

## DFS Test Report

**Report No.:** RF150514C34A-1

**FCC ID:** E2K-APL410BA

**Test Model:** APL41-0BA

**Received Date:** May 11, 2015

**Test Date:** Nov. 05 ~ Nov. 12, 2015

**Issued Date:** Oct. 13, 2015

**Applicant:** Dell Inc.

**Address:** One Dell Way, Round Rock, Texas 78682, USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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## Table of Contents

|                                                          |           |
|----------------------------------------------------------|-----------|
| <b>Release Control Record</b>                            | <b>3</b>  |
| <b>1 Certificate of Conformity</b>                       | <b>4</b>  |
| <b>2 EUT Information</b>                                 | <b>5</b>  |
| 2.1 Operating Frequency Bands and Mode of EUT            | 5         |
| 2.2 EUT Software and Firmware Version                    | 5         |
| 2.3 Description Of Available Antennas to The EUT         | 5         |
| 2.4 EUT Maximum Conducted Power                          | 6         |
| 2.5 EUT Maximum E.I.R.P. Power                           | 7         |
| 2.6 Transmit Power Control (TPC)                         | 8         |
| 2.7 Statement of Manufacturer                            | 8         |
| <b>3. U-NII DFS Rule Requirements</b>                    | <b>9</b>  |
| 3.1 Working Modes and Required Test Items                | 9         |
| 3.2 Test Limits and Radar Signal Parameters              | 10        |
| <b>4. Test &amp; Support Equipment List</b>              | <b>12</b> |
| 4.1 Test Instruments                                     | 12        |
| 4.2 Description of Support Units                         | 12        |
| <b>5. Test Procedure</b>                                 | <b>13</b> |
| 5.1 ADT DFS Measurement System                           | 13        |
| 5.2 Calibration of DFS Detection Threshold Level         | 14        |
| 5.3 Deviation From Test Standard                         | 14        |
| 5.4 Radiated Test Setup Configuration                    | 15        |
| 5.4.1 Master Mode                                        | 15        |
| 5.4.2 Client mode                                        | 16        |
| <b>6. Test Results</b>                                   | <b>17</b> |
| 6.1 Summary of Test Results                              | 17        |
| 6.2 Test Results: Master                                 | 18        |
| 6.2.1 Test Mode                                          | 18        |
| 6.2.2 U-NII Detection Bandwidth                          | 23        |
| 6.2.3 Channel Availability Check Time                    | 26        |
| 6.2.4 Channel Closing Transmission and Channel Move Time | 28        |
| 6.2.5 Non-Occupancy Period                               | 36        |
| 6.2.6 Uniform Spreading                                  | 39        |
| 6.2.7 Transmit Power Control (TPC)                       | 39        |
| 6.3 Test Results: Client                                 | 40        |
| 6.3.1 Test Mode                                          | 40        |
| 6.3.2 Channel Closing Transmission and Channel Move Time | 41        |
| 6.3.3 Non-Occupancy Period                               | 43        |
| 6.3.4 Non-Associated Test                                | 45        |
| 6.3.5 Non-Co-Channel Test                                | 45        |
| <b>7. Information on The Testing Laboratories</b>        | <b>46</b> |



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### Release Control Record

| Issue No.      | Description       | Date Issued   |
|----------------|-------------------|---------------|
| RF150514C34A-1 | Original release. | Nov. 12, 2015 |

## 1 Certificate of Conformity

**Product:** Wireless Network Security Appliance

**Brand:** DELL, DELL SONICWALL, SONICWALL

**Test Model:** APL41-0BA

**Sample Status:** Engineering sample

**Applicant:** Dell Inc.

**Test Date:** Nov. 05 ~ Nov. 12, 2015

**Standards:** FCC Part 15, Subpart E (Section 15.407)  
KDB 905462 D02 UNII DFS Compliance Procedures New Rules v01r02  
(May 15, 2015)

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Nov. 12, 2015  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Nov. 12, 2015  
Ken Liu / Senior Manager

## 2 EUT Information

### 2.1 Operating Frequency Bands and Mode of EUT

Table 1: Operating Frequency Bands and Mode of EUT

| Operational Mode | Operating Frequency Range |              |
|------------------|---------------------------|--------------|
|                  | 5250~5350MHz              | 5470~5725MHz |
| Master / Client  | ✓                         | ✓            |

The EUT has disabled the 5600 ~ 5650 MHz band

### 2.2 EUT Software and Firmware Version

Table 2: The Eut Software/Firmware Version

| No. | Product                             | Model No. | Software/Firmware Version                   |
|-----|-------------------------------------|-----------|---------------------------------------------|
| 1   | Wireless Network Security Appliance | APL41-0BA | SonicOS Enhanced<br>6.2.4.3-23n--TZ_DFS2-3n |

### 2.3 Description Of Available Antennas to The EUT

Table 3: Antenna List

| ANT No. | Antenna Type | Operation Frequency Range (MHz) | Gain (dBi) |
|---------|--------------|---------------------------------|------------|
| 1.      | Dipole       | 5250-5350                       | 4          |
| 1.      | Dipole       | 5470-5725                       | 4          |
| 2       | Dipole       | 5250-5350                       | 4          |
| 2       | Dipole       | 5470-5725                       | 4          |
| 3       | Dipole       | 5250-5350                       | 4          |
| 3       | Dipole       | 5470-5725                       | 4          |

## 2.4 EUT Maximum Conducted Power

Table 4: The Measured Conducted Output Power

### 802.11a

| ANT No. | Frequency Band (MHz) | MAX. Power        |                  |
|---------|----------------------|-------------------|------------------|
|         |                      | Output Power(dBm) | Output Power(mW) |
| 1       | 5250~5350            | 15.51             | 35.533           |
| 1       | 5470~5725            | 17.92             | 61.937           |

### 802.11n HT20

| ANT No. | Frequency Band (MHz) | MAX. Power        |                  |
|---------|----------------------|-------------------|------------------|
|         |                      | Output Power(dBm) | Output Power(mW) |
| 1       | 5250~5350            | 15.60             | 36.315           |
| 1       | 5470~5725            | 17.86             | 61.116           |

### 802.11n HT40

| ANT No. | Frequency Band (MHz) | MAX. Power        |                  |
|---------|----------------------|-------------------|------------------|
|         |                      | Output Power(dBm) | Output Power(mW) |
| 1       | 5250~5350            | 14.71             | 29.608           |
| 1       | 5470~5725            | 16.87             | 48.591           |

## 2.5 EUT Maximum E.I.R.P. Power

Table 5: The EIRP Output Power List

### 802.11a

| ANT No. | Frequency Band (MHz) | MAX. Power        |                  |
|---------|----------------------|-------------------|------------------|
|         |                      | Output Power(dBm) | Output Power(mW) |
| 1       | 5250~5350            | 19.51             | 89.331           |
| 1       | 5470~5725            | 21.92             | 155.597          |

### 802.11n HT20

| ANT No. | Frequency Band (MHz) | MAX. Power        |                  |
|---------|----------------------|-------------------|------------------|
|         |                      | Output Power(dBm) | Output Power(mW) |
| 1       | 5250~5350            | 19.60             | 91.201           |
| 1       | 5470~5725            | 21.86             | 153.462          |

### 802.11n HT40

| ANT No. | Frequency Band (MHz) | MAX. Power        |                  |
|---------|----------------------|-------------------|------------------|
|         |                      | Output Power(dBm) | Output Power(mW) |
| 1       | 5250~5350            | 18.71             | 74.302           |
| 1       | 5470~5725            | 20.87             | 122.180          |

## **2.6 Transmit Power Control (TPC)**

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

Maximum EIRP of this device is 155.597 mW, which less than 500mW, therefore it's not require TPC function

## **2.7 Statement of Manufacturer**

Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms is not available to the end user.



### 3. U-NII DFS Rule Requirements

#### 3.1 Working Modes and Required Test Items

The manufacturer shall state whether the EUT is capable of operating as a Master and/or a Client. If the EUT is capable of operating in more than one operating mode then each operating mode shall be tested separately. See tables 6 and 7 for the applicability of DFS requirements for each of the operational modes.

Table 6: Applicability of DFS Requirements Prior To Use a Channel

| Requirement                     | Operational Mode |                                |                             |
|---------------------------------|------------------|--------------------------------|-----------------------------|
|                                 | Master           | Client without radar detection | Client with radar detection |
| Non-Occupancy Period            | ✓                | Not required                   | ✓                           |
| DFS Detection Threshold         | ✓                | Not required                   | ✓                           |
| Channel Availability Check Time | ✓                | Not required                   | Not required                |
| U-NII Detection Bandwidth       | ✓                | Not required                   | ✓                           |

Table 7: Applicability of DFS Requirements During Normal Operation.

| Requirement                       | Operational Mode                      |                                |
|-----------------------------------|---------------------------------------|--------------------------------|
|                                   | Master or Client with radar detection | Client without radar detection |
| DFS Detection Threshold           | ✓                                     | Not required                   |
| Channel Closing Transmission Time | ✓                                     | ✓                              |
| Channel Move Time                 | ✓                                     | ✓                              |
| U-NII Detection Bandwidth         | ✓                                     | Not required                   |

| Additional requirements for devices with multiple bandwidth modes | Master or Client with radar detection | Client without radar detection                       |
|-------------------------------------------------------------------|---------------------------------------|------------------------------------------------------|
| U-NII Detection Bandwidth and Statistical Performance Check       | All BW modes must be tested           | Not required                                         |
| Channel Move Time and Channel Closing Transmission Time           | Test using widest BW mode available   | Test using the widest BW mode available for the link |
| All other tests                                                   | Any single BW mode                    | Not required                                         |

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequencies between the bonded 20 MHz channel blocks.

### 3.2 Test Limits and Radar Signal Parameters

#### Detection Threshold Values

Table 8: DFS Detection Thresholds For Master Devices And Client Devices With Radar Detection

| Maximum Transmit Power                                                          | Value<br>(See Notes 1, 2, and 3) |
|---------------------------------------------------------------------------------|----------------------------------|
| EIRP $\geq$ 200 milliwatt                                                       | -64 dBm                          |
| EIRP < 200 milliwatt and<br>power spectral density < 10 dBm/MHz                 | -62 dBm                          |
| EIRP < 200 milliwatt that do not meet the<br>power spectral density requirement | -64 dBm                          |

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.  
Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.  
Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

Table 9: DFS Response Requirement Values

| Parameter                         | Value                                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Non-occupancy period              | Minimum 30 minutes                                                                                        |
| Channel Availability Check Time   | 60 seconds                                                                                                |
| Channel Move Time                 | 10 seconds<br>See Note 1.                                                                                 |
| Channel Closing Transmission Time | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.<br>See Notes 1 and 2. |
| U-NII Detection Bandwidth         | Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3                                    |

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.  
Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.  
Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

## Parameters of DFS Test Signals

Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Table 10: Short Pulse Radar Test Waveforms

| Radar Type                                                                                                                           | Pulse Width (μsec) | PRI (μsec)                                                                                                                                                    | Number of Pulses                                                                                                                                   | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------|
| 0                                                                                                                                    | 1                  | 1428                                                                                                                                                          | 18                                                                                                                                                 | See Note 1                                 | See Note 1               |
| 1                                                                                                                                    | 1                  | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a                                                                     | Roundup $\left\{ \left\lceil \frac{1}{360} \right\rceil \cdot \left\lceil \frac{19 \cdot 10^6}{\text{PRI}_{\mu \text{sec}}} \right\rceil \right\}$ | 60%                                        | 30                       |
|                                                                                                                                      |                    | Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A |                                                                                                                                                    |                                            |                          |
| 2                                                                                                                                    | 1-5                | 150-230                                                                                                                                                       | 23-29                                                                                                                                              | 60%                                        | 30                       |
| 3                                                                                                                                    | 6-10               | 200-500                                                                                                                                                       | 16-18                                                                                                                                              | 60%                                        | 30                       |
| 4                                                                                                                                    | 11-20              | 200-500                                                                                                                                                       | 12-16                                                                                                                                              | 60%                                        | 30                       |
| Aggregate (Radar Types 1-4)                                                                                                          |                    |                                                                                                                                                               |                                                                                                                                                    | 80%                                        | 120                      |
| Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests. |                    |                                                                                                                                                               |                                                                                                                                                    |                                            |                          |

Table 11: Long Pulse Radar Test Waveform

| Radar Type | Pulse Width (μsec) | Chirp Width (MHz) | PRI (μsec) | Number Of Pulses Per Burst | Number Of Bursts | Minimum Percentage Of Successful Detection | Minimum Number Of Trials |
|------------|--------------------|-------------------|------------|----------------------------|------------------|--------------------------------------------|--------------------------|
| 5          | 50-100             | 5-20              | 1000-2000  | 1-3                        | 8-20             | 80%                                        | 30                       |

Table 12: Frequency Hopping Radar Test Waveform

| Radar Type | Pulse Width (μsec) | PRI (μsec) | Pulses per Hop | Hopping Rate (kHz) | Hopping Sequence Length (msec) | Minimum Percentage Of Successful Detection | Minimum Number Of Trials |
|------------|--------------------|------------|----------------|--------------------|--------------------------------|--------------------------------------------|--------------------------|
| 6          | 1                  | 333        | 9              | 0.333              | 300                            | 70%                                        | 30                       |

#### 4. Test & Support Equipment List

##### 4.1 Test Instruments

Table 13: Test Instruments List

| Description & Manufacturer | Model No. | Brand   | Date Of Calibration | Due Date Of Calibration |
|----------------------------|-----------|---------|---------------------|-------------------------|
| R&S Spectrum analyzer      | ESR       | R&S     | 2015/01/14          | 2016/01/13              |
| Signal generator           | 8645A     | Agilent | 2015/08/05          | 2016/08/04              |

##### 4.2 Description of Support Units

Table 14: Support Unit Information.

| No. | Product                             | Brand | Model No. | FCC ID       |
|-----|-------------------------------------|-------|-----------|--------------|
| 1   | Wireless Network Security Appliance | Senao | APL41-0BA | E2K-APL410BA |

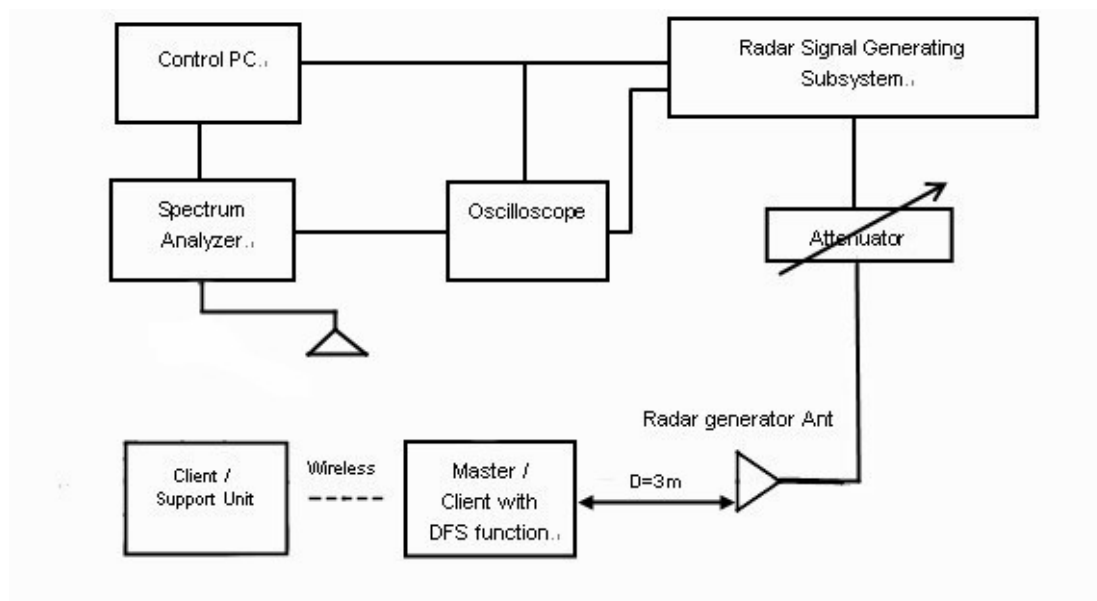
**NOTE:** This device was functioned as a ☐ Master ☒ Slave device during the DFS test.

## 5. Test Procedure

### 5.1 ADT DFS Measurement System

A complete ADT DFS Measurement System consists of two subsystems: (1) the Radar Signal Generating Subsystem and (2) the Traffic Monitoring Subsystem. The control PC is necessary for generating the Radar waveforms in Table 10, 11 and 12. The traffic monitoring subsystem is specified to the type of Equipment under test (EUT).

#### Radiated Setup Configuration of ADT DFS Measurement System



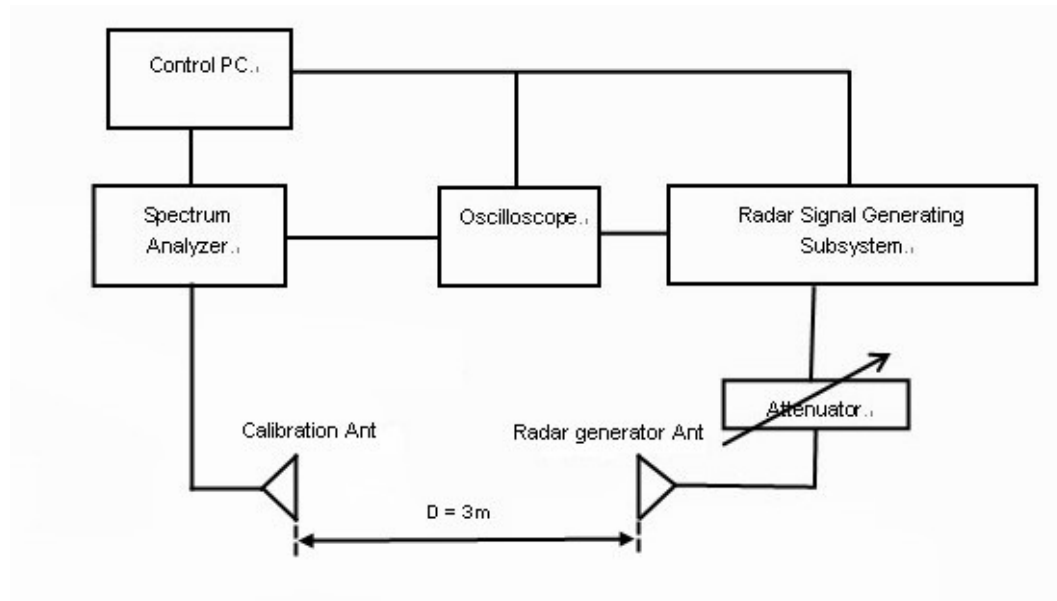
System testing will be performed with channel-loading using means appropriate to the data types that are used by the unlicensed device. The following requirements apply:

|   |                                                                                                                                                                            |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | a) The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode. |
|   | b) Software to ping the client is permitted to simulate data transfer but must have random ping intervals.                                                                 |
| ✓ | c) Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater.                                                    |
|   | d) Unicast or Multicast protocols are preferable but other protocols may be used. The appropriate protocol used must be described in the test procedures.                  |

## 5.2 Calibration of DFS Detection Threshold Level

The measured channel is 5500MHz and 5510MHz. The radar signal was the same as transmitted channels, and injected into the antenna of AP (master) or Client Device with Radar Detection, measured the channel closing transmission time and channel move time. The calibrated conducted detection threshold level is set to -64dBm. The tested level is lower than required level hence it provides margin to the limit.

### Radiated setup configuration of Calibration of DFS Detection Threshold Level

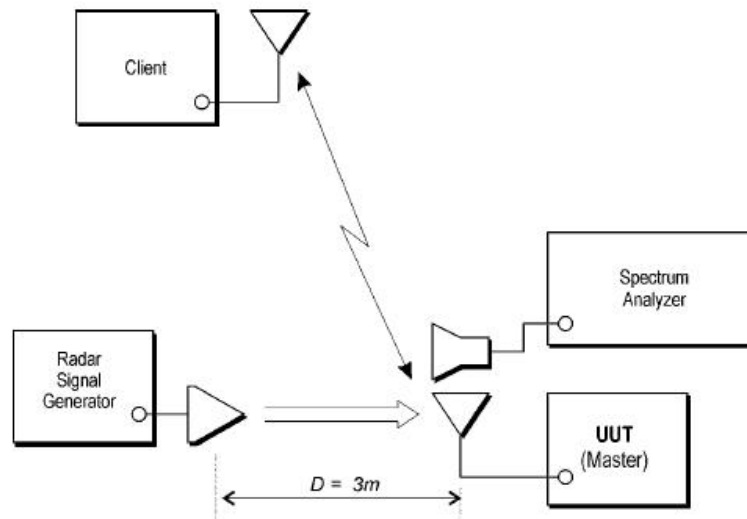


## 5.3 Deviation From Test Standard

No deviation.

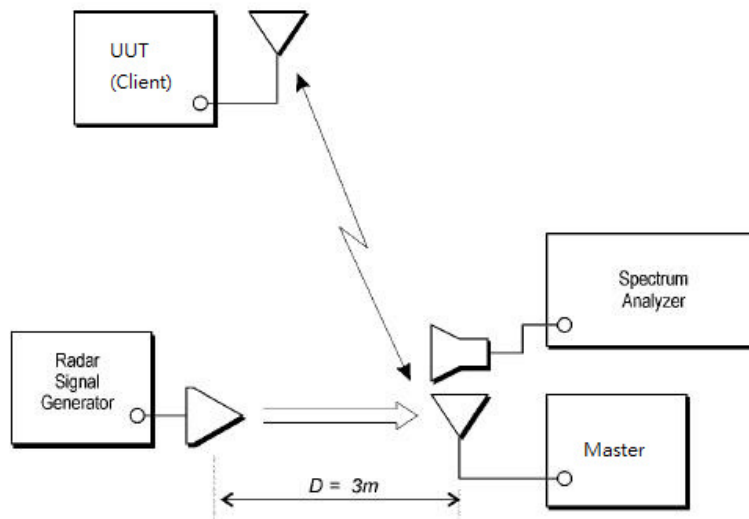
## 5.4 Radiated Test Setup Configuration

### 5.4.1 Master Mode



The EUT is a U-NII Device operating in Master mode. The radar test signals are injected into the Master Device.

#### 5.4.2 Client mode



The EUT is a U-NII Device operating in Client mode without radar detection. The radar test signals are injected into the Master Device.



## 6. Test Results

### 6.1 Summary of Test Results

| Clause | Test Parameter                    | Remarks    | Pass/Fail |
|--------|-----------------------------------|------------|-----------|
| 15.407 | DFS Detection Threshold           | Applicable | Pass      |
| 15.407 | U-NII Detection Bandwidth         | Applicable | Pass      |
| 15.407 | Channel Availability Check Time   | Applicable | Pass      |
| 15.407 | Channel Move Time                 | Applicable | Pass      |
| 15.407 | Channel Closing Transmission Time | Applicable | Pass      |
| 15.407 | Non- Occupancy Period             | Applicable | Pass      |
| 15.407 | Uniform Spreading                 | Applicable | Pass      |

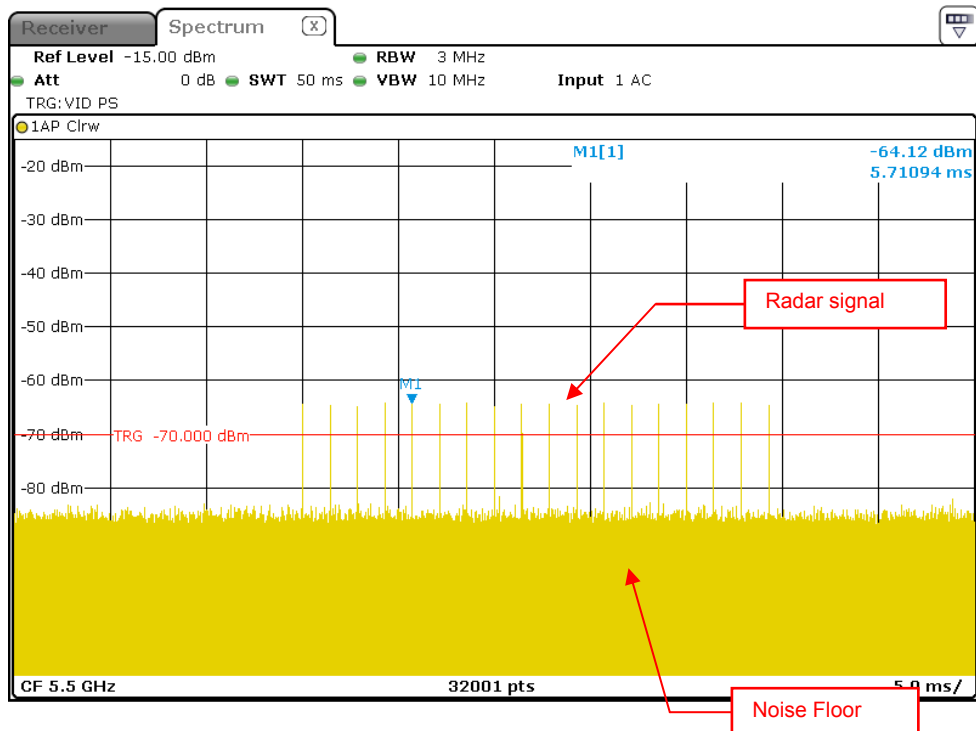
## 6.2 Test Results: Master

### 6.2.1 Test Mode

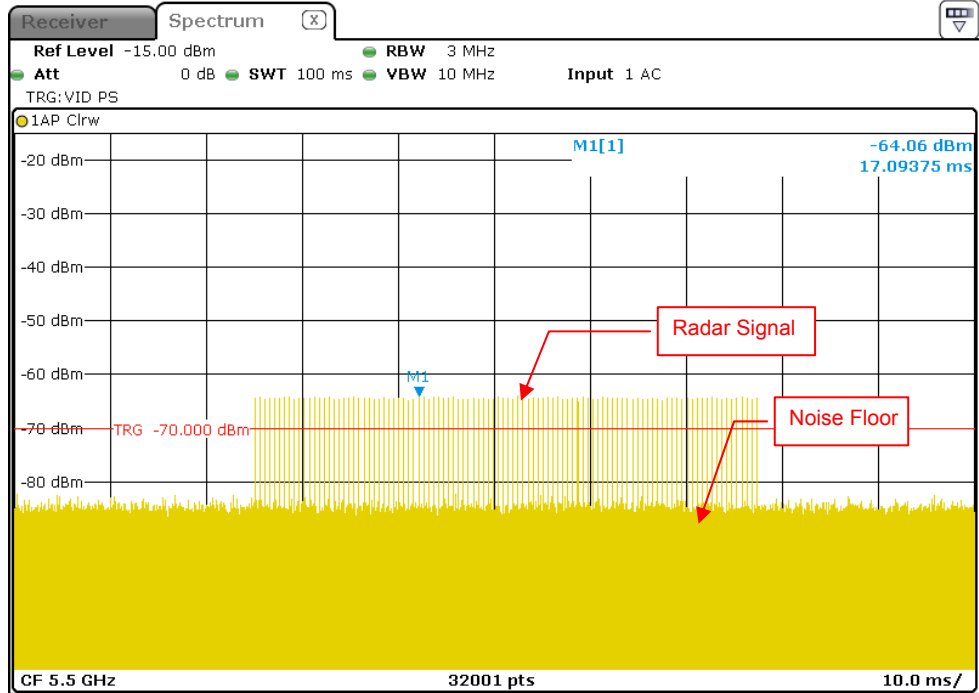
Master with injection at the Master. (Radar Test Waveforms are injected into the Master.)

### DFS Detection Threshold

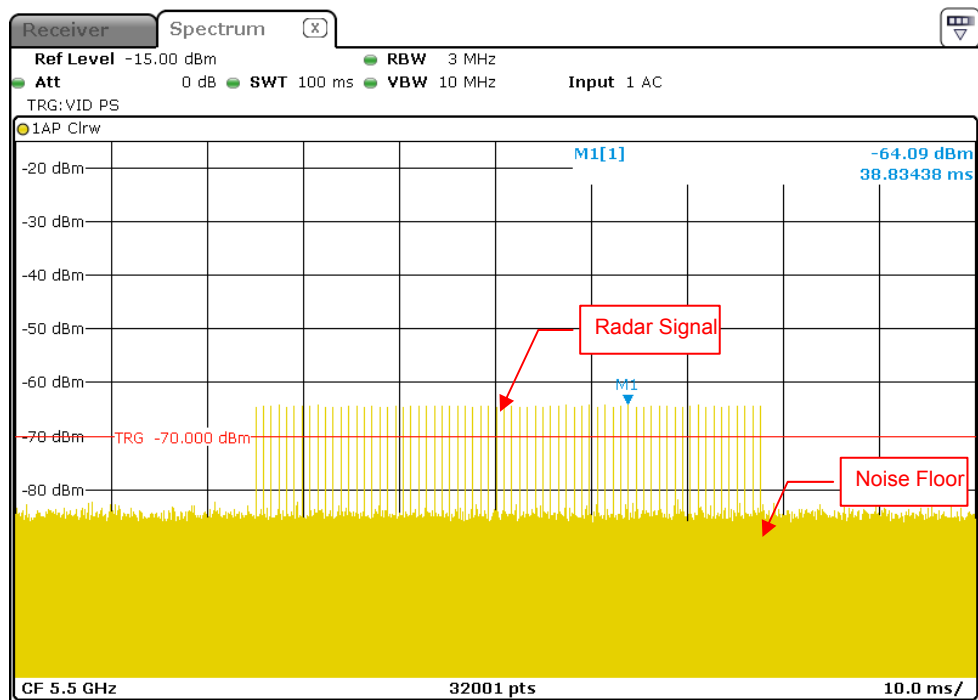
For detection threshold level of -64dBm, the required Radar Signal at antenna port was set to -64dBm. The tested level is lower than required level for 1dB, hence it provides margin to the limit.



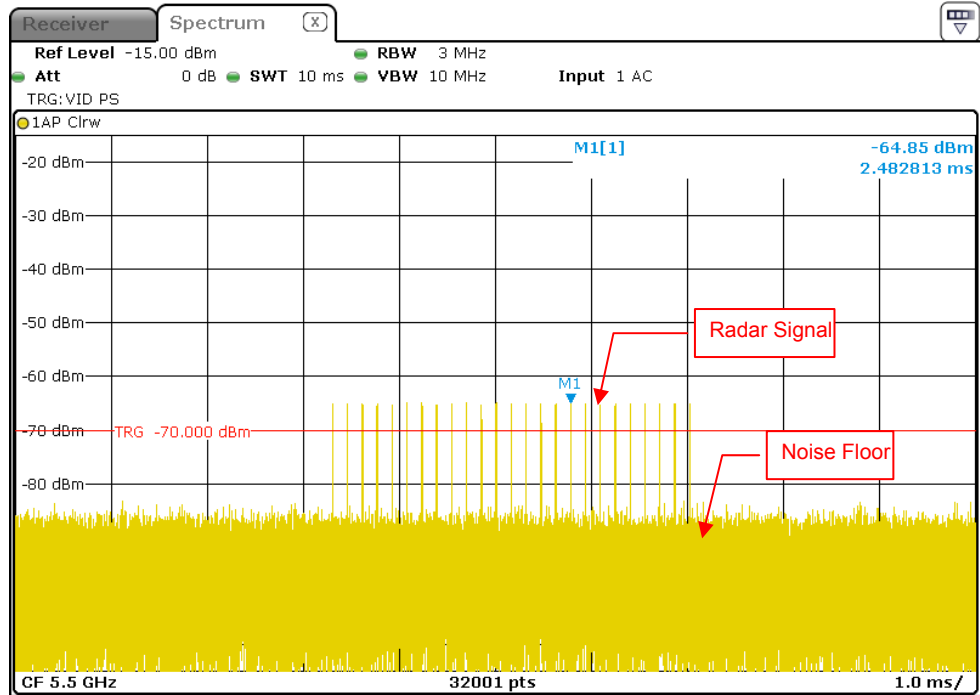
Radar Signal 0



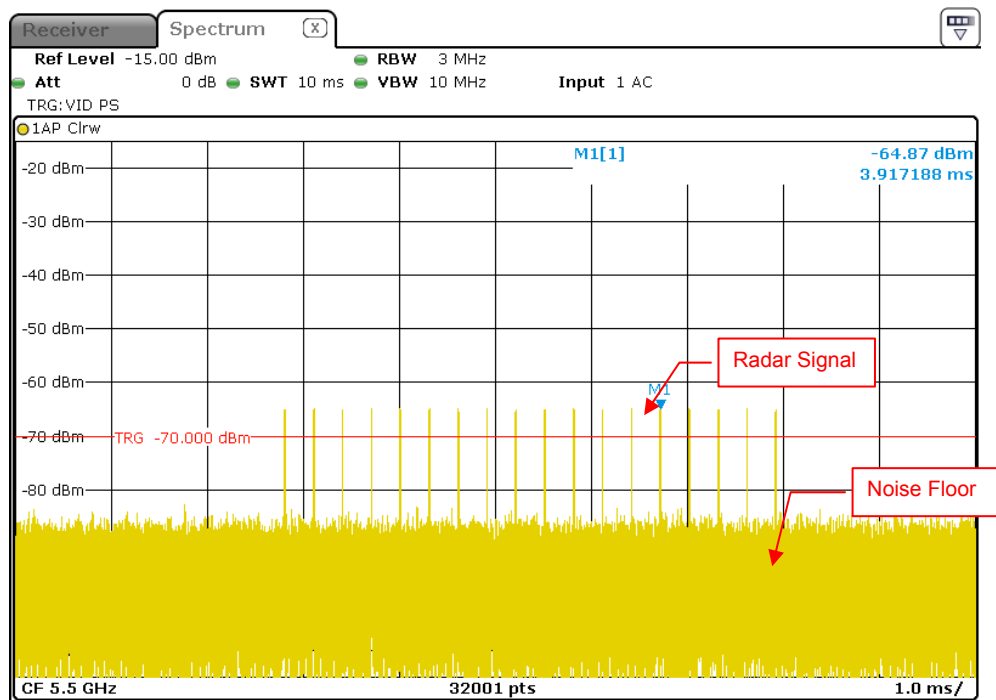
Radar Signal 1 (Test A)



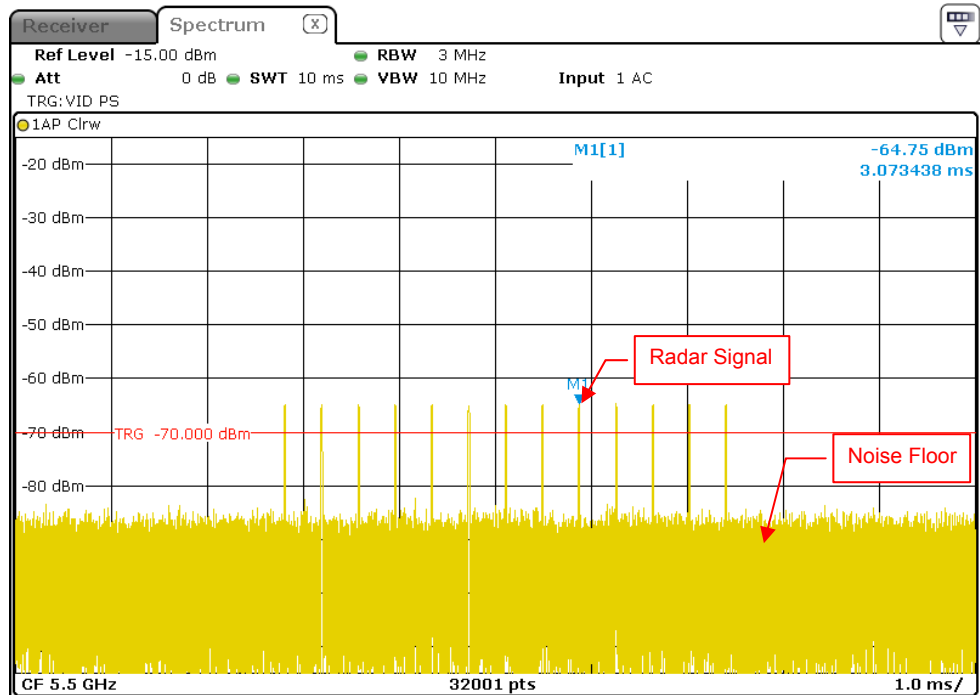
Radar Signal 1 (Test B)



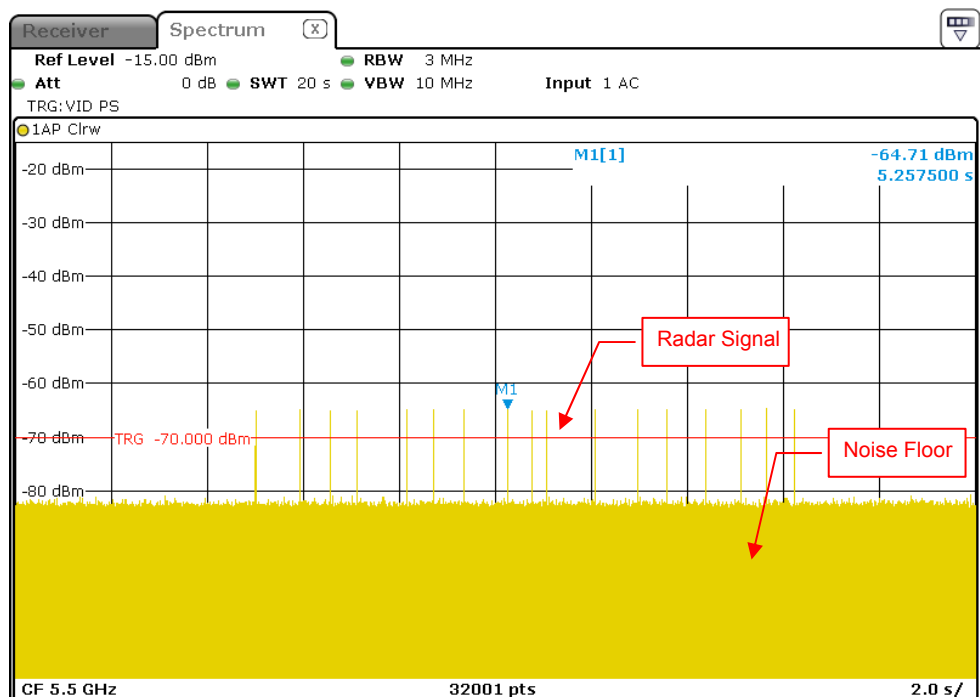
Radar Signal 2



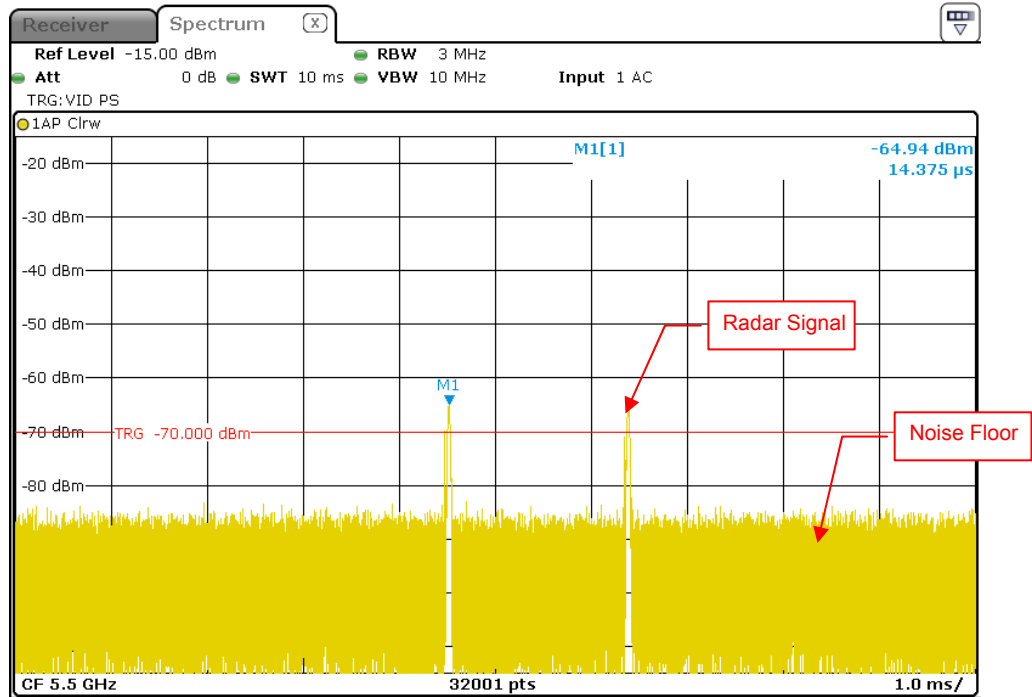
Radar Signal 3



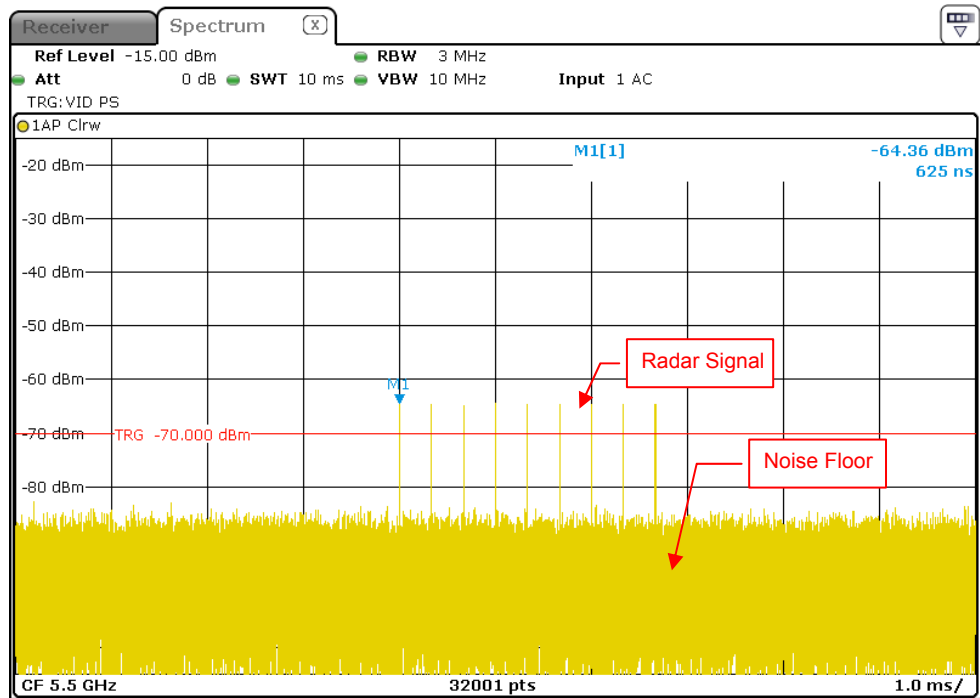
Radar Signal 4



Radar Signal 5



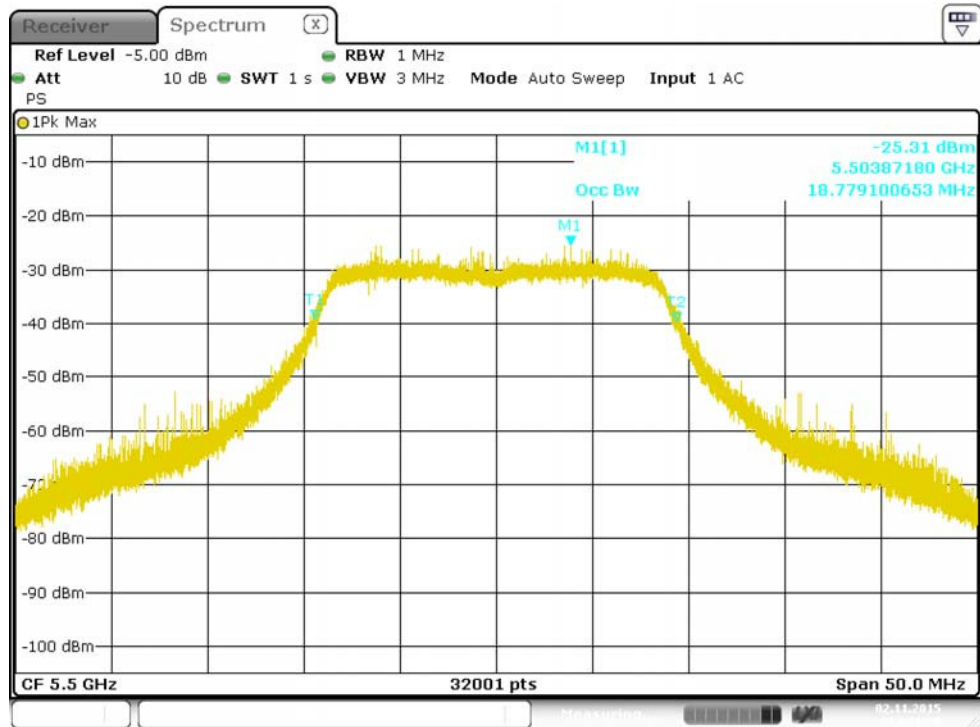
Single Burst of Radar Signal 5



Radar Signal 6

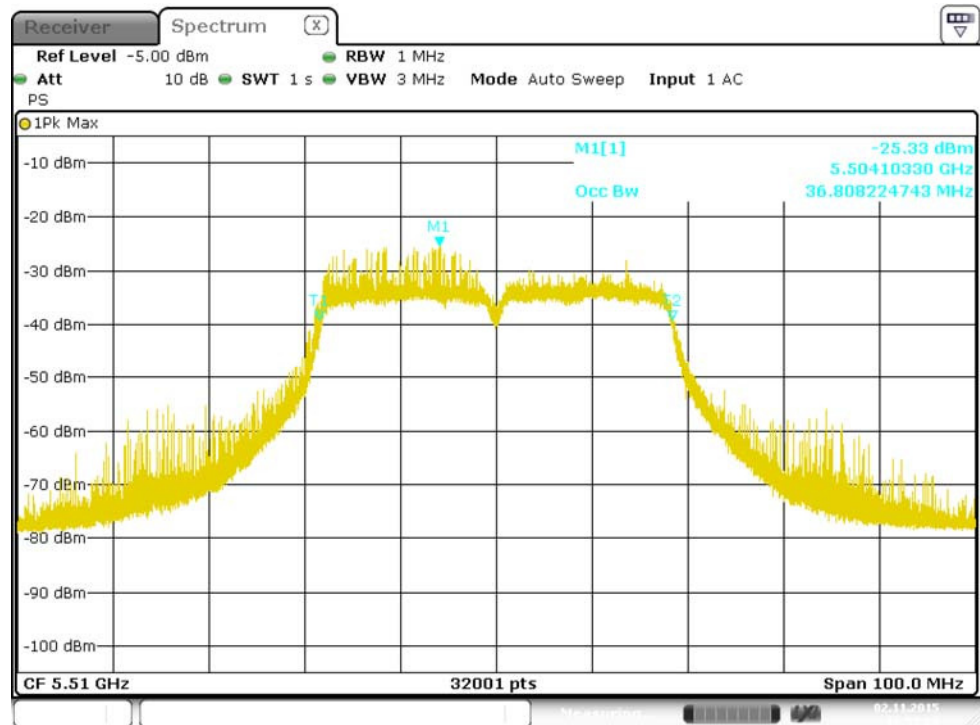
## 6.2.2 U-NII Detection Bandwidth

### IEEE 802.11n HT20



U-NII 99% Channel bandwidth

### IEEE 802.11n HT40



U-NII 99% Channel bandwidth

# Detection Bandwidth Test - IEEE 802.11n HT20

Radar Type 0

EUT Frequency: 5500MHz

EUT 99% Power bandwidth: 18.78MHz

Detection bandwidth limit (100% of EUT 99% Power bandwidth): 18.78MHz

Detection bandwidth (5510(FH) – 5490(FL)) : 24MHz

Test Result : PASS

| Radar<br>Frequency<br>(MHz) | Trial Number / Detection |   |   |   |   |   |   |   |   |    | Detection<br>Rate (%) |
|-----------------------------|--------------------------|---|---|---|---|---|---|---|---|----|-----------------------|
|                             | 1                        | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                       |
| 5487                        | N                        | N | N | N | N | N | N | N | N | N  | 0                     |
| 5488(FL)                    | Y                        | Y | Y | N | Y | Y | Y | Y | Y | Y  | 90                    |
| 5489                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5490                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5491                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5492                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5493                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5494                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5495                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5496                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5497                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5498                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5499                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5500                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5501                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5502                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5503                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5504                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5505                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5506                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5507                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5508                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5509                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5510                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5511                        | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                   |
| 5512(FH)                    | Y                        | Y | Y | Y | Y | Y | Y | N | Y | Y  | 90                    |
| 5513                        | N                        | N | N | N | N | N | N | N | N | N  | 0                     |



# Detection Bandwidth Test - IEEE 802.11n HT40

Radar Type 0

EUT Frequency: 5510MHz

EUT 99% Power bandwidth: 36.81MHz

Detection bandwidth limit (100% of EUT 99% Power bandwidth): 36.81MHz

Detection bandwidth (5531(FH) – 5489(FL)) : 42MHz

Test Result : PASS

| Radar Frequency (MHz) | Trial Number / Detection |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|-----------------------|--------------------------|---|---|---|---|---|---|---|---|----|--------------------|
|                       | 1                        | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5489                  | N                        | N | N | N | N | N | N | N | N | N  | 0                  |
| 5490(FL)              | Y                        | Y | Y | Y | Y | N | Y | Y | Y | Y  | 90                 |
| 5491                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5492                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5493                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5494                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5495                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5496                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5497                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5498                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5499                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5500                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5501                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5502                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5503                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5504                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5505                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5506                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5507                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5508                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5509                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5510                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5511                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5512                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5513                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5514                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5515                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5516                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5517                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5518                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5519                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5520                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5521                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5522                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5523                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5524                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5525                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5526                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5527                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5528                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5529                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5530                  | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5531(FH)              | Y                        | Y | Y | Y | Y | Y | Y | Y | Y | Y  | 100                |
| 5532                  | N                        | N | N | N | N | N | N | N | N | N  | 0                  |

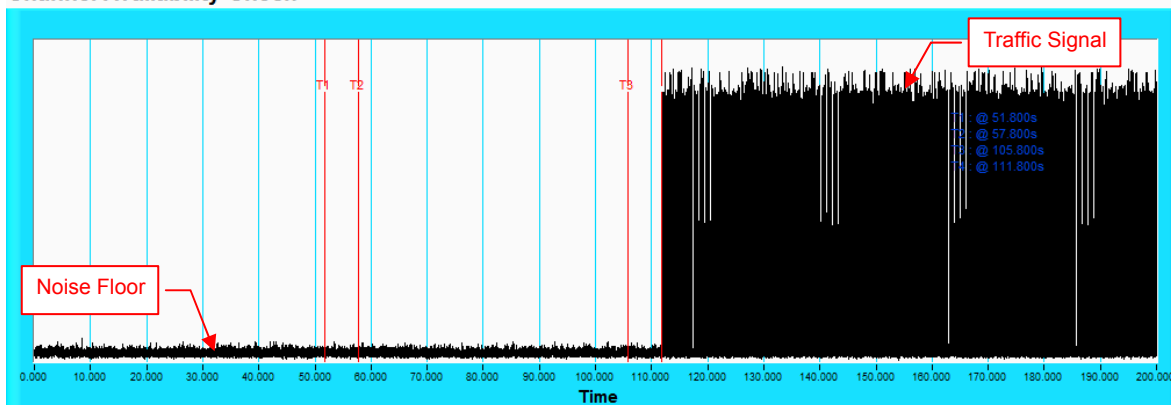
### 6.2.3 Channel Availability Check Time

If the EUT successfully detected the radar burst, it should be observed as the EUT has no transmissions occurred until the EUT starts transmitting on another channel.

| Timing of Radar Signal | Observation |                   |
|------------------------|-------------|-------------------|
|                        | EUT         | Spectrum Analyzer |
| Within 1 to 6 second   | Detected    | No transmissions  |
| Within 54 to 60 second | Detected    | No transmissions  |

### Initial Channel Availability Check Time

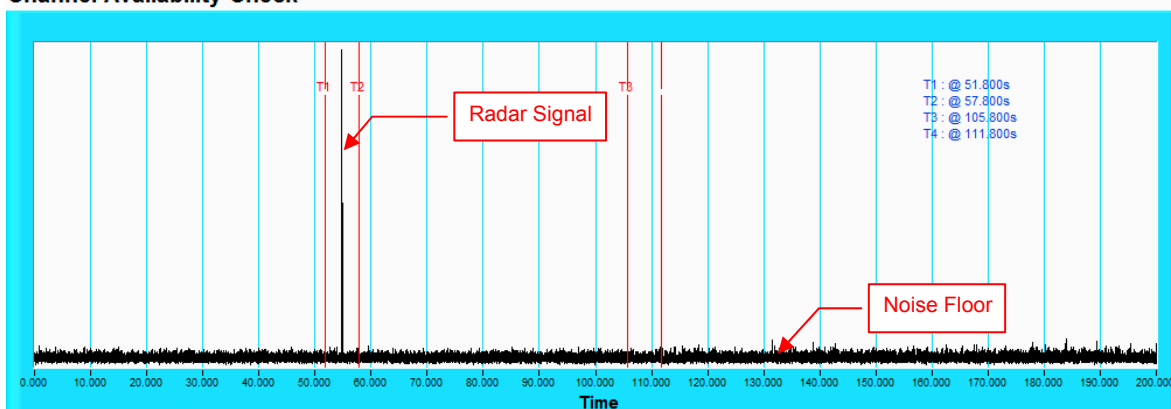
#### Channel Availability Check



**NOTE:** T1 denotes the end of power-up time period is 51.8 second. T4 denotes the end of Channel Availability Check time is 111.8 second. Channel Availability Check time is equal to (T4 – T1) 60 seconds.

