



AFC DUT TEST HARNESS REPORT

FCC ID : QXO-AP4020FX
Equipment : Access Point
Brand Name : Extreme Networks
Model Name : AP4020FX
Applicant : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Manufacturer : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Standard : 47 CFR FCC Part 15.407

The product was received on Jun. 18, 2025, and testing was started from Aug. 04, 2025 and completed on Aug. 04, 2025. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in AFC Device (AFC DUT) Compliance Test Plan Version 1.7 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

AFC DUT Compliance Test Report

DUT Information

AFC DUT System	Standard Power AP with Proxy
DUT Vendor Name	Extreme Networks
DUT Product Model	AP4020FX

Test Result

FCC Requirements	TestCaseName	Test Result
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_NoRootCA_10639_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_TLSCipherSuiteENULL_10638_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_StapledOCSPRespExpired_10637_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_OCSPStaplingDisabled_10636_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_ServerCertRevoked_10635_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_MatchSuffixSAN_10634_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_DifferentRootCA_10633_1 (Unsuccessful server validation)	PASS
15.407(k)(8)(v)	CT_AFC_ServerValidation_AP_AFCDUSV35_NonMatchSAN_10632_1 (Unsuccessful server validation)	PASS
15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii), 15.407(k)(8)(iv)	CT_AFC_SP_AP_AFCDRSA31_Channel_320MHz_10714_1 (Successful registration and spectrum access request)	PASS
15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(9)(i)	CT_AFC_SP_AP_AFCDUAU34_Channel_10624_1 (Unsuccessful spectrum access update)	PASS
15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(9)(i)	CT_AFC_SP_AP_AFCDUAU33_Channel_10623_1 (Successful spectrum access update)	PASS
15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii)	CT_AFC_SP_AP_AFCDUSA32_Channel_10622_1 (Unsuccessful registration and spectrum access request)	PASS
15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii), 15.407(k)(8)(iv)	CT_AFC_SP_AP_AFCDRSA31_Channel_160MHz_10621_1 (Successful registration and spectrum access request)	PASS
15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii), 15.407(k)(8)(iv)	CT_AFC_SP_AP_AFCDRSA31_Channel_80MHz_10620_1 (Successful registration and spectrum access request)	PASS
15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii), 15.407(k)(8)(iv)	CT_AFC_SP_AP_AFCDRSA31_Channel_40MHz_10619_1 (Successful registration and spectrum access request)	PASS

15.407(k)(1), 15.407(k)(8)(i), 15.407(k)(8)(ii), 15.407(k)(8)(iii), 15.407(l)(ii), 15.407(k)(8)(iv)	CT_AFC_SP_AP_AFCDRSA31_Channel_20MHz_10618_1 (Successful registration and spectrum access request)	PASS
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Test Measurements

TestCaseName: CT_AFC_ServerValidation_AP_AFCDUSV35_NoRootCA_10639_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_AP_AFCDUSV35_TLSCipherSuiteENULL_10638_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_AP_AFCDUSV35_StapledOCSPRespExpired_10637_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_AP_AFCDUSV35_OCSPStaplingDisabled_10636_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_AP_AFCDUSV35_ServerCertRevoked_10635_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_AP_AFCDUSV35_MatchSuffixSAN_10634_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_AP_AFCDUSV35_DifferentRootCA_10633_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_AP_AFCDUSV35_NonMatchSAN_10632_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_SP_AP_AFCDRSA31_Channel_320MHz_10714_1 (Successful registration and spectrum access request)

TestResult: PASS

Band: 6GHz

Measurements Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1	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 (27.4 dBm EIRP) on channel center frequency index 37 bandwidth 320.	true	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_2	AFC DUT sends an Available Spectrum Inquiry Request	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 conditions in Spectrum Response (22.1 dBm EIRP) on channel center frequency index 31 bandwidth 320.	true	PASS

TestCaseName: CT_AFC_SP_AP_AFCDUAU34_Channel_10624_1 (Unsuccessful spectrum access update)

TestResult: PASS

Band: 6GHz

Measurements Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
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 133 bandwidth 20.	true	PASS
AFC_DUT_SP_OPERATION_NO_REQ	AFC DUT transmit with standard power in the band in no Spectrum Inquiry Request case	false	PASS

TestCaseName: CT_AFC_SP_AP_AFCD3AU33_Channel_10623_1 (Successful spectrum access update)
TestResult: PASS
Band: 6GHz

Measurements Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION_1	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
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 (28.5 dBm EIRP) on channel 5 bandwidth 20.	true	PASS
AFC_DUT_SP_OPERATION_NO_REQ	AFC DUT transmit with standard power in the band in no Spectrum Inquiry Request case	false	PASS

TestCaseName: CT_AFC_SP_AP_AFCDUSA32_Channel_10622_1 (Unsuccessful registration and spectrum access request)
TestResult: PASS
Band: 6GHz

Measurements Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
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 the Spectrum Inquiry Response	true	PASS

TestCaseName: CT_AFC_SP_AP_AFCDRSA31_Channel_160MHz_10621_1 (Successful registration and spectrum access request)
 TestResult: PASS
 Band: 6GHz

Measurement Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1	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 (30.5 dBm EIRP) on channel center frequency index 47 bandwidth 160.	true	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_2	AFC DUT sends an Available Spectrum Inquiry Request	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 conditions in Spectrum Response (31.4 dBm EIRP) on channel center frequency index 15 bandwidth 160.	true	PASS

TestCaseName: CT_AFC_SP_AP_AFCDRSA31_Channel_80MHz_10620_1 (Successful registration and spectrum access request)
 TestResult: PASS
 Band: 6GHz

Measurement Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1	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 (27.3 dBm EIRP) on channel center frequency index 135 bandwidth 80.	true	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_2	AFC DUT sends an Available Spectrum Inquiry Request	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 conditions in Spectrum Response (30.8 dBm EIRP) on channel center frequency index 87 bandwidth 80.	true	PASS

TestCaseName: CT_AFC_SP_AP_AFCDRSA31_Channel_40MHz_10619_1 (Successful registration and spectrum access request)
 TestResult: PASS
 Band: 6GHz

Measurements Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1	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 (30.5 dBm EIRP) on channel center frequency index 83 bandwidth 40.	true	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_2	AFC DUT sends an Available Spectrum Inquiry Request	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 conditions in Spectrum Response (27.3 dBm EIRP) on channel center frequency index 19 bandwidth 40.	true	PASS

TestCaseName: CT_AFC_SP_AP_AFCDRSA31_Channel_20MHz_10618_1 (Successful registration and spectrum access request)

TestResult: PASS

Band:6GHz

Measurements Name	Description	Value	Validation Result
AFC_DUT_SP_OPERATION	AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response	false	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1	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 (23.0 dBm EIRP) on channel 37 bandwidth 20.	true	PASS
AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_2	AFC DUT sends an Available Spectrum Inquiry Request	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 conditions in Spectrum Response (22.4 dBm EIRP) on channel 5 bandwidth 20.	true	PASS

AFC capability - Inquired Channel**CT_AFC_SP_AP_AFCRSA31_Channel_20MHz_10618_1**

2025-08-04T02:57:23Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      }
    }
  }
}
```

```
"ellipse": {
  "majorAxis": 30,
  "minorAxis": 19,
  "orientation": 90.0,
  "center": {
    "latitude": 43.83956,
    "longitude": -79.3818
  }
},
"inquiredFrequencyRange": [],
"inquiredChannels": [
  {
    "globalOperatingClass": 131
  },
  {
    "globalOperatingClass": 132
  },
  {
    "globalOperatingClass": 133
  },
  {
    "globalOperatingClass": 134
  },
  {
    "globalOperatingClass": 137
  }
],
"minDesiredPower": 0.0
}
]
```

2025-08-04T02:57:23Z

```
{
  "availableSpectrumInquiryResponses": [
```

```
{
  "response": {
    "responseCode": 0,
    "shortDescription": "SUCCESS"
  },
  "availableChannelInfo": [
    {
      "channelCfi": [
        33,
        37,
        41,
        45,
        65,
        69,
        73,
        77,
        81,
        85,
        89,
        93,
        145,
        149,
        153,
        157
      ],
      "globalOperatingClass": 131,
      "maxEirp": [
        32.0,
        23.0,
        26.7,
        24.4,
        28.8,
        21.1,
        21.0,
        31.3,
        27.6,
        28.5,
```

```
        31.9,  
        31.7,  
        21.8,  
        29.0,  
        29.0,  
        29.6  
    ]  
},  
{  
    "channelCfi": [  
        35,  
        43,  
        67,  
        75,  
        83,  
        91,  
        147,  
        155  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        26.0,  
        27.4,  
        24.1,  
        24.0,  
        30.6,  
        34.7,  
        24.8,  
        32.0  
    ]  
},  
{  
    "channelCfi": [  
        39,  
        71,  
        87,  
        151
```

```
    ],
    "globalOperatingClass": 133,
    "maxEirp": [
        29.0,
        27.0,
        33.6,
        27.8
    ]
},
{
    "channelCfi": [
        79
    ],
    "globalOperatingClass": 134,
    "maxEirp": [
        30.0
    ]
},
{
    "channelCfi": [],
    "globalOperatingClass": 137,
    "maxEirp": []
}
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T02:57:23Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

```
##### 2025-08-04T03:10:05Z #####
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
        "Accept": "application/json",
```

```
"Content-Type": "application/json",
"User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
"Accept-Encoding": "gzip,deflate",
"X-Forwarded-For": "192.168.1.169",
"X-Forwarded-Host": "testserver.wfatestorg.org",
"X-Forwarded-Server": "testserver.wfatestorg.org",
"Content-Length": "661",
"Connection": "Keep-Alive"
},
"body": {
  "version": "1.4",
  "availableSpectrumInquiryRequests": [
    {
      "requestId": "WF032448S-C0114",
      "deviceDescriptor": {
        "serialNumber": "WF032448S-C0114",
        "certificationId": [
          {
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
            "id": "QXO-AP4020FX"
          }
        ]
      }
    }
  ],
  "location": {
    "indoorDeployment": 2,
    "elevation": {
      "height": 154.9,
      "heightType": "AMSL",
      "verticalUncertainty": 66
    }
  },
  "ellipse": {
    "majorAxis": 30,
    "minorAxis": 19,
    "orientation": 90.0,
    "center": {
      "latitude": 43.83956,
      "longitude": -79.3818
    }
  }
}
```

```
    }
  }
},
"inquiredFrequencyRange": [],
"inquiredChannels": [
  {
    "globalOperatingClass": 131
  },
  {
    "globalOperatingClass": 132
  },
  {
    "globalOperatingClass": 133
  },
  {
    "globalOperatingClass": 134
  },
  {
    "globalOperatingClass": 137
  }
],
"minDesiredPower": 0.0
}
]
}
}
```

2025-08-04T03:10:05Z

```
{
  "availableSpectrumInquiryResponses": [
    {
      "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
      },
      "availableChannelInfo": [
        {
```

```
"channelCfi": [  
    1,  
    5,  
    9,  
    13,  
    17,  
    21,  
    25,  
    29,  
    49,  
    53,  
    57,  
    61,  
    129,  
    133,  
    137,  
    141,  
    161,  
    165,  
    169,  
    173  
],  
"globalOperatingClass": 131,  
"maxEirp": [  
    24.7,  
    22.4,  
    33.8,  
    26.3,  
    25.3,  
    26.0,  
    26.6,  
    30.1,  
    31.6,  
    23.2,  
    29.8,  
    25.0,  
    21.1,
```

```
        30.5,
        34.4,
        31.9,
        33.1,
        26.6,
        30.5,
        34.3
    ]
},
{
    "channelCfi": [
        3,
        11,
        19,
        27,
        51,
        59,
        131,
        139,
        163,
        171
    ],
    "globalOperatingClass": 132,
    "maxEirp": [
        25.4,
        29.3,
        28.3,
        29.6,
        26.2,
        28.0,
        24.1,
        34.9,
        29.6,
        33.5
    ]
},
{
```

```
"channelCfi": [
    7,
    23,
    55,
    135,
    167
],
"globalOperatingClass": 133,
"maxEirp": [
    28.4,
    31.3,
    29.2,
    27.1,
    32.6
]
},
{
    "channelCfi": [
        15
    ],
    "globalOperatingClass": 134,
    "maxEirp": [
        31.4
    ]
},
{
    "channelCfi": [],
    "globalOperatingClass": 137,
    "maxEirp": []
}
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T03:10:05Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

CT_AFC_SP_AP_AFCDSA31_Channel_40MHz_10619_1

2025-08-04T03:25:09Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}

]

}

}

##### 2025-08-04T03:25:10Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {
  "responseCode": 0,
  "shortDescription": "SUCCESS"
},
"availableChannelInfo": [
  {
    "channelCfi": [
      1,
      5,
      9,
      13,
      33,
      37,
      41,
      45,
      65,
      69,
      73,
      77,
      81,
      85,
      89,
      93
    ],
    "globalOperatingClass": 131,
    "maxEirp": [
      21.2,
      21.8,
      33.7,
      23.5,
      29.8,
      33.8,
      22.3,
      31.0,
      24.7,
      33.3,
      29.3,
```

```
        28.2,  
        31.0,  
        27.5,  
        29.4,  
        25.5  
    ]  
},  
{  
    "channelCfi": [  
        3,  
        11,  
        35,  
        43,  
        67,  
        75,  
        83,  
        91  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        24.2,  
        26.5,  
        32.8,  
        25.3,  
        27.7,  
        31.2,  
        30.5,  
        28.5  
    ]  
},  
{  
    "channelCfi": [  
        7,  
        39,  
        71,  
        87  
    ],
```

```
"globalOperatingClass": 133,
  "maxEirp": [
    27.2,
    28.3,
    30.7,
    31.5
  ]
},
{
  "channelCfi": [
    79
  ],
  "globalOperatingClass": 134,
  "maxEirp": [
    33.7
  ]
},
{
  "channelCfi": [],
  "globalOperatingClass": 137,
  "maxEirp": []
}
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T03:25:10Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

