# AFC Device (DUT) Test Report

| | | |
|---|---|---|
| **FCC ID** | : | **2ABOF-GXRN8356900** |
| **Equipment** | : | **RN System (Multiband)** |
| **Brand Name** | : | **Tarana** |
| **Model Name** | : | **GXRN8356900** |
| **Applicant** | : | **Tarana Wireless, Inc.<br>630 Alder Dr, Milpitas, CA 95035** |
| **Manufacturer** | : | **Tarana Wireless, Inc.<br>630 Alder Dr, Milpitas, CA 95035** |
| **Standard** | : | **FCC Part 15.407** |

**The product was received on May 21, 2025 and testing was performed from May 21, 2025 to May 24, 2025. We, Sporton International (USA) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in WiFi Alliance AFC Device (DUT) Compliance Test Plan Version 1.7 and has been in 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 (USA) Inc., the test report shall not be reproduced except in full.**

Neil Kao

**Approved by: Neil Kao**

***Sporton International (USA) Inc.***
*1175 Montague Expressway, Milpitas, CA 95035*

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**Appendix A. Setup Photographs**

**Appendix B. AFC Test Logs**

# History of this test report

| Report No. | Version | Description | Issue Date |
|---|---|---|---|
| FR250408001C | 01 | Initial issue of report. | Jun. 04, 2025 |
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| **Conformity Assessment Condition:** |
|---|
| The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. |
| **Disclaimer:** |
| The product specifications of the DUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity. |

# 1. Administration Data

## 1.1 Testing Laboratory

| | |
|---|---|
| **Test Site** | Sporton International (USA) Inc. |
| **Test Site Location** | 1175 Montague Expressway, Milpitas, CA 95035<br>TEL: (408) 904-3300 |
| **Test Site No.** | **Sporton Site No.** |
| | TH01-CA |
| **Test Engineer** | Kaying Xiong |
| **Temperature** | 23 ~ 26 ℃ |
| **Relative Humidity** | 43 ~ 47 % |

FCC Designation No.: US1250

## 1.2 Applicant

| | |
|---|---|
| **Company Name** | Tarana Wireless, Inc. |
| **Address** | 630 Alder Dr, Milpitas, CA 95035 |

## 1.3 Manufacturer

| | |
|---|---|
| **Company Name** | Tarana Wireless, Inc. |
| **Address** | 630 Alder Dr, Milpitas, CA 95035 |

### 1.4 Applied Standard

According to the specifications declared by the manufacturer, the DUT must comply with the requirement of the following standards:

| | |
|---|---|
| **Standards** | [n.1]. FCC Part 15.407<br>[n.2]. FCC KDB 987594 D01 U-NII 6GHz General Requirements v02r02<br>[n.3]. FCC KDB 987594 D05 AFC DUT Test Harness Testing v01r01<br>[n.4]. WiFi Alliance AFC System to AFC Device Interface Specification v1.5, 5 May 2023<br>[n.5]. WiFi Alliance AFC Device (DUT) Compliance Test Plan v1.7, 16 Jun 2024<br>[n.6]. WiFi Alliance AFC Device (DUT) Compliance Test Vectors v1.2, 27 Jun 2023<br>[n.7]. ANSI C63.10-2013 |

Remark: All the test items were validated and recorded in accordance with the standards without any modification during the testing.

## 2. General Information

### 2.1 Description of Device Under Test (DUT)

| Product Feature & Specification | |
|---|---|
| **EUT Type** | RN System (Multiband) |
| **Brand Name** | Tarana |
| **Model Name** | GXRN8356900 |
| **FCC ID** | 2ABOF-GXRN8356900 |
| **Device Under Test Type** | ☐ Standard Power Access Point<br>■ Fixed Client |
| **Domain Proxy support** | ■ with Domain Proxy<br>☐ without Domain Proxy |
| **Deployment** | ☐ Indoor<br>■ Outdoor |
| **DUT HW Version** | 30-0202-001.1.0 |
| **DUT FW Version** | SYS.A3.R10.XXX.3.920.046.00 |
| **DUT Serial Number** | M229M1251300089 |
| **Domain Proxy SW Version** | 20250527141617-4d8499d7-devel |

| AFC DUT general capabilities declaration | | |
|---|---|---|
| **Item** | **Question** | **Vendor response** |
| 1 | AFC DUT Type. | ☐ Standard Power Access Point (6SD)<br>■ Fixed Client (6FC)<br>■ Domain Proxy |
| 2 | Does the AFC DUT support sending an Available Spectrum Inquiry Request based on the inquiredFrequencyRange field | No |
| 3 | Does the AFC DUT support sending an Available Spectrum Inquiry Request based on the inquired Channels fields? | Yes |
| 4<br>(For 2, 3) | If the Answer to Items **2** and **3** is "Yes", what is AFC DUT's default inquiry type? | ☐ Frequency based<br>■ Channel based<br>☐ Both |
| 5 | Does the AFC DUT need to be supplied with BSS configuration parameters? | No |
| 6 | Does the AFC DUT manufacturer attest to AFC DUT compliance with rules for LPI operation? | No |
| 7 | Does the AFC DUT need to be supplied with mandatory registration information to formulate an Available Spectrum Inquiry Request | Yes |
| 8<br>(For 7) | If the Answer to Item **7** is "Yes". What is the geographic Supported by the AFC DUT? | ■ Ellipse<br>☐ Linear Polygon<br>☐ Radial Polygon |
| 9 | Does the AFC DUT support 160 MHz channel width operation? | No |
| 10 | Which method does AFC DUT acting as a Fixed Client uses for sending an Available Spectrum Inquiry Request? | ■ In-band<br>☐ Out-of-band |
| 11 | Does the AFC DUT support 320 MHz channel width operation? | No |

## 2.2 Protocol Test Summary

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.1 | AFCD.RSA | Successful registration and spectrum access request | 47 CFR Section 15.407(k)(1) | Transmit only as instructed by AFC System | PASS |
| | | | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System prior to initial transmission | |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Provide required registration parameters | |
| | | | 47 CFR Section 15.407(k)(8)(iii) | Registration either directly or via proxy | |
| | | | 47 CFR Section 15.407(l)(ii) | Determination of appropriate channel configuration implied by AFC System response | |
| | | | 47 CFR 15.407(k)(8)(iv) | Must contact an AFC system at least once per day to obtain the latest list of available frequencies and the maximum permissible power | |
| 4.2 | AFCD.USA | Unsuccessful registration and spectrum access request | 47 CFR Section 15.407(k)(1) | Transmit only as instructed by AFC System | PASS |
| | | | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System prior to initial transmission | |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Provide required registration parameters | |
| | | | 47 CFR Section 15.407(k)(8)(iii) | Registration either directly or via proxy | |

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.3 | AFCD.SAU | Successful spectrum access update | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System after change of location | PASS |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Update AFC System upon change of registration parameters | |
| | | | 47 CFR Section 15.407(k)(9)(i) | Report location and uncertainty from power-off condition | |
| 4.4 | AFCD.UAU | Unsuccessful spectrum access update | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System after change of location | |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Update AFC System upon change of registration parameters | |
| | | | 47 CFR Section 15.407(k)(9)(i) | Report location and uncertainty from power-off condition | |
| 4.5 | AFCD.USV | Unsuccessful server validation | 47 CFR Section 15.407(k)(8)(v) | Incorporate adequate security measurements to prevent it from accessing AFC systems not approved by the FCC | PASS |

Note: For Protocol Test Results, please find the Appendix B for AFC Test Logs.

## 2.3 Support Equipment

| Name | Manufacturer | Type/Model | Serial Number | FCC ID |
|---|---|---|---|---|
| G2 Base Node (BN) | Tarana Wireless | G2BNF356900 | S198T1250800008 | 2ABOF-G2BNF356900 |

## 2.4 Measuring Equipment List

| Name | Manufacturer | Type/Model | Serial Number | Calibration | |
|---|---|---|---|---|---|
| | | | | Last Cal. | Due Date |
| Spectrum Analyzer | Rohde & Schwarz | FSV3044 | 101128 | Oct. 22, 2024 | Oct. 21, 2025 |

## 2.5 Measurement Uncertainty

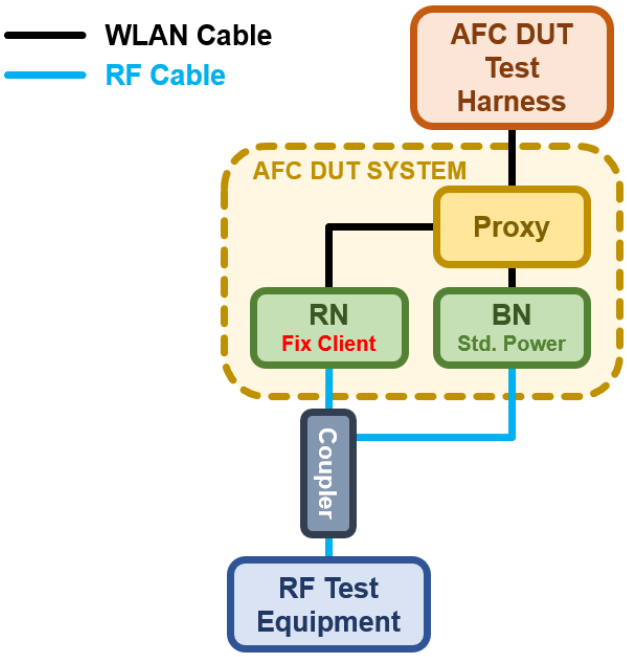
Uncertainty of Conducted Power Measurement

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2uc(y)$) | 0.33dB |

# 3. Measurement Environment

| Measurement Environment Information | |
|---|---|
| **AFC DUT Test Harness** | AFC DUT Test Harness Version (2.0.65.144) |
| **Operating System** | Ubuntu 22.04 |
| **TLS version** | V 1.2 |

## 3.1 Test configuration




Proxy representing Standard Power Access Point (BN)
and Fixed Client Device (RN) Test Setup

# 4. Protocol Test Results

## 4.1 Successful registration and spectrum access request

| # | Description | Results |
|---|---|---|
| 1 | If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 12 | Go to step 12 |
| 2 | AFC DUT set to Initial Pre-test State.<br>If needed (see Table 5 declaration), configure the AFC DUT with BSS parameters per Table 9 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request. | Not applicable |
| 3 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*. | Not applicable |
| 4 | AFC DUT Test Harness validates the presence of mandatory registration information | Not applicable |
| 5 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields. | Not applicable |

| # | Description | Results |
|---|---|---|
| 6 | Throughout Step 1 to Step 4, RF Test Equipment monitors the output of the AFC DUT to confirm that the AFC DUT does not transmit:<br>● In the band if the AFC DUT supports only SP operation<br>Or<br>● Above LPI limits for AFC DUT whose manufacturer attests to its compliance with rules for LPI operation<br>Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the following:<br>● For SP only operation, AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies.<br>● For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, AFC DUT transmit power in the band is less than CEILING [LPI limits, SP limits contained in the Available Spectrum Inquiry Response] and does not exceed emissions limits in adjacent frequencies. | Not applicable |
| 7 | Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request. | Not applicable |
| 8 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*. | Not applicable |
| 9 | AFC DUT Test Harness validates the presence of mandatory registration information | Not applicable |
| 10 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields which are significantly different from Step 5. | Not applicable |

| # | Description | Results |
|---|---|---|
| 11 | Wait for 5 minutes (configurable)<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the following:<br>● For SP only operation, AFC DUT conforms to the conditions contained in the latest Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies.<br>● For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, AFC DUT transmit power in the band is less than CEILING [LPI limits, SP limits contained in the latest Available Spectrum Inquiry Response] and does not exceed emissions limits in adjacent frequencies. | Not applicable |
| 12 | If the AFC DUT is Fixed Client, go to Step 13 else Stop the test | Go to step 13 |
| 13 | The AFC DUT set to Initial Pre-test State. | Done |
| 14 | If needed (see Table 5 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request using either In-band or Out-of-band methods. | Done |
| 15 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields* | PASS |
| 16 | AFC DUT Test Harness validates the presence of mandatory registration information | PASS |
| 17 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields. | Done |
| 18 | If AFC DUT used Out-of-band method, initiate connection procedure between AFC DUT and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |

| # | Description | Results |
|---|---|---|
| 19 | Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies | PASS |
| 20 | Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request using either In-band or Out-of-band methods | Done |
| 21 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields* | PASS |
| 22 | AFC DUT Test Harness validates the presence of mandatory registration information | PASS |
| 23 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields which are significantly different from Step 17. | Done |
| 24 | If AFC DUT used Out-of-band method, initiate connection procedure between AFC DUT and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |
| 25 | Wait for 60 seconds (configurable)<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the conditions contained in the latest Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies | PASS |