### Radar Burst at the Beginning of the Channel Availability Check Time

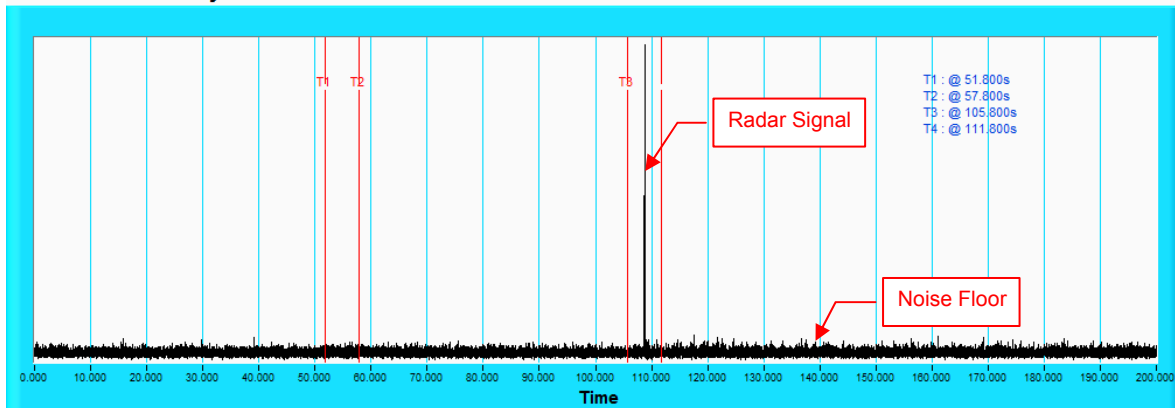
#### Channel Availability Check



**NOTE:** T1 denotes the end of power up time period is 51.8 second. T2 denotes 57.8 second, the radar burst was commenced within a 6 second window starting from the end of power-up sequence. T4 denotes the 111.8 second.

## Radar Burst at the End of the Channel Availability Check Time

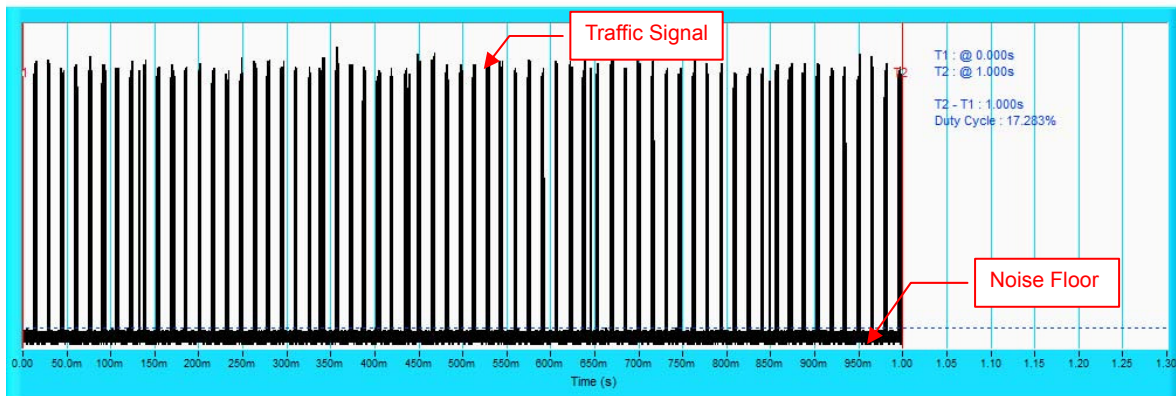
### Channel Availability Check



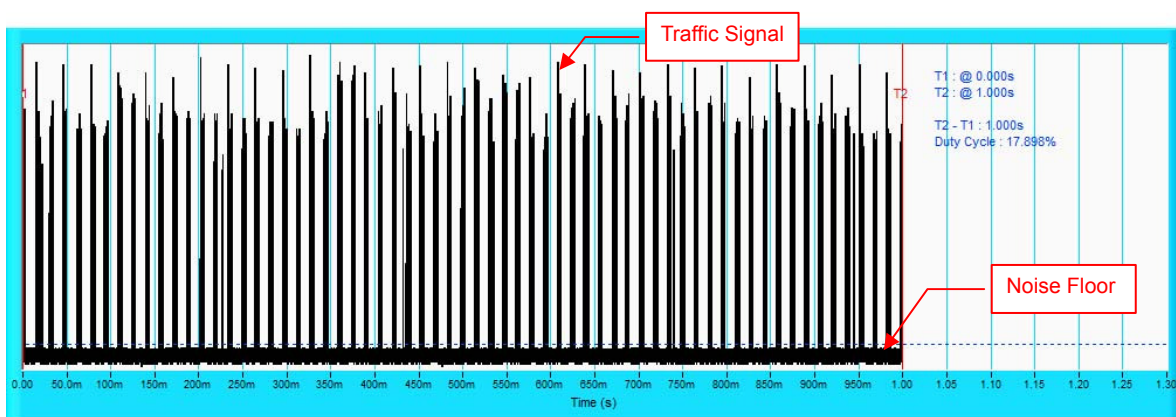
**NOTE:** T1 denotes the end of power up time period is 51.8 second. T3 denotes 105.8 second and radar burst was commenced within 54<sup>th</sup> second to 60<sup>th</sup> second window starting from the end of power-up sequence. T4 denotes the 111.8 second.

## 6.2.4 Channel Closing Transmission and Channel Move Time

### Wireless Traffic Loading IEEE 802.11n HT20



### IEEE 802.11n HT40



# IEEE 802.11n HT20

Table 1: Short Pulse Radar Test Waveforms.

| Radar Type                  | Pulse Width (μsec) | PRI (μsec)                                                                                                                                                      | Number of Pulses                                                                                  | Number of Trials(Times) | Percentage of Successful Detection (%) |
|-----------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------|
| 1                           | 1                  | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a                                                                       | Roundup $\left\{ \frac{1}{360} \cdot \left( \frac{19 \cdot 10^6}{PRI_{\mu sec}} \right) \right\}$ | 30                      | 100                                    |
|                             |                    | Test B: 15 unique PRI values randomly selected within the range of 518-3066 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A |                                                                                                   |                         |                                        |
| 2                           | 1-5                | 150-230                                                                                                                                                         | 23-29                                                                                             | 30                      | 86.7                                   |
| 3                           | 6-10               | 200-500                                                                                                                                                         | 16-18                                                                                             | 30                      | 83.3                                   |
| 4                           | 11-20              | 200-500                                                                                                                                                         | 12-16                                                                                             | 30                      | 76.7                                   |
| Aggregate (Radar Types 1-4) |                    |                                                                                                                                                                 |                                                                                                   | 120                     | 86.675                                 |

Table 2: Long Pulse Radar Test Waveform

| Radar Type | Pulse Width (μsec) | Chirp Width (MHz) | PRI (μsec) | Number of Pulses per Burst | Number of Bursts | Number of Trials(Times) | Percentage of Successful Detection (%) |
|------------|--------------------|-------------------|------------|----------------------------|------------------|-------------------------|----------------------------------------|
| 5          | 50-100             | 5-20              | 1000-2000  | 1-3                        | 8-20             | 30                      | 83.3                                   |

Table 3: Frequency Hopping Radar Test Waveform

| Radar Type | Pulse Width (μsec) | PRI (μsec) | Pulses per Hop | Hopping Rate (kHz) | Hopping Sequence Length (msec) | Number of Trials(Times) | Percentage of Successful Detection (%) |
|------------|--------------------|------------|----------------|--------------------|--------------------------------|-------------------------|----------------------------------------|
| 6          | 1                  | 333        | 9              | 0.333              | 300                            | 30                      | 100                                    |

The Detailed Radar pattern and Statistical Performance showed in Annex A.

# IEEE 802.11n HT40

Table 1: Short Pulse Radar Test Waveforms.

| Radar Type                  | Pulse Width (μsec) | PRI (μsec)                                                                                                                                                      | Number of Pulses                                                                                  | Number of Trials(Times) | Percentage of Successful Detection (%) |
|-----------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------|
| 1                           | 1                  | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a                                                                       | Roundup $\left\{ \frac{1}{360} \cdot \left( \frac{19 \cdot 10^6}{PRI_{\mu sec}} \right) \right\}$ | 30                      | 100                                    |
|                             |                    | Test B: 15 unique PRI values randomly selected within the range of 518-3066 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A |                                                                                                   |                         |                                        |
| 2                           | 1-5                | 150-230                                                                                                                                                         | 23-29                                                                                             | 30                      | 86.7                                   |
| 3                           | 6-10               | 200-500                                                                                                                                                         | 16-18                                                                                             | 30                      | 76.7                                   |
| 4                           | 11-20              | 200-500                                                                                                                                                         | 12-16                                                                                             | 30                      | 80                                     |
| Aggregate (Radar Types 1-4) |                    |                                                                                                                                                                 |                                                                                                   | 120                     | 85.85                                  |

Table 2: Long Pulse Radar Test Waveform

| Radar Type | Pulse Width (μsec) | Chirp Width (MHz) | PRI (μsec) | Number of Pulses per Burst | Number of Bursts | Number of Trials(Times) | Percentage of Successful Detection (%) |
|------------|--------------------|-------------------|------------|----------------------------|------------------|-------------------------|----------------------------------------|
| 5          | 50-100             | 5-20              | 1000-2000  | 1-3                        | 8-20             | 30                      | 100                                    |

Table 3: Frequency Hopping Radar Test Waveform

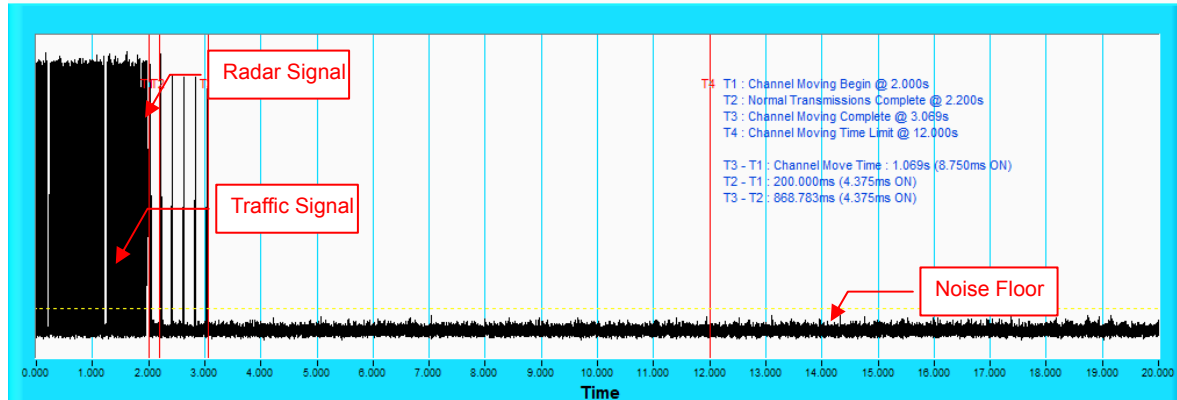
| Radar Type | Pulse Width (μsec) | PRI (μsec) | Pulses per Hop | Hopping Rate (kHz) | Hopping Sequence Length (msec) | Number of Trials(Times) | Percentage of Successful Detection (%) |
|------------|--------------------|------------|----------------|--------------------|--------------------------------|-------------------------|----------------------------------------|
| 6          | 1                  | 333        | 9              | 0.333              | 300                            | 30                      | 100                                    |

The Detailed Radar pattern and Statistical Performance showed in Annex A.

## Radar signal 0

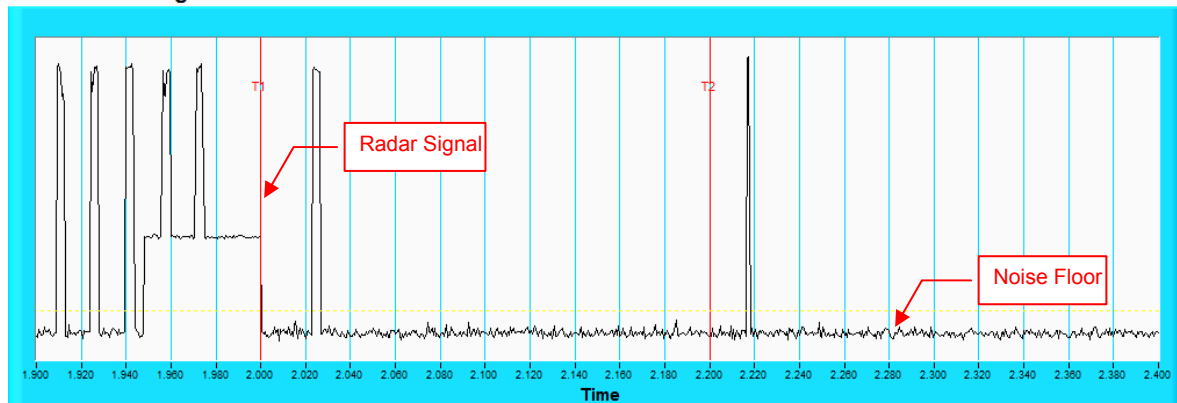
IEEE 802.11n HT20

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Channel Closing Transmission Time & Channel Move Time

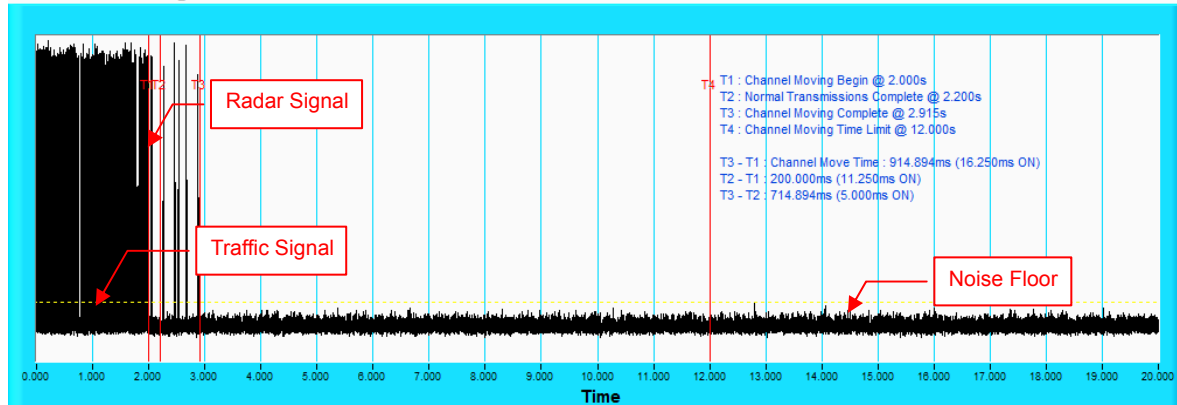


**NOTE:** Room-in of the first 500ms after radar signal applied.

## Radar signal 1

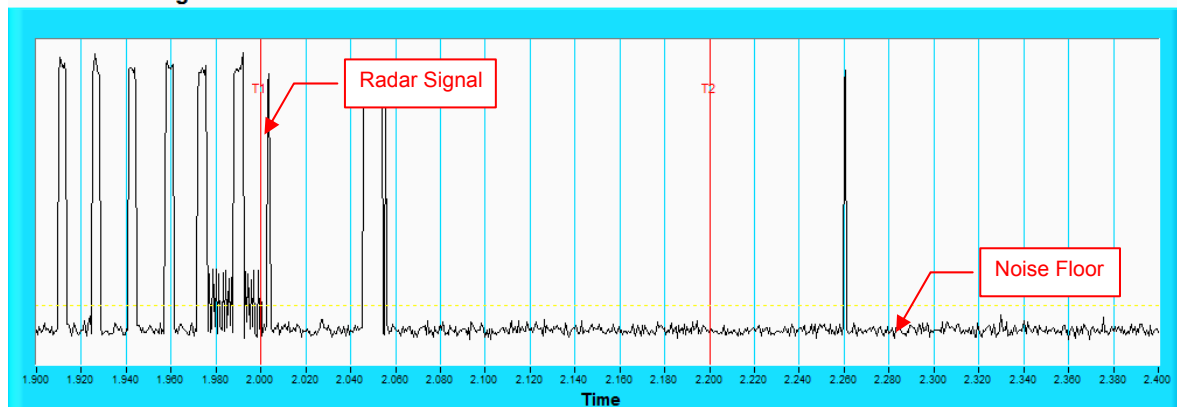
IEEE 802.11n HT20

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Channel Closing Transmission Time & Channel Move Time



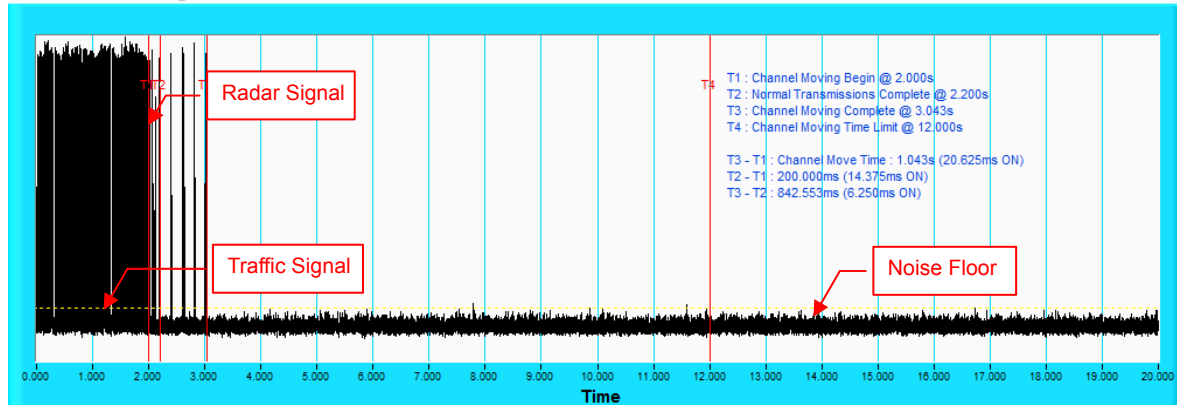
**NOTE:** Room-in of the first 500ms after radar signal applied.



## Radar signal 2

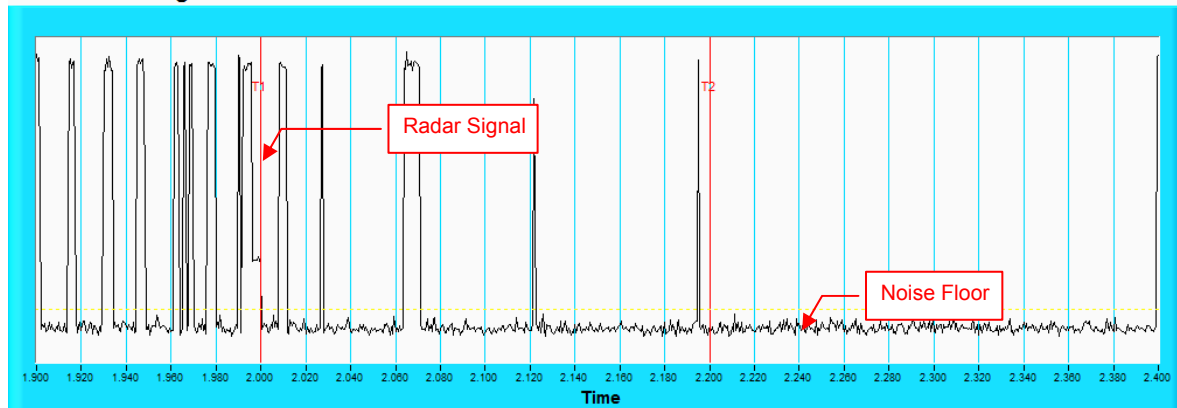
IEEE 802.11n HT20

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Channel Closing Transmission Time & Channel Move Time

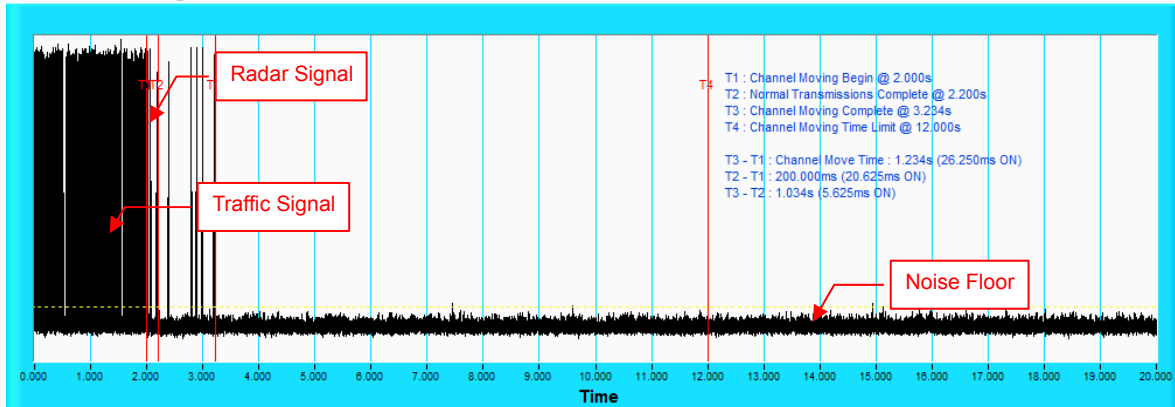


**NOTE:** Room-in of the first 500ms after radar signal applied.

### Radar signal 3

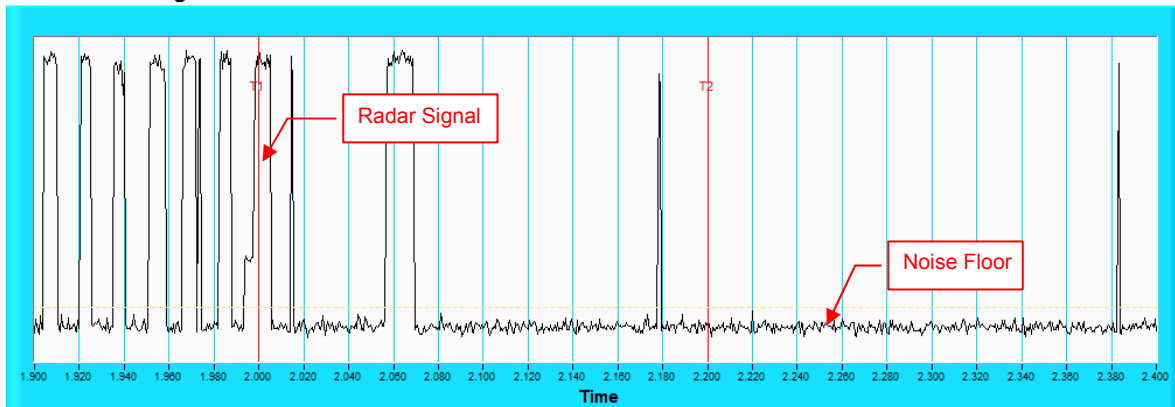
IEEE 802.11n HT20

#### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

#### Channel Closing Transmission Time & Channel Move Time

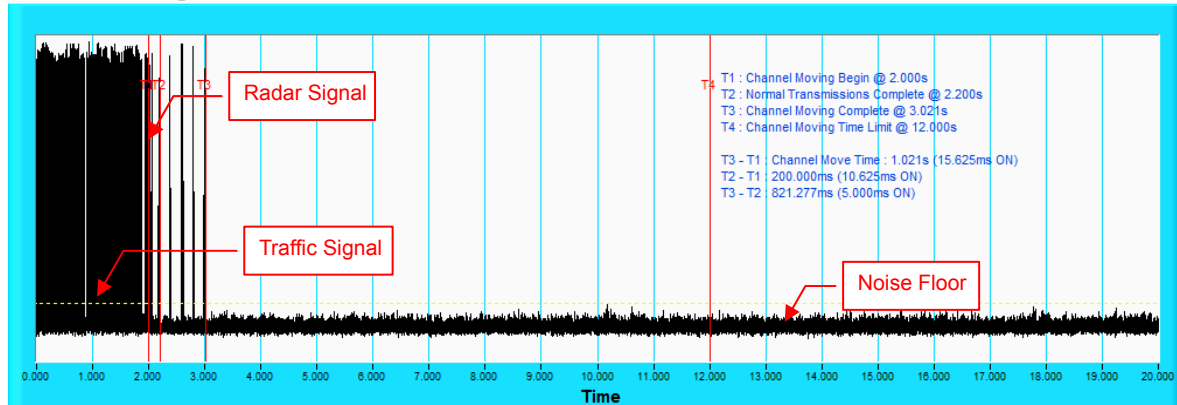


**NOTE:** Zoom-in of the first 500ms after radar signal applied.

## Radar signal 4

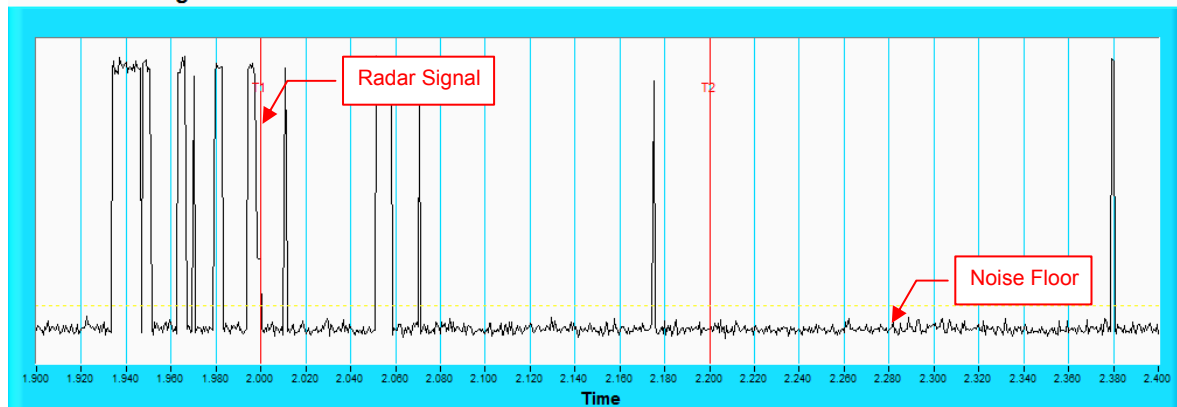
IEEE 802.11n HT20

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** Zoom-in of the first 500ms after radar signal applied.

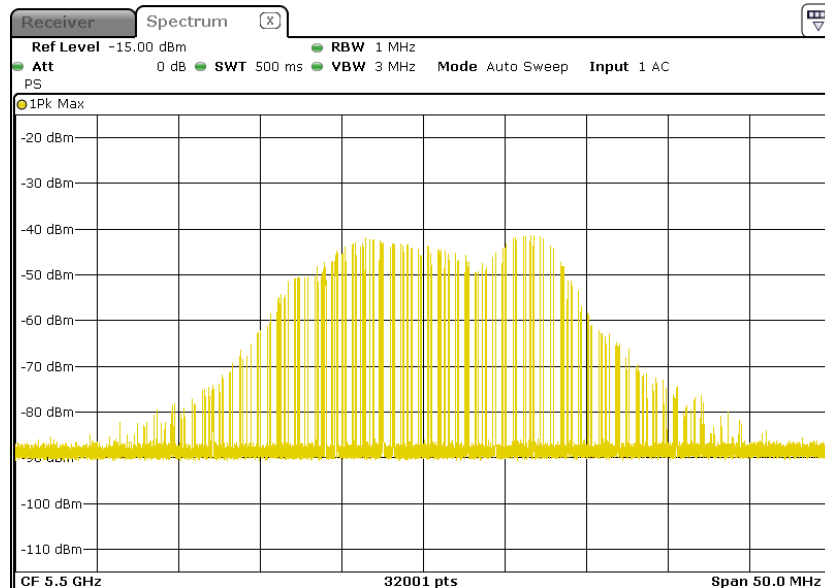
## 6.2.5 Non- Occupancy Period

### Associate test:

During the 30 minutes observation time, EUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.

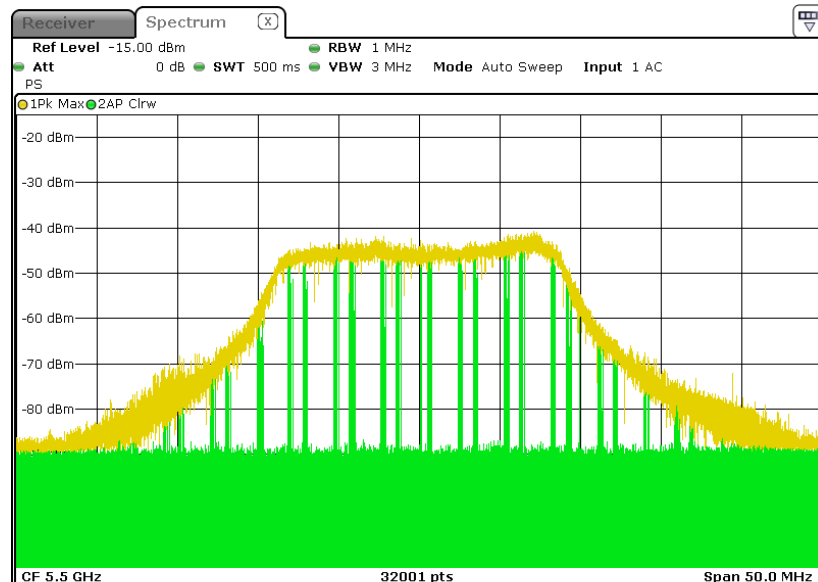
- 1) EUT (Client) links with master on 5500MHz.

Waveform of EUT links up with Master



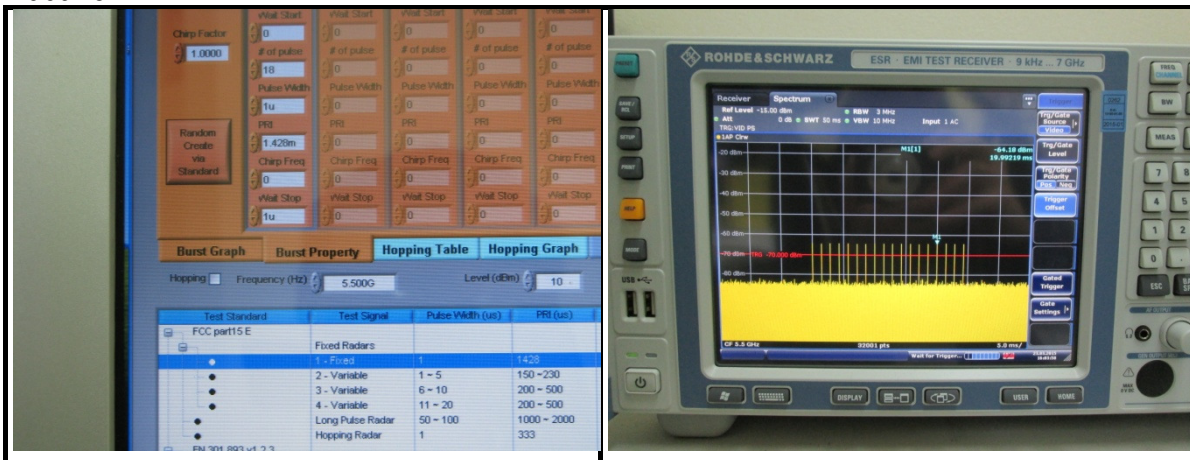
- 2) Client plays specified files via master.

Waveform of transmission



3) Radar signal is applied to the Master device and WiFi traffic signal stop immediately.

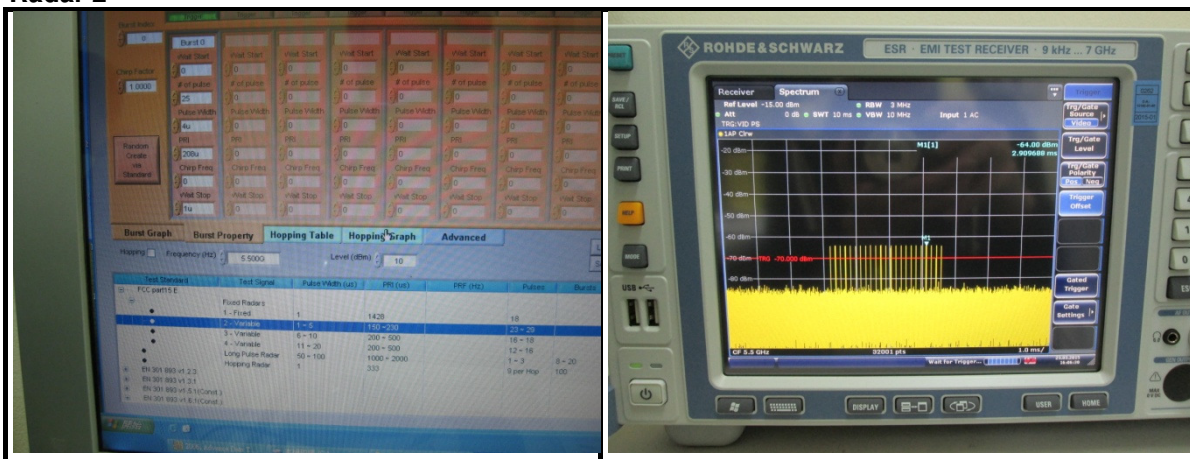
### Radar 0



### Radar 1

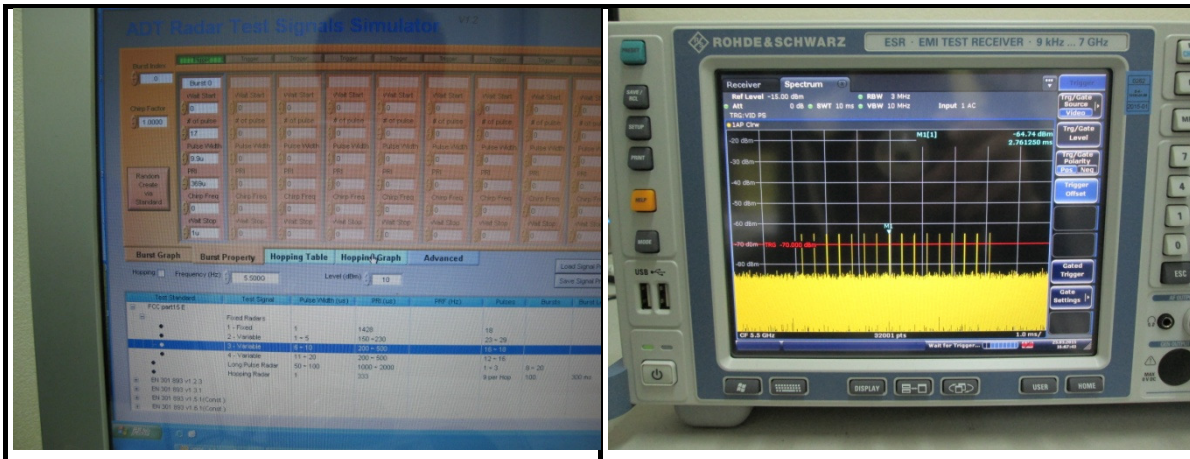


### Radar 2

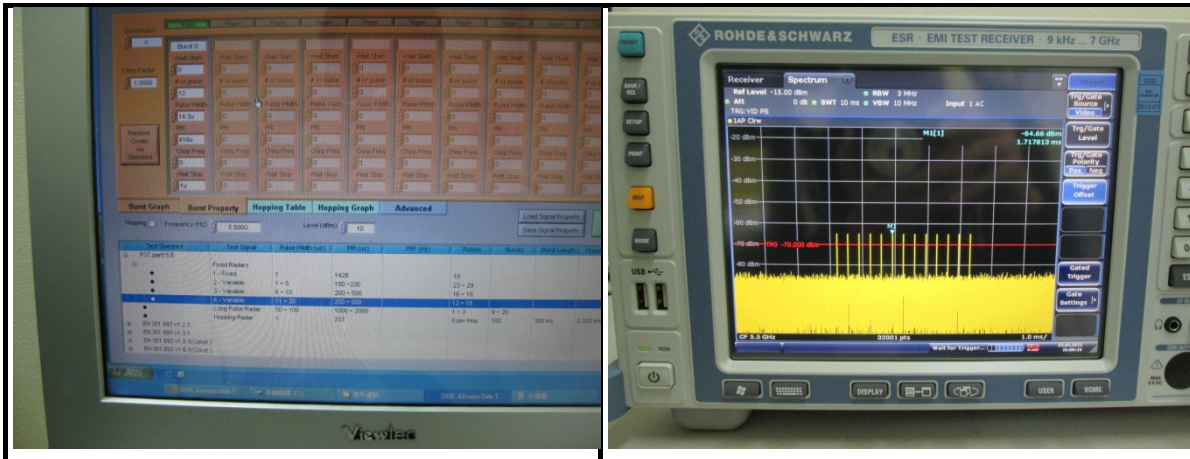




### Radar 3



### Radar 4



### Radar 5



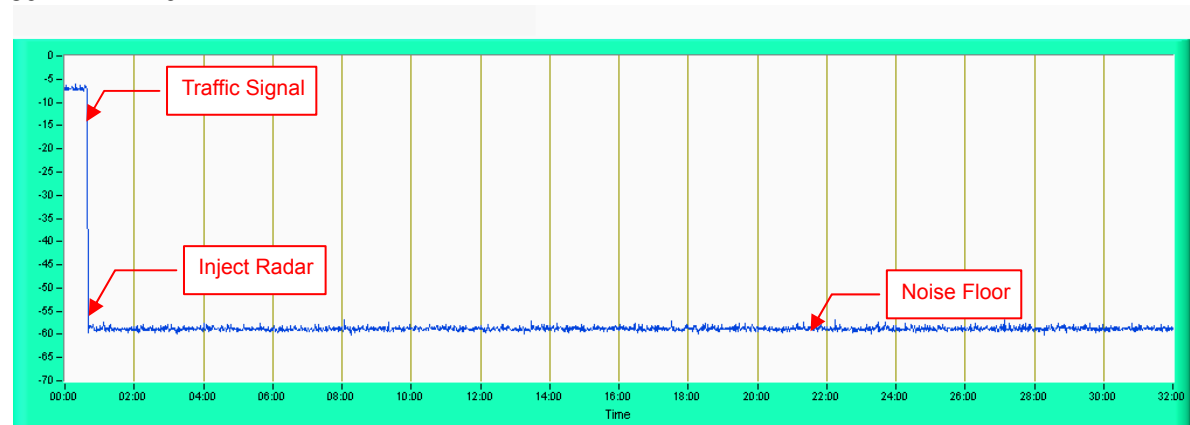
## Radar 6



4) 5510MHz has been monitored in 30 minutes period. In this period, no any transmission occurs.

Plot of 30minutes period

## 802.11n HT20



**NOTE:** Test setup are shown on Test setup photo.pdf

### 6.2.6 Uniform Spreading

The intention of the uniform spreading is to provide, on aggregate, a uniform loading of the spectrum. The EUT randomly select next output channel without any bias or fixed pattern, so that all channels in DFS bands (5250 to 5350MHz and 5470 to 5725 MHz) will be used equally.

### 6.2.7 Transmit Power Control (TPC)

| TPC | E.I.R.P | FCC 15.407(h)(1)                                                            |
|-----|---------|-----------------------------------------------------------------------------|
|     | > 500mW | The TPC mechanism is required for system with an E.I.R.P. of above 500mW    |
| ✓   | < 500mW | The TPC mechanism is not required for system with an E.I.R.P. of less 500mW |

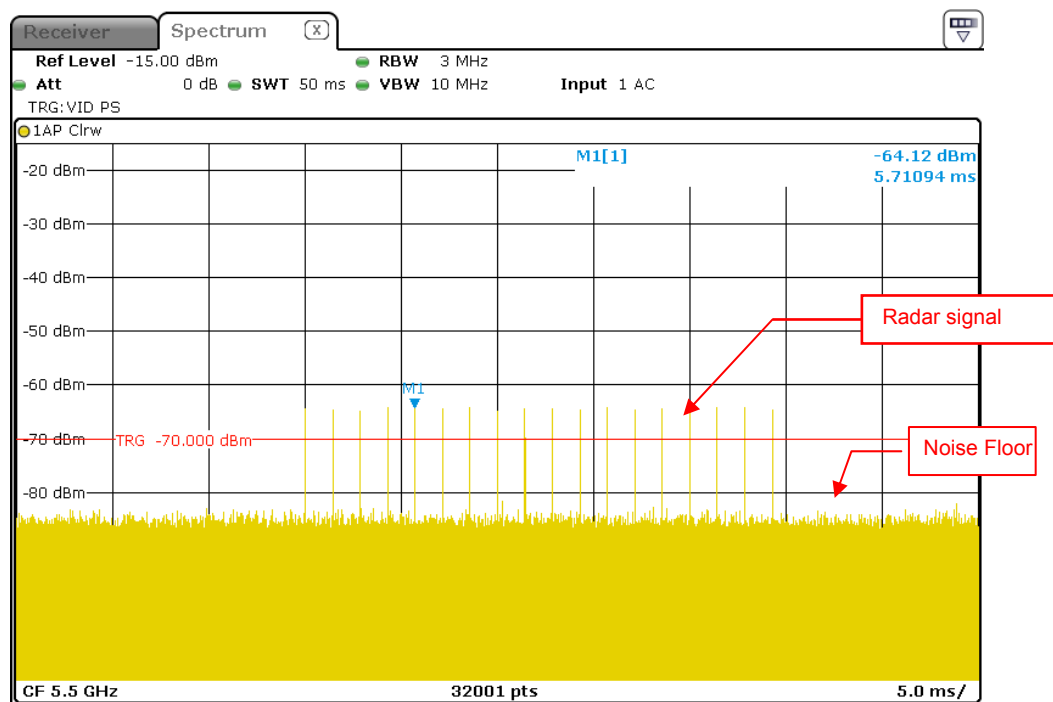
## 6.3 Test Results: Client

### 6.3.1 Test Mode

Client with injection at the Master. (The radar test signals are injected into the Master Device.)

#### DFS Detection Threshold

For a detection threshold level of -64dBm, the required signal strength at EUT antenna location is -64 dBm. The tested level is lower than required level hence it provides margin to the limit.



Radar Signal 0

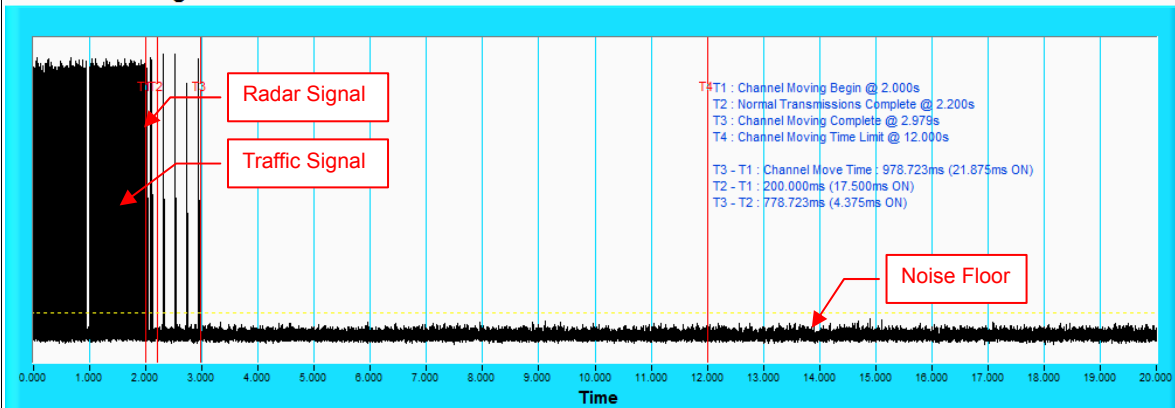


### 6.3.2 Channel Closing Transmission and Channel Move Time

#### RADAR SIGNAL 0

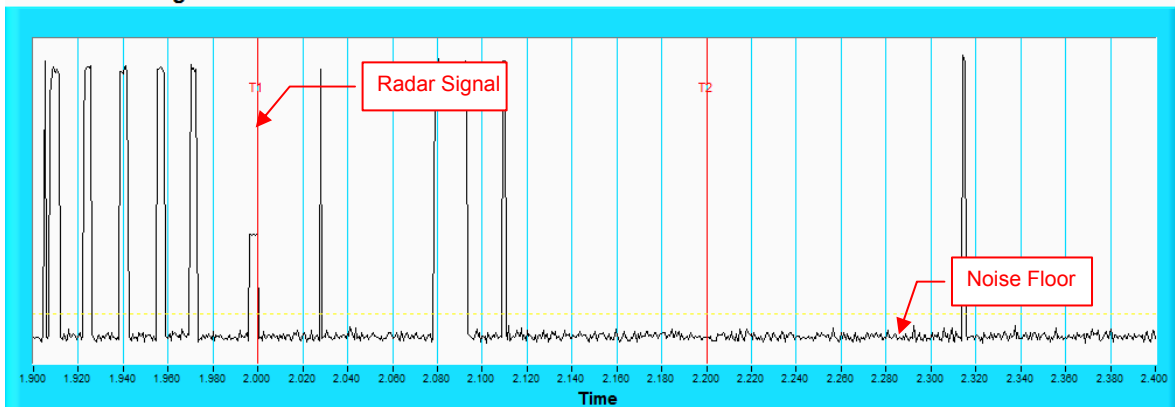
802.11n HT20

##### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

##### Channel Closing Transmission Time & Channel Move Time

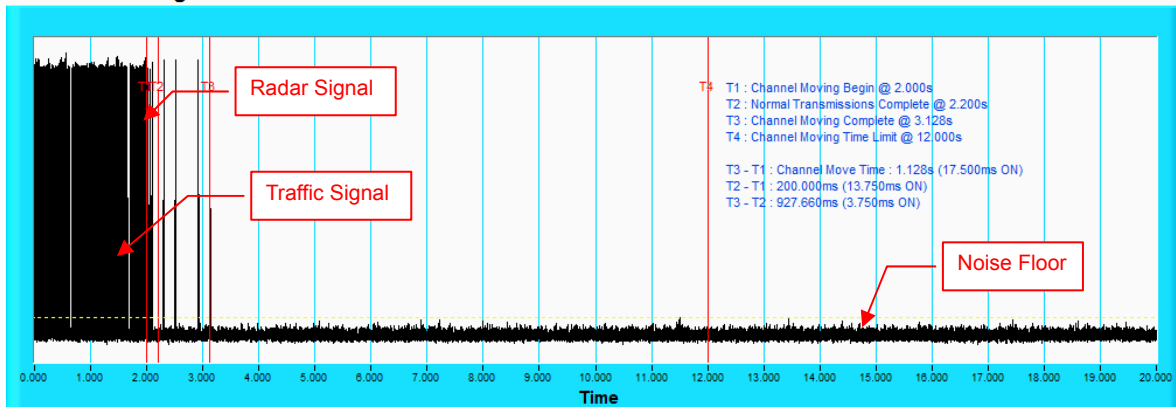


**NOTE:** An expanded plot for the device vacates the channel in the required 500ms.

## RADAR SIGNAL 0

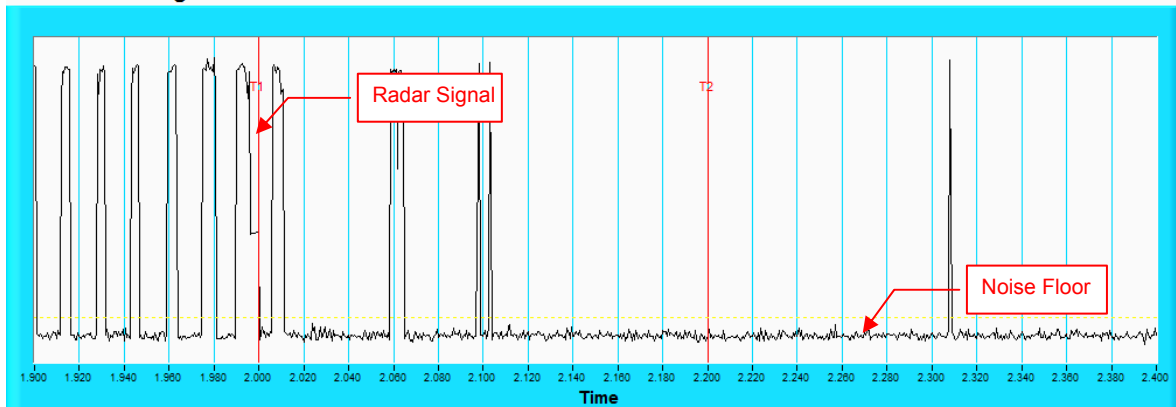
802.11n HT40

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

### Channel Closing Transmission Time & Channel Move Time



**NOTE:** An expanded plot for the device vacates the channel in the required 500ms.

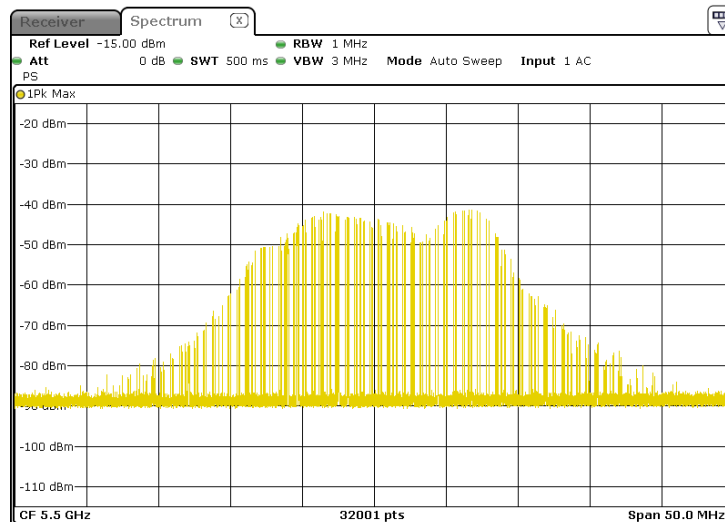
### 6.3.3 Non-Occupancy Period

#### Associate test:

During the 30 minutes observation time, EUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.

