

Test Logs

FCC ID: P27-SCP5173P

Test Model: SCP5173P

Received Date: 2025/8/7

Test Date: 2025/9/19 ~ 2025/12/18

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1 CBSD Registration Process

1.1 WINNF.FT.C.REG.1

2025-12-15T09:12:56.650Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-15T09:12:56.650Z - INFO - the selected test from the user : WINNF.FT.C.REG.1 is starting now

2025-12-15T09:22:15.072Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "B",

"cbsdSerialNumber": "EBZXQC00A0011",

"cpiSignatureData": {

"digitalSignature":

"CyTUa25DAPVL9p-oGwsUSkoKnT1Uh5yXgVFBRLryRQp5N5z3-ecCc6jOTT2yveSLmr0UceNrJXICuA4huBa5A-gxD_JHadooKsqhXJGF-irw_ZSqH0z3OFXzvPHeIW46_3fLKOayn-3iqhXRGehswkuX59pY2PE3Daspe_NB3BM7c6_kH_-at_rQGjQUYK8-kTpd7SuF-Gtcl5WvKdxw4d-VLmcFhFqJZ6oUG87F3E8KGfZC6v2IS85AGTB2Ji4jsYz7agAqJjeZmY6azPzUsQHZYI12v_bDeMac5xAKbcqr0Z7Vodkwz8FnCh1uovJNB2qFNZijQUKfxAx9kYUHG",

"encodedCpiSignedData":

"eyJpbmN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6NDcsImhlaWdodFR5cGUOiJBR0wiLCJhbnRlbnM5hR2Fpbil6MTUsImhvcml6b250YWwBY2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJhbnRlbnM5hQmVhbXdpZHRoljo2NSwiaGVpZ2h0IjoxLjAsInZlcnRyY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFBe mltdXRoljowLjCJsb25naXR1ZGUOiJCYmN0YWxsZXIgaGQ2VydGlmaWNhdGUiLCJpbmN0YWxsQ2VydGlmaWNhdGUibGlhbnRpbWUiOiJyMDI1LTExLTEzVDE4OjMyOjI1LjU5MjA5NlloLCJjcGlJZCI6ImNwaTkWMDRlZSwiY2JzZFNlcmllbE51bWJlcil6IklVCWlRQzAwQTAwMTEifQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fcclId": "P27-SCP5173P",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "W8QZWf"

}

]

}

2025-12-15T09:22:15.125Z - INFO - Registration message contains cpiSignatureData

2025-12-15T09:22:15.125Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2025-12-15T09:22:15.125Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 47,

"antennaAzimuth": 0,

"heightType": "AGL",

```

    "longitude": 121.379644,
    "antennaGain": 15,
    "indoorDeployment": false,
    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbstdSerialNumber": "EBZXQC00A0011"
}

```

2025-12-15T09:22:15.173Z - INFO - verified signature on cpiSignatureData

2025-12-15T09:22:15.173Z - INFO - cpiSignatureData data successfully validated against jsonschema

2025-12-15T09:22:15.173Z - INFO - engine sent successfully, the response to CBRS : {

```

  "registrationResponse": [
    {
      "cbstdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

2025-12-15T09:22:16.868Z - INFO - arrived to nstep starting question answer session with the technician

2025-12-15T09:22:16.868Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2025-12-15T09:24:33.644Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2025-12-15T09:24:34.046Z - INFO - The final result of the test : WINNF.FT.C.REG.1 is - passed


```

    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T09:29:59.546Z - INFO - verified signature on cpiSignatureData
2025-12-15T09:29:59.546Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T09:29:59.562Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbssdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2025-12-15T09:30:01.335Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T09:30:01.335Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T09:31:47.411Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T09:31:47.746Z - INFO - The final result of the test : WINNF.FT.C.REG.5 is - passed

```

1.3 WINNF.FT.C.REG.8

2025-12-15T09:32:49.907Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-15T09:32:49.907Z - INFO - the selected test from the user : WINNF.FT.C.REG.8 is starting now

2025-12-15T09:37:50.711Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "B",

"cbsdSerialNumber": "EBZXQC00A0011",

"cpiSignatureData": {

"digitalSignature":

"CyTUa25DAPVL9p-oGwsUSkoKnT1Uh5yXgVFBRLryRQp5N5z3-ecCc6jOTT2yveSLmr0UceNrJXICuA4huBa5A-gxD_JHadooKsqhhXJGF-irw_ZSqH0z3OFXzvPHeIW46_3fLKOayn-3iqhxRgEhswkuX59pY2PE3Daspe_NB3BM7c6_kH_-at_rQGjQUYK8-kTpd7SuF-Gtcl5WvKdxw4d-VLmcFhFqJZ6oUG87F3E8KGfZC6v2IS85AGTB2Ji4jsYz7agAqJjeZmY6azPzUsQHYZI12v_bDeMac5xAKbcqr0Z7Vodkwz8FnCh1uovJNB2qFNZijQUKfxAx9kYUHG",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6NDcsImhlaWdodFR5cGUOiJBR0wiLCJhbRlbnRlbn5hR2Fpbil6MTUsImhvcml6b250YWx2Y2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJhbRlbnRlbn5hQmVhbXdpZHRoljo2NSwiaGVpZ2h0IjoxLjAsInZlcnRpY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFBe mltdXRoljowLCJsb25naXR1ZGUiOiEYMS4zNzk2NDQsImluZG9vckRlcGxveW1lbnQiOmZhbnHNILCJsYXRpdHVkZSI6MjUuMDUzOTg5fSwiZmNjSWQiOiJQMjctU0NQNTU3M1AiLCJwcm9mZXNzaW9uYWxJbnN0YWxsZXJJEYXRhljlp7ImNwaU5hbWUiOiJCvIBJbnN0YWxsZXJlQ2VydGlmaWNhdGUiLCJpbN0YWxsQ2VydGlmaWNhdGlvblRpbWUiOiIyMDI1LTExLTExVDE4OjMyOjI1LjU5MjA5NloilLCJjcGlJZCI6ImNwaTkWMDIifSwiY2JzZFNlcmllbE51bWJlcil6IklVCWlRQzAwQTAwMTEifQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fccId": "P27-SCP5173P",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "W8QZWf"

}

]

}

2025-12-15T09:37:50.773Z - INFO - Registration message contains cpiSignatureData

2025-12-15T09:37:50.773Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2025-12-15T09:37:50.773Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 47,

"antennaAzimuth": 0,

"heightType": "AGL",

"longitude": 121.379644,

"antennaGain": 15,

"indoorDeployment": false,

```
"latitude": 25.053989,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 65,  
"height": 1.0,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "BV Installer Certificate",  
  "installCertificationTime": "2025-11-13T18:32:29.592096Z",  
  "cpild": "cpi9001"  
},  
"fcclId": "P27-SCP5173P",  
"cbsdSerialNumber": "EBZXQC00A0011"
```

```
}
```

2025-12-15T09:37:50.812Z - INFO - verified signature on cpiSignatureData

2025-12-15T09:37:50.828Z - INFO - cpiSignatureData data successfully validated against jsonschema

2025-12-15T09:37:50.828Z - INFO - engine sent successfully, the response to CBRS : {

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

```
}
```

2025-12-15T09:37:52.684Z - INFO - arrived to nstep starting question answer session with the technician

2025-12-15T09:37:52.684Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2025-12-15T09:57:34.953Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2025-12-15T09:57:35.207Z - INFO - The final result of the test : WINNF.FT.C.REG.8 is - passed


```

    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbsdSerialNumber": "EBZXQC00A0011"
}

```

```

}
2025-12-15T10:04:26.132Z - INFO - verified signature on cpiSignatureData
2025-12-15T10:04:26.140Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T10:04:26.140Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [

```

