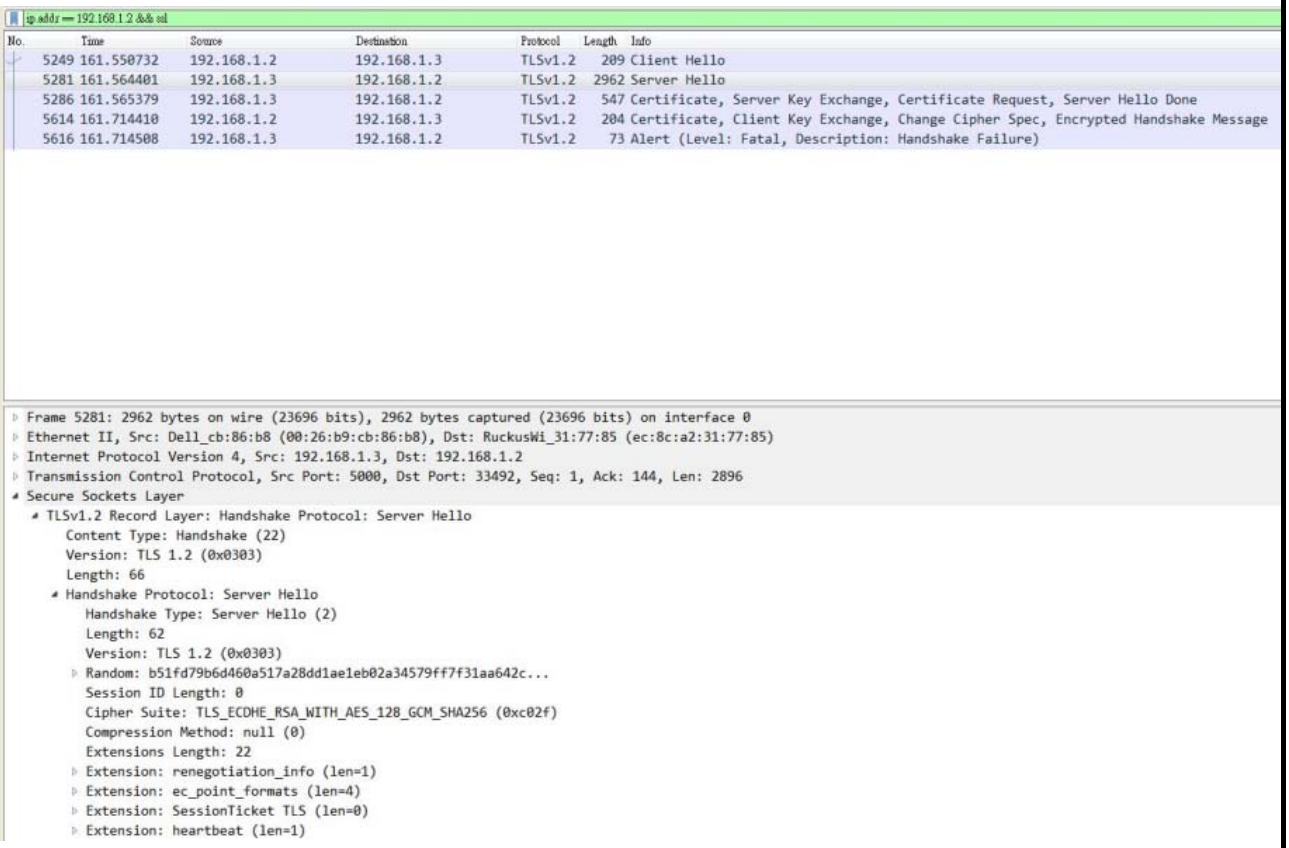
Wireshark Plots for WINNF.FT.C.SCS.1 Test Case ID