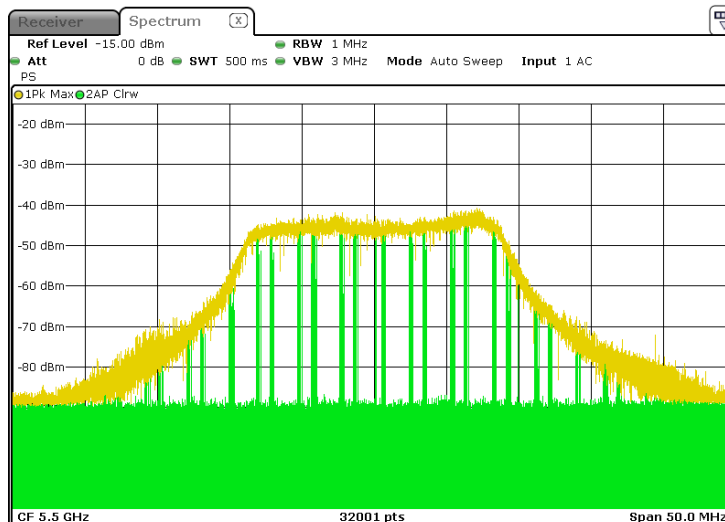
- 1) EUT (Client) links with master on 5500MHz.

Waveform of EUT links up with Master

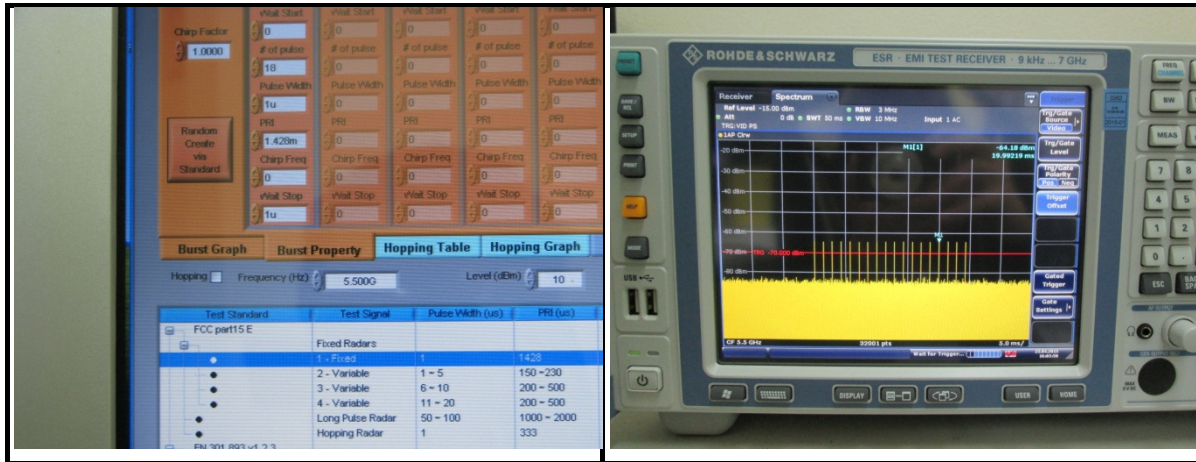


- 2) Client plays specified files via master.

Waveform of transmission



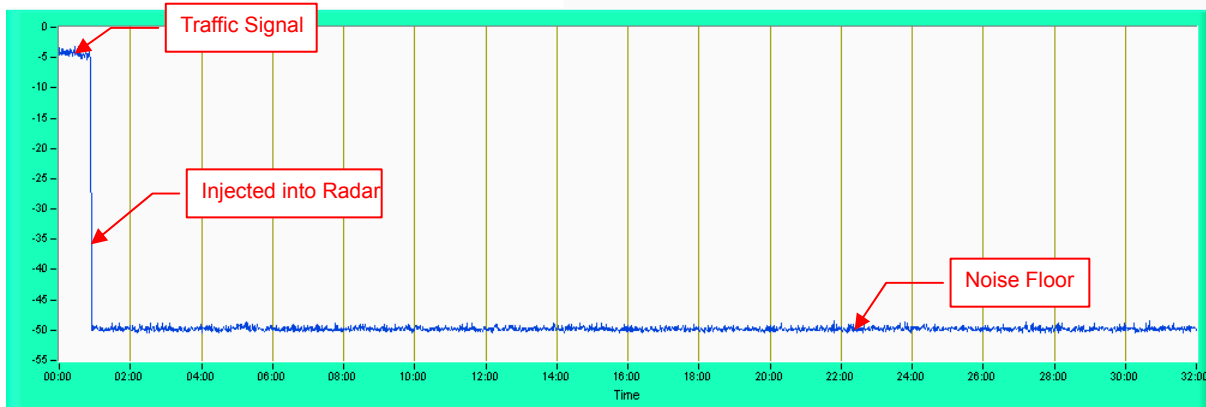
3) Radar signal 0 is applied to the Master device and WiFi traffic signal stop immediately.



4) 5500MHz has been monitored in 30 minutes period. In this period, no any transmission occurs.

Plot of 30minutes period

802.11n HT20

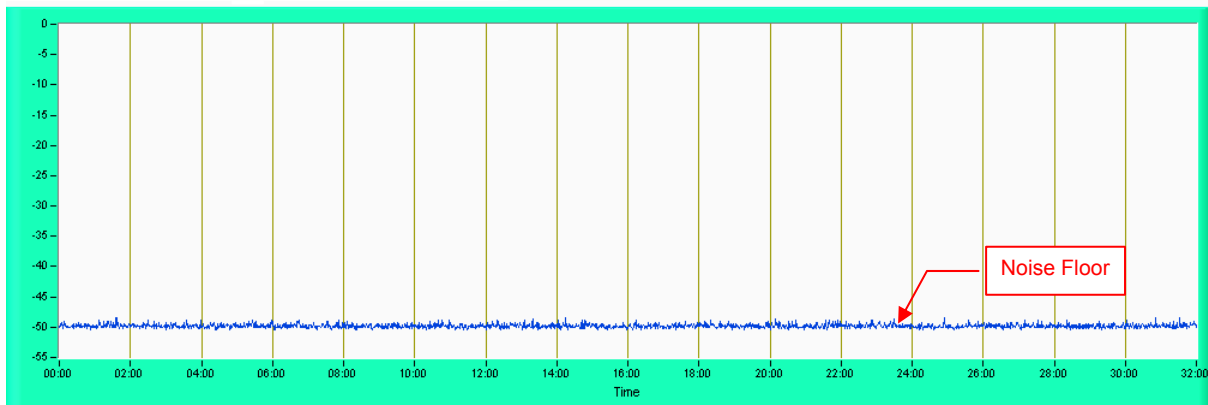


**NOTE:** Test setup are shown on Test set up photo.pdf

#### 6.3.4 Non-Associated Test

Master was off.

During the 30 minutes observation time, The EUT did not make any transmissions in the DFS band after EUT power up.



#### 6.3.5 Non-Co-Channel Test

The EUT was investigated after radar was detected the channel and made sure no co-channel operation with radars.

## 7. Information on The Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab:**

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Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab:**

Tel: 886-3-5935343

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**Hwa Ya EMC/RF/Safety Lab:**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

--- END ---

## Annex-A

### Annex A.1: The Detailed Radar pattern and Statistical Performance

#### IEEE 802.11n HT20

| Type 1 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 102              | 1.0u            | 518.0u  | 5497            | Yes       |
| 2                                     | 99               | 1.0u            | 538.0u  | 5492            | Yes       |
| 3                                     | 95               | 1.0u            | 558.0u  | 5509            | Yes       |
| 4                                     | 92               | 1.0u            | 578.0u  | 5493            | Yes       |
| 5                                     | 89               | 1.0u            | 598.0u  | 5491            | Yes       |
| 6                                     | 86               | 1.0u            | 618.0u  | 5508            | Yes       |
| 7                                     | 83               | 1.0u            | 638.0u  | 5502            | Yes       |
| 8                                     | 81               | 1.0u            | 658.0u  | 5495            | Yes       |
| 9                                     | 78               | 1.0u            | 678.0u  | 5493            | Yes       |
| 10                                    | 76               | 1.0u            | 698.0u  | 5494            | Yes       |
| 11                                    | 74               | 1.0u            | 718.0u  | 5498            | Yes       |
| 12                                    | 72               | 1.0u            | 738.0u  | 5498            | Yes       |
| 13                                    | 70               | 1.0u            | 758.0u  | 5506            | Yes       |
| 14                                    | 68               | 1.0u            | 778.0u  | 5501            | Yes       |
| 15                                    | 67               | 1.0u            | 798.0u  | 5504            | Yes       |
| 16                                    | 95               | 1.0u            | 559.0u  | 5509            | Yes       |
| 17                                    | 76               | 1.0u            | 699.0u  | 5499            | Yes       |
| 18                                    | 75               | 1.0u            | 707.0u  | 5501            | Yes       |
| 19                                    | 64               | 1.0u            | 827.0u  | 5504            | Yes       |
| 20                                    | 100              | 1.0u            | 529.0u  | 5501            | Yes       |
| 21                                    | 75               | 1.0u            | 709.0u  | 5505            | Yes       |
| 22                                    | 64               | 1.0u            | 829.0u  | 5492            | Yes       |
| 23                                    | 60               | 1.0u            | 889.0u  | 5495            | Yes       |
| 24                                    | 24               | 1.0u            | 2.215m  | 5496            | Yes       |
| 25                                    | 87               | 1.0u            | 611.0u  | 5509            | Yes       |
| 26                                    | 75               | 1.0u            | 711.0u  | 5508            | Yes       |
| 27                                    | 63               | 1.0u            | 851.0u  | 5495            | Yes       |
| 28                                    | 22               | 1.0u            | 2.428m  | 5494            | Yes       |
| 29                                    | 84               | 1.0u            | 633.0u  | 5499            | Yes       |
| 30                                    | 73               | 1.0u            | 733.0u  | 5507            | Yes       |
| Detection Rate: 100.0 %               |                  |                 |         |                 |           |

| Type 2 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 29               | 4.8u            | 194.0u  | 5509            | Yes       |
| 2                                     | 29               | 1.1u            | 168.0u  | 5491            | Yes       |
| 3                                     | 25               | 2.1u            | 162.0u  | 5508            | Yes       |
| 4                                     | 28               | 3.2u            | 179.0u  | 5506            | Yes       |
| 5                                     | 28               | 1.1u            | 152.0u  | 5500            | Yes       |
| 6                                     | 26               | 4.0u            | 213.0u  | 5491            | Yes       |
| 7                                     | 23               | 1.6u            | 230.0u  | 5508            | Yes       |
| 8                                     | 28               | 4.0u            | 213.0u  | 5498            | Yes       |
| 9                                     | 27               | 1.5u            | 184.0u  | 5492            | Yes       |
| 10                                    | 27               | 1.0u            | 181.0u  | 5506            | Yes       |
| 11                                    | 29               | 1.7u            | 196.0u  | 5507            | No        |
| 12                                    | 25               | 1.9u            | 196.0u  | 5495            | Yes       |
| 13                                    | 27               | 4.4u            | 223.0u  | 5507            | Yes       |
| 14                                    | 24               | 2.6u            | 200.0u  | 5493            | Yes       |
| 15                                    | 28               | 2.6u            | 175.0u  | 5494            | Yes       |
| 16                                    | 27               | 1.3u            | 182.0u  | 5491            | Yes       |
| 17                                    | 27               | 1.6u            | 154.0u  | 5498            | Yes       |
| 18                                    | 23               | 1.9u            | 185.0u  | 5508            | Yes       |
| 19                                    | 28               | 2.4u            | 207.0u  | 5500            | Yes       |
| 20                                    | 23               | 1.0u            | 180.0u  | 5503            | No        |
| 21                                    | 24               | 1.2u            | 201.0u  | 5496            | Yes       |
| 22                                    | 25               | 1.4u            | 176.0u  | 5504            | Yes       |
| 23                                    | 27               | 3.5u            | 209.0u  | 5505            | No        |
| 24                                    | 27               | 1.9u            | 223.0u  | 5497            | Yes       |
| 25                                    | 26               | 2.5u            | 188.0u  | 5495            | Yes       |
| 26                                    | 24               | 4.5u            | 186.0u  | 5504            | Yes       |
| 27                                    | 25               | 2.7u            | 226.0u  | 5495            | Yes       |
| 28                                    | 24               | 3.9u            | 218.0u  | 5494            | Yes       |
| 29                                    | 23               | 3.7u            | 199.0u  | 5498            | No        |
| 30                                    | 28               | 1.5u            | 228.0u  | 5500            | Yes       |
| Detection Rate: 86.7 %                |                  |                 |         |                 |           |



| Type 3 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 16               | 10.0u           | 402.0u  | 5491            | Yes       |
| 2                                     | 16               | 7.7u            | 239.0u  | 5509            | Yes       |
| 3                                     | 17               | 6.2u            | 255.0u  | 5507            | No        |
| 4                                     | 16               | 9.8u            | 484.0u  | 5493            | Yes       |
| 5                                     | 16               | 9.6u            | 225.0u  | 5503            | Yes       |
| 6                                     | 17               | 7.2u            | 255.0u  | 5492            | Yes       |
| 7                                     | 16               | 6.7u            | 419.0u  | 5498            | Yes       |
| 8                                     | 18               | 7.2u            | 479.0u  | 5499            | Yes       |
| 9                                     | 18               | 9.3u            | 289.0u  | 5509            | No        |
| 10                                    | 16               | 9.2u            | 246.0u  | 5500            | Yes       |
| 11                                    | 16               | 6.7u            | 338.0u  | 5499            | Yes       |
| 12                                    | 17               | 7.2u            | 400.0u  | 5502            | Yes       |
| 13                                    | 17               | 7.3u            | 496.0u  | 5505            | Yes       |
| 14                                    | 18               | 7.1u            | 380.0u  | 5502            | Yes       |
| 15                                    | 17               | 9.8u            | 201.0u  | 5495            | No        |
| 16                                    | 17               | 8.6u            | 380.0u  | 5491            | Yes       |
| 17                                    | 17               | 8.7u            | 467.0u  | 5509            | Yes       |
| 18                                    | 18               | 6.7u            | 218.0u  | 5502            | No        |
| 19                                    | 17               | 7.9u            | 414.0u  | 5497            | Yes       |
| 20                                    | 18               | 7.9u            | 464.0u  | 5496            | Yes       |
| 21                                    | 16               | 7.1u            | 490.0u  | 5495            | Yes       |
| 22                                    | 17               | 9.8u            | 480.0u  | 5499            | Yes       |
| 23                                    | 16               | 7.1u            | 236.0u  | 5494            | Yes       |
| 24                                    | 17               | 7.5u            | 283.0u  | 5502            | Yes       |
| 25                                    | 16               | 8.5u            | 482.0u  | 5498            | Yes       |
| 26                                    | 17               | 7.9u            | 252.0u  | 5507            | No        |
| 27                                    | 16               | 8.7u            | 205.0u  | 5506            | Yes       |
| 28                                    | 17               | 8.6u            | 432.0u  | 5493            | Yes       |
| 29                                    | 17               | 9.7u            | 225.0u  | 5491            | Yes       |
| 30                                    | 17               | 6.9u            | 310.0u  | 5509            | Yes       |
| Detection Rate: 83.3 %                |                  |                 |         |                 |           |

| Type 4 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 13               | 14.8u           | 419.0u  | 5501            | Yes       |
| 2                                     | 13               | 12.4u           | 334.0u  | 5492            | Yes       |
| 3                                     | 13               | 12.7u           | 226.0u  | 5509            | Yes       |
| 4                                     | 15               | 15.3u           | 375.0u  | 5507            | No        |
| 5                                     | 14               | 19.6u           | 245.0u  | 5505            | Yes       |
| 6                                     | 15               | 13.9u           | 452.0u  | 5494            | Yes       |
| 7                                     | 15               | 17.2u           | 358.0u  | 5509            | Yes       |
| 8                                     | 16               | 13.8u           | 373.0u  | 5500            | Yes       |
| 9                                     | 13               | 18.3u           | 365.0u  | 5493            | Yes       |
| 10                                    | 13               | 13.9u           | 259.0u  | 5492            | Yes       |
| 11                                    | 13               | 16.4u           | 275.0u  | 5494            | No        |
| 12                                    | 15               | 15.0u           | 244.0u  | 5491            | Yes       |
| 13                                    | 15               | 12.3u           | 339.0u  | 5501            | Yes       |
| 14                                    | 16               | 15.5u           | 400.0u  | 5508            | Yes       |
| 15                                    | 14               | 12.6u           | 369.0u  | 5506            | Yes       |
| 16                                    | 13               | 11.2u           | 469.0u  | 5507            | Yes       |
| 17                                    | 12               | 11.1u           | 448.0u  | 5502            | No        |
| 18                                    | 15               | 19.0u           | 453.0u  | 5501            | Yes       |
| 19                                    | 16               | 14.3u           | 357.0u  | 5497            | Yes       |
| 20                                    | 15               | 17.6u           | 434.0u  | 5507            | No        |
| 21                                    | 16               | 17.0u           | 463.0u  | 5491            | Yes       |
| 22                                    | 14               | 18.2u           | 431.0u  | 5497            | Yes       |
| 23                                    | 13               | 12.6u           | 232.0u  | 5504            | No        |
| 24                                    | 13               | 11.2u           | 283.0u  | 5504            | Yes       |
| 25                                    | 12               | 14.0u           | 272.0u  | 5491            | No        |
| 26                                    | 15               | 11.8u           | 297.0u  | 5494            | Yes       |
| 27                                    | 13               | 18.0u           | 232.0u  | 5503            | Yes       |
| 28                                    | 13               | 17.7u           | 313.0u  | 5506            | No        |
| 29                                    | 13               | 16.7u           | 282.0u  | 5496            | Yes       |
| 30                                    | 16               | 13.6u           | 267.0u  | 5498            | Yes       |
| Detection Rate: 76.7 %                |                  |                 |         |                 |           |

| Type 5 Radar Statistical Performances |                  |                        |
|---------------------------------------|------------------|------------------------|
| Trial #                               | Test Signal Name | Detection              |
| 1                                     | LP_Signal_01     | Yes                    |
| 2                                     | LP_Signal_02     | Yes                    |
| 3                                     | LP_Signal_03     | Yes                    |
| 4                                     | LP_Signal_04     | Yes                    |
| 5                                     | LP_Signal_05     | Yes                    |
| 6                                     | LP_Signal_06     | Yes                    |
| 7                                     | LP_Signal_07     | Yes                    |
| 8                                     | LP_Signal_08     | Yes                    |
| 9                                     | LP_Signal_09     | Yes                    |
| 10                                    | LP_Signal_10     | Yes                    |
| 11                                    | LP_Signal_11     | Yes                    |
| 12                                    | LP_Signal_12     | Yes                    |
| 13                                    | LP_Signal_13     | Yes                    |
| 14                                    | LP_Signal_14     | Yes                    |
| 15                                    | LP_Signal_15     | Yes                    |
| 16                                    | LP_Signal_16     | Yes                    |
| 17                                    | LP_Signal_17     | Yes                    |
| 18                                    | LP_Signal_18     | Yes                    |
| 19                                    | LP_Signal_19     | No                     |
| 20                                    | LP_Signal_20     | No                     |
| 21                                    | LP_Signal_21     | No                     |
| 22                                    | LP_Signal_22     | Yes                    |
| 23                                    | LP_Signal_23     | No                     |
| 24                                    | LP_Signal_24     | Yes                    |
| 25                                    | LP_Signal_25     | No                     |
| 26                                    | LP_Signal_26     | Yes                    |
| 27                                    | LP_Signal_27     | Yes                    |
| 28                                    | LP_Signal_28     | Yes                    |
| 29                                    | LP_Signal_29     | Yes                    |
| 30                                    | LP_Signal_30     | Yes                    |
|                                       |                  | Detection Rate: 83.3 % |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_01

Number of Bursts in Trial: 9

Chrip Center Frequency: 5492MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 9M         | 70.7u           | 1.655m                   | -                        | 748.6m             |
| 2     | 1                | 7M         | 61.6u           | -                        | -                        | 368.1m             |
| 3     | 3                | 7M         | 80.1u           | 1.417m                   | 1.424m                   | 965.4m             |
| 4     | 2                | 6M         | 62.7u           | 1.219m                   | -                        | 113.2m             |
| 5     | 3                | 5M         | 66.2u           | 949.8u                   | 1.859m                   | 1.277              |
| 6     | 1                | 17M        | 68.1u           | -                        | -                        | 663.1m             |
| 7     | 1                | 10M        | 99.3u           | -                        | -                        | 907.6m             |
| 8     | 1                | 9M         | 74.9u           | -                        | -                        | 1.254              |
| 9     | 3                | 16M        | 83.5u           | 1.200m                   | 1.643m                   | 69.81m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_02

Number of Bursts in Trial: 19

Chrip Center Frequency: 5493MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 11M        | 98.7u           | 1.382m                   | -                        | 330.9m             |
| 2     | 1                | 6M         | 52.1u           | -                        | -                        | 550.8m             |
| 3     | 3                | 7M         | 74.7u           | 956.3u                   | 1.574m                   | 291.7m             |
| 4     | 2                | 12M        | 66.1u           | 1.877m                   | -                        | 299.0m             |
| 5     | 2                | 18M        | 83.2u           | 1.178m                   | -                        | 477.2m             |
| 6     | 1                | 19M        | 64.3u           | -                        | -                        | 159.1m             |
| 7     | 2                | 5M         | 99.3u           | 1.474m                   | -                        | 29.54m             |
| 8     | 1                | 20M        | 72.2u           | -                        | -                        | 518.6m             |
| 9     | 3                | 12M        | 95.9u           | 1.812m                   | 1.075m                   | 464.4m             |
| 10    | 2                | 11M        | 75.2u           | 925.8u                   | -                        | 416.8m             |
| 11    | 3                | 17M        | 55.6u           | 1.547m                   | 1.215m                   | 552.6m             |
| 12    | 2                | 9M         | 69.5u           | 1.404m                   | -                        | 180.7m             |
| 13    | 2                | 19M        | 69.6u           | 1.384m                   | -                        | 434.8m             |
| 14    | 1                | 9M         | 68.4u           | -                        | -                        | 390.5m             |
| 15    | 1                | 13M        | 96.0u           | -                        | -                        | 309.1m             |
| 16    | 3                | 12M        | 84.9u           | 1.364m                   | 1.686m                   | 145.8m             |
| 17    | 2                | 17M        | 59.4u           | 1.591m                   | -                        | 16.74m             |
| 18    | 3                | 8M         | 70.8u           | 1.584m                   | 1.012m                   | 270.6m             |
| 19    | 1                | 16M        | 51.6u           | -                        | -                        | 541.3m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_03

Number of Bursts in Trial: 17

Chrip Center Frequency: 5494MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 17M        | 76.5u           | 1.298m                   | -                        | 513.7m             |
| 2     | 3                | 7M         | 75.5u           | 1.192m                   | 1.383m                   | 463.1m             |
| 3     | 1                | 7M         | 56.2u           | -                        | -                        | 545.4m             |
| 4     | 3                | 7M         | 70.9u           | 958.1u                   | 1.182m                   | 671.6m             |
| 5     | 2                | 7M         | 63.7u           | 991.3u                   | -                        | 357.2m             |
| 6     | 1                | 18M        | 77.3u           | -                        | -                        | 213.0m             |
| 7     | 1                | 14M        | 55.4u           | -                        | -                        | 637.9m             |
| 8     | 2                | 5M         | 61.7u           | 1.370m                   | -                        | 473.0m             |
| 9     | 2                | 13M        | 62.2u           | 1.639m                   | -                        | 47.96m             |
| 10    | 1                | 17M        | 64.1u           | -                        | -                        | 313.8m             |
| 11    | 2                | 11M        | 78.0u           | 1.146m                   | -                        | 642.3m             |
| 12    | 2                | 6M         | 68.0u           | 1.326m                   | -                        | 597.6m             |
| 13    | 2                | 8M         | 68.8u           | 1.203m                   | -                        | 535.9m             |
| 14    | 2                | 6M         | 58.5u           | 1.274m                   | -                        | 410.8m             |
| 15    | 1                | 16M        | 95.2u           | -                        | -                        | 85.59m             |
| 16    | 2                | 19M        | 63.1u           | 1.143m                   | -                        | 73.05m             |
| 17    | 2                | 9M         | 100.0u          | 1.861m                   | -                        | 349.4m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_04

Number of Bursts in Trial: 17

Chrip Center Frequency: 5495MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 19M        | 91.6u           | -                        | -                        | 326.0m             |
| 2     | 2                | 13M        | 78.1u           | 1.190m                   | -                        | 112.0m             |
| 3     | 3                | 6M         | 92.3u           | 1.111m                   | 1.405m                   | 418.2m             |
| 4     | 1                | 11M        | 51.0u           | -                        | -                        | 461.3m             |
| 5     | 1                | 18M        | 64.3u           | -                        | -                        | 285.1m             |
| 6     | 3                | 14M        | 91.7u           | 1.162m                   | 973.3u                   | 466.5m             |
| 7     | 2                | 10M        | 80.4u           | 1.070m                   | -                        | 591.6m             |
| 8     | 2                | 11M        | 52.1u           | 1.046m                   | -                        | 483.5m             |
| 9     | 1                | 9M         | 97.5u           | -                        | -                        | 23.67m             |
| 10    | 2                | 5M         | 58.0u           | 1.588m                   | -                        | 124.1m             |
| 11    | 2                | 8M         | 70.9u           | 1.001m                   | -                        | 694.4m             |
| 12    | 1                | 18M        | 64.4u           | -                        | -                        | 594.5m             |
| 13    | 2                | 8M         | 75.5u           | 1.324m                   | -                        | 648.6m             |
| 14    | 2                | 14M        | 76.8u           | 1.815m                   | -                        | 359.0m             |
| 15    | 2                | 9M         | 82.5u           | 1.720m                   | -                        | 395.7m             |
| 16    | 3                | 13M        | 67.7u           | 1.810m                   | 1.664m                   | 642.4m             |
| 17    | 3                | 14M        | 93.3u           | 1.365m                   | 1.220m                   | 500.8m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_05

Number of Bursts in Trial: 14

Chrip Center Frequency: 5496MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 6M         | 97.7u           | 1.370m                   | -                        | 792.9m             |
| 2     | 3                | 18M        | 50.6u           | 1.456m                   | 1.734m                   | 55.10m             |
| 3     | 1                | 6M         | 76.4u           | -                        | -                        | 434.5m             |
| 4     | 3                | 10M        | 94.6u           | 1.009m                   | 1.352m                   | 472.9m             |
| 5     | 2                | 18M        | 52.3u           | 1.116m                   | -                        | 453.0m             |
| 6     | 2                | 10M        | 53.1u           | 1.838m                   | -                        | 307.0m             |
| 7     | 2                | 16M        | 54.4u           | 1.392m                   | -                        | 451.0m             |
| 8     | 2                | 6M         | 96.3u           | 966.7u                   | -                        | 808.6m             |
| 9     | 3                | 11M        | 58.9u           | 1.866m                   | 1.779m                   | 639.8m             |
| 10    | 3                | 14M        | 99.6u           | 941.4u                   | 1.634m                   | 650.7m             |
| 11    | 2                | 14M        | 71.7u           | 933.3u                   | -                        | 346.9m             |
| 12    | 1                | 18M        | 65.1u           | -                        | -                        | 602.4m             |
| 13    | 2                | 9M         | 70.2u           | 1.601m                   | -                        | 689.6m             |
| 14    | 3                | 16M        | 88.6u           | 1.507m                   | 1.171m                   | 41.54m             |



Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_06

Number of Bursts in Trial: 14

Chrip Center Frequency: 5497MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 15M        | 81.0u           | -                        | -                        | 324.5m             |
| 2     | 2                | 19M        | 96.0u           | 1.828m                   | -                        | 636.2m             |
| 3     | 3                | 18M        | 60.9u           | 1.638m                   | 1.691m                   | 592.1m             |
| 4     | 2                | 18M        | 58.3u           | 1.196m                   | -                        | 598.2m             |
| 5     | 3                | 16M        | 65.7u           | 937.3u                   | 1.606m                   | 297.3m             |
| 6     | 1                | 10M        | 65.9u           | -                        | -                        | 459.1m             |
| 7     | 2                | 19M        | 59.0u           | 1.091m                   | -                        | 433.1m             |
| 8     | 2                | 7M         | 86.3u           | 1.035m                   | -                        | 329.7m             |
| 9     | 2                | 5M         | 96.6u           | 1.788m                   | -                        | 802.6m             |
| 10    | 2                | 17M        | 96.3u           | 927.7u                   | -                        | 723.1m             |
| 11    | 3                | 10M        | 98.9u           | 1.632m                   | 1.707m                   | 695.4m             |
| 12    | 2                | 16M        | 95.6u           | 1.683m                   | -                        | 820.7m             |
| 13    | 1                | 20M        | 64.9u           | -                        | -                        | 385.8m             |
| 14    | 2                | 17M        | 83.7u           | 1.341m                   | -                        | 668.5m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_07

Number of Bursts in Trial: 16

Chrip Center Frequency: 5498MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 18M        | 55.8u           | 1.783m                   | -                        | 122.9m             |
| 2     | 2                | 20M        | 59.9u           | 1.569m                   | -                        | 580.4m             |
| 3     | 3                | 14M        | 83.5u           | 1.389m                   | 926.5u                   | 313.9m             |
| 4     | 1                | 7M         | 96.0u           | -                        | -                        | 338.1m             |
| 5     | 1                | 6M         | 55.0u           | -                        | -                        | 555.2m             |
| 6     | 2                | 17M        | 69.2u           | 1.872m                   | -                        | 623.3m             |
| 7     | 3                | 6M         | 89.8u           | 1.188m                   | 1.515m                   | 502.1m             |
| 8     | 1                | 12M        | 82.5u           | -                        | -                        | 442.6m             |
| 9     | 2                | 13M        | 87.3u           | 1.385m                   | -                        | 421.7m             |
| 10    | 2                | 17M        | 74.9u           | 1.720m                   | -                        | 46.57m             |
| 11    | 2                | 14M        | 50.3u           | 1.072m                   | -                        | 81.62m             |
| 12    | 3                | 9M         | 92.3u           | 1.821m                   | 1.245m                   | 456.5m             |
| 13    | 2                | 17M        | 86.7u           | 1.024m                   | -                        | 122.2m             |
| 14    | 2                | 7M         | 96.0u           | 1.149m                   | -                        | 269.2m             |
| 15    | 2                | 20M        | 93.8u           | 1.149m                   | -                        | 331.4m             |
| 16    | 3                | 19M        | 80.9u           | 1.468m                   | 1.728m                   | 703.9m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_08

Number of Bursts in Trial: 12

Chrip Center Frequency: 5499MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 3                | 19M        | 76.5u           | 1.700m                   | 1.267m                   | 562.2m             |
| 2     | 2                | 20M        | 58.1u           | 1.064m                   | -                        | 748.2m             |
| 3     | 1                | 18M        | 65.2u           | -                        | -                        | 609.3m             |
| 4     | 2                | 17M        | 95.4u           | 1.894m                   | -                        | 310.9m             |
| 5     | 3                | 12M        | 70.4u           | 1.420m                   | 1.919m                   | 662.5m             |
| 6     | 3                | 20M        | 93.5u           | 1.571m                   | 1.391m                   | 764.2m             |
| 7     | 1                | 11M        | 51.9u           | -                        | -                        | 74.45m             |
| 8     | 2                | 8M         | 81.0u           | 1.039m                   | -                        | 836.5m             |
| 9     | 1                | 9M         | 63.5u           | -                        | -                        | 591.7m             |
| 10    | 1                | 7M         | 73.2u           | -                        | -                        | 221.4m             |
| 11    | 3                | 7M         | 92.3u           | 918.7u                   | 1.862m                   | 689.1m             |
| 12    | 2                | 10M        | 76.6u           | 1.598m                   | -                        | 329.0m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_09

Number of Bursts in Trial: 19

Chrip Center Frequency: 5500MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 10M        | 82.2u           | 963.8u                   | -                        | 343.6m             |
| 2     | 1                | 19M        | 68.7u           | -                        | -                        | 543.3m             |
| 3     | 3                | 18M        | 78.4u           | 1.678m                   | 1.404m                   | 473.3m             |
| 4     | 2                | 8M         | 71.9u           | 1.609m                   | -                        | 407.4m             |
| 5     | 2                | 7M         | 55.3u           | 1.521m                   | -                        | 495.1m             |
| 6     | 1                | 6M         | 55.9u           | -                        | -                        | 214.4m             |
| 7     | 2                | 12M        | 67.2u           | 1.424m                   | -                        | 88.86m             |
| 8     | 1                | 8M         | 92.6u           | -                        | -                        | 469.5m             |
| 9     | 3                | 6M         | 68.1u           | 1.015m                   | 1.492m                   | 557.1m             |
| 10    | 2                | 10M        | 86.7u           | 1.333m                   | -                        | 581.1m             |
| 11    | 2                | 13M        | 73.9u           | 1.892m                   | -                        | 142.6m             |
| 12    | 2                | 12M        | 61.3u           | 1.067m                   | -                        | 186.2m             |
| 13    | 2                | 11M        | 59.1u           | 1.407m                   | -                        | 259.0m             |
| 14    | 3                | 6M         | 60.4u           | 1.197m                   | 1.906m                   | 409.0m             |
| 15    | 3                | 12M        | 89.0u           | 1.068m                   | 1.138m                   | 194.8m             |
| 16    | 2                | 6M         | 52.9u           | 1.005m                   | -                        | 219.6m             |
| 17    | 2                | 7M         | 84.0u           | 1.042m                   | -                        | 585.4m             |
| 18    | 2                | 7M         | 69.4u           | 1.763m                   | -                        | 537.6m             |
| 19    | 1                | 10M        | 61.8u           | -                        | -                        | 400.0m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_10

Number of Bursts in Trial: 15

Chrip Center Frequency: 5501MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 17M        | 93.4u           | 1.852m                   | -                        | 730.0m             |
| 2     | 2                | 12M        | 82.6u           | 1.896m                   | -                        | 634.8m             |
| 3     | 2                | 17M        | 51.0u           | 1.214m                   | -                        | 132.1m             |
| 4     | 3                | 13M        | 73.9u           | 1.237m                   | 1.141m                   | 176.5m             |
| 5     | 3                | 14M        | 57.7u           | 1.067m                   | 1.892m                   | 96.40m             |
| 6     | 2                | 10M        | 76.6u           | 1.546m                   | -                        | 739.3m             |
| 7     | 3                | 8M         | 92.7u           | 1.432m                   | 1.606m                   | 730.1m             |
| 8     | 2                | 20M        | 57.6u           | 1.586m                   | -                        | 167.2m             |
| 9     | 2                | 11M        | 74.4u           | 1.507m                   | -                        | 474.3m             |
| 10    | 2                | 15M        | 70.3u           | 1.598m                   | -                        | 537.6m             |
| 11    | 3                | 14M        | 94.0u           | 1.869m                   | 1.625m                   | 10.21m             |
| 12    | 1                | 19M        | 50.2u           | -                        | -                        | 278.5m             |
| 13    | 2                | 10M        | 75.1u           | 1.206m                   | -                        | 275.1m             |
| 14    | 3                | 13M        | 98.4u           | 1.208m                   | 1.126m                   | 639.7m             |
| 15    | 3                | 19M        | 86.7u           | 1.610m                   | 1.886m                   | 294.3m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_11

Number of Bursts in Trial: 18

Chrip Center Frequency: 5502MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 18M        | 89.1u           | -                        | -                        | 19.17m             |
| 2     | 1                | 9M         | 87.0u           | -                        | -                        | 212.4m             |
| 3     | 2                | 13M        | 69.5u           | 997.5u                   | -                        | 286.8m             |
| 4     | 1                | 5M         | 69.2u           | -                        | -                        | 286.2m             |
| 5     | 2                | 12M        | 94.2u           | 1.413m                   | -                        | 128.7m             |
| 6     | 1                | 14M        | 98.0u           | -                        | -                        | 265.2m             |
| 7     | 1                | 8M         | 82.9u           | -                        | -                        | 345.1m             |
| 8     | 1                | 10M        | 82.3u           | -                        | -                        | 138.8m             |
| 9     | 2                | 5M         | 68.6u           | 1.059m                   | -                        | 54.31m             |
| 10    | 3                | 7M         | 84.4u           | 970.6u                   | 1.110m                   | 38.93m             |
| 11    | 1                | 14M        | 65.7u           | -                        | -                        | 100.3m             |
| 12    | 2                | 15M        | 99.8u           | 1.174m                   | -                        | 662.6m             |
| 13    | 2                | 6M         | 86.2u           | 1.900m                   | -                        | 434.0m             |
| 14    | 1                | 12M        | 74.0u           | -                        | -                        | 571.0m             |
| 15    | 1                | 14M        | 53.6u           | -                        | -                        | 98.50m             |
| 16    | 2                | 11M        | 77.1u           | 1.187m                   | -                        | 5.465m             |
| 17    | 2                | 7M         | 76.8u           | 1.193m                   | -                        | 52.88m             |
| 18    | 3                | 17M        | 59.3u           | 1.737m                   | 1.105m                   | 166.8m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_12

Number of Bursts in Trial: 13

Chrip Center Frequency: 5503MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 18M        | 50.2u           | -                        | -                        | 742.1m             |
| 2     | 1                | 17M        | 83.1u           | -                        | -                        | 92.80m             |
| 3     | 2                | 9M         | 97.0u           | 1.378m                   | -                        | 314.5m             |
| 4     | 2                | 19M        | 95.5u           | 1.184m                   | -                        | 591.9m             |
| 5     | 1                | 11M        | 74.9u           | -                        | -                        | 601.9m             |
| 6     | 2                | 15M        | 60.0u           | 1.217m                   | -                        | 544.1m             |
| 7     | 3                | 8M         | 85.6u           | 1.064m                   | 1.507m                   | 622.2m             |
| 8     | 2                | 19M        | 97.7u           | 1.286m                   | -                        | 127.3m             |
| 9     | 2                | 7M         | 78.7u           | 1.353m                   | -                        | 877.0m             |
| 10    | 2                | 18M        | 61.8u           | 1.823m                   | -                        | 533.8m             |
| 11    | 1                | 18M        | 95.1u           | -                        | -                        | 488.4m             |
| 12    | 2                | 10M        | 95.8u           | 1.878m                   | -                        | 855.6m             |
| 13    | 2                | 13M        | 61.3u           | 1.387m                   | -                        | 913.0m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_13

Number of Bursts in Trial: 10

Chrip Center Frequency: 5504MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 12M        | 73.7u           | -                        | -                        | 188.5m             |
| 2     | 2                | 14M        | 86.4u           | 1.325m                   | -                        | 996.4m             |
| 3     | 1                | 10M        | 89.1u           | -                        | -                        | 892.9m             |
| 4     | 3                | 9M         | 85.2u           | 1.299m                   | 1.533m                   | 502.4m             |
| 5     | 2                | 7M         | 84.6u           | 1.234m                   | -                        | 614.1m             |
| 6     | 1                | 7M         | 57.5u           | -                        | -                        | 125.5m             |
| 7     | 2                | 14M        | 51.0u           | 970.0u                   | -                        | 1.076              |
| 8     | 2                | 7M         | 66.6u           | 1.546m                   | -                        | 667.5m             |
| 9     | 3                | 12M        | 86.7u           | 1.033m                   | 1.597m                   | 622.9m             |
| 10    | 2                | 13M        | 61.2u           | 1.322m                   | -                        | 664.9m             |



Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_14

Number of Bursts in Trial: 15

Chrip Center Frequency: 5505MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 18M        | 70.5u           | -                        | -                        | 160.6m             |
| 2     | 3                | 10M        | 65.0u           | 1.209m                   | 1.058m                   | 767.6m             |
| 3     | 3                | 8M         | 54.1u           | 1.071m                   | 1.347m                   | 639.1m             |
| 4     | 2                | 16M        | 67.7u           | 1.311m                   | -                        | 107.5m             |
| 5     | 2                | 8M         | 62.4u           | 1.585m                   | -                        | 421.3m             |
| 6     | 2                | 17M        | 80.8u           | 1.790m                   | -                        | 655.5m             |
| 7     | 2                | 20M        | 77.7u           | 1.882m                   | -                        | 225.9m             |
| 8     | 2                | 12M        | 56.1u           | 1.743m                   | -                        | 586.9m             |
| 9     | 2                | 14M        | 71.6u           | 1.015m                   | -                        | 448.6m             |
| 10    | 2                | 13M        | 59.6u           | 1.809m                   | -                        | 504.3m             |
| 11    | 2                | 7M         | 62.7u           | 1.857m                   | -                        | 305.8m             |
| 12    | 1                | 13M        | 65.8u           | -                        | -                        | 62.25m             |
| 13    | 1                | 13M        | 74.1u           | -                        | -                        | 315.6m             |
| 14    | 3                | 16M        | 59.8u           | 1.185m                   | 1.162m                   | 61.77m             |
| 15    | 2                | 14M        | 58.6u           | 1.732m                   | -                        | 231.3m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_15

Number of Bursts in Trial: 11

Chrip Center Frequency: 5506MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 19M        | 77.8u           | 1.702m                   | -                        | 310.1m             |
| 2     | 2                | 20M        | 79.0u           | 1.397m                   | -                        | 684.1m             |
| 3     | 3                | 12M        | 70.8u           | 1.095m                   | 976.2u                   | 973.8m             |
| 4     | 1                | 12M        | 56.1u           | -                        | -                        | 337.7m             |
| 5     | 1                | 20M        | 78.3u           | -                        | -                        | 680.8m             |
| 6     | 3                | 6M         | 77.2u           | 1.455m                   | 1.122m                   | 212.6m             |
| 7     | 2                | 14M        | 76.4u           | 1.716m                   | -                        | 555.8m             |
| 8     | 2                | 10M        | 91.8u           | 919.2u                   | -                        | 283.6m             |
| 9     | 1                | 8M         | 53.3u           | -                        | -                        | 877.5m             |
| 10    | 2                | 7M         | 56.3u           | 1.572m                   | -                        | 1.007              |
| 11    | 1                | 19M        | 96.8u           | -                        | -                        | 116.8m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_16

Number of Bursts in Trial: 18

Chrip Center Frequency: 5507MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 3                | 8M         | 83.3u           | 1.527m                   | 1.641m                   | 1.265m             |
| 2     | 1                | 8M         | 78.9u           | -                        | -                        | 10.84m             |
| 3     | 2                | 8M         | 50.1u           | 1.575m                   | -                        | 663.5m             |
| 4     | 2                | 11M        | 74.1u           | 1.559m                   | -                        | 298.1m             |
| 5     | 2                | 16M        | 82.3u           | 1.560m                   | -                        | 649.0m             |
| 6     | 1                | 11M        | 90.9u           | -                        | -                        | 655.8m             |
| 7     | 2                | 11M        | 72.0u           | 1.552m                   | -                        | 254.4m             |
| 8     | 3                | 13M        | 66.7u           | 1.069m                   | 1.691m                   | 515.4m             |
| 9     | 2                | 11M        | 75.0u           | 1.252m                   | -                        | 298.1m             |
| 10    | 2                | 9M         | 81.2u           | 1.659m                   | -                        | 61.30m             |
| 11    | 1                | 8M         | 66.5u           | -                        | -                        | 271.9m             |
| 12    | 3                | 16M        | 54.8u           | 1.252m                   | 1.598m                   | 54.63m             |
| 13    | 3                | 12M        | 79.8u           | 1.393m                   | 1.687m                   | 188.8m             |
| 14    | 2                | 12M        | 57.7u           | 1.802m                   | -                        | 352.8m             |
| 15    | 3                | 13M        | 73.6u           | 1.079m                   | 1.597m                   | 15.98m             |
| 16    | 3                | 9M         | 57.5u           | 1.320m                   | 1.182m                   | 116.9m             |
| 17    | 2                | 19M        | 92.7u           | 1.269m                   | -                        | 256.7m             |
| 18    | 1                | 17M        | 78.9u           | -                        | -                        | 76.00m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_17

Number of Bursts in Trial: 16

Chrip Center Frequency: 5508MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 15M        | 73.5u           | -                        | -                        | 469.1m             |
| 2     | 3                | 9M         | 81.1u           | 1.360m                   | 1.585m                   | 266.1m             |
| 3     | 2                | 12M        | 91.5u           | 1.086m                   | -                        | 250.2m             |
| 4     | 3                | 12M        | 59.9u           | 1.153m                   | 1.663m                   | 617.1m             |
| 5     | 2                | 18M        | 68.4u           | 1.502m                   | -                        | 744.8m             |
| 6     | 2                | 19M        | 88.4u           | 1.676m                   | -                        | 639.7m             |
| 7     | 3                | 18M        | 88.0u           | 1.818m                   | 1.247m                   | 274.8m             |
| 8     | 2                | 13M        | 93.1u           | 1.530m                   | -                        | 169.0m             |
| 9     | 2                | 18M        | 84.3u           | 1.069m                   | -                        | 563.1m             |
| 10    | 1                | 18M        | 81.6u           | -                        | -                        | 507.5m             |
| 11    | 2                | 5M         | 86.0u           | 1.869m                   | -                        | 390.2m             |
| 12    | 2                | 15M        | 97.3u           | 1.772m                   | -                        | 273.4m             |
| 13    | 3                | 7M         | 87.5u           | 1.577m                   | 1.666m                   | 413.5m             |
| 14    | 2                | 9M         | 71.3u           | 1.242m                   | -                        | 188.4m             |
| 15    | 1                | 11M        | 80.5u           | -                        | -                        | 420.9m             |
| 16    | 2                | 8M         | 88.0u           | 1.670m                   | -                        | 278.8m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_18

Number of Bursts in Trial: 14

Chrip Center Frequency: 5500MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 19M        | 92.9u           | 1.625m                   | -                        | 217.2m             |
| 2     | 2                | 14M        | 66.1u           | 1.028m                   | -                        | 54.58m             |
| 3     | 1                | 13M        | 68.6u           | -                        | -                        | 792.8m             |
| 4     | 3                | 6M         | 87.9u           | 1.603m                   | 1.633m                   | 727.2m             |
| 5     | 3                | 19M        | 75.2u           | 1.018m                   | 1.898m                   | 650.1m             |
| 6     | 3                | 10M        | 93.0u           | 1.094m                   | 1.800m                   | 623.1m             |
| 7     | 2                | 14M        | 89.8u           | 1.873m                   | -                        | 390.3m             |
| 8     | 2                | 9M         | 56.8u           | 1.857m                   | -                        | 443.5m             |
| 9     | 2                | 10M        | 61.9u           | 1.757m                   | -                        | 119.5m             |
| 10    | 2                | 13M        | 95.9u           | 1.162m                   | -                        | 235.0m             |
| 11    | 2                | 10M        | 70.1u           | 1.542m                   | -                        | 716.2m             |
| 12    | 2                | 10M        | 59.4u           | 1.746m                   | -                        | 144.3m             |
| 13    | 2                | 10M        | 93.6u           | 1.359m                   | -                        | 437.3m             |
| 14    | 2                | 18M        | 95.4u           | 1.387m                   | -                        | 604.2m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_19