### 4.1.1 AFCD.RSA Test Vector

| Test Vector | Test Category | Results |
|---|---|---|
| AFCD.RSA | Successful registration and spectrum access request | PASS |

### 4.1.2 AFCD.RSA RF Transmit Power Measurement

| Center Frequency [MHz] | BW [MHz] | DUT Internal Loss [dB] | Duty Cycle Factor [dB] | Directional Gain [dBi] | SA Reading Power [dBm] | | Total EIRP [dBm] | AFC EIRP Limit [dBm] |
|---|---|---|---|---|---|---|---|---|
| | | | | | Pol H | Pol V | | |
| 6205 | 40 | 19.48 | 6.84 | 15.90 | -14.44 | -14.31 | 30.86 | 31.43 |
| 6365 | | | | | -9.83 | -10.43 | 35.11 | 36.00 |
| 6605 | | | | | -11.43 | -11.88 | 33.58 | 34.66 |
| 6765 | | | | | -12.20 | -12.15 | 33.06 | 33.76 |
| 6165 | | | | | -13.82 | -13.62 | 31.51 | 32.04 |
| 6405 | | | | | -10.69 | -10.94 | 34.42 | 34.82 |
| 6565 | | | | | -12.98 | -12.58 | 32.46 | 33.21 |
| 6845 | | | | | -11.57 | -11.78 | 33.56 | 34.20 |

Note 1: The DUT was operating in X2 mode, which supports up to four carriers. It will transmit on four of available channels which has highest allowed power based on response from AFC system. During testing, four channels were validated to ensure each channel's EIRP power does not exceed allowed power from AFC, i.e., AFC EIRP Limit on the table above.

Note 2: The maximun of UNII-5 and UNII-7 Antenna Gain = 15.90dBi.
The device is driving cross-polarized antenna, which has 8 horizontal polarization antennas and 8 vertical polarization antennas. Directional Gain (8H/8V) = 15.90dBi + 10log (Ntx = 2 / Nss = 2) = 15.90dBi.

Note 3: Conducted power was measured as the sum of 8 horizontal polarization output ports and the sum of 8 vertical polarization output ports, which are then added together to calculate the total conducted output power.

Note 4: The path loss between the DUT and the Spectrum Analyzer has been offset and configured in the Spectrum Analyzer.

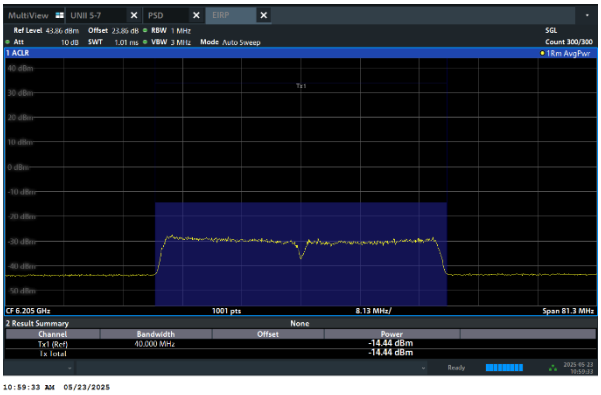
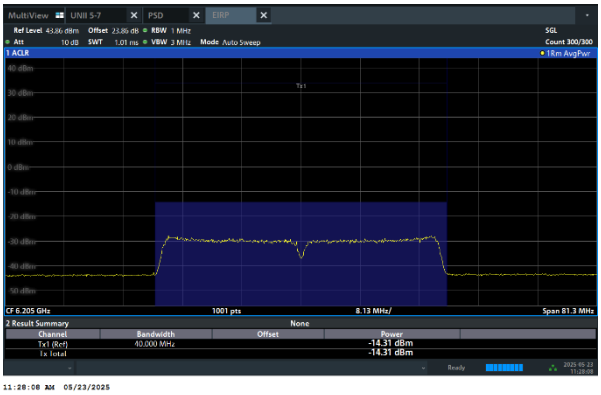
Note 5: The duty cycle factor, calculated as 10log (1/duty cycle) and listed in the table above, is used to compute the average power during continuous transmission.

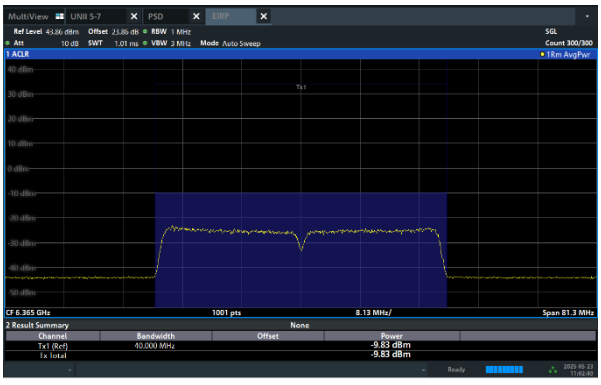
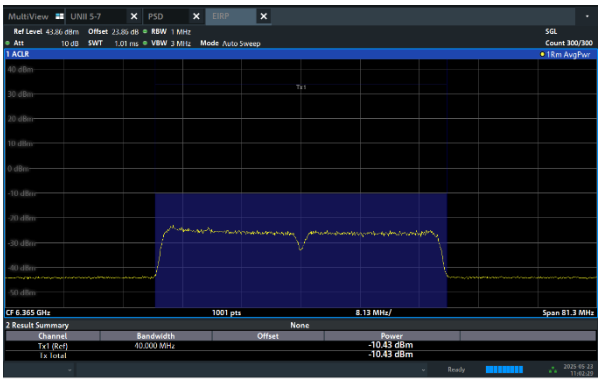
**Duty Cycle: 20.70%**

**AFC EIRP Limit 31.43 dBm**

**DUT Center Frequency 6205 MHz, Bandwidth 40 MHz, Total EIRP 30.86 dBm**

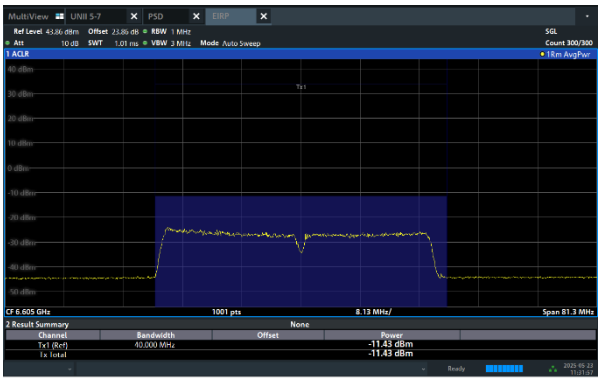
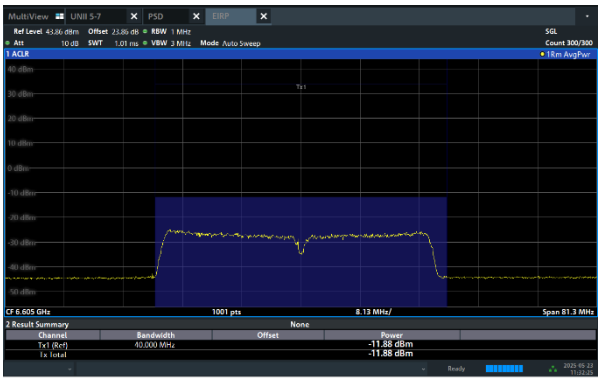
**SA Reading Power [dBm]**

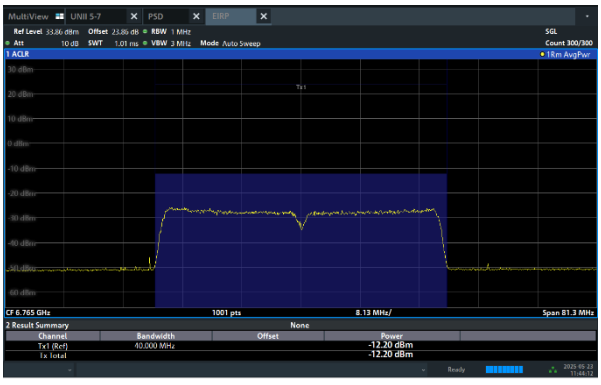
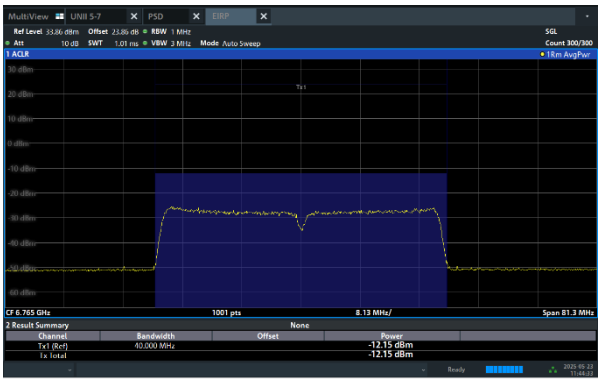
| Horizontal Antenna | Vertical Antenna |
|---|---|
|  |  |

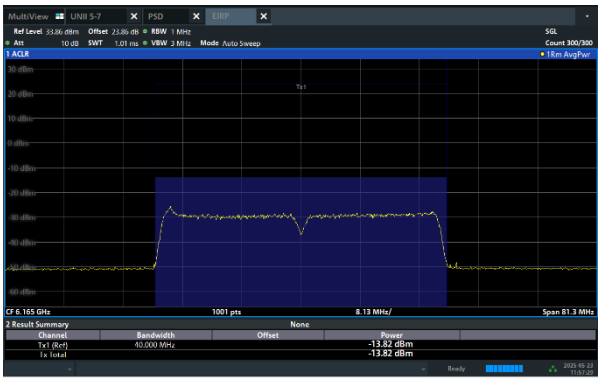
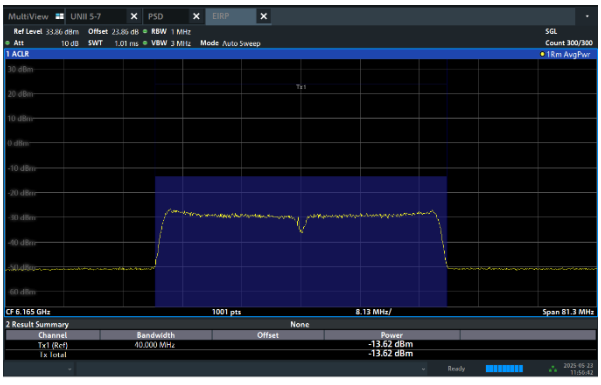
| AFC EIRP Limit 36.00 dBm<br>DUT Center Frequency 6365 MHz, Bandwidth 40 MHz, Total EIRP 35.11 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

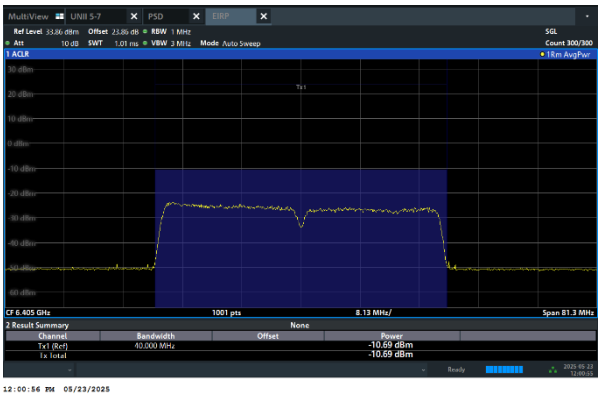
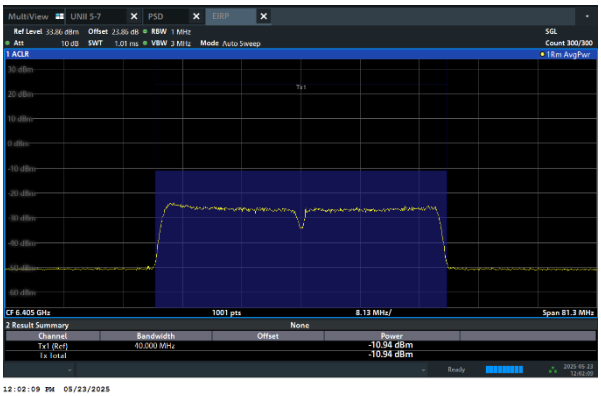




| AFC EIRP Limit 34.66 dBm<br>DUT Center Frequency 6605 MHz, Bandwidth 40 MHz, Total EIRP 33.58 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