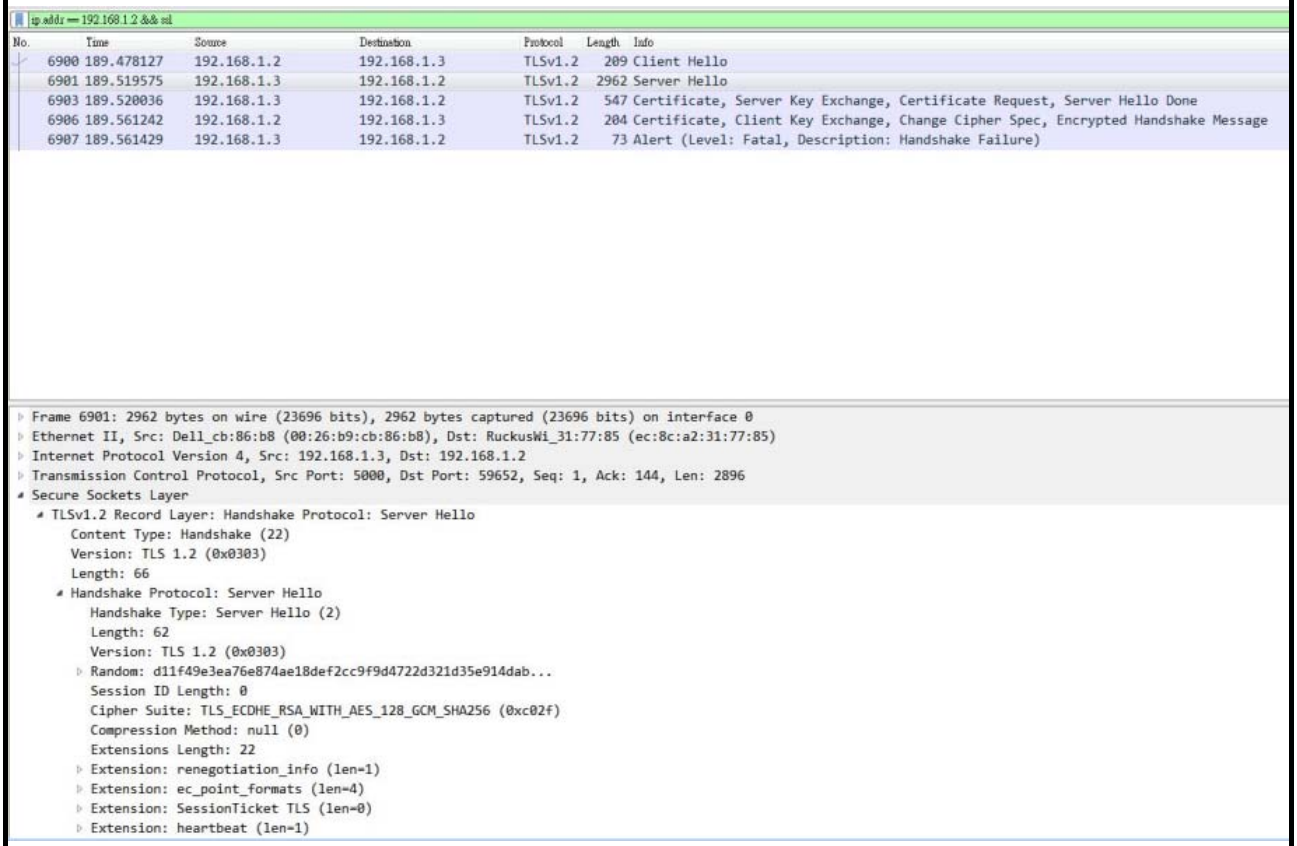
Wireshark Plots for WINNF.FT.C.SCS.2 Test Case ID