```

    {
      "response": {
        "responseCode": 200
      }
    }
  ]
}

```

```

}
2025-12-15T10:04:27.780Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T10:04:27.780Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T10:11:23.729Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T10:11:23.999Z - INFO - The final result of the test : WINNF.FT.C.REG.10 is - passed

```



```

    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T10:23:22.515Z - INFO - verified signature on cpiSignatureData
2025-12-15T10:23:22.515Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T10:23:22.515Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 103
      }
    }
  ]
}
2025-12-15T10:23:23.783Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T10:23:23.783Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T10:24:51.339Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T10:24:52.046Z - INFO - The final result of the test : WINNF.FT.C.REG.12 is - passed

```



```
"latitude": 25.053989,  
"horizontalAccuracy": 3,  
"antennaDowntilt": 0,  
"antennaBeamwidth": 65,  
"height": 1.0,  
"verticalAccuracy": 3  
},  
"professionalInstallerData": {  
  "cpiName": "BV Installer Certificate",  
  "installCertificationTime": "2025-11-13T18:32:29.592096Z",  
  "cpild": "cpi9001"  
},  
"fcclId": "P27-SCP5173P",  
"cbsdSerialNumber": "EBZXQC00A0011"
```

```
}
```

2025-12-15T10:30:39.641Z - INFO - verified signature on cpiSignatureData

2025-12-15T10:30:39.641Z - INFO - cpiSignatureData data successfully validated against jsonschema

2025-12-15T10:30:39.641Z - INFO - engine sent successfully, the response to CBRS : {

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

```
}
```

2025-12-15T10:30:40.763Z - INFO - arrived to nstep starting question answer session with the technician

2025-12-15T10:30:40.763Z - INFO - the question is : Were there RF transmissions from the CBSD1 during the test? please choose one of the answers :

2025-12-15T10:41:39.898Z - INFO - for the question : Were there RF transmissions from the CBSD1 during the test? , the user choose n

2025-12-15T10:41:40.177Z - INFO - The final result of the test : WINNF.FT.C.REG.14 is - passed


```
"latitude": 25.053989,
"horizontalAccuracy": 3,
"antennaDowntilt": 0,
"antennaBeamwidth": 65,
"height": 1.0,
"verticalAccuracy": 3
},
"professionalInstallerData": {
  "cpiName": "BV Installer Certificate",
  "installCertificationTime": "2025-11-13T18:32:29.592096Z",
  "cpild": "cpi9001"
},
"fcclId": "P27-SCP5173P",
"cbbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T12:42:49.538Z - INFO - verified signature on cpiSignatureData
2025-12-15T12:42:49.538Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T12:42:49.538Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 100
      }
    }
  ]
}
}
2025-12-15T12:42:51.164Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T12:42:51.164Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T12:44:27.256Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T12:44:27.542Z - INFO - The final result of the test : WINNF.FT.C.REG.16 is - passed
```



```
"latitude": 25.053989,
"horizontalAccuracy": 3,
"antennaDowntilt": 0,
"antennaBeamwidth": 65,
"height": 1.0,
"verticalAccuracy": 3
},
"professionalInstallerData": {
  "cpiName": "BV Installer Certificate",
  "installCertificationTime": "2025-11-13T18:32:29.592096Z",
  "cpild": "cpi9001"
},
"fcclId": "P27-SCP5173P",
"cbbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T12:53:22.842Z - INFO - verified signature on cpiSignatureData
2025-12-15T12:53:22.842Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T12:53:22.842Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "response": {
        "responseCode": 201
      }
    }
  ]
}
}
2025-12-15T12:53:24.437Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T12:53:24.437Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T12:56:34.749Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T12:56:35.005Z - INFO - The final result of the test : WINNF.FT.C.REG.18 is - passed
```



```

    "indoorDeployment": false,
    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T13:06:11.088Z - INFO - verified signature on cpiSignatureData
2025-12-15T13:06:11.088Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T13:06:11.088Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-15T13:06:13.117Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-15T13:06:13.131Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

```

```

    }
  ]
}
2025-12-15T13:06:14.085Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "operationParam": {
        "maxEirp": 37,
        "operationFrequencyRange": {
          "highFrequency": 3590000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
}
2025-12-15T13:06:14.107Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 400
      }
    }
  ]
}
}
2025-12-15T13:06:15.611Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T13:06:15.617Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T13:10:48.440Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T13:10:48.881Z - INFO - The final result of the test : WINNF.FT.C.GRA.1 is - passed

```



```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T13:18:25.671Z - INFO - verified signature on cpiSignatureData
2025-12-15T13:18:25.687Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T13:18:25.687Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-15T13:18:27.700Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-15T13:18:27.714Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    ]
  }
2025-12-15T13:18:28.674Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "operationParam": {
        "maxEirp": 37,
        "operationFrequencyRange": {
          "highFrequency": 3590000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
2025-12-15T13:18:28.688Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 401
      }
    }
  ]
}
2025-12-15T13:18:30.299Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T13:18:30.299Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-15T13:19:22.529Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-15T13:19:22.868Z - INFO - The final result of the test : WINNF.FT.C.GRA.2 is - passed

```

3 CBSD Heart Beat Process

3.1 WINNF.FT.C.HBT.1

2025-12-15T13:20:48.299Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-15T13:20:48.299Z - INFO - the selected test from the user : WINNF.FT.C.HBT.1 is starting now

2025-12-15T13:25:48.740Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "B",

"cbsdSerialNumber": "EBZXQC00A0011",

"cpiSignatureData": {

"digitalSignature":

"CyTUa25DAPVL9p-oGwsUSkoKnT1Uh5yXgVFBLYRQp5N5z3-ecCc6jOTT2yveSLmr0UceNrJXICuA4huBa5A-gxD_JHadooKsqhhXJGF-irw_ZSqH0z3OFXzvPHeIW46_3fLKOayn-3iqhxRgEhswkuX59pY2PE3Daspe_NB3BM7c6_kH_-at_rQGjQUYK8-kTpd7SuF-Gtcl5WvKdxw4d-VLmcFhFqJZ6oUG87F3E8KGfZC6v2IS85AGTB2Ji4jsYz7agAqJjeZmY6azPzUsQHZYI12v_bDeMac5xAKbcqr0Z7Vodkwz8FnCh1uovJNB2qFNZijQUKfxAx9kYUHG",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6NDcsImhlaWdodFR5cGUOiJBR0wiLCJhbNRIbm5hR2Fpbil6MTUsImhvcml6b250YWx2Y2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJhbNRIbm5hQmVhbXdpZHRoljo2NSwiaGVpZ2h0IjoxLjAsInZlcnRpY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFBe mltdXRoljowLCJsb25naXR1ZGUiOiEYMS4zNzk2NDQsImluZG9vckRlcGxveW1lbnQiOmZhbnHNILCJsYXRpdHVkZSI6MjUuMDUzOTg5fSwiZmNjSWQiOiJQMjctU0NQNTU3M1AilCjwcm9mZXNzaW9uYWxJbnN0YWxsZXJJEYXRhljlp7ImNwaU5hbWUiOiJCvIBjbnN0YWxsZXJlQ2VydGlmaWNhdGUiLCJpbN0YWxsQ2VydGlmaWNhdGlvblRpbWUiOiIyMDI1LTExLTEzVDE4OjMyOjI1LjU5MjA5NloiLCJjcGlJZCI6ImNwaTkWMDIifSwiY2JzZFNlcmllbE51bWJlcil6IkVjZWlRQzAwQTAwMTEifQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fccId": "P27-SCP5173P",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "W8QZWf"

}

]

}

2025-12-15T13:25:48.809Z - INFO - Registration message contains cpiSignatureData

2025-12-15T13:25:48.809Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2025-12-15T13:25:48.809Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 47,

"antennaAzimuth": 0,

"heightType": "AGL",

"longitude": 121.379644,

"antennaGain": 15,

"indoorDeployment": false,