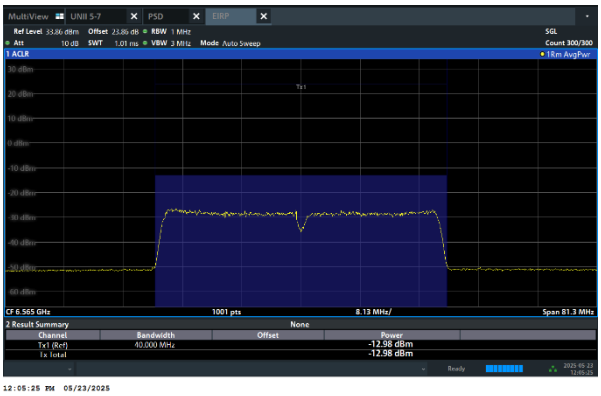
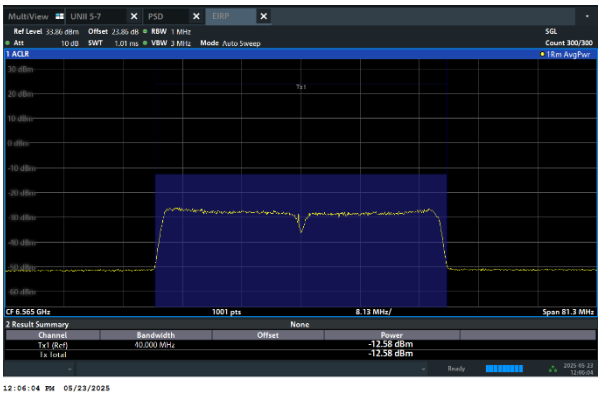
| AFC EIRP Limit 33.76 dBm<br>DUT Center Frequency 6765 MHz, Bandwidth 40 MHz, Total EIRP 33.06 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

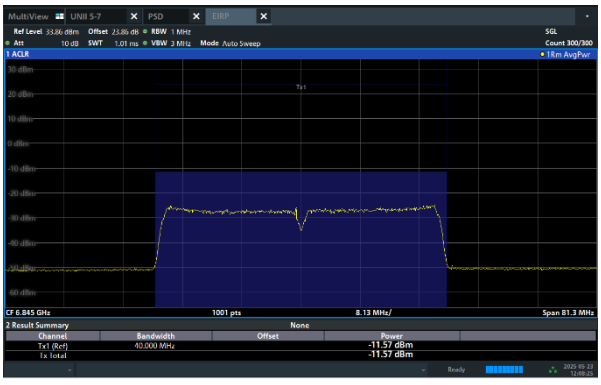
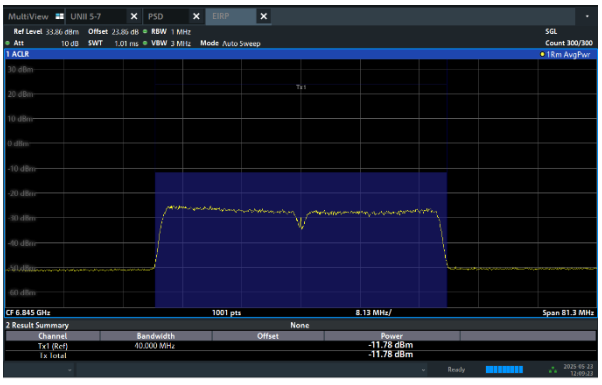
| AFC EIRP Limit 32.04 dBm<br>DUT Center Frequency 6165 MHz, Bandwidth 40 MHz, Total EIRP 31.51 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

| AFC EIRP Limit 34.82 dBm<br>DUT Center Frequency 6405 MHz, Bandwidth 40 MHz, Total EIRP 34.42 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |





| AFC EIRP Limit 33.21 dBm<br>DUT Center Frequency 6565 MHz, Bandwidth 40 MHz, Total EIRP 32.46 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

| AFC EIRP Limit 34.20 dBm<br>DUT Center Frequency 6845 MHz, Bandwidth 40 MHz, Total EIRP 33.56 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

## 4.2 Unsuccessful spectrum access request

| # | Description | Results |
|---|---|---|
| 1 | If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 7 | Go to step 7 |
| 2 | AFC DUT set to Initial Pre-test State.<br>If needed (see Table 5 declaration), configure the AFC DUT with BSS parameters per Table 9 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request. | Not applicable |
| 3 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*. | Not applicable |
| 4 | AFC DUT Test Harness validates mandatory registration information. | Not applicable |
| 5 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available. | Not applicable |
| 6 | Throughout Step 2 to Step 5 and subsequent to Step 5, RF Test Equipment monitors the output of the AFC DUT to confirm the following:<br>● For SP only operation, AFC DUT does not transmit in the band.<br>● For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits. | Not applicable |
| 7 | If the AFC DUT is Fixed Client, go to Step 8 else Stop the test | Go to step 8 |
| 8 | The AFC DUT set to Initial Pre-test State. | Done |
| 9 | If needed (see Table 5 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID or IC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request. | Done |
| 10 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*. | PASS |
| 11 | AFC DUT Test Harness validates mandatory registration information. | PASS |

| # | Description | Results |
|---|---|---|
| 12 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available using either In-band or Out-of-band methods. | Done |
| 13 | If AFC DUT used Out-of-band method, initiate connection procedure between Fixed Client and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |
| 14 | Wait for 60 seconds<br>RF Test Equipment monitors that the AFC DUT does not transmit above maximum transmit power limits advertised by the Standard Power Access Point for Standard Client Devices in the channel. | PASS |

### 4.2.1 AFCD.USA Test Vectors

| Test Vector | Test Category | Results |
|---|---|---|
| AFCD.USA | Unsuccessful spectrum access request | PASS |

### 4.3 Successful spectrum access update

| # | Description | Results |
|---|---|---|
| 1 | If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 12 | Go to step 12 |
| 2 | AFC DUT set to Initial Pre-test State.<br>If needed (see Table 5 declaration), configure the DUT with BSS parameters per Table 9 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request. | Not applicable |
| 3 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*. | Not applicable |
| 4 | AFC DUT Harness validates mandatory registration information. | Not applicable |
| 5 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields. | Not applicable |

| # | Description | Results |
|---|---|---|
| 6 | Throughout the preceding steps, RF Test Equipment monitors the output of the AFC DUT to confirm that the AFC DUT does not transmit:<br>● In the band if the AFC DUT supports only SP operation<br>Or<br>● Above LPI limits for AFC DUT whose manufacturer attests to its compliance with rules for LPI operation<br>Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the following:<br>● For SP only operation, AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies.<br>● For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, AFC DUT transmit power in the band is less than CEILING [LPI limits, SP limits contained in the Available Spectrum Inquiry Response] and does not exceed emissions limits in adjacent frequencies. | Not applicable |
| 7 | AFC DUT is power cycled.<br>If needed (see Table 5 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), new geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate. | Not applicable |
| 8 | Wait for 60 seconds<br>If the AFC DUT does not send an Available Spectrum Inquiry Request, RF Test Equipment monitors the output of the AFC DUT to verify the following and STOP the test<br>● For SP only operation, AFC DUT does not transmit in the band.<br>● For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits.<br>If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 9 | Not applicable |

| # | Description | Results |
|---|---|---|
| 9 | AFC DUT Test Harness evaluates validity of mandatory registration information | Not applicable |
| 10 | AFC DUT Test Harness waits for 60 seconds before sending an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields which are significantly different from Step 5.<br>● During the 60 seconds wait time:<br>■ For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, RF Test Equipment monitors the output of the AFC DUT to confirm that AFC DUT does not transmit above LPI threshold limits<br>■ For SP only operation, RF Test Equipment monitors the output of the AFC DUT to confirm that AFC DUT doesn't transmit in the band | Not applicable |
| 11 | Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the following:<br>● For SP only operation, AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies.<br>● For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, AFC DUT transmit power in the band is less than CEILING [LPI limits, SP limits contained in the Available Spectrum Inquiry Response] and does not exceed emissions limits in adjacent frequencies. | Not applicable |
| 12 | If the AFC DUT is Fixed Client, go to Step 13 else Stop the test | Go to step 13 |
| 13 | The AFC DUT set to Initial Pre-test State. | Done |

| # | Description | Results |
|---|---|---|
| 14 | If needed (see Table 5 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request using either In-band or Out-of-band methods. | Done |
| 15 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields* | PASS |
| 16 | AFC DUT Test Harness validates the presence of mandatory registration information | PASS |
| 17 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields. | Done |
| 18 | If AFC DUT used Out-of-band method, initiate connection procedure between AFC DUT and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |
| 19 | Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies | PASS |
| 20 | AFC DUT is power cycled.<br>If needed (see Table 5 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), new geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate | Done |

| # | Description | Results |
|---|---|---|
| 21 | Wait for 60 seconds<br>If the AFC DUT does not send an Available Spectrum Inquiry Request, RF Test Equipment monitors the output of the AFC DUT to verify the AFC DUT does not transmit above maximum transmit power limits advertised by the Standard Power Access Point for Standard Client Devices in the channel and STOP the test.<br>If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 21 | PASS |
| 22 | AFC DUT Test Harness evaluates validity of mandatory registration information | PASS |
| 23 | AFC DUT Test Harness waits for 60 seconds before sending an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields which are significantly different from step 17.<br>During the 60 seconds wait time, RF Test Equipment monitors the output of the AFC DUT to confirm that the AFC DUT does not transmit above maximum transmit power limits advertised by the Standard Power Access Point for Standard Client Devices in the channel. | PASS |
| 24 | If AFC DUT used Out-of-band method, initiate connection procedure between AFC DUT and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |
| 25 | Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies | PASS |

### *4.3.1 AFCD.SAU Test Vectors*

| Test Vector | Test Category | Results |
|---|---|---|
| AFCD.SAU | Successful spectrum access update | PASS |

### 4.3.2 AFCD.SAU RF Transmit Power Measurement

| Center Frequency [MHz] | BW [MHz] | DUT Internal Loss [dB] | Duty Cycle Factor [dB] | Directional Gain [dBi] | SA Reading Power [dBm] | | Total EIRP [dBm] | AFC EIRP Limit [dBm] |
|---|---|---|---|---|---|---|---|---|
| | | | | | Pol H | Pol V | | |
| 6005 | 40 | 19.48 | 6.84 | 15.90 | -11.12 | -11.14 | 34.10 | 34.61 |
| 6165 | | | | | -11.94 | -12.46 | 33.04 | 33.83 |
| 6805 | | | | | -11.09 | -15.64 | 32.44 | 34.00 |
| 6845 | | | | | -14.56 | -13.53 | 31.22 | 32.20 |
| 6005 | | | | | -9.66 | -10.03 | 35.39 | 36.00 |
| 6365 | | | | | -12.05 | -11.65 | 33.39 | 34.06 |
| 6685 | | | | | -12.94 | -13.78 | 31.89 | 33.08 |
| 6765 | | | | | -10.62 | -10.46 | 34.69 | 35.23 |

Note 1: The DUT was operating in X2 mode, which supports up to four carriers. It will transmit on four of available channels which has highest allowed power based on response from AFC system. During testing, four channels were validated to ensure each channel's EIRP power does not exceed allowed power from AFC, i.e., AFC EIRP Limit on the table above.

Note 2: The maximun of UNII-5 and UNII-7 Antenna Gain = 15.90dBi.
The device is driving cross-polarized antenna, which has 8 horizontal polarization antennas and 8 vertical polarization antennas. Directional Gain (8H/8V) = 15.90dBi + 10log (Ntx = 2 / Nss = 2) = 15.90dBi.

Note 3: Conducted power was measured as the sum of 8 horizontal polarization output ports and the sum of 8 vertical polarization output ports, which are then added together to calculate the total conducted output power.

Note 4: The path loss between the DUT and the Spectrum Analyzer has been offset and configured in the Spectrum Analyzer.