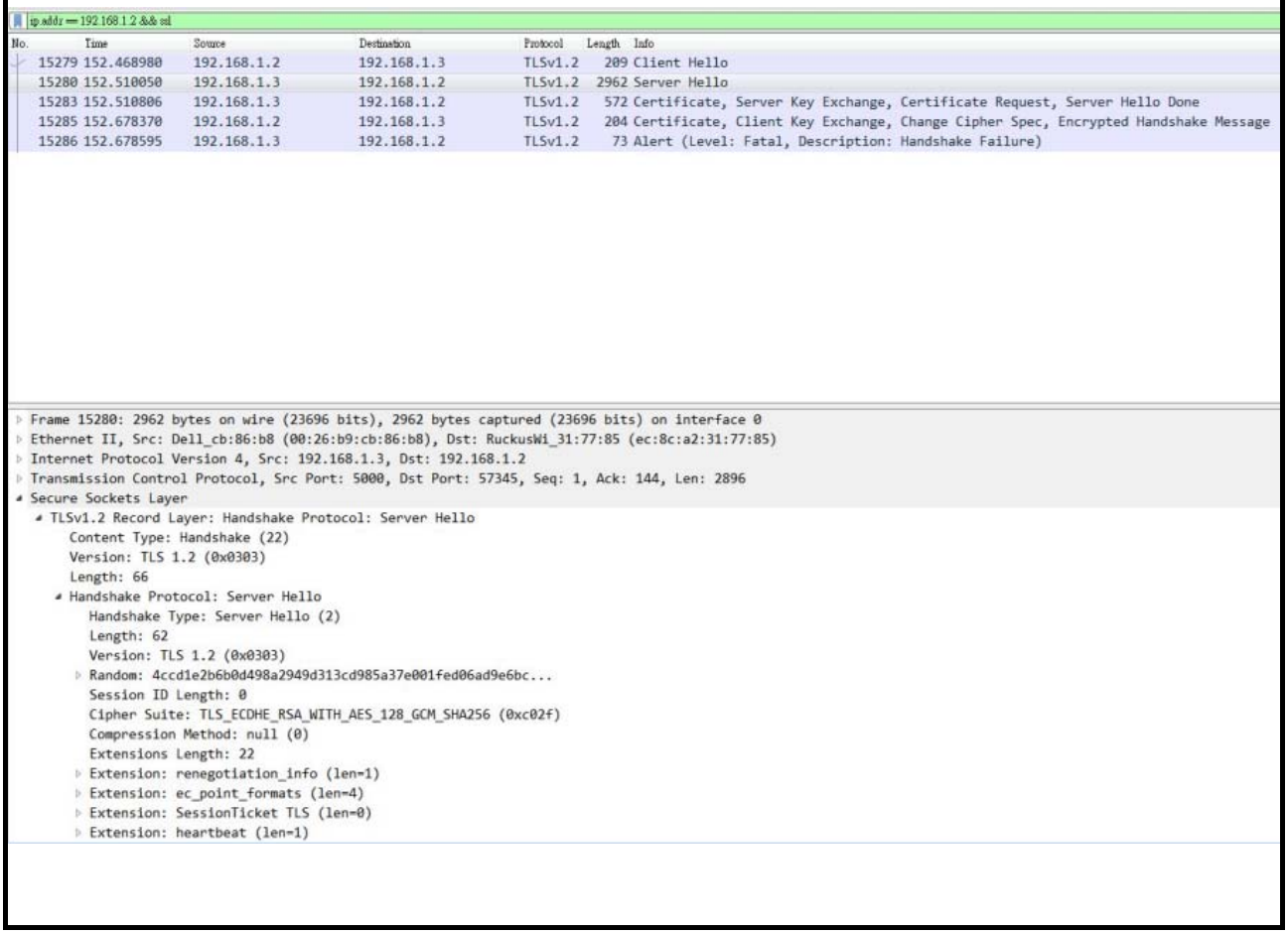
Wireshark Plots for WINNF.FT.C.SCS.3 Test Case ID