```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T13:25:48.862Z - INFO - verified signature on cpiSignatureData
2025-12-15T13:25:48.862Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T13:25:48.862Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-15T13:25:50.874Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-15T13:25:50.890Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    ]
  }
  2025-12-15T13:25:51.842Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  2025-12-15T13:25:51.857Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-22T13:25:51Z",
        "grantId": "810393049",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  2025-12-15T13:25:56.203Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "810393049",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  2025-12-15T13:25:56.220Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "810393049",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-15T13:29:16Z"
      }
    ]
  }
  2025-12-15T13:27:07.325Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "810393049",
        "grantRenew": false,

```

```

    "operationState": "AUTHORIZED"
  }
]
}
2025-12-15T13:27:07.346Z - INFO - Time interval between two heartbeat request messages is: 71.121, limit
is: 105.0
2025-12-15T13:27:07.346Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "810393049",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-15T13:30:27Z"
    }
  ]
}
2025-12-15T13:28:13.430Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "810393049",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-15T13:28:13.430Z - INFO - Time interval between two heartbeat request messages is: 66.106, limit
is: 105.0
2025-12-15T13:28:13.446Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "810393049",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-15T13:31:33Z"
    }
  ]
}
2025-12-15T13:29:19.525Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "810393049",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-15T13:29:19.539Z - INFO - Time interval between two heartbeat request messages is: 66.109, limit
is: 105.0
2025-12-15T13:29:19.555Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

```

```

        "grantId": "810393049",
        "response": {
            "responseCode": 0
        },
        "transmitExpireTime": "2025-12-15T13:32:39Z"
    }
}
2025-12-15T13:30:25.632Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "810393049",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-15T13:30:25.632Z - INFO - Time interval between two heartbeat request messages is: 66.093, limit
is: 105.0
2025-12-15T13:30:25.648Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "810393049",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-15T13:33:45Z"
        }
    ]
}
2025-12-15T13:31:31.734Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "810393049",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-15T13:31:31.734Z - INFO - Time interval between two heartbeat request messages is: 66.102, limit
is: 105.0
2025-12-15T13:31:31.750Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "810393049",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-15T13:34:51Z"
        }
    ]
}
2025-12-15T13:31:33.142Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-15T13:31:33.142Z - INFO - the question is : Did CBSD1 transmit power prior to AUTHORIZED state

```

(first successful HBT response)? please choose one of the answers :

2025-12-15T13:38:46.940Z - INFO - for the question : Did CBSD1 transmit power prior to AUTHORIZED state (first successful HBT response)? , the user choose n

2025-12-15T13:38:46.940Z - INFO - the question is : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? please choose one of the answers :

2025-12-15T13:38:47.829Z - INFO - for the question : Did CBSD1 transmit only within the frequency range specified in its grantRequest message? , the user choose y

2025-12-15T13:38:48.311Z - INFO - The final result of the test : WINNF.FT.C.HBT.1 is - passed


```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-16T02:09:47.165Z - INFO - verified signature on cpiSignatureData
2025-12-16T02:09:47.181Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-16T02:09:47.181Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-16T02:09:49.194Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-16T02:09:49.210Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    ]
  }
  2025-12-16T02:09:50.168Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  ]
}
  2025-12-16T02:09:50.200Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-23T02:09:50Z",
        "grantId": "16084418",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  ]
}
  2025-12-16T02:09:54.565Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "16084418",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  ]
}
  2025-12-16T02:09:54.579Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "16084418",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-16T02:13:14Z"
      }
    ]
  }
  ]
}
  2025-12-16T02:11:05.723Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "16084418",
        "grantRenew": false,

```

```

        "operationState": "AUTHORIZED"
    }
]
}
2025-12-16T02:11:05.739Z - INFO - Time interval between two heartbeat request messages is: 71.158, limit
is: 105.0
2025-12-16T02:11:05.739Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "16084418",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-16T02:14:25Z"
        }
    ]
}
2025-12-16T02:12:11.832Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "16084418",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-16T02:12:11.832Z - INFO - Time interval between two heartbeat request messages is: 66.109, limit
is: 105.0
2025-12-16T02:12:11.846Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "16084418",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-16T02:15:31Z"
        }
    ]
}
2025-12-16T02:13:17.940Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "16084418",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-16T02:13:17.940Z - INFO - Time interval between two heartbeat request messages is: 66.108, limit
is: 105.0
2025-12-16T02:13:17.956Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

```

```
"grantId": "16084418",  
"response": {  
  "responseCode": 105  
},  
"transmitExpireTime": "2025-12-16T02:13:17Z"  
}  
]
```

2025-12-16T02:13:19.526Z - INFO - arrived to nstep starting question answer session with the technician

2025-12-16T02:13:19.595Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? please choose one of the answers :

2025-12-16T02:14:37.809Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 105? , the user choose y

2025-12-16T02:14:38.188Z - INFO - The final result of the test : WINNF.FT.C.HBT.3 is - passed


```

    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-16T02:32:20.357Z - INFO - verified signature on cpiSignatureData
2025-12-16T02:32:20.357Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-16T02:32:20.357Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-16T02:32:22.368Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-16T02:32:22.382Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

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    ]
  }
  2025-12-16T02:32:23.351Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
}
  2025-12-16T02:32:23.367Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-23T02:32:23Z",
        "grantId": "116576969",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
}
  2025-12-16T02:32:27.711Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "116576969",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
}
  2025-12-16T02:32:27.727Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "116576969",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-16T02:35:47Z"
      }
    ]
  }
}
  2025-12-16T02:33:38.867Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "116576969",
        "grantRenew": false,

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        "operationState": "AUTHORIZED"
    }
]
}
2025-12-16T02:33:38.867Z - INFO - Time interval between two heartbeat request messages is: 71.155, limit
is: 105.0
2025-12-16T02:33:38.882Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "116576969",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-16T02:36:58Z"
        }
    ]
}
2025-12-16T02:34:44.966Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "116576969",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-16T02:34:44.966Z - INFO - Time interval between two heartbeat request messages is: 66.099, limit
is: 105.0
2025-12-16T02:34:44.986Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "116576969",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-16T02:38:04Z"
        }
    ]
}
2025-12-16T02:35:51.065Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "116576969",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-16T02:35:51.065Z - INFO - Time interval between two heartbeat request messages is: 66.099, limit
is: 105.0
2025-12-16T02:35:51.079Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

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    "grantId": "116576969",
    "response": {
      "responseCode": 0
    },
    "transmitExpireTime": "2025-12-16T02:39:11Z"
  }
]
}
2025-12-16T02:36:57.177Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "116576969",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-16T02:36:57.177Z - INFO - Time interval between two heartbeat request messages is: 66.112, limit
is: 105.0
2025-12-16T02:36:57.191Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "116576969",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-16T02:40:17Z"
    }
  ]
}
2025-12-16T02:38:03.265Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "116576969",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-16T02:38:03.279Z - INFO - Time interval between two heartbeat request messages is: 66.088, limit
is: 105.0
2025-12-16T02:38:03.296Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "116576969",
      "response": {
        "responseCode": 500
      },
      "transmitExpireTime": "2025-12-16T02:38:03Z"
    }
  ]
}
2025-12-16T02:38:05.028Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-16T02:38:05.028Z - INFO - the question is : Did the CBSD1 stop RF transmission within 60 seconds

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of receiving Heartbeat response with responseCode = 500? please choose one of the answers :
2025-12-16T02:45:54.177Z - INFO - for the question : Did the CBSD1 stop RF transmission within 60
seconds of receiving Heartbeat response with responseCode = 500? , the user choose y
2025-12-16T02:45:54.563Z - INFO - The final result of the test : WINNF.FT.C.HBT.4 is - passed