```
##### 2025-08-04T03:33:04Z #####
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
```

```
"User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
"Accept-Encoding": "gzip,deflate",
"X-Forwarded-For": "192.168.1.169",
"X-Forwarded-Host": "testserver.wfatestorg.org",
"X-Forwarded-Server": "testserver.wfatestorg.org",
"Content-Length": "661",
"Connection": "Keep-Alive"
},
"body": {
  "version": "1.4",
  "availableSpectrumInquiryRequests": [
    {
      "requestId": "WF032448S-C0114",
      "deviceDescriptor": {
        "serialNumber": "WF032448S-C0114",
        "certificationId": [
          {
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
            "id": "QXO-AP4020FX"
          }
        ]
      }
    }
  ],
  "location": {
    "indoorDeployment": 2,
    "elevation": {
      "height": 154.9,
      "heightType": "AMSL",
      "verticalUncertainty": 66
    },
    "ellipse": {
      "majorAxis": 30,
      "minorAxis": 19,
      "orientation": 90.0,
      "center": {
        "latitude": 43.83956,
        "longitude": -79.3818
      }
    }
  }
}
```

```
    }
  },
  "inquiredFrequencyRange": [],
  "inquiredChannels": [
    {
      "globalOperatingClass": 131
    },
    {
      "globalOperatingClass": 132
    },
    {
      "globalOperatingClass": 133
    },
    {
      "globalOperatingClass": 134
    },
    {
      "globalOperatingClass": 137
    }
  ],
  "minDesiredPower": 0.0
}
]
```

```
##### 2025-08-04T03:33:04Z #####
{
  "availableSpectrumInquiryResponses": [
    {
      "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
      },
      "availableChannelInfo": [
        {
          "channelCfi": [
```

17,
21,
25,
29,
49,
53,
57,
61,
129,
133,
137,
141,
145,
149,
153,
157,
161,
165,
169,
173
],
"globalOperatingClass": 131,
"maxEirp": [
33.2,
24.3,
23.3,
28.9,
22.4,
34.1,
23.2,
23.7,
23.4,
27.8,
22.2,
25.5,
26.8,
27.1,

```
        24.8,  
        28.1,  
        30.4,  
        31.0,  
        27.6,  
        26.9  
    ]  
},  
{  
    "channelCfi": [  
        19,  
        27,  
        51,  
        59,  
        131,  
        139,  
        147,  
        155,  
        163,  
        171  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        27.3,  
        26.3,  
        25.4,  
        26.2,  
        26.4,  
        25.2,  
        29.8,  
        27.8,  
        33.4,  
        29.9  
    ]  
},  
{  
    "channelCfi": [  

```

```
        23,
        55,
        135,
        151,
        167
    ],
    "globalOperatingClass": 133,
    "maxEirp": [
        29.3,
        28.4,
        28.2,
        30.8,
        32.9
    ]
},
{
    "channelCfi": [
        143
    ],
    "globalOperatingClass": 134,
    "maxEirp": [
        31.2
    ]
},
{
    "channelCfi": [],
    "globalOperatingClass": 137,
    "maxEirp": []
}
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T03:33:04Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

CT_AFC_SP_AP_AFCRSA31_Channel_80MHz_10620_1

2025-08-04T05:47:43Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}

]

}

}

##### 2025-08-04T05:47:44Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {
  "responseCode": 0,
  "shortDescription": "SUCCESS"
},
"availableChannelInfo": [
  {
    "channelCfi": [
      17,
      21,
      25,
      29,
      65,
      69,
      73,
      77,
      129,
      133,
      137,
      141,
      161,
      165,
      169,
      173
    ],
    "globalOperatingClass": 131,
    "maxEirp": [
      29.6,
      22.1,
      32.8,
      26.2,
      23.5,
      21.7,
      27.6,
      28.4,
      32.0,
      21.3,
      34.2,
```

```
        28.6,  
        27.1,  
        32.0,  
        28.3,  
        27.0  
    ]  
},  
{  
    "channelCfi": [  
        19,  
        27,  
        67,  
        75,  
        131,  
        139,  
        163,  
        171  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        25.1,  
        29.2,  
        24.7,  
        30.6,  
        24.3,  
        31.6,  
        30.1,  
        30.0  
    ]  
},  
{  
    "channelCfi": [  
        23,  
        71,  
        135,  
        167  
    ],
```

```
        "globalOperatingClass": 133,
        "maxEirp": [
            28.1,
            27.7,
            27.3,
            33.0
        ]
    },
    {
        "channelCfi": [],
        "globalOperatingClass": 134,
        "maxEirp": []
    },
    {
        "channelCfi": [],
        "globalOperatingClass": 137,
        "maxEirp": []
    }
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T05:47:44Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

2025-08-04T05:54:42Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
```

```
"X-Forwarded-Server": "testserver.wfatestorg.org",
"Content-Length": "661",
"Connection": "Keep-Alive"
},
"body": {
  "version": "1.4",
  "availableSpectrumInquiryRequests": [
    {
      "requestId": "WF032448S-C0114",
      "deviceDescriptor": {
        "serialNumber": "WF032448S-C0114",
        "certificationId": [
          {
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
            "id": "QXO-AP4020FX"
          }
        ]
      }
    }
  ],
  "location": {
    "indoorDeployment": 2,
    "elevation": {
      "height": 154.9,
      "heightType": "AMSL",
      "verticalUncertainty": 66
    },
    "ellipse": {
      "majorAxis": 30,
      "minorAxis": 19,
      "orientation": 90.0,
      "center": {
        "latitude": 43.83956,
        "longitude": -79.3818
      }
    }
  },
  "inquiredFrequencyRange": [],
  "inquiredChannels": [
```

```
{
  "globalOperatingClass": 131
},
{
  "globalOperatingClass": 132
},
{
  "globalOperatingClass": 133
},
{
  "globalOperatingClass": 134
},
{
  "globalOperatingClass": 137
}
],
"minDesiredPower": 0.0
}
]
}
}

##### 2025-08-04T05:54:42Z #####
{
  "availableSpectrumInquiryResponses": [
    {
      "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
      },
      "availableChannelInfo": [
        {
          "channelCfi": [
            1,
            5,
            9,
            13,
```

```
33,  
37,  
41,  
45,  
49,  
53,  
57,  
61,  
81,  
85,  
89,  
93,  
145,  
149,  
153,  
157  
],  
"globalOperatingClass": 131,  
"maxEirp": [  
27.6,  
24.8,  
25.6,  
22.6,  
33.3,  
21.3,  
30.2,  
31.8,  
26.9,  
23.2,  
27.6,  
24.7,  
28.2,  
26.8,  
24.8,  
28.6,  
30.2,  
31.0,
```

```
        26.9,
        31.9
    ]
},
{
    "channelCfi": [
        3,
        11,
        35,
        43,
        51,
        59,
        83,
        91,
        147,
        155
    ],
    "globalOperatingClass": 132,
    "maxEirp": [
        27.8,
        25.6,
        24.3,
        33.2,
        26.2,
        27.7,
        29.8,
        27.8,
        33.2,
        29.9
    ]
},
{
    "channelCfi": [
        7,
        39,
        55,
        87,
```

```
        151
      ],
      "globalOperatingClass": 133,
      "maxEirp": [
        28.6,
        27.3,
        29.2,
        30.8,
        32.9
      ]
    },
    {
      "channelCfi": [
        47
      ],
      "globalOperatingClass": 134,
      "maxEirp": [
        30.3
      ]
    },
    {
      "channelCfi": [],
      "globalOperatingClass": 137,
      "maxEirp": []
    }
  ],
  "requestId": "WF032448S-C0114",
  "availabilityExpireTime": "2025-08-05T05:54:42Z",
  "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

CT_AFC_SP_AP_AFCDSA31_Channel_160MHz_10621_1

2025-08-04T06:04:14Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}

]

}

}

##### 2025-08-04T06:04:14Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {
  "responseCode": 0,
  "shortDescription": "SUCCESS"
},
"availableChannelInfo": [
  {
    "channelCfi": [
      33,
      37,
      41,
      45,
      49,
      53,
      57,
      61,
      129,
      133,
      137,
      141,
      145,
      149,
      153,
      157
    ],
    "globalOperatingClass": 131,
    "maxEirp": [
      27.7,
      26.2,
      33.7,
      25.1,
      21.5,
      23.4,
      32.6,
      30.1,
      22.0,
      25.7,
      24.6,
```

```
        31.3,  
        27.0,  
        31.4,  
        30.6,  
        27.5  
    ]  
},  
{  
    "channelCfi": [  
        35,  
        43,  
        51,  
        59,  
        131,  
        139,  
        147,  
        155  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        29.2,  
        28.1,  
        24.5,  
        33.1,  
        25.0,  
        27.6,  
        30.0,  
        30.5  
    ]  
},  
{  
    "channelCfi": [  
        39,  
        55,  
        135,  
        151  
    ],
```

```
        "globalOperatingClass": 133,
        "maxEirp": [
            31.1,
            27.5,
            28.0,
            33.0
        ]
    },
    {
        "channelCfi": [
            47,
            143
        ],
        "globalOperatingClass": 134,
        "maxEirp": [
            30.5,
            31.0
        ]
    },
    {
        "channelCfi": [],
        "globalOperatingClass": 137,
        "maxEirp": []
    }
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T06:04:14Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