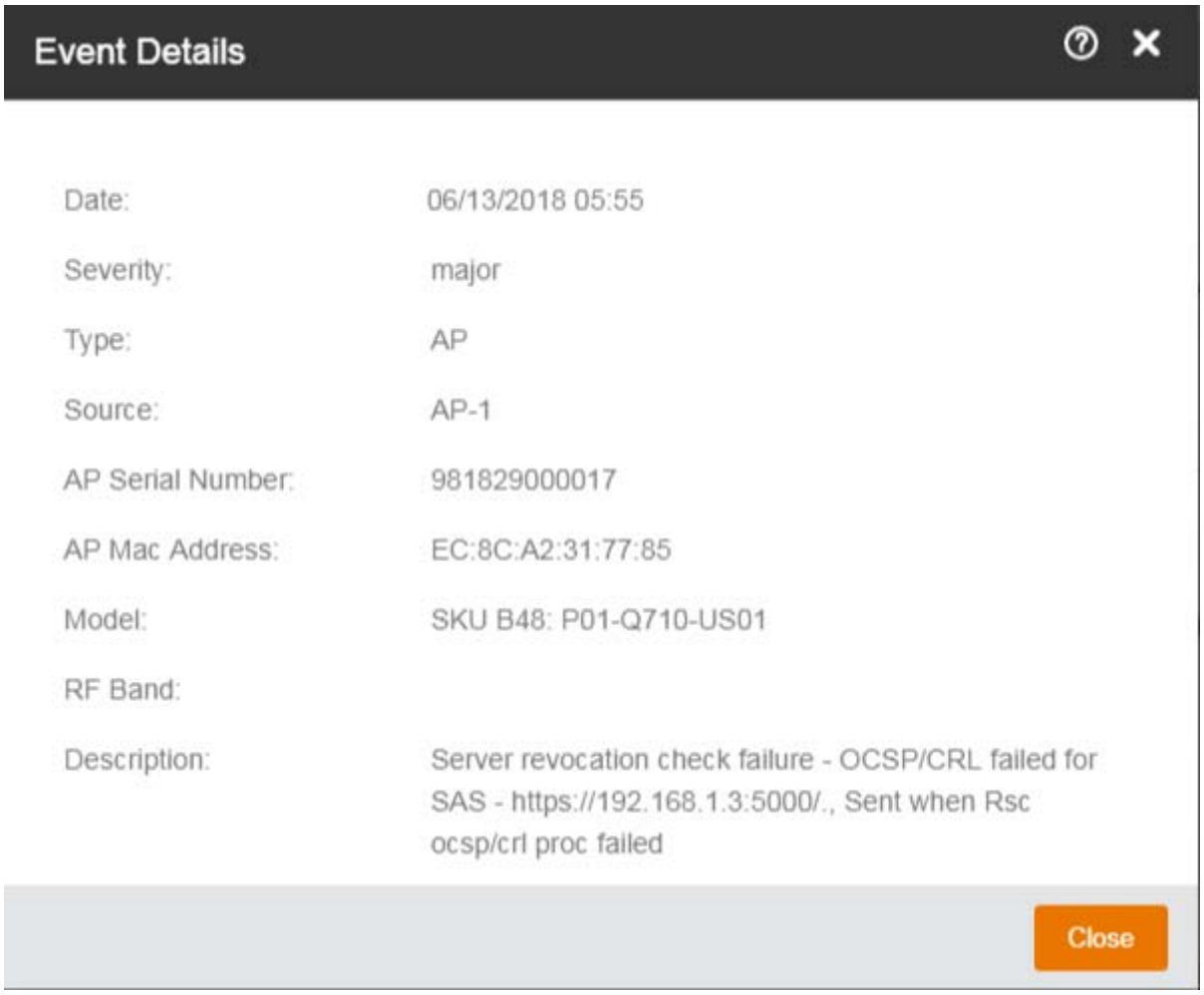
Wireshark Plots for WINNF.FT.C.SCS.4 Test Case ID