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        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-16T03:00:53.654Z - INFO - verified signature on cpiSignatureData
2025-12-16T03:00:53.655Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-16T03:00:53.657Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-16T03:00:55.665Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-16T03:00:55.681Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

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    ]
  }
  2025-12-16T03:00:56.631Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  ]
}
  2025-12-16T03:00:56.637Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-23T03:00:56Z",
        "grantId": "822413912",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  ]
}
  2025-12-16T03:01:01.026Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "822413912",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  ]
}
  2025-12-16T03:01:01.042Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "822413912",
        "response": {
          "responseCode": 501
        },
        "transmitExpireTime": "2025-12-16T03:01:01Z"
      }
    ]
  }
  ]
}
  2025-12-16T03:01:08.864Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "822413912",
        "grantRenew": false,

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        "operationState": "GRANTED"
      }
    ]
  }
2025-12-16T03:01:08.865Z - INFO - Time interval between two heartbeat request messages is: 7.837, limit is: 105.0
2025-12-16T03:01:08.869Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "822413912",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2025-12-16T03:01:08Z"
    }
  ]
}
2025-12-16T03:01:10.710Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-16T03:01:10.714Z - INFO - the question is : Did the CBSD transmit at any time during the test?
please choose one of the answers :
2025-12-16T03:05:03.648Z - INFO - for the question : Did the CBSD transmit at any time during the test? , the
user choose n
2025-12-16T03:05:03.963Z - INFO - The final result of the test : WINNF.FT.C.HBT.5 is - passed
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        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-16T03:34:29.019Z - INFO - verified signature on cpiSignatureData
2025-12-16T03:34:29.022Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-16T03:34:29.023Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-16T03:34:31.042Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-16T03:34:31.058Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

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    ]
  }
  2025-12-16T03:34:32.013Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  ]
}
  2025-12-16T03:34:32.028Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-23T03:34:32Z",
        "grantId": "689264346",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  ]
}
  2025-12-16T03:34:36.404Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "689264346",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  ]
}
  2025-12-16T03:34:36.420Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "689264346",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-16T03:37:56Z"
      }
    ]
  }
  ]
}
  2025-12-16T03:35:47.558Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "689264346",
        "grantRenew": false,

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        "operationState": "AUTHORIZED"
    }
]
}
2025-12-16T03:35:47.561Z - INFO - Time interval between two heartbeat request messages is: 71.154, limit
is: 105.0
2025-12-16T03:35:47.575Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "689264346",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-16T03:39:07Z"
        }
    ]
}
2025-12-16T03:36:53.657Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "689264346",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-16T03:36:53.661Z - INFO - Time interval between two heartbeat request messages is: 66.1, limit is:
105.0
2025-12-16T03:36:53.674Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "689264346",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-16T03:40:13Z"
        }
    ]
}
2025-12-16T03:37:59.759Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "689264346",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-16T03:37:59.762Z - INFO - Time interval between two heartbeat request messages is: 66.101, limit
is: 105.0
2025-12-16T03:37:59.776Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

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    "grantId": "689264346",
    "response": {
      "responseCode": 501
    },
    "transmitExpireTime": "2025-12-16T03:37:59Z"
  }
]
}
2025-12-16T03:38:14.161Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "689264346",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2025-12-16T03:38:14.164Z - INFO - Time interval between two heartbeat request messages is: 14.403, limit is: 105.0
2025-12-16T03:38:14.170Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "689264346",
      "response": {
        "responseCode": 501
      },
      "transmitExpireTime": "2025-12-16T03:38:14Z"
    }
  ]
}
2025-12-16T03:38:15.387Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-16T03:38:15.395Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? please choose one of the answers :
2025-12-16T03:49:48.398Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds of receiving Heartbeat response with responseCode = 501? , the user choose y
2025-12-16T03:49:48.717Z - INFO - The final result of the test : WINNF.FT.C.HBT.6 is - passed

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    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-16T08:18:37.036Z - INFO - verified signature on cpiSignatureData
2025-12-16T08:18:37.059Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-16T08:18:37.059Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-16T08:18:39.078Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-16T08:18:39.125Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}

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    ]
  }
  2025-12-16T08:18:40.085Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  ]
}
  2025-12-16T08:18:40.115Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-23T08:18:40Z",
        "grantId": "717722028",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  ]
}
  2025-12-16T08:18:44.470Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "717722028",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  ]
}
  2025-12-16T08:18:44.476Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "717722028",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-16T08:22:04Z"
      }
    ]
  }
  ]
}
  2025-12-16T08:19:55.631Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "717722028",
        "grantRenew": false,

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    "operationState": "AUTHORIZED"
  }
]
}
2025-12-16T08:19:55.631Z - INFO - Time interval between two heartbeat request messages is: 71.162, limit
is: 105.0
2025-12-16T08:19:55.648Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "717722028",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-16T08:23:15Z"
    }
  ]
}
2025-12-16T08:21:01.736Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "717722028",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-16T08:21:01.736Z - INFO - Time interval between two heartbeat request messages is: 66.104, limit
is: 105.0
2025-12-16T08:21:01.752Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "717722028",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-16T08:24:21Z"
    }
  ]
}
2025-12-16T08:22:07.836Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "717722028",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-16T08:22:07.836Z - INFO - Time interval between two heartbeat request messages is: 66.101, limit
is: 105.0
2025-12-16T08:22:07.851Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

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```

    "grantId": "717722028",
    "response": {
      "responseCode": 502
    },
    "transmitExpireTime": "2025-12-16T08:22:07Z"
  }
]
}
2025-12-16T08:22:10.670Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "717722028"
    }
  ]
}
2025-12-16T08:22:10.755Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "717722028",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-16T08:22:12.634Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-16T08:22:12.717Z - INFO - the question is : Did the CBSD stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 502? please choose one of the answers :
2025-12-16T08:34:10.546Z - INFO - for the question : Did the CBSD stop RF transmission within 60 seconds
of receiving Heartbeat response with responseCode = 502? , the user choose y
2025-12-16T08:34:11.003Z - INFO - The final result of the test : WINNF.FT.C.HBT.7 is - passed

```



```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-18T03:15:59.443Z - INFO - verified signature on cpiSignatureData
2025-12-18T03:15:59.456Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-18T03:15:59.457Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-18T03:16:01.457Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-18T03:16:01.486Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    ]
  }
  2025-12-18T03:16:02.437Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  ]
}
  2025-12-18T03:16:02.451Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-25T03:16:02Z",
        "grantId": "354354112",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  ]
}
  2025-12-18T03:16:06.838Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "354354112",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  ]
}
  2025-12-18T03:16:37.032Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "354354112",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  ]
}
  2025-12-18T03:16:37.032Z - INFO - request message received while HBT is absent, sleep 174 sec before
  responding
  2025-12-18T03:17:07.032Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "354354112",
        "grantRenew": false,

```

```

    "operationState": "GRANTED"
  }
]
}
2025-12-18T03:17:07.032Z - INFO - request message received while HBT is absent, sleep 144 sec before
responding
2025-12-18T03:17:37.026Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "354354112",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2025-12-18T03:17:37.026Z - INFO - request message received while HBT is absent, sleep 114 sec before
responding
2025-12-18T03:18:07.039Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "354354112",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2025-12-18T03:18:07.039Z - INFO - request message received while HBT is absent, sleep 84 sec before
responding
2025-12-18T03:18:27.811Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "354354112",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2025-12-18T03:18:27.811Z - INFO - request message received while HBT is absent, sleep 64 sec before
responding
2025-12-18T03:18:57.767Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-18T03:18:57.767Z - INFO - request message received while HBT is absent, sleep 34 sec before
responding
2025-12-18T03:19:26.904Z - INFO - engine sent successfully, the response to CBRS : {

```

```
"heartbeatResponse": [  
  {  
    "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",  
    "grantId": "354354112",  
    "response": {  
      "responseCode": 501  
    },  
    "transmitExpireTime": "2025-12-18T03:19:26Z"  
  }  
]
```