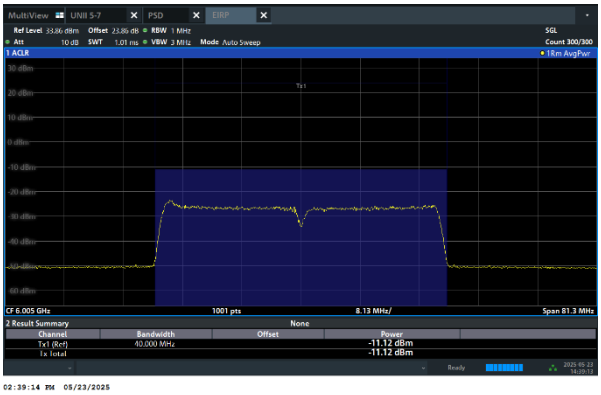
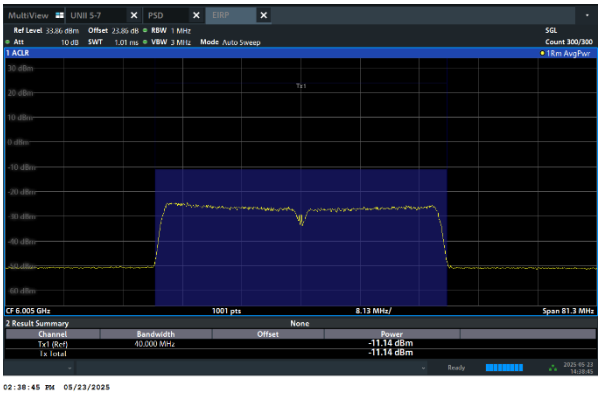
Note 5: The duty cycle factor, calculated as 10log (1/duty cycle) and listed in the table above, is used to compute the average power during continuous transmission.

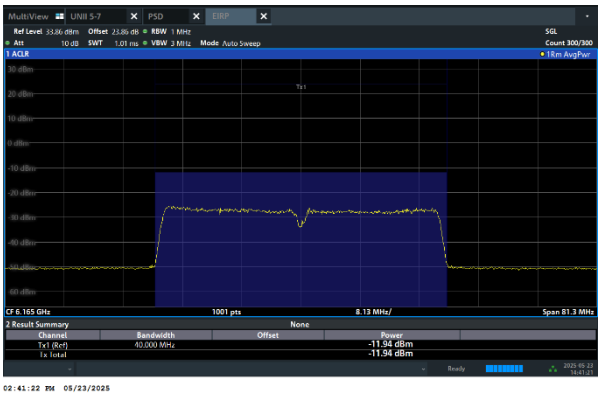
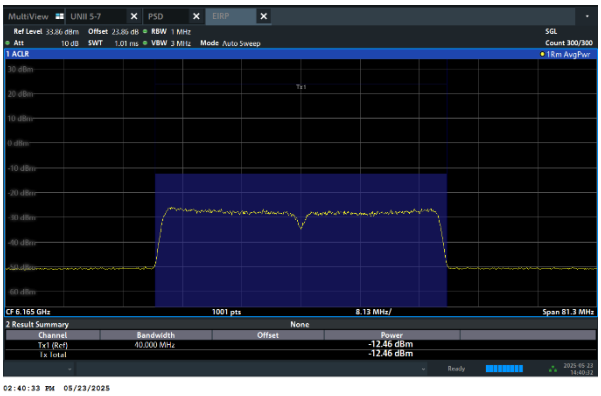
**Duty Cycle: 20.70%**

**AFC EIRP Limit 34.61 dBm**

**DUT Center Frequency 6005 MHz, Bandwidth 40 MHz, Total EIRP 34.10 dBm**

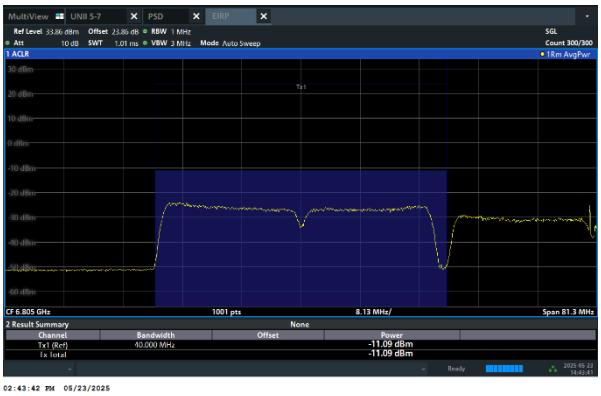
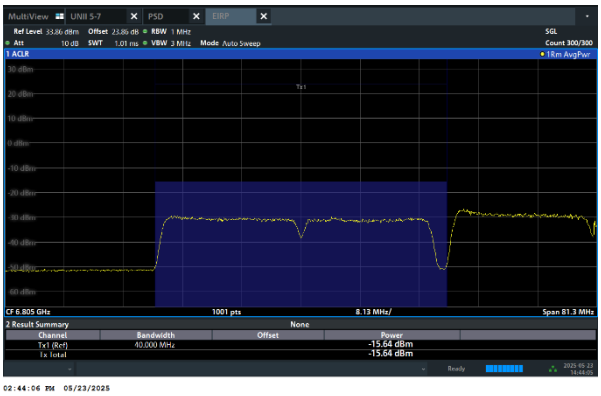
**SA Reading Power [dBm]**

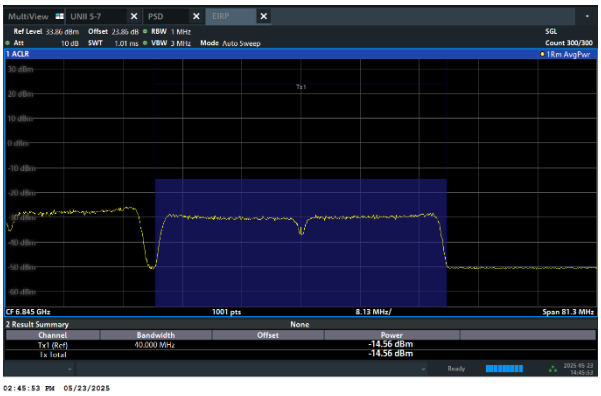
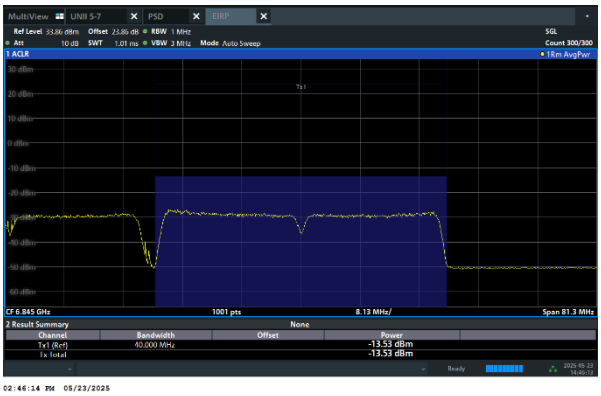
| Horizontal Antenna | Vertical Antenna |
|---|---|
|  |  |

| AFC EIRP Limit 33.83 dBm<br>DUT Center Frequency 6165 MHz, Bandwidth 40 MHz, Total EIRP 33.04 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |



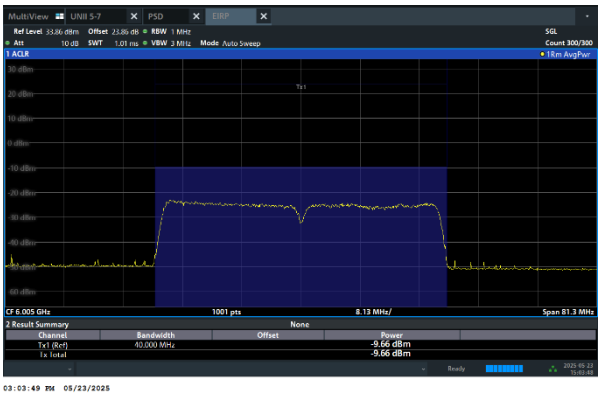
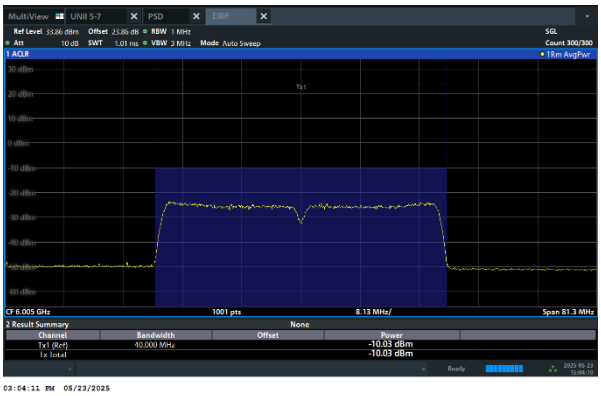


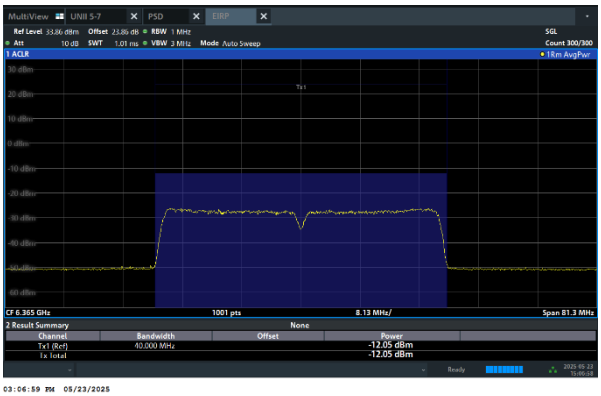
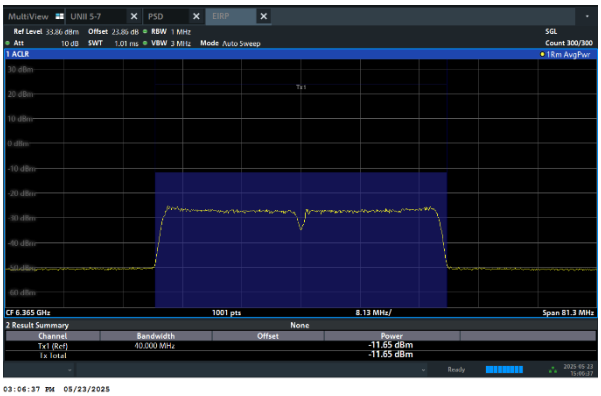
| AFC EIRP Limit 34.00 dBm<br>DUT Center Frequency 6805 MHz, Bandwidth 40 MHz, Total EIRP 32.44 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

| AFC EIRP Limit 32.20 dBm<br>DUT Center Frequency 6845 MHz, Bandwidth 40 MHz, Total EIRP 31.22 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |



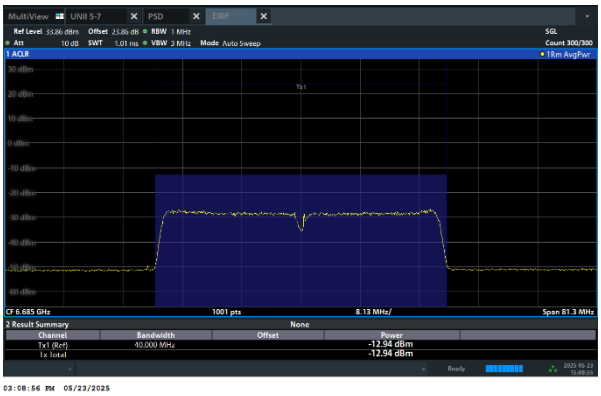
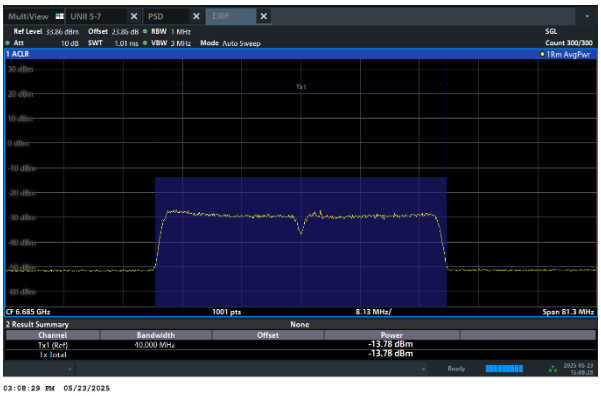