2025-08-04T06:16:46Z

```
{
    "headers": {
        "Host": "testserver.wfatestorg.org",
```

```
"Accept": "application/json",
"Content-Type": "application/json",
"User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
"Accept-Encoding": "gzip,deflate",
"X-Forwarded-For": "192.168.1.169",
"X-Forwarded-Host": "testserver.wfatestorg.org",
"X-Forwarded-Server": "testserver.wfatestorg.org",
"Content-Length": "661",
"Connection": "Keep-Alive"
},
"body": {
  "version": "1.4",
  "availableSpectrumInquiryRequests": [
    {
      "requestId": "WF032448S-C0114",
      "deviceDescriptor": {
        "serialNumber": "WF032448S-C0114",
        "certificationId": [
          {
            "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
            "id": "QXO-AP4020FX"
          }
        ]
      }
    }
  ],
  "location": {
    "indoorDeployment": 2,
    "elevation": {
      "height": 154.9,
      "heightType": "AMSL",
      "verticalUncertainty": 66
    },
    "ellipse": {
      "majorAxis": 30,
      "minorAxis": 19,
      "orientation": 90.0,
      "center": {
        "latitude": 43.83956,
```

```
        "longitude": -79.3818
      }
    }
  },
  "inquiredFrequencyRange": [],
  "inquiredChannels": [
    {
      "globalOperatingClass": 131
    },
    {
      "globalOperatingClass": 132
    },
    {
      "globalOperatingClass": 133
    },
    {
      "globalOperatingClass": 134
    },
    {
      "globalOperatingClass": 137
    }
  ],
  "minDesiredPower": 0.0
}
]
}
}

##### 2025-08-04T06:16:47Z #####
{
  "availableSpectrumInquiryResponses": [
    {
      "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
      },
      "availableChannelInfo": [
```

```
{
  "channelCfi": [
    1,
    5,
    9,
    13,
    17,
    21,
    25,
    29,
    65,
    69,
    73,
    77,
    81,
    85,
    89,
    93
  ],
  "globalOperatingClass": 131,
  "maxEirp": [
    31.0,
    22.4,
    32.1,
    31.9,
    24.6,
    25.2,
    34.4,
    30.3,
    34.7,
    29.5,
    22.9,
    34.8,
    28.8,
    23.4,
    33.6,
    35.0
  ]
}
```

```
]
},
{
  "channelCfi": [
    3,
    11,
    19,
    27,
    67,
    75,
    83,
    91
  ],
  "globalOperatingClass": 132,
  "maxEirp": [
    25.4,
    34.9,
    27.6,
    33.3,
    32.5,
    25.9,
    26.4,
    36.0
  ]
},
{
  "channelCfi": [
    7,
    23,
    71,
    87
  ],
  "globalOperatingClass": 133,
  "maxEirp": [
    28.4,
    30.6,
    28.9,
```

```
        29.4
      ]
    },
    {
      "channelCfi": [
        15,
        79
      ],
      "globalOperatingClass": 134,
      "maxEirp": [
        31.4,
        31.9
      ]
    },
    {
      "channelCfi": [],
      "globalOperatingClass": 137,
      "maxEirp": []
    }
  ],
  "requestId": "WF032448S-C0114",
  "availabilityExpireTime": "2025-08-05T06:16:47Z",
  "rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

CT_AFC_SP_AP_AFCDUSA32_Channel_10622_1

2025-08-04T07:35:04Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}

]

}

}

##### 2025-08-04T07:35:04Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {  
  "responseCode": 0,  
  "shortDescription": "SUCCESS"  
},  
"availableChannelInfo": [],  
"requestId": "WF032448S-C0114",  
"availabilityExpireTime": "2025-08-05T07:35:04Z",  
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"  
}  
],  
"version": "1.4"  
}
```

CT_AFC_SP_AP_AFCDSAU33_Channel_10623_1

2025-08-04T07:36:06Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}
]
```

```
##### 2025-08-04T07:36:07Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {
  "responseCode": 0,
  "shortDescription": "SUCCESS"
},
"availableChannelInfo": [
  {
    "channelCfi": [
      1,
      5,
      9,
      13,
      17,
      21,
      25,
      29,
      33,
      37,
      41,
      45,
      81,
      85,
      89,
      93
    ],
    "globalOperatingClass": 131,
    "maxEirp": [
      27.4,
      28.5,
      29.3,
      26.3,
      23.5,
      22.3,
      27.8,
      25.9,
      24.2,
      21.6,
      25.4,
```

```
        31.3,  
        28.7,  
        25.0,  
        29.3,  
        23.6  
    ]  
},  
{  
    "channelCfi": [  
        3,  
        11,  
        19,  
        27,  
        35,  
        43,  
        83,  
        91  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        30.4,  
        29.3,  
        25.3,  
        28.9,  
        24.6,  
        28.4,  
        28.0,  
        26.6  
    ]  
},  
{  
    "channelCfi": [  
        7,  
        23,  
        39,  
        87  
    ],  
}
```

```
        "globalOperatingClass": 133,
        "maxEirp": [
            32.3,
            28.3,
            27.6,
            29.6
        ]
    },
    {
        "channelCfi": [
            15
        ],
        "globalOperatingClass": 134,
        "maxEirp": [
            31.3
        ]
    },
    {
        "channelCfi": [],
        "globalOperatingClass": 137,
        "maxEirp": []
    }
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T07:36:07Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

CT_AFC_SP_AP_AFCDUAU34_Channel_10624_1

2025-08-04T07:52:15Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}

]

}

}

##### 2025-08-04T07:52:15Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {  
  "responseCode": 0,  
  "shortDescription": "SUCCESS"  
},  
"availableChannelInfo": [  
  {  
    "channelCfi": [  
      1,  
      5,  
      9,  
      13,  
      17,  
      21,  
      25,  
      29,  
      33,  
      37,  
      41,  
      45,  
      49,  
      53,  
      57,  
      61,  
      65,  
      69,  
      73,  
      77,  
      81,  
      85,  
      89,  
      93,  
      117,  
      121,  
      125,  
      129,  
      133,  
      137,
```

[illegible]

```
        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  
    ]  
},  
{  
    "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
]
},
{
    "channelCfi": [
        7,
        23,
        39,
        55,
        71,

```

```
        87,  
        135,  
        151,  
        167  
    ],  
    "globalOperatingClass": 133,  
    "maxEirp": [  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0  
    ]  
},  
{  
    "channelCfi": [  
        15,  
        47,  
        79,  
        143  
    ],  
    "globalOperatingClass": 134,  
    "maxEirp": [  
        36.0,  
        36.0,  
        36.0,  
        36.0  
    ]  
}  
],  
"requestId": "WF032448S-C0114",  
"availabilityExpireTime": "2025-08-05T07:52:15Z",  
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
```

```
}  
],  
"version": "1.4"  
}
```

```
##### 2025-08-04T07:52:23Z #####
```

```
{  
  "headers": {  
    "Host": "testserver.wfatestorg.org",  
    "Accept": "application/json",  
    "Content-Type": "application/json",  
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",  
    "Accept-Encoding": "gzip,deflate",  
    "X-Forwarded-For": "192.168.1.169",  
    "X-Forwarded-Host": "testserver.wfatestorg.org",  
    "X-Forwarded-Server": "testserver.wfatestorg.org",  
    "Content-Length": "661",  
    "Connection": "Keep-Alive"  
  },  
  "body": {  
    "version": "1.4",  
    "availableSpectrumInquiryRequests": [  
      {  
        "requestId": "WF032448S-C0114",  
        "deviceDescriptor": {  
          "serialNumber": "WF032448S-C0114",  
          "certificationId": [  
            {  
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",  
              "id": "QXO-AP4020FX"  
            }  
          ]  
        }  
      ]  
    },  
    "location": {  
      "indoorDeployment": 2,  
      "elevation": {  
        "height": 154.9,  

```

```
        "heightType": "AMSL",
        "verticalUncertainty": 66
    },
    "ellipse": {
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    }
},
"inquiredFrequencyRange": [],
"inquiredChannels": [
    {
        "globalOperatingClass": 131
    },
    {
        "globalOperatingClass": 132
    },
    {
        "globalOperatingClass": 133
    },
    {
        "globalOperatingClass": 134
    },
    {
        "globalOperatingClass": 137
    }
],
"minDesiredPower": 0.0
}
]
}
```



2025-08-04T07:52:23Z

```
{
  "availableSpectrumInquiryResponses": [
    {
      "response": {
        "responseCode": 0,
        "shortDescription": "SUCCESS"
      },
      "availableChannelInfo": [
        {
          "channelCfi": [
            1,
            5,
            9,
            13,
            17,
            21,
            25,
            29,
            33,
            37,
            41,
            45,
            49,
            53,
            57,
            61,
            65,
            69,
            73,
            77,
            81,
            85,
            89,
            93,
            117,
            121,
```



```

    ],
    "channelCfi": [
        3,
        11,
        19,
        27,
        35,
        43,
        51,
        59,
        67,
        75,
        83,

```

[illegible]

```
        23,  
        39,  
        55,  
        71,  
        87,  
        135,  
        151,  
        167  
    ],  
    "globalOperatingClass": 133,  
    "maxEirp": [  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0,  
        36.0  
    ]  
},  
{  
    "channelCfi": [  
        15,  
        47,  
        79,  
        143  
    ],  
    "globalOperatingClass": 134,  
    "maxEirp": [  
        36.0,  
        36.0,  
        36.0,  
        36.0  
    ]  
}
```



```
    ],  
    "requestId": "WF032448S-C0114",  
    "availabilityExpireTime": "2025-08-05T07:52:23Z",  
    "rulesetId": "US_47_CFR_PART_15_SUBPART_E"  
  }  
],  
"version": "1.4"  
}
```

CT_AFC_SP_AP_AFCDSA31_Channel_320MHz_10714_1

2025-08-04T06:39:37Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
```

```
        "majorAxis": 30,
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}
]
```

```
##### 2025-08-04T06:39:37Z #####
{
    "availableSpectrumInquiryResponses": [
        {
```

```
"response": {
  "responseCode": 0,
  "shortDescription": "SUCCESS"
},
"availableChannelInfo": [
  {
    "channelCfi": [
      33,
      37,
      41,
      45,
      49,
      53,
      57,
      61,
      65,
      69,
      73,
      77,
      81,
      85,
      89,
      93
    ],
    "globalOperatingClass": 131,
    "maxEirp": [
      28.1,
      27.4,
      28.0,
      27.8,
      25.5,
      21.2,
      33.8,
      23.5,
      24.2,
      32.4,
      25.0,
```

```
        29.8,  
        28.2,  
        25.2,  
        33.1,  
        32.0  
    ]  
},  
{  
    "channelCfi": [  
        35,  
        43,  
        51,  
        59,  
        67,  
        75,  
        83,  
        91  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        30.4,  
        30.8,  
        24.2,  
        26.5,  
        27.2,  
        28.0,  
        28.2,  
        35.0  
    ]  
},  
{  
    "channelCfi": [  
        39,  
        55,  
        71,  
        87  
    ],
```

```
"globalOperatingClass": 133,
  "maxEirp": [
    33.4,
    27.2,
    30.2,
    31.2
  ]
},
{
  "channelCfi": [
    47,
    79
  ],
  "globalOperatingClass": 134,
  "maxEirp": [
    30.2,
    33.2
  ]
},
{
  "channelCfi": [
    63
  ],
  "globalOperatingClass": 137,
  "maxEirp": [
    33.3
  ]
}
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T06:39:37Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

2025-08-04T06:42:35Z

```
{
  "headers": {
    "Host": "testserver.wfatestorg.org",
    "Accept": "application/json",
    "Content-Type": "application/json",
    "User-Agent": "Apache-HttpClient/4.5.6 (Java/1.8.0_432-internal)",
    "Accept-Encoding": "gzip,deflate",
    "X-Forwarded-For": "192.168.1.169",
    "X-Forwarded-Host": "testserver.wfatestorg.org",
    "X-Forwarded-Server": "testserver.wfatestorg.org",
    "Content-Length": "661",
    "Connection": "Keep-Alive"
  },
  "body": {
    "version": "1.4",
    "availableSpectrumInquiryRequests": [
      {
        "requestId": "WF032448S-C0114",
        "deviceDescriptor": {
          "serialNumber": "WF032448S-C0114",
          "certificationId": [
            {
              "rulesetId": "US_47_CFR_PART_15_SUBPART_E",
              "id": "QXO-AP4020FX"
            }
          ]
        }
      }
    ],
    "location": {
      "indoorDeployment": 2,
      "elevation": {
        "height": 154.9,
        "heightType": "AMSL",
        "verticalUncertainty": 66
      },
      "ellipse": {
        "majorAxis": 30,
```

```
        "minorAxis": 19,
        "orientation": 90.0,
        "center": {
            "latitude": 43.83956,
            "longitude": -79.3818
        }
    },
    "inquiredFrequencyRange": [],
    "inquiredChannels": [
        {
            "globalOperatingClass": 131
        },
        {
            "globalOperatingClass": 132
        },
        {
            "globalOperatingClass": 133
        },
        {
            "globalOperatingClass": 134
        },
        {
            "globalOperatingClass": 137
        }
    ],
    "minDesiredPower": 0.0
}
]
```

```
##### 2025-08-04T06:42:36Z #####
{
    "availableSpectrumInquiryResponses": [
        {
            "response": {
```

```
"responseCode": 0,
"shortDescription": "SUCCESS"
},
"availableChannelInfo": [
  {
    "channelCfi": [
      1,
      5,
      9,
      13,
      17,
      21,
      25,
      29,
      33,
      37,
      41,
      45,
      49,
      53,
      57,
      61
    ],
    "globalOperatingClass": 131,
    "maxEirp": [
      15.1,
      19.5,
      20.9,
      16.9,
      22.5,
      13.7,
      11.4,
      24.9,
      25.6,
      10.0,
      15.8,
      20.9,
```

```
        18.9,  
        21.7,  
        25.9,  
        16.6  
    ]  
},  
{  
    "channelCfi": [  
        3,  
        11,  
        19,  
        27,  
        35,  
        43,  
        51,  
        59  
    ],  
    "globalOperatingClass": 132,  
    "maxEirp": [  
        18.1,  
        19.9,  
        16.7,  
        14.4,  
        13.0,  
        18.8,  
        21.9,  
        19.6  
    ]  
},  
{  
    "channelCfi": [  
        7,  
        23,  
        39,  
        55  
    ],  
    "globalOperatingClass": 133,
```