Number of Bursts in Trial: 13

Chrip Center Frequency: 5501MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 9M         | 97.5u           | 1.642m                   | -                        | 456.1m             |
| 2     | 2                | 16M        | 82.5u           | 1.782m                   | -                        | 840.1m             |
| 3     | 1                | 7M         | 63.2u           | -                        | -                        | 209.4m             |
| 4     | 2                | 18M        | 70.7u           | 1.365m                   | -                        | 119.8m             |
| 5     | 2                | 18M        | 81.0u           | 1.596m                   | -                        | 834.3m             |
| 6     | 2                | 15M        | 66.1u           | 1.919m                   | -                        | 135.4m             |
| 7     | 1                | 15M        | 80.0u           | -                        | -                        | 489.5m             |
| 8     | 3                | 8M         | 51.0u           | 1.083m                   | 1.184m                   | 233.7m             |
| 9     | 3                | 20M        | 76.2u           | 1.014m                   | 1.922m                   | 36.97m             |
| 10    | 3                | 17M        | 64.7u           | 1.652m                   | 1.514m                   | 830.8m             |
| 11    | 1                | 19M        | 59.1u           | -                        | -                        | 345.8m             |
| 12    | 2                | 16M        | 73.4u           | 1.594m                   | -                        | 776.1m             |
| 13    | 3                | 8M         | 62.1u           | 1.302m                   | 1.157m                   | 566.9m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_20  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 11   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5502MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 13M        | 60.7u           | 1.624m                   | 1.365m                   | 504.3m             |
| 2                               | 1                | 10M        | 80.7u           | -                        | -                        | 509.5m             |
| 3                               | 2                | 14M        | 76.0u           | 1.185m                   | -                        | 755.0m             |
| 4                               | 2                | 18M        | 55.6u           | 1.036m                   | -                        | 909.5m             |
| 5                               | 3                | 16M        | 53.2u           | 995.8u                   | 1.627m                   | 980.1m             |
| 6                               | 3                | 16M        | 64.1u           | 1.569m                   | 1.272m                   | 879.5m             |
| 7                               | 3                | 10M        | 90.0u           | 938.0u                   | 1.816m                   | 596.7m             |
| 8                               | 1                | 8M         | 63.2u           | -                        | -                        | 1.063              |
| 9                               | 3                | 18M        | 97.3u           | 1.185m                   | 1.463m                   | 557.9m             |
| 10                              | 1                | 6M         | 85.6u           | -                        | -                        | 841.8m             |
| 11                              | 2                | 17M        | 72.1u           | 969.9u                   | -                        | 134.4m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_21  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 11   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5503MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 9M         | 97.2u           | 1.226m                   | -                        | 466.9m             |
| 2                               | 2                | 17M        | 91.5u           | 1.148m                   | -                        | 523.5m             |
| 3                               | 3                | 10M        | 65.8u           | 1.888m                   | 1.085m                   | 761.3m             |
| 4                               | 2                | 18M        | 54.4u           | 1.726m                   | -                        | 1.047              |
| 5                               | 2                | 10M        | 50.5u           | 1.332m                   | -                        | 605.4m             |
| 6                               | 1                | 18M        | 85.2u           | -                        | -                        | 690.3m             |
| 7                               | 1                | 20M        | 96.0u           | -                        | -                        | 245.1m             |
| 8                               | 2                | 6M         | 60.3u           | 1.529m                   | -                        | 103.0m             |
| 9                               | 2                | 17M        | 59.7u           | 1.352m                   | -                        | 324.2m             |
| 10                              | 2                | 19M        | 53.6u           | 1.582m                   | -                        | 1.082              |
| 11                              | 2                | 7M         | 98.2u           | 1.661m                   | -                        | 755.5m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_22  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 12   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5499MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 15M        | 62.6u           | 1.187m                   | 1.659m                   | 373.3m             |
| 2                               | 2                | 9M         | 73.6u           | 1.445m                   | -                        | 368.2m             |
| 3                               | 1                | 8M         | 77.8u           | -                        | -                        | 958.1m             |
| 4                               | 2                | 18M        | 78.2u           | 1.456m                   | -                        | 940.0m             |
| 5                               | 1                | 12M        | 58.8u           | -                        | -                        | 876.0m             |
| 6                               | 1                | 15M        | 56.7u           | -                        | -                        | 644.9m             |
| 7                               | 1                | 19M        | 76.1u           | -                        | -                        | 893.6m             |
| 8                               | 2                | 15M        | 95.8u           | 1.042m                   | -                        | 244.5m             |
| 9                               | 3                | 7M         | 67.8u           | 1.416m                   | 1.539m                   | 763.4m             |
| 10                              | 3                | 10M        | 67.7u           | 1.130m                   | 1.363m                   | 78.78m             |
| 11                              | 2                | 9M         | 51.9u           | 1.088m                   | -                        | 293.6m             |
| 12                              | 3                | 13M        | 95.6u           | 941.4u                   | 1.041m                   | 280.0m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_23  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 10   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5498MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 13M        | 96.5u           | 1.004m                   | -                        | 185.7m             |
| 2                               | 3                | 7M         | 56.7u           | 1.158m                   | 1.563m                   | 648.7m             |
| 3                               | 2                | 16M        | 62.6u           | 1.798m                   | -                        | 864.5m             |
| 4                               | 2                | 16M        | 94.2u           | 927.8u                   | -                        | 616.7m             |
| 5                               | 2                | 15M        | 92.2u           | 1.640m                   | -                        | 841.1m             |
| 6                               | 3                | 19M        | 68.7u           | 1.512m                   | 1.801m                   | 667.9m             |
| 7                               | 3                | 15M        | 64.1u           | 984.9u                   | 1.052m                   | 961.9m             |
| 8                               | 2                | 7M         | 62.8u           | 956.2u                   | -                        | 226.8m             |
| 9                               | 3                | 12M        | 71.9u           | 1.774m                   | 1.290m                   | 654.6m             |
| 10                              | 2                | 6M         | 52.3u           | 1.374m                   | -                        | 692.3m             |



| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_24  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 9    |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5497MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 9M         | 59.5u           | 1.541m                   | 1.130m                   | 892.5m             |
| 2                               | 3                | 5M         | 61.0u           | 1.367m                   | 979.0u                   | 591.0m             |
| 3                               | 1                | 14M        | 85.6u           | -                        | -                        | 20.53m             |
| 4                               | 2                | 17M        | 66.5u           | 1.510m                   | -                        | 677.2m             |
| 5                               | 1                | 5M         | 99.6u           | -                        | -                        | 224.7m             |
| 6                               | 2                | 6M         | 92.8u           | 1.292m                   | -                        | 1.249              |
| 7                               | 1                | 13M        | 59.0u           | -                        | -                        | 861.4m             |
| 8                               | 2                | 18M        | 99.9u           | 1.433m                   | -                        | 445.5m             |
| 9                               | 2                | 12M        | 54.9u           | 1.661m                   | -                        | 490.2m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_25  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 14   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5496MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 8M         | 78.5u           | 1.337m                   | -                        | 318.3m             |
| 2                               | 2                | 12M        | 54.2u           | 1.429m                   | -                        | 845.3m             |
| 3                               | 2                | 19M        | 90.7u           | 1.866m                   | -                        | 220.5m             |
| 4                               | 3                | 8M         | 53.6u           | 1.058m                   | 1.224m                   | 477.7m             |
| 5                               | 1                | 10M        | 93.7u           | -                        | -                        | 200.3m             |
| 6                               | 2                | 8M         | 90.2u           | 1.902m                   | -                        | 677.9m             |
| 7                               | 1                | 18M        | 60.7u           | -                        | -                        | 282.8m             |
| 8                               | 2                | 14M        | 52.5u           | 1.018m                   | -                        | 352.5m             |
| 9                               | 2                | 18M        | 74.9u           | 1.899m                   | -                        | 318.6m             |
| 10                              | 1                | 14M        | 63.6u           | -                        | -                        | 545.1m             |
| 11                              | 3                | 16M        | 91.5u           | 1.172m                   | 1.118m                   | 461.6m             |
| 12                              | 1                | 12M        | 97.3u           | -                        | -                        | 57.92m             |
| 13                              | 1                | 16M        | 60.7u           | -                        | -                        | 639.0m             |
| 14                              | 2                | 8M         | 71.5u           | 1.746m                   | -                        | 138.8m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_26

Number of Bursts in Trial: 17

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 10M        | 95.4u           | -                        | -                        | 360.2m             |
| 2     | 2                | 16M        | 96.7u           | 1.141m                   | -                        | 75.96m             |
| 3     | 3                | 17M        | 91.7u           | 968.3u                   | 1.299m                   | 603.6m             |
| 4     | 1                | 5M         | 81.2u           | -                        | -                        | 248.6m             |
| 5     | 2                | 11M        | 82.5u           | 1.723m                   | -                        | 114.2m             |
| 6     | 3                | 8M         | 93.4u           | 1.827m                   | 1.616m                   | 420.9m             |
| 7     | 1                | 18M        | 91.7u           | -                        | -                        | 602.1m             |
| 8     | 2                | 16M        | 91.6u           | 1.337m                   | -                        | 214.6m             |
| 9     | 2                | 17M        | 99.1u           | 1.524m                   | -                        | 103.4m             |
| 10    | 3                | 13M        | 83.3u           | 1.382m                   | 972.7u                   | 83.47m             |
| 11    | 1                | 12M        | 78.8u           | -                        | -                        | 327.7m             |
| 12    | 2                | 12M        | 61.9u           | 1.849m                   | -                        | 232.8m             |
| 13    | 2                | 9M         | 58.4u           | 1.905m                   | -                        | 625.9m             |
| 14    | 1                | 19M        | 97.0u           | -                        | -                        | 665.4m             |
| 15    | 3                | 19M        | 73.7u           | 1.592m                   | 1.864m                   | 475.7m             |
| 16    | 2                | 5M         | 96.2u           | 1.322m                   | -                        | 467.6m             |
| 17    | 2                | 9M         | 83.6u           | 1.433m                   | -                        | 666.3m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_27

Number of Bursts in Trial: 10

Chrip Center Frequency: 5495MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 8M         | 76.7u           | 1.643m                   | -                        | 466.9m             |
| 2     | 3                | 18M        | 50.4u           | 967.6u                   | 1.607m                   | 809.3m             |
| 3     | 3                | 18M        | 62.5u           | 1.825m                   | 1.717m                   | 741.1m             |
| 4     | 2                | 9M         | 90.1u           | 1.625m                   | -                        | 487.0m             |
| 5     | 2                | 17M        | 76.2u           | 1.785m                   | -                        | 552.7m             |
| 6     | 3                | 15M        | 73.8u           | 1.241m                   | 1.206m                   | 524.1m             |
| 7     | 2                | 13M        | 78.3u           | 1.201m                   | -                        | 604.4m             |
| 8     | 2                | 10M        | 63.3u           | 971.7u                   | -                        | 168.4m             |
| 9     | 1                | 10M        | 50.8u           | -                        | -                        | 322.9m             |
| 10    | 3                | 19M        | 68.9u           | 1.033m                   | 1.810m                   | 882.7m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_28

Number of Bursts in Trial: 15

Chrip Center Frequency: 5494MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 11M        | 97.0u           | 1.069m                   | -                        | 568.0m             |
| 2     | 2                | 7M         | 59.0u           | 1.122m                   | -                        | 308.9m             |
| 3     | 3                | 14M        | 53.4u           | 1.233m                   | 1.005m                   | 365.3m             |
| 4     | 2                | 11M        | 95.4u           | 1.845m                   | -                        | 159.9m             |
| 5     | 2                | 12M        | 99.0u           | 1.451m                   | -                        | 748.3m             |
| 6     | 3                | 10M        | 62.0u           | 1.153m                   | 1.596m                   | 209.3m             |
| 7     | 2                | 12M        | 96.1u           | 1.870m                   | -                        | 242.5m             |
| 8     | 3                | 14M        | 59.5u           | 1.243m                   | 1.700m                   | 633.4m             |
| 9     | 1                | 10M        | 65.7u           | -                        | -                        | 781.4m             |
| 10    | 2                | 15M        | 64.5u           | 1.230m                   | -                        | 324.2m             |
| 11    | 1                | 11M        | 69.3u           | -                        | -                        | 291.3m             |
| 12    | 2                | 15M        | 64.5u           | 1.187m                   | -                        | 456.3m             |
| 13    | 2                | 9M         | 81.5u           | 1.022m                   | -                        | 446.0m             |
| 14    | 2                | 14M        | 99.7u           | 910.3u                   | -                        | 784.7m             |
| 15    | 2                | 9M         | 74.4u           | 1.310m                   | -                        | 712.4m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_29

Number of Bursts in Trial: 10

Chrip Center Frequency: 5505MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 18M        | 92.6u           | 1.048m                   | -                        | 278.0m             |
| 2     | 1                | 9M         | 99.1u           | -                        | -                        | 1.111              |
| 3     | 2                | 13M        | 88.0u           | 956.0u                   | -                        | 39.30m             |
| 4     | 1                | 13M        | 52.4u           | -                        | -                        | 826.3m             |
| 5     | 1                | 10M        | 62.6u           | -                        | -                        | 1.076              |
| 6     | 2                | 13M        | 50.8u           | 1.764m                   | -                        | 350.6m             |
| 7     | 3                | 18M        | 69.1u           | 1.008m                   | 1.331m                   | 993.4m             |
| 8     | 3                | 8M         | 91.8u           | 1.881m                   | 1.645m                   | 724.4m             |
| 9     | 3                | 18M        | 71.6u           | 1.471m                   | 1.464m                   | 839.7m             |
| 10    | 3                | 10M        | 57.6u           | 1.899m                   | 1.630m                   | 56.13m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_30

Number of Bursts in Trial: 12

Chrip Center Frequency: 5506MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 6M         | 60.5u           | 980.5u                   | -                        | 51.65m             |
| 2     | 2                | 5M         | 76.1u           | 1.376m                   | -                        | 523.8m             |
| 3     | 2                | 11M        | 83.7u           | 1.713m                   | -                        | 774.2m             |
| 4     | 3                | 8M         | 54.1u           | 1.116m                   | 1.719m                   | 323.7m             |
| 5     | 3                | 14M        | 78.3u           | 1.345m                   | 1.793m                   | 722.4m             |
| 6     | 1                | 5M         | 53.1u           | -                        | -                        | 150.0m             |
| 7     | 1                | 10M        | 67.0u           | -                        | -                        | 720.1m             |
| 8     | 3                | 8M         | 59.1u           | 1.554m                   | 1.878m                   | 369.1m             |
| 9     | 2                | 20M        | 80.1u           | 1.586m                   | -                        | 446.5m             |
| 10    | 1                | 20M        | 69.3u           | -                        | -                        | 490.7m             |
| 11    | 3                | 10M        | 79.9u           | 1.636m                   | 1.365m                   | 1.959m             |
| 12    | 3                | 20M        | 62.9u           | 1.164m                   | 1.856m                   | 509.4m             |

| Type 6 Radar Statistical Performances |                  |                 |         |                         |
|---------------------------------------|------------------|-----------------|---------|-------------------------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Detection               |
| 1                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 2                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 3                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 4                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 5                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 6                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 7                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 8                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 9                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 10                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 11                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 12                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 13                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 14                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 15                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 16                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 17                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 18                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 19                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 20                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 21                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 22                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 23                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 24                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 25                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 26                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 27                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 28                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 29                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 30                                    | 9                | 1.0u            | 333.0u  | Yes                     |
|                                       |                  |                 |         | Detection Rate: 100.0 % |