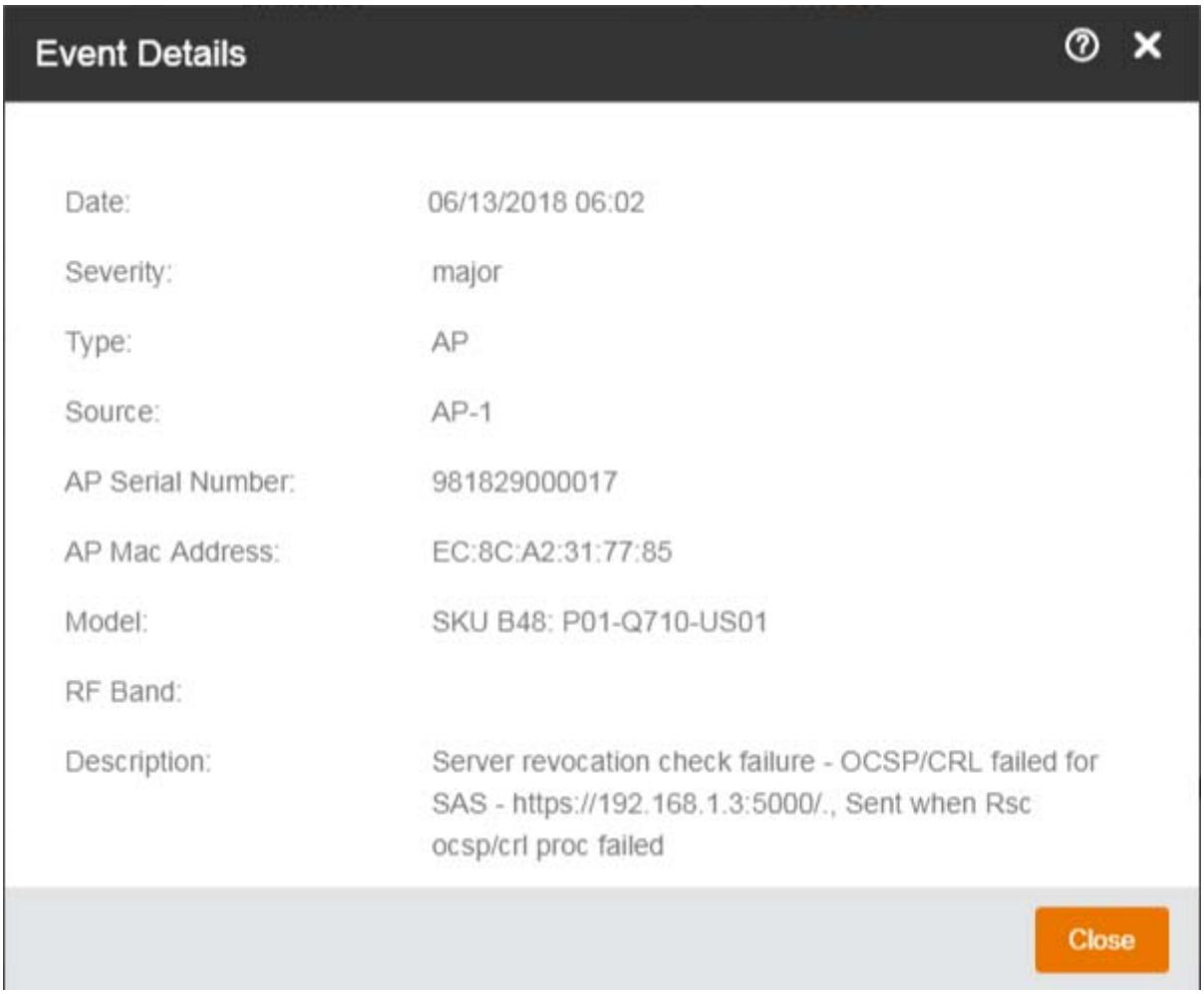
Wireshark Plots for WINNF.FT.C.SCS.5 Test Case ID