```
        "maxEirp": [
            21.1,
            17.4,
            16.0,
            22.6
        ]
    },
    {
        "channelCfi": [
            15,
            47
        ],
        "globalOperatingClass": 134,
        "maxEirp": [
            20.4,
            19.0
        ]
    },
    {
        "channelCfi": [
            31
        ],
        "globalOperatingClass": 137,
        "maxEirp": [
            22.1
        ]
    }
],
"requestId": "WF032448S-C0114",
"availabilityExpireTime": "2025-08-05T06:42:36Z",
"rulesetId": "US_47_CFR_PART_15_SUBPART_E"
}
],
"version": "1.4"
}
```

AFC capability - Inquired Channel

AFCD.RSA: Successful registration and spectrum access request							
Freq. (MHz)	Mode (LPI or SP)	Bandwidth (MHz)	Antenna Gain (dBi)	Power (dBm)	EIRP (dBm)	AFC Response Limit (dBm)	Result
6135	SP	20	11.13	8.41	19.54	23.00	Pass
5975	SP	20	11.13	7.21	18.34	22.40	Pass
6365	SP	40	11.13	16.24	27.37	30.50	Pass
6045	SP	40	11.13	13.15	24.28	27.30	Pass
6625	SP	80	11.12	13.18	24.30	27.30	Pass
6385	SP	80	11.13	16.38	27.51	30.80	Pass
6185	SP	160	11.13	16.48	27.61	30.50	Pass
6025	SP	160	11.13	16.76	27.89	31.40	Pass
6265	OFF *	320	-	-	-	27.40	N/A
6105	SP	320	11.13	7.67	18.80	22.10	Pass

Note: "*" : Products cannot use 320MHz of 6265MHz; the product will stop working when the AFC response is 6265MHz.

AFCD.SAU: Successful spectrum access update							
Freq. (MHz)	Mode (LPI or SP)	Bandwidth (MHz)	Antenna Gain (dBi)	Power (dBm)	EIRP (dBm)	AFC Response Limit (dBm)	Result
5975	SP	20	11.13	13.86	24.99	28.50	Pass

AFCD.UAU: Unsuccessful spectrum access update							
Freq. (MHz)	Mode (LPI or SP)	Bandwidth (MHz)	Antenna Gain (dBi)	Power (dBm)	EIRP (dBm)	AFC Response Limit (dBm)	Result
6615	SP	20	11.12	15.65	26.77	36.00	Pass

AFC capability - Inquired Channel

CT_AFC_SP_AP_AFCRSA31_Channel_20MHz_10618_1

Frequency (MHz): 6135

5.925-6.425GHz_802.11be EHT20_Nss1,(MCS0)_1TX

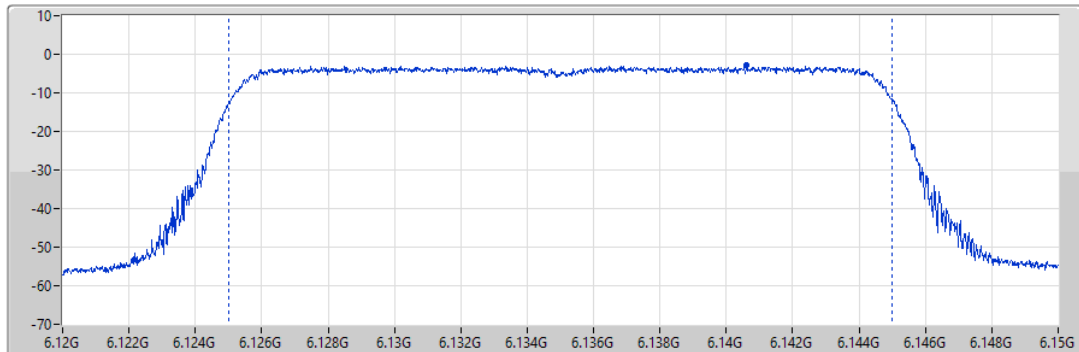
AV Power

6135MHz_TX

04/08/2025

CF (Hz)
6.135G
Span (Hz)
30M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
1.067m
Detector Type
RMS
CP BW (Hz)
20M

Sum=Total Power
PX=Port X



Port 1

Sum(dBm) P1(dBm)

8.41 8.41

Frequency (MHz): 5975

5.925-6.425GHz_802.11be EHT20_Nss1,(MCS0)_1TX

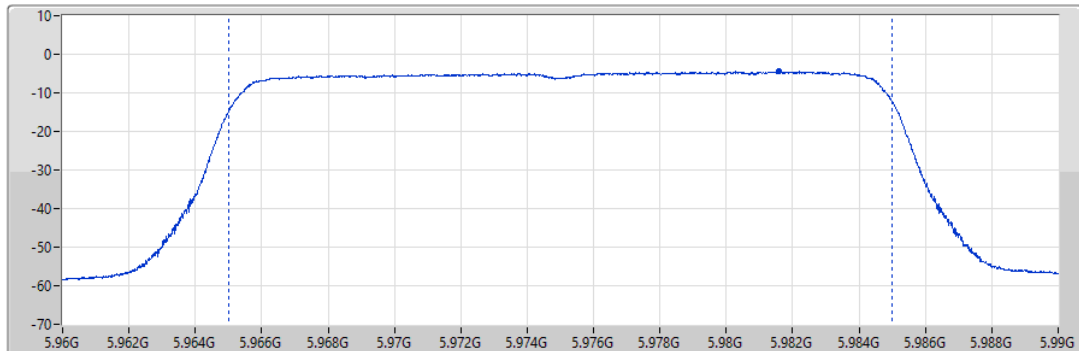
AV Power

5975MHz_TX

04/08/2025

CF (Hz)
5.975G
Span (Hz)
30M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
20m
Detector Type
RMS
CP BW (Hz)
20M

Sum=Total Power
PX=Port X



Port 1

Sum(dBm) P1(dBm)

7.21 7.21

CT_AFC_SP_AP_AFCRSA31_Channel_40MHz_10619_1

Frequency (MHz): 6365

5.925-6.425GHz_802.11be EHT40_Nss1,(MCS0)_1TX

AV Power

6365MHz_TX

04/08/2025

CF (Hz)
6.365G

Span (Hz)
60M

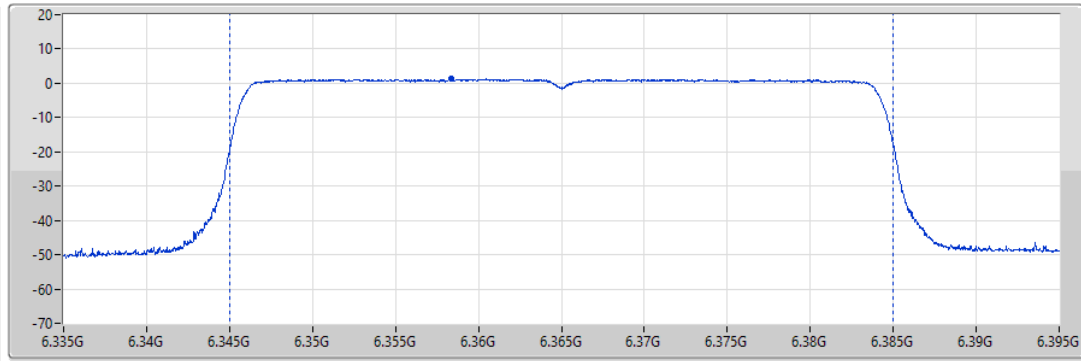
RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
20m

Detector Type
RMS

CP BW (Hz)
40M



Port 1

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
16.24	16.24

Frequency (MHz): 6045

5.925-6.425GHz_802.11be EHT40_Nss1,(MCS0)_1TX

AV Power

6045MHz_TX

04/08/2025

CF (Hz)
6.045G

Span (Hz)
60M

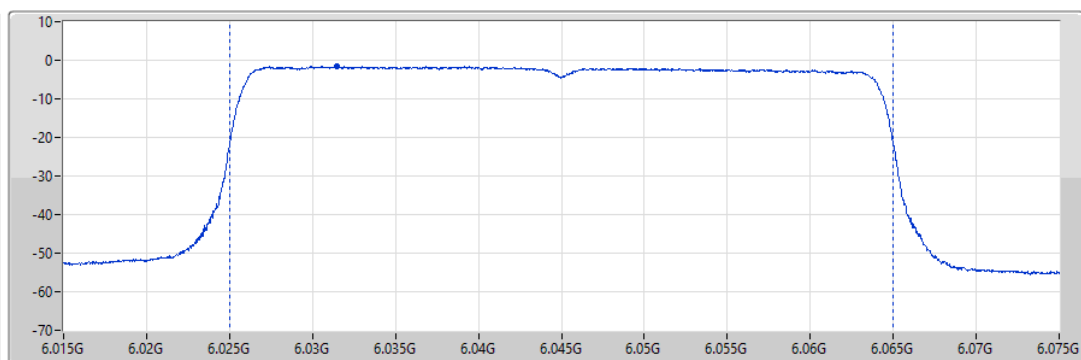
RBW (Hz)
1M

VBW (Hz)
3M

Sweep Time (s)
20m

Detector Type
RMS

CP BW (Hz)
40M



Port 1

Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
13.15	13.15

CT_AFC_SP_AP_AFCRSA31_Channel_80MHz_10620_1

Frequency (MHz): 6625

6.525-6.875GHz_802.11be EHT80_Nss1,(MCS0)_1TX

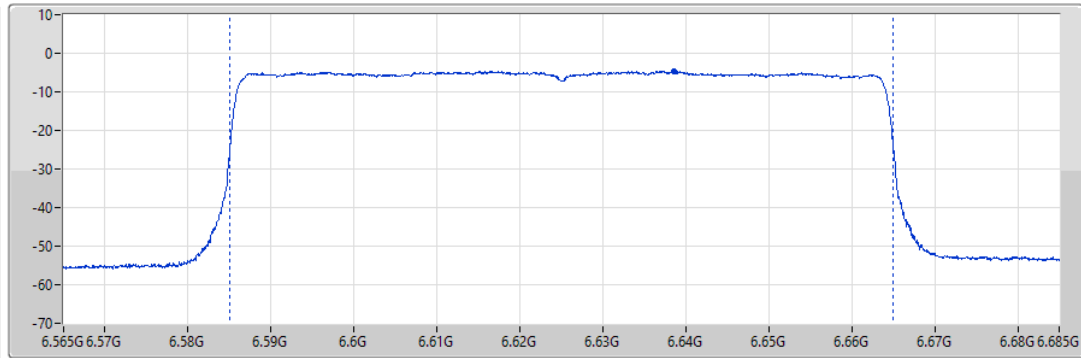
AV Power

6625MHz_TX

04/08/2025

CF (Hz)
6.625G
Span (Hz)
120M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
20m
Detector Type
RMS
CP BW (Hz)
80M

Sum=Total Power
PX=Port X



Port 1

Sum(dBm)	P1(dBm)
13.18	13.18

Frequency (MHz): 6385

5.925-6.425GHz_802.11be EHT80_Nss1,(MCS0)_1TX

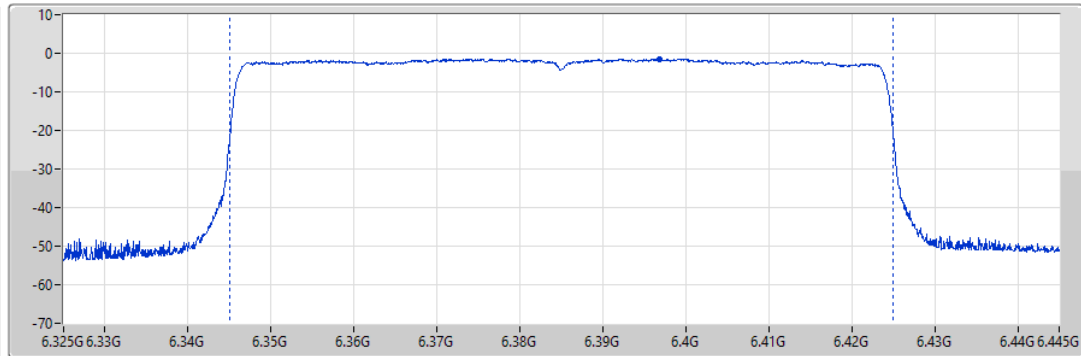
AV Power

6385MHz_TX

04/08/2025

CF (Hz)
6.385G
Span (Hz)
120M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
20m
Detector Type
RMS
CP BW (Hz)
80M

Sum=Total Power
PX=Port X



Port 1

Sum(dBm)	P1(dBm)
16.38	16.38

CT_AFC_SP_AP_AFCDRSA31_Channel_160MHz_10621_1

Frequency (MHz): 6185

5.925-6.425GHz_802.11be EHT160_Nss1,(MCS0)_1TX

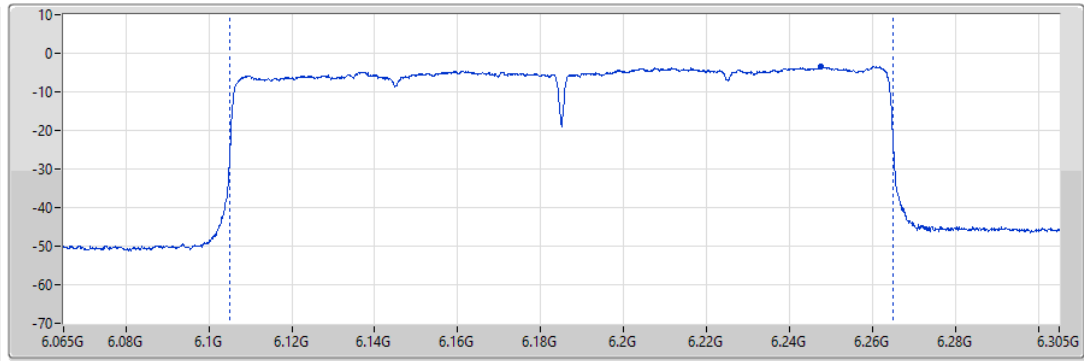
AV Power

6185MHz_TX

04/08/2025

CF (Hz)
6.185G
Span (Hz)
240M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
20m
Detector Type
RMS
CP BW (Hz)
160M

Sum=Total Power
PX=Port X



Port 1

Sum(dBm)	P1(dBm)
16.48	16.48

Frequency (MHz): 6025

5.925-6.425GHz_802.11be EHT160_Nss1,(MCS0)_1TX

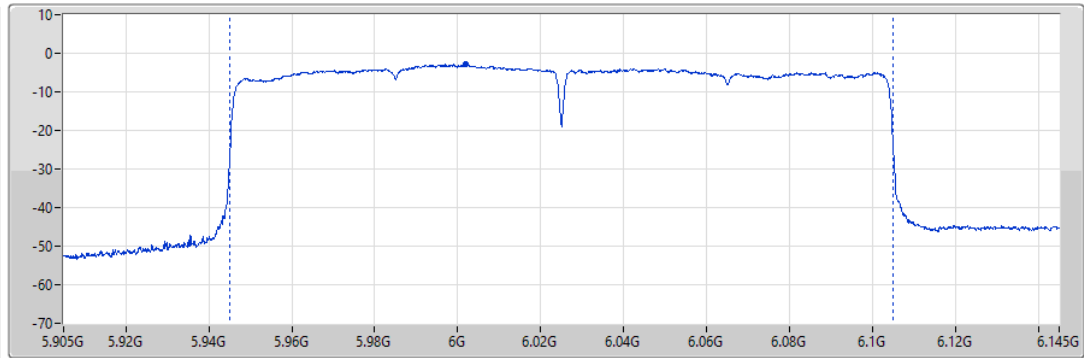
AV Power

6025MHz_TX

04/08/2025

CF (Hz)
6.025G
Span (Hz)
240M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
20m
Detector Type
RMS
CP BW (Hz)
160M

Sum=Total Power
PX=Port X



Port 1

Sum(dBm)	P1(dBm)
16.76	16.76

CT_AFC_SP_AP_AFCDRSA31_Channel_320MHz_10714_1

Bandwidth: 320MHz

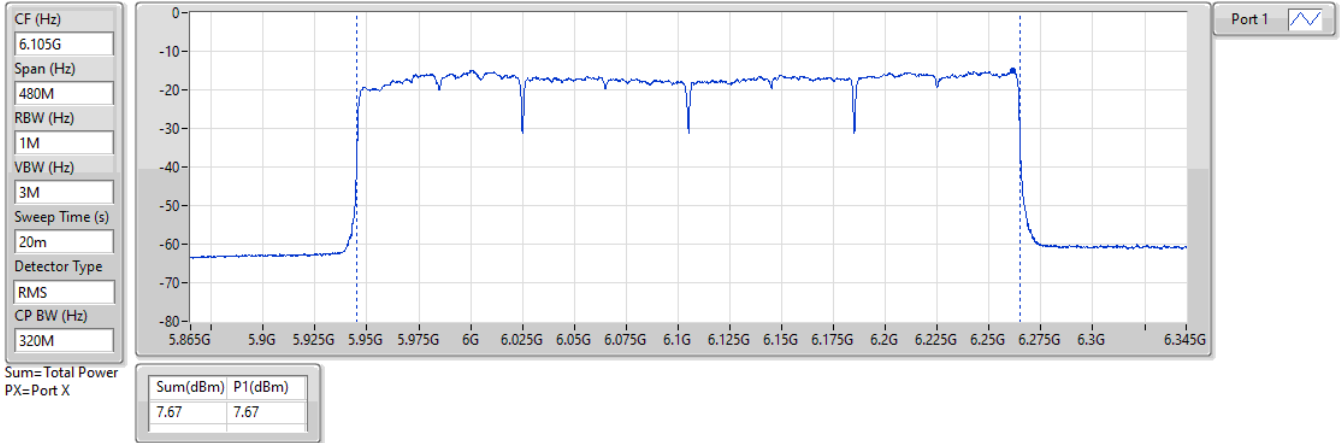
Frequency (MHz): 6105

5.925-6.425GHz_802.11be EHT320_Nss1,(MCS0)_1TX

AV Power

6105MHz_TX

04/08/2025



CT_AFC_SP_AP_AFCDSAU33_Channel_10623_1

Bandwidth: 20MHz

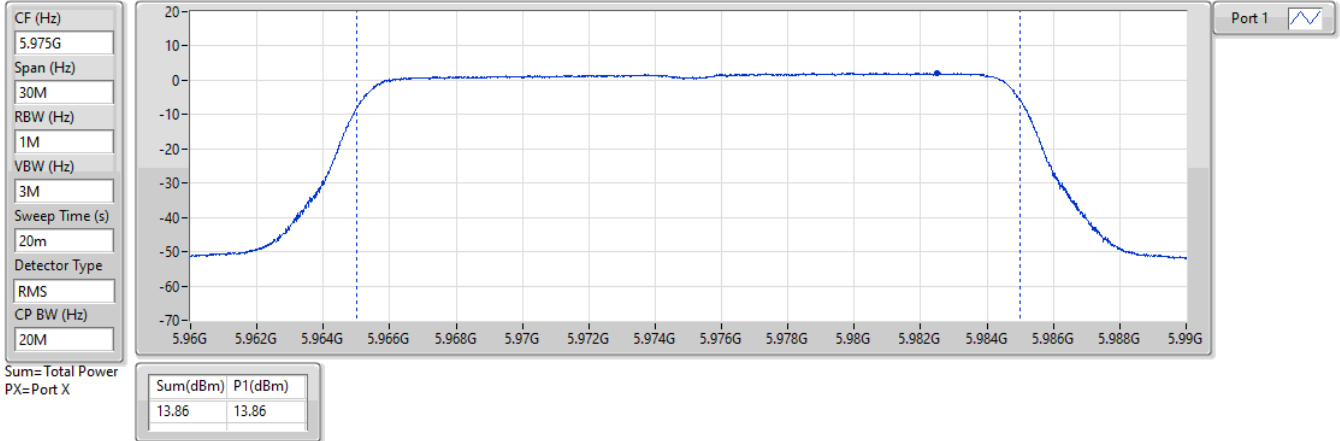
Frequency (MHz): 5975

5.925-6.425GHz_802.11be EHT20_Nss1,(MCS0)_1TX

AV Power

5975MHz_TX

04/08/2025



CT_AFC_SP_AP_AFCDUAU34_Channel_10624_1

Bandwidth: 20MHz

Frequency (MHz): 6615

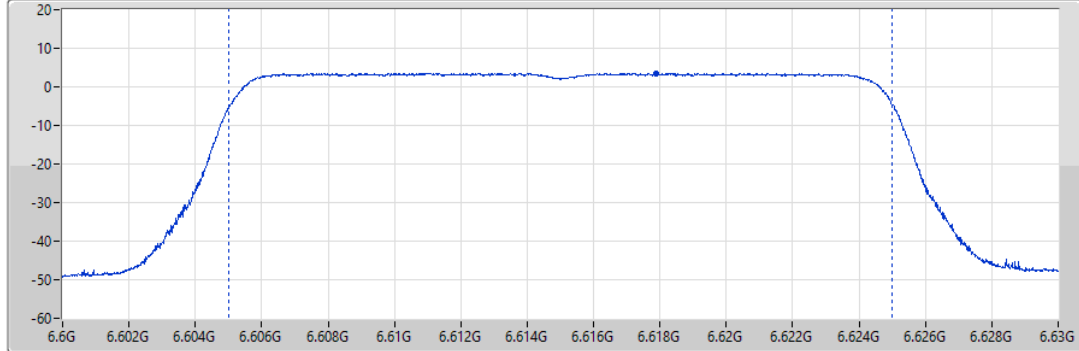
6.525-6.875GHz_802.11be EHT20_Nss1,(MCS0)_1TX

AV Power

6615MHz_TX

04/08/2025

CF (Hz)
6.615G
Span (Hz)
30M
RBW (Hz)
1M
VBW (Hz)
3M
Sweep Time (s)
20m
Detector Type
RMS
CP BW (Hz)
20M



Port 1

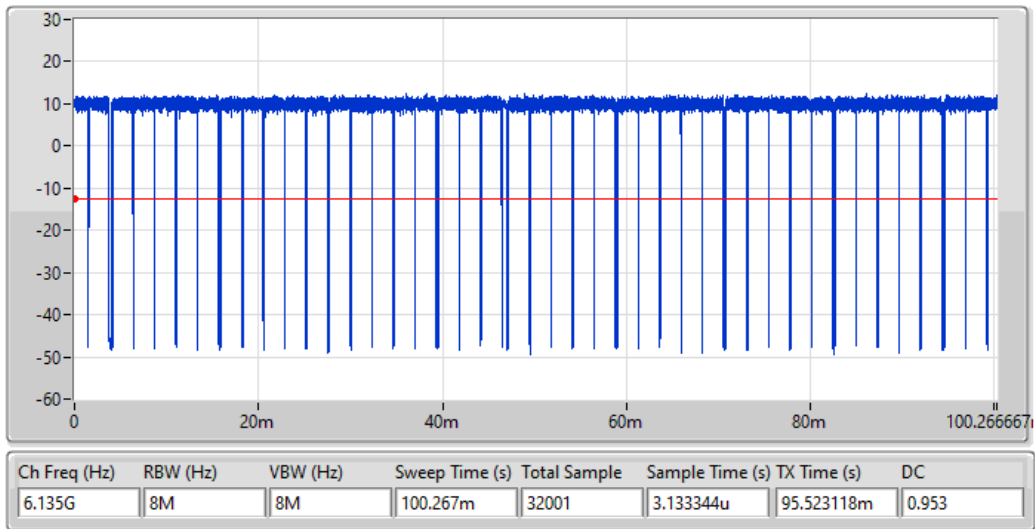
Sum=Total Power
PX=Port X

Sum(dBm)	P1(dBm)
15.65	15.65

Duty Cycle

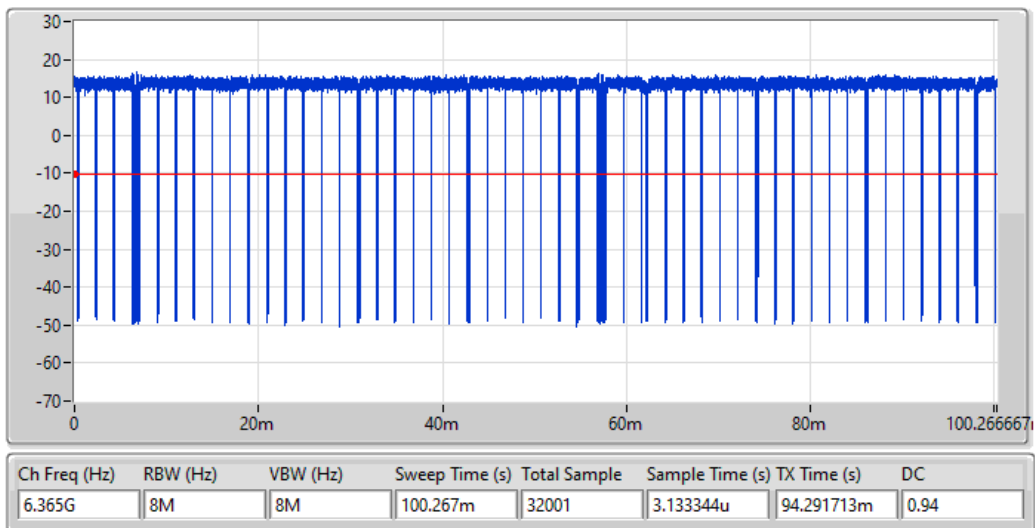
Bandwidth: 20MHz

DC;be20;BWch:20



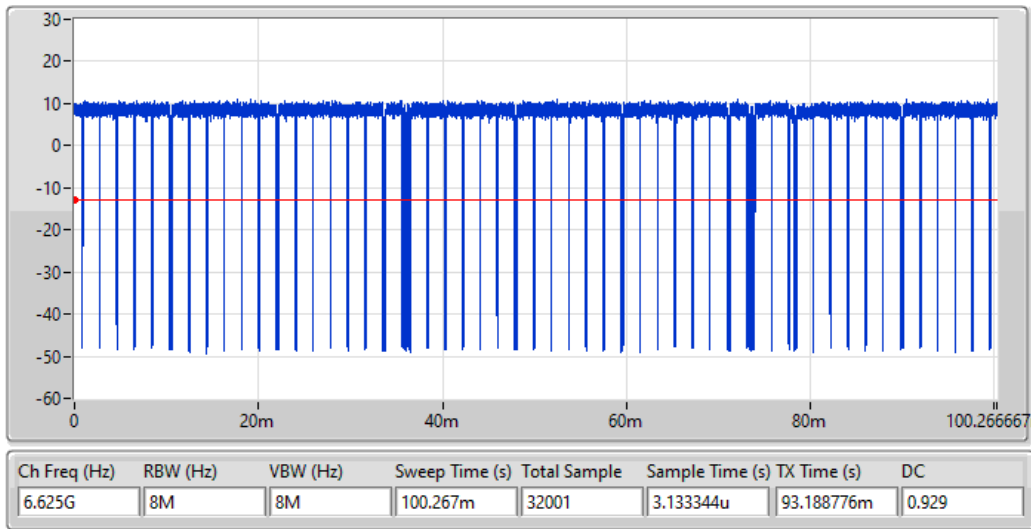
Bandwidth: 40MHz

DC;be40;BWch:40



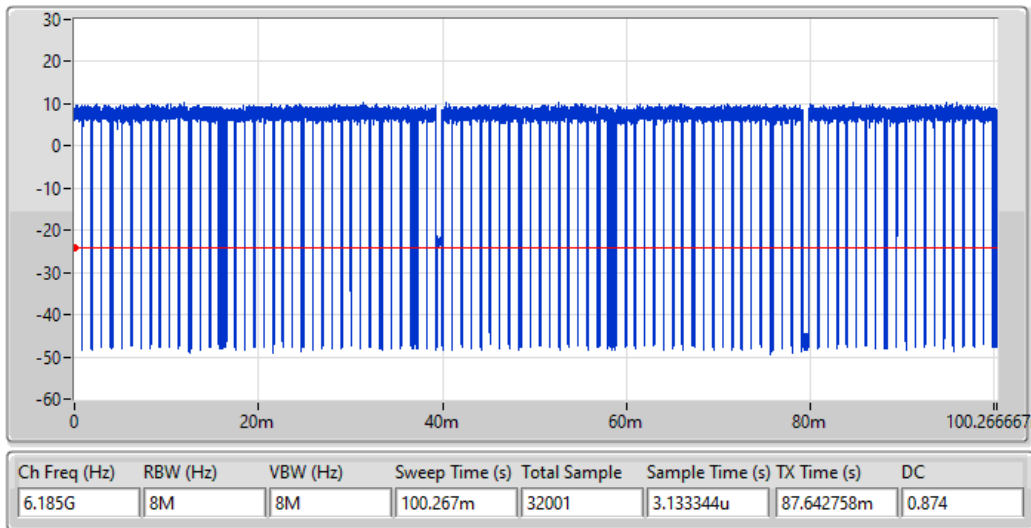
Bandwidth: 80MHz

DC;be80;BWch:80



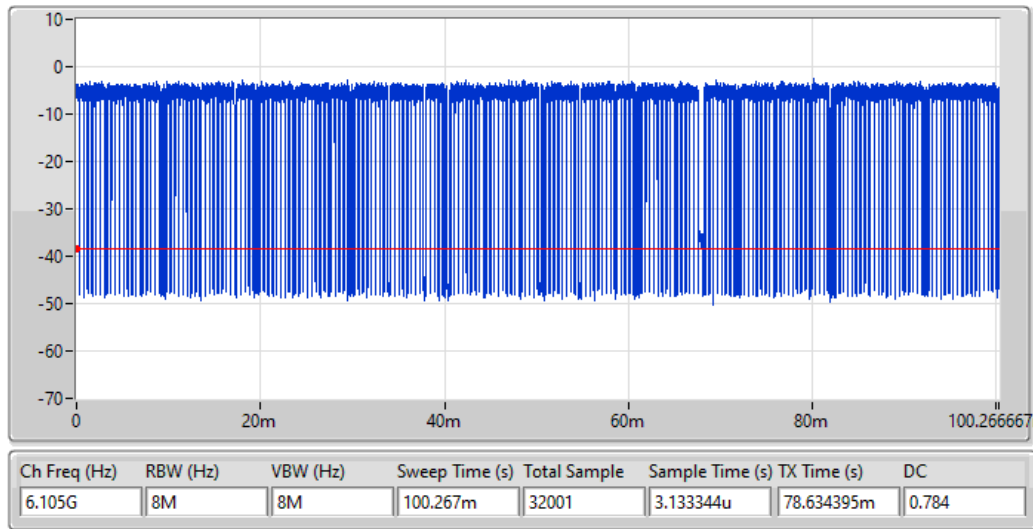
Bandwidth: 160MHz

DC;be160;BWch:160



Bandwidth: 320MHz

DC;be320;BWch:320



————THE END————



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Appendix A. Tools Report

Appendix B. DUT Spectrum Inquiry Request/Response Logs

Appendix C. RF Measurement Plots

Photographs of EUT v01



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_7 Ver2.0



Summary of Test Result

Report Clause	Ref Std. Clause	Test Case Name	Result (PASS/FAIL)	Remark
AFC capability - Inquired Frequency				
Test Group: Inquired Frequency - Always				
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Frequency_20MHz_10611_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Frequency_40MHz_10612_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Frequency_80MHz_10613_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Frequency_160MHz_10614_1	N/A	-