```
}  
2025-12-18T03:19:28.888Z - INFO - arrived to nstep starting question answer session with the technician  
2025-12-18T03:19:28.954Z - INFO - the question is : Were there RF transmissions from the CBSD during the  
test? please choose one of the answers :  
2025-12-18T03:19:31.036Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2025-12-18T03:19:31.053Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2025-12-18T03:19:31.055Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2025-12-18T03:19:31.055Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2025-12-18T03:19:31.770Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2025-12-18T03:19:31.821Z - INFO - engine sent successfully, the response to CBRS : "list index out of  
range"  
2025-12-18T03:30:51.469Z - INFO - for the question : Were there RF transmissions from the CBSD during  
the test? , the user choose n  
2025-12-18T03:30:52.125Z - INFO - The final result of the test : WINNF.FT.C.HBT.9 is - passed
```



```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-18T05:39:43.076Z - INFO - verified signature on cpiSignatureData
2025-12-18T05:39:43.076Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-18T05:39:43.076Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-18T05:39:45.089Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-18T05:39:45.105Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```
]
}
2025-12-18T05:39:46.063Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "operationParam": {
        "maxEirp": 37,
        "operationFrequencyRange": {
          "highFrequency": 3590000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
2025-12-18T05:39:46.079Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "channelType": "GAA",
      "grantExpireTime": "2025-12-25T05:39:46Z",
      "grantId": "518642534",
      "heartbeatInterval": 100,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-18T05:39:50.469Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
2025-12-18T05:39:50.484Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T05:43:10Z"
    }
  ]
}
2025-12-18T05:41:01.657Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "grantRenew": false,
```

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    "operationState": "AUTHORIZED"
  }
]
}
2025-12-18T05:41:01.657Z - INFO - Time interval between two heartbeat request messages is: 71.188, limit
is: 105.0
2025-12-18T05:41:01.673Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T05:44:21Z"
    }
  ]
}
2025-12-18T05:42:07.750Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T05:42:07.750Z - INFO - Time interval between two heartbeat request messages is: 66.094, limit
is: 105.0
2025-12-18T05:42:07.750Z - INFO - LAST HBT RESPONSE THAT SET TRANSMIT_EXPIRE_TIME WAS AT:
2025-12-18 05:41:01.657000
2025-12-18T05:42:37.971Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T05:42:37.971Z - INFO - request message received while HBT is absent, sleep 174 sec before
responding
2025-12-18T05:43:07.959Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "518642534",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T05:43:07.959Z - INFO - request message received while HBT is absent, sleep 144 sec before
responding
2025-12-18T05:43:37.960Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [

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```

        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "518642534",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T05:43:37.960Z - INFO - request message received while HBT is absent, sleep 114 sec before
responding
2025-12-18T05:44:07.960Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "518642534",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T05:44:07.960Z - INFO - request message received while HBT is absent, sleep 84 sec before
responding
2025-12-18T05:44:37.969Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "518642534",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T05:44:37.969Z - INFO - request message received while HBT is absent, sleep 54 sec before
responding
2025-12-18T05:44:58.259Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "518642534",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2025-12-18T05:44:58.259Z - INFO - request message received while HBT is absent, sleep 34 sec before
responding
2025-12-18T05:45:27.782Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "518642534",
            "response": {
                "responseCode": 501
            },
            "transmitExpireTime": "2025-12-18T05:45:27Z"
        }
    ]
}
}

```

2025-12-18T05:45:29.525Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-18T05:45:29.525Z - INFO - the question is : Did the CBSD stop RF transmissions within
(transmitExpireTime + 60seconds) of last valid heartbeat response? please choose one of the answers :
2025-12-18T05:45:31.977Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2025-12-18T05:45:31.977Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2025-12-18T05:45:31.977Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2025-12-18T05:45:31.993Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2025-12-18T05:45:31.993Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2025-12-18T05:45:32.279Z - INFO - engine sent successfully, the response to CBRS : "list index out of
range"
2025-12-18T05:45:59.280Z - INFO - for the question : Did the CBSD stop RF transmissions within
(transmitExpireTime + 60seconds) of last valid heartbeat response? , the user choose y
2025-12-18T05:45:59.621Z - INFO - The final result of the test : WINNF.FT.C.HBT.10 is - passed

4 CBSD Measurement Report

4.1 WINNF.FT.C.MES.1

2025-12-15T08:17:15.671Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-15T08:17:15.671Z - INFO - the selected test from the user : WINNF.FT.C.MES.1 is starting now

2025-12-15T08:22:07.506Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "B",

"cbsdSerialNumber": "EBZXQC00A0011",

"cpiSignatureData": {

"digitalSignature":

"CyTUa25DAPVL9p-oGwsUSkoKnT1Uh5yXgVFBRLryRQp5N5z3-ecCc6jOTT2yveSLmr0UceNrJXICuA4huBa5A-gxD_JHadooKsqhhXJGF-irw_ZSqH0z3OFXzvPHeIW46_3fLKOayn-3iqhxRgEhswkuX59pY2PE3Daspe_NB3BM7c6_kH_-at_rQGjQUYK8-kTpd7SuF-Gtcl5WvKdxw4d-VLmcFhFqJZ6oUG87F3E8KGfZC6v2IS85AGTB2Ji4jsYz7agAqJjeZmY6azPzUsQHZYI12v_bDeMac5xAKbcqr0Z7Vodkwz8FnCh1uovJNB2qFNZijQUKfxAx9kYUHG",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6NDcsImhlaWdodFR5cGUiOiJBR0wiLCJhbNRIbm5hR2Fpbil6MTUsImhvcml6b250YWx2Y2N1cmFjeSI6MywiYW50ZW5uYURvd250aWx0IjowLCJhbNRIbm5hQmVhbXdpZHRoljo2NSwiaGVpZ2h0IjoxLjAsInZlcnRpY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFBe mltdXRoljowLCJsb25naXR1ZGUiOiEYMS4zNzk2NDQsImluZG9vckRlcGxveW1lbnQiOmZhbnHNILCJsYXRpdHVkZSI6MjUuMDUzOTg5fSwiZmNjSWQiOiJQMjctU0NQNTU3M1AiLCJwcm9mZXNzaW9uYWxJbnN0YWxsZXJJEYXRhljlp7ImNwaU5hbWUiOiJCvIBJbnN0YWxsZXJlQ2VydGlmaWNhdGUiLCJpbN0YWxsQ2VydGlmaWNhdGlvblRpbWUiOiIyMDI1LTExLTExVDE4OjMyOjI1LjU5MjA5NloilLCJjcGlJZCI6ImNwaTkWMDIifSwiY2JzZFNlcmllbE51bWJlcil6IklVCWlRQzAwQTAwMTEifQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fccId": "P27-SCP5173P",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "W8QZWf"

}

]

}

2025-12-15T08:22:07.526Z - INFO - Registration message contains cpiSignatureData

2025-12-15T08:22:07.526Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2025-12-15T08:22:07.526Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 47,

"antennaAzimuth": 0,

"heightType": "AGL",

"longitude": 121.379644,

"antennaGain": 15,

"indoorDeployment": false,

```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-15T08:22:07.575Z - INFO - verified signature on cpiSignatureData
2025-12-15T08:22:07.578Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-15T08:22:07.579Z - INFO - Response message contains measReportConfig
2025-12-15T08:22:07.581Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "measReportConfig": [
                "RECEIVED_POWER_WITHOUT_GRANT"
            ],
            "response": {
                "responseCode": 0
            }
        }
    ]
}
}
2025-12-15T08:22:10.085Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ],
            "measReport": {
                "rcvdPowerMeasReports": [
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3550000000,
                        "measRcvdPower": -88.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3560000000,
                        "measRcvdPower": -88.0
                    },
                    {
                        "measBandwidth": 10000000,
                        "measFrequency": 3570000000,
                        "measRcvdPower": -86.0
                    }
                ]
            }
        }
    ]
}