| Type 6 Radar Statistical Performances |                                 |                         |
|---------------------------------------|---------------------------------|-------------------------|
| Trial #                               | Hopping Frequency Sequence Name | Detection               |
| 1                                     | HOP_FREQ_SEQ_01                 | Yes                     |
| 2                                     | HOP_FREQ_SEQ_02                 | Yes                     |
| 3                                     | HOP_FREQ_SEQ_03                 | Yes                     |
| 4                                     | HOP_FREQ_SEQ_04                 | Yes                     |
| 5                                     | HOP_FREQ_SEQ_05                 | Yes                     |
| 6                                     | HOP_FREQ_SEQ_06                 | Yes                     |
| 7                                     | HOP_FREQ_SEQ_07                 | Yes                     |
| 8                                     | HOP_FREQ_SEQ_08                 | Yes                     |
| 9                                     | HOP_FREQ_SEQ_09                 | Yes                     |
| 10                                    | HOP_FREQ_SEQ_10                 | Yes                     |
| 11                                    | HOP_FREQ_SEQ_11                 | Yes                     |
| 12                                    | HOP_FREQ_SEQ_12                 | Yes                     |
| 13                                    | HOP_FREQ_SEQ_13                 | Yes                     |
| 14                                    | HOP_FREQ_SEQ_14                 | Yes                     |
| 15                                    | HOP_FREQ_SEQ_15                 | Yes                     |
| 16                                    | HOP_FREQ_SEQ_16                 | Yes                     |
| 17                                    | HOP_FREQ_SEQ_17                 | Yes                     |
| 18                                    | HOP_FREQ_SEQ_18                 | Yes                     |
| 19                                    | HOP_FREQ_SEQ_19                 | Yes                     |
| 20                                    | HOP_FREQ_SEQ_20                 | Yes                     |
| 21                                    | HOP_FREQ_SEQ_21                 | Yes                     |
| 22                                    | HOP_FREQ_SEQ_22                 | Yes                     |
| 23                                    | HOP_FREQ_SEQ_23                 | Yes                     |
| 24                                    | HOP_FREQ_SEQ_24                 | Yes                     |
| 25                                    | HOP_FREQ_SEQ_25                 | Yes                     |
| 26                                    | HOP_FREQ_SEQ_26                 | Yes                     |
| 27                                    | HOP_FREQ_SEQ_27                 | Yes                     |
| 28                                    | HOP_FREQ_SEQ_28                 | Yes                     |
| 29                                    | HOP_FREQ_SEQ_29                 | Yes                     |
| 30                                    | HOP_FREQ_SEQ_30                 | Yes                     |
|                                       |                                 | Detection Rate: 100.0 % |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_01 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.594G            | 2    | 5.685G            | 3    | 5.361G            | 4    | 5.582G            |
| 5                                                | 5.699G            | 6    | 5.598G            | 7    | 5.352G            | 8    | 5.301G            |
| 9                                                | 5.658G            | 10   | 5.311G            | 11   | 5.696G            | 12   | 5.278G            |
| 13                                               | 5.529G            | 14   | 5.462G            | 15   | 5.313G            | 16   | 5.655G            |
| 17                                               | 5.523G            | 18   | 5.390G            | 19   | 5.282G            | 20   | 5.273G            |
| 21                                               | 5.339G            | 22   | 5.595G            | 23   | 5.434G            | 24   | 5.300G            |
| 25                                               | 5.351G            | 26   | 5.617G            | 27   | 5.250G            | 28   | 5.436G            |
| 29                                               | 5.605G            | 30   | 5.508G            | 31   | 5.307G            | 32   | 5.636G            |
| 33                                               | 5.294G            | 34   | 5.401G            | 35   | 5.601G            | 36   | 5.460G            |
| 37                                               | 5.587G            | 38   | 5.324G            | 39   | 5.314G            | 40   | 5.349G            |
| 41                                               | 5.654G            | 42   | 5.576G            | 43   | 5.432G            | 44   | 5.413G            |
| 45                                               | 5.538G            | 46   | 5.336G            | 47   | 5.378G            | 48   | 5.702G            |
| 49                                               | 5.542G            | 50   | 5.417G            | 51   | 5.723G            | 52   | 5.374G            |
| 53                                               | 5.535G            | 54   | 5.485G            | 55   | 5.302G            | 56   | 5.635G            |
| 57                                               | 5.384G            | 58   | 5.503G            | 59   | 5.387G            | 60   | 5.575G            |
| 61                                               | 5.465G            | 62   | 5.297G            | 63   | 5.440G            | 64   | 5.602G            |
| 65                                               | 5.691G            | 66   | 5.715G            | 67   | 5.565G            | 68   | 5.579G            |
| 69                                               | 5.698G            | 70   | 5.500G            | 71   | 5.252G            | 72   | 5.649G            |
| 73                                               | 5.272G            | 74   | 5.589G            | 75   | 5.711G            | 76   | 5.712G            |
| 77                                               | 5.359G            | 78   | 5.592G            | 79   | 5.624G            | 80   | 5.671G            |
| 81                                               | 5.545G            | 82   | 5.402G            | 83   | 5.445G            | 84   | 5.514G            |
| 85                                               | 5.549G            | 86   | 5.291G            | 87   | 5.317G            | 88   | 5.299G            |
| 89                                               | 5.501G            | 90   | 5.554G            | 91   | 5.293G            | 92   | 5.285G            |
| 93                                               | 5.546G            | 94   | 5.253G            | 95   | 5.379G            | 96   | 5.551G            |
| 97                                               | 5.350G            | 98   | 5.550G            | 99   | 5.447G            | 100  | 5.358G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_02 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.376G            | 2    | 5.709G            | 3    | 5.610G            | 4    | 5.380G            |
| 5                                                | 5.421G            | 6    | 5.506G            | 7    | 5.294G            | 8    | 5.373G            |
| 9                                                | 5.669G            | 10   | 5.716G            | 11   | 5.589G            | 12   | 5.307G            |
| 13                                               | 5.429G            | 14   | 5.651G            | 15   | 5.275G            | 16   | 5.478G            |
| 17                                               | 5.720G            | 18   | 5.667G            | 19   | 5.272G            | 20   | 5.534G            |
| 21                                               | 5.629G            | 22   | 5.405G            | 23   | 5.447G            | 24   | 5.543G            |
| 25                                               | 5.495G            | 26   | 5.279G            | 27   | 5.719G            | 28   | 5.444G            |
| 29                                               | 5.578G            | 30   | 5.512G            | 31   | 5.408G            | 32   | 5.250G            |
| 33                                               | 5.263G            | 34   | 5.372G            | 35   | 5.295G            | 36   | 5.433G            |
| 37                                               | 5.445G            | 38   | 5.586G            | 39   | 5.609G            | 40   | 5.381G            |
| 41                                               | 5.661G            | 42   | 5.655G            | 43   | 5.469G            | 44   | 5.273G            |
| 45                                               | 5.497G            | 46   | 5.717G            | 47   | 5.356G            | 48   | 5.611G            |
| 49                                               | 5.422G            | 50   | 5.439G            | 51   | 5.620G            | 52   | 5.260G            |
| 53                                               | 5.350G            | 54   | 5.282G            | 55   | 5.666G            | 56   | 5.701G            |
| 57                                               | 5.575G            | 58   | 5.633G            | 59   | 5.472G            | 60   | 5.367G            |
| 61                                               | 5.454G            | 62   | 5.416G            | 63   | 5.508G            | 64   | 5.340G            |
| 65                                               | 5.718G            | 66   | 5.561G            | 67   | 5.283G            | 68   | 5.274G            |
| 69                                               | 5.514G            | 70   | 5.568G            | 71   | 5.361G            | 72   | 5.605G            |
| 73                                               | 5.715G            | 74   | 5.639G            | 75   | 5.576G            | 76   | 5.658G            |
| 77                                               | 5.379G            | 78   | 5.300G            | 79   | 5.482G            | 80   | 5.311G            |
| 81                                               | 5.265G            | 82   | 5.501G            | 83   | 5.523G            | 84   | 5.480G            |
| 85                                               | 5.479G            | 86   | 5.722G            | 87   | 5.335G            | 88   | 5.359G            |
| 89                                               | 5.413G            | 90   | 5.425G            | 91   | 5.516G            | 92   | 5.532G            |
| 93                                               | 5.407G            | 94   | 5.343G            | 95   | 5.419G            | 96   | 5.703G            |
| 97                                               | 5.711G            | 98   | 5.527G            | 99   | 5.695G            | 100  | 5.546G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_03 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.357G            | 2    | 5.382G            | 3    | 5.464G            | 4    | 5.556G            |
| 5                                                | 5.456G            | 6    | 5.458G            | 7    | 5.300G            | 8    | 5.616G            |
| 9                                                | 5.582G            | 10   | 5.499G            | 11   | 5.618G            | 12   | 5.402G            |
| 13                                               | 5.250G            | 14   | 5.684G            | 15   | 5.620G            | 16   | 5.723G            |
| 17                                               | 5.265G            | 18   | 5.379G            | 19   | 5.632G            | 20   | 5.486G            |
| 21                                               | 5.606G            | 22   | 5.496G            | 23   | 5.507G            | 24   | 5.411G            |
| 25                                               | 5.598G            | 26   | 5.435G            | 27   | 5.587G            | 28   | 5.373G            |
| 29                                               | 5.381G            | 30   | 5.344G            | 31   | 5.672G            | 32   | 5.480G            |
| 33                                               | 5.455G            | 34   | 5.296G            | 35   | 5.715G            | 36   | 5.409G            |
| 37                                               | 5.371G            | 38   | 5.539G            | 39   | 5.336G            | 40   | 5.557G            |
| 41                                               | 5.506G            | 42   | 5.254G            | 43   | 5.669G            | 44   | 5.405G            |
| 45                                               | 5.420G            | 46   | 5.714G            | 47   | 5.528G            | 48   | 5.701G            |
| 49                                               | 5.363G            | 50   | 5.626G            | 51   | 5.438G            | 52   | 5.542G            |
| 53                                               | 5.685G            | 54   | 5.568G            | 55   | 5.599G            | 56   | 5.595G            |
| 57                                               | 5.299G            | 58   | 5.580G            | 59   | 5.416G            | 60   | 5.372G            |
| 61                                               | 5.312G            | 62   | 5.629G            | 63   | 5.561G            | 64   | 5.393G            |
| 65                                               | 5.307G            | 66   | 5.313G            | 67   | 5.414G            | 68   | 5.417G            |
| 69                                               | 5.696G            | 70   | 5.719G            | 71   | 5.690G            | 72   | 5.627G            |
| 73                                               | 5.617G            | 74   | 5.636G            | 75   | 5.404G            | 76   | 5.593G            |
| 77                                               | 5.678G            | 78   | 5.399G            | 79   | 5.491G            | 80   | 5.304G            |
| 81                                               | 5.643G            | 82   | 5.608G            | 83   | 5.392G            | 84   | 5.263G            |
| 85                                               | 5.589G            | 86   | 5.466G            | 87   | 5.425G            | 88   | 5.553G            |
| 89                                               | 5.707G            | 90   | 5.453G            | 91   | 5.332G            | 92   | 5.590G            |
| 93                                               | 5.594G            | 94   | 5.272G            | 95   | 5.328G            | 96   | 5.708G            |
| 97                                               | 5.449G            | 98   | 5.298G            | 99   | 5.348G            | 100  | 5.365G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_04 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.665G            | 2    | 5.500G            | 3    | 5.273G            | 4    | 5.495G            |
| 5                                                | 5.656G            | 6    | 5.481G            | 7    | 5.396G            | 8    | 5.355G            |
| 9                                                | 5.567G            | 10   | 5.431G            | 11   | 5.337G            | 12   | 5.473G            |
| 13                                               | 5.504G            | 14   | 5.320G            | 15   | 5.520G            | 16   | 5.685G            |
| 17                                               | 5.574G            | 18   | 5.638G            | 19   | 5.477G            | 20   | 5.306G            |
| 21                                               | 5.357G            | 22   | 5.255G            | 23   | 5.679G            | 24   | 5.258G            |
| 25                                               | 5.720G            | 26   | 5.564G            | 27   | 5.523G            | 28   | 5.696G            |
| 29                                               | 5.445G            | 30   | 5.290G            | 31   | 5.503G            | 32   | 5.681G            |
| 33                                               | 5.310G            | 34   | 5.446G            | 35   | 5.385G            | 36   | 5.551G            |
| 37                                               | 5.578G            | 38   | 5.279G            | 39   | 5.457G            | 40   | 5.430G            |
| 41                                               | 5.484G            | 42   | 5.657G            | 43   | 5.558G            | 44   | 5.518G            |
| 45                                               | 5.709G            | 46   | 5.492G            | 47   | 5.552G            | 48   | 5.597G            |
| 49                                               | 5.710G            | 50   | 5.527G            | 51   | 5.605G            | 52   | 5.266G            |
| 53                                               | 5.331G            | 54   | 5.300G            | 55   | 5.704G            | 56   | 5.667G            |
| 57                                               | 5.405G            | 58   | 5.352G            | 59   | 5.723G            | 60   | 5.269G            |
| 61                                               | 5.475G            | 62   | 5.659G            | 63   | 5.347G            | 64   | 5.555G            |
| 65                                               | 5.458G            | 66   | 5.628G            | 67   | 5.722G            | 68   | 5.646G            |
| 69                                               | 5.630G            | 70   | 5.340G            | 71   | 5.448G            | 72   | 5.391G            |
| 73                                               | 5.435G            | 74   | 5.612G            | 75   | 5.272G            | 76   | 5.314G            |
| 77                                               | 5.327G            | 78   | 5.476G            | 79   | 5.386G            | 80   | 5.381G            |
| 81                                               | 5.617G            | 82   | 5.443G            | 83   | 5.345G            | 84   | 5.607G            |
| 85                                               | 5.631G            | 86   | 5.374G            | 87   | 5.260G            | 88   | 5.261G            |
| 89                                               | 5.714G            | 90   | 5.287G            | 91   | 5.680G            | 92   | 5.451G            |
| 93                                               | 5.541G            | 94   | 5.265G            | 95   | 5.294G            | 96   | 5.399G            |
| 97                                               | 5.377G            | 98   | 5.432G            | 99   | 5.307G            | 100  | 5.707G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_05 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.388G            | 2    | 5.353G            | 3    | 5.492G            | 4    | 5.545G            |
| 5                                                | 5.604G            | 6    | 5.585G            | 7    | 5.355G            | 8    | 5.720G            |
| 9                                                | 5.570G            | 10   | 5.403G            | 11   | 5.454G            | 12   | 5.258G            |
| 13                                               | 5.326G            | 14   | 5.573G            | 15   | 5.342G            | 16   | 5.562G            |
| 17                                               | 5.327G            | 18   | 5.348G            | 19   | 5.634G            | 20   | 5.499G            |
| 21                                               | 5.537G            | 22   | 5.451G            | 23   | 5.554G            | 24   | 5.260G            |
| 25                                               | 5.672G            | 26   | 5.627G            | 27   | 5.300G            | 28   | 5.712G            |
| 29                                               | 5.268G            | 30   | 5.603G            | 31   | 5.558G            | 32   | 5.387G            |
| 33                                               | 5.669G            | 34   | 5.619G            | 35   | 5.701G            | 36   | 5.504G            |
| 37                                               | 5.675G            | 38   | 5.709G            | 39   | 5.394G            | 40   | 5.589G            |
| 41                                               | 5.312G            | 42   | 5.459G            | 43   | 5.686G            | 44   | 5.599G            |
| 45                                               | 5.722G            | 46   | 5.445G            | 47   | 5.255G            | 48   | 5.270G            |
| 49                                               | 5.616G            | 50   | 5.567G            | 51   | 5.252G            | 52   | 5.430G            |
| 53                                               | 5.421G            | 54   | 5.310G            | 55   | 5.593G            | 56   | 5.569G            |
| 57                                               | 5.291G            | 58   | 5.611G            | 59   | 5.439G            | 60   | 5.356G            |
| 61                                               | 5.704G            | 62   | 5.538G            | 63   | 5.346G            | 64   | 5.607G            |
| 65                                               | 5.267G            | 66   | 5.295G            | 67   | 5.651G            | 68   | 5.527G            |
| 69                                               | 5.621G            | 70   | 5.311G            | 71   | 5.695G            | 72   | 5.697G            |
| 73                                               | 5.413G            | 74   | 5.693G            | 75   | 5.340G            | 76   | 5.673G            |
| 77                                               | 5.516G            | 78   | 5.321G            | 79   | 5.706G            | 80   | 5.333G            |
| 81                                               | 5.638G            | 82   | 5.301G            | 83   | 5.515G            | 84   | 5.389G            |
| 85                                               | 5.602G            | 86   | 5.698G            | 87   | 5.415G            | 88   | 5.369G            |
| 89                                               | 5.436G            | 90   | 5.711G            | 91   | 5.262G            | 92   | 5.650G            |
| 93                                               | 5.450G            | 94   | 5.419G            | 95   | 5.580G            | 96   | 5.282G            |
| 97                                               | 5.305G            | 98   | 5.618G            | 99   | 5.399G            | 100  | 5.581G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_06 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.501G            | 2    | 5.702G            | 3    | 5.543G            | 4    | 5.629G            |
| 5                                                | 5.576G            | 6    | 5.687G            | 7    | 5.402G            | 8    | 5.504G            |
| 9                                                | 5.487G            | 10   | 5.293G            | 11   | 5.266G            | 12   | 5.562G            |
| 13                                               | 5.276G            | 14   | 5.282G            | 15   | 5.531G            | 16   | 5.535G            |
| 17                                               | 5.649G            | 18   | 5.361G            | 19   | 5.430G            | 20   | 5.529G            |
| 21                                               | 5.485G            | 22   | 5.523G            | 23   | 5.723G            | 24   | 5.471G            |
| 25                                               | 5.719G            | 26   | 5.253G            | 27   | 5.257G            | 28   | 5.414G            |
| 29                                               | 5.601G            | 30   | 5.621G            | 31   | 5.579G            | 32   | 5.600G            |
| 33                                               | 5.708G            | 34   | 5.469G            | 35   | 5.566G            | 36   | 5.552G            |
| 37                                               | 5.653G            | 38   | 5.612G            | 39   | 5.306G            | 40   | 5.557G            |
| 41                                               | 5.550G            | 42   | 5.321G            | 43   | 5.682G            | 44   | 5.415G            |
| 45                                               | 5.305G            | 46   | 5.505G            | 47   | 5.701G            | 48   | 5.433G            |
| 49                                               | 5.657G            | 50   | 5.404G            | 51   | 5.551G            | 52   | 5.545G            |
| 53                                               | 5.264G            | 54   | 5.339G            | 55   | 5.685G            | 56   | 5.442G            |
| 57                                               | 5.399G            | 58   | 5.636G            | 59   | 5.556G            | 60   | 5.525G            |
| 61                                               | 5.381G            | 62   | 5.666G            | 63   | 5.420G            | 64   | 5.389G            |
| 65                                               | 5.628G            | 66   | 5.397G            | 67   | 5.617G            | 68   | 5.400G            |
| 69                                               | 5.313G            | 70   | 5.391G            | 71   | 5.440G            | 72   | 5.615G            |
| 73                                               | 5.474G            | 74   | 5.307G            | 75   | 5.463G            | 76   | 5.611G            |
| 77                                               | 5.398G            | 78   | 5.340G            | 79   | 5.534G            | 80   | 5.330G            |
| 81                                               | 5.546G            | 82   | 5.284G            | 83   | 5.537G            | 84   | 5.625G            |
| 85                                               | 5.296G            | 86   | 5.259G            | 87   | 5.299G            | 88   | 5.401G            |
| 89                                               | 5.382G            | 90   | 5.547G            | 91   | 5.492G            | 92   | 5.518G            |
| 93                                               | 5.443G            | 94   | 5.376G            | 95   | 5.457G            | 96   | 5.473G            |
| 97                                               | 5.470G            | 98   | 5.539G            | 99   | 5.603G            | 100  | 5.290G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_07 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.471G            | 2    | 5.572G            | 3    | 5.333G            | 4    | 5.307G            |
| 5                                                | 5.392G            | 6    | 5.555G            | 7    | 5.469G            | 8    | 5.531G            |
| 9                                                | 5.523G            | 10   | 5.339G            | 11   | 5.686G            | 12   | 5.538G            |
| 13                                               | 5.512G            | 14   | 5.520G            | 15   | 5.713G            | 16   | 5.621G            |
| 17                                               | 5.660G            | 18   | 5.434G            | 19   | 5.613G            | 20   | 5.430G            |
| 21                                               | 5.387G            | 22   | 5.589G            | 23   | 5.273G            | 24   | 5.385G            |
| 25                                               | 5.299G            | 26   | 5.619G            | 27   | 5.458G            | 28   | 5.563G            |
| 29                                               | 5.679G            | 30   | 5.446G            | 31   | 5.399G            | 32   | 5.321G            |
| 33                                               | 5.297G            | 34   | 5.647G            | 35   | 5.432G            | 36   | 5.668G            |
| 37                                               | 5.271G            | 38   | 5.503G            | 39   | 5.353G            | 40   | 5.290G            |
| 41                                               | 5.376G            | 42   | 5.326G            | 43   | 5.500G            | 44   | 5.675G            |
| 45                                               | 5.316G            | 46   | 5.580G            | 47   | 5.501G            | 48   | 5.677G            |
| 49                                               | 5.554G            | 50   | 5.415G            | 51   | 5.709G            | 52   | 5.498G            |
| 53                                               | 5.528G            | 54   | 5.288G            | 55   | 5.449G            | 56   | 5.630G            |
| 57                                               | 5.417G            | 58   | 5.536G            | 59   | 5.255G            | 60   | 5.639G            |
| 61                                               | 5.669G            | 62   | 5.482G            | 63   | 5.324G            | 64   | 5.591G            |
| 65                                               | 5.452G            | 66   | 5.502G            | 67   | 5.567G            | 68   | 5.542G            |
| 69                                               | 5.251G            | 70   | 5.718G            | 71   | 5.436G            | 72   | 5.695G            |
| 73                                               | 5.348G            | 74   | 5.525G            | 75   | 5.358G            | 76   | 5.466G            |
| 77                                               | 5.470G            | 78   | 5.712G            | 79   | 5.314G            | 80   | 5.394G            |
| 81                                               | 5.263G            | 82   | 5.391G            | 83   | 5.625G            | 84   | 5.483G            |
| 85                                               | 5.666G            | 86   | 5.537G            | 87   | 5.517G            | 88   | 5.653G            |
| 89                                               | 5.429G            | 90   | 5.305G            | 91   | 5.607G            | 92   | 5.298G            |
| 93                                               | 5.284G            | 94   | 5.687G            | 95   | 5.426G            | 96   | 5.623G            |
| 97                                               | 5.453G            | 98   | 5.388G            | 99   | 5.673G            | 100  | 5.608G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_08 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.673G            | 2    | 5.401G            | 3    | 5.697G            | 4    | 5.716G            |
| 5                                                | 5.619G            | 6    | 5.251G            | 7    | 5.708G            | 8    | 5.499G            |
| 9                                                | 5.294G            | 10   | 5.565G            | 11   | 5.300G            | 12   | 5.593G            |
| 13                                               | 5.567G            | 14   | 5.549G            | 15   | 5.581G            | 16   | 5.598G            |
| 17                                               | 5.364G            | 18   | 5.571G            | 19   | 5.720G            | 20   | 5.589G            |
| 21                                               | 5.486G            | 22   | 5.534G            | 23   | 5.301G            | 24   | 5.569G            |
| 25                                               | 5.487G            | 26   | 5.652G            | 27   | 5.703G            | 28   | 5.586G            |
| 29                                               | 5.426G            | 30   | 5.509G            | 31   | 5.514G            | 32   | 5.525G            |
| 33                                               | 5.590G            | 34   | 5.453G            | 35   | 5.513G            | 36   | 5.685G            |
| 37                                               | 5.398G            | 38   | 5.602G            | 39   | 5.632G            | 40   | 5.377G            |
| 41                                               | 5.459G            | 42   | 5.664G            | 43   | 5.686G            | 44   | 5.408G            |
| 45                                               | 5.292G            | 46   | 5.307G            | 47   | 5.706G            | 48   | 5.387G            |
| 49                                               | 5.696G            | 50   | 5.298G            | 51   | 5.717G            | 52   | 5.721G            |
| 53                                               | 5.478G            | 54   | 5.381G            | 55   | 5.563G            | 56   | 5.468G            |
| 57                                               | 5.416G            | 58   | 5.325G            | 59   | 5.382G            | 60   | 5.680G            |
| 61                                               | 5.670G            | 62   | 5.681G            | 63   | 5.545G            | 64   | 5.316G            |
| 65                                               | 5.639G            | 66   | 5.614G            | 67   | 5.512G            | 68   | 5.419G            |
| 69                                               | 5.272G            | 70   | 5.302G            | 71   | 5.331G            | 72   | 5.659G            |
| 73                                               | 5.679G            | 74   | 5.526G            | 75   | 5.592G            | 76   | 5.576G            |
| 77                                               | 5.719G            | 78   | 5.397G            | 79   | 5.653G            | 80   | 5.551G            |
| 81                                               | 5.395G            | 82   | 5.353G            | 83   | 5.498G            | 84   | 5.405G            |
| 85                                               | 5.692G            | 86   | 5.374G            | 87   | 5.368G            | 88   | 5.434G            |
| 89                                               | 5.492G            | 90   | 5.271G            | 91   | 5.601G            | 92   | 5.273G            |
| 93                                               | 5.475G            | 94   | 5.322G            | 95   | 5.612G            | 96   | 5.350G            |
| 97                                               | 5.362G            | 98   | 5.517G            | 99   | 5.683G            | 100  | 5.712G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_09 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.263G            | 2    | 5.355G            | 3    | 5.702G            | 4    | 5.382G            |
| 5                                                | 5.577G            | 6    | 5.648G            | 7    | 5.265G            | 8    | 5.516G            |
| 9                                                | 5.491G            | 10   | 5.566G            | 11   | 5.692G            | 12   | 5.363G            |
| 13                                               | 5.319G            | 14   | 5.469G            | 15   | 5.448G            | 16   | 5.507G            |
| 17                                               | 5.414G            | 18   | 5.708G            | 19   | 5.348G            | 20   | 5.644G            |
| 21                                               | 5.620G            | 22   | 5.449G            | 23   | 5.314G            | 24   | 5.674G            |
| 25                                               | 5.597G            | 26   | 5.723G            | 27   | 5.389G            | 28   | 5.509G            |
| 29                                               | 5.353G            | 30   | 5.317G            | 31   | 5.675G            | 32   | 5.392G            |
| 33                                               | 5.574G            | 34   | 5.568G            | 35   | 5.352G            | 36   | 5.659G            |
| 37                                               | 5.250G            | 38   | 5.408G            | 39   | 5.704G            | 40   | 5.681G            |
| 41                                               | 5.256G            | 42   | 5.388G            | 43   | 5.718G            | 44   | 5.466G            |
| 45                                               | 5.661G            | 46   | 5.270G            | 47   | 5.432G            | 48   | 5.683G            |
| 49                                               | 5.299G            | 50   | 5.627G            | 51   | 5.506G            | 52   | 5.343G            |
| 53                                               | 5.486G            | 54   | 5.366G            | 55   | 5.385G            | 56   | 5.406G            |
| 57                                               | 5.713G            | 58   | 5.709G            | 59   | 5.641G            | 60   | 5.714G            |
| 61                                               | 5.647G            | 62   | 5.460G            | 63   | 5.360G            | 64   | 5.544G            |
| 65                                               | 5.259G            | 66   | 5.722G            | 67   | 5.273G            | 68   | 5.457G            |
| 69                                               | 5.344G            | 70   | 5.303G            | 71   | 5.576G            | 72   | 5.498G            |
| 73                                               | 5.422G            | 74   | 5.439G            | 75   | 5.587G            | 76   | 5.454G            |
| 77                                               | 5.435G            | 78   | 5.676G            | 79   | 5.415G            | 80   | 5.285G            |
| 81                                               | 5.578G            | 82   | 5.545G            | 83   | 5.412G            | 84   | 5.624G            |
| 85                                               | 5.417G            | 86   | 5.530G            | 87   | 5.667G            | 88   | 5.338G            |
| 89                                               | 5.612G            | 90   | 5.266G            | 91   | 5.337G            | 92   | 5.476G            |
| 93                                               | 5.588G            | 94   | 5.690G            | 95   | 5.345G            | 96   | 5.482G            |
| 97                                               | 5.444G            | 98   | 5.295G            | 99   | 5.419G            | 100  | 5.426G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_10 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.302G            | 2    | 5.691G            | 3    | 5.421G            | 4    | 5.695G            |
| 5                                                | 5.673G            | 6    | 5.539G            | 7    | 5.484G            | 8    | 5.367G            |
| 9                                                | 5.665G            | 10   | 5.344G            | 11   | 5.590G            | 12   | 5.321G            |
| 13                                               | 5.305G            | 14   | 5.292G            | 15   | 5.576G            | 16   | 5.718G            |
| 17                                               | 5.328G            | 18   | 5.573G            | 19   | 5.361G            | 20   | 5.331G            |
| 21                                               | 5.708G            | 22   | 5.516G            | 23   | 5.338G            | 24   | 5.629G            |
| 25                                               | 5.680G            | 26   | 5.415G            | 27   | 5.351G            | 28   | 5.264G            |
| 29                                               | 5.528G            | 30   | 5.488G            | 31   | 5.561G            | 32   | 5.541G            |
| 33                                               | 5.563G            | 34   | 5.723G            | 35   | 5.411G            | 36   | 5.591G            |
| 37                                               | 5.621G            | 38   | 5.668G            | 39   | 5.659G            | 40   | 5.623G            |
| 41                                               | 5.323G            | 42   | 5.373G            | 43   | 5.630G            | 44   | 5.538G            |
| 45                                               | 5.717G            | 46   | 5.453G            | 47   | 5.451G            | 48   | 5.520G            |
| 49                                               | 5.505G            | 50   | 5.575G            | 51   | 5.641G            | 52   | 5.554G            |
| 53                                               | 5.587G            | 54   | 5.669G            | 55   | 5.314G            | 56   | 5.420G            |
| 57                                               | 5.645G            | 58   | 5.459G            | 59   | 5.664G            | 60   | 5.329G            |
| 61                                               | 5.567G            | 62   | 5.464G            | 63   | 5.359G            | 64   | 5.706G            |
| 65                                               | 5.596G            | 66   | 5.434G            | 67   | 5.482G            | 68   | 5.313G            |
| 69                                               | 5.676G            | 70   | 5.529G            | 71   | 5.369G            | 72   | 5.504G            |
| 73                                               | 5.388G            | 74   | 5.315G            | 75   | 5.435G            | 76   | 5.483G            |
| 77                                               | 5.282G            | 78   | 5.704G            | 79   | 5.337G            | 80   | 5.307G            |
| 81                                               | 5.465G            | 82   | 5.412G            | 83   | 5.477G            | 84   | 5.372G            |
| 85                                               | 5.447G            | 86   | 5.322G            | 87   | 5.617G            | 88   | 5.707G            |
| 89                                               | 5.506G            | 90   | 5.310G            | 91   | 5.517G            | 92   | 5.527G            |
| 93                                               | 5.526G            | 94   | 5.425G            | 95   | 5.709G            | 96   | 5.386G            |
| 97                                               | 5.540G            | 98   | 5.259G            | 99   | 5.558G            | 100  | 5.345G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_11 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.654G            | 2    | 5.398G            | 3    | 5.470G            | 4    | 5.660G            |
| 5                                                | 5.519G            | 6    | 5.321G            | 7    | 5.527G            | 8    | 5.513G            |
| 9                                                | 5.293G            | 10   | 5.600G            | 11   | 5.440G            | 12   | 5.302G            |
| 13                                               | 5.363G            | 14   | 5.491G            | 15   | 5.637G            | 16   | 5.450G            |
| 17                                               | 5.457G            | 18   | 5.683G            | 19   | 5.390G            | 20   | 5.535G            |
| 21                                               | 5.388G            | 22   | 5.546G            | 23   | 5.472G            | 24   | 5.534G            |
| 25                                               | 5.386G            | 26   | 5.595G            | 27   | 5.543G            | 28   | 5.394G            |
| 29                                               | 5.471G            | 30   | 5.320G            | 31   | 5.634G            | 32   | 5.458G            |
| 33                                               | 5.719G            | 34   | 5.566G            | 35   | 5.407G            | 36   | 5.677G            |
| 37                                               | 5.565G            | 38   | 5.524G            | 39   | 5.716G            | 40   | 5.681G            |
| 41                                               | 5.718G            | 42   | 5.486G            | 43   | 5.496G            | 44   | 5.709G            |
| 45                                               | 5.481G            | 46   | 5.482G            | 47   | 5.655G            | 48   | 5.572G            |
| 49                                               | 5.377G            | 50   | 5.704G            | 51   | 5.373G            | 52   | 5.528G            |
| 53                                               | 5.706G            | 54   | 5.666G            | 55   | 5.622G            | 56   | 5.614G            |
| 57                                               | 5.627G            | 58   | 5.349G            | 59   | 5.515G            | 60   | 5.422G            |
| 61                                               | 5.501G            | 62   | 5.617G            | 63   | 5.253G            | 64   | 5.281G            |
| 65                                               | 5.287G            | 66   | 5.526G            | 67   | 5.542G            | 68   | 5.673G            |
| 69                                               | 5.261G            | 70   | 5.498G            | 71   | 5.435G            | 72   | 5.480G            |
| 73                                               | 5.705G            | 74   | 5.668G            | 75   | 5.618G            | 76   | 5.536G            |
| 77                                               | 5.484G            | 78   | 5.529G            | 79   | 5.343G            | 80   | 5.374G            |
| 81                                               | 5.339G            | 82   | 5.552G            | 83   | 5.478G            | 84   | 5.475G            |
| 85                                               | 5.446G            | 86   | 5.329G            | 87   | 5.620G            | 88   | 5.447G            |
| 89                                               | 5.341G            | 90   | 5.304G            | 91   | 5.588G            | 92   | 5.591G            |
| 93                                               | 5.477G            | 94   | 5.664G            | 95   | 5.334G            | 96   | 5.357G            |
| 97                                               | 5.667G            | 98   | 5.579G            | 99   | 5.506G            | 100  | 5.412G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_12 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.675G            | 2    | 5.480G            | 3    | 5.267G            | 4    | 5.630G            |
| 5                                                | 5.596G            | 6    | 5.633G            | 7    | 5.253G            | 8    | 5.317G            |
| 9                                                | 5.273G            | 10   | 5.362G            | 11   | 5.522G            | 12   | 5.594G            |
| 13                                               | 5.642G            | 14   | 5.547G            | 15   | 5.503G            | 16   | 5.672G            |
| 17                                               | 5.449G            | 18   | 5.316G            | 19   | 5.569G            | 20   | 5.555G            |
| 21                                               | 5.498G            | 22   | 5.710G            | 23   | 5.722G            | 24   | 5.682G            |
| 25                                               | 5.308G            | 26   | 5.598G            | 27   | 5.276G            | 28   | 5.495G            |
| 29                                               | 5.493G            | 30   | 5.593G            | 31   | 5.643G            | 32   | 5.377G            |
| 33                                               | 5.670G            | 34   | 5.294G            | 35   | 5.369G            | 36   | 5.714G            |
| 37                                               | 5.516G            | 38   | 5.648G            | 39   | 5.357G            | 40   | 5.621G            |
| 41                                               | 5.264G            | 42   | 5.261G            | 43   | 5.504G            | 44   | 5.392G            |
| 45                                               | 5.295G            | 46   | 5.334G            | 47   | 5.439G            | 48   | 5.305G            |
| 49                                               | 5.581G            | 50   | 5.624G            | 51   | 5.272G            | 52   | 5.297G            |
| 53                                               | 5.488G            | 54   | 5.629G            | 55   | 5.304G            | 56   | 5.368G            |
| 57                                               | 5.391G            | 58   | 5.379G            | 59   | 5.274G            | 60   | 5.263G            |
| 61                                               | 5.687G            | 62   | 5.285G            | 63   | 5.639G            | 64   | 5.347G            |
| 65                                               | 5.640G            | 66   | 5.579G            | 67   | 5.278G            | 68   | 5.705G            |
| 69                                               | 5.491G            | 70   | 5.250G            | 71   | 5.592G            | 72   | 5.344G            |
| 73                                               | 5.560G            | 74   | 5.321G            | 75   | 5.646G            | 76   | 5.563G            |
| 77                                               | 5.339G            | 78   | 5.453G            | 79   | 5.677G            | 80   | 5.507G            |
| 81                                               | 5.605G            | 82   | 5.617G            | 83   | 5.389G            | 84   | 5.462G            |
| 85                                               | 5.378G            | 86   | 5.390G            | 87   | 5.583G            | 88   | 5.469G            |
| 89                                               | 5.338G            | 90   | 5.568G            | 91   | 5.448G            | 92   | 5.329G            |
| 93                                               | 5.388G            | 94   | 5.380G            | 95   | 5.564G            | 96   | 5.418G            |
| 97                                               | 5.668G            | 98   | 5.303G            | 99   | 5.693G            | 100  | 5.404G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_13 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.553G            | 2    | 5.630G            | 3    | 5.296G            | 4    | 5.685G            |
| 5                                                | 5.719G            | 6    | 5.441G            | 7    | 5.582G            | 8    | 5.386G            |
| 9                                                | 5.563G            | 10   | 5.689G            | 11   | 5.663G            | 12   | 5.610G            |
| 13                                               | 5.456G            | 14   | 5.352G            | 15   | 5.524G            | 16   | 5.586G            |
| 17                                               | 5.435G            | 18   | 5.270G            | 19   | 5.353G            | 20   | 5.534G            |
| 21                                               | 5.575G            | 22   | 5.470G            | 23   | 5.465G            | 24   | 5.671G            |
| 25                                               | 5.278G            | 26   | 5.604G            | 27   | 5.406G            | 28   | 5.475G            |
| 29                                               | 5.652G            | 30   | 5.550G            | 31   | 5.381G            | 32   | 5.443G            |
| 33                                               | 5.531G            | 34   | 5.307G            | 35   | 5.411G            | 36   | 5.634G            |
| 37                                               | 5.412G            | 38   | 5.568G            | 39   | 5.709G            | 40   | 5.626G            |
| 41                                               | 5.339G            | 42   | 5.621G            | 43   | 5.469G            | 44   | 5.327G            |
| 45                                               | 5.560G            | 46   | 5.501G            | 47   | 5.362G            | 48   | 5.314G            |
| 49                                               | 5.640G            | 50   | 5.667G            | 51   | 5.650G            | 52   | 5.710G            |
| 53                                               | 5.287G            | 54   | 5.544G            | 55   | 5.500G            | 56   | 5.617G            |
| 57                                               | 5.419G            | 58   | 5.334G            | 59   | 5.683G            | 60   | 5.533G            |
| 61                                               | 5.678G            | 62   | 5.447G            | 63   | 5.497G            | 64   | 5.715G            |
| 65                                               | 5.397G            | 66   | 5.356G            | 67   | 5.450G            | 68   | 5.658G            |
| 69                                               | 5.257G            | 70   | 5.618G            | 71   | 5.635G            | 72   | 5.696G            |
| 73                                               | 5.448G            | 74   | 5.371G            | 75   | 5.514G            | 76   | 5.579G            |
| 77                                               | 5.496G            | 78   | 5.439G            | 79   | 5.330G            | 80   | 5.250G            |
| 81                                               | 5.698G            | 82   | 5.482G            | 83   | 5.651G            | 84   | 5.564G            |
| 85                                               | 5.429G            | 86   | 5.494G            | 87   | 5.616G            | 88   | 5.676G            |
| 89                                               | 5.251G            | 90   | 5.253G            | 91   | 5.272G            | 92   | 5.644G            |
| 93                                               | 5.393G            | 94   | 5.628G            | 95   | 5.313G            | 96   | 5.665G            |
| 97                                               | 5.446G            | 98   | 5.624G            | 99   | 5.389G            | 100  | 5.484G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_14 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.580G            | 2    | 5.447G            | 3    | 5.392G            | 4    | 5.691G            |
| 5                                                | 5.576G            | 6    | 5.444G            | 7    | 5.397G            | 8    | 5.477G            |
| 9                                                | 5.296G            | 10   | 5.288G            | 11   | 5.323G            | 12   | 5.608G            |
| 13                                               | 5.325G            | 14   | 5.313G            | 15   | 5.307G            | 16   | 5.350G            |
| 17                                               | 5.345G            | 18   | 5.396G            | 19   | 5.367G            | 20   | 5.648G            |
| 21                                               | 5.717G            | 22   | 5.577G            | 23   | 5.373G            | 24   | 5.401G            |
| 25                                               | 5.537G            | 26   | 5.438G            | 27   | 5.375G            | 28   | 5.689G            |
| 29                                               | 5.501G            | 30   | 5.498G            | 31   | 5.380G            | 32   | 5.439G            |
| 33                                               | 5.340G            | 34   | 5.645G            | 35   | 5.348G            | 36   | 5.636G            |
| 37                                               | 5.533G            | 38   | 5.437G            | 39   | 5.329G            | 40   | 5.291G            |
| 41                                               | 5.363G            | 42   | 5.278G            | 43   | 5.298G            | 44   | 5.255G            |
| 45                                               | 5.667G            | 46   | 5.379G            | 47   | 5.626G            | 48   | 5.354G            |
| 49                                               | 5.374G            | 50   | 5.364G            | 51   | 5.299G            | 52   | 5.552G            |
| 53                                               | 5.609G            | 54   | 5.459G            | 55   | 5.508G            | 56   | 5.516G            |
| 57                                               | 5.641G            | 58   | 5.446G            | 59   | 5.661G            | 60   | 5.700G            |
| 61                                               | 5.633G            | 62   | 5.346G            | 63   | 5.337G            | 64   | 5.642G            |
| 65                                               | 5.388G            | 66   | 5.265G            | 67   | 5.586G            | 68   | 5.435G            |
| 69                                               | 5.318G            | 70   | 5.674G            | 71   | 5.623G            | 72   | 5.594G            |
| 73                                               | 5.272G            | 74   | 5.680G            | 75   | 5.565G            | 76   | 5.721G            |
| 77                                               | 5.341G            | 78   | 5.338G            | 79   | 5.562G            | 80   | 5.409G            |
| 81                                               | 5.614G            | 82   | 5.369G            | 83   | 5.475G            | 84   | 5.544G            |
| 85                                               | 5.649G            | 86   | 5.411G            | 87   | 5.327G            | 88   | 5.651G            |
| 89                                               | 5.500G            | 90   | 5.520G            | 91   | 5.257G            | 92   | 5.551G            |
| 93                                               | 5.583G            | 94   | 5.424G            | 95   | 5.541G            | 96   | 5.723G            |
| 97                                               | 5.601G            | 98   | 5.322G            | 99   | 5.620G            | 100  | 5.557G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_15 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.634G            | 2    | 5.567G            | 3    | 5.338G            | 4    | 5.557G            |
| 5                                                | 5.457G            | 6    | 5.390G            | 7    | 5.337G            | 8    | 5.443G            |
| 9                                                | 5.667G            | 10   | 5.418G            | 11   | 5.452G            | 12   | 5.349G            |
| 13                                               | 5.485G            | 14   | 5.437G            | 15   | 5.287G            | 16   | 5.377G            |
| 17                                               | 5.324G            | 18   | 5.583G            | 19   | 5.306G            | 20   | 5.578G            |
| 21                                               | 5.712G            | 22   | 5.684G            | 23   | 5.588G            | 24   | 5.343G            |
| 25                                               | 5.267G            | 26   | 5.657G            | 27   | 5.651G            | 28   | 5.496G            |
| 29                                               | 5.478G            | 30   | 5.671G            | 31   | 5.367G            | 32   | 5.462G            |
| 33                                               | 5.609G            | 34   | 5.624G            | 35   | 5.255G            | 36   | 5.332G            |
| 37                                               | 5.399G            | 38   | 5.703G            | 39   | 5.385G            | 40   | 5.545G            |
| 41                                               | 5.436G            | 42   | 5.266G            | 43   | 5.469G            | 44   | 5.560G            |
| 45                                               | 5.273G            | 46   | 5.431G            | 47   | 5.401G            | 48   | 5.600G            |
| 49                                               | 5.364G            | 50   | 5.687G            | 51   | 5.561G            | 52   | 5.625G            |
| 53                                               | 5.284G            | 54   | 5.468G            | 55   | 5.422G            | 56   | 5.376G            |
| 57                                               | 5.497G            | 58   | 5.615G            | 59   | 5.659G            | 60   | 5.523G            |
| 61                                               | 5.341G            | 62   | 5.455G            | 63   | 5.409G            | 64   | 5.479G            |
| 65                                               | 5.481G            | 66   | 5.498G            | 67   | 5.280G            | 68   | 5.704G            |
| 69                                               | 5.713G            | 70   | 5.470G            | 71   | 5.366G            | 72   | 5.356G            |
| 73                                               | 5.416G            | 74   | 5.607G            | 75   | 5.256G            | 76   | 5.454G            |
| 77                                               | 5.275G            | 78   | 5.420G            | 79   | 5.421G            | 80   | 5.627G            |
| 81                                               | 5.714G            | 82   | 5.542G            | 83   | 5.281G            | 84   | 5.289G            |
| 85                                               | 5.359G            | 86   | 5.311G            | 87   | 5.573G            | 88   | 5.645G            |
| 89                                               | 5.623G            | 90   | 5.690G            | 91   | 5.296G            | 92   | 5.465G            |
| 93                                               | 5.373G            | 94   | 5.509G            | 95   | 5.369G            | 96   | 5.282G            |
| 97                                               | 5.372G            | 98   | 5.348G            | 99   | 5.547G            | 100  | 5.681G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_16 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.301G            | 2    | 5.473G            | 3    | 5.670G            | 4    | 5.364G            |
| 5                                                | 5.667G            | 6    | 5.471G            | 7    | 5.477G            | 8    | 5.508G            |
| 9                                                | 5.556G            | 10   | 5.320G            | 11   | 5.359G            | 12   | 5.558G            |
| 13                                               | 5.314G            | 14   | 5.581G            | 15   | 5.624G            | 16   | 5.656G            |
| 17                                               | 5.446G            | 18   | 5.502G            | 19   | 5.303G            | 20   | 5.361G            |
| 21                                               | 5.655G            | 22   | 5.485G            | 23   | 5.531G            | 24   | 5.406G            |
| 25                                               | 5.719G            | 26   | 5.565G            | 27   | 5.421G            | 28   | 5.657G            |
| 29                                               | 5.677G            | 30   | 5.307G            | 31   | 5.313G            | 32   | 5.537G            |
| 33                                               | 5.648G            | 34   | 5.542G            | 35   | 5.724G            | 36   | 5.689G            |
| 37                                               | 5.264G            | 38   | 5.611G            | 39   | 5.343G            | 40   | 5.405G            |
| 41                                               | 5.649G            | 42   | 5.414G            | 43   | 5.682G            | 44   | 5.325G            |
| 45                                               | 5.341G            | 46   | 5.296G            | 47   | 5.390G            | 48   | 5.614G            |
| 49                                               | 5.260G            | 50   | 5.567G            | 51   | 5.294G            | 52   | 5.444G            |
| 53                                               | 5.384G            | 54   | 5.275G            | 55   | 5.606G            | 56   | 5.460G            |
| 57                                               | 5.457G            | 58   | 5.373G            | 59   | 5.277G            | 60   | 5.713G            |
| 61                                               | 5.284G            | 62   | 5.602G            | 63   | 5.413G            | 64   | 5.478G            |
| 65                                               | 5.647G            | 66   | 5.544G            | 67   | 5.660G            | 68   | 5.626G            |
| 69                                               | 5.609G            | 70   | 5.439G            | 71   | 5.548G            | 72   | 5.358G            |
| 73                                               | 5.585G            | 74   | 5.643G            | 75   | 5.319G            | 76   | 5.597G            |
| 77                                               | 5.526G            | 78   | 5.554G            | 79   | 5.372G            | 80   | 5.493G            |
| 81                                               | 5.271G            | 82   | 5.340G            | 83   | 5.286G            | 84   | 5.506G            |
| 85                                               | 5.367G            | 86   | 5.662G            | 87   | 5.678G            | 88   | 5.467G            |
| 89                                               | 5.309G            | 90   | 5.424G            | 91   | 5.536G            | 92   | 5.632G            |
| 93                                               | 5.703G            | 94   | 5.386G            | 95   | 5.651G            | 96   | 5.570G            |
| 97                                               | 5.716G            | 98   | 5.253G            | 99   | 5.644G            | 100  | 5.491G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_17 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.291G            | 2    | 5.604G            | 3    | 5.711G            | 4    | 5.721G            |
| 5                                                | 5.310G            | 6    | 5.283G            | 7    | 5.413G            | 8    | 5.623G            |
| 9                                                | 5.595G            | 10   | 5.570G            | 11   | 5.603G            | 12   | 5.338G            |
| 13                                               | 5.416G            | 14   | 5.439G            | 15   | 5.432G            | 16   | 5.523G            |
| 17                                               | 5.428G            | 18   | 5.468G            | 19   | 5.334G            | 20   | 5.656G            |
| 21                                               | 5.387G            | 22   | 5.611G            | 23   | 5.608G            | 24   | 5.385G            |
| 25                                               | 5.687G            | 26   | 5.363G            | 27   | 5.622G            | 28   | 5.682G            |
| 29                                               | 5.503G            | 30   | 5.696G            | 31   | 5.565G            | 32   | 5.336G            |
| 33                                               | 5.449G            | 34   | 5.321G            | 35   | 5.396G            | 36   | 5.300G            |
| 37                                               | 5.620G            | 38   | 5.599G            | 39   | 5.456G            | 40   | 5.673G            |
| 41                                               | 5.712G            | 42   | 5.315G            | 43   | 5.355G            | 44   | 5.613G            |
| 45                                               | 5.636G            | 46   | 5.590G            | 47   | 5.312G            | 48   | 5.557G            |
| 49                                               | 5.305G            | 50   | 5.380G            | 51   | 5.605G            | 52   | 5.384G            |
| 53                                               | 5.463G            | 54   | 5.400G            | 55   | 5.451G            | 56   | 5.643G            |
| 57                                               | 5.264G            | 58   | 5.724G            | 59   | 5.415G            | 60   | 5.640G            |
| 61                                               | 5.316G            | 62   | 5.579G            | 63   | 5.267G            | 64   | 5.375G            |
| 65                                               | 5.671G            | 66   | 5.547G            | 67   | 5.391G            | 68   | 5.318G            |
| 69                                               | 5.619G            | 70   | 5.537G            | 71   | 5.342G            | 72   | 5.271G            |
| 73                                               | 5.661G            | 74   | 5.542G            | 75   | 5.669G            | 76   | 5.710G            |
| 77                                               | 5.574G            | 78   | 5.586G            | 79   | 5.524G            | 80   | 5.378G            |
| 81                                               | 5.659G            | 82   | 5.423G            | 83   | 5.644G            | 84   | 5.258G            |
| 85                                               | 5.268G            | 86   | 5.377G            | 87   | 5.462G            | 88   | 5.529G            |
| 89                                               | 5.577G            | 90   | 5.684G            | 91   | 5.628G            | 92   | 5.648G            |
| 93                                               | 5.703G            | 94   | 5.543G            | 95   | 5.641G            | 96   | 5.531G            |
| 97                                               | 5.361G            | 98   | 5.365G            | 99   | 5.297G            | 100  | 5.362G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_18 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.521G            | 2    | 5.365G            | 3    | 5.664G            | 4    | 5.548G            |
| 5                                                | 5.281G            | 6    | 5.534G            | 7    | 5.546G            | 8    | 5.276G            |
| 9                                                | 5.275G            | 10   | 5.292G            | 11   | 5.301G            | 12   | 5.597G            |
| 13                                               | 5.316G            | 14   | 5.595G            | 15   | 5.667G            | 16   | 5.641G            |
| 17                                               | 5.589G            | 18   | 5.269G            | 19   | 5.619G            | 20   | 5.611G            |
| 21                                               | 5.399G            | 22   | 5.274G            | 23   | 5.508G            | 24   | 5.333G            |
| 25                                               | 5.307G            | 26   | 5.605G            | 27   | 5.699G            | 28   | 5.604G            |
| 29                                               | 5.474G            | 30   | 5.435G            | 31   | 5.551G            | 32   | 5.693G            |
| 33                                               | 5.253G            | 34   | 5.700G            | 35   | 5.347G            | 36   | 5.405G            |
| 37                                               | 5.425G            | 38   | 5.309G            | 39   | 5.496G            | 40   | 5.343G            |
| 41                                               | 5.422G            | 42   | 5.341G            | 43   | 5.498G            | 44   | 5.433G            |
| 45                                               | 5.408G            | 46   | 5.633G            | 47   | 5.362G            | 48   | 5.639G            |
| 49                                               | 5.663G            | 50   | 5.550G            | 51   | 5.610G            | 52   | 5.487G            |
| 53                                               | 5.381G            | 54   | 5.349G            | 55   | 5.598G            | 56   | 5.657G            |
| 57                                               | 5.599G            | 58   | 5.300G            | 59   | 5.272G            | 60   | 5.383G            |
| 61                                               | 5.531G            | 62   | 5.560G            | 63   | 5.367G            | 64   | 5.417G            |
| 65                                               | 5.295G            | 66   | 5.661G            | 67   | 5.632G            | 68   | 5.557G            |
| 69                                               | 5.437G            | 70   | 5.416G            | 71   | 5.622G            | 72   | 5.704G            |
| 73                                               | 5.488G            | 74   | 5.370G            | 75   | 5.317G            | 76   | 5.583G            |
| 77                                               | 5.642G            | 78   | 5.407G            | 79   | 5.410G            | 80   | 5.715G            |
| 81                                               | 5.658G            | 82   | 5.466G            | 83   | 5.593G            | 84   | 5.532G            |
| 85                                               | 5.375G            | 86   | 5.252G            | 87   | 5.378G            | 88   | 5.578G            |
| 89                                               | 5.697G            | 90   | 5.413G            | 91   | 5.396G            | 92   | 5.293G            |
| 93                                               | 5.629G            | 94   | 5.371G            | 95   | 5.500G            | 96   | 5.411G            |
| 97                                               | 5.592G            | 98   | 5.460G            | 99   | 5.567G            | 100  | 5.288G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_19 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.289G            | 2    | 5.358G            | 3    | 5.453G            | 4    | 5.440G            |
| 5                                                | 5.312G            | 6    | 5.469G            | 7    | 5.701G            | 8    | 5.292G            |
| 9                                                | 5.309G            | 10   | 5.467G            | 11   | 5.342G            | 12   | 5.695G            |
| 13                                               | 5.525G            | 14   | 5.473G            | 15   | 5.569G            | 16   | 5.529G            |
| 17                                               | 5.334G            | 18   | 5.588G            | 19   | 5.532G            | 20   | 5.592G            |
| 21                                               | 5.443G            | 22   | 5.722G            | 23   | 5.454G            | 24   | 5.508G            |
| 25                                               | 5.378G            | 26   | 5.487G            | 27   | 5.338G            | 28   | 5.496G            |
| 29                                               | 5.434G            | 30   | 5.663G            | 31   | 5.633G            | 32   | 5.531G            |
| 33                                               | 5.463G            | 34   | 5.616G            | 35   | 5.630G            | 36   | 5.333G            |
| 37                                               | 5.626G            | 38   | 5.468G            | 39   | 5.363G            | 40   | 5.279G            |
| 41                                               | 5.404G            | 42   | 5.311G            | 43   | 5.683G            | 44   | 5.416G            |
| 45                                               | 5.368G            | 46   | 5.484G            | 47   | 5.310G            | 48   | 5.702G            |
| 49                                               | 5.514G            | 50   | 5.542G            | 51   | 5.421G            | 52   | 5.268G            |
| 53                                               | 5.283G            | 54   | 5.520G            | 55   | 5.457G            | 56   | 5.438G            |
| 57                                               | 5.493G            | 58   | 5.323G            | 59   | 5.266G            | 60   | 5.331G            |
| 61                                               | 5.433G            | 62   | 5.715G            | 63   | 5.682G            | 64   | 5.582G            |
| 65                                               | 5.321G            | 66   | 5.388G            | 67   | 5.585G            | 68   | 5.330G            |
| 69                                               | 5.322G            | 70   | 5.314G            | 71   | 5.551G            | 72   | 5.365G            |
| 73                                               | 5.301G            | 74   | 5.623G            | 75   | 5.401G            | 76   | 5.370G            |
| 77                                               | 5.429G            | 78   | 5.284G            | 79   | 5.271G            | 80   | 5.672G            |
| 81                                               | 5.721G            | 82   | 5.658G            | 83   | 5.351G            | 84   | 5.361G            |
| 85                                               | 5.717G            | 86   | 5.287G            | 87   | 5.714G            | 88   | 5.606G            |
| 89                                               | 5.480G            | 90   | 5.684G            | 91   | 5.318G            | 92   | 5.693G            |
| 93                                               | 5.405G            | 94   | 5.261G            | 95   | 5.485G            | 96   | 5.417G            |
| 97                                               | 5.636G            | 98   | 5.448G            | 99   | 5.698G            | 100  | 5.295G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_20 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.705G            | 2    | 5.525G            | 3    | 5.712G            | 4    | 5.547G            |
| 5                                                | 5.640G            | 6    | 5.681G            | 7    | 5.450G            | 8    | 5.352G            |
| 9                                                | 5.561G            | 10   | 5.469G            | 11   | 5.558G            | 12   | 5.674G            |
| 13                                               | 5.484G            | 14   | 5.536G            | 15   | 5.527G            | 16   | 5.444G            |
| 17                                               | 5.425G            | 18   | 5.327G            | 19   | 5.359G            | 20   | 5.570G            |
| 21                                               | 5.482G            | 22   | 5.512G            | 23   | 5.301G            | 24   | 5.330G            |
| 25                                               | 5.620G            | 26   | 5.355G            | 27   | 5.615G            | 28   | 5.318G            |
| 29                                               | 5.568G            | 30   | 5.313G            | 31   | 5.454G            | 32   | 5.552G            |
| 33                                               | 5.627G            | 34   | 5.542G            | 35   | 5.488G            | 36   | 5.545G            |
| 37                                               | 5.562G            | 38   | 5.716G            | 39   | 5.515G            | 40   | 5.508G            |
| 41                                               | 5.574G            | 42   | 5.315G            | 43   | 5.480G            | 44   | 5.294G            |
| 45                                               | 5.394G            | 46   | 5.537G            | 47   | 5.585G            | 48   | 5.328G            |
| 49                                               | 5.297G            | 50   | 5.688G            | 51   | 5.332G            | 52   | 5.581G            |
| 53                                               | 5.380G            | 54   | 5.576G            | 55   | 5.451G            | 56   | 5.284G            |
| 57                                               | 5.452G            | 58   | 5.422G            | 59   | 5.486G            | 60   | 5.507G            |
| 61                                               | 5.524G            | 62   | 5.575G            | 63   | 5.329G            | 64   | 5.283G            |
| 65                                               | 5.580G            | 66   | 5.291G            | 67   | 5.416G            | 68   | 5.643G            |
| 69                                               | 5.619G            | 70   | 5.589G            | 71   | 5.320G            | 72   | 5.711G            |
| 73                                               | 5.434G            | 74   | 5.473G            | 75   | 5.555G            | 76   | 5.504G            |
| 77                                               | 5.541G            | 78   | 5.260G            | 79   | 5.461G            | 80   | 5.350G            |
| 81                                               | 5.715G            | 82   | 5.456G            | 83   | 5.679G            | 84   | 5.676G            |
| 85                                               | 5.638G            | 86   | 5.478G            | 87   | 5.288G            | 88   | 5.277G            |
| 89                                               | 5.393G            | 90   | 5.466G            | 91   | 5.341G            | 92   | 5.386G            |
| 93                                               | 5.666G            | 94   | 5.453G            | 95   | 5.337G            | 96   | 5.358G            |
| 97                                               | 5.455G            | 98   | 5.413G            | 99   | 5.254G            | 100  | 5.414G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_21 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.380G            | 2    | 5.680G            | 3    | 5.652G            | 4    | 5.398G            |
| 5                                                | 5.386G            | 6    | 5.422G            | 7    | 5.353G            | 8    | 5.369G            |
| 9                                                | 5.283G            | 10   | 5.578G            | 11   | 5.468G            | 12   | 5.405G            |
| 13                                               | 5.645G            | 14   | 5.605G            | 15   | 5.642G            | 16   | 5.312G            |
| 17                                               | 5.449G            | 18   | 5.464G            | 19   | 5.370G            | 20   | 5.383G            |
| 21                                               | 5.539G            | 22   | 5.653G            | 23   | 5.389G            | 24   | 5.570G            |
| 25                                               | 5.723G            | 26   | 5.697G            | 27   | 5.639G            | 28   | 5.598G            |
| 29                                               | 5.450G            | 30   | 5.676G            | 31   | 5.553G            | 32   | 5.257G            |
| 33                                               | 5.621G            | 34   | 5.296G            | 35   | 5.604G            | 36   | 5.366G            |
| 37                                               | 5.618G            | 38   | 5.318G            | 39   | 5.537G            | 40   | 5.626G            |
| 41                                               | 5.611G            | 42   | 5.499G            | 43   | 5.270G            | 44   | 5.359G            |
| 45                                               | 5.647G            | 46   | 5.409G            | 47   | 5.679G            | 48   | 5.686G            |
| 49                                               | 5.620G            | 50   | 5.555G            | 51   | 5.658G            | 52   | 5.334G            |
| 53                                               | 5.475G            | 54   | 5.328G            | 55   | 5.377G            | 56   | 5.674G            |
| 57                                               | 5.264G            | 58   | 5.517G            | 59   | 5.385G            | 60   | 5.254G            |
| 61                                               | 5.397G            | 62   | 5.443G            | 63   | 5.478G            | 64   | 5.584G            |
| 65                                               | 5.648G            | 66   | 5.547G            | 67   | 5.378G            | 68   | 5.687G            |
| 69                                               | 5.519G            | 70   | 5.396G            | 71   | 5.518G            | 72   | 5.597G            |
| 73                                               | 5.702G            | 74   | 5.348G            | 75   | 5.581G            | 76   | 5.567G            |
| 77                                               | 5.271G            | 78   | 5.454G            | 79   | 5.325G            | 80   | 5.573G            |
| 81                                               | 5.552G            | 82   | 5.374G            | 83   | 5.293G            | 84   | 5.544G            |
| 85                                               | 5.282G            | 86   | 5.448G            | 87   | 5.309G            | 88   | 5.612G            |
| 89                                               | 5.395G            | 90   | 5.557G            | 91   | 5.575G            | 92   | 5.323G            |
| 93                                               | 5.319G            | 94   | 5.536G            | 95   | 5.722G            | 96   | 5.387G            |
| 97                                               | 5.551G            | 98   | 5.259G            | 99   | 5.298G            | 100  | 5.582G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_22 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.596G            | 2    | 5.649G            | 3    | 5.400G            | 4    | 5.522G            |
| 5                                                | 5.443G            | 6    | 5.391G            | 7    | 5.651G            | 8    | 5.535G            |
| 9                                                | 5.337G            | 10   | 5.268G            | 11   | 5.387G            | 12   | 5.587G            |
| 13                                               | 5.342G            | 14   | 5.274G            | 15   | 5.657G            | 16   | 5.351G            |
| 17                                               | 5.367G            | 18   | 5.565G            | 19   | 5.509G            | 20   | 5.523G            |
| 21                                               | 5.350G            | 22   | 5.280G            | 23   | 5.442G            | 24   | 5.584G            |
| 25                                               | 5.628G            | 26   | 5.422G            | 27   | 5.335G            | 28   | 5.372G            |
| 29                                               | 5.491G            | 30   | 5.462G            | 31   | 5.604G            | 32   | 5.363G            |
| 33                                               | 5.302G            | 34   | 5.658G            | 35   | 5.666G            | 36   | 5.578G            |
| 37                                               | 5.269G            | 38   | 5.263G            | 39   | 5.529G            | 40   | 5.308G            |
| 41                                               | 5.532G            | 42   | 5.287G            | 43   | 5.436G            | 44   | 5.528G            |
| 45                                               | 5.284G            | 46   | 5.689G            | 47   | 5.467G            | 48   | 5.665G            |
| 49                                               | 5.688G            | 50   | 5.333G            | 51   | 5.554G            | 52   | 5.722G            |
| 53                                               | 5.504G            | 54   | 5.285G            | 55   | 5.306G            | 56   | 5.551G            |
| 57                                               | 5.384G            | 58   | 5.580G            | 59   | 5.407G            | 60   | 5.361G            |
| 61                                               | 5.373G            | 62   | 5.676G            | 63   | 5.482G            | 64   | 5.347G            |
| 65                                               | 5.500G            | 66   | 5.710G            | 67   | 5.662G            | 68   | 5.623G            |
| 69                                               | 5.322G            | 70   | 5.612G            | 71   | 5.444G            | 72   | 5.429G            |
| 73                                               | 5.460G            | 74   | 5.629G            | 75   | 5.360G            | 76   | 5.313G            |
| 77                                               | 5.541G            | 78   | 5.416G            | 79   | 5.561G            | 80   | 5.619G            |
| 81                                               | 5.704G            | 82   | 5.300G            | 83   | 5.631G            | 84   | 5.611G            |
| 85                                               | 5.488G            | 86   | 5.618G            | 87   | 5.552G            | 88   | 5.250G            |
| 89                                               | 5.371G            | 90   | 5.258G            | 91   | 5.251G            | 92   | 5.633G            |
| 93                                               | 5.475G            | 94   | 5.639G            | 95   | 5.566G            | 96   | 5.632G            |
| 97                                               | 5.358G            | 98   | 5.617G            | 99   | 5.492G            | 100  | 5.498G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_23 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.494G            | 2    | 5.369G            | 3    | 5.704G            | 4    | 5.580G            |
| 5                                                | 5.497G            | 6    | 5.598G            | 7    | 5.462G            | 8    | 5.435G            |
| 9                                                | 5.459G            | 10   | 5.591G            | 11   | 5.559G            | 12   | 5.495G            |
| 13                                               | 5.302G            | 14   | 5.558G            | 15   | 5.609G            | 16   | 5.306G            |
| 17                                               | 5.632G            | 18   | 5.639G            | 19   | 5.425G            | 20   | 5.702G            |
| 21                                               | 5.252G            | 22   | 5.263G            | 23   | 5.427G            | 24   | 5.330G            |
| 25                                               | 5.316G            | 26   | 5.253G            | 27   | 5.687G            | 28   | 5.266G            |
| 29                                               | 5.692G            | 30   | 5.472G            | 31   | 5.682G            | 32   | 5.708G            |
| 33                                               | 5.719G            | 34   | 5.716G            | 35   | 5.650G            | 36   | 5.717G            |
| 37                                               | 5.350G            | 38   | 5.452G            | 39   | 5.431G            | 40   | 5.429G            |
| 41                                               | 5.319G            | 42   | 5.393G            | 43   | 5.503G            | 44   | 5.620G            |
| 45                                               | 5.290G            | 46   | 5.400G            | 47   | 5.614G            | 48   | 5.312G            |
| 49                                               | 5.568G            | 50   | 5.373G            | 51   | 5.445G            | 52   | 5.636G            |
| 53                                               | 5.634G            | 54   | 5.331G            | 55   | 5.328G            | 56   | 5.483G            |
| 57                                               | 5.303G            | 58   | 5.700G            | 59   | 5.310G            | 60   | 5.505G            |
| 61                                               | 5.590G            | 62   | 5.533G            | 63   | 5.343G            | 64   | 5.711G            |
| 65                                               | 5.551G            | 66   | 5.506G            | 67   | 5.476G            | 68   | 5.407G            |
| 69                                               | 5.398G            | 70   | 5.357G            | 71   | 5.485G            | 72   | 5.292G            |
| 73                                               | 5.612G            | 74   | 5.584G            | 75   | 5.481G            | 76   | 5.694G            |
| 77                                               | 5.264G            | 78   | 5.683G            | 79   | 5.541G            | 80   | 5.475G            |
| 81                                               | 5.693G            | 82   | 5.388G            | 83   | 5.635G            | 84   | 5.555G            |
| 85                                               | 5.608G            | 86   | 5.283G            | 87   | 5.308G            | 88   | 5.493G            |
| 89                                               | 5.570G            | 90   | 5.260G            | 91   | 5.557G            | 92   | 5.411G            |
| 93                                               | 5.413G            | 94   | 5.295G            | 95   | 5.713G            | 96   | 5.507G            |
| 97                                               | 5.451G            | 98   | 5.254G            | 99   | 5.471G            | 100  | 5.709G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_24 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.578G            | 2    | 5.505G            | 3    | 5.309G            | 4    | 5.599G            |
| 5                                                | 5.343G            | 6    | 5.532G            | 7    | 5.354G            | 8    | 5.671G            |
| 9                                                | 5.262G            | 10   | 5.602G            | 11   | 5.533G            | 12   | 5.250G            |
| 13                                               | 5.320G            | 14   | 5.632G            | 15   | 5.610G            | 16   | 5.308G            |
| 17                                               | 5.539G            | 18   | 5.717G            | 19   | 5.428G            | 20   | 5.707G            |
| 21                                               | 5.701G            | 22   | 5.442G            | 23   | 5.603G            | 24   | 5.375G            |
| 25                                               | 5.334G            | 26   | 5.706G            | 27   | 5.626G            | 28   | 5.702G            |
| 29                                               | 5.453G            | 30   | 5.703G            | 31   | 5.319G            | 32   | 5.478G            |
| 33                                               | 5.378G            | 34   | 5.520G            | 35   | 5.509G            | 36   | 5.447G            |
| 37                                               | 5.563G            | 38   | 5.678G            | 39   | 5.569G            | 40   | 5.346G            |
| 41                                               | 5.598G            | 42   | 5.596G            | 43   | 5.471G            | 44   | 5.680G            |
| 45                                               | 5.622G            | 46   | 5.306G            | 47   | 5.348G            | 48   | 5.468G            |
| 49                                               | 5.685G            | 50   | 5.633G            | 51   | 5.302G            | 52   | 5.665G            |
| 53                                               | 5.260G            | 54   | 5.494G            | 55   | 5.321G            | 56   | 5.480G            |
| 57                                               | 5.571G            | 58   | 5.661G            | 59   | 5.410G            | 60   | 5.394G            |
| 61                                               | 5.664G            | 62   | 5.570G            | 63   | 5.292G            | 64   | 5.630G            |
| 65                                               | 5.416G            | 66   | 5.545G            | 67   | 5.605G            | 68   | 5.639G            |
| 69                                               | 5.646G            | 70   | 5.593G            | 71   | 5.379G            | 72   | 5.648G            |
| 73                                               | 5.487G            | 74   | 5.625G            | 75   | 5.450G            | 76   | 5.301G            |
| 77                                               | 5.637G            | 78   | 5.549G            | 79   | 5.503G            | 80   | 5.564G            |
| 81                                               | 5.353G            | 82   | 5.662G            | 83   | 5.623G            | 84   | 5.565G            |
| 85                                               | 5.548G            | 86   | 5.467G            | 87   | 5.700G            | 88   | 5.445G            |
| 89                                               | 5.257G            | 90   | 5.360G            | 91   | 5.357G            | 92   | 5.543G            |
| 93                                               | 5.363G            | 94   | 5.519G            | 95   | 5.377G            | 96   | 5.463G            |
| 97                                               | 5.432G            | 98   | 5.328G            | 99   | 5.427G            | 100  | 5.281G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_25 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.551G            | 2    | 5.406G            | 3    | 5.488G            | 4    | 5.357G            |
| 5                                                | 5.539G            | 6    | 5.635G            | 7    | 5.633G            | 8    | 5.518G            |
| 9                                                | 5.672G            | 10   | 5.636G            | 11   | 5.527G            | 12   | 5.450G            |
| 13                                               | 5.601G            | 14   | 5.279G            | 15   | 5.651G            | 16   | 5.641G            |
| 17                                               | 5.699G            | 18   | 5.323G            | 19   | 5.555G            | 20   | 5.274G            |
| 21                                               | 5.421G            | 22   | 5.505G            | 23   | 5.399G            | 24   | 5.674G            |
| 25                                               | 5.317G            | 26   | 5.306G            | 27   | 5.292G            | 28   | 5.609G            |
| 29                                               | 5.254G            | 30   | 5.686G            | 31   | 5.309G            | 32   | 5.537G            |
| 33                                               | 5.307G            | 34   | 5.523G            | 35   | 5.288G            | 36   | 5.632G            |
| 37                                               | 5.320G            | 38   | 5.715G            | 39   | 5.398G            | 40   | 5.335G            |
| 41                                               | 5.340G            | 42   | 5.509G            | 43   | 5.613G            | 44   | 5.458G            |
| 45                                               | 5.703G            | 46   | 5.506G            | 47   | 5.353G            | 48   | 5.375G            |
| 49                                               | 5.504G            | 50   | 5.623G            | 51   | 5.409G            | 52   | 5.516G            |
| 53                                               | 5.269G            | 54   | 5.610G            | 55   | 5.431G            | 56   | 5.554G            |
| 57                                               | 5.682G            | 58   | 5.679G            | 59   | 5.625G            | 60   | 5.696G            |
| 61                                               | 5.325G            | 62   | 5.534G            | 63   | 5.701G            | 64   | 5.478G            |
| 65                                               | 5.411G            | 66   | 5.347G            | 67   | 5.638G            | 68   | 5.430G            |
| 69                                               | 5.272G            | 70   | 5.657G            | 71   | 5.298G            | 72   | 5.700G            |
| 73                                               | 5.480G            | 74   | 5.680G            | 75   | 5.416G            | 76   | 5.376G            |
| 77                                               | 5.646G            | 78   | 5.587G            | 79   | 5.395G            | 80   | 5.514G            |
| 81                                               | 5.467G            | 82   | 5.343G            | 83   | 5.627G            | 84   | 5.316G            |
| 85                                               | 5.622G            | 86   | 5.559G            | 87   | 5.637G            | 88   | 5.541G            |
| 89                                               | 5.469G            | 90   | 5.662G            | 91   | 5.465G            | 92   | 5.466G            |
| 93                                               | 5.714G            | 94   | 5.310G            | 95   | 5.295G            | 96   | 5.337G            |
| 97                                               | 5.675G            | 98   | 5.293G            | 99   | 5.608G            | 100  | 5.558G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_26 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.270G            | 2    | 5.280G            | 3    | 5.623G            | 4    | 5.597G            |
| 5                                                | 5.639G            | 6    | 5.290G            | 7    | 5.674G            | 8    | 5.438G            |
| 9                                                | 5.630G            | 10   | 5.284G            | 11   | 5.360G            | 12   | 5.389G            |
| 13                                               | 5.561G            | 14   | 5.530G            | 15   | 5.541G            | 16   | 5.604G            |
| 17                                               | 5.300G            | 18   | 5.704G            | 19   | 5.430G            | 20   | 5.564G            |
| 21                                               | 5.482G            | 22   | 5.675G            | 23   | 5.680G            | 24   | 5.590G            |
| 25                                               | 5.303G            | 26   | 5.268G            | 27   | 5.622G            | 28   | 5.508G            |
| 29                                               | 5.603G            | 30   | 5.474G            | 31   | 5.316G            | 32   | 5.497G            |
| 33                                               | 5.466G            | 34   | 5.660G            | 35   | 5.579G            | 36   | 5.450G            |
| 37                                               | 5.646G            | 38   | 5.415G            | 39   | 5.317G            | 40   | 5.707G            |
| 41                                               | 5.330G            | 42   | 5.322G            | 43   | 5.628G            | 44   | 5.484G            |
| 45                                               | 5.664G            | 46   | 5.700G            | 47   | 5.428G            | 48   | 5.371G            |
| 49                                               | 5.636G            | 50   | 5.377G            | 51   | 5.465G            | 52   | 5.481G            |
| 53                                               | 5.475G            | 54   | 5.665G            | 55   | 5.253G            | 56   | 5.591G            |
| 57                                               | 5.624G            | 58   | 5.609G            | 59   | 5.299G            | 60   | 5.440G            |
| 61                                               | 5.418G            | 62   | 5.384G            | 63   | 5.483G            | 64   | 5.582G            |
| 65                                               | 5.388G            | 66   | 5.666G            | 67   | 5.457G            | 68   | 5.708G            |
| 69                                               | 5.642G            | 70   | 5.411G            | 71   | 5.608G            | 72   | 5.627G            |
| 73                                               | 5.410G            | 74   | 5.499G            | 75   | 5.405G            | 76   | 5.544G            |
| 77                                               | 5.494G            | 78   | 5.718G            | 79   | 5.339G            | 80   | 5.442G            |
| 81                                               | 5.616G            | 82   | 5.261G            | 83   | 5.560G            | 84   | 5.373G            |
| 85                                               | 5.533G            | 86   | 5.263G            | 87   | 5.578G            | 88   | 5.509G            |
| 89                                               | 5.265G            | 90   | 5.691G            | 91   | 5.670G            | 92   | 5.369G            |
| 93                                               | 5.715G            | 94   | 5.283G            | 95   | 5.567G            | 96   | 5.407G            |
| 97                                               | 5.570G            | 98   | 5.645G            | 99   | 5.313G            | 100  | 5.306G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_27 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.416G            | 2    | 5.254G            | 3    | 5.482G            | 4    | 5.523G            |
| 5                                                | 5.395G            | 6    | 5.387G            | 7    | 5.407G            | 8    | 5.685G            |
| 9                                                | 5.382G            | 10   | 5.352G            | 11   | 5.704G            | 12   | 5.721G            |
| 13                                               | 5.466G            | 14   | 5.348G            | 15   | 5.477G            | 16   | 5.540G            |
| 17                                               | 5.302G            | 18   | 5.568G            | 19   | 5.450G            | 20   | 5.521G            |
| 21                                               | 5.708G            | 22   | 5.326G            | 23   | 5.600G            | 24   | 5.411G            |
| 25                                               | 5.606G            | 26   | 5.278G            | 27   | 5.535G            | 28   | 5.616G            |
| 29                                               | 5.676G            | 30   | 5.536G            | 31   | 5.562G            | 32   | 5.662G            |
| 33                                               | 5.693G            | 34   | 5.688G            | 35   | 5.396G            | 36   | 5.461G            |
| 37                                               | 5.251G            | 38   | 5.417G            | 39   | 5.627G            | 40   | 5.598G            |
| 41                                               | 5.338G            | 42   | 5.555G            | 43   | 5.552G            | 44   | 5.362G            |
| 45                                               | 5.608G            | 46   | 5.316G            | 47   | 5.647G            | 48   | 5.397G            |
| 49                                               | 5.646G            | 50   | 5.331G            | 51   | 5.534G            | 52   | 5.250G            |
| 53                                               | 5.720G            | 54   | 5.480G            | 55   | 5.304G            | 56   | 5.611G            |
| 57                                               | 5.663G            | 58   | 5.405G            | 59   | 5.446G            | 60   | 5.700G            |
| 61                                               | 5.603G            | 62   | 5.515G            | 63   | 5.497G            | 64   | 5.341G            |
| 65                                               | 5.299G            | 66   | 5.376G            | 67   | 5.410G            | 68   | 5.545G            |
| 69                                               | 5.294G            | 70   | 5.711G            | 71   | 5.325G            | 72   | 5.285G            |
| 73                                               | 5.287G            | 74   | 5.644G            | 75   | 5.705G            | 76   | 5.690G            |
| 77                                               | 5.577G            | 78   | 5.363G            | 79   | 5.381G            | 80   | 5.588G            |
| 81                                               | 5.557G            | 82   | 5.436G            | 83   | 5.543G            | 84   | 5.378G            |
| 85                                               | 5.453G            | 86   | 5.589G            | 87   | 5.273G            | 88   | 5.615G            |
| 89                                               | 5.503G            | 90   | 5.559G            | 91   | 5.398G            | 92   | 5.621G            |
| 93                                               | 5.379G            | 94   | 5.394G            | 95   | 5.699G            | 96   | 5.619G            |
| 97                                               | 5.452G            | 98   | 5.502G            | 99   | 5.270G            | 100  | 5.255G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_28 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.338G            | 2    | 5.353G            | 3    | 5.309G            | 4    | 5.401G            |
| 5                                                | 5.349G            | 6    | 5.659G            | 7    | 5.709G            | 8    | 5.679G            |
| 9                                                | 5.683G            | 10   | 5.544G            | 11   | 5.280G            | 12   | 5.382G            |
| 13                                               | 5.580G            | 14   | 5.379G            | 15   | 5.607G            | 16   | 5.551G            |
| 17                                               | 5.514G            | 18   | 5.260G            | 19   | 5.479G            | 20   | 5.714G            |
| 21                                               | 5.699G            | 22   | 5.494G            | 23   | 5.292G            | 24   | 5.316G            |
| 25                                               | 5.571G            | 26   | 5.691G            | 27   | 5.444G            | 28   | 5.655G            |
| 29                                               | 5.390G            | 30   | 5.584G            | 31   | 5.430G            | 32   | 5.393G            |
| 33                                               | 5.562G            | 34   | 5.633G            | 35   | 5.274G            | 36   | 5.368G            |
| 37                                               | 5.325G            | 38   | 5.436G            | 39   | 5.589G            | 40   | 5.472G            |
| 41                                               | 5.441G            | 42   | 5.285G            | 43   | 5.276G            | 44   | 5.478G            |
| 45                                               | 5.632G            | 46   | 5.535G            | 47   | 5.253G            | 48   | 5.581G            |
| 49                                               | 5.399G            | 50   | 5.255G            | 51   | 5.624G            | 52   | 5.715G            |
| 53                                               | 5.327G            | 54   | 5.340G            | 55   | 5.596G            | 56   | 5.323G            |
| 57                                               | 5.635G            | 58   | 5.261G            | 59   | 5.431G            | 60   | 5.331G            |
| 61                                               | 5.265G            | 62   | 5.394G            | 63   | 5.381G            | 64   | 5.626G            |
| 65                                               | 5.453G            | 66   | 5.308G            | 67   | 5.448G            | 68   | 5.582G            |
| 69                                               | 5.525G            | 70   | 5.644G            | 71   | 5.541G            | 72   | 5.687G            |
| 73                                               | 5.277G            | 74   | 5.304G            | 75   | 5.660G            | 76   | 5.618G            |
| 77                                               | 5.256G            | 78   | 5.366G            | 79   | 5.647G            | 80   | 5.565G            |
| 81                                               | 5.671G            | 82   | 5.252G            | 83   | 5.370G            | 84   | 5.496G            |
| 85                                               | 5.567G            | 86   | 5.395G            | 87   | 5.642G            | 88   | 5.588G            |
| 89                                               | 5.638G            | 90   | 5.389G            | 91   | 5.648G            | 92   | 5.458G            |
| 93                                               | 5.523G            | 94   | 5.563G            | 95   | 5.716G            | 96   | 5.597G            |
| 97                                               | 5.559G            | 98   | 5.426G            | 99   | 5.334G            | 100  | 5.534G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_29 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.270G            | 2    | 5.282G            | 3    | 5.447G            | 4    | 5.316G            |
| 5                                                | 5.548G            | 6    | 5.334G            | 7    | 5.647G            | 8    | 5.576G            |
| 9                                                | 5.659G            | 10   | 5.314G            | 11   | 5.386G            | 12   | 5.345G            |
| 13                                               | 5.324G            | 14   | 5.290G            | 15   | 5.515G            | 16   | 5.597G            |
| 17                                               | 5.573G            | 18   | 5.470G            | 19   | 5.364G            | 20   | 5.712G            |
| 21                                               | 5.649G            | 22   | 5.461G            | 23   | 5.685G            | 24   | 5.320G            |
| 25                                               | 5.366G            | 26   | 5.413G            | 27   | 5.635G            | 28   | 5.411G            |
| 29                                               | 5.374G            | 30   | 5.351G            | 31   | 5.586G            | 32   | 5.286G            |
| 33                                               | 5.522G            | 34   | 5.390G            | 35   | 5.275G            | 36   | 5.349G            |
| 37                                               | 5.575G            | 38   | 5.258G            | 39   | 5.274G            | 40   | 5.662G            |
| 41                                               | 5.429G            | 42   | 5.658G            | 43   | 5.549G            | 44   | 5.449G            |
| 45                                               | 5.430G            | 46   | 5.634G            | 47   | 5.599G            | 48   | 5.695G            |
| 49                                               | 5.438G            | 50   | 5.454G            | 51   | 5.518G            | 52   | 5.384G            |
| 53                                               | 5.698G            | 54   | 5.525G            | 55   | 5.663G            | 56   | 5.672G            |
| 57                                               | 5.651G            | 58   | 5.279G            | 59   | 5.485G            | 60   | 5.631G            |
| 61                                               | 5.358G            | 62   | 5.406G            | 63   | 5.456G            | 64   | 5.622G            |
| 65                                               | 5.716G            | 66   | 5.620G            | 67   | 5.431G            | 68   | 5.460G            |
| 69                                               | 5.643G            | 70   | 5.359G            | 71   | 5.562G            | 72   | 5.288G            |
| 73                                               | 5.714G            | 74   | 5.289G            | 75   | 5.408G            | 76   | 5.572G            |
| 77                                               | 5.445G            | 78   | 5.577G            | 79   | 5.452G            | 80   | 5.371G            |
| 81                                               | 5.446G            | 82   | 5.262G            | 83   | 5.471G            | 84   | 5.656G            |
| 85                                               | 5.307G            | 86   | 5.574G            | 87   | 5.260G            | 88   | 5.362G            |
| 89                                               | 5.420G            | 90   | 5.674G            | 91   | 5.595G            | 92   | 5.629G            |
| 93                                               | 5.667G            | 94   | 5.387G            | 95   | 5.424G            | 96   | 5.709G            |
| 97                                               | 5.325G            | 98   | 5.507G            | 99   | 5.570G            | 100  | 5.513G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_30 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.578G            | 2    | 5.337G            | 3    | 5.417G            | 4    | 5.700G            |
| 5                                                | 5.342G            | 6    | 5.667G            | 7    | 5.428G            | 8    | 5.415G            |
| 9                                                | 5.639G            | 10   | 5.525G            | 11   | 5.526G            | 12   | 5.533G            |
| 13                                               | 5.261G            | 14   | 5.631G            | 15   | 5.545G            | 16   | 5.577G            |
| 17                                               | 5.612G            | 18   | 5.498G            | 19   | 5.393G            | 20   | 5.574G            |
| 21                                               | 5.550G            | 22   | 5.718G            | 23   | 5.298G            | 24   | 5.520G            |
| 25                                               | 5.255G            | 26   | 5.387G            | 27   | 5.356G            | 28   | 5.444G            |
| 29                                               | 5.448G            | 30   | 5.353G            | 31   | 5.668G            | 32   | 5.402G            |
| 33                                               | 5.414G            | 34   | 5.637G            | 35   | 5.676G            | 36   | 5.363G            |
| 37                                               | 5.445G            | 38   | 5.354G            | 39   | 5.403G            | 40   | 5.267G            |
| 41                                               | 5.703G            | 42   | 5.560G            | 43   | 5.559G            | 44   | 5.680G            |
| 45                                               | 5.506G            | 46   | 5.257G            | 47   | 5.365G            | 48   | 5.317G            |
| 49                                               | 5.454G            | 50   | 5.629G            | 51   | 5.260G            | 52   | 5.543G            |
| 53                                               | 5.673G            | 54   | 5.620G            | 55   | 5.389G            | 56   | 5.627G            |
| 57                                               | 5.661G            | 58   | 5.386G            | 59   | 5.645G            | 60   | 5.373G            |
| 61                                               | 5.623G            | 62   | 5.456G            | 63   | 5.606G            | 64   | 5.289G            |
| 65                                               | 5.658G            | 66   | 5.258G            | 67   | 5.584G            | 68   | 5.446G            |
| 69                                               | 5.483G            | 70   | 5.427G            | 71   | 5.399G            | 72   | 5.457G            |
| 73                                               | 5.642G            | 74   | 5.299G            | 75   | 5.603G            | 76   | 5.552G            |
| 77                                               | 5.495G            | 78   | 5.576G            | 79   | 5.715G            | 80   | 5.652G            |
| 81                                               | 5.449G            | 82   | 5.410G            | 83   | 5.626G            | 84   | 5.651G            |
| 85                                               | 5.538G            | 86   | 5.687G            | 87   | 5.346G            | 88   | 5.250G            |
| 89                                               | 5.692G            | 90   | 5.252G            | 91   | 5.322G            | 92   | 5.632G            |
| 93                                               | 5.659G            | 94   | 5.681G            | 95   | 5.585G            | 96   | 5.426G            |
| 97                                               | 5.635G            | 98   | 5.657G            | 99   | 5.704G            | 100  | 5.297G            |