3.2	3.2.4	CT_AFC_SP_AP_AFCDUSA32_Frequency_10615_1	N/A	-
3.3	3.3.4	CT_AFC_SP_AP_AFCDSAU33_Frequency_10616_1	N/A	-
3.4	3.4.4	CT_AFC_SP_AP_AFCDUUAU34_Frequency_10617_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Frequency_320MHz_10713_1	N/A	-
AFC capability - Inquired Channel				
Test Group: Inquired Channel - Always				
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Channel_20MHz_10618_1	PASS	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Channel_40MHz_10619_1	PASS	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Channel_80MHz_10620_1	PASS	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Channel_160MHz_10621_1	PASS	-
3.2	3.2.4	CT_AFC_SP_AP_AFCDUSA32_Channel_10622_1	PASS	-
3.3	3.3.4	CT_AFC_SP_AP_AFCDSAU33_Channel_10623_1	PASS	-
3.4	3.4.4	CT_AFC_SP_AP_AFCDUUAU34_Channel_10624_1	PASS	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_Channel_320MHz_10714_1	PASS	-
AFC capability - Inquired Frequency & Channel				
Test Group: Inquired Frequency and Channel - Always				
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_20MHz_10625_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_40MHz_10626_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_80MHz_10627_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_160MHz_10628_1	N/A	-
3.2	3.2.4	CT_AFC_SP_AP_AFCDUSA32_FrequencyChannel_10629_1	N/A	-
3.3	3.3.4	CT_AFC_SP_AP_AFCDSAU33_FrequencyChannel_10630_1	N/A	-
3.4	3.4.4	CT_AFC_SP_AP_AFCDUUAU34_FrequencyChannel_10631_1	N/A	-
3.1	3.1.4	CT_AFC_SP_AP_AFCDRSA31_FrequencyChannel_320MHz_10715_1	N/A	-
AFC capability - Server Validation – Mandatory				
Test Group: Server Validation - Always				
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_NonMatchSAN_10632_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_DifferentRootCA_10633_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_MatchSuffixSAN_10634_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_ServerCertRevoked_10635_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_OCSPStaplingDisabled_10636_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_StapledOCSPRespExpired_10637_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_TLSCipherSuiteENULL_10638_1	PASS	-
3.5	3.5.4	CT_AFC_ServerValidation_AP_AFCDUSV35_NoRootCA_10639_1	PASS	-

**Note:**

The EUT was equipped with the Dipole, Dual-Polarized MIMO Panel, and Panel antenna. There is only the Panel antenna has been tested and recorded in this test report.

Conformity Assessment Condition:

1. 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/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen

Report Producer: Sandy Chuang



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature of Equipment Under Test	
Power Type	From power adapter or PoE
EUT Type	☒ Standard Power Access Point with Proxy ☐ Standard Power Access Point without Proxy ☐ Fixed Client with Proxy ☐ Fixed Client without Proxy
Bandwidth (MHz)	20 / 40 / 80 / 160 / 320
Condition of EUT	☒ Indoor ☐ Outdoor
Professional Installation	☒ Yes ☐ No
DUT Firmware version	10.15.1.0-026R
DUT Software version	N/A
DUT Hardware version	N/A
Proxy Firmware version	VE6120K Small 10.15.01.0024
Proxy Software version	N/A
Proxy Hardware version	N/A

Note: The above information was declared by manufacturer.



1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	AWAN	AW158SM002	Dipole	Reverse SMA	2.4G+5G	Radio 1_2.4G
						Radio 2_5G
2	AWAN	AW158SM002	Dipole	Reverse SMA	2.4G+5G	Radio 1_2.4G
						Radio 2_5G
3	AWAN	AW158SM002	Dipole	Reverse SMA	5G	Radio 3_5G
4	AWAN	AW158SM002	Dipole	Reverse SMA	5G+BT	Radio 3_5G
						BLE_chain 0_E
5	AWAN	AW158SM002	Dipole	Reverse SMA	6G	Radio 3_6G
6	AWAN	AW158SM002	Dipole	Reverse SMA	6G	Radio 3_6G
7	Sercomm	6172005QWA03	PIFA	I-Pex	2.4G+5G+6G	Radio 1_Scan
8	Sercomm	6172005QWA08	PIFA	I-Pex	BT	BLE_chain 0_I
9	Sercomm	6172005QWA09	PIFA	I-Pex	BT	BLE_chain 1_H
10	Sercomm	6172005QWA10	PIFA	I-Pex	BT	BLE_chain 1_V
11	Sercomm	6172005QWA11	PIFA	I-Pex	GPS	N/A
12	Extreme	WX6PB6508R	Dual-Polarized MIMO Panel	Reverse SMA	2.4G+5G+6G+BT	Radio 1_2.4G
						Radio 2_5G
						Radio 3_5G
						Radio 3_6G
						BLE_chain 0_E
13	Signal Plus	61723018SG	Panel	Reverse SMA	2.4G+5G+6G+BT	Radio 1_2.4G
						Radio 2_5G
						Radio 3_5G
						Radio 3_6G
						BLE_chain 0_E



Ant.	Port	Antenna Cable Loss (dB)													
		2.4G	5G				6G				BT0-E	BT0-I	BT1-H	BT1-V	GPS
			UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8					
1	1	2.28	5.59	5.59	5.61	5.53	-	-	-	-	-	-	-	-	-
2	2	2.28	5.59	5.59	5.61	5.53	-	-	-	-	-	-	-	-	-
3	1	-	5.59	5.59	-	-	-	-	-	-	-	-	-	-	-
4	2	-	5.59	5.59	-	-	-	-	-	-	2.28	-	-	-	-
5	1	-	-	-	-	-	5.56	5.24	5.32	5.21	-	-	-	-	-
6	2	-	-	-	-	-	5.56	5.24	5.32	5.21	-	-	-	-	-
7	1	4.5	5	5	5	5	5	5	5	5	-	-	-	-	-
8	1	-	-	-	-	-	-	-	-	-	-	4.9	-	-	-
9	1	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-
10	2	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-
11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
12-1	1	8	8	8	8	8	-	-	-	-	-	-	-	-	-
12-2	2	8	8	8	8	8	-	-	-	-	-	-	-	-	-
12-3	1	-	8	8	-	-	-	-	-	-	-	-	-	-	-
12-4	2	-	8	8	-	-	-	-	-	-	8	-	-	-	-
12-5	1	-	-	-	-	-	8	8	8	8	-	-	-	-	-
12-6	2	-	-	-	-	-	8	8	8	8	-	-	-	-	-
13-1	1	12.52	12.19	12.18	12.42	12.36	-	-	-	-	-	-	-	-	-
13-2	2	12.52	12.19	12.18	12.42	12.36	-	-	-	-	-	-	-	-	-
13-3	1	-	12.19	12.18	-	-	-	-	-	-	-	-	-	-	-
13-4	2	-	12.19	12.18	-	-	-	-	-	-	12.52	-	-	-	-
13-5	1	-	-	-	-	-	12.46	11.8	12.45	12.41	-	-	-	-	-
13-6	2	-	-	-	-	-	12.46	11.8	12.45	12.41	-	-	-	-	-

Note 1: The EUT has thirteen antennas.



Ant.	Port	Antenna cable loss Gain (dBi)													
		2.4G	5G				6G				BT0-E	BT0-I	BT1-H	BT1-V	GPS
			UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8					
1	1	0.7	1.2	1.2	1.2	1.2	-	-	-	-	-	-	-	-	-
2	2	0.8	1.3	1.3	1.3	1.3	-	-	-	-	-	-	-	-	-
3	1	-	0.8	0.8	-	-	-	-	-	-	-	-	-	-	-
4	2	-	1.2	1.2	-	-	-	-	-	-	0.7	-	-	-	-
5	1	-	-	-	-	-	0.85	0.85	0.85	0.85	-	-	-	-	-
6	2	-	-	-	-	-	0.55	0.55	0.55	0.55	-	-	-	-	-
7	1	4.5	5	5	5	5	5	5	5	5	-	-	-	-	-
8	1	-	-	-	-	-	-	-	-	-	-	4.9	-	-	-
9	1	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-
10	2	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-
11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
12-1	1	0.7	1.2	1.2	1.2	1.2	-	-	-	-	-	-	-	-	-
12-2	2	0.8	1.3	1.3	1.3	1.3	-	-	-	-	-	-	-	-	-
12-3	1	-	0.8	0.8	-	-	-	-	-	-	-	-	-	-	-
12-4	2	-	1.2	1.2	-	-	-	-	-	-	0.7	-	-	-	-
12-5	1	-	-	-	-	-	0.85	0.85	0.85	0.85	-	-	-	-	-