```

```
{
  "measBandwidth": 10000000,
  "measFrequency": 3580000000,
  "measRcvdPower": -86.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3590000000,
  "measRcvdPower": -84.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -86.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -87.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -83.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -89.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -80.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -80.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -87.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -86.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3690000000,
```

```

        "measRcvdPower": -85.0
      }
    ]
  }
}
2025-12-15T08:22:10.105Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-15T08:22:11.520Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "measReport": {
        "rcvdPowerMeasReports": [
          {
            "measBandwidth": 10000000,
            "measFrequency": 3550000000,
            "measRcvdPower": -88.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3560000000,
            "measRcvdPower": -88.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3570000000,
            "measRcvdPower": -86.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3580000000,
            "measRcvdPower": -86.0
          },
          {
            "measBandwidth": 10000000,
            "measFrequency": 3590000000,
            "measRcvdPower": -84.0
          }
        ]
      }
    }
  ]
}

```

```

{
  "measBandwidth": 10000000,
  "measFrequency": 3600000000,
  "measRcvdPower": -85.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3610000000,
  "measRcvdPower": -86.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3620000000,
  "measRcvdPower": -87.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3630000000,
  "measRcvdPower": -83.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3640000000,
  "measRcvdPower": -89.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3650000000,
  "measRcvdPower": -80.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3660000000,
  "measRcvdPower": -80.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3670000000,
  "measRcvdPower": -87.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3680000000,
  "measRcvdPower": -86.0
},
{
  "measBandwidth": 10000000,
  "measFrequency": 3690000000,
  "measRcvdPower": -85.0
}
]
},
"operationParam": {
  "maxEirp": 37,
  "operationFrequencyRange": {
    "highFrequency": 3590000000,
    "lowFrequency": 3550000000
  }
}

```

```
    }  
  }  
]  
}  
2025-12-15T08:22:11.540Z - INFO - engine sent successfully, the response to CBRS : {  
  "grantResponse": [  
    {  
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",  
      "channelType": "GAA",  
      "grantExpireTime": "2025-12-22T08:22:11Z",  
      "grantId": "598231636",  
      "heartbeatInterval": 100,  
      "response": {  
        "responseCode": 0  
      }  
    }  
  ]  
}  
2025-12-15T08:22:13.213Z - INFO - arrived to nstep starting question answer session with the technician  
2025-12-15T08:22:21.596Z - INFO - The final result of the test : WINNF.FT.C.MES.1 is - passed
```

5 CBSD Relinquishment Process

5.1 WINNF.FT.C.RLQ.1

2025-12-18T06:34:40.025Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-18T06:34:40.025Z - INFO - the selected test from the user : WINNF.FT.C.RLQ.1 is starting now

2025-12-18T06:39:38.296Z - INFO - registration request from CBRS : {

"registrationRequest": [

{

"airInterface": {

"radioTechnology": "NR",

"supportedSpec": "FFS"

},

"callSign": "",

"cbsdCategory": "B",

"cbsdSerialNumber": "EBZXQC00A0011",

"cpiSignatureData": {

"digitalSignature":

"CyTUa25DAPVL9p-oGwsUSkoKnT1Uh5yXgVFBRLryRQp5N5z3-ecCc6jOTT2yveSLmr0UceNrJXICuA4huBa5A-gxD_JHadooKsqhhXJGF-irw_ZSqH0z3OFXzvPHeIW46_3fLKOayn-3iqhxRgEhswkuX59pY2PE3Daspe_NB3BM7c6_kH_-at_rQGjQUYK8-kTpd7SuF-Gtcl5WvKdxw4d-VLmcFhFqJZ6oUG87F3E8KGfZC6v2IS85AGTB2Ji4jsYz7agAqJjeZmY6azPzUsQHZYI12v_bDeMac5xAKbcqr0Z7Vodkwz8FnCh1uovJNB2qFNZijQUKfxAx9kYUHG",

"encodedCpiSignedData":

"eyJpbN0YWxsYXRpb25QYXJhbSI6eyJlaXJwQ2FwYWJpbGl0eSI6NDcsImhlaWdodFR5cGUOiJBR0wiLCJhbNRIbm5hR2Fpbil6MTUsImhvcml6b250YWx2Y3Vybm50ZW5uYURvd250aWx0IjowLCJhbNRIbm5hQmVhbXdpZHRoljo2NSwiaGVpZ2h0IjoxLjAsInZlcnRpY2FsQWNjdXJhY3kiOiJMSlMfudGVubmFBe mltdXRoljowLCJsb25naXR1ZGUiOiEYMS4zNzk2NDQsImluZG9vckRlcGxveW1lbnQiOmZhbnHNILCJsYXRpdHVkZSI6MjUuMDUzOTg5fSwiZmNjSWQIiOiJQMjctU0NQNTU3M1AiLCJwcm9mZXNzaW9uYWxJbnN0YWxsZXJJEYXRhljlp7ImNwaU5hbWUiOiJCViBjbN0YWxsZXIlgQ2VydGlmaWNhdGUiLCJpbN0YWxsQ2VydGlmaWNhdGlvblRpbWUiOiIyMDI1LTExLTExVDE4OjMyOjI1LjU5MjA5NloiLCJjcGlZCi6ImNwaTkWMDIifSwiY2JzZFNlcmllbE51bWJlcil6IkVCWlRQzAwQTAwMTEifQ",

"protectedHeader": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9"

},

"fccId": "P27-SCP5173P",

"groupingParam": [

{

"groupId": "SERCOMM_111",

"groupType": "INTERFERENCE_COORDINATION"

}

],

"measCapability": [

"RECEIVED_POWER_WITHOUT_GRANT"

],

"userId": "W8QZWf"

}

]

}

2025-12-18T06:39:38.312Z - INFO - Registration message contains cpiSignatureData

2025-12-18T06:39:38.312Z - INFO - protectedHeader = {u'alg': u'RS256', u'typ': u'JWT'}

2025-12-18T06:39:38.312Z - INFO - encodedCpiSignedData contents = {

"installationParam": {

"eirpCapability": 47,

"antennaAzimuth": 0,

"heightType": "AGL",

"longitude": 121.379644,

"antennaGain": 15,

"indoorDeployment": false,

```

        "latitude": 25.053989,
        "horizontalAccuracy": 3,
        "antennaDowntilt": 0,
        "antennaBeamwidth": 65,
        "height": 1.0,
        "verticalAccuracy": 3
    },
    "professionalInstallerData": {
        "cpiName": "BV Installer Certificate",
        "installCertificationTime": "2025-11-13T18:32:29.592096Z",
        "cpild": "cpi9001"
    },
    "fcclId": "P27-SCP5173P",
    "cbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-18T06:39:38.362Z - INFO - verified signature on cpiSignatureData
2025-12-18T06:39:38.365Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-18T06:39:38.367Z - INFO - engine sent successfully, the response to CBRS : {
    "registrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-18T06:39:40.387Z - INFO - spectrumInquiry request from CBRS : {
    "spectrumInquiryRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "inquiredSpectrum": [
                {
                    "highFrequency": 3700000000,
                    "lowFrequency": 3550000000
                }
            ]
        }
    ]
}
2025-12-18T06:39:40.397Z - INFO - engine sent successfully, the response to CBRS : {
    "spectrumInquiryResponse": [
        {
            "availableChannel": [
                {
                    "channelType": "GAA",
                    "frequencyRange": {
                        "highFrequency": 3700000000,
                        "lowFrequency": 3550000000
                    },
                    "ruleApplied": "FCC_PART_96"
                }
            ],
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}