**IEEE 802.11n HT40**

| Type 1 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 102              | 1.0u            | 518.0u  | 5535            | Yes       |
| 2                                     | 99               | 1.0u            | 538.0u  | 5537            | Yes       |
| 3                                     | 95               | 1.0u            | 558.0u  | 5543            | Yes       |
| 4                                     | 92               | 1.0u            | 578.0u  | 5521            | Yes       |
| 5                                     | 89               | 1.0u            | 598.0u  | 5542            | Yes       |
| 6                                     | 86               | 1.0u            | 618.0u  | 5532            | Yes       |
| 7                                     | 83               | 1.0u            | 638.0u  | 5525            | Yes       |
| 8                                     | 81               | 1.0u            | 658.0u  | 5512            | Yes       |
| 9                                     | 78               | 1.0u            | 678.0u  | 5514            | Yes       |
| 10                                    | 76               | 1.0u            | 698.0u  | 5541            | Yes       |
| 11                                    | 74               | 1.0u            | 718.0u  | 5541            | Yes       |
| 12                                    | 72               | 1.0u            | 738.0u  | 5512            | Yes       |
| 13                                    | 70               | 1.0u            | 758.0u  | 5518            | Yes       |
| 14                                    | 68               | 1.0u            | 778.0u  | 5536            | Yes       |
| 15                                    | 67               | 1.0u            | 798.0u  | 5536            | Yes       |
| 16                                    | 95               | 1.0u            | 559.0u  | 5520            | Yes       |
| 17                                    | 83               | 1.0u            | 639.0u  | 5529            | Yes       |
| 18                                    | 69               | 1.0u            | 767.0u  | 5536            | Yes       |
| 19                                    | 64               | 1.0u            | 827.0u  | 5544            | Yes       |
| 20                                    | 56               | 1.0u            | 947.0u  | 5539            | Yes       |
| 21                                    | 97               | 1.0u            | 549.0u  | 5539            | Yes       |
| 22                                    | 87               | 1.0u            | 609.0u  | 5532            | Yes       |
| 23                                    | 77               | 1.0u            | 689.0u  | 5513            | Yes       |
| 24                                    | 64               | 1.0u            | 829.0u  | 5515            | Yes       |
| 25                                    | 57               | 1.0u            | 929.0u  | 5545            | Yes       |
| 26                                    | 24               | 1.0u            | 2.215m  | 5528            | Yes       |
| 27                                    | 87               | 1.0u            | 611.0u  | 5548            | Yes       |
| 28                                    | 75               | 1.0u            | 711.0u  | 5512            | Yes       |
| 29                                    | 64               | 1.0u            | 831.0u  | 5536            | Yes       |
| 30                                    | 58               | 1.0u            | 911.0u  | 5522            | Yes       |
| Detection Rate: 100.0 %               |                  |                 |         |                 |           |

| Type 2 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 24               | 1.8u            | 180.0u  | 5539            | Yes       |
| 2                                     | 23               | 4.8u            | 213.0u  | 5523            | Yes       |
| 3                                     | 24               | 1.2u            | 177.0u  | 5512            | No        |
| 4                                     | 27               | 2.4u            | 206.0u  | 5541            | Yes       |
| 5                                     | 26               | 1.5u            | 153.0u  | 5537            | Yes       |
| 6                                     | 26               | 1.0u            | 158.0u  | 5537            | Yes       |
| 7                                     | 25               | 4.4u            | 193.0u  | 5523            | Yes       |
| 8                                     | 27               | 4.9u            | 167.0u  | 5527            | Yes       |
| 9                                     | 28               | 3.9u            | 197.0u  | 5545            | Yes       |
| 10                                    | 26               | 3.4u            | 152.0u  | 5525            | Yes       |
| 11                                    | 26               | 3.0u            | 175.0u  | 5533            | Yes       |
| 12                                    | 25               | 1.1u            | 185.0u  | 5530            | Yes       |
| 13                                    | 24               | 3.9u            | 174.0u  | 5546            | Yes       |
| 14                                    | 24               | 1.4u            | 175.0u  | 5534            | Yes       |
| 15                                    | 28               | 2.5u            | 188.0u  | 5522            | No        |
| 16                                    | 24               | 3.8u            | 209.0u  | 5546            | Yes       |
| 17                                    | 28               | 1.6u            | 200.0u  | 5525            | Yes       |
| 18                                    | 25               | 1.7u            | 187.0u  | 5538            | Yes       |
| 19                                    | 25               | 4.8u            | 164.0u  | 5542            | Yes       |
| 20                                    | 25               | 2.5u            | 172.0u  | 5544            | Yes       |
| 21                                    | 29               | 4.7u            | 179.0u  | 5535            | No        |
| 22                                    | 26               | 4.1u            | 181.0u  | 5515            | Yes       |
| 23                                    | 25               | 4.1u            | 223.0u  | 5530            | Yes       |
| 24                                    | 29               | 1.4u            | 195.0u  | 5535            | Yes       |
| 25                                    | 26               | 1.2u            | 185.0u  | 5527            | Yes       |
| 26                                    | 26               | 2.8u            | 171.0u  | 5523            | Yes       |
| 27                                    | 27               | 4.5u            | 156.0u  | 5512            | No        |
| 28                                    | 25               | 1.1u            | 203.0u  | 5519            | Yes       |
| 29                                    | 29               | 1.3u            | 180.0u  | 5530            | Yes       |
| 30                                    | 28               | 2.4u            | 207.0u  | 5517            | Yes       |
| Detection Rate: 86.7 %                |                  |                 |         |                 |           |



| Type 3 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 17               | 7.6u            | 336.0u  | 5541            | Yes       |
| 2                                     | 18               | 7.7u            | 499.0u  | 5529            | Yes       |
| 3                                     | 17               | 7.4u            | 451.0u  | 5512            | Yes       |
| 4                                     | 17               | 9.3u            | 319.0u  | 5521            | No        |
| 5                                     | 17               | 9.1u            | 293.0u  | 5522            | Yes       |
| 6                                     | 17               | 8.0u            | 403.0u  | 5542            | Yes       |
| 7                                     | 16               | 9.7u            | 481.0u  | 5527            | No        |
| 8                                     | 17               | 7.6u            | 333.0u  | 5545            | Yes       |
| 9                                     | 18               | 8.6u            | 348.0u  | 5519            | Yes       |
| 10                                    | 18               | 6.6u            | 487.0u  | 5512            | Yes       |
| 11                                    | 17               | 6.4u            | 217.0u  | 5544            | Yes       |
| 12                                    | 18               | 6.9u            | 472.0u  | 5520            | Yes       |
| 13                                    | 17               | 9.6u            | 210.0u  | 5539            | Yes       |
| 14                                    | 16               | 9.6u            | 349.0u  | 5529            | Yes       |
| 15                                    | 16               | 6.1u            | 271.0u  | 5518            | Yes       |
| 16                                    | 18               | 7.8u            | 306.0u  | 5527            | No        |
| 17                                    | 18               | 9.1u            | 431.0u  | 5531            | Yes       |
| 18                                    | 18               | 9.2u            | 267.0u  | 5529            | No        |
| 19                                    | 18               | 9.0u            | 230.0u  | 5541            | Yes       |
| 20                                    | 17               | 6.6u            | 363.0u  | 5523            | Yes       |
| 21                                    | 17               | 8.0u            | 358.0u  | 5540            | Yes       |
| 22                                    | 16               | 8.5u            | 496.0u  | 5514            | No        |
| 23                                    | 16               | 8.5u            | 472.0u  | 5541            | Yes       |
| 24                                    | 18               | 9.0u            | 392.0u  | 5516            | Yes       |
| 25                                    | 18               | 9.8u            | 284.0u  | 5538            | Yes       |
| 26                                    | 18               | 7.0u            | 231.0u  | 5541            | No        |
| 27                                    | 17               | 8.6u            | 348.0u  | 5513            | Yes       |
| 28                                    | 17               | 8.2u            | 293.0u  | 5540            | No        |
| 29                                    | 17               | 8.9u            | 499.0u  | 5526            | Yes       |
| 30                                    | 17               | 7.2u            | 264.0u  | 5537            | Yes       |
| Detection Rate: 76.7 %                |                  |                 |         |                 |           |

| Type 4 Radar Statistical Performances |                  |                 |         |                 |           |
|---------------------------------------|------------------|-----------------|---------|-----------------|-----------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Radar Frequency | Detection |
| 1                                     | 15               | 19.6u           | 390.0u  | 5544            | Yes       |
| 2                                     | 12               | 12.2u           | 297.0u  | 5515            | No        |
| 3                                     | 16               | 16.1u           | 379.0u  | 5543            | Yes       |
| 4                                     | 14               | 12.9u           | 383.0u  | 5522            | Yes       |
| 5                                     | 12               | 12.8u           | 409.0u  | 5528            | No        |
| 6                                     | 16               | 18.7u           | 486.0u  | 5536            | Yes       |
| 7                                     | 13               | 14.8u           | 490.0u  | 5524            | Yes       |
| 8                                     | 13               | 12.8u           | 369.0u  | 5518            | Yes       |
| 9                                     | 14               | 15.4u           | 298.0u  | 5514            | Yes       |
| 10                                    | 14               | 13.8u           | 312.0u  | 5533            | Yes       |
| 11                                    | 16               | 11.3u           | 472.0u  | 5546            | Yes       |
| 12                                    | 15               | 16.1u           | 443.0u  | 5540            | Yes       |
| 13                                    | 13               | 19.6u           | 317.0u  | 5520            | Yes       |
| 14                                    | 14               | 12.4u           | 245.0u  | 5531            | Yes       |
| 15                                    | 13               | 11.1u           | 277.0u  | 5534            | Yes       |
| 16                                    | 14               | 16.6u           | 235.0u  | 5526            | Yes       |
| 17                                    | 13               | 18.0u           | 204.0u  | 5536            | Yes       |
| 18                                    | 16               | 11.8u           | 266.0u  | 5544            | Yes       |
| 19                                    | 12               | 12.4u           | 318.0u  | 5535            | Yes       |
| 20                                    | 12               | 14.3u           | 463.0u  | 5512            | No        |
| 21                                    | 14               | 14.3u           | 472.0u  | 5548            | Yes       |
| 22                                    | 12               | 15.2u           | 434.0u  | 5513            | Yes       |
| 23                                    | 13               | 13.9u           | 395.0u  | 5526            | Yes       |
| 24                                    | 13               | 15.0u           | 457.0u  | 5517            | Yes       |
| 25                                    | 13               | 13.7u           | 335.0u  | 5543            | Yes       |
| 26                                    | 14               | 13.2u           | 343.0u  | 5523            | No        |
| 27                                    | 15               | 14.5u           | 387.0u  | 5520            | Yes       |
| 28                                    | 16               | 11.4u           | 444.0u  | 5534            | Yes       |
| 29                                    | 14               | 19.4u           | 317.0u  | 5548            | No        |
| 30                                    | 16               | 16.4u           | 429.0u  | 5520            | No        |
| Detection Rate: 80.0 %                |                  |                 |         |                 |           |

| Type 5 Radar Statistical Performances |                  |                         |
|---------------------------------------|------------------|-------------------------|
| Trial #                               | Test Signal Name | Detection               |
| 1                                     | LP_Signal_01     | Yes                     |
| 2                                     | LP_Signal_02     | Yes                     |
| 3                                     | LP_Signal_03     | Yes                     |
| 4                                     | LP_Signal_04     | Yes                     |
| 5                                     | LP_Signal_05     | Yes                     |
| 6                                     | LP_Signal_06     | Yes                     |
| 7                                     | LP_Signal_07     | Yes                     |
| 8                                     | LP_Signal_08     | Yes                     |
| 9                                     | LP_Signal_09     | Yes                     |
| 10                                    | LP_Signal_10     | Yes                     |
| 11                                    | LP_Signal_11     | Yes                     |
| 12                                    | LP_Signal_12     | Yes                     |
| 13                                    | LP_Signal_13     | Yes                     |
| 14                                    | LP_Signal_14     | Yes                     |
| 15                                    | LP_Signal_15     | Yes                     |
| 16                                    | LP_Signal_16     | Yes                     |
| 17                                    | LP_Signal_17     | Yes                     |
| 18                                    | LP_Signal_18     | Yes                     |
| 19                                    | LP_Signal_19     | Yes                     |
| 20                                    | LP_Signal_20     | Yes                     |
| 21                                    | LP_Signal_21     | Yes                     |
| 22                                    | LP_Signal_22     | Yes                     |
| 23                                    | LP_Signal_23     | Yes                     |
| 24                                    | LP_Signal_24     | Yes                     |
| 25                                    | LP_Signal_25     | Yes                     |
| 26                                    | LP_Signal_26     | Yes                     |
| 27                                    | LP_Signal_27     | Yes                     |
| 28                                    | LP_Signal_28     | Yes                     |
| 29                                    | LP_Signal_29     | Yes                     |
| 30                                    | LP_Signal_30     | Yes                     |
|                                       |                  | Detection Rate: 100.0 % |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_01

Number of Bursts in Trial: 20

Chrip Center Frequency: 5515MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 14M        | 64.2u           | 1.059m                   | -                        | 552.7m             |
| 2     | 2                | 8M         | 83.1u           | 1.801m                   | -                        | 396.6m             |
| 3     | 3                | 8M         | 90.3u           | 1.063m                   | 1.369m                   | 567.2m             |
| 4     | 2                | 11M        | 73.1u           | 1.174m                   | -                        | 467.5m             |
| 5     | 1                | 15M        | 57.9u           | -                        | -                        | 374.5m             |
| 6     | 1                | 13M        | 88.6u           | -                        | -                        | 468.9m             |
| 7     | 1                | 5M         | 61.4u           | -                        | -                        | 18.80m             |
| 8     | 2                | 10M        | 73.5u           | 1.411m                   | -                        | 530.1m             |
| 9     | 1                | 9M         | 59.7u           | -                        | -                        | 186.2m             |
| 10    | 3                | 7M         | 98.9u           | 1.144m                   | 1.052m                   | 254.1m             |
| 11    | 1                | 18M        | 88.7u           | -                        | -                        | 572.9m             |
| 12    | 3                | 10M        | 91.3u           | 1.260m                   | 1.620m                   | 208.4m             |
| 13    | 2                | 8M         | 93.9u           | 1.418m                   | -                        | 115.7m             |
| 14    | 2                | 6M         | 68.9u           | 1.666m                   | -                        | 187.7m             |
| 15    | 2                | 5M         | 54.0u           | 1.496m                   | -                        | 408.2m             |
| 16    | 1                | 11M        | 51.9u           | -                        | -                        | 272.2m             |
| 17    | 2                | 13M        | 70.7u           | 1.362m                   | -                        | 305.8m             |
| 18    | 2                | 7M         | 94.6u           | 990.4u                   | -                        | 276.4m             |
| 19    | 2                | 14M        | 56.8u           | 1.555m                   | -                        | 582.7m             |
| 20    | 3                | 16M        | 89.0u           | 1.034m                   | 1.359m                   | 313.1m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_02

Number of Bursts in Trial: 17

Chrip Center Frequency: 5516MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 12M        | 97.3u           | -                        | -                        | 386.4m             |
| 2     | 2                | 17M        | 95.9u           | 1.561m                   | -                        | 634.5m             |
| 3     | 2                | 9M         | 91.0u           | 1.868m                   | -                        | 154.5m             |
| 4     | 2                | 11M        | 95.9u           | 1.606m                   | -                        | 297.9m             |
| 5     | 2                | 17M        | 52.7u           | 1.600m                   | -                        | 600.3m             |
| 6     | 3                | 6M         | 67.6u           | 1.740m                   | 1.786m                   | 594.6m             |
| 7     | 2                | 16M        | 60.7u           | 1.815m                   | -                        | 95.42m             |
| 8     | 2                | 11M        | 85.0u           | 1.388m                   | -                        | 466.7m             |
| 9     | 3                | 17M        | 58.5u           | 1.179m                   | 1.312m                   | 520.7m             |
| 10    | 2                | 17M        | 98.6u           | 1.285m                   | -                        | 6.999m             |
| 11    | 1                | 17M        | 77.5u           | -                        | -                        | 57.33m             |
| 12    | 2                | 18M        | 54.5u           | 1.143m                   | -                        | 617.2m             |
| 13    | 3                | 5M         | 98.5u           | 1.131m                   | 1.425m                   | 313.3m             |
| 14    | 2                | 9M         | 97.1u           | 1.600m                   | -                        | 242.7m             |
| 15    | 2                | 16M        | 67.2u           | 1.565m                   | -                        | 108.8m             |
| 16    | 2                | 6M         | 63.8u           | 1.756m                   | -                        | 29.45m             |
| 17    | 2                | 12M        | 80.6u           | 1.132m                   | -                        | 140.5m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_03

Number of Bursts in Trial: 16

Chrip Center Frequency: 5517MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 18M        | 83.8u           | 1.805m                   | -                        | 153.0m             |
| 2     | 2                | 17M        | 84.9u           | 1.230m                   | -                        | 589.8m             |
| 3     | 2                | 11M        | 68.7u           | 1.256m                   | -                        | 113.0m             |
| 4     | 2                | 8M         | 71.4u           | 1.925m                   | -                        | 733.4m             |
| 5     | 1                | 14M        | 57.9u           | -                        | -                        | 480.1m             |
| 6     | 2                | 14M        | 53.1u           | 1.516m                   | -                        | 213.7m             |
| 7     | 2                | 16M        | 71.2u           | 1.253m                   | -                        | 97.67m             |
| 8     | 1                | 20M        | 55.4u           | -                        | -                        | 108.3m             |
| 9     | 2                | 17M        | 64.0u           | 1.037m                   | -                        | 50.59m             |
| 10    | 2                | 9M         | 62.6u           | 1.315m                   | -                        | 63.70m             |
| 11    | 2                | 13M        | 74.1u           | 988.9u                   | -                        | 454.2m             |
| 12    | 1                | 19M        | 57.1u           | -                        | -                        | 708.1m             |
| 13    | 3                | 6M         | 55.6u           | 1.374m                   | 1.219m                   | 34.45m             |
| 14    | 2                | 7M         | 93.5u           | 1.215m                   | -                        | 427.0m             |
| 15    | 2                | 19M        | 76.5u           | 985.5u                   | -                        | 172.4m             |
| 16    | 3                | 6M         | 84.2u           | 1.750m                   | 1.713m                   | 584.7m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_04

Number of Bursts in Trial: 19

Chrip Center Frequency: 5518MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 16M        | 91.1u           | 1.711m                   | -                        | 180.6m             |
| 2     | 1                | 14M        | 88.7u           | -                        | -                        | 95.10m             |
| 3     | 3                | 14M        | 93.8u           | 1.149m                   | 991.2u                   | 308.7m             |
| 4     | 2                | 17M        | 99.9u           | 1.336m                   | -                        | 61.92m             |
| 5     | 1                | 12M        | 52.3u           | -                        | -                        | 604.1m             |
| 6     | 3                | 7M         | 99.9u           | 1.789m                   | 954.1u                   | 338.3m             |
| 7     | 1                | 7M         | 86.6u           | -                        | -                        | 37.01m             |
| 8     | 2                | 10M        | 99.1u           | 946.9u                   | -                        | 27.25m             |
| 9     | 2                | 11M        | 63.0u           | 1.442m                   | -                        | 434.6m             |
| 10    | 2                | 7M         | 96.6u           | 1.784m                   | -                        | 116.2m             |
| 11    | 3                | 15M        | 62.1u           | 1.919m                   | 1.582m                   | 70.62m             |
| 12    | 1                | 18M        | 58.8u           | -                        | -                        | 546.1m             |
| 13    | 2                | 15M        | 62.2u           | 1.731m                   | -                        | 451.3m             |
| 14    | 2                | 7M         | 59.4u           | 1.667m                   | -                        | 431.0m             |
| 15    | 3                | 8M         | 51.8u           | 1.334m                   | 1.553m                   | 57.15m             |
| 16    | 2                | 10M        | 67.4u           | 1.044m                   | -                        | 376.2m             |
| 17    | 2                | 14M        | 53.2u           | 1.475m                   | -                        | 395.5m             |
| 18    | 3                | 19M        | 89.2u           | 1.134m                   | 1.842m                   | 545.8m             |
| 19    | 3                | 9M         | 64.8u           | 1.443m                   | 1.515m                   | 415.1m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_05  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 9    |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5519MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 19M        | 98.1u           | 1.776m                   | -                        | 253.4m             |
| 2                               | 2                | 15M        | 56.2u           | 1.467m                   | -                        | 1.084              |
| 3                               | 2                | 6M         | 75.7u           | 1.367m                   | -                        | 632.9m             |
| 4                               | 2                | 6M         | 69.8u           | 1.860m                   | -                        | 958.1m             |
| 5                               | 3                | 18M        | 77.5u           | 1.330m                   | 1.052m                   | 1.122              |
| 6                               | 1                | 18M        | 63.9u           | -                        | -                        | 110.3m             |
| 7                               | 2                | 19M        | 94.4u           | 1.826m                   | -                        | 636.9m             |
| 8                               | 2                | 20M        | 64.5u           | 1.887m                   | -                        | 1.019              |
| 9                               | 3                | 7M         | 74.8u           | 1.011m                   | 1.304m                   | 1.126              |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_06  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 13   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5520MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 1                | 9M         | 85.9u           | -                        | -                        | 577.7m             |
| 2                               | 2                | 20M        | 73.0u           | 1.741m                   | -                        | 418.3m             |
| 3                               | 2                | 8M         | 65.8u           | 1.239m                   | -                        | 875.0m             |
| 4                               | 2                | 20M        | 79.4u           | 1.234m                   | -                        | 633.5m             |
| 5                               | 3                | 11M        | 56.5u           | 1.399m                   | 1.630m                   | 869.1m             |
| 6                               | 2                | 9M         | 80.4u           | 1.289m                   | -                        | 77.73m             |
| 7                               | 3                | 10M        | 97.9u           | 967.1u                   | 1.454m                   | 512.3m             |
| 8                               | 2                | 12M        | 73.8u           | 1.353m                   | -                        | 179.1m             |
| 9                               | 3                | 7M         | 56.5u           | 1.168m                   | 1.553m                   | 232.8m             |
| 10                              | 3                | 16M        | 92.3u           | 1.440m                   | 1.466m                   | 457.5m             |
| 11                              | 1                | 19M        | 62.3u           | -                        | -                        | 828.0m             |
| 12                              | 3                | 16M        | 81.6u           | 1.374m                   | 1.655m                   | 583.6m             |
| 13                              | 2                | 14M        | 63.2u           | 1.076m                   | -                        | 239.3m             |



Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_07

Number of Bursts in Trial: 19

Chrip Center Frequency: 5521MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 19M        | 59.5u           | -                        | -                        | 156.8m             |
| 2     | 2                | 15M        | 83.6u           | 1.578m                   | -                        | 511.4m             |
| 3     | 3                | 17M        | 60.9u           | 1.153m                   | 1.606m                   | 416.5m             |
| 4     | 2                | 11M        | 93.0u           | 1.830m                   | -                        | 141.7m             |
| 5     | 2                | 10M        | 59.6u           | 1.831m                   | -                        | 171.5m             |
| 6     | 1                | 16M        | 65.1u           | -                        | -                        | 329.3m             |
| 7     | 2                | 8M         | 50.2u           | 1.826m                   | -                        | 333.2m             |
| 8     | 3                | 19M        | 68.1u           | 1.857m                   | 1.003m                   | 483.2m             |
| 9     | 2                | 9M         | 99.6u           | 1.794m                   | -                        | 393.7m             |
| 10    | 3                | 19M        | 78.2u           | 1.683m                   | 1.446m                   | 229.9m             |
| 11    | 1                | 11M        | 65.9u           | -                        | -                        | 98.38m             |
| 12    | 2                | 17M        | 66.1u           | 1.432m                   | -                        | 622.7m             |
| 13    | 2                | 15M        | 97.3u           | 1.081m                   | -                        | 433.4m             |
| 14    | 1                | 15M        | 58.3u           | -                        | -                        | 453.0m             |
| 15    | 2                | 6M         | 75.0u           | 1.732m                   | -                        | 517.2m             |
| 16    | 1                | 7M         | 64.9u           | -                        | -                        | 396.3m             |
| 17    | 3                | 9M         | 71.7u           | 1.422m                   | 1.586m                   | 214.5m             |
| 18    | 2                | 12M        | 88.9u           | 1.520m                   | -                        | 69.25m             |
| 19    | 3                | 5M         | 58.1u           | 1.068m                   | 1.719m                   | 304.9m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_08

Number of Bursts in Trial: 17

Chrip Center Frequency: 5522MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 14M        | 84.3u           | 1.190m                   | -                        | 30.69m             |
| 2     | 2                | 17M        | 86.0u           | 1.872m                   | -                        | 397.6m             |
| 3     | 2                | 13M        | 66.2u           | 1.325m                   | -                        | 383.1m             |
| 4     | 3                | 5M         | 92.2u           | 1.576m                   | 1.324m                   | 693.6m             |
| 5     | 2                | 10M        | 96.1u           | 1.351m                   | -                        | 410.5m             |
| 6     | 3                | 16M        | 84.8u           | 1.699m                   | 1.501m                   | 528.4m             |
| 7     | 2                | 18M        | 60.5u           | 1.450m                   | -                        | 66.48m             |
| 8     | 1                | 6M         | 81.5u           | -                        | -                        | 128.5m             |
| 9     | 2                | 18M        | 67.0u           | 1.337m                   | -                        | 413.2m             |
| 10    | 2                | 10M        | 60.8u           | 1.745m                   | -                        | 457.9m             |
| 11    | 1                | 8M         | 82.9u           | -                        | -                        | 151.3m             |
| 12    | 2                | 7M         | 50.1u           | 1.015m                   | -                        | 329.0m             |
| 13    | 1                | 5M         | 66.1u           | -                        | -                        | 128.9m             |
| 14    | 2                | 6M         | 95.0u           | 1.264m                   | -                        | 522.3m             |
| 15    | 2                | 7M         | 50.9u           | 1.720m                   | -                        | 268.9m             |
| 16    | 3                | 14M        | 58.9u           | 1.067m                   | 1.686m                   | 458.1m             |
| 17    | 1                | 11M        | 70.1u           | -                        | -                        | 389.6m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_09

Number of Bursts in Trial: 11

Chrip Center Frequency: 5523MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 5M         | 75.0u           | 1.721m                   | -                        | 1.042              |
| 2     | 2                | 11M        | 59.5u           | 1.518m                   | -                        | 333.8m             |
| 3     | 2                | 12M        | 67.0u           | 1.913m                   | -                        | 269.9m             |
| 4     | 3                | 19M        | 85.7u           | 1.249m                   | 1.364m                   | 37.14m             |
| 5     | 3                | 8M         | 64.6u           | 1.181m                   | 1.751m                   | 408.1m             |
| 6     | 2                | 10M        | 92.5u           | 933.5u                   | -                        | 934.1m             |
| 7     | 2                | 7M         | 78.8u           | 1.629m                   | -                        | 800.6m             |
| 8     | 2                | 8M         | 80.8u           | 1.888m                   | -                        | 787.2m             |
| 9     | 2                | 10M        | 64.6u           | 1.250m                   | -                        | 578.8m             |
| 10    | 1                | 16M        | 51.7u           | -                        | -                        | 116.7m             |
| 11    | 1                | 15M        | 63.5u           | -                        | -                        | 438.5m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_10

Number of Bursts in Trial: 19

Chrip Center Frequency: 5524MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 3                | 19M        | 63.5u           | 1.520m                   | 1.316m                   | 157.8m             |
| 2     | 2                | 6M         | 74.0u           | 1.618m                   | -                        | 423.4m             |
| 3     | 2                | 16M        | 77.1u           | 1.676m                   | -                        | 351.2m             |
| 4     | 1                | 13M        | 79.8u           | -                        | -                        | 427.6m             |
| 5     | 3                | 9M         | 96.7u           | 1.475m                   | 1.718m                   | 411.8m             |
| 6     | 2                | 12M        | 65.2u           | 1.171m                   | -                        | 207.5m             |
| 7     | 2                | 10M        | 85.0u           | 1.357m                   | -                        | 72.16m             |
| 8     | 2                | 8M         | 96.0u           | 1.637m                   | -                        | 426.8m             |
| 9     | 2                | 19M        | 91.5u           | 1.602m                   | -                        | 333.1m             |
| 10    | 2                | 13M        | 70.1u           | 981.9u                   | -                        | 530.2m             |
| 11    | 2                | 15M        | 74.8u           | 1.679m                   | -                        | 297.3m             |
| 12    | 2                | 7M         | 64.8u           | 1.916m                   | -                        | 9.109m             |
| 13    | 1                | 19M        | 64.1u           | -                        | -                        | 104.0m             |
| 14    | 3                | 15M        | 88.4u           | 1.629m                   | 1.543m                   | 13.68m             |
| 15    | 2                | 6M         | 98.8u           | 1.572m                   | -                        | 91.11m             |
| 16    | 2                | 13M        | 66.3u           | 1.885m                   | -                        | 325.0m             |
| 17    | 2                | 13M        | 63.1u           | 1.637m                   | -                        | 149.0m             |
| 18    | 2                | 16M        | 64.8u           | 1.666m                   | -                        | 28.55m             |
| 19    | 3                | 16M        | 94.5u           | 1.298m                   | 1.717m                   | 314.5m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_11

Number of Bursts in Trial: 20

Chrip Center Frequency: 5525MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 16M        | 90.9u           | 1.526m                   | -                        | 525.6m             |
| 2     | 2                | 19M        | 63.2u           | 1.091m                   | -                        | 67.59m             |
| 3     | 1                | 13M        | 95.7u           | -                        | -                        | 197.3m             |
| 4     | 2                | 20M        | 96.4u           | 1.656m                   | -                        | 68.64m             |
| 5     | 1                | 5M         | 65.2u           | -                        | -                        | 199.6m             |
| 6     | 1                | 7M         | 83.5u           | -                        | -                        | 540.0m             |
| 7     | 3                | 19M        | 95.9u           | 1.569m                   | 1.135m                   | 296.3m             |
| 8     | 3                | 13M        | 56.5u           | 1.204m                   | 1.114m                   | 166.0m             |
| 9     | 2                | 17M        | 83.5u           | 1.480m                   | -                        | 471.5m             |
| 10    | 2                | 10M        | 63.7u           | 1.569m                   | -                        | 123.8m             |
| 11    | 2                | 16M        | 76.7u           | 1.703m                   | -                        | 340.3m             |
| 12    | 2                | 15M        | 61.2u           | 1.904m                   | -                        | 294.1m             |
| 13    | 3                | 17M        | 56.9u           | 1.754m                   | 979.1u                   | 241.7m             |
| 14    | 2                | 17M        | 58.5u           | 1.564m                   | -                        | 535.4m             |
| 15    | 1                | 18M        | 61.9u           | -                        | -                        | 510.0m             |
| 16    | 2                | 9M         | 83.9u           | 1.168m                   | -                        | 172.9m             |
| 17    | 1                | 9M         | 52.4u           | -                        | -                        | 173.5m             |
| 18    | 2                | 5M         | 89.8u           | 1.425m                   | -                        | 138.8m             |
| 19    | 2                | 10M        | 97.4u           | 1.793m                   | -                        | 68.37m             |
| 20    | 3                | 8M         | 71.3u           | 961.7u                   | 1.411m                   | 42.34m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_12

Number of Bursts in Trial: 20

Chrip Center Frequency: 5526MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 13M        | 53.9u           | 1.060m                   | -                        | 197.3m             |
| 2     | 2                | 16M        | 60.5u           | 1.602m                   | -                        | 415.6m             |
| 3     | 1                | 7M         | 66.1u           | -                        | -                        | 125.7m             |
| 4     | 3                | 15M        | 55.0u           | 1.585m                   | 1.629m                   | 415.0m             |
| 5     | 2                | 18M        | 92.3u           | 1.542m                   | -                        | 437.0m             |
| 6     | 3                | 10M        | 85.7u           | 961.3u                   | 1.733m                   | 41.45m             |
| 7     | 2                | 19M        | 72.6u           | 1.230m                   | -                        | 150.5m             |
| 8     | 1                | 19M        | 81.5u           | -                        | -                        | 490.2m             |
| 9     | 3                | 10M        | 67.8u           | 1.053m                   | 1.336m                   | 31.63m             |
| 10    | 2                | 7M         | 86.7u           | 1.287m                   | -                        | 379.2m             |
| 11    | 2                | 6M         | 58.1u           | 1.849m                   | -                        | 421.9m             |
| 12    | 2                | 8M         | 74.4u           | 1.788m                   | -                        | 319.3m             |
| 13    | 2                | 16M        | 74.3u           | 1.595m                   | -                        | 101.9m             |
| 14    | 2                | 12M        | 81.0u           | 1.069m                   | -                        | 79.78m             |
| 15    | 2                | 13M        | 97.4u           | 1.742m                   | -                        | 227.5m             |
| 16    | 3                | 13M        | 89.1u           | 1.275m                   | 1.052m                   | 551.6m             |
| 17    | 2                | 17M        | 94.0u           | 1.122m                   | -                        | 23.70m             |
| 18    | 3                | 7M         | 98.7u           | 1.723m                   | 1.061m                   | 143.0m             |
| 19    | 3                | 9M         | 81.2u           | 1.199m                   | 1.830m                   | 118.2m             |
| 20    | 2                | 18M        | 69.6u           | 1.738m                   | -                        | 261.1m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_13

Number of Bursts in Trial: 19

Chrip Center Frequency: 5527MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 7M         | 69.5u           | 1.086m                   | -                        | 252.5m             |
| 2     | 2                | 8M         | 54.9u           | 1.425m                   | -                        | 84.94m             |
| 3     | 3                | 16M        | 64.1u           | 1.346m                   | 1.245m                   | 258.3m             |
| 4     | 2                | 12M        | 91.3u           | 1.034m                   | -                        | 258.5m             |
| 5     | 2                | 13M        | 69.2u           | 1.374m                   | -                        | 483.3m             |
| 6     | 3                | 15M        | 90.9u           | 1.239m                   | 991.1u                   | 262.4m             |
| 7     | 3                | 15M        | 66.7u           | 1.838m                   | 1.830m                   | 61.01m             |
| 8     | 2                | 9M         | 96.3u           | 1.837m                   | -                        | 183.0m             |
| 9     | 2                | 19M        | 79.4u           | 1.684m                   | -                        | 198.7m             |
| 10    | 2                | 17M        | 84.0u           | 1.297m                   | -                        | 516.2m             |
| 11    | 1                | 9M         | 95.7u           | -                        | -                        | 486.3m             |
| 12    | 2                | 19M        | 53.4u           | 1.125m                   | -                        | 237.4m             |
| 13    | 3                | 12M        | 89.1u           | 1.676m                   | 1.215m                   | 94.13m             |
| 14    | 3                | 13M        | 97.7u           | 906.3u                   | 1.712m                   | 157.8m             |
| 15    | 3                | 11M        | 84.6u           | 1.459m                   | 1.361m                   | 497.8m             |
| 16    | 2                | 8M         | 51.0u           | 976.0u                   | -                        | 312.8m             |
| 17    | 1                | 15M        | 73.9u           | -                        | -                        | 96.07m             |
| 18    | 2                | 17M        | 97.5u           | 1.287m                   | -                        | 192.4m             |
| 19    | 3                | 13M        | 53.2u           | 1.577m                   | 1.069m                   | 579.2m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_14  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 8    |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5528MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 14M        | 87.1u           | 1.765m                   | 1.565m                   | 61.39m             |
| 2                               | 2                | 12M        | 82.3u           | 1.197m                   | -                        | 1.371              |
| 3                               | 2                | 14M        | 58.9u           | 1.114m                   | -                        | 1.471              |
| 4                               | 2                | 14M        | 93.1u           | 1.005m                   | -                        | 1.080              |
| 5                               | 1                | 14M        | 97.1u           | -                        | -                        | 322.3m             |
| 6                               | 2                | 18M        | 74.9u           | 1.272m                   | -                        | 1.219              |
| 7                               | 1                | 17M        | 60.4u           | -                        | -                        | 365.3m             |
| 8                               | 2                | 16M        | 55.7u           | 1.388m                   | -                        | 502.8m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_15  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 12   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5529MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 10M        | 79.9u           | 1.281m                   | -                        | 809.3m             |
| 2                               | 1                | 8M         | 75.3u           | -                        | -                        | 799.0m             |
| 3                               | 3                | 12M        | 68.3u           | 1.808m                   | 999.7u                   | 834.5m             |
| 4                               | 1                | 7M         | 52.6u           | -                        | -                        | 42.61m             |
| 5                               | 2                | 16M        | 80.5u           | 1.105m                   | -                        | 898.0m             |
| 6                               | 3                | 5M         | 56.7u           | 1.669m                   | 1.257m                   | 284.5m             |
| 7                               | 2                | 12M        | 53.6u           | 1.109m                   | -                        | 636.5m             |
| 8                               | 3                | 15M        | 93.0u           | 910.0u                   | 1.678m                   | 213.6m             |
| 9                               | 3                | 15M        | 55.3u           | 1.406m                   | 1.258m                   | 95.26m             |
| 10                              | 1                | 17M        | 68.6u           | -                        | -                        | 765.3m             |
| 11                              | 2                | 9M         | 54.4u           | 1.828m                   | -                        | 736.0m             |
| 12                              | 2                | 17M        | 73.1u           | 1.012m                   | -                        | 829.9m             |



Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_16

Number of Bursts in Trial: 20

Chrip Center Frequency: 5530MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 18M        | 54.3u           | -                        | -                        | 356.1m             |
| 2     | 3                | 14M        | 94.5u           | 1.247m                   | 1.522m                   | 580.2m             |
| 3     | 1                | 8M         | 75.9u           | -                        | -                        | 462.9m             |
| 4     | 2                | 7M         | 62.9u           | 1.840m                   | -                        | 509.7m             |
| 5     | 2                | 11M        | 89.9u           | 1.425m                   | -                        | 347.3m             |
| 6     | 1                | 12M        | 80.6u           | -                        | -                        | 174.9m             |
| 7     | 2                | 12M        | 63.0u           | 1.759m                   | -                        | 189.8m             |
| 8     | 1                | 5M         | 83.4u           | -                        | -                        | 93.20m             |
| 9     | 1                | 16M        | 57.9u           | -                        | -                        | 249.4m             |
| 10    | 2                | 8M         | 52.0u           | 1.678m                   | -                        | 72.75m             |
| 11    | 1                | 13M        | 92.2u           | -                        | -                        | 360.0m             |
| 12    | 2                | 9M         | 75.2u           | 1.910m                   | -                        | 151.4m             |
| 13    | 3                | 16M        | 90.6u           | 1.807m                   | 1.184m                   | 419.1m             |
| 14    | 2                | 8M         | 62.2u           | 954.8u                   | -                        | 32.33m             |
| 15    | 3                | 19M        | 88.8u           | 1.407m                   | 1.201m                   | 376.7m             |
| 16    | 1                | 13M        | 50.1u           | -                        | -                        | 134.7m             |
| 17    | 1                | 9M         | 62.0u           | -                        | -                        | 276.9m             |
| 18    | 2                | 20M        | 96.8u           | 1.292m                   | -                        | 137.9m             |
| 19    | 3                | 14M        | 69.7u           | 1.184m                   | 955.3u                   | 413.2m             |
| 20    | 1                | 14M        | 82.8u           | -                        | -                        | 337.5m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_17  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 12   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5532MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 16M        | 91.2u           | 1.553m                   | -                        | 323.4m             |
| 2                               | 2                | 7M         | 51.9u           | 1.276m                   | -                        | 826.9m             |
| 3                               | 2                | 8M         | 89.5u           | 1.189m                   | -                        | 638.6m             |
| 4                               | 2                | 6M         | 78.0u           | 942.0u                   | -                        | 764.5m             |
| 5                               | 1                | 10M        | 68.4u           | -                        | -                        | 516.7m             |
| 6                               | 2                | 5M         | 95.1u           | 1.893m                   | -                        | 458.3m             |
| 7                               | 2                | 7M         | 53.9u           | 1.781m                   | -                        | 989.4m             |
| 8                               | 2                | 15M        | 58.1u           | 1.622m                   | -                        | 356.4m             |
| 9                               | 3                | 11M        | 51.1u           | 1.573m                   | 1.866m                   | 41.67m             |
| 10                              | 3                | 11M        | 51.5u           | 1.401m                   | 1.690m                   | 793.7m             |
| 11                              | 3                | 20M        | 89.4u           | 1.398m                   | 913.6u                   | 249.5m             |
| 12                              | 3                | 13M        | 92.8u           | 1.707m                   | 1.073m                   | 812.1m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_18  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 9    |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5533MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 8M         | 65.5u           | 1.612m                   | -                        | 1.059              |
| 2                               | 1                | 10M        | 85.3u           | -                        | -                        | 733.3m             |
| 3                               | 3                | 17M        | 68.3u           | 1.031m                   | 1.269m                   | 977.9m             |
| 4                               | 1                | 16M        | 59.1u           | -                        | -                        | 1.017              |
| 5                               | 2                | 13M        | 96.2u           | 1.661m                   | -                        | 34.33m             |
| 6                               | 2                | 9M         | 59.6u           | 1.423m                   | -                        | 86.83m             |
| 7                               | 2                | 12M        | 70.0u           | 1.724m                   | -                        | 51.12m             |
| 8                               | 2                | 7M         | 50.5u           | 1.405m                   | -                        | 814.3m             |
| 9                               | 2                | 10M        | 60.8u           | 1.598m                   | -                        | 693.0m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_19  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 11   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5534MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 1                | 10M        | 80.6u           | -                        | -                        | 652.2m             |
| 2                               | 3                | 14M        | 84.1u           | 1.477m                   | 1.702m                   | 794.9m             |
| 3                               | 2                | 11M        | 97.0u           | 1.160m                   | -                        | 273.1m             |
| 4                               | 1                | 17M        | 92.2u           | -                        | -                        | 1.077              |
| 5                               | 1                | 15M        | 78.6u           | -                        | -                        | 39.50m             |
| 6                               | 3                | 13M        | 70.2u           | 1.658m                   | 1.759m                   | 533.6m             |
| 7                               | 2                | 12M        | 87.0u           | 1.572m                   | -                        | 657.1m             |
| 8                               | 2                | 7M         | 72.8u           | 1.747m                   | -                        | 844.5m             |
| 9                               | 2                | 8M         | 92.9u           | 1.267m                   | -                        | 670.0m             |
| 10                              | 1                | 15M        | 59.1u           | -                        | -                        | 58.26m             |
| 11                              | 2                | 7M         | 76.0u           | 1.305m                   | -                        | 620.3m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_20  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 12   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5535MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 1                | 19M        | 57.3u           | -                        | -                        | 533.5m             |
| 2                               | 1                | 19M        | 54.9u           | -                        | -                        | 487.2m             |
| 3                               | 2                | 17M        | 61.0u           | 1.458m                   | -                        | 407.8m             |
| 4                               | 3                | 7M         | 64.2u           | 1.389m                   | 1.586m                   | 815.5m             |
| 5                               | 2                | 11M        | 90.4u           | 1.345m                   | -                        | 807.4m             |
| 6                               | 3                | 7M         | 81.3u           | 1.278m                   | 1.599m                   | 384.2m             |
| 7                               | 2                | 15M        | 51.9u           | 1.350m                   | -                        | 477.5m             |
| 8                               | 3                | 18M        | 73.9u           | 1.676m                   | 1.256m                   | 840.9m             |
| 9                               | 2                | 10M        | 83.6u           | 1.801m                   | -                        | 594.4m             |
| 10                              | 2                | 15M        | 63.0u           | 1.835m                   | -                        | 505.6m             |
| 11                              | 3                | 19M        | 82.3u           | 1.894m                   | 1.321m                   | 28.20m             |
| 12                              | 1                | 16M        | 97.0u           | -                        | -                        | 660.1m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_21

Number of Bursts in Trial: 16

Chrip Center Frequency: 5536MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 1                | 15M        | 85.0u           | -                        | -                        | 302.0m             |
| 2     | 2                | 16M        | 90.0u           | 1.364m                   | -                        | 295.1m             |
| 3     | 2                | 8M         | 60.0u           | 1.226m                   | -                        | 304.6m             |
| 4     | 2                | 20M        | 67.8u           | 1.419m                   | -                        | 722.8m             |
| 5     | 1                | 11M        | 89.2u           | -                        | -                        | 571.1m             |
| 6     | 1                | 12M        | 98.0u           | -                        | -                        | 711.1m             |
| 7     | 1                | 12M        | 76.9u           | -                        | -                        | 147.8m             |
| 8     | 3                | 14M        | 83.2u           | 1.026m                   | 1.726m                   | 289.0m             |
| 9     | 1                | 18M        | 93.9u           | -                        | -                        | 430.8m             |
| 10    | 2                | 14M        | 67.8u           | 1.504m                   | -                        | 150.2m             |
| 11    | 1                | 14M        | 54.5u           | -                        | -                        | 729.7m             |
| 12    | 2                | 16M        | 93.4u           | 1.835m                   | -                        | 624.5m             |
| 13    | 1                | 17M        | 66.0u           | -                        | -                        | 70.58m             |
| 14    | 3                | 15M        | 74.5u           | 958.5u                   | 1.026m                   | 199.2m             |
| 15    | 2                | 14M        | 62.8u           | 1.734m                   | -                        | 471.7m             |
| 16    | 2                | 5M         | 91.4u           | 1.054m                   | -                        | 672.3m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_22