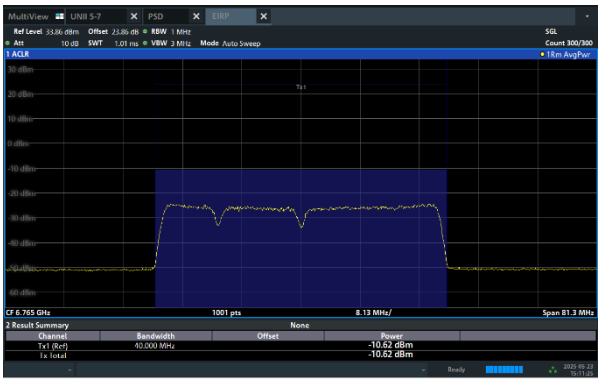
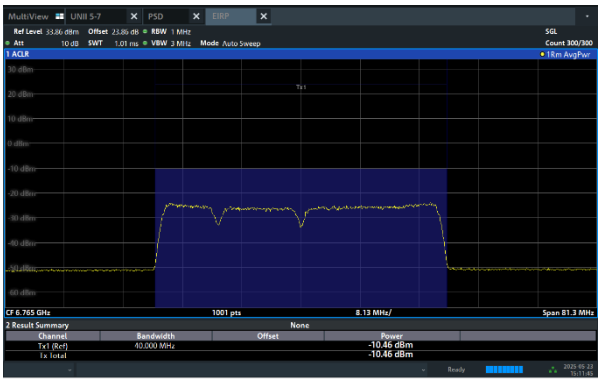
| AFC EIRP Limit 36.00 dBm<br>DUT Center Frequency 6005 MHz, Bandwidth 40 MHz, Total EIRP 35.39 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

| AFC EIRP Limit 34.06 dBm<br>DUT Center Frequency 6365 MHz, Bandwidth 40 MHz, Total EIRP 33.39 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |





| AFC EIRP Limit 33.08 dBm<br>DUT Center Frequency 6685 MHz, Bandwidth 40 MHz, Total EIRP 31.89 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

| AFC EIRP Limit 35.23 dBm<br>DUT Center Frequency 6765 MHz, Bandwidth 40 MHz, Total EIRP 34.69 dBm | |
|---|---|
| SA Reading Power [dBm] | |
| Horizontal Antenna | Vertical Antenna |
|  |  |

### 4.4 Unsuccessful spectrum access update

| # | Description | Results |
|---|---|---|
| 1 | If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 12 | Go to step 12 |
| 2 | AFC DUT set to Initial Pre-test State.<br>If needed (see Table 5 declaration), configure the AFC DUT with BSS parameters per Table 9 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the DUT with AFC System URL and server root certificate.<br>Trigger the DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request using either In-band or Out-of-band methods. | Not applicable |
| 3 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields. | Not applicable |
| 4 | AFC DUT Test Harness validates mandatory registration information | Not applicable |
| 5 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields. | Not applicable |

| # | Description | Results |
|---|---|---|
| 6 | Throughout the Step 2 to 5, RF Test Equipment monitors the output of the AFC DUT to confirm that the AFC DUT does not transmit:<br>● In the band if the AFC DUT supports only SP operation<br>Or<br>● Above LPI limits for AFC DUT whose manufacturer attests to its compliance with rules for LPI operation<br>Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the following:<br>● For SP only operation, AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies.<br>For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, AFC DUT transmit power in the band is less than CEILING [LPI limits, SP limits contained in the Available Spectrum Inquiry Response] and does not exceed emissions limits in adjacent frequencies | Not applicable |
| 7 | AFC DUT is power cycled.<br>If needed (see Table 5declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), new geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate. | Not applicable |
| 8 | Wait for 60 seconds<br>● If the AFC DUT does not send an Available Spectrum Inquiry Request, RF Test Equipment monitors the output of the DUT to verify the following and STOP the test:<br>■ For SP only operation, AFC DUT does not transmit in the band,<br>■ For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits.<br>● If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 8 | Not applicable |
| 9 | AFC DUT Test Harness evaluates validity of mandatory registration information. | Not applicable |

| # | Description | Results |
|---|---|---|
| 10 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available. | Not applicable |
| 11 | Throughout Step 7 to 10 and subsequent to Step 10 Test Equipment monitors the output of the AFC DUT to confirm that:<br>For SP only operation, AFC DUT does not transmit in the band.<br>For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits. | Not applicable |
| 12 | If the AFC DUT is Fixed Client, go to Step 13 else Stop the test | Go to step 13 |
| 13 | The AFC DUT set to Initial Pre-test State. | Done |
| 14 | If needed (see Table 5 declaration), configure the DUT with a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate.<br>Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request using either In-band or Out-of-band methods. | Done |
| 15 | AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields* | PASS |
| 16 | AFC DUT Test Harness validates the presence of mandatory registration information | PASS |
| 17 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response containing a list of available frequency ranges and/or channels and the maximum permissible transmit power in the availableFrequencyInfo and/or availableChannelInfo fields. | Done |
| 18 | If AFC DUT used Out-of-band method, initiate connection procedure between AFC DUT and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |
| 19 | Wait for 60 seconds<br>RF Test Equipment monitors any transmission by the AFC DUT conforms to the conditions contained in the Available Spectrum Inquiry Response and does not exceed emissions limits in adjacent frequencies | PASS |

| # | Description | Results |
|---|---|---|
| 20 | AFC DUT is power cycled.<br>If needed (see Table 5 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID or IC ID), new geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT with AFC System URL and server root certificate | Done |
| 21 | Wait for 60 seconds<br>If the AFC DUT does not send an Available Spectrum Inquiry Request, RF Test Equipment monitors that the AFC DUT does not transmit above maximum transmit power limits advertised by the Standard Power Access Point for Standard Client Devices in the channel.,<br>If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 22 else STOP the test | PASS |
| 22 | AFC DUT Test Harness evaluates validity of mandatory registration information. | PASS |
| 23 | AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available. | Done |
| 24 | If AFC DUT used Out-of-band method, initiate connection procedure between AFC DUT and SP Access Point by following instructions provided by the AFC DUT Vendor | Done |
| 25 | Wait for 60 seconds<br>RF Test Equipment monitors that the AFC DUT does not transmit above maximum transmit power limits advertised by the Standard Power Access Point for Standard Client Devices in the channel. | PASS |

### *4.4.1 AFCD.UAU Test Vectors*

| Test Vector | Test Category | Results |
|---|---|---|
| AFCD.UAU | Unsuccessful spectrum access update | PASS |

## 4.5 Unsuccessful server validation

| # | Description | Results |
|---|---|---|
| 1 | The AFC DUT set to Initial Pre-test State.<br>If needed (see Table 5 declaration), configure the AFC DUT with BSS parameters per Table 9 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters.<br>Configure the AFC DUT Test Harness with TLS configuration that is the same as the default configuration defined in Section 2.3.1 except for the following:<br>● Run 1: A different server certificate (and private key) with SAN domain name entry "badafc.com" (i.e. that does not match AFC system URL's domain name); signed by the same root certificate as per Section 2.3.1<br>● Run 2: A different server certificate (and private key) where all attributes other than Public Key are the same as the server certificate per Section 2.3.1, but the certificate is signed by a different root certificate<br>● Run 3: A different server certificate (and private key) with SAN domain name entry "wfatestorg.org" only (i.e. SAN domain name only matches suffix of AFC server's hostname); signed by the same root certificate as per Section 2.3.1<br>● Run 4: A different server certificate (and private key) where all attributes other than Public Key are the same as the server certificate per Section 2.3.1 signed by the same root certificate as per Section 2.3.1, but the server certificate is revoked as indicated in stapled OCSP response<br>● Run 5: Same configuration as per Section 2.3.1, except OCSP stapling is disabled and CRL/OCSP servers are not available<br>● Run 6: Same configuration as per Section 2.3.1, except stapled OCSP response has expired and CRL/OCSP servers are not available<br>● Run 7: Same configuration as per Section 2.3.1, except only the TLS cipher suite "eNULL" (no encryption) is enabled<br>● Run 8: N/A (same configuration as per Section 2.3.1)<br>Configure the DUT with the AFC System URL and the following root certificate:<br>● Runs 1-7: Root certificate as per Section 2.3.1<br>● Run 8: No root certificate<br>Trigger the DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request. | Done |

| # | Description | Results |
|---|---|---|
| 2 | AFC DUT Test Harness waits 10 seconds, and verifies no Available Spectrum Inquiry Request is sent to it. | PASS |
| 3 | Steps 1 and 2 are repeated for each of the remaining Runs | PASS |

### 4.5.1 AFCD.USV Test Vectors

| Test Vector | Test Category | Results |
|---|---|---|
| AFCD.USV | Unsuccessful server validation | PASS |

# Appendix B. AFC DUT Test Logs and Tool Report

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.1 | AFCD.RSA | Successful registration and spectrum access request | 47 CFR Section 15.407(k)(1) | Transmit only as instructed by AFC System | PASS |
| | | | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System prior to initial transmission | |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Provide required registration parameters | |
| | | | 47 CFR Section 15.407(k)(8)(iii) | Registration either directly or via proxy | |
| | | | 47 CFR Section 15.407(l)(ii) | Determination of appropriate channel configuration implied by AFC System response | |
| | | | 47 CFR 15.407(k)(8)(iv) | Must contact an AFC system at least once per day to obtain the latest list of available frequencies and the maximum permissible power | |

Note: For AFCD.RSA test logs, please refer to section B.1.

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.2 | AFCD.USA | Unsuccessful registration and spectrum access request | 47 CFR Section 15.407(k)(1) | Transmit only as instructed by AFC System | PASS |
| | | | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System prior to initial transmission | |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Provide required registration parameters | |
| | | | 47 CFR Section 15.407(k)(8)(iii) | Registration either directly or via proxy | |

Note: For AFCD.USA test logs, please refer to section B.2.

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.3 | AFCD.SAU | Successful spectrum access update | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System after change of location | PASS |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Update AFC System upon change of registration parameters | |
| | | | 47 CFR Section 15.407(k)(9)(i) | Report location and uncertainty from power-off condition | |

Note: For AFCD.SAU test logs, please refer to section B.3.

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.4 | AFCD.UAU | Unsuccessful spectrum access update | 47 CFR Section 15.407(k)(8)(i) | Register with AFC System after change of location | PASS |
| | | | 47 CFR Section 15.407(k)(8)(ii) | Update AFC System upon change of registration parameters | |
| | | | 47 CFR Section 15.407(k)(9)(i) | Report location and uncertainty from power-off condition | |

Note: For AFCD.UAU test logs, please refer to section B.4.

| Section | Test Case ID | Test Description | FCC Requirement | Short Description | Test Result |
|---|---|---|---|---|---|
| 4.5 | AFCD.USV | Unsuccessful server validation | 47 CFR Section 15.407(k)(8)(v) | Incorporate adequate security measurements to prevent it from accessing AFC systems not approved by the FCC | PASS |

Note: For AFCD.USV test logs, please refer to section B.5.