```

```

    ]
  }
  2025-12-18T06:39:41.351Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
}
2025-12-18T06:39:41.367Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "channelType": "GAA",
      "grantExpireTime": "2025-12-25T06:39:41Z",
      "grantId": "548949636",
      "heartbeatInterval": 100,
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2025-12-18T06:39:45.732Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "548949636",
      "grantRenew": false,
      "operationState": "GRANTED"
    }
  ]
}
}
2025-12-18T06:39:45.747Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "548949636",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T06:43:05Z"
    }
  ]
}
}
2025-12-18T06:40:56.907Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "548949636",
      "grantRenew": false,

```

```

    "operationState": "AUTHORIZED"
  }
]
}
2025-12-18T06:40:56.911Z - INFO - Time interval between two heartbeat request messages is: 71.174, limit
is: 105.0
2025-12-18T06:40:56.927Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "548949636",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T06:44:16Z"
    }
  ]
}
2025-12-18T06:41:44.654Z - INFO - relinquishment request from CBRS : {
  "relinquishmentRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "548949636"
    }
  ]
}
2025-12-18T06:41:44.670Z - INFO - engine sent successfully, the response to CBRS : {
  "relinquishmentResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "548949636",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-18T06:41:46.604Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-18T06:41:46.608Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of
Relinquishment Request by Test Harness? please choose one of the answers :
2025-12-18T06:45:18.132Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of
Relinquishment Request by Test Harness? , the user choose y
2025-12-18T06:45:18.479Z - INFO - The final result of the test : WINNF.FT.C.RLQ.1 is - passed

```



```
"latitude": 25.053989,
"horizontalAccuracy": 3,
"antennaDowntilt": 0,
"antennaBeamwidth": 65,
"height": 1.0,
"verticalAccuracy": 3
},
"professionalInstallerData": {
  "cpiName": "BV Installer Certificate",
  "installCertificationTime": "2025-11-13T18:32:29.592096Z",
  "cpild": "cpi9001"
},
"fcclId": "P27-SCP5173P",
"cbstdSerialNumber": "EBZXQC00A0011"
}
2025-12-18T06:50:57.839Z - INFO - verified signature on cpiSignatureData
2025-12-18T06:50:57.842Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-18T06:50:57.844Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbstdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-18T06:50:59.845Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbstdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-18T06:50:59.861Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3700000000,
            "lowFrequency": 3550000000
          },
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbstdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
```

```

    ]
  }
  2025-12-18T06:51:00.813Z - INFO - grant request from CBRS : {
    "grantRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "operationParam": {
          "maxEirp": 37,
          "operationFrequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          }
        }
      }
    ]
  }
  2025-12-18T06:51:00.829Z - INFO - engine sent successfully, the response to CBRS : {
    "grantResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "channelType": "GAA",
        "grantExpireTime": "2025-12-25T06:51:00Z",
        "grantId": "713905161",
        "heartbeatInterval": 100,
        "response": {
          "responseCode": 0
        }
      }
    ]
  }
  2025-12-18T06:51:05.176Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "713905161",
        "grantRenew": false,
        "operationState": "GRANTED"
      }
    ]
  }
  2025-12-18T06:51:05.191Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "713905161",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-18T06:54:25Z"
      }
    ]
  }
  2025-12-18T06:52:16.315Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "713905161",
        "grantRenew": false,

```

```

        "operationState": "AUTHORIZED"
    }
]
}
2025-12-18T06:52:16.318Z - INFO - Time interval between two heartbeat request messages is: 71.138, limit
is: 105.0
2025-12-18T06:52:16.332Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "713905161",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T06:55:36Z"
        }
    ]
}
2025-12-18T06:53:22.414Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "713905161",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T06:53:22.417Z - INFO - Time interval between two heartbeat request messages is: 66.1, limit is:
105.0
2025-12-18T06:53:22.431Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "713905161",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T06:56:42Z"
        }
    ]
}
2025-12-18T06:54:28.513Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "713905161",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T06:54:28.517Z - INFO - Time interval between two heartbeat request messages is: 66.099, limit
is: 105.0
2025-12-18T06:54:28.535Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

```

```

        "grantId": "713905161",
        "response": {
            "responseCode": 0
        },
        "transmitExpireTime": "2025-12-18T06:57:48Z"
    }
}
2025-12-18T06:55:00.265Z - INFO - relinquishment request from CBRS : {
    "relinquishmentRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "713905161"
        }
    ]
}
2025-12-18T06:55:00.267Z - INFO - engine sent successfully, the response to CBRS : {
    "relinquishmentResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "713905161",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-18T06:55:02.818Z - INFO - deregistration request from CBRS : {
    "deregistrationRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011"
        }
    ]
}
2025-12-18T06:55:02.859Z - INFO - engine sent successfully, the response to CBRS : {
    "deregistrationResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "response": {
                "responseCode": 0
            }
        }
    ]
}
2025-12-18T06:55:04.654Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-18T06:55:04.670Z - INFO - the question is : Did CBSD1 cease RF transmission before receipt of
Relinquishment request (if sent) or Deregistration request at Test Harness? please choose one of the
answers :
2025-12-18T06:59:06.805Z - INFO - for the question : Did CBSD1 cease RF transmission before receipt of
Relinquishment request (if sent) or Deregistration request at Test Harness? , the user choose y
2025-12-18T06:59:07.135Z - INFO - The final result of the test : WINNF.FT.C.DRG.1 is - passed

```



```

    "latitude": 25.053989,
    "horizontalAccuracy": 3,
    "antennaDowntilt": 0,
    "antennaBeamwidth": 65,
    "height": 1.0,
    "verticalAccuracy": 3
  },
  "professionalInstallerData": {
    "cpiName": "BV Installer Certificate",
    "installCertificationTime": "2025-11-13T18:32:29.592096Z",
    "cpild": "cpi9001"
  },
  "fcclId": "P27-SCP5173P",
  "cbbsdSerialNumber": "EBZXQC00A0011"
}
2025-12-18T07:52:05.513Z - INFO - verified signature on cpiSignatureData
2025-12-18T07:52:05.528Z - INFO - cpiSignatureData data successfully validated against jsonschema
2025-12-18T07:52:05.528Z - INFO - engine sent successfully, the response to CBRS : {
  "registrationResponse": [
    {
      "cbssdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
}
2025-12-18T07:52:07.290Z - INFO - arrived to nstep starting question answer session with the technician
2025-12-18T07:52:07.290Z - INFO - the question is : Were there RF transmissions from the CBSD1 during
the test? please choose one of the answers :
2025-12-18T07:54:10.440Z - INFO - for the question : Were there RF transmissions from the CBSD1 during
the test? , the user choose n
2025-12-18T07:54:10.772Z - INFO - The final result of the test : WINNF.FT.C.SCS.1 is - passed

```

7.2 WINNF.FT.C.SCS.2

2025-12-18T08:07:31.391Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-18T08:07:31.405Z - INFO - the selected test from the user : WINNF.FT.C.SCS.2 is starting now

7.3 WINNF.FT.C.SCS.3

2025-12-18T08:15:48.963Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-18T08:15:48.963Z - INFO - the selected test from the user : WINNF.FT.C.SCS.3 is starting now

7.4 WINNF.FT.C.SCS.4

2025-12-18T08:32:04.130Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-18T08:32:04.130Z - INFO - the selected test from the user : WINNF.FT.C.SCS.4 is starting now