Number of Bursts in Trial: 11

Chrip Center Frequency: 5537MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 11M        | 80.8u           | 1.059m                   | -                        | 764.1m             |
| 2     | 2                | 10M        | 66.5u           | 1.599m                   | -                        | 411.4m             |
| 3     | 3                | 14M        | 53.6u           | 1.104m                   | 1.106m                   | 645.2m             |
| 4     | 3                | 14M        | 65.4u           | 1.922m                   | 1.016m                   | 407.2m             |
| 5     | 3                | 8M         | 78.0u           | 1.465m                   | 1.446m                   | 1.007              |
| 6     | 2                | 9M         | 59.6u           | 1.123m                   | -                        | 494.9m             |
| 7     | 2                | 14M        | 50.6u           | 1.589m                   | -                        | 478.0m             |
| 8     | 1                | 19M        | 58.8u           | -                        | -                        | 651.0m             |
| 9     | 2                | 9M         | 56.0u           | 1.569m                   | -                        | 474.0m             |
| 10    | 3                | 7M         | 87.7u           | 1.149m                   | 1.000m                   | 1.033              |
| 11    | 1                | 16M        | 50.6u           | -                        | -                        | 240.7m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_23  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 13   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5538MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 2                | 15M        | 82.0u           | 1.872m                   | -                        | 346.5m             |
| 2                               | 2                | 10M        | 96.7u           | 1.596m                   | -                        | 295.1m             |
| 3                               | 2                | 15M        | 96.3u           | 1.520m                   | -                        | 903.8m             |
| 4                               | 2                | 13M        | 51.1u           | 1.455m                   | -                        | 912.6m             |
| 5                               | 3                | 15M        | 97.6u           | 1.676m                   | 1.426m                   | 30.55m             |
| 6                               | 2                | 10M        | 89.9u           | 1.313m                   | -                        | 241.2m             |
| 7                               | 3                | 16M        | 54.6u           | 968.4u                   | 961.4u                   | 181.6m             |
| 8                               | 2                | 11M        | 79.4u           | 1.149m                   | -                        | 167.3m             |
| 9                               | 3                | 13M        | 84.5u           | 1.107m                   | 1.504m                   | 803.5m             |
| 10                              | 2                | 19M        | 75.2u           | 1.419m                   | -                        | 263.5m             |
| 11                              | 3                | 6M         | 68.2u           | 1.201m                   | 1.520m                   | 599.2m             |
| 12                              | 3                | 5M         | 66.5u           | 1.683m                   | 1.591m                   | 654.5m             |
| 13                              | 3                | 10M        | 96.1u           | 1.150m                   | 1.621m                   | 495.7m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_24  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 9    |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5539MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 13M        | 99.4u           | 1.649m                   | 992.6u                   | 956.0m             |
| 2                               | 2                | 15M        | 78.5u           | 1.058m                   | -                        | 726.3m             |
| 3                               | 2                | 16M        | 63.5u           | 1.497m                   | -                        | 34.09m             |
| 4                               | 3                | 9M         | 57.5u           | 1.399m                   | 1.696m                   | 434.2m             |
| 5                               | 2                | 11M        | 94.2u           | 1.305m                   | -                        | 751.6m             |
| 6                               | 2                | 10M        | 57.8u           | 1.068m                   | -                        | 837.2m             |
| 7                               | 2                | 7M         | 60.4u           | 1.727m                   | -                        | 209.6m             |
| 8                               | 1                | 15M        | 76.5u           | -                        | -                        | 1.148              |
| 9                               | 2                | 18M        | 62.8u           | 1.288m                   | -                        | 1.201              |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_25  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 11   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5540MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 16M        | 78.7u           | 1.329m                   | 1.448m                   | 601.3m             |
| 2                               | 3                | 17M        | 85.5u           | 1.223m                   | 1.422m                   | 287.5m             |
| 3                               | 2                | 7M         | 85.3u           | 1.192m                   | -                        | 169.2m             |
| 4                               | 2                | 14M        | 94.2u           | 1.824m                   | -                        | 74.75m             |
| 5                               | 1                | 18M        | 71.6u           | -                        | -                        | 333.2m             |
| 6                               | 1                | 11M        | 59.2u           | -                        | -                        | 37.23m             |
| 7                               | 2                | 14M        | 67.8u           | 1.387m                   | -                        | 645.7m             |
| 8                               | 1                | 7M         | 53.4u           | -                        | -                        | 219.7m             |
| 9                               | 2                | 14M        | 82.3u           | 1.820m                   | -                        | 795.7m             |
| 10                              | 1                | 13M        | 55.2u           | -                        | -                        | 439.1m             |
| 11                              | 3                | 6M         | 64.1u           | 1.358m                   | 1.151m                   | 796.2m             |

| Long Pulse Radar Test Signal    |                  |            |                 |                          |                          |                    |
|---------------------------------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| Test Signal Name: LP_Signal_26  |                  |            |                 |                          |                          |                    |
| Number of Bursts in Trial: 10   |                  |            |                 |                          |                          |                    |
| Chrip Center Frequency: 5541MHz |                  |            |                 |                          |                          |                    |
| Burst                           | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
| 1                               | 3                | 15M        | 69.2u           | 1.694m                   | 1.760m                   | 52.91m             |
| 2                               | 3                | 17M        | 59.0u           | 1.410m                   | 1.037m                   | 1.168              |
| 3                               | 3                | 11M        | 78.5u           | 1.643m                   | 1.190m                   | 243.2m             |
| 4                               | 2                | 6M         | 82.8u           | 1.640m                   | -                        | 1.140              |
| 5                               | 1                | 12M        | 74.2u           | -                        | -                        | 861.1m             |
| 6                               | 2                | 8M         | 90.1u           | 1.869m                   | -                        | 1.099              |
| 7                               | 2                | 10M        | 73.0u           | 1.352m                   | -                        | 407.3m             |
| 8                               | 2                | 14M        | 86.8u           | 1.238m                   | -                        | 316.1m             |
| 9                               | 3                | 6M         | 67.7u           | 1.261m                   | 1.104m                   | 614.7m             |
| 10                              | 2                | 13M        | 63.3u           | 1.234m                   | -                        | 579.9m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_27

Number of Bursts in Trial: 9

Chrip Center Frequency: 5542MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 13M        | 50.7u           | 1.676m                   | -                        | 396.1m             |
| 2     | 2                | 11M        | 57.3u           | 972.7u                   | -                        | 371.9m             |
| 3     | 1                | 11M        | 92.5u           | -                        | -                        | 1.007              |
| 4     | 3                | 9M         | 90.1u           | 938.9u                   | 1.176m                   | 1.291              |
| 5     | 3                | 17M        | 75.1u           | 1.382m                   | 1.914m                   | 1.033              |
| 6     | 1                | 12M        | 87.6u           | -                        | -                        | 234.2m             |
| 7     | 3                | 7M         | 83.8u           | 1.274m                   | 1.764m                   | 1.007              |
| 8     | 1                | 11M        | 68.8u           | -                        | -                        | 691.0m             |
| 9     | 2                | 10M        | 65.5u           | 1.282m                   | -                        | 1.047              |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_28

Number of Bursts in Trial: 11

Chrip Center Frequency: 5543MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 3                | 20M        | 54.2u           | 1.297m                   | 1.736m                   | 354.2m             |
| 2     | 1                | 18M        | 92.9u           | -                        | -                        | 71.46m             |
| 3     | 3                | 16M        | 61.3u           | 1.616m                   | 1.217m                   | 362.1m             |
| 4     | 3                | 19M        | 67.3u           | 1.069m                   | 1.013m                   | 766.7m             |
| 5     | 2                | 14M        | 72.3u           | 956.7u                   | -                        | 909.2m             |
| 6     | 2                | 8M         | 75.0u           | 1.230m                   | -                        | 29.21m             |
| 7     | 3                | 8M         | 97.7u           | 1.011m                   | 1.208m                   | 786.3m             |
| 8     | 2                | 8M         | 96.5u           | 1.780m                   | -                        | 112.8m             |
| 9     | 1                | 10M        | 84.6u           | -                        | -                        | 386.8m             |
| 10    | 1                | 7M         | 50.5u           | -                        | -                        | 22.32m             |
| 11    | 1                | 11M        | 63.3u           | -                        | -                        | 330.4m             |



Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_29

Number of Bursts in Trial: 14

Chrip Center Frequency: 5544MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 3                | 16M        | 60.3u           | 1.726m                   | 961.7u                   | 74.70m             |
| 2     | 3                | 10M        | 89.9u           | 1.470m                   | 1.781m                   | 776.6m             |
| 3     | 1                | 10M        | 60.2u           | -                        | -                        | 319.7m             |
| 4     | 3                | 11M        | 66.1u           | 1.529m                   | 1.393m                   | 511.2m             |
| 5     | 2                | 13M        | 57.2u           | 1.770m                   | -                        | 511.6m             |
| 6     | 2                | 6M         | 58.2u           | 1.186m                   | -                        | 208.0m             |
| 7     | 3                | 19M        | 54.1u           | 1.142m                   | 1.062m                   | 369.0m             |
| 8     | 1                | 16M        | 78.4u           | -                        | -                        | 665.3m             |
| 9     | 2                | 10M        | 75.5u           | 1.027m                   | -                        | 539.1m             |
| 10    | 1                | 19M        | 86.4u           | -                        | -                        | 444.0m             |
| 11    | 3                | 7M         | 70.0u           | 1.390m                   | 1.493m                   | 437.8m             |
| 12    | 1                | 16M        | 52.3u           | -                        | -                        | 838.7m             |
| 13    | 2                | 11M        | 61.4u           | 1.880m                   | -                        | 757.1m             |
| 14    | 3                | 5M         | 88.8u           | 1.391m                   | 917.2u                   | 747.2m             |

Long Pulse Radar Test Signal

Test Signal Name: LP\_Signal\_30

Number of Bursts in Trial: 20

Chrip Center Frequency: 5545MHz

| Burst | Pulses per Burst | Chrip (Hz) | Pulse Width (s) | Pulse 1 to 2 Spacing (s) | Pulse 2 to 3 Spacing (s) | Start Location (s) |
|-------|------------------|------------|-----------------|--------------------------|--------------------------|--------------------|
| 1     | 2                | 9M         | 82.5u           | 1.272m                   | -                        | 575.7m             |
| 2     | 1                | 12M        | 71.0u           | -                        | -                        | 43.73m             |
| 3     | 2                | 20M        | 72.7u           | 1.581m                   | -                        | 13.17m             |
| 4     | 2                | 8M         | 50.5u           | 1.679m                   | -                        | 302.9m             |
| 5     | 1                | 19M        | 69.7u           | -                        | -                        | 116.5m             |
| 6     | 2                | 12M        | 95.1u           | 987.9u                   | -                        | 585.8m             |
| 7     | 2                | 13M        | 71.5u           | 1.355m                   | -                        | 480.2m             |
| 8     | 2                | 7M         | 56.2u           | 1.277m                   | -                        | 340.3m             |
| 9     | 3                | 18M        | 99.8u           | 968.2u                   | 1.845m                   | 274.5m             |
| 10    | 3                | 18M        | 90.9u           | 1.369m                   | 1.379m                   | 78.28m             |
| 11    | 3                | 11M        | 82.0u           | 1.261m                   | 1.737m                   | 403.4m             |
| 12    | 2                | 9M         | 89.3u           | 1.353m                   | -                        | 581.3m             |
| 13    | 2                | 16M        | 97.9u           | 1.331m                   | -                        | 596.7m             |
| 14    | 1                | 11M        | 78.1u           | -                        | -                        | 50.82m             |
| 15    | 3                | 7M         | 80.7u           | 1.566m                   | 1.247m                   | 260.8m             |
| 16    | 2                | 19M        | 59.9u           | 1.095m                   | -                        | 482.4m             |
| 17    | 3                | 19M        | 69.9u           | 1.278m                   | 1.437m                   | 265.6m             |
| 18    | 1                | 13M        | 67.5u           | -                        | -                        | 52.23m             |
| 19    | 3                | 10M        | 57.5u           | 1.784m                   | 1.123m                   | 251.9m             |
| 20    | 2                | 18M        | 62.7u           | 1.289m                   | -                        | 261.2m             |

| Type 6 Radar Statistical Performances |                  |                 |         |                         |
|---------------------------------------|------------------|-----------------|---------|-------------------------|
| Trial #                               | Pulses per Burst | Pulse Width (s) | PRI (s) | Detection               |
| 1                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 2                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 3                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 4                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 5                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 6                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 7                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 8                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 9                                     | 9                | 1.0u            | 333.0u  | Yes                     |
| 10                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 11                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 12                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 13                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 14                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 15                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 16                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 17                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 18                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 19                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 20                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 21                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 22                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 23                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 24                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 25                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 26                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 27                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 28                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 29                                    | 9                | 1.0u            | 333.0u  | Yes                     |
| 30                                    | 9                | 1.0u            | 333.0u  | Yes                     |
|                                       |                  |                 |         | Detection Rate: 100.0 % |