12-6	2	-	-	-	-	-	0.55	0.55	0.55	0.55	-	-	-	-	-
13-1	1	1.19	1.92	1.92	1.92	1.92	-	-	-	-	-	-	-	-	-
13-2	2	1.29	2.02	2.02	2.02	2.02	-	-	-	-	-	-	-	-	-
13-3	1	-	1.52	1.52	-	-	-	-	-	-	-	-	-	-	-
13-4	2	-	1.92	1.92	-	-	-	-	-	-	1.19	-	-	-	-
13-5	1	-	-	-	-	-	1.63	1.63	1.63	1.63	-	-	-	-	-
13-6	2	-	-	-	-	-	1.33	1.33	1.33	1.33	-	-	-	-	-



Ant.	Port	Antenna Net Gain (dBi)													
		2.4G	5G				6G				BT0-E	BT0-I	BT1-H	BT1-V	GPS
			UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8					
1	1	1.58	4.39	4.39	4.41	4.33	-	-	-	-	-	-	-	-	-
2	2	1.48	4.29	4.29	4.31	4.23	-	-	-	-	-	-	-	-	-
3	1	-	4.79	4.79	-	-	-	-	-	-	-	-	-	-	-
4	2	-	4.39	4.39	-	-	-	-	-	-	1.58	-	-	-	-
5	1	-	-	-	-	-	4.71	4.39	4.47	4.36	-	-	-	-	-
6	2	-	-	-	-	-	5.01	4.69	4.77	4.66	-	-	-	-	-
7	1	4.5	5	5	5	5	5	5	5	5	-	-	-	-	-
8	1	-	-	-	-	-	-	-	-	-	-	4.9	-	-	-
9	1	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-
10	2	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-
11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
12-1	1	7.3	6.8	6.8	6.8	6.8	-	-	-	-	-	-	-	-	-
12-2	2	7.2	6.7	6.7	6.7	6.7	-	-	-	-	-	-	-	-	-
12-3	1	-	7.2	7.2	-	-	-	-	-	-	-	-	-	-	-
12-4	2	-	6.8	6.8	-	-	-	-	-	-	7.3	-	-	-	-
12-5	1	-	-	-	-	-	7.15	7.15	7.15	7.15	-	-	-	-	-
12-6	2	-	-	-	-	-	7.45	7.45	7.45	7.45	-	-	-	-	-
13-1	1	11.33	10.27	10.26	10.5	10.44	-	-	-	-	-	-	-	-	-
13-2	2	11.23	10.17	10.16	10.4	10.34	-	-	-	-	-	-	-	-	-
13-3	1	-	10.67	10.66	-	-	-	-	-	-	-	-	-	-	-
13-4	2	-	10.27	10.26	-	-	-	-	-	-	11.33	-	-	-	-
13-5	1	-	-	-	-	-	10.83	10.17	10.82	10.78	-	-	-	-	-
13-6	2	-	-	-	-	-	11.13	10.47	11.12	11.08	-	-	-	-	-

**For 2.4GHz function:**

For IEEE 802.11 b/g/n/VHT/ax/be mode (1TX/2RX) (Radio 1)

Ant. 1 (port 1) could transmit/receive.

Ant. 12-1 (port 1) could transmit/receive.

Ant. 13-1 (port 1) could transmit/receive

For IEEE 802.11 b/g/n/VHT/ax/be mode (2TX/2RX) (Radio 1)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

Ant. 12-1 (port 1) and Ant. 12-2 (port 2) could transmit/receive simultaneously.

Ant. 13-1 (port 1) and Ant. 13-2 (port 2) could transmit/receive simultaneously.

For b20, g20 mode (1TX/1RX) (Radio 1_Scan)

Ant. 7 (port 1) could transmit/receive.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode (1TX/2RX) (Radio 2)

Ant. 1 (port 1) could transmit/receive.

Ant. 12-1 (port 1) could transmit/receive.

Ant. 13-1 (port 1) could transmit/receive.

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX) (Radio 2)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

Ant. 12-1 (port 1) and Ant. 12-2 (port 2) could transmit/receive simultaneously.

Ant. 13-1 (port 1) and Ant. 13-2 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 a/n/ac/ax/be mode (1TX/2RX) (Radio 3)

Ant. 3 (port 1) could transmit/receive.

Ant. 12-3 (port 1) could transmit/receive.

Ant. 13-3 (port 1) could transmit/receive.

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX) (Radio 3)

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

Ant. 12-3 (port 1) and Ant. 12-4 (port 2) could transmit/receive simultaneously.

Ant. 13-3 (port 1) and Ant. 13-4 (port 2) could transmit/receive simultaneously.

For a20, a40, a80, a160 (1TX/1RX) (Radio 1_Scan)

Ant. 7 (port 1) could transmit/receive.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX) (Chain 0)

Ant. 4 (port 2) could transmit/receive.

Ant. 8 (port 1) could transmit/receive.

Ant. 12-4 (port 2) could transmit/receive.

Ant. 13-4 (port 2) could transmit/receive.

For IEEE 802.15.1 Bluetooth mode (1TX/2RX) (Chain 1)

Ant. 9 (port 1) or Ant. 10 (port 2) could transmit/receive

Support diversity function and pre-tested on each single chain, the worst case was Ant. 9 (port 1) and it was recorded in this test report.

Note 2: Directional gain information

	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{DI}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{DI}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{DI}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$

1.3 Table for Radio function

Function Radio (R)	WLAN 2.4GHz	WLAN 5GHz		WLAN 6GHz	Bluetooth
		UNII-1/2A	UNII-2C/3		
1	✓	-	-	-	-
	✓ (Scanning)	✓ (Scanning)	✓ (Scanning)	✓ (Scanning)	-
2	-	✓	✓	-	-
3	-	✓	-	✓	✓

Note: The above information was declared by manufacturer.

1.4 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: 462705-03

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Adding the Standard Power Access Point for this device via Firmware by factory.	All tests

1.5 Accessories

Antenna bracket 1*1 (For Ant. 12 use)

Antenna bracket 2*1 (For Ant. 12 use)



1.6 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	WLAN module	QCA	QCNCM865	N/A
D	Adaptor	Powertron Electronics	PA1045-120HIB300	N/A
E	Proxy	DELL	OptiPlex	N/A

Note: The Adapter was for measurement only and would not be marketed. Its information is shown as below:

Equipment	Brand	Model Name
Adapter	Powertron Electronics	PA1045-120HIB300

1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15.407

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ AFC Device (AFC DUT) Compliance Test Plan Version 1.7
- ♦ FCC KDB 987594 D05 v01r01

1.8 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
Test site Designation No. TW3787 with FCC.	
Conformity Assessment Body Identifier (CABID) TW3787 with ISED.	

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH01-CB	Caster Chang	23.9-24.3 / 61-64	Aug. 04, 2025



2 Measurement Environment

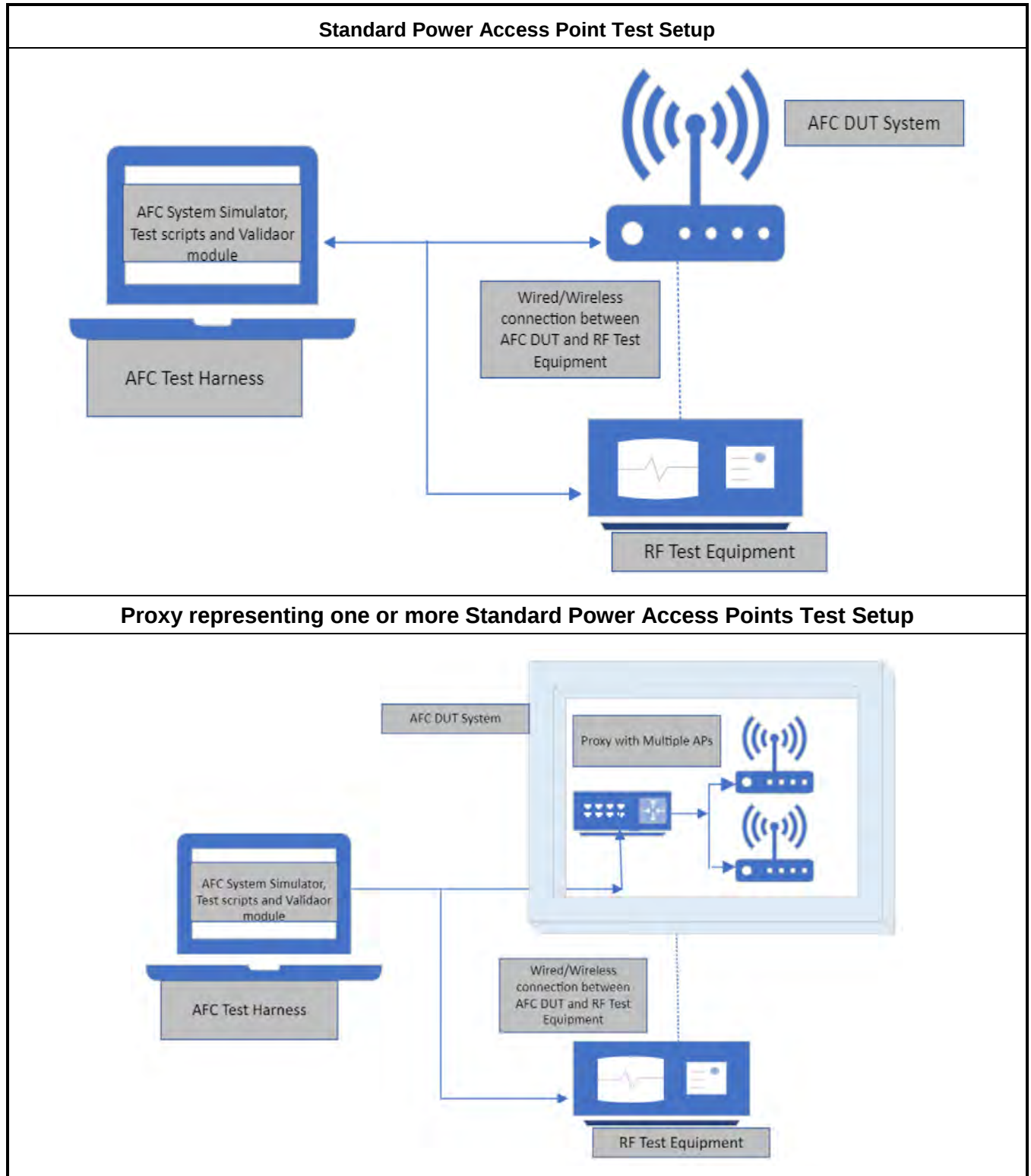
Measurement Environment Information	
AFC DUT Test Harness version	2.0.65.184

2.1 AFCD General Capabilities Declaration

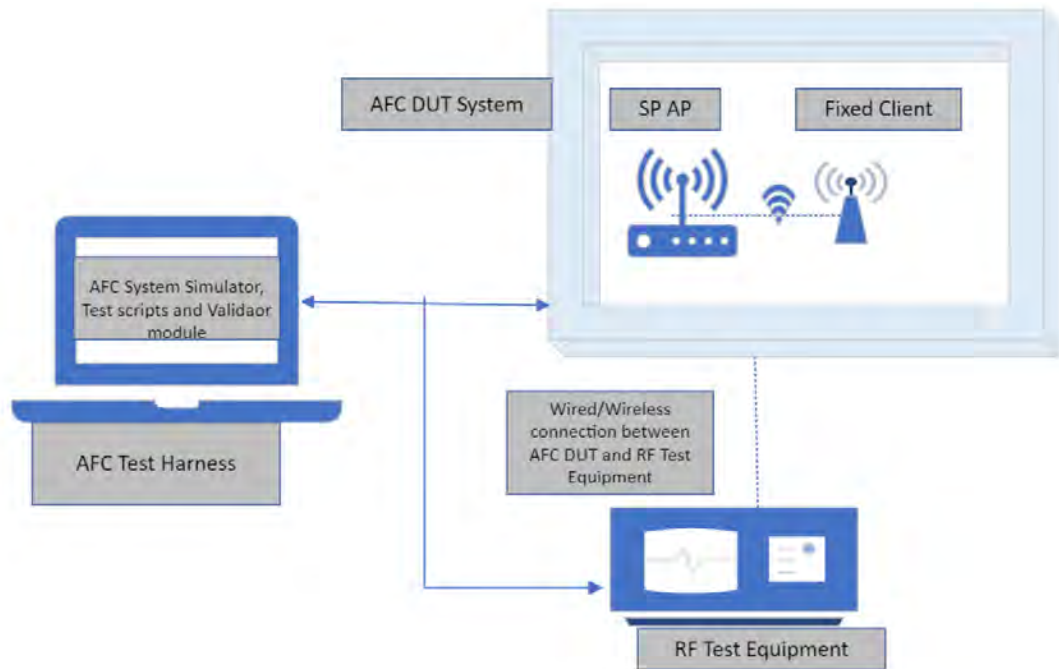
Item	Question	Vendor Response
1	AFC DUT Type	Standalone AP with Proxy
2	Does the AFC DUT supports sending an Available Spectrum Inquiry Request based on the inquired Frequency Range field?	No
3	Does the AFC DUT supports sending an Available Spectrum Inquiry Request based on the inquired Channels fields?	Yes
4	If the Answer to Items 2 and 3 is "Yes", what is AFC DUT's default inquiry type?	-
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	No
8	If the Answer to Item 7 is "Yes". What is the geographic Supported by the AFC DUT?	N/A
9	Does the AFC DUT supports 160 MHz channel width operation?	Yes
10	Which method does AFC DUT acting as a Fixed Client uses for sending an Available Spectrum Inquiry Request?	No
11	Does the AFC DUT supports 320 MHz channel width operation?	Yes

Note: The above information was declared by manufacturer.

2.2 Test Configuration



Fixed Client Device Test Setup





3 Protocol Test Results