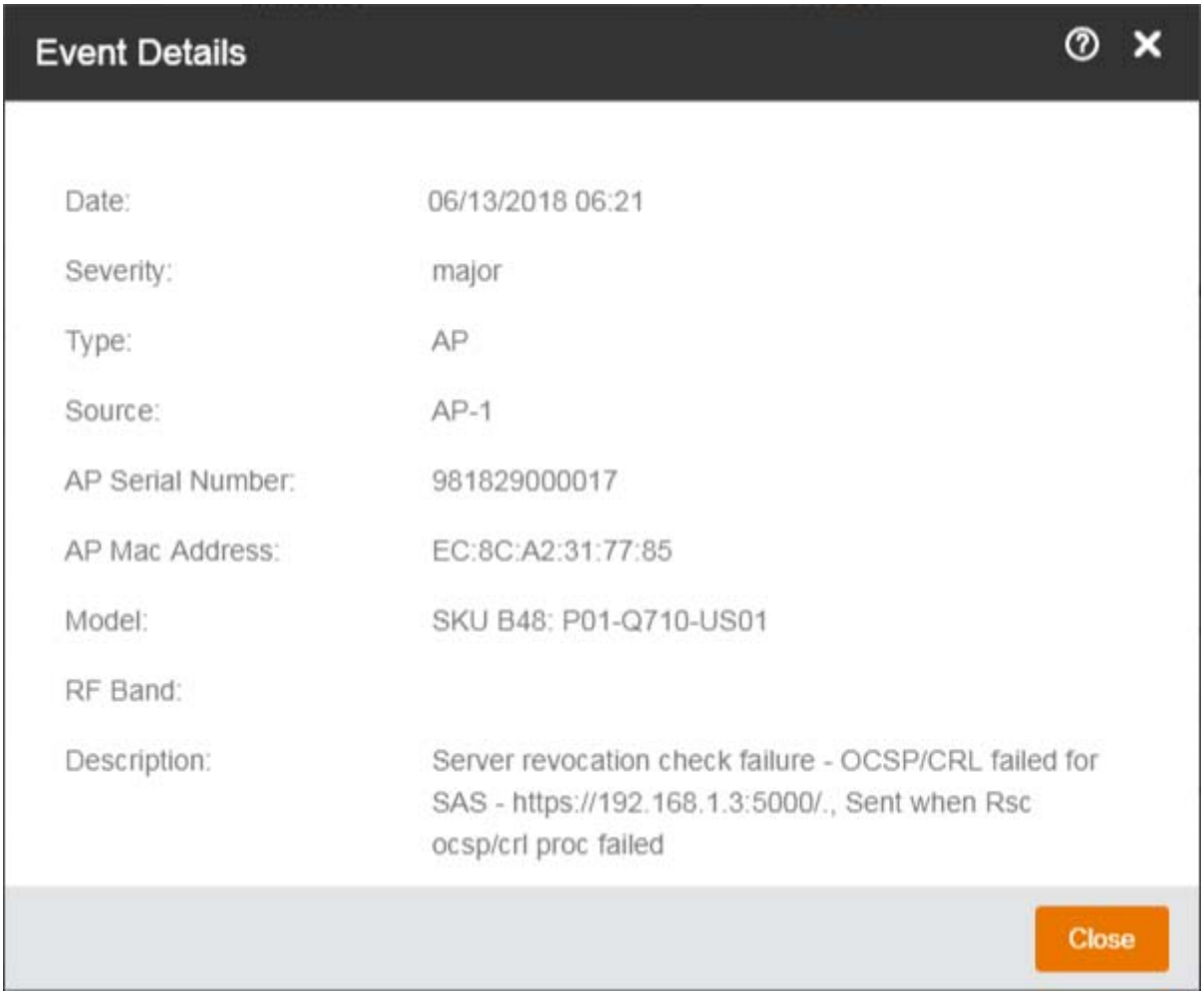
CRL and OCSP Verify Plots for WINNF.FT.C.SCS.2 Test Case ID