## B.1. Successful registration and spectrum access request (RSA)

### B.1.1. AFC DUT Compliance Test Report

### RSA Test 1

**AFC DUT Compliance Test Report**

**DUT Information**

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

**Test Result**

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii) | CT_AFC_FC_STA_AFCDRSA31_Channel_40MHz_10648_1 (Successful registration and spectrum access request) | PASS |

**Test Measurements**

**TestCaseName: CT_AFC_FC_STA_AFCDRSA31_Channel_40MHz_10648_1 (Successful registration and spectrum access request)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID | Valid mandatory registration information | true | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE | AFC DUT conforms to the conditions in Spectrum Response (31.433557586491087 dBm EIRP) on channel center frequency index 51 bandwidth 40. | true | PASS |

### RSA Test 2

**AFC DUT Compliance Test Report**

**DUT Information**

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

**Test Result**

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii) | CT_AFC_FC_STA_AFCDRSA31_Channel_40MHz_10648_1 (Successful registration and spectrum access request) | PASS |

**Test Measurements**

**TestCaseName: CT_AFC_FC_STA_AFCDRSA31_Channel_40MHz_10648_1 (Successful registration and spectrum access request)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID | Valid mandatory registration information | true | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE | AFC DUT conforms to the conditions in Spectrum Response (32.0436995729832 dBm EIRP) on channel center frequency index 43 bandwidth 40. | true | PASS |

### B.1.2. DUT Available Spectrum Inquiry Request-Response

### RSA Test 1


```
############################     2025-05-23T16:46:22Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "S198T1250800008-1748018779018",
                "deviceDescriptor": {
                    "serialNumber": "S198T1250800008",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-G2BNF356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.189533
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
```

```
        ]
    }
}

############################    2025-05-23T16:46:22Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748018771995",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.30363,
                            "latitude": 36.189526
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
```

```
                }
            ]
        }
}

############################     2025-05-23T16:46:22Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        24.11067041650068,
                        29.81470376868868,
                        30.687001840070227,
                        29.98981637467453,
                        29.371917022980874,
                        30.011264774276068,
                        31.433557586491087,
                        25.110841303993325,
                        28.56629443887767,
                        24.280662358999408,
                        36.0,
                        24.935463132961527,
                        26.39373010331849,
                        34.66249046550687,
                        31.818282094416436,
                        32.2886319504285,
```

```
                                24.47751834643808,
                                33.76344553808128,
                                29.748347487009358,
                                27.24639830538532
                            ]
                        }
                    ],
                    "requestId": "M229M1251300089-1748018771995",
                    "availabilityExpireTime": "2025-05-24T16:46:22Z",
                    "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
                }
            ],
            "version": "1.4"
}

############################     2025-05-23T16:46:22Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        24.11067041650068,
                        29.81470376868868,
                        30.687001840070227,
                        29.98981637467453,
                        29.371917022980874,
                        30.011264774276068,
```

```
                                31.433557586491087,
                                25.110841303993325,
                                28.56629443887767,
                                24.280662358999408,
                                36.0,
                                24.935463132961527,
                                26.39373010331849,
                                34.66249046550687,
                                31.818282094416436,
                                32.2886319504285,
                                24.47751834643808,
                                33.76344553808128,
                                29.748347487009358,
                                27.24639830538532
                            ]
                        }
                    ],
                    "requestId": "M229M1251300089-1748018771995",
                    "availabilityExpireTime": "2025-05-24T16:46:22Z",
                    "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
                }
            ],
            "version": "1.4"
}

############################     2025-05-23T16:46:30Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "536",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748018790808",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
```

```
                    "center": {
                        "longitude": -115.30363,
                        "latitude": 36.18953
                    },
                    "minorAxis": 10,
                    "majorAxis": 10,
                    "orientation": 0.0
                },
                "elevation": {
                    "height": 0.0,
                    "heightType": "AGL",
                    "verticalUncertainty": 1
                },
                "indoorDeployment": 2
            },
            "inquiredChannels": [
                {
                    "globalOperatingClass": 132
                }
            ],
            "minDesiredPower": -175.0
        }
    ]
  }
}

############################    2025-05-23T16:46:31Z    ############################
{
  "availableSpectrumInquiryResponses": [
    {
        "response": {
            "responseCode": 0,
            "shortDescription": "SUCCESS"
        },
        "availableChannelInfo": [
            {
                "channelCfi": [
                    3,
                    11,
                    19,
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
```

```
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    24.11067041650068,
                    29.81470376868868,
                    30.687001840070227,
                    29.98981637467453,
                    29.371917022980874,
                    30.011264774276068,
                    31.433557586491087,
                    25.110841303993325,
                    28.56629443887767,
                    24.280662358999408,
                    36.0,
                    24.935463132961527,
                    26.39373010331849,
                    34.66249046550687,
                    31.818282094416436,
                    32.2886319504285,
                    24.47751834643808,
                    33.76344553808128,
                    29.748347487009358,
                    27.24639830538532
                ]
            }
        ],
        "requestId": "M229M1251300089-1748018790808",
        "availabilityExpireTime": "2025-05-24T16:46:30Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T16:46:36Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748018796041",
```

```
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.30363,
                            "latitude": 36.189526
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-23T16:46:36Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
```

```
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    24.11067041650068,
                    29.81470376868868,
                    30.687001840070227,
                    29.98981637467453,
                    29.371917022980874,
                    30.011264774276068,
                    31.433557586491087,
                    25.110841303993325,
                    28.56629443887767,
                    24.280662358999408,
                    36.0,
                    24.935463132961527,
                    26.39373010331849,
                    34.66249046550687,
                    31.818282094416436,
                    32.2886319504285,
                    24.47751834643808,
                    33.76344553808128,
                    29.748347487009358,
                    27.24639830538532
                ]
            }
        ],
        "requestId": "M229M1251300089-1748018796041",
        "availabilityExpireTime": "2025-05-24T16:46:36Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################## 2025-05-23T16:52:17Z ##############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
```

```
            "X-Forwarded-For": "52.10.83.105",
            "X-Forwarded-Host": "testserver.wfatestorg.org",
            "X-Forwarded-Server": "testserver.wfatestorg.org",
            "Content-Length": "538",
            "Connection": "Keep-Alive"
        },
        "body": {
            "version": "1.4",
            "availableSpectrumInquiryRequests": [
                {
                    "requestId": "M229M1251300089-1748019137056",
                    "deviceDescriptor": {
                        "serialNumber": "M229M1251300089",
                        "certificationId": [
                            {
                                "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                                "id": "2ABOF-GXRN8356900"
                            }
                        ]
                    },
                    "location": {
                        "ellipse": {
                            "center": {
                                "longitude": -115.30363,
                                "latitude": 36.189526
                            },
                            "minorAxis": 10,
                            "majorAxis": 10,
                            "orientation": 90.0
                        },
                        "elevation": {
                            "height": 0.0,
                            "heightType": "AGL",
                            "verticalUncertainty": 1
                        },
                        "indoorDeployment": 2
                    },
                    "inquiredChannels": [
                        {
                            "globalOperatingClass": 132
                        }
                    ],
                    "minDesiredPower": -175.0
                }
            ]
        }
}

############################     2025-05-23T16:52:17Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
```

```
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        24.11067041650068,
                        29.81470376868868,
                        30.687001840070227,
                        29.98981637467453,
                        29.371917022980874,
                        30.011264774276068,
                        31.433557586491087,
                        25.110841303993325,
                        28.56629443887767,
                        24.280662358999408,
                        36.0,
                        24.935463132961527,
                        26.39373010331849,
                        34.66249046550687,
                        31.818282094416436,
                        32.2886319504285,
                        24.47751834643808,
                        33.76344553808128,
                        29.748347487009358,
                        27.24639830538532
                    ]
                }
            ],
            "requestId": "M229M1251300089-1748019137056",
            "availabilityExpireTime": "2025-05-24T16:52:17Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
```

```
    "version": "1.4"
}
```

## RSA Test 2


```
############################     2025-05-23T17:45:22Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "S198T1250800008-1748022312017",
                "deviceDescriptor": {
                    "serialNumber": "S198T1250800008",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-G2BNF356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.189533
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
```

```
}

############################     2025-05-23T17:45:22Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        28.630196325803396,
                        30.307008544377723,
                        26.264034304777766,
                        25.261440585633586,
                        26.009146797698385,
                        32.0436995729832,
                        27.8161874688944,
                        30.90181001384051,
                        25.50330196811481,
                        30.415661312895082,
                        31.404243405347287,
                        34.82147311287017,
                        33.207795196559225,
                        30.3164615827049,
                        30.489040835439248,
                        26.943164099633222,
                        30.083210398929765,
                        25.297711218625828,
                        29.193025973607234,
```

```
                                34.19574854887878
                            ]
                        }
                ],
                "requestId": "S198T1250800008-1748022312017",
                "availabilityExpireTime": "2025-05-24T17:45:22Z",
                "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
            }
        ],
        "version": "1.4"
}

############################     2025-05-23T17:45:37Z     ############################
{
        "headers": {
            "Host": "testserver.wfatestorg.org",
            "Accept": "*/*",
            "Content-Type": "application/json",
            "Accept-Encoding": "gzip",
            "User-Agent": "okhttp/2.7.5",
            "X-Forwarded-For": "52.10.83.105",
            "X-Forwarded-Host": "testserver.wfatestorg.org",
            "X-Forwarded-Server": "testserver.wfatestorg.org",
            "Content-Length": "536",
            "Connection": "Keep-Alive"
        },
        "body": {
            "version": "1.4",
            "availableSpectrumInquiryRequests": [
                {
                    "requestId": "M229M1251300089-1748022337141",
                    "deviceDescriptor": {
                        "serialNumber": "M229M1251300089",
                        "certificationId": [
                            {
                                "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                                "id": "2ABOF-GXRN8356900"
                            }
                        ]
                    },
                    "location": {
                        "ellipse": {
                            "center": {
                                "longitude": -115.30363,
                                "latitude": 36.18953
                            },
                            "minorAxis": 10,
                            "majorAxis": 10,
                            "orientation": 0.0
                        },
                        "elevation": {
                            "height": 0.0,
                            "heightType": "AGL",
                            "verticalUncertainty": 1
                        },
```

```
                "indoorDeployment": 2
            },
            "inquiredChannels": [
                {
                    "globalOperatingClass": 132
                }
            ],
            "minDesiredPower": -175.0
        }
    ]
  }
}

############################    2025-05-23T17:45:37Z    ############################
{
  "availableSpectrumInquiryResponses": [
    {
        "response": {
            "responseCode": 0,
            "shortDescription": "SUCCESS"
        },
        "availableChannelInfo": [
            {
                "channelCfi": [
                    3,
                    11,
                    19,
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    28.630196325803396,
                    30.307008544377723,
                    26.264034304777766,
                    25.261440585633586,
                    26.009146797698385,
                    32.0436995729832,
                    27.8161874688944,
                    30.90181001384051,
```

```
                                25.50330196811481,
                                30.415661312895082,
                                31.404243405347287,
                                34.82147311287017,
                                33.207795196559225,
                                30.3164615827049,
                                30.489040835439248,
                                26.943164099633222,
                                30.083210398929765,
                                25.297711218625828,
                                29.193025973607234,
                                34.19574854887878
                            ]
                        }
                    ],
                    "requestId": "M229M1251300089-1748022337141",
                    "availabilityExpireTime": "2025-05-24T17:45:37Z",
                    "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
                }
            ],
            "version": "1.4"
}
```

## B.2. Unsuccessful registration and spectrum access request (USA)

### B.2.1. AFC DUT Compliance Test Report

**AFC DUT Compliance Test Report**

**DUT Information**

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

**Test Result**

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii) | CT_AFC_FC_STA_AFCDUSA32_Channel_10651_1 (Unsuccessful registration and spectrum access request) | PASS |

**Test Measurements**

**TestCaseName: CT_AFC_FC_STA_AFCDUSA32_Channel_10651_1 (Unsuccessful registration and spectrum access request)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID | Valid mandatory registration information | true | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE | AFC DUT conforms to the conditons in the Spectrum Inquiry Response | true | PASS |

### B.2.2. DUT Available Spectrum Inquiry Request-Response


```
############################    2025-05-21T18:24:23Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1747851860216",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
```

```
                    "ellipse": {
                        "center": {
                            "longitude": -115.30362,
                            "latitude": 36.189545
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-21T18:24:23Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1747851853274",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
```

```
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.30362,
                            "latitude": 36.189545
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-21T18:24:23Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [],
            "requestId": "M229M1251300089-1747851853274",
            "availabilityExpireTime": "2025-05-22T18:24:23Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}

############################    2025-05-21T18:24:23Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [],
            "requestId": "M229M1251300089-1747851853274",
```

```
                "availabilityExpireTime": "2025-05-22T18:24:23Z",
                "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
            }
        ],
        "version": "1.4"
}

############################     2025-05-21T18:24:24Z     ############################
{
        "headers": {
            "Host": "testserver.wfatestorg.org",
            "Accept": "*/*",
            "Content-Type": "application/json",
            "Accept-Encoding": "gzip",
            "User-Agent": "okhttp/2.7.5",
            "X-Forwarded-For": "52.10.83.105",
            "X-Forwarded-Host": "testserver.wfatestorg.org",
            "X-Forwarded-Server": "testserver.wfatestorg.org",
            "Content-Length": "538",
            "Connection": "Keep-Alive"
        },
        "body": {
            "version": "1.4",
            "availableSpectrumInquiryRequests": [
                {
                    "requestId": "S198T1250800008-1747851864871",
                    "deviceDescriptor": {
                        "serialNumber": "S198T1250800008",
                        "certificationId": [
                            {
                                "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                                "id": "2ABOF-G2BNF356900"
                            }
                        ]
                    },
                    "location": {
                        "ellipse": {
                            "center": {
                                "longitude": -115.303635,
                                "latitude": 36.189537
                            },
                            "minorAxis": 10,
                            "majorAxis": 10,
                            "orientation": 0.0
                        },
                        "elevation": {
                            "height": 0.0,
                            "heightType": "AGL",
                            "verticalUncertainty": 1
                        },
                        "indoorDeployment": 2
                    },
                    "inquiredChannels": [
                        {
                            "globalOperatingClass": 132
```

```
                        }
                    ],
                    "minDesiredPower": -175.0
                }
            ]
        }
}

############################     2025-05-21T18:24:25Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [],
            "requestId": "S198T1250800008-1747851864871",
            "availabilityExpireTime": "2025-05-22T18:24:25Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}
```