7.5 WINNF.FT.C.SCS.5

2025-12-18T08:45:46.940Z - INFO - WINNF TEST HARNESS RELEASE: 1.0.0.3 - 2018-November-13

2025-12-18T08:45:46.940Z - INFO - the selected test from the user : WINNF.FT.C.SCS.5 is starting now


```

    }
  ]
}
2025-12-18T09:44:11.834Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-18T09:44:11.852Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2025-12-18T09:44:11.855Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          },
          "maxEirp": 25,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-18T09:44:12.799Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "operationParam": {
        "maxEirp": 25,
        "operationFrequencyRange": {
          "highFrequency": 3590000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
2025-12-18T09:44:12.815Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "channelType": "GAA",
      "grantExpireTime": "2025-12-25T09:44:12Z",

```

```

        "grantId": "501360964",
        "heartbeatInterval": 100,
        "response": {
            "responseCode": 0
        }
    }
]
}
2025-12-18T09:44:17.237Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2025-12-18T09:44:17.253Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:47:37Z"
        }
    ]
}
2025-12-18T09:45:28.447Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:45:28.447Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:48:48Z"
        }
    ]
}
2025-12-18T09:46:34.529Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,

```

```

        "operationState": "AUTHORIZED"
    }
]
}
2025-12-18T09:46:34.545Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:49:54Z"
        }
    ]
}
2025-12-18T09:47:40.627Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:47:40.630Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:51:00Z"
        }
    ]
}
2025-12-18T09:48:46.711Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:48:46.740Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:52:06Z"
        }
    ]
}

```

```

    ]
  }
  2025-12-18T09:49:52.819Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "501360964",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
      }
    ]
  }
  2025-12-18T09:49:52.828Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "501360964",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-18T09:53:12Z"
      }
    ]
  }
  2025-12-18T09:50:58.908Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "501360964",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
      }
    ]
  }
  2025-12-18T09:50:58.924Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "501360964",
        "response": {
          "responseCode": 0
        },
        "transmitExpireTime": "2025-12-18T09:54:18Z"
      }
    ]
  }
  2025-12-18T09:52:05.010Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
      {
        "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
        "grantId": "501360964",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
      }
    ]
  }
  2025-12-18T09:52:05.026Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [

```

```

        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:55:25Z"
        }
    ]
}
2025-12-18T09:53:11.104Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:53:11.119Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:56:31Z"
        }
    ]
}
2025-12-18T09:54:17.207Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:54:17.223Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "501360964",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:57:37Z"
        }
    ]
}
2025-12-18T09:55:23.306Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

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```
        "grantId": "501360964",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2025-12-18T09:55:23.322Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "501360964",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:58:43Z"
    }
  ]
}
```



```

    }
  ]
}
2025-12-18T09:30:16.857Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-18T09:30:16.871Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2025-12-18T09:30:16.871Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          },
          "maxEirp": 31,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-18T09:30:17.831Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "operationParam": {
        "maxEirp": 31,
        "operationFrequencyRange": {
          "highFrequency": 3590000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
2025-12-18T09:30:17.846Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "channelType": "GAA",
      "grantExpireTime": "2025-12-25T09:30:17Z",

```

```

        "grantId": "6307876",
        "heartbeatInterval": 100,
        "response": {
            "responseCode": 0
        }
    }
]
}
2025-12-18T09:30:22.263Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2025-12-18T09:30:22.263Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:33:42Z"
        }
    ]
}
2025-12-18T09:31:33.479Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:31:33.494Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:34:53Z"
        }
    ]
}
2025-12-18T09:32:39.573Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "grantRenew": false,

```

```

        "operationState": "AUTHORIZED"
    }
]
}
2025-12-18T09:32:39.588Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:35:59Z"
        }
    ]
}
2025-12-18T09:33:45.671Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:33:45.687Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:37:05Z"
        }
    ]
}
2025-12-18T09:34:51.773Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:34:51.789Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "6307876",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:38:11Z"
        }
    ]
}

```

```
]
}
2025-12-18T09:35:57.867Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "6307876",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:35:57.881Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "6307876",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:39:17Z"
    }
  ]
}
2025-12-18T09:37:03.964Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "6307876",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:37:03.980Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "6307876",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:40:23Z"
    }
  ]
}
```



```

    }
  ]
}
2025-12-18T09:10:28.744Z - INFO - spectrumInquiry request from CBRS : {
  "spectrumInquiryRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "inquiredSpectrum": [
        {
          "highFrequency": 3700000000,
          "lowFrequency": 3550000000
        }
      ]
    }
  ]
}
2025-12-18T09:10:28.790Z - INFO - The requested spectrum is out of the range, availableChannel is sent out
2025-12-18T09:10:28.790Z - INFO - engine sent successfully, the response to CBRS : {
  "spectrumInquiryResponse": [
    {
      "availableChannel": [
        {
          "channelType": "GAA",
          "frequencyRange": {
            "highFrequency": 3590000000,
            "lowFrequency": 3550000000
          },
          "maxEirp": 37,
          "ruleApplied": "FCC_PART_96"
        }
      ],
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "response": {
        "responseCode": 0
      }
    }
  ]
}
2025-12-18T09:10:29.733Z - INFO - grant request from CBRS : {
  "grantRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "operationParam": {
        "maxEirp": 37,
        "operationFrequencyRange": {
          "highFrequency": 3590000000,
          "lowFrequency": 3550000000
        }
      }
    }
  ]
}
2025-12-18T09:10:29.779Z - INFO - engine sent successfully, the response to CBRS : {
  "grantResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "channelType": "GAA",
      "grantExpireTime": "2025-12-25T09:10:29Z",

```

```

        "grantId": "296090025",
        "heartbeatInterval": 100,
        "response": {
            "responseCode": 0
        }
    }
]
}
2025-12-18T09:10:34.171Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "296090025",
            "grantRenew": false,
            "operationState": "GRANTED"
        }
    ]
}
2025-12-18T09:10:34.210Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "296090025",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:13:54Z"
        }
    ]
}
2025-12-18T09:11:45.375Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "296090025",
            "grantRenew": false,
            "operationState": "AUTHORIZED"
        }
    ]
}
2025-12-18T09:11:45.375Z - INFO - engine sent successfully, the response to CBRS : {
    "heartbeatResponse": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "296090025",
            "response": {
                "responseCode": 0
            },
            "transmitExpireTime": "2025-12-18T09:15:05Z"
        }
    ]
}
2025-12-18T09:12:51.453Z - INFO - heartbeat request from CBRS : {
    "heartbeatRequest": [
        {
            "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
            "grantId": "296090025",
            "grantRenew": false,

```

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    "operationState": "AUTHORIZED"
  }
]
}
2025-12-18T09:12:51.467Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:16:11Z"
    }
  ]
}
2025-12-18T09:13:57.549Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:13:57.565Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:17:17Z"
    }
  ]
}
2025-12-18T09:15:03.658Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:15:03.661Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:18:23Z"
    }
  ]
}

```

```
]
}
2025-12-18T09:16:09.742Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:16:09.757Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:19:29Z"
    }
  ]
}
2025-12-18T09:17:15.835Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:17:15.851Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:20:35Z"
    }
  ]
}
2025-12-18T09:18:21.938Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:18:21.953Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
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    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:21:41Z"
    }
  ]
}
2025-12-18T09:19:28.042Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:19:28.056Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:22:48Z"
    }
  ]
}
2025-12-18T09:20:34.131Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "grantRenew": false,
      "operationState": "AUTHORIZED"
    }
  ]
}
2025-12-18T09:20:34.145Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:23:54Z"
    }
  ]
}
2025-12-18T09:21:40.234Z - INFO - heartbeat request from CBRS : {
  "heartbeatRequest": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",

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        "grantId": "296090025",
        "grantRenew": false,
        "operationState": "AUTHORIZED"
    }
]
}
2025-12-18T09:21:40.250Z - INFO - engine sent successfully, the response to CBRS : {
  "heartbeatResponse": [
    {
      "cbsdId": "P27-SCP5173PMock-SASEBZXQC00A0011",
      "grantId": "296090025",
      "response": {
        "responseCode": 0
      },
      "transmitExpireTime": "2025-12-18T09:25:00Z"
    }
  ]
}
```