| Type 6 Radar Statistical Performances |                                 |                         |
|---------------------------------------|---------------------------------|-------------------------|
| Trial #                               | Hopping Frequency Sequence Name | Detection               |
| 1                                     | HOP_FREQ_SEQ_01                 | Yes                     |
| 2                                     | HOP_FREQ_SEQ_02                 | Yes                     |
| 3                                     | HOP_FREQ_SEQ_03                 | Yes                     |
| 4                                     | HOP_FREQ_SEQ_04                 | Yes                     |
| 5                                     | HOP_FREQ_SEQ_05                 | Yes                     |
| 6                                     | HOP_FREQ_SEQ_06                 | Yes                     |
| 7                                     | HOP_FREQ_SEQ_07                 | Yes                     |
| 8                                     | HOP_FREQ_SEQ_08                 | Yes                     |
| 9                                     | HOP_FREQ_SEQ_09                 | Yes                     |
| 10                                    | HOP_FREQ_SEQ_10                 | Yes                     |
| 11                                    | HOP_FREQ_SEQ_11                 | Yes                     |
| 12                                    | HOP_FREQ_SEQ_12                 | Yes                     |
| 13                                    | HOP_FREQ_SEQ_13                 | Yes                     |
| 14                                    | HOP_FREQ_SEQ_14                 | Yes                     |
| 15                                    | HOP_FREQ_SEQ_15                 | Yes                     |
| 16                                    | HOP_FREQ_SEQ_16                 | Yes                     |
| 17                                    | HOP_FREQ_SEQ_17                 | Yes                     |
| 18                                    | HOP_FREQ_SEQ_18                 | Yes                     |
| 19                                    | HOP_FREQ_SEQ_19                 | Yes                     |
| 20                                    | HOP_FREQ_SEQ_20                 | Yes                     |
| 21                                    | HOP_FREQ_SEQ_21                 | Yes                     |
| 22                                    | HOP_FREQ_SEQ_22                 | Yes                     |
| 23                                    | HOP_FREQ_SEQ_23                 | Yes                     |
| 24                                    | HOP_FREQ_SEQ_24                 | Yes                     |
| 25                                    | HOP_FREQ_SEQ_25                 | Yes                     |
| 26                                    | HOP_FREQ_SEQ_26                 | Yes                     |
| 27                                    | HOP_FREQ_SEQ_27                 | Yes                     |
| 28                                    | HOP_FREQ_SEQ_28                 | Yes                     |
| 29                                    | HOP_FREQ_SEQ_29                 | Yes                     |
| 30                                    | HOP_FREQ_SEQ_30                 | Yes                     |
|                                       |                                 | Detection Rate: 100.0 % |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_01 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.661G            | 2    | 5.682G            | 3    | 5.347G            | 4    | 5.275G            |
| 5                                                | 5.582G            | 6    | 5.334G            | 7    | 5.691G            | 8    | 5.453G            |
| 9                                                | 5.693G            | 10   | 5.601G            | 11   | 5.713G            | 12   | 5.585G            |
| 13                                               | 5.341G            | 14   | 5.511G            | 15   | 5.445G            | 16   | 5.670G            |
| 17                                               | 5.666G            | 18   | 5.296G            | 19   | 5.465G            | 20   | 5.679G            |
| 21                                               | 5.256G            | 22   | 5.714G            | 23   | 5.494G            | 24   | 5.454G            |
| 25                                               | 5.317G            | 26   | 5.290G            | 27   | 5.376G            | 28   | 5.612G            |
| 29                                               | 5.648G            | 30   | 5.439G            | 31   | 5.474G            | 32   | 5.563G            |
| 33                                               | 5.416G            | 34   | 5.721G            | 35   | 5.351G            | 36   | 5.668G            |
| 37                                               | 5.435G            | 38   | 5.440G            | 39   | 5.664G            | 40   | 5.369G            |
| 41                                               | 5.600G            | 42   | 5.292G            | 43   | 5.534G            | 44   | 5.708G            |
| 45                                               | 5.624G            | 46   | 5.537G            | 47   | 5.652G            | 48   | 5.655G            |
| 49                                               | 5.374G            | 50   | 5.336G            | 51   | 5.643G            | 52   | 5.437G            |
| 53                                               | 5.533G            | 54   | 5.482G            | 55   | 5.285G            | 56   | 5.443G            |
| 57                                               | 5.501G            | 58   | 5.547G            | 59   | 5.274G            | 60   | 5.650G            |
| 61                                               | 5.683G            | 62   | 5.615G            | 63   | 5.280G            | 64   | 5.469G            |
| 65                                               | 5.628G            | 66   | 5.639G            | 67   | 5.426G            | 68   | 5.379G            |
| 69                                               | 5.393G            | 70   | 5.479G            | 71   | 5.706G            | 72   | 5.604G            |
| 73                                               | 5.315G            | 74   | 5.605G            | 75   | 5.371G            | 76   | 5.409G            |
| 77                                               | 5.282G            | 78   | 5.572G            | 79   | 5.333G            | 80   | 5.272G            |
| 81                                               | 5.645G            | 82   | 5.588G            | 83   | 5.402G            | 84   | 5.399G            |
| 85                                               | 5.442G            | 86   | 5.258G            | 87   | 5.673G            | 88   | 5.575G            |
| 89                                               | 5.309G            | 90   | 5.570G            | 91   | 5.313G            | 92   | 5.701G            |
| 93                                               | 5.678G            | 94   | 5.510G            | 95   | 5.622G            | 96   | 5.580G            |
| 97                                               | 5.700G            | 98   | 5.250G            | 99   | 5.456G            | 100  | 5.633G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_02 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.414G            | 2    | 5.439G            | 3    | 5.282G            | 4    | 5.592G            |
| 5                                                | 5.714G            | 6    | 5.570G            | 7    | 5.685G            | 8    | 5.466G            |
| 9                                                | 5.529G            | 10   | 5.637G            | 11   | 5.396G            | 12   | 5.708G            |
| 13                                               | 5.298G            | 14   | 5.361G            | 15   | 5.663G            | 16   | 5.651G            |
| 17                                               | 5.601G            | 18   | 5.690G            | 19   | 5.522G            | 20   | 5.557G            |
| 21                                               | 5.589G            | 22   | 5.391G            | 23   | 5.511G            | 24   | 5.263G            |
| 25                                               | 5.636G            | 26   | 5.284G            | 27   | 5.615G            | 28   | 5.408G            |
| 29                                               | 5.721G            | 30   | 5.318G            | 31   | 5.463G            | 32   | 5.562G            |
| 33                                               | 5.290G            | 34   | 5.250G            | 35   | 5.706G            | 36   | 5.452G            |
| 37                                               | 5.526G            | 38   | 5.588G            | 39   | 5.400G            | 40   | 5.399G            |
| 41                                               | 5.357G            | 42   | 5.541G            | 43   | 5.269G            | 44   | 5.552G            |
| 45                                               | 5.431G            | 46   | 5.481G            | 47   | 5.697G            | 48   | 5.724G            |
| 49                                               | 5.461G            | 50   | 5.322G            | 51   | 5.474G            | 52   | 5.476G            |
| 53                                               | 5.330G            | 54   | 5.359G            | 55   | 5.698G            | 56   | 5.358G            |
| 57                                               | 5.464G            | 58   | 5.547G            | 59   | 5.346G            | 60   | 5.386G            |
| 61                                               | 5.676G            | 62   | 5.560G            | 63   | 5.673G            | 64   | 5.543G            |
| 65                                               | 5.275G            | 66   | 5.691G            | 67   | 5.581G            | 68   | 5.598G            |
| 69                                               | 5.616G            | 70   | 5.471G            | 71   | 5.374G            | 72   | 5.405G            |
| 73                                               | 5.254G            | 74   | 5.537G            | 75   | 5.442G            | 76   | 5.315G            |
| 77                                               | 5.546G            | 78   | 5.274G            | 79   | 5.342G            | 80   | 5.671G            |
| 81                                               | 5.416G            | 82   | 5.545G            | 83   | 5.658G            | 84   | 5.512G            |
| 85                                               | 5.555G            | 86   | 5.381G            | 87   | 5.567G            | 88   | 5.672G            |
| 89                                               | 5.296G            | 90   | 5.595G            | 91   | 5.421G            | 92   | 5.299G            |
| 93                                               | 5.540G            | 94   | 5.701G            | 95   | 5.411G            | 96   | 5.376G            |
| 97                                               | 5.494G            | 98   | 5.329G            | 99   | 5.264G            | 100  | 5.270G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_03 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.679G            | 2    | 5.317G            | 3    | 5.547G            | 4    | 5.700G            |
| 5                                                | 5.503G            | 6    | 5.452G            | 7    | 5.250G            | 8    | 5.582G            |
| 9                                                | 5.521G            | 10   | 5.374G            | 11   | 5.535G            | 12   | 5.340G            |
| 13                                               | 5.686G            | 14   | 5.430G            | 15   | 5.264G            | 16   | 5.364G            |
| 17                                               | 5.306G            | 18   | 5.462G            | 19   | 5.309G            | 20   | 5.516G            |
| 21                                               | 5.499G            | 22   | 5.315G            | 23   | 5.639G            | 24   | 5.636G            |
| 25                                               | 5.724G            | 26   | 5.417G            | 27   | 5.335G            | 28   | 5.444G            |
| 29                                               | 5.458G            | 30   | 5.536G            | 31   | 5.432G            | 32   | 5.551G            |
| 33                                               | 5.477G            | 34   | 5.661G            | 35   | 5.677G            | 36   | 5.344G            |
| 37                                               | 5.675G            | 38   | 5.693G            | 39   | 5.441G            | 40   | 5.287G            |
| 41                                               | 5.681G            | 42   | 5.328G            | 43   | 5.712G            | 44   | 5.454G            |
| 45                                               | 5.357G            | 46   | 5.561G            | 47   | 5.271G            | 48   | 5.515G            |
| 49                                               | 5.608G            | 50   | 5.538G            | 51   | 5.506G            | 52   | 5.376G            |
| 53                                               | 5.584G            | 54   | 5.355G            | 55   | 5.705G            | 56   | 5.406G            |
| 57                                               | 5.260G            | 58   | 5.683G            | 59   | 5.422G            | 60   | 5.343G            |
| 61                                               | 5.605G            | 62   | 5.518G            | 63   | 5.316G            | 64   | 5.459G            |
| 65                                               | 5.722G            | 66   | 5.689G            | 67   | 5.577G            | 68   | 5.423G            |
| 69                                               | 5.702G            | 70   | 5.527G            | 71   | 5.500G            | 72   | 5.716G            |
| 73                                               | 5.587G            | 74   | 5.710G            | 75   | 5.528G            | 76   | 5.562G            |
| 77                                               | 5.568G            | 78   | 5.349G            | 79   | 5.523G            | 80   | 5.609G            |
| 81                                               | 5.481G            | 82   | 5.378G            | 83   | 5.637G            | 84   | 5.684G            |
| 85                                               | 5.261G            | 86   | 5.615G            | 87   | 5.299G            | 88   | 5.410G            |
| 89                                               | 5.358G            | 90   | 5.548G            | 91   | 5.715G            | 92   | 5.534G            |
| 93                                               | 5.370G            | 94   | 5.289G            | 95   | 5.600G            | 96   | 5.553G            |
| 97                                               | 5.525G            | 98   | 5.520G            | 99   | 5.572G            | 100  | 5.273G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_04 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.400G            | 2    | 5.348G            | 3    | 5.316G            | 4    | 5.506G            |
| 5                                                | 5.301G            | 6    | 5.657G            | 7    | 5.382G            | 8    | 5.300G            |
| 9                                                | 5.524G            | 10   | 5.617G            | 11   | 5.349G            | 12   | 5.646G            |
| 13                                               | 5.273G            | 14   | 5.283G            | 15   | 5.446G            | 16   | 5.588G            |
| 17                                               | 5.330G            | 18   | 5.417G            | 19   | 5.669G            | 20   | 5.528G            |
| 21                                               | 5.580G            | 22   | 5.679G            | 23   | 5.628G            | 24   | 5.621G            |
| 25                                               | 5.673G            | 26   | 5.651G            | 27   | 5.391G            | 28   | 5.444G            |
| 29                                               | 5.564G            | 30   | 5.685G            | 31   | 5.361G            | 32   | 5.454G            |
| 33                                               | 5.404G            | 34   | 5.690G            | 35   | 5.439G            | 36   | 5.380G            |
| 37                                               | 5.614G            | 38   | 5.516G            | 39   | 5.535G            | 40   | 5.536G            |
| 41                                               | 5.302G            | 42   | 5.388G            | 43   | 5.658G            | 44   | 5.426G            |
| 45                                               | 5.561G            | 46   | 5.550G            | 47   | 5.513G            | 48   | 5.451G            |
| 49                                               | 5.393G            | 50   | 5.560G            | 51   | 5.365G            | 52   | 5.703G            |
| 53                                               | 5.671G            | 54   | 5.684G            | 55   | 5.337G            | 56   | 5.256G            |
| 57                                               | 5.332G            | 58   | 5.571G            | 59   | 5.372G            | 60   | 5.544G            |
| 61                                               | 5.274G            | 62   | 5.723G            | 63   | 5.456G            | 64   | 5.520G            |
| 65                                               | 5.472G            | 66   | 5.425G            | 67   | 5.634G            | 68   | 5.702G            |
| 69                                               | 5.309G            | 70   | 5.710G            | 71   | 5.670G            | 72   | 5.533G            |
| 73                                               | 5.366G            | 74   | 5.724G            | 75   | 5.680G            | 76   | 5.595G            |
| 77                                               | 5.517G            | 78   | 5.287G            | 79   | 5.375G            | 80   | 5.574G            |
| 81                                               | 5.495G            | 82   | 5.328G            | 83   | 5.548G            | 84   | 5.668G            |
| 85                                               | 5.407G            | 86   | 5.579G            | 87   | 5.682G            | 88   | 5.291G            |
| 89                                               | 5.315G            | 90   | 5.586G            | 91   | 5.529G            | 92   | 5.584G            |
| 93                                               | 5.263G            | 94   | 5.541G            | 95   | 5.359G            | 96   | 5.340G            |
| 97                                               | 5.523G            | 98   | 5.543G            | 99   | 5.480G            | 100  | 5.485G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_05 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.319G            | 2    | 5.719G            | 3    | 5.506G            | 4    | 5.714G            |
| 5                                                | 5.382G            | 6    | 5.638G            | 7    | 5.336G            | 8    | 5.350G            |
| 9                                                | 5.416G            | 10   | 5.352G            | 11   | 5.309G            | 12   | 5.381G            |
| 13                                               | 5.517G            | 14   | 5.669G            | 15   | 5.534G            | 16   | 5.540G            |
| 17                                               | 5.705G            | 18   | 5.637G            | 19   | 5.551G            | 20   | 5.471G            |
| 21                                               | 5.287G            | 22   | 5.608G            | 23   | 5.541G            | 24   | 5.606G            |
| 25                                               | 5.709G            | 26   | 5.500G            | 27   | 5.689G            | 28   | 5.527G            |
| 29                                               | 5.422G            | 30   | 5.710G            | 31   | 5.568G            | 32   | 5.346G            |
| 33                                               | 5.575G            | 34   | 5.514G            | 35   | 5.347G            | 36   | 5.391G            |
| 37                                               | 5.362G            | 38   | 5.625G            | 39   | 5.640G            | 40   | 5.258G            |
| 41                                               | 5.398G            | 42   | 5.270G            | 43   | 5.511G            | 44   | 5.499G            |
| 45                                               | 5.684G            | 46   | 5.314G            | 47   | 5.272G            | 48   | 5.303G            |
| 49                                               | 5.647G            | 50   | 5.379G            | 51   | 5.476G            | 52   | 5.392G            |
| 53                                               | 5.494G            | 54   | 5.501G            | 55   | 5.377G            | 56   | 5.467G            |
| 57                                               | 5.507G            | 58   | 5.295G            | 59   | 5.686G            | 60   | 5.254G            |
| 61                                               | 5.306G            | 62   | 5.572G            | 63   | 5.290G            | 64   | 5.373G            |
| 65                                               | 5.302G            | 66   | 5.632G            | 67   | 5.320G            | 68   | 5.578G            |
| 69                                               | 5.539G            | 70   | 5.327G            | 71   | 5.487G            | 72   | 5.515G            |
| 73                                               | 5.571G            | 74   | 5.370G            | 75   | 5.666G            | 76   | 5.604G            |
| 77                                               | 5.368G            | 78   | 5.528G            | 79   | 5.414G            | 80   | 5.695G            |
| 81                                               | 5.429G            | 82   | 5.641G            | 83   | 5.436G            | 84   | 5.417G            |
| 85                                               | 5.269G            | 86   | 5.649G            | 87   | 5.529G            | 88   | 5.457G            |
| 89                                               | 5.283G            | 90   | 5.444G            | 91   | 5.603G            | 92   | 5.372G            |
| 93                                               | 5.664G            | 94   | 5.503G            | 95   | 5.680G            | 96   | 5.563G            |
| 97                                               | 5.712G            | 98   | 5.673G            | 99   | 5.650G            | 100  | 5.296G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_06 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.464G            | 2    | 5.500G            | 3    | 5.454G            | 4    | 5.723G            |
| 5                                                | 5.711G            | 6    | 5.679G            | 7    | 5.623G            | 8    | 5.303G            |
| 9                                                | 5.639G            | 10   | 5.651G            | 11   | 5.289G            | 12   | 5.657G            |
| 13                                               | 5.435G            | 14   | 5.551G            | 15   | 5.608G            | 16   | 5.335G            |
| 17                                               | 5.321G            | 18   | 5.467G            | 19   | 5.503G            | 20   | 5.543G            |
| 21                                               | 5.584G            | 22   | 5.481G            | 23   | 5.618G            | 24   | 5.650G            |
| 25                                               | 5.306G            | 26   | 5.366G            | 27   | 5.695G            | 28   | 5.328G            |
| 29                                               | 5.533G            | 30   | 5.461G            | 31   | 5.452G            | 32   | 5.708G            |
| 33                                               | 5.477G            | 34   | 5.479G            | 35   | 5.412G            | 36   | 5.407G            |
| 37                                               | 5.548G            | 38   | 5.683G            | 39   | 5.620G            | 40   | 5.315G            |
| 41                                               | 5.495G            | 42   | 5.416G            | 43   | 5.317G            | 44   | 5.327G            |
| 45                                               | 5.457G            | 46   | 5.641G            | 47   | 5.526G            | 48   | 5.309G            |
| 49                                               | 5.665G            | 50   | 5.636G            | 51   | 5.266G            | 52   | 5.675G            |
| 53                                               | 5.422G            | 54   | 5.271G            | 55   | 5.569G            | 56   | 5.288G            |
| 57                                               | 5.434G            | 58   | 5.505G            | 59   | 5.272G            | 60   | 5.643G            |
| 61                                               | 5.534G            | 62   | 5.259G            | 63   | 5.252G            | 64   | 5.592G            |
| 65                                               | 5.662G            | 66   | 5.267G            | 67   | 5.382G            | 68   | 5.433G            |
| 69                                               | 5.485G            | 70   | 5.682G            | 71   | 5.688G            | 72   | 5.590G            |
| 73                                               | 5.332G            | 74   | 5.269G            | 75   | 5.716G            | 76   | 5.427G            |
| 77                                               | 5.549G            | 78   | 5.456G            | 79   | 5.348G            | 80   | 5.357G            |
| 81                                               | 5.458G            | 82   | 5.440G            | 83   | 5.692G            | 84   | 5.693G            |
| 85                                               | 5.638G            | 86   | 5.509G            | 87   | 5.567G            | 88   | 5.409G            |
| 89                                               | 5.307G            | 90   | 5.715G            | 91   | 5.552G            | 92   | 5.360G            |
| 93                                               | 5.292G            | 94   | 5.470G            | 95   | 5.441G            | 96   | 5.587G            |
| 97                                               | 5.444G            | 98   | 5.365G            | 99   | 5.310G            | 100  | 5.394G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_07 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.458G            | 2    | 5.662G            | 3    | 5.310G            | 4    | 5.348G            |
| 5                                                | 5.655G            | 6    | 5.508G            | 7    | 5.547G            | 8    | 5.650G            |
| 9                                                | 5.415G            | 10   | 5.350G            | 11   | 5.550G            | 12   | 5.474G            |
| 13                                               | 5.551G            | 14   | 5.450G            | 15   | 5.722G            | 16   | 5.417G            |
| 17                                               | 5.494G            | 18   | 5.409G            | 19   | 5.499G            | 20   | 5.327G            |
| 21                                               | 5.699G            | 22   | 5.403G            | 23   | 5.390G            | 24   | 5.448G            |
| 25                                               | 5.561G            | 26   | 5.632G            | 27   | 5.564G            | 28   | 5.618G            |
| 29                                               | 5.513G            | 30   | 5.260G            | 31   | 5.339G            | 32   | 5.437G            |
| 33                                               | 5.463G            | 34   | 5.406G            | 35   | 5.446G            | 36   | 5.690G            |
| 37                                               | 5.671G            | 38   | 5.723G            | 39   | 5.588G            | 40   | 5.712G            |
| 41                                               | 5.709G            | 42   | 5.328G            | 43   | 5.451G            | 44   | 5.438G            |
| 45                                               | 5.428G            | 46   | 5.479G            | 47   | 5.320G            | 48   | 5.413G            |
| 49                                               | 5.529G            | 50   | 5.554G            | 51   | 5.517G            | 52   | 5.663G            |
| 53                                               | 5.642G            | 54   | 5.331G            | 55   | 5.715G            | 56   | 5.677G            |
| 57                                               | 5.528G            | 58   | 5.330G            | 59   | 5.526G            | 60   | 5.570G            |
| 61                                               | 5.675G            | 62   | 5.600G            | 63   | 5.654G            | 64   | 5.595G            |
| 65                                               | 5.361G            | 66   | 5.633G            | 67   | 5.540G            | 68   | 5.357G            |
| 69                                               | 5.278G            | 70   | 5.300G            | 71   | 5.641G            | 72   | 5.258G            |
| 73                                               | 5.373G            | 74   | 5.273G            | 75   | 5.656G            | 76   | 5.408G            |
| 77                                               | 5.649G            | 78   | 5.500G            | 79   | 5.421G            | 80   | 5.630G            |
| 81                                               | 5.396G            | 82   | 5.251G            | 83   | 5.533G            | 84   | 5.433G            |
| 85                                               | 5.370G            | 86   | 5.524G            | 87   | 5.386G            | 88   | 5.605G            |
| 89                                               | 5.353G            | 90   | 5.256G            | 91   | 5.640G            | 92   | 5.591G            |
| 93                                               | 5.488G            | 94   | 5.312G            | 95   | 5.295G            | 96   | 5.364G            |
| 97                                               | 5.646G            | 98   | 5.599G            | 99   | 5.697G            | 100  | 5.696G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_08 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.495G            | 2    | 5.553G            | 3    | 5.386G            | 4    | 5.410G            |
| 5                                                | 5.686G            | 6    | 5.417G            | 7    | 5.287G            | 8    | 5.575G            |
| 9                                                | 5.292G            | 10   | 5.356G            | 11   | 5.537G            | 12   | 5.589G            |
| 13                                               | 5.291G            | 14   | 5.624G            | 15   | 5.453G            | 16   | 5.485G            |
| 17                                               | 5.607G            | 18   | 5.339G            | 19   | 5.650G            | 20   | 5.660G            |
| 21                                               | 5.601G            | 22   | 5.486G            | 23   | 5.431G            | 24   | 5.328G            |
| 25                                               | 5.515G            | 26   | 5.678G            | 27   | 5.448G            | 28   | 5.371G            |
| 29                                               | 5.556G            | 30   | 5.661G            | 31   | 5.659G            | 32   | 5.599G            |
| 33                                               | 5.536G            | 34   | 5.521G            | 35   | 5.261G            | 36   | 5.305G            |
| 37                                               | 5.337G            | 38   | 5.646G            | 39   | 5.588G            | 40   | 5.527G            |
| 41                                               | 5.574G            | 42   | 5.642G            | 43   | 5.695G            | 44   | 5.380G            |
| 45                                               | 5.358G            | 46   | 5.484G            | 47   | 5.713G            | 48   | 5.629G            |
| 49                                               | 5.676G            | 50   | 5.704G            | 51   | 5.267G            | 52   | 5.555G            |
| 53                                               | 5.293G            | 54   | 5.326G            | 55   | 5.461G            | 56   | 5.544G            |
| 57                                               | 5.499G            | 58   | 5.342G            | 59   | 5.420G            | 60   | 5.437G            |
| 61                                               | 5.290G            | 62   | 5.579G            | 63   | 5.597G            | 64   | 5.426G            |
| 65                                               | 5.277G            | 66   | 5.389G            | 67   | 5.257G            | 68   | 5.557G            |
| 69                                               | 5.593G            | 70   | 5.393G            | 71   | 5.341G            | 72   | 5.405G            |
| 73                                               | 5.644G            | 74   | 5.618G            | 75   | 5.594G            | 76   | 5.477G            |
| 77                                               | 5.696G            | 78   | 5.447G            | 79   | 5.577G            | 80   | 5.325G            |
| 81                                               | 5.474G            | 82   | 5.616G            | 83   | 5.647G            | 84   | 5.679G            |
| 85                                               | 5.309G            | 86   | 5.440G            | 87   | 5.652G            | 88   | 5.627G            |
| 89                                               | 5.428G            | 90   | 5.382G            | 91   | 5.419G            | 92   | 5.501G            |
| 93                                               | 5.637G            | 94   | 5.600G            | 95   | 5.306G            | 96   | 5.517G            |
| 97                                               | 5.387G            | 98   | 5.545G            | 99   | 5.497G            | 100  | 5.488G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_09 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.307G            | 2    | 5.564G            | 3    | 5.439G            | 4    | 5.660G            |
| 5                                                | 5.654G            | 6    | 5.676G            | 7    | 5.652G            | 8    | 5.527G            |
| 9                                                | 5.422G            | 10   | 5.452G            | 11   | 5.378G            | 12   | 5.550G            |
| 13                                               | 5.387G            | 14   | 5.542G            | 15   | 5.563G            | 16   | 5.290G            |
| 17                                               | 5.431G            | 18   | 5.516G            | 19   | 5.575G            | 20   | 5.671G            |
| 21                                               | 5.470G            | 22   | 5.696G            | 23   | 5.580G            | 24   | 5.591G            |
| 25                                               | 5.599G            | 26   | 5.703G            | 27   | 5.421G            | 28   | 5.679G            |
| 29                                               | 5.688G            | 30   | 5.395G            | 31   | 5.257G            | 32   | 5.388G            |
| 33                                               | 5.335G            | 34   | 5.390G            | 35   | 5.364G            | 36   | 5.666G            |
| 37                                               | 5.535G            | 38   | 5.450G            | 39   | 5.322G            | 40   | 5.686G            |
| 41                                               | 5.677G            | 42   | 5.325G            | 43   | 5.578G            | 44   | 5.344G            |
| 45                                               | 5.655G            | 46   | 5.295G            | 47   | 5.430G            | 48   | 5.522G            |
| 49                                               | 5.331G            | 50   | 5.424G            | 51   | 5.508G            | 52   | 5.368G            |
| 53                                               | 5.457G            | 54   | 5.285G            | 55   | 5.673G            | 56   | 5.689G            |
| 57                                               | 5.362G            | 58   | 5.698G            | 59   | 5.401G            | 60   | 5.691G            |
| 61                                               | 5.624G            | 62   | 5.482G            | 63   | 5.473G            | 64   | 5.310G            |
| 65                                               | 5.610G            | 66   | 5.558G            | 67   | 5.365G            | 68   | 5.273G            |
| 69                                               | 5.298G            | 70   | 5.380G            | 71   | 5.567G            | 72   | 5.708G            |
| 73                                               | 5.600G            | 74   | 5.269G            | 75   | 5.303G            | 76   | 5.398G            |
| 77                                               | 5.308G            | 78   | 5.404G            | 79   | 5.718G            | 80   | 5.499G            |
| 81                                               | 5.373G            | 82   | 5.593G            | 83   | 5.358G            | 84   | 5.468G            |
| 85                                               | 5.311G            | 86   | 5.488G            | 87   | 5.606G            | 88   | 5.363G            |
| 89                                               | 5.533G            | 90   | 5.700G            | 91   | 5.485G            | 92   | 5.346G            |
| 93                                               | 5.642G            | 94   | 5.256G            | 95   | 5.415G            | 96   | 5.721G            |
| 97                                               | 5.500G            | 98   | 5.381G            | 99   | 5.576G            | 100  | 5.585G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_10 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.512G            | 2    | 5.624G            | 3    | 5.511G            | 4    | 5.656G            |
| 5                                                | 5.314G            | 6    | 5.708G            | 7    | 5.617G            | 8    | 5.352G            |
| 9                                                | 5.544G            | 10   | 5.669G            | 11   | 5.391G            | 12   | 5.671G            |
| 13                                               | 5.416G            | 14   | 5.501G            | 15   | 5.568G            | 16   | 5.318G            |
| 17                                               | 5.643G            | 18   | 5.275G            | 19   | 5.661G            | 20   | 5.567G            |
| 21                                               | 5.424G            | 22   | 5.274G            | 23   | 5.650G            | 24   | 5.276G            |
| 25                                               | 5.581G            | 26   | 5.418G            | 27   | 5.290G            | 28   | 5.395G            |
| 29                                               | 5.550G            | 30   | 5.601G            | 31   | 5.413G            | 32   | 5.468G            |
| 33                                               | 5.358G            | 34   | 5.534G            | 35   | 5.285G            | 36   | 5.600G            |
| 37                                               | 5.553G            | 38   | 5.638G            | 39   | 5.625G            | 40   | 5.506G            |
| 41                                               | 5.559G            | 42   | 5.305G            | 43   | 5.526G            | 44   | 5.717G            |
| 45                                               | 5.539G            | 46   | 5.542G            | 47   | 5.427G            | 48   | 5.484G            |
| 49                                               | 5.251G            | 50   | 5.269G            | 51   | 5.715G            | 52   | 5.478G            |
| 53                                               | 5.454G            | 54   | 5.359G            | 55   | 5.252G            | 56   | 5.353G            |
| 57                                               | 5.514G            | 58   | 5.436G            | 59   | 5.316G            | 60   | 5.343G            |
| 61                                               | 5.255G            | 62   | 5.604G            | 63   | 5.626G            | 64   | 5.340G            |
| 65                                               | 5.310G            | 66   | 5.482G            | 67   | 5.450G            | 68   | 5.431G            |
| 69                                               | 5.546G            | 70   | 5.645G            | 71   | 5.447G            | 72   | 5.623G            |
| 73                                               | 5.572G            | 74   | 5.723G            | 75   | 5.566G            | 76   | 5.449G            |
| 77                                               | 5.477G            | 78   | 5.356G            | 79   | 5.459G            | 80   | 5.465G            |
| 81                                               | 5.547G            | 82   | 5.532G            | 83   | 5.517G            | 84   | 5.380G            |
| 85                                               | 5.437G            | 86   | 5.594G            | 87   | 5.648G            | 88   | 5.637G            |
| 89                                               | 5.503G            | 90   | 5.474G            | 91   | 5.422G            | 92   | 5.589G            |
| 93                                               | 5.655G            | 94   | 5.333G            | 95   | 5.344G            | 96   | 5.635G            |
| 97                                               | 5.412G            | 98   | 5.504G            | 99   | 5.652G            | 100  | 5.607G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_11 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.652G            | 2    | 5.570G            | 3    | 5.614G            | 4    | 5.430G            |
| 5                                                | 5.628G            | 6    | 5.368G            | 7    | 5.343G            | 8    | 5.681G            |
| 9                                                | 5.266G            | 10   | 5.707G            | 11   | 5.389G            | 12   | 5.409G            |
| 13                                               | 5.426G            | 14   | 5.458G            | 15   | 5.309G            | 16   | 5.330G            |
| 17                                               | 5.428G            | 18   | 5.598G            | 19   | 5.300G            | 20   | 5.621G            |
| 21                                               | 5.694G            | 22   | 5.566G            | 23   | 5.600G            | 24   | 5.423G            |
| 25                                               | 5.543G            | 26   | 5.644G            | 27   | 5.673G            | 28   | 5.528G            |
| 29                                               | 5.351G            | 30   | 5.503G            | 31   | 5.577G            | 32   | 5.595G            |
| 33                                               | 5.303G            | 34   | 5.572G            | 35   | 5.499G            | 36   | 5.632G            |
| 37                                               | 5.688G            | 38   | 5.525G            | 39   | 5.396G            | 40   | 5.315G            |
| 41                                               | 5.615G            | 42   | 5.436G            | 43   | 5.620G            | 44   | 5.386G            |
| 45                                               | 5.468G            | 46   | 5.712G            | 47   | 5.537G            | 48   | 5.534G            |
| 49                                               | 5.394G            | 50   | 5.697G            | 51   | 5.280G            | 52   | 5.488G            |
| 53                                               | 5.668G            | 54   | 5.716G            | 55   | 5.316G            | 56   | 5.591G            |
| 57                                               | 5.502G            | 58   | 5.392G            | 59   | 5.366G            | 60   | 5.255G            |
| 61                                               | 5.308G            | 62   | 5.292G            | 63   | 5.427G            | 64   | 5.327G            |
| 65                                               | 5.671G            | 66   | 5.610G            | 67   | 5.254G            | 68   | 5.660G            |
| 69                                               | 5.556G            | 70   | 5.553G            | 71   | 5.533G            | 72   | 5.522G            |
| 73                                               | 5.719G            | 74   | 5.446G            | 75   | 5.364G            | 76   | 5.439G            |
| 77                                               | 5.407G            | 78   | 5.440G            | 79   | 5.624G            | 80   | 5.265G            |
| 81                                               | 5.538G            | 82   | 5.710G            | 83   | 5.563G            | 84   | 5.500G            |
| 85                                               | 5.259G            | 86   | 5.271G            | 87   | 5.613G            | 88   | 5.698G            |
| 89                                               | 5.262G            | 90   | 5.622G            | 91   | 5.561G            | 92   | 5.687G            |
| 93                                               | 5.506G            | 94   | 5.648G            | 95   | 5.419G            | 96   | 5.541G            |
| 97                                               | 5.575G            | 98   | 5.701G            | 99   | 5.649G            | 100  | 5.551G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_12 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.711G            | 2    | 5.453G            | 3    | 5.383G            | 4    | 5.419G            |
| 5                                                | 5.398G            | 6    | 5.591G            | 7    | 5.470G            | 8    | 5.534G            |
| 9                                                | 5.411G            | 10   | 5.405G            | 11   | 5.306G            | 12   | 5.264G            |
| 13                                               | 5.354G            | 14   | 5.581G            | 15   | 5.406G            | 16   | 5.439G            |
| 17                                               | 5.340G            | 18   | 5.585G            | 19   | 5.697G            | 20   | 5.723G            |
| 21                                               | 5.274G            | 22   | 5.500G            | 23   | 5.368G            | 24   | 5.358G            |
| 25                                               | 5.446G            | 26   | 5.393G            | 27   | 5.332G            | 28   | 5.580G            |
| 29                                               | 5.283G            | 30   | 5.372G            | 31   | 5.300G            | 32   | 5.296G            |
| 33                                               | 5.321G            | 34   | 5.420G            | 35   | 5.499G            | 36   | 5.484G            |
| 37                                               | 5.661G            | 38   | 5.409G            | 39   | 5.478G            | 40   | 5.565G            |
| 41                                               | 5.437G            | 42   | 5.506G            | 43   | 5.634G            | 44   | 5.612G            |
| 45                                               | 5.289G            | 46   | 5.626G            | 47   | 5.445G            | 48   | 5.620G            |
| 49                                               | 5.495G            | 50   | 5.712G            | 51   | 5.665G            | 52   | 5.644G            |
| 53                                               | 5.386G            | 54   | 5.452G            | 55   | 5.527G            | 56   | 5.691G            |
| 57                                               | 5.288G            | 58   | 5.519G            | 59   | 5.337G            | 60   | 5.258G            |
| 61                                               | 5.388G            | 62   | 5.532G            | 63   | 5.394G            | 64   | 5.299G            |
| 65                                               | 5.702G            | 66   | 5.682G            | 67   | 5.327G            | 68   | 5.608G            |
| 69                                               | 5.267G            | 70   | 5.385G            | 71   | 5.466G            | 72   | 5.415G            |
| 73                                               | 5.362G            | 74   | 5.716G            | 75   | 5.647G            | 76   | 5.587G            |
| 77                                               | 5.455G            | 78   | 5.520G            | 79   | 5.704G            | 80   | 5.414G            |
| 81                                               | 5.444G            | 82   | 5.720G            | 83   | 5.713G            | 84   | 5.373G            |
| 85                                               | 5.604G            | 86   | 5.292G            | 87   | 5.593G            | 88   | 5.542G            |
| 89                                               | 5.689G            | 90   | 5.325G            | 91   | 5.632G            | 92   | 5.539G            |
| 93                                               | 5.594G            | 94   | 5.524G            | 95   | 5.347G            | 96   | 5.724G            |
| 97                                               | 5.281G            | 98   | 5.521G            | 99   | 5.605G            | 100  | 5.262G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_13 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.329G            | 2    | 5.719G            | 3    | 5.325G            | 4    | 5.419G            |
| 5                                                | 5.606G            | 6    | 5.510G            | 7    | 5.281G            | 8    | 5.571G            |
| 9                                                | 5.690G            | 10   | 5.423G            | 11   | 5.716G            | 12   | 5.266G            |
| 13                                               | 5.696G            | 14   | 5.607G            | 15   | 5.435G            | 16   | 5.394G            |
| 17                                               | 5.308G            | 18   | 5.665G            | 19   | 5.322G            | 20   | 5.600G            |
| 21                                               | 5.508G            | 22   | 5.518G            | 23   | 5.348G            | 24   | 5.471G            |
| 25                                               | 5.603G            | 26   | 5.724G            | 27   | 5.630G            | 28   | 5.330G            |
| 29                                               | 5.318G            | 30   | 5.278G            | 31   | 5.598G            | 32   | 5.405G            |
| 33                                               | 5.294G            | 34   | 5.464G            | 35   | 5.649G            | 36   | 5.583G            |
| 37                                               | 5.523G            | 38   | 5.663G            | 39   | 5.364G            | 40   | 5.382G            |
| 41                                               | 5.358G            | 42   | 5.353G            | 43   | 5.384G            | 44   | 5.277G            |
| 45                                               | 5.699G            | 46   | 5.406G            | 47   | 5.527G            | 48   | 5.470G            |
| 49                                               | 5.451G            | 50   | 5.568G            | 51   | 5.416G            | 52   | 5.386G            |
| 53                                               | 5.656G            | 54   | 5.389G            | 55   | 5.356G            | 56   | 5.501G            |
| 57                                               | 5.301G            | 58   | 5.346G            | 59   | 5.480G            | 60   | 5.367G            |
| 61                                               | 5.711G            | 62   | 5.529G            | 63   | 5.434G            | 64   | 5.581G            |
| 65                                               | 5.547G            | 66   | 5.307G            | 67   | 5.655G            | 68   | 5.582G            |
| 69                                               | 5.272G            | 70   | 5.631G            | 71   | 5.713G            | 72   | 5.556G            |
| 73                                               | 5.251G            | 74   | 5.397G            | 75   | 5.540G            | 76   | 5.537G            |
| 77                                               | 5.392G            | 78   | 5.381G            | 79   | 5.585G            | 80   | 5.575G            |
| 81                                               | 5.365G            | 82   | 5.579G            | 83   | 5.459G            | 84   | 5.404G            |
| 85                                               | 5.520G            | 86   | 5.639G            | 87   | 5.496G            | 88   | 5.331G            |
| 89                                               | 5.366G            | 90   | 5.624G            | 91   | 5.360G            | 92   | 5.698G            |
| 93                                               | 5.625G            | 94   | 5.553G            | 95   | 5.669G            | 96   | 5.532G            |
| 97                                               | 5.641G            | 98   | 5.629G            | 99   | 5.491G            | 100  | 5.474G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_14 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.564G            | 2    | 5.296G            | 3    | 5.603G            | 4    | 5.441G            |
| 5                                                | 5.598G            | 6    | 5.358G            | 7    | 5.287G            | 8    | 5.590G            |
| 9                                                | 5.672G            | 10   | 5.569G            | 11   | 5.412G            | 12   | 5.445G            |
| 13                                               | 5.377G            | 14   | 5.428G            | 15   | 5.385G            | 16   | 5.500G            |
| 17                                               | 5.512G            | 18   | 5.701G            | 19   | 5.258G            | 20   | 5.354G            |
| 21                                               | 5.432G            | 22   | 5.717G            | 23   | 5.436G            | 24   | 5.324G            |
| 25                                               | 5.298G            | 26   | 5.722G            | 27   | 5.525G            | 28   | 5.661G            |
| 29                                               | 5.602G            | 30   | 5.687G            | 31   | 5.562G            | 32   | 5.494G            |
| 33                                               | 5.716G            | 34   | 5.269G            | 35   | 5.348G            | 36   | 5.647G            |
| 37                                               | 5.585G            | 38   | 5.297G            | 39   | 5.684G            | 40   | 5.643G            |
| 41                                               | 5.253G            | 42   | 5.612G            | 43   | 5.375G            | 44   | 5.401G            |
| 45                                               | 5.664G            | 46   | 5.678G            | 47   | 5.433G            | 48   | 5.523G            |
| 49                                               | 5.652G            | 50   | 5.680G            | 51   | 5.314G            | 52   | 5.552G            |
| 53                                               | 5.670G            | 54   | 5.695G            | 55   | 5.316G            | 56   | 5.460G            |
| 57                                               | 5.535G            | 58   | 5.620G            | 59   | 5.450G            | 60   | 5.439G            |
| 61                                               | 5.359G            | 62   | 5.502G            | 63   | 5.313G            | 64   | 5.328G            |
| 65                                               | 5.368G            | 66   | 5.681G            | 67   | 5.263G            | 68   | 5.578G            |
| 69                                               | 5.294G            | 70   | 5.629G            | 71   | 5.310G            | 72   | 5.607G            |
| 73                                               | 5.322G            | 74   | 5.616G            | 75   | 5.534G            | 76   | 5.673G            |
| 77                                               | 5.411G            | 78   | 5.615G            | 79   | 5.536G            | 80   | 5.285G            |
| 81                                               | 5.648G            | 82   | 5.330G            | 83   | 5.498G            | 84   | 5.458G            |
| 85                                               | 5.374G            | 86   | 5.389G            | 87   | 5.610G            | 88   | 5.274G            |
| 89                                               | 5.676G            | 90   | 5.601G            | 91   | 5.495G            | 92   | 5.520G            |
| 93                                               | 5.644G            | 94   | 5.521G            | 95   | 5.407G            | 96   | 5.404G            |
| 97                                               | 5.437G            | 98   | 5.633G            | 99   | 5.654G            | 100  | 5.267G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_15 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.371G            | 2    | 5.447G            | 3    | 5.295G            | 4    | 5.475G            |
| 5                                                | 5.315G            | 6    | 5.417G            | 7    | 5.576G            | 8    | 5.543G            |
| 9                                                | 5.274G            | 10   | 5.354G            | 11   | 5.487G            | 12   | 5.286G            |
| 13                                               | 5.495G            | 14   | 5.521G            | 15   | 5.527G            | 16   | 5.296G            |
| 17                                               | 5.458G            | 18   | 5.549G            | 19   | 5.476G            | 20   | 5.445G            |
| 21                                               | 5.613G            | 22   | 5.653G            | 23   | 5.510G            | 24   | 5.656G            |
| 25                                               | 5.383G            | 26   | 5.506G            | 27   | 5.273G            | 28   | 5.702G            |
| 29                                               | 5.312G            | 30   | 5.331G            | 31   | 5.492G            | 32   | 5.443G            |
| 33                                               | 5.522G            | 34   | 5.427G            | 35   | 5.338G            | 36   | 5.674G            |
| 37                                               | 5.638G            | 38   | 5.694G            | 39   | 5.636G            | 40   | 5.572G            |
| 41                                               | 5.570G            | 42   | 5.419G            | 43   | 5.715G            | 44   | 5.384G            |
| 45                                               | 5.645G            | 46   | 5.307G            | 47   | 5.300G            | 48   | 5.633G            |
| 49                                               | 5.707G            | 50   | 5.260G            | 51   | 5.683G            | 52   | 5.374G            |
| 53                                               | 5.632G            | 54   | 5.666G            | 55   | 5.689G            | 56   | 5.609G            |
| 57                                               | 5.563G            | 58   | 5.682G            | 59   | 5.435G            | 60   | 5.252G            |
| 61                                               | 5.272G            | 62   | 5.469G            | 63   | 5.375G            | 64   | 5.423G            |
| 65                                               | 5.639G            | 66   | 5.403G            | 67   | 5.542G            | 68   | 5.471G            |
| 69                                               | 5.512G            | 70   | 5.455G            | 71   | 5.278G            | 72   | 5.405G            |
| 73                                               | 5.253G            | 74   | 5.438G            | 75   | 5.473G            | 76   | 5.292G            |
| 77                                               | 5.626G            | 78   | 5.343G            | 79   | 5.667G            | 80   | 5.267G            |
| 81                                               | 5.498G            | 82   | 5.545G            | 83   | 5.400G            | 84   | 5.655G            |
| 85                                               | 5.451G            | 86   | 5.529G            | 87   | 5.285G            | 88   | 5.416G            |
| 89                                               | 5.577G            | 90   | 5.325G            | 91   | 5.554G            | 92   | 5.568G            |
| 93                                               | 5.519G            | 94   | 5.566G            | 95   | 5.380G            | 96   | 5.693G            |
| 97                                               | 5.479G            | 98   | 5.298G            | 99   | 5.481G            | 100  | 5.442G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_16 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.517G            | 2    | 5.386G            | 3    | 5.347G            | 4    | 5.448G            |
| 5                                                | 5.356G            | 6    | 5.667G            | 7    | 5.291G            | 8    | 5.538G            |
| 9                                                | 5.714G            | 10   | 5.257G            | 11   | 5.387G            | 12   | 5.644G            |
| 13                                               | 5.293G            | 14   | 5.504G            | 15   | 5.657G            | 16   | 5.596G            |
| 17                                               | 5.480G            | 18   | 5.638G            | 19   | 5.631G            | 20   | 5.682G            |
| 21                                               | 5.699G            | 22   | 5.519G            | 23   | 5.696G            | 24   | 5.558G            |
| 25                                               | 5.721G            | 26   | 5.705G            | 27   | 5.358G            | 28   | 5.365G            |
| 29                                               | 5.641G            | 30   | 5.399G            | 31   | 5.462G            | 32   | 5.340G            |
| 33                                               | 5.625G            | 34   | 5.254G            | 35   | 5.713G            | 36   | 5.272G            |
| 37                                               | 5.343G            | 38   | 5.712G            | 39   | 5.686G            | 40   | 5.666G            |
| 41                                               | 5.264G            | 42   | 5.718G            | 43   | 5.273G            | 44   | 5.430G            |
| 45                                               | 5.453G            | 46   | 5.537G            | 47   | 5.630G            | 48   | 5.674G            |
| 49                                               | 5.385G            | 50   | 5.455G            | 51   | 5.433G            | 52   | 5.389G            |
| 53                                               | 5.550G            | 54   | 5.336G            | 55   | 5.577G            | 56   | 5.582G            |
| 57                                               | 5.529G            | 58   | 5.578G            | 59   | 5.408G            | 60   | 5.594G            |
| 61                                               | 5.524G            | 62   | 5.518G            | 63   | 5.307G            | 64   | 5.417G            |
| 65                                               | 5.299G            | 66   | 5.338G            | 67   | 5.393G            | 68   | 5.319G            |
| 69                                               | 5.405G            | 70   | 5.516G            | 71   | 5.391G            | 72   | 5.560G            |
| 73                                               | 5.411G            | 74   | 5.655G            | 75   | 5.653G            | 76   | 5.328G            |
| 77                                               | 5.499G            | 78   | 5.348G            | 79   | 5.722G            | 80   | 5.521G            |
| 81                                               | 5.341G            | 82   | 5.506G            | 83   | 5.422G            | 84   | 5.324G            |
| 85                                               | 5.645G            | 86   | 5.583G            | 87   | 5.597G            | 88   | 5.684G            |
| 89                                               | 5.271G            | 90   | 5.419G            | 91   | 5.672G            | 92   | 5.364G            |
| 93                                               | 5.279G            | 94   | 5.315G            | 95   | 5.366G            | 96   | 5.624G            |
| 97                                               | 5.494G            | 98   | 5.255G            | 99   | 5.382G            | 100  | 5.440G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_17 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.506G            | 2    | 5.256G            | 3    | 5.686G            | 4    | 5.406G            |
| 5                                                | 5.443G            | 6    | 5.716G            | 7    | 5.719G            | 8    | 5.660G            |
| 9                                                | 5.519G            | 10   | 5.690G            | 11   | 5.569G            | 12   | 5.365G            |
| 13                                               | 5.645G            | 14   | 5.654G            | 15   | 5.417G            | 16   | 5.402G            |
| 17                                               | 5.625G            | 18   | 5.477G            | 19   | 5.277G            | 20   | 5.388G            |
| 21                                               | 5.580G            | 22   | 5.581G            | 23   | 5.682G            | 24   | 5.289G            |
| 25                                               | 5.607G            | 26   | 5.720G            | 27   | 5.634G            | 28   | 5.263G            |
| 29                                               | 5.395G            | 30   | 5.513G            | 31   | 5.511G            | 32   | 5.677G            |
| 33                                               | 5.692G            | 34   | 5.463G            | 35   | 5.383G            | 36   | 5.604G            |
| 37                                               | 5.687G            | 38   | 5.614G            | 39   | 5.315G            | 40   | 5.502G            |
| 41                                               | 5.309G            | 42   | 5.526G            | 43   | 5.662G            | 44   | 5.352G            |
| 45                                               | 5.495G            | 46   | 5.508G            | 47   | 5.487G            | 48   | 5.366G            |
| 49                                               | 5.313G            | 50   | 5.343G            | 51   | 5.599G            | 52   | 5.320G            |
| 53                                               | 5.430G            | 54   | 5.408G            | 55   | 5.629G            | 56   | 5.722G            |
| 57                                               | 5.585G            | 58   | 5.706G            | 59   | 5.280G            | 60   | 5.387G            |
| 61                                               | 5.415G            | 62   | 5.381G            | 63   | 5.510G            | 64   | 5.471G            |
| 65                                               | 5.299G            | 66   | 5.566G            | 67   | 5.550G            | 68   | 5.468G            |
| 69                                               | 5.563G            | 70   | 5.393G            | 71   | 5.691G            | 72   | 5.539G            |
| 73                                               | 5.721G            | 74   | 5.707G            | 75   | 5.681G            | 76   | 5.591G            |
| 77                                               | 5.536G            | 78   | 5.701G            | 79   | 5.708G            | 80   | 5.621G            |
| 81                                               | 5.453G            | 82   | 5.715G            | 83   | 5.446G            | 84   | 5.254G            |
| 85                                               | 5.649G            | 86   | 5.276G            | 87   | 5.449G            | 88   | 5.357G            |
| 89                                               | 5.396G            | 90   | 5.622G            | 91   | 5.638G            | 92   | 5.287G            |
| 93                                               | 5.616G            | 94   | 5.680G            | 95   | 5.610G            | 96   | 5.601G            |
| 97                                               | 5.259G            | 98   | 5.483G            | 99   | 5.596G            | 100  | 5.640G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_18 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.710G            | 2    | 5.546G            | 3    | 5.289G            | 4    | 5.331G            |
| 5                                                | 5.419G            | 6    | 5.552G            | 7    | 5.663G            | 8    | 5.543G            |
| 9                                                | 5.467G            | 10   | 5.330G            | 11   | 5.435G            | 12   | 5.603G            |
| 13                                               | 5.724G            | 14   | 5.634G            | 15   | 5.469G            | 16   | 5.495G            |
| 17                                               | 5.259G            | 18   | 5.581G            | 19   | 5.487G            | 20   | 5.563G            |
| 21                                               | 5.610G            | 22   | 5.651G            | 23   | 5.407G            | 24   | 5.699G            |
| 25                                               | 5.398G            | 26   | 5.612G            | 27   | 5.387G            | 28   | 5.277G            |
| 29                                               | 5.712G            | 30   | 5.571G            | 31   | 5.444G            | 32   | 5.607G            |
| 33                                               | 5.290G            | 34   | 5.388G            | 35   | 5.601G            | 36   | 5.297G            |
| 37                                               | 5.293G            | 38   | 5.465G            | 39   | 5.349G            | 40   | 5.381G            |
| 41                                               | 5.723G            | 42   | 5.428G            | 43   | 5.448G            | 44   | 5.284G            |
| 45                                               | 5.510G            | 46   | 5.527G            | 47   | 5.504G            | 48   | 5.598G            |
| 49                                               | 5.609G            | 50   | 5.362G            | 51   | 5.640G            | 52   | 5.458G            |
| 53                                               | 5.393G            | 54   | 5.347G            | 55   | 5.478G            | 56   | 5.568G            |
| 57                                               | 5.451G            | 58   | 5.320G            | 59   | 5.459G            | 60   | 5.368G            |
| 61                                               | 5.644G            | 62   | 5.673G            | 63   | 5.449G            | 64   | 5.391G            |
| 65                                               | 5.375G            | 66   | 5.570G            | 67   | 5.309G            | 68   | 5.540G            |
| 69                                               | 5.692G            | 70   | 5.539G            | 71   | 5.698G            | 72   | 5.691G            |
| 73                                               | 5.285G            | 74   | 5.361G            | 75   | 5.281G            | 76   | 5.486G            |
| 77                                               | 5.628G            | 78   | 5.721G            | 79   | 5.573G            | 80   | 5.605G            |
| 81                                               | 5.295G            | 82   | 5.376G            | 83   | 5.298G            | 84   | 5.355G            |
| 85                                               | 5.536G            | 86   | 5.338G            | 87   | 5.709G            | 88   | 5.390G            |
| 89                                               | 5.575G            | 90   | 5.475G            | 91   | 5.429G            | 92   | 5.503G            |
| 93                                               | 5.505G            | 94   | 5.516G            | 95   | 5.464G            | 96   | 5.493G            |
| 97                                               | 5.574G            | 98   | 5.311G            | 99   | 5.319G            | 100  | 5.565G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_19 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.538G            | 2    | 5.393G            | 3    | 5.323G            | 4    | 5.571G            |
| 5                                                | 5.643G            | 6    | 5.353G            | 7    | 5.660G            | 8    | 5.668G            |
| 9                                                | 5.459G            | 10   | 5.454G            | 11   | 5.665G            | 12   | 5.573G            |
| 13                                               | 5.400G            | 14   | 5.277G            | 15   | 5.498G            | 16   | 5.406G            |
| 17                                               | 5.424G            | 18   | 5.595G            | 19   | 5.696G            | 20   | 5.597G            |
| 21                                               | 5.664G            | 22   | 5.255G            | 23   | 5.639G            | 24   | 5.389G            |
| 25                                               | 5.514G            | 26   | 5.576G            | 27   | 5.536G            | 28   | 5.642G            |
| 29                                               | 5.366G            | 30   | 5.336G            | 31   | 5.431G            | 32   | 5.518G            |
| 33                                               | 5.482G            | 34   | 5.345G            | 35   | 5.532G            | 36   | 5.297G            |
| 37                                               | 5.321G            | 38   | 5.589G            | 39   | 5.474G            | 40   | 5.686G            |
| 41                                               | 5.445G            | 42   | 5.362G            | 43   | 5.702G            | 44   | 5.288G            |
| 45                                               | 5.456G            | 46   | 5.631G            | 47   | 5.259G            | 48   | 5.577G            |
| 49                                               | 5.282G            | 50   | 5.387G            | 51   | 5.372G            | 52   | 5.303G            |
| 53                                               | 5.593G            | 54   | 5.635G            | 55   | 5.477G            | 56   | 5.691G            |
| 57                                               | 5.339G            | 58   | 5.446G            | 59   | 5.275G            | 60   | 5.533G            |
| 61                                               | 5.697G            | 62   | 5.606G            | 63   | 5.414G            | 64   | 5.268G            |
| 65                                               | 5.652G            | 66   | 5.442G            | 67   | 5.687G            | 68   | 5.348G            |
| 69                                               | 5.318G            | 70   | 5.542G            | 71   | 5.319G            | 72   | 5.616G            |
| 73                                               | 5.250G            | 74   | 5.556G            | 75   | 5.486G            | 76   | 5.419G            |
| 77                                               | 5.695G            | 78   | 5.379G            | 79   | 5.545G            | 80   | 5.401G            |
| 81                                               | 5.485G            | 82   | 5.280G            | 83   | 5.548G            | 84   | 5.262G            |
| 85                                               | 5.363G            | 86   | 5.581G            | 87   | 5.516G            | 88   | 5.554G            |
| 89                                               | 5.579G            | 90   | 5.596G            | 91   | 5.376G            | 92   | 5.479G            |
| 93                                               | 5.563G            | 94   | 5.505G            | 95   | 5.298G            | 96   | 5.347G            |
| 97                                               | 5.549G            | 98   | 5.524G            | 99   | 5.410G            | 100  | 5.291G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_20 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.674G            | 2    | 5.475G            | 3    | 5.290G            | 4    | 5.341G            |
| 5                                                | 5.404G            | 6    | 5.336G            | 7    | 5.428G            | 8    | 5.429G            |
| 9                                                | 5.583G            | 10   | 5.611G            | 11   | 5.608G            | 12   | 5.511G            |
| 13                                               | 5.427G            | 14   | 5.305G            | 15   | 5.701G            | 16   | 5.619G            |
| 17                                               | 5.303G            | 18   | 5.626G            | 19   | 5.684G            | 20   | 5.719G            |
| 21                                               | 5.614G            | 22   | 5.301G            | 23   | 5.355G            | 24   | 5.252G            |
| 25                                               | 5.327G            | 26   | 5.379G            | 27   | 5.682G            | 28   | 5.395G            |
| 29                                               | 5.576G            | 30   | 5.575G            | 31   | 5.293G            | 32   | 5.461G            |
| 33                                               | 5.538G            | 34   | 5.493G            | 35   | 5.348G            | 36   | 5.268G            |
| 37                                               | 5.665G            | 38   | 5.332G            | 39   | 5.699G            | 40   | 5.679G            |
| 41                                               | 5.598G            | 42   | 5.484G            | 43   | 5.307G            | 44   | 5.559G            |
| 45                                               | 5.331G            | 46   | 5.383G            | 47   | 5.660G            | 48   | 5.451G            |
| 49                                               | 5.328G            | 50   | 5.573G            | 51   | 5.693G            | 52   | 5.387G            |
| 53                                               | 5.636G            | 54   | 5.605G            | 55   | 5.285G            | 56   | 5.691G            |
| 57                                               | 5.506G            | 58   | 5.510G            | 59   | 5.597G            | 60   | 5.476G            |
| 61                                               | 5.666G            | 62   | 5.517G            | 63   | 5.600G            | 64   | 5.337G            |
| 65                                               | 5.500G            | 66   | 5.460G            | 67   | 5.703G            | 68   | 5.425G            |
| 69                                               | 5.670G            | 70   | 5.555G            | 71   | 5.564G            | 72   | 5.250G            |
| 73                                               | 5.570G            | 74   | 5.507G            | 75   | 5.596G            | 76   | 5.482G            |
| 77                                               | 5.519G            | 78   | 5.662G            | 79   | 5.257G            | 80   | 5.491G            |
| 81                                               | 5.412G            | 82   | 5.292G            | 83   | 5.400G            | 84   | 5.295G            |
| 85                                               | 5.525G            | 86   | 5.453G            | 87   | 5.560G            | 88   | 5.592G            |
| 89                                               | 5.364G            | 90   | 5.494G            | 91   | 5.687G            | 92   | 5.351G            |
| 93                                               | 5.297G            | 94   | 5.577G            | 95   | 5.612G            | 96   | 5.463G            |
| 97                                               | 5.349G            | 98   | 5.552G            | 99   | 5.492G            | 100  | 5.546G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_21 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.270G            | 2    | 5.525G            | 3    | 5.527G            | 4    | 5.628G            |
| 5                                                | 5.402G            | 6    | 5.639G            | 7    | 5.615G            | 8    | 5.369G            |
| 9                                                | 5.302G            | 10   | 5.456G            | 11   | 5.250G            | 12   | 5.407G            |
| 13                                               | 5.362G            | 14   | 5.435G            | 15   | 5.252G            | 16   | 5.698G            |
| 17                                               | 5.660G            | 18   | 5.442G            | 19   | 5.385G            | 20   | 5.359G            |
| 21                                               | 5.685G            | 22   | 5.263G            | 23   | 5.404G            | 24   | 5.387G            |
| 25                                               | 5.661G            | 26   | 5.510G            | 27   | 5.449G            | 28   | 5.395G            |
| 29                                               | 5.704G            | 30   | 5.496G            | 31   | 5.467G            | 32   | 5.554G            |
| 33                                               | 5.257G            | 34   | 5.393G            | 35   | 5.305G            | 36   | 5.572G            |
| 37                                               | 5.700G            | 38   | 5.373G            | 39   | 5.548G            | 40   | 5.320G            |
| 41                                               | 5.392G            | 42   | 5.296G            | 43   | 5.274G            | 44   | 5.610G            |
| 45                                               | 5.611G            | 46   | 5.581G            | 47   | 5.409G            | 48   | 5.390G            |
| 49                                               | 5.451G            | 50   | 5.376G            | 51   | 5.417G            | 52   | 5.523G            |
| 53                                               | 5.282G            | 54   | 5.432G            | 55   | 5.546G            | 56   | 5.497G            |
| 57                                               | 5.355G            | 58   | 5.276G            | 59   | 5.342G            | 60   | 5.327G            |
| 61                                               | 5.637G            | 62   | 5.289G            | 63   | 5.293G            | 64   | 5.539G            |
| 65                                               | 5.627G            | 66   | 5.379G            | 67   | 5.299G            | 68   | 5.427G            |
| 69                                               | 5.595G            | 70   | 5.553G            | 71   | 5.315G            | 72   | 5.669G            |
| 73                                               | 5.709G            | 74   | 5.405G            | 75   | 5.587G            | 76   | 5.360G            |
| 77                                               | 5.663G            | 78   | 5.461G            | 79   | 5.565G            | 80   | 5.275G            |
| 81                                               | 5.308G            | 82   | 5.487G            | 83   | 5.620G            | 84   | 5.540G            |
| 85                                               | 5.469G            | 86   | 5.561G            | 87   | 5.545G            | 88   | 5.597G            |
| 89                                               | 5.536G            | 90   | 5.506G            | 91   | 5.318G            | 92   | 5.697G            |
| 93                                               | 5.295G            | 94   | 5.519G            | 95   | 5.560G            | 96   | 5.389G            |
| 97                                               | 5.719G            | 98   | 5.654G            | 99   | 5.336G            | 100  | 5.608G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_22 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.288G            | 2    | 5.441G            | 3    | 5.682G            | 4    | 5.304G            |
| 5                                                | 5.313G            | 6    | 5.446G            | 7    | 5.442G            | 8    | 5.612G            |
| 9                                                | 5.345G            | 10   | 5.337G            | 11   | 5.557G            | 12   | 5.638G            |
| 13                                               | 5.427G            | 14   | 5.303G            | 15   | 5.298G            | 16   | 5.592G            |
| 17                                               | 5.267G            | 18   | 5.717G            | 19   | 5.568G            | 20   | 5.320G            |
| 21                                               | 5.697G            | 22   | 5.541G            | 23   | 5.667G            | 24   | 5.506G            |
| 25                                               | 5.423G            | 26   | 5.518G            | 27   | 5.575G            | 28   | 5.413G            |
| 29                                               | 5.527G            | 30   | 5.283G            | 31   | 5.709G            | 32   | 5.469G            |
| 33                                               | 5.554G            | 34   | 5.418G            | 35   | 5.250G            | 36   | 5.495G            |
| 37                                               | 5.366G            | 38   | 5.681G            | 39   | 5.716G            | 40   | 5.471G            |
| 41                                               | 5.302G            | 42   | 5.628G            | 43   | 5.534G            | 44   | 5.698G            |
| 45                                               | 5.439G            | 46   | 5.510G            | 47   | 5.673G            | 48   | 5.408G            |
| 49                                               | 5.624G            | 50   | 5.280G            | 51   | 5.473G            | 52   | 5.676G            |
| 53                                               | 5.582G            | 54   | 5.400G            | 55   | 5.648G            | 56   | 5.383G            |
| 57                                               | 5.626G            | 58   | 5.358G            | 59   | 5.296G            | 60   | 5.641G            |
| 61                                               | 5.690G            | 62   | 5.608G            | 63   | 5.365G            | 64   | 5.397G            |
| 65                                               | 5.629G            | 66   | 5.647G            | 67   | 5.620G            | 68   | 5.493G            |
| 69                                               | 5.417G            | 70   | 5.570G            | 71   | 5.596G            | 72   | 5.581G            |
| 73                                               | 5.285G            | 74   | 5.606G            | 75   | 5.654G            | 76   | 5.445G            |
| 77                                               | 5.318G            | 78   | 5.404G            | 79   | 5.553G            | 80   | 5.335G            |
| 81                                               | 5.378G            | 82   | 5.505G            | 83   | 5.694G            | 84   | 5.487G            |
| 85                                               | 5.715G            | 86   | 5.269G            | 87   | 5.552G            | 88   | 5.287G            |
| 89                                               | 5.315G            | 90   | 5.289G            | 91   | 5.422G            | 92   | 5.431G            |
| 93                                               | 5.569G            | 94   | 5.507G            | 95   | 5.478G            | 96   | 5.464G            |
| 97                                               | 5.702G            | 98   | 5.347G            | 99   | 5.275G            | 100  | 5.409G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_23 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.521G            | 2    | 5.425G            | 3    | 5.711G            | 4    | 5.694G            |
| 5                                                | 5.679G            | 6    | 5.449G            | 7    | 5.723G            | 8    | 5.440G            |
| 9                                                | 5.279G            | 10   | 5.442G            | 11   | 5.700G            | 12   | 5.326G            |
| 13                                               | 5.286G            | 14   | 5.608G            | 15   | 5.664G            | 16   | 5.265G            |
| 17                                               | 5.395G            | 18   | 5.687G            | 19   | 5.258G            | 20   | 5.656G            |
| 21                                               | 5.348G            | 22   | 5.319G            | 23   | 5.306G            | 24   | 5.412G            |
| 25                                               | 5.624G            | 26   | 5.556G            | 27   | 5.420G            | 28   | 5.457G            |
| 29                                               | 5.404G            | 30   | 5.693G            | 31   | 5.640G            | 32   | 5.606G            |
| 33                                               | 5.627G            | 34   | 5.367G            | 35   | 5.387G            | 36   | 5.401G            |
| 37                                               | 5.441G            | 38   | 5.580G            | 39   | 5.398G            | 40   | 5.274G            |
| 41                                               | 5.323G            | 42   | 5.651G            | 43   | 5.386G            | 44   | 5.683G            |
| 45                                               | 5.300G            | 46   | 5.283G            | 47   | 5.655G            | 48   | 5.638G            |
| 49                                               | 5.487G            | 50   | 5.705G            | 51   | 5.358G            | 52   | 5.600G            |
| 53                                               | 5.559G            | 54   | 5.261G            | 55   | 5.614G            | 56   | 5.581G            |
| 57                                               | 5.409G            | 58   | 5.424G            | 59   | 5.322G            | 60   | 5.292G            |
| 61                                               | 5.263G            | 62   | 5.667G            | 63   | 5.682G            | 64   | 5.397G            |
| 65                                               | 5.264G            | 66   | 5.482G            | 67   | 5.713G            | 68   | 5.302G            |
| 69                                               | 5.650G            | 70   | 5.572G            | 71   | 5.464G            | 72   | 5.686G            |
| 73                                               | 5.351G            | 74   | 5.562G            | 75   | 5.573G            | 76   | 5.355G            |
| 77                                               | 5.724G            | 78   | 5.550G            | 79   | 5.476G            | 80   | 5.603G            |
| 81                                               | 5.450G            | 82   | 5.601G            | 83   | 5.684G            | 84   | 5.592G            |
| 85                                               | 5.354G            | 86   | 5.255G            | 87   | 5.359G            | 88   | 5.568G            |
| 89                                               | 5.702G            | 90   | 5.692G            | 91   | 5.336G            | 92   | 5.639G            |
| 93                                               | 5.484G            | 94   | 5.637G            | 95   | 5.477G            | 96   | 5.520G            |
| 97                                               | 5.327G            | 98   | 5.378G            | 99   | 5.461G            | 100  | 5.501G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_24 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.461G            | 2    | 5.451G            | 3    | 5.572G            | 4    | 5.600G            |
| 5                                                | 5.561G            | 6    | 5.338G            | 7    | 5.515G            | 8    | 5.403G            |
| 9                                                | 5.527G            | 10   | 5.628G            | 11   | 5.654G            | 12   | 5.544G            |
| 13                                               | 5.367G            | 14   | 5.353G            | 15   | 5.665G            | 16   | 5.573G            |
| 17                                               | 5.377G            | 18   | 5.534G            | 19   | 5.432G            | 20   | 5.621G            |
| 21                                               | 5.302G            | 22   | 5.414G            | 23   | 5.560G            | 24   | 5.574G            |
| 25                                               | 5.381G            | 26   | 5.533G            | 27   | 5.546G            | 28   | 5.404G            |
| 29                                               | 5.700G            | 30   | 5.325G            | 31   | 5.355G            | 32   | 5.685G            |
| 33                                               | 5.588G            | 34   | 5.625G            | 35   | 5.294G            | 36   | 5.505G            |
| 37                                               | 5.344G            | 38   | 5.352G            | 39   | 5.630G            | 40   | 5.599G            |
| 41                                               | 5.430G            | 42   | 5.495G            | 43   | 5.431G            | 44   | 5.253G            |
| 45                                               | 5.714G            | 46   | 5.258G            | 47   | 5.691G            | 48   | 5.719G            |
| 49                                               | 5.287G            | 50   | 5.557G            | 51   | 5.623G            | 52   | 5.343G            |
| 53                                               | 5.682G            | 54   | 5.717G            | 55   | 5.408G            | 56   | 5.526G            |
| 57                                               | 5.569G            | 58   | 5.393G            | 59   | 5.452G            | 60   | 5.549G            |
| 61                                               | 5.705G            | 62   | 5.375G            | 63   | 5.271G            | 64   | 5.264G            |
| 65                                               | 5.470G            | 66   | 5.674G            | 67   | 5.312G            | 68   | 5.389G            |
| 69                                               | 5.341G            | 70   | 5.358G            | 71   | 5.394G            | 72   | 5.440G            |
| 73                                               | 5.493G            | 74   | 5.538G            | 75   | 5.604G            | 76   | 5.699G            |
| 77                                               | 5.554G            | 78   | 5.586G            | 79   | 5.380G            | 80   | 5.454G            |
| 81                                               | 5.662G            | 82   | 5.304G            | 83   | 5.443G            | 84   | 5.267G            |
| 85                                               | 5.649G            | 86   | 5.364G            | 87   | 5.487G            | 88   | 5.636G            |
| 89                                               | 5.276G            | 90   | 5.360G            | 91   | 5.722G            | 92   | 5.694G            |
| 93                                               | 5.616G            | 94   | 5.255G            | 95   | 5.351G            | 96   | 5.424G            |
| 97                                               | 5.279G            | 98   | 5.663G            | 99   | 5.382G            | 100  | 5.373G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_25 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.536G            | 2    | 5.267G            | 3    | 5.257G            | 4    | 5.254G            |
| 5                                                | 5.720G            | 6    | 5.325G            | 7    | 5.329G            | 8    | 5.393G            |
| 9                                                | 5.689G            | 10   | 5.621G            | 11   | 5.601G            | 12   | 5.464G            |
| 13                                               | 5.700G            | 14   | 5.261G            | 15   | 5.418G            | 16   | 5.270G            |
| 17                                               | 5.417G            | 18   | 5.702G            | 19   | 5.341G            | 20   | 5.565G            |
| 21                                               | 5.573G            | 22   | 5.310G            | 23   | 5.537G            | 24   | 5.612G            |
| 25                                               | 5.495G            | 26   | 5.314G            | 27   | 5.714G            | 28   | 5.723G            |
| 29                                               | 5.292G            | 30   | 5.369G            | 31   | 5.401G            | 32   | 5.378G            |
| 33                                               | 5.716G            | 34   | 5.311G            | 35   | 5.667G            | 36   | 5.455G            |
| 37                                               | 5.467G            | 38   | 5.336G            | 39   | 5.520G            | 40   | 5.600G            |
| 41                                               | 5.535G            | 42   | 5.595G            | 43   | 5.604G            | 44   | 5.363G            |
| 45                                               | 5.696G            | 46   | 5.472G            | 47   | 5.677G            | 48   | 5.598G            |
| 49                                               | 5.425G            | 50   | 5.391G            | 51   | 5.660G            | 52   | 5.650G            |
| 53                                               | 5.352G            | 54   | 5.586G            | 55   | 5.360G            | 56   | 5.371G            |
| 57                                               | 5.532G            | 58   | 5.420G            | 59   | 5.692G            | 60   | 5.454G            |
| 61                                               | 5.579G            | 62   | 5.539G            | 63   | 5.617G            | 64   | 5.516G            |
| 65                                               | 5.498G            | 66   | 5.649G            | 67   | 5.452G            | 68   | 5.514G            |
| 69                                               | 5.412G            | 70   | 5.293G            | 71   | 5.668G            | 72   | 5.574G            |
| 73                                               | 5.547G            | 74   | 5.424G            | 75   | 5.326G            | 76   | 5.722G            |
| 77                                               | 5.524G            | 78   | 5.289G            | 79   | 5.258G            | 80   | 5.713G            |
| 81                                               | 5.451G            | 82   | 5.251G            | 83   | 5.618G            | 84   | 5.357G            |
| 85                                               | 5.446G            | 86   | 5.348G            | 87   | 5.427G            | 88   | 5.681G            |
| 89                                               | 5.544G            | 90   | 5.260G            | 91   | 5.606G            | 92   | 5.280G            |
| 93                                               | 5.501G            | 94   | 5.438G            | 95   | 5.474G            | 96   | 5.284G            |
| 97                                               | 5.382G            | 98   | 5.376G            | 99   | 5.444G            | 100  | 5.496G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_26 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.635G            | 2    | 5.651G            | 3    | 5.269G            | 4    | 5.372G            |
| 5                                                | 5.328G            | 6    | 5.410G            | 7    | 5.344G            | 8    | 5.563G            |
| 9                                                | 5.250G            | 10   | 5.420G            | 11   | 5.549G            | 12   | 5.565G            |
| 13                                               | 5.346G            | 14   | 5.682G            | 15   | 5.548G            | 16   | 5.632G            |
| 17                                               | 5.573G            | 18   | 5.614G            | 19   | 5.376G            | 20   | 5.690G            |
| 21                                               | 5.495G            | 22   | 5.409G            | 23   | 5.348G            | 24   | 5.648G            |
| 25                                               | 5.469G            | 26   | 5.666G            | 27   | 5.272G            | 28   | 5.408G            |
| 29                                               | 5.584G            | 30   | 5.571G            | 31   | 5.553G            | 32   | 5.425G            |
| 33                                               | 5.512G            | 34   | 5.619G            | 35   | 5.386G            | 36   | 5.368G            |
| 37                                               | 5.318G            | 38   | 5.620G            | 39   | 5.609G            | 40   | 5.336G            |
| 41                                               | 5.560G            | 42   | 5.424G            | 43   | 5.610G            | 44   | 5.429G            |
| 45                                               | 5.433G            | 46   | 5.680G            | 47   | 5.313G            | 48   | 5.366G            |
| 49                                               | 5.576G            | 50   | 5.396G            | 51   | 5.669G            | 52   | 5.663G            |
| 53                                               | 5.283G            | 54   | 5.562G            | 55   | 5.270G            | 56   | 5.697G            |
| 57                                               | 5.481G            | 58   | 5.668G            | 59   | 5.533G            | 60   | 5.688G            |
| 61                                               | 5.487G            | 62   | 5.305G            | 63   | 5.389G            | 64   | 5.589G            |
| 65                                               | 5.296G            | 66   | 5.364G            | 67   | 5.597G            | 68   | 5.494G            |
| 69                                               | 5.419G            | 70   | 5.698G            | 71   | 5.427G            | 72   | 5.662G            |
| 73                                               | 5.397G            | 74   | 5.261G            | 75   | 5.444G            | 76   | 5.465G            |
| 77                                               | 5.678G            | 78   | 5.498G            | 79   | 5.684G            | 80   | 5.629G            |
| 81                                               | 5.464G            | 82   | 5.282G            | 83   | 5.251G            | 84   | 5.700G            |
| 85                                               | 5.473G            | 86   | 5.634G            | 87   | 5.567G            | 88   | 5.380G            |
| 89                                               | 5.460G            | 90   | 5.468G            | 91   | 5.362G            | 92   | 5.527G            |
| 93                                               | 5.539G            | 94   | 5.720G            | 95   | 5.439G            | 96   | 5.704G            |
| 97                                               | 5.438G            | 98   | 5.339G            | 99   | 5.583G            | 100  | 5.486G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_27 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.370G            | 2    | 5.453G            | 3    | 5.644G            | 4    | 5.308G            |
| 5                                                | 5.373G            | 6    | 5.503G            | 7    | 5.257G            | 8    | 5.336G            |
| 9                                                | 5.387G            | 10   | 5.669G            | 11   | 5.319G            | 12   | 5.548G            |
| 13                                               | 5.273G            | 14   | 5.334G            | 15   | 5.663G            | 16   | 5.428G            |
| 17                                               | 5.492G            | 18   | 5.638G            | 19   | 5.295G            | 20   | 5.388G            |
| 21                                               | 5.512G            | 22   | 5.513G            | 23   | 5.455G            | 24   | 5.405G            |
| 25                                               | 5.496G            | 26   | 5.538G            | 27   | 5.596G            | 28   | 5.654G            |
| 29                                               | 5.368G            | 30   | 5.674G            | 31   | 5.279G            | 32   | 5.696G            |
| 33                                               | 5.277G            | 34   | 5.718G            | 35   | 5.600G            | 36   | 5.327G            |
| 37                                               | 5.660G            | 38   | 5.714G            | 39   | 5.723G            | 40   | 5.631G            |
| 41                                               | 5.539G            | 42   | 5.420G            | 43   | 5.482G            | 44   | 5.353G            |
| 45                                               | 5.345G            | 46   | 5.702G            | 47   | 5.390G            | 48   | 5.668G            |
| 49                                               | 5.349G            | 50   | 5.480G            | 51   | 5.534G            | 52   | 5.583G            |
| 53                                               | 5.256G            | 54   | 5.526G            | 55   | 5.643G            | 56   | 5.304G            |
| 57                                               | 5.435G            | 58   | 5.377G            | 59   | 5.264G            | 60   | 5.656G            |
| 61                                               | 5.450G            | 62   | 5.448G            | 63   | 5.298G            | 64   | 5.697G            |
| 65                                               | 5.282G            | 66   | 5.468G            | 67   | 5.586G            | 68   | 5.430G            |
| 69                                               | 5.561G            | 70   | 5.576G            | 71   | 5.401G            | 72   | 5.402G            |
| 73                                               | 5.553G            | 74   | 5.568G            | 75   | 5.323G            | 76   | 5.281G            |
| 77                                               | 5.285G            | 78   | 5.381G            | 79   | 5.270G            | 80   | 5.635G            |
| 81                                               | 5.577G            | 82   | 5.486G            | 83   | 5.684G            | 84   | 5.602G            |
| 85                                               | 5.374G            | 86   | 5.708G            | 87   | 5.501G            | 88   | 5.592G            |
| 89                                               | 5.499G            | 90   | 5.484G            | 91   | 5.682G            | 92   | 5.607G            |
| 93                                               | 5.507G            | 94   | 5.375G            | 95   | 5.678G            | 96   | 5.641G            |
| 97                                               | 5.646G            | 98   | 5.557G            | 99   | 5.588G            | 100  | 5.691G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_28 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.347G            | 2    | 5.450G            | 3    | 5.355G            | 4    | 5.604G            |
| 5                                                | 5.544G            | 6    | 5.673G            | 7    | 5.325G            | 8    | 5.523G            |
| 9                                                | 5.721G            | 10   | 5.585G            | 11   | 5.703G            | 12   | 5.475G            |
| 13                                               | 5.390G            | 14   | 5.525G            | 15   | 5.337G            | 16   | 5.267G            |
| 17                                               | 5.285G            | 18   | 5.320G            | 19   | 5.322G            | 20   | 5.281G            |
| 21                                               | 5.682G            | 22   | 5.675G            | 23   | 5.718G            | 24   | 5.669G            |
| 25                                               | 5.279G            | 26   | 5.269G            | 27   | 5.265G            | 28   | 5.636G            |
| 29                                               | 5.677G            | 30   | 5.483G            | 31   | 5.376G            | 32   | 5.495G            |
| 33                                               | 5.535G            | 34   | 5.335G            | 35   | 5.601G            | 36   | 5.275G            |
| 37                                               | 5.349G            | 38   | 5.368G            | 39   | 5.552G            | 40   | 5.521G            |
| 41                                               | 5.411G            | 42   | 5.417G            | 43   | 5.457G            | 44   | 5.303G            |
| 45                                               | 5.366G            | 46   | 5.709G            | 47   | 5.437G            | 48   | 5.292G            |
| 49                                               | 5.536G            | 50   | 5.298G            | 51   | 5.405G            | 52   | 5.333G            |
| 53                                               | 5.658G            | 54   | 5.354G            | 55   | 5.657G            | 56   | 5.623G            |
| 57                                               | 5.403G            | 58   | 5.421G            | 59   | 5.534G            | 60   | 5.491G            |
| 61                                               | 5.582G            | 62   | 5.713G            | 63   | 5.546G            | 64   | 5.428G            |
| 65                                               | 5.459G            | 66   | 5.435G            | 67   | 5.512G            | 68   | 5.352G            |
| 69                                               | 5.280G            | 70   | 5.440G            | 71   | 5.338G            | 72   | 5.487G            |
| 73                                               | 5.426G            | 74   | 5.288G            | 75   | 5.722G            | 76   | 5.705G            |
| 77                                               | 5.704G            | 78   | 5.628G            | 79   | 5.538G            | 80   | 5.478G            |
| 81                                               | 5.602G            | 82   | 5.434G            | 83   | 5.710G            | 84   | 5.441G            |
| 85                                               | 5.315G            | 86   | 5.717G            | 87   | 5.714G            | 88   | 5.569G            |
| 89                                               | 5.592G            | 90   | 5.461G            | 91   | 5.344G            | 92   | 5.622G            |
| 93                                               | 5.511G            | 94   | 5.460G            | 95   | 5.409G            | 96   | 5.668G            |
| 97                                               | 5.264G            | 98   | 5.517G            | 99   | 5.584G            | 100  | 5.259G            |



| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_29 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.449G            | 2    | 5.476G            | 3    | 5.473G            | 4    | 5.397G            |
| 5                                                | 5.508G            | 6    | 5.695G            | 7    | 5.656G            | 8    | 5.679G            |
| 9                                                | 5.435G            | 10   | 5.293G            | 11   | 5.618G            | 12   | 5.439G            |
| 13                                               | 5.468G            | 14   | 5.521G            | 15   | 5.563G            | 16   | 5.462G            |
| 17                                               | 5.633G            | 18   | 5.641G            | 19   | 5.533G            | 20   | 5.669G            |
| 21                                               | 5.486G            | 22   | 5.627G            | 23   | 5.403G            | 24   | 5.348G            |
| 25                                               | 5.614G            | 26   | 5.529G            | 27   | 5.671G            | 28   | 5.549G            |
| 29                                               | 5.638G            | 30   | 5.295G            | 31   | 5.518G            | 32   | 5.255G            |
| 33                                               | 5.432G            | 34   | 5.277G            | 35   | 5.709G            | 36   | 5.535G            |
| 37                                               | 5.286G            | 38   | 5.557G            | 39   | 5.619G            | 40   | 5.719G            |
| 41                                               | 5.259G            | 42   | 5.320G            | 43   | 5.639G            | 44   | 5.429G            |
| 45                                               | 5.451G            | 46   | 5.603G            | 47   | 5.382G            | 48   | 5.341G            |
| 49                                               | 5.357G            | 50   | 5.714G            | 51   | 5.377G            | 52   | 5.423G            |
| 53                                               | 5.580G            | 54   | 5.314G            | 55   | 5.335G            | 56   | 5.543G            |
| 57                                               | 5.278G            | 58   | 5.406G            | 59   | 5.676G            | 60   | 5.454G            |
| 61                                               | 5.591G            | 62   | 5.433G            | 63   | 5.632G            | 64   | 5.532G            |
| 65                                               | 5.697G            | 66   | 5.422G            | 67   | 5.478G            | 68   | 5.321G            |
| 69                                               | 5.381G            | 70   | 5.569G            | 71   | 5.398G            | 72   | 5.272G            |
| 73                                               | 5.500G            | 74   | 5.635G            | 75   | 5.280G            | 76   | 5.323G            |
| 77                                               | 5.516G            | 78   | 5.299G            | 79   | 5.710G            | 80   | 5.620G            |
| 81                                               | 5.675G            | 82   | 5.345G            | 83   | 5.362G            | 84   | 5.498G            |
| 85                                               | 5.322G            | 86   | 5.339G            | 87   | 5.552G            | 88   | 5.648G            |
| 89                                               | 5.541G            | 90   | 5.523G            | 91   | 5.337G            | 92   | 5.380G            |
| 93                                               | 5.650G            | 94   | 5.326G            | 95   | 5.418G            | 96   | 5.502G            |
| 97                                               | 5.351G            | 98   | 5.264G            | 99   | 5.626G            | 100  | 5.565G            |

| Hopping Frequency Sequence Name: HOP_FREQ_SEQ_30 |                   |      |                   |      |                   |      |                   |
|--------------------------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|
| SEQ#                                             | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) | SEQ# | Frequency<br>(Hz) |
| 1                                                | 5.672G            | 2    | 5.293G            | 3    | 5.512G            | 4    | 5.436G            |
| 5                                                | 5.415G            | 6    | 5.447G            | 7    | 5.336G            | 8    | 5.636G            |
| 9                                                | 5.316G            | 10   | 5.650G            | 11   | 5.392G            | 12   | 5.567G            |
| 13                                               | 5.600G            | 14   | 5.668G            | 15   | 5.696G            | 16   | 5.459G            |
| 17                                               | 5.305G            | 18   | 5.396G            | 19   | 5.574G            | 20   | 5.587G            |
| 21                                               | 5.623G            | 22   | 5.644G            | 23   | 5.724G            | 24   | 5.442G            |
| 25                                               | 5.294G            | 26   | 5.548G            | 27   | 5.253G            | 28   | 5.443G            |
| 29                                               | 5.542G            | 30   | 5.258G            | 31   | 5.261G            | 32   | 5.353G            |
| 33                                               | 5.515G            | 34   | 5.430G            | 35   | 5.648G            | 36   | 5.344G            |
| 37                                               | 5.296G            | 38   | 5.462G            | 39   | 5.514G            | 40   | 5.709G            |
| 41                                               | 5.562G            | 42   | 5.622G            | 43   | 5.540G            | 44   | 5.365G            |
| 45                                               | 5.417G            | 46   | 5.255G            | 47   | 5.513G            | 48   | 5.639G            |
| 49                                               | 5.621G            | 50   | 5.494G            | 51   | 5.358G            | 52   | 5.398G            |
| 53                                               | 5.700G            | 54   | 5.569G            | 55   | 5.378G            | 56   | 5.420G            |
| 57                                               | 5.444G            | 58   | 5.572G            | 59   | 5.362G            | 60   | 5.297G            |
| 61                                               | 5.712G            | 62   | 5.519G            | 63   | 5.303G            | 64   | 5.505G            |
| 65                                               | 5.486G            | 66   | 5.466G            | 67   | 5.597G            | 68   | 5.427G            |
| 69                                               | 5.448G            | 70   | 5.460G            | 71   | 5.310G            | 72   | 5.502G            |
| 73                                               | 5.590G            | 74   | 5.487G            | 75   | 5.625G            | 76   | 5.581G            |
| 77                                               | 5.431G            | 78   | 5.723G            | 79   | 5.545G            | 80   | 5.264G            |
| 81                                               | 5.651G            | 82   | 5.338G            | 83   | 5.301G            | 84   | 5.299G            |
| 85                                               | 5.346G            | 86   | 5.713G            | 87   | 5.282G            | 88   | 5.286G            |
| 89                                               | 5.559G            | 90   | 5.593G            | 91   | 5.533G            | 92   | 5.278G            |
| 93                                               | 5.266G            | 94   | 5.332G            | 95   | 5.380G            | 96   | 5.350G            |
| 97                                               | 5.483G            | 98   | 5.682G            | 99   | 5.414