## B.3. Successful spectrum access update (SAU)

### B.3.1. AFC DUT Compliance Test Report

**AFC DUT Compliance Test Report**

**DUT Information**

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

**Test Result**

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(9)(i) | CT_AFC_FC_STA_AFCDSAU33_Channel_10652_1 (Successful spectrum access update) | PASS |

**Test Measurements**

**TestCaseName: CT_AFC_FC_STA_AFCDSAU33_Channel_10652_1 (Successful spectrum access update)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_1 | Valid mandatory registration information | true | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE_1 | AFC DUT conforms to the conditions in Spectrum Response (34.60593731091809 dBm EIRP) on channel 11 bandwidth 20. | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_2 | Valid mandatory registration information | true | PASS |
| AFC_DUT_SP_OPERATION_2 | AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response | false | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE_2 | AFC DUT conforms to the conditions in Spectrum Response (36.0 dBm EIRP) on channel 11 bandwidth 20. | true | PASS |

### B.3.2. DUT Available Spectrum Inquiry Request-Response


```
############################     2025-05-23T20:29:49Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "S198T1250800008-1748032178844",
                "deviceDescriptor": {
                    "serialNumber": "S198T1250800008",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-G2BNF356900"
```

```
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.189526
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 9.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################     2025-05-23T20:29:49Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748032184512",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
```

```
                    "id": "2ABOF-GXRN8356900"
                }
            ]
        },
        "location": {
            "ellipse": {
                "center": {
                    "longitude": -115.303635,
                    "latitude": 36.18953
                },
                "minorAxis": 10,
                "majorAxis": 10,
                "orientation": 0.0
            },
            "elevation": {
                "height": 0.0,
                "heightType": "AGL",
                "verticalUncertainty": 1
            },
            "indoorDeployment": 2
        },
        "inquiredChannels": [
            {
                "globalOperatingClass": 132
            }
        ],
        "minDesiredPower": -175.0
    }
  ]
 }
}

############################    2025-05-23T20:29:49Z    ############################
{
 "availableSpectrumInquiryResponses": [
  {
    "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
    },
    "availableChannelInfo": [
        {
            "channelCfi": [
                3,
                11,
                19,
                27,
                35,
                43,
                51,
                59,
                67,
                75,
                83,
                91,
```

```
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    24.128447070438185,
                    34.60593731091809,
                    29.21944191581102,
                    26.036471125281068,
                    29.190719362655763,
                    33.82761956024315,
                    27.07878162595751,
                    31.923246946730217,
                    24.426361781121734,
                    26.25251973862163,
                    26.393591194986385,
                    24.2803586530948,
                    28.354875417500097,
                    30.798775955005276,
                    27.197753175858544,
                    28.26910895869281,
                    27.884274430980025,
                    28.27900527794009,
                    34.00297607606437,
                    32.20094283782867
                ]
            }
        ],
        "requestId": "S198T1250800008-1748032178844",
        "availabilityExpireTime": "2025-05-24T20:29:49Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:29:49Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
```

```
                    19,
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    24.128447070438185,
                    34.60593731091809,
                    29.21944191581102,
                    26.036471125281068,
                    29.190719362655763,
                    33.82761956024315,
                    27.07878162595751,
                    31.923246946730217,
                    24.426361781121734,
                    26.25251973862163,
                    26.393591194986385,
                    24.2803586530948,
                    28.354875417500097,
                    30.798775955005276,
                    27.197753175858544,
                    28.26910895869281,
                    27.884274430980025,
                    28.27900527794009,
                    34.00297607606437,
                    32.20094283782867
                ]
            }
        ],
        "requestId": "M229M1251300089-1748032184512",
        "availabilityExpireTime": "2025-05-24T20:29:49Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:52:16Z    ############################
{
    "headers": {
```

```
            "Host": "testserver.wfatestorg.org",
            "Accept": "*/*",
            "Content-Type": "application/json",
            "Accept-Encoding": "gzip",
            "User-Agent": "okhttp/2.7.5",
            "X-Forwarded-For": "52.10.83.105",
            "X-Forwarded-Host": "testserver.wfatestorg.org",
            "X-Forwarded-Server": "testserver.wfatestorg.org",
            "Content-Length": "537",
            "Connection": "Keep-Alive"
        },
        "body": {
            "version": "1.4",
            "availableSpectrumInquiryRequests": [
                {
                    "requestId": "M229M1251300089-1748033535852",
                    "deviceDescriptor": {
                        "serialNumber": "M229M1251300089",
                        "certificationId": [
                            {
                                "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                                "id": "2ABOF-GXRN8356900"
                            }
                        ]
                    },
                    "location": {
                        "ellipse": {
                            "center": {
                                "longitude": -115.303635,
                                "latitude": 36.18953
                            },
                            "minorAxis": 10,
                            "majorAxis": 10,
                            "orientation": 0.0
                        },
                        "elevation": {
                            "height": 0.0,
                            "heightType": "AGL",
                            "verticalUncertainty": 1
                        },
                        "indoorDeployment": 2
                    },
                    "inquiredChannels": [
                        {
                            "globalOperatingClass": 132
                        }
                    ],
                    "minDesiredPower": -175.0
                }
            ]
        }
}

############################     2025-05-23T20:52:16Z     ############################
{
```

```
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033535890",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-23T20:52:16Z    ############################
```

```
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033535933",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}
```

```
############################     2025-05-23T20:53:13Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "539",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "S198T1250800008-1748033593097",
                "deviceDescriptor": {
                    "serialNumber": "S198T1250800008",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-G2BNF356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.189526
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}
```

```
############################     2025-05-23T20:53:23Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033603542",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.30365,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
```

```
}

############################    2025-05-23T20:54:16Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033656052",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.30365,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
```

```
    }
}

############################     2025-05-23T20:54:28Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "536",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033668085",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.30365,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
```

```
            ]
        }
}

############################     2025-05-23T20:55:01Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        26.125459515938857,
                        36.0,
                        25.0146875967891,
                        31.173488146356384,
                        25.2516559811393,
                        24.259304735779068,
                        29.836766734655196,
                        26.57553029358118,
                        27.8614815130412,
                        25.1821892379047,
                        34.05493640343583,
                        31.405673800071405,
                        26.733866049282604,
                        27.41737683060705,
                        25.678268212702648,
                        33.07673724620131,
                        27.717163717995184,
```

```
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "M229M1251300089-1748033603542",
        "availabilityExpireTime": "2025-05-24T20:55:01Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:55:01Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "S198T1250800008-1748033701876",
                "deviceDescriptor": {
                    "serialNumber": "S198T1250800008",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-G2BNF356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.189526
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
```

```
                    "verticalUncertainty": 1
                },
                "indoorDeployment": 2
            },
            "inquiredChannels": [
                {
                    "globalOperatingClass": 132
                }
            ],
            "minDesiredPower": -175.0
        }
    ]
  }
}

############################     2025-05-23T20:55:01Z     ############################
{
  "availableSpectrumInquiryResponses": [
    {
      "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
      },
      "availableChannelInfo": [
        {
          "channelCfi": [
            3,
            11,
            19,
            27,
            35,
            43,
            51,
            59,
            67,
            75,
            83,
            91,
            123,
            131,
            139,
            147,
            155,
            163,
            171,
            179
          ],
          "globalOperatingClass": 132,
          "maxEirp": [
            26.125459515938857,
            36.0,
            25.0146875967891,
            31.173488146356384,
            25.2516559811393,
            24.259304735779068,
```

```
                    29.836766734655196,
                    26.57553029358118,
                    27.8614815130412,
                    25.1821892379047,
                    34.05493640343583,
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "S198T1250800008-1748033701876",
        "availabilityExpireTime": "2025-05-24T20:55:01Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:55:02Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
```

```
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    26.125459515938857,
                    36.0,
                    25.0146875967891,
                    31.173488146356384,
                    25.2516559811393,
                    24.259304735779068,
                    29.836766734655196,
                    26.57553029358118,
                    27.8614815130412,
                    25.1821892379047,
                    34.05493640343583,
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "M229M1251300089-1748033668085",
        "availabilityExpireTime": "2025-05-24T20:55:02Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:55:02Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
```

```
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    26.125459515938857,
                    36.0,
                    25.0146875967891,
                    31.173488146356384,
                    25.2516559811393,
                    24.259304735779068,
                    29.836766734655196,
                    26.57553029358118,
                    27.8614815130412,
                    25.1821892379047,
                    34.05493640343583,
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "M229M1251300089-1748033535852",
        "availabilityExpireTime": "2025-05-24T20:55:02Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:55:02Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
```

```
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        26.125459515938857,
                        36.0,
                        25.0146875967891,
                        31.173488146356384,
                        25.2516559811393,
                        24.259304735779068,
                        29.836766734655196,
                        26.57553029358118,
                        27.8614815130412,
                        25.1821892379047,
                        34.05493640343583,
                        31.405673800071405,
                        26.733866049282604,
                        27.41737683060705,
                        25.678268212702648,
                        33.07673724620131,
                        27.717163717995184,
                        35.225676328974714,
                        27.159319225070703,
                        26.119310038209875
                    ]
                }
            ],
            "requestId": "S198T1250800008-1748033593097",
            "availabilityExpireTime": "2025-05-24T20:55:02Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}
```

```
############################     2025-05-23T20:55:02Z     ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        26.125459515938857,
                        36.0,
                        25.0146875967891,
                        31.173488146356384,
                        25.2516559811393,
                        24.259304735779068,
                        29.836766734655196,
                        26.57553029358118,
                        27.8614815130412,
                        25.1821892379047,
                        34.05493640343583,
                        31.405673800071405,
                        26.733866049282604,
                        27.41737683060705,
                        25.678268212702648,
                        33.07673724620131,
                        27.717163717995184,
                        35.225676328974714,
                        27.159319225070703,
                        26.119310038209875
                    ]
```

```
                }
            ],
            "requestId": "S198T1250800008-1748033593097",
            "availabilityExpireTime": "2025-05-24T20:55:02Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}

############################    2025-05-23T20:55:02Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        26.125459515938857,
                        36.0,
                        25.0146875967891,
                        31.173488146356384,
                        25.2516559811393,
                        24.259304735779068,
                        29.836766734655196,
                        26.57553029358118,
                        27.8614815130412,
                        25.1821892379047,
                        34.05493640343583,
```

```
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "M229M1251300089-1748033535933",
        "availabilityExpireTime": "2025-05-24T20:55:02Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:55:02Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
                        27,
                        35,
                        43,
                        51,
                        59,
                        67,
                        75,
                        83,
                        91,
                        123,
                        131,
                        139,
                        147,
                        155,
                        163,
                        171,
                        179
                    ],
                    "globalOperatingClass": 132,
                    "maxEirp": [
                        26.125459515938857,
```

```
                                36.0,
                                25.0146875967891,
                                31.173488146356384,
                                25.2516559811393,
                                24.259304735779068,
                                29.836766734655196,
                                26.57553029358118,
                                27.8614815130412,
                                25.1821892379047,
                                34.05493640343583,
                                31.405673800071405,
                                26.733866049282604,
                                27.41737683060705,
                                25.678268212702648,
                                33.07673724620131,
                                27.717163717995184,
                                35.225676328974714,
                                27.159319225070703,
                                26.119310038209875
                            ]
                        }
                    ],
                    "requestId": "M229M1251300089-1748033535933",
                    "availabilityExpireTime": "2025-05-24T20:55:02Z",
                    "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
                }
            ],
            "version": "1.4"
}

############################     2025-05-23T20:56:00Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033760052",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
```

```
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 0.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################     2025-05-23T20:56:00Z     ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "537",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748033760135",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
```

```
                    "id": "2ABOF-GXRN8356900"
                }
            ]
        },
        "location": {
            "ellipse": {
                "center": {
                    "longitude": -115.303635,
                    "latitude": 36.18953
                },
                "minorAxis": 10,
                "majorAxis": 10,
                "orientation": 0.0
            },
            "elevation": {
                "height": 0.0,
                "heightType": "AGL",
                "verticalUncertainty": 1
            },
            "indoorDeployment": 2
        },
        "inquiredChannels": [
            {
                "globalOperatingClass": 132
            }
        ],
        "minDesiredPower": -175.0
    }
  ]
 }
}

############################    2025-05-23T20:56:00Z    ############################
{
 "availableSpectrumInquiryResponses": [
  {
    "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
    },
    "availableChannelInfo": [
        {
            "channelCfi": [
                3,
                11,
                19,
                27,
                35,
                43,
                51,
                59,
                67,
                75,
                83,
                91,
```

```
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    26.125459515938857,
                    36.0,
                    25.0146875967891,
                    31.173488146356384,
                    25.2516559811393,
                    24.259304735779068,
                    29.836766734655196,
                    26.57553029358118,
                    27.8614815130412,
                    25.1821892379047,
                    34.05493640343583,
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "M229M1251300089-1748033760052",
        "availabilityExpireTime": "2025-05-24T20:56:00Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:56:00Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
```

```
                    19,
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    26.125459515938857,
                    36.0,
                    25.0146875967891,
                    31.173488146356384,
                    25.2516559811393,
                    24.259304735779068,
                    29.836766734655196,
                    26.57553029358118,
                    27.8614815130412,
                    25.1821892379047,
                    34.05493640343583,
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
        "requestId": "M229M1251300089-1748033760135",
        "availabilityExpireTime": "2025-05-24T20:56:00Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
  ],
  "version": "1.4"
}

############################    2025-05-23T20:56:07Z    ############################
{
  "headers": {
```

```
            "Host": "testserver.wfatestorg.org",
            "Accept": "*/*",
            "Content-Type": "application/json",
            "Accept-Encoding": "gzip",
            "User-Agent": "okhttp/2.7.5",
            "X-Forwarded-For": "52.10.83.105",
            "X-Forwarded-Host": "testserver.wfatestorg.org",
            "X-Forwarded-Server": "testserver.wfatestorg.org",
            "Content-Length": "537",
            "Connection": "Keep-Alive"
        },
        "body": {
            "version": "1.4",
            "availableSpectrumInquiryRequests": [
                {
                    "requestId": "M229M1251300089-1748033767109",
                    "deviceDescriptor": {
                        "serialNumber": "M229M1251300089",
                        "certificationId": [
                            {
                                "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                                "id": "2ABOF-GXRN8356900"
                            }
                        ]
                    },
                    "location": {
                        "ellipse": {
                            "center": {
                                "longitude": -115.303635,
                                "latitude": 36.18953
                            },
                            "minorAxis": 10,
                            "majorAxis": 10,
                            "orientation": 0.0
                        },
                        "elevation": {
                            "height": 0.0,
                            "heightType": "AGL",
                            "verticalUncertainty": 1
                        },
                        "indoorDeployment": 2
                    },
                    "inquiredChannels": [
                        {
                            "globalOperatingClass": 132
                        }
                    ],
                    "minDesiredPower": -175.0
                }
            ]
        }
}

############################     2025-05-23T20:56:07Z     ############################
{
```

```
"availableSpectrumInquiryResponses": [
    {
        "response": {
            "responseCode": 0,
            "shortDescription": "SUCCESS"
        },
        "availableChannelInfo": [
            {
                "channelCfi": [
                    3,
                    11,
                    19,
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    26.125459515938857,
                    36.0,
                    25.0146875967891,
                    31.173488146356384,
                    25.2516559811393,
                    24.259304735779068,
                    29.836766734655196,
                    26.57553029358118,
                    27.8614815130412,
                    25.1821892379047,
                    34.05493640343583,
                    31.405673800071405,
                    26.733866049282604,
                    27.41737683060705,
                    25.678268212702648,
                    33.07673724620131,
                    27.717163717995184,
                    35.225676328974714,
                    27.159319225070703,
                    26.119310038209875
                ]
            }
        ],
```

```
                "requestId": "M229M1251300089-1748033767109",
                "availabilityExpireTime": "2025-05-24T20:56:07Z",
                "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
            }
        ],
        "version": "1.4"
}
```