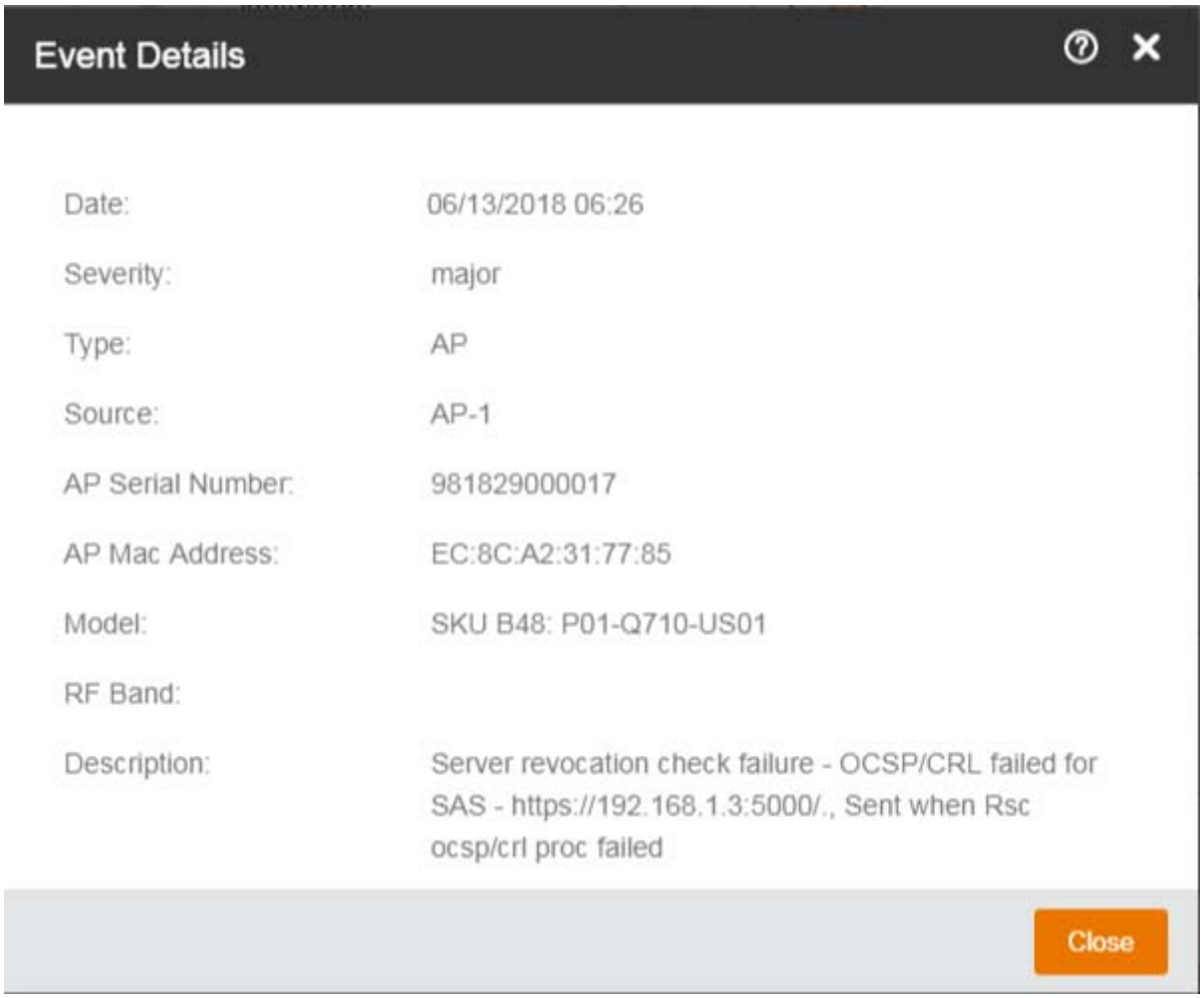
CRL and OCSP Verify Plots for WINNF.FT.C.SCS.3 Test Case ID



CRL and OCSP Verify Plots for WINNF.FT.C.SCS.4 Test Case ID



CRL and OCSP Verify Plots for WINNF.FT.C.SCS.5 Test Case ID



WInnForum Approved CBSD Test Labs

Bureau Veritas Consumer Products Services (Hong Kong) Ltd., Taoyuan Branch

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405 Glenn Drive Suite, Sterling, Virginia 20164

Nemko (multiple approved locations)

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303 River Rd., Ottowa Ontario, Canada K1V 1H2

2210 Faraday Ave., Suite 150, Carlsbad, California 92008

Nokia Global Product Compliance Laboratory
600-700 Mountain Ave, Murray Hill, New Jersey 07974

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