3.1 Successful Registration and Spectrum Access Request

3.1.1 Test Procedure

Step	Description
1	If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 12
2	AFC DUT set to Initial Pre-test State. If needed (see Table 9 declaration), configure the AFC DUT with BSS parameters per Table 14 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate. Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request.
3	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*.
4	AFC DUT Test Harness validates the presence of mandatory registration information
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.
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: • In the band if the AFC DUT supports only SP operation Or • Above LPI limits for AFC DUT whose manufacturer attests to its compliance with rules for LPI operation Wait for 60 seconds RF Test Equipment monitors any transmission by the AFC DUT conforms to the following: • 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. • 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.
7	Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request.
8	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*.
9	AFC DUT Test Harness validates the presence of mandatory registration information
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.
11	Wait for 5 minutes (configurable) RF Test Equipment monitors any transmission by the AFC DUT conforms to the following: • 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. • 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.
12	If the AFC DUT is Fixed Client, go to Step 13 else Stop the test
13	The AFC DUT set to Initial Pre-test State.
14	If needed (see Table 9 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate. 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.
15	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*
16	AFC DUT Test Harness validates the presence of mandatory registration information
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.



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
19	Wait for 60 seconds
20	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
21	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
22	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*
23	AFC DUT Test Harness validates the presence of mandatory registration information
24	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.
25	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
	Wait for 60 seconds (configurable)
	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

3.1.2 Test Result

Refer as Appendix A~C



3.2 Unsuccessful Spectrum Access Request

3.2.1 Test Procedure

Step	Description
1	If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 7
2	AFC DUT set to Initial Pre-test State. If needed (see Table 9 declaration), configure the AFC DUT with BSS parameters per Table 14 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate. Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request.
3	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*.
4	AFC DUT Test Harness validates mandatory registration information.
5	AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available.
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: • For SP only operation, AFC DUT does not transmit in the band. • For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits.
7	If the AFC DUT is Fixed Client, go to Step 8 else Stop the test
8	The AFC DUT set to Initial Pre-test State.
9	If needed (see Table 9 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. Configure the AFC DUT with AFC System URL and server root certificate. Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request.
10	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*.
11	AFC DUT Test Harness validates mandatory registration information.
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.
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
13	Wait for 60 seconds 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.

3.2.2 Test Result

Refer as Appendix A~C



3.3 Successful Spectrum Access Update

3.3.1 Test Procedure

Step	Description
1	If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 12
2	AFC DUT set to Initial Pre-test State. If needed (see Table 9 declaration), configure the DUT with BSS parameters per Table 14 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate. Trigger the AFC DUT to send to the AFC DUT Test Harness an Available Spectrum Inquiry Request.
3	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*.
4	AFC DUT Harness validates mandatory registration information.
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.
6	Throughout the preceding steps, RF Test Equipment monitors the output of the AFC DUT to confirm that the AFC DUT does not transmit: • In the band if the AFC DUT supports only SP operation Or • Above LPI limits for AFC DUT whose manufacturer attests to its compliance with rules for LPI operation Wait for 60 seconds RF Test Equipment monitors any transmission by the AFC DUT conforms to the following: • 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. • 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.
7	AFC DUT is power cycled. If needed (see Table 9 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), new geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate.
8	Wait for 60 seconds 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 • For SP only operation, AFC DUT does not transmit in the band. • For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits. If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 9
9	AFC DUT Test Harness evaluates validity of mandatory registration information
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. • During the 60 seconds wait time: ▪ 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 ▪ 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
11	Wait for 60 seconds RF Test Equipment monitors any transmission by the AFC DUT conforms to the following: • 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. • 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.
12	If the AFC DUT is Fixed Client, go to Step 13 else Stop the test
13	The AFC DUT set to Initial Pre-test State.



14	If needed (see Table 9 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate. 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.
15	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*
16	AFC DUT Test Harness validates the presence of mandatory registration information