## B.4. Unsuccessful spectrum access update (UAU)

### B.4.1. AFC DUT Compliance Test Report

**AFC DUT Compliance Test Report**

**DUT Information**

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

**Test Result**

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(9)(i) | CT_AFC_FC_STA_AFCDUAU34_Channel_10653_1 (Unsuccessful spectrum access update) | PASS |

**Test Measurements**

**TestCaseName: CT_AFC_FC_STA_AFCDUAU34_Channel_10653_1 (Unsuccessful spectrum access update)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_1 | Valid mandatory registration information | true | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE_1 | AFC DUT conforms to the conditions in Spectrum Response (36.0 dBm EIRP) on channel 3 bandwidth 20. | true | PASS |
| AFC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_2 | Valid mandatory registration information | true | PASS |
| AFC_DUT_CONFORM_SPECTRUM_INQUIRYRESPONSE_2 | AFC DUT conforms to the conditons in the Spectrum Inquiry Response | true | PASS |

### B.4.2. DUT Available Spectrum Inquiry Request-Response


```
############################## 2025-05-23T20:03:25Z ##############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "S198T1250800008-1748030594808",
                "deviceDescriptor": {
                    "serialNumber": "S198T1250800008",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-G2BNF356900"
                        }
```

```
                ]
            },
            "location": {
                "ellipse": {
                    "center": {
                        "longitude": -115.303635,
                        "latitude": 36.189526
                    },
                    "minorAxis": 10,
                    "majorAxis": 10,
                    "orientation": 0.0
                },
                "elevation": {
                    "height": 0.0,
                    "heightType": "AGL",
                    "verticalUncertainty": 1
                },
                "indoorDeployment": 2
            },
            "inquiredChannels": [
                {
                    "globalOperatingClass": 132
                }
            ],
            "minDesiredPower": -175.0
        }
    ]
  }
}

############################    2025-05-23T20:03:25Z    ############################
{
  "availableSpectrumInquiryResponses": [
    {
        "response": {
            "responseCode": 0,
            "shortDescription": "SUCCESS"
        },
        "availableChannelInfo": [
            {
                "channelCfi": [
                    3,
                    11,
                    19,
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
```

```
                                139,
                                147,
                                155,
                                163,
                                171,
                                179
                            ],
                            "globalOperatingClass": 132,
                            "maxEirp": [
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0,
                                36.0
                            ]
                        }
                    ],
                    "requestId": "S198T1250800008-1748030594808",
                    "availabilityExpireTime": "2025-05-24T20:03:25Z",
                    "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
                }
            ],
            "version": "1.4"
        }

############################     2025-05-23T20:03:28Z     ############################
        {
            "headers": {
                "Host": "testserver.wfatestorg.org",
                "Accept": "*/*",
                "Content-Type": "application/json",
                "Accept-Encoding": "gzip",
                "User-Agent": "okhttp/2.7.5",
                "X-Forwarded-For": "52.10.83.105",
                "X-Forwarded-Host": "testserver.wfatestorg.org",
                "X-Forwarded-Server": "testserver.wfatestorg.org",
                "Content-Length": "538",
                "Connection": "Keep-Alive"
            },
            "body": {
```

```
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748030608221",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-23T20:03:28Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [
                {
                    "channelCfi": [
                        3,
                        11,
                        19,
```

```
                    27,
                    35,
                    43,
                    51,
                    59,
                    67,
                    75,
                    83,
                    91,
                    123,
                    131,
                    139,
                    147,
                    155,
                    163,
                    171,
                    179
                ],
                "globalOperatingClass": 132,
                "maxEirp": [
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0,
                    36.0
                ]
            }
        ],
        "requestId": "M229M1251300089-1748030608221",
        "availabilityExpireTime": "2025-05-24T20:03:28Z",
        "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
    }
],
"version": "1.4"
}

############################    2025-05-23T20:24:25Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
```

```
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748031865718",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-23T20:24:25Z    ############################
{
    "headers": {
```

```
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748031865752",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-23T20:24:26Z    ############################
{
```

```
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748031865961",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}
```


##########################  2025-05-23T20:24:26Z  ##########################

```
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [],
            "requestId": "M229M1251300089-1748031865752",
            "availabilityExpireTime": "2025-05-24T20:24:26Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}

############################    2025-05-23T20:24:26Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [],
            "requestId": "M229M1251300089-1748031865752",
            "availabilityExpireTime": "2025-05-24T20:24:26Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}

############################    2025-05-23T20:24:26Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
                "responseCode": 0,
                "shortDescription": "SUCCESS"
            },
            "availableChannelInfo": [],
            "requestId": "M229M1251300089-1748031865961",
            "availabilityExpireTime": "2025-05-24T20:24:26Z",
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
        }
    ],
    "version": "1.4"
}

############################    2025-05-23T20:25:04Z    ############################
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "*/*",
```

```
        "Content-Type": "application/json",
        "Accept-Encoding": "gzip",
        "User-Agent": "okhttp/2.7.5",
        "X-Forwarded-For": "52.10.83.105",
        "X-Forwarded-Host": "testserver.wfatestorg.org",
        "X-Forwarded-Server": "testserver.wfatestorg.org",
        "Content-Length": "538",
        "Connection": "Keep-Alive"
    },
    "body": {
        "version": "1.4",
        "availableSpectrumInquiryRequests": [
            {
                "requestId": "M229M1251300089-1748031904244",
                "deviceDescriptor": {
                    "serialNumber": "M229M1251300089",
                    "certificationId": [
                        {
                            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
                            "id": "2ABOF-GXRN8356900"
                        }
                    ]
                },
                "location": {
                    "ellipse": {
                        "center": {
                            "longitude": -115.303635,
                            "latitude": 36.18953
                        },
                        "minorAxis": 10,
                        "majorAxis": 10,
                        "orientation": 90.0
                    },
                    "elevation": {
                        "height": 0.0,
                        "heightType": "AGL",
                        "verticalUncertainty": 1
                    },
                    "indoorDeployment": 2
                },
                "inquiredChannels": [
                    {
                        "globalOperatingClass": 132
                    }
                ],
                "minDesiredPower": -175.0
            }
        ]
    }
}

############################    2025-05-23T20:25:04Z    ############################
{
    "availableSpectrumInquiryResponses": [
        {
```

```
                "response": {
                    "responseCode": 0,
                    "shortDescription": "SUCCESS"
                },
                "availableChannelInfo": [],
                "requestId": "M229M1251300089-1748031904244",
                "availabilityExpireTime": "2025-05-24T20:25:04Z",
                "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
            }
        ],
        "version": "1.4"
}
```

## B.5. Unsuccessful server validation (USV)

### B.5.1. AFC DUT Compliance Test Report

**AFC DUT Compliance Test Report**

**DUT Information**

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

**Test Result**

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_TLSCipherSuiteENULL_10667_1 (Unsuccessful server validation) | PASS |
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_StapledOCSPRespExpired_10666_1 (Unsuccessful server validation) | PASS |
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_OCSPStaplingDisabled_10665_1 (Unsuccessful server validation) | PASS |
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_ServerCertRevoked_10664_1 (Unsuccessful server validation) | PASS |
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_MatchSuffixSAN_10663_1 (Unsuccessful server validation) | PASS |
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_DifferentRootCA_10662_1 (Unsuccessful server validation) | PASS |
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_NonMatchSAN_10661_1 (Unsuccessful server validation) | PASS |

**Test Measurements**

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_TLSCipherSuiteENULL_10667_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_StapledOCSPRespExpired_10666_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_OCSPStaplingDisabled_10665_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_ServerCertRevoked_10664_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_MatchSuffixSAN_10663_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_DifferentRootCA_10662_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_NonMatchSAN_10661_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

## AFC DUT Compliance Test Report

### DUT Information

| | |
|---|---|
| **AFC DUT System** | Fixed Client |
| **DUT Vendor Name** | Tarana |
| **DUT Product Model** | Cello RN |

### Test Result

| FCC Requirements | TestCaseName | Test Result |
|---|---|---|
| 15.407(k)(8)(v) | CT_AFC_ServerValidation_STA_AFCDUSV35_NoRootCA_10668_1 (Unsuccessful server validation) | PASS |

### Test Measurements

**TestCaseName: CT_AFC_ServerValidation_STA_AFCDUSV35_NoRootCA_10668_1 (Unsuccessful server validation)**
**TestResult:PASS**
**Band:6GHz**

| Measurements Name | Description | Value | Validation Result |
|---|---|---|---|
| AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST | AFC DUT sends an Available Spectrum Inquiry Request | false | PASS |

———THE END———