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.
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
19	Wait for 60 seconds 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
20	AFC DUT is power cycled. If needed (see Table 9 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), new geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate
21	Wait for 60 seconds 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. If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 21
22	AFC DUT Test Harness evaluates validity of mandatory registration information
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. 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.
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
25	Wait for 60 seconds 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

3.3.2 Test Result

Refer as Appendix A~C



3.4 Unsuccessful Spectrum Access Update

3.4.1 Test Procedure

Step	Description
1	If the AFC DUT is Standard Power Access Point, go to Step 2, else go to Step 12
2	AFC DUT set to Initial Pre-test State. 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. Configure the DUT with AFC System URL and server root certificate. 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.
3	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields.
4	AFC DUT Test Harness validates mandatory registration information
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.
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: • In the band if the AFC DUT supports only SP operation Or • Above LPI limits for AFC DUT whose manufacturer attests to its compliance with rules for LPI operation Wait for 60 seconds RF Test Equipment monitors any transmission by the AFC DUT conforms to the following: • 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. 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
7	AFC DUT is power cycled. If needed (see Table 9 declaration), configure the AFC DUT with a temporary test regulatory identifier (e.g., FCC ID), new geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate.
8	Wait for 60 seconds • 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: ▪ For SP only operation, AFC DUT does not transmit in the band, ▪ For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits. • If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 8
9	AFC DUT Test Harness evaluates validity of mandatory registration information.
10	AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available.
11	Throughout Step 7 to 10 and subsequent to Step 10 Test Equipment monitors the output of the AFC DUT to confirm that: For SP only operation, AFC DUT does not transmit in the band. For AFC DUT whose manufacturer attests to its compliance with rules for LPI operation, the AFC DUT does not transmit above LPI limits.
12	If the AFC DUT is Fixed Client, go to Step 13 else Stop the test
13	The AFC DUT set to Initial Pre-test State.
14	If needed (see Table 9 declaration), configure the DUT with a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. Configure the AFC DUT with AFC System URL and server root certificate. 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.
15	AFC DUT sends a valid Available Spectrum Inquiry Request containing the inquiredFrequencyRange and/or the inquiredChannels fields*
16	AFC DUT Test Harness validates the presence of mandatory registration information
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.
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
19	Wait for 60 seconds 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
20	AFC DUT is power cycled. If needed (see Table 9 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. Configure the AFC DUT with AFC System URL and server root certificate
21	Wait for 60 seconds 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., If the AFC DUT sends an Available Spectrum Inquiry Request, then CONTINUE with Step 22 else STOP the test
22	AFC DUT Test Harness evaluates validity of mandatory registration information.
23	AFC DUT Test Harness sends an Available Spectrum Inquiry Response indicating that no frequency ranges and/or channels are available.
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
25	Wait for 60 seconds 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.

3.4.2 Test Result

Refer as Appendix A~C



3.5 Unsuccessful Server Validation

3.5.1 Test Procedure

Step	Description
1	The AFC DUT set to Initial Pre-test State. If needed (see Table 9 declaration), configure the AFC DUT with BSS parameters per Table 14 and a temporary test regulatory identifier (e.g., FCC ID), geographic coordinates, antenna height, and uncertainty parameters. 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: - 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 - 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 - 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 - 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 - Run 5: Same configuration as per Section 2.3.1, except OCSP stapling is disabled and CRL/OCSP servers are not available - Run 6: Same configuration as per Section 2.3.1, except stapled OCSP response has expired and CRL/OCSP servers are not available - Run 7: Same configuration as per Section 2.3.1, except only the TLS cipher suite "eNULL" (no encryption) is enabled - Run 8: N/A (same configuration as per Section 2.3.1) Configure the AFC DUT with the AFC System URL and the following root certificate: - Runs 1-7: Root certificate as per Section 2.3.1 - Run 8: No root certificate 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.
2	AFC DUT Test Harness waits 10 seconds, and verifies no Available Spectrum Inquiry Request is sent to it.
3	Steps 1 and 2 are repeated for each of the remaining Runs

3.5.2 Test Result

Refer as Appendix A



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2025	May 26, 2026	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Conducted (TH01-CB)
RF Power Divider	STI	2 Way	DV-8G -05	1 ~ 8GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH01-CB)
RF Power Divider	STI	2 Way	DV-8G -06	1 ~ 8GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH01-CB)
RF Power Divider	STI	2 Way	DV-8G -07	1 ~ 8GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH01-CB)
RF Power Divider	STI	2 Way	DV-8G -08	1 ~ 8GHz	Oct. 02, 2024	Oct. 01, 2025	Conducted (TH01-CB)

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



5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Conducted Emission	2.5 dB	Confidence levels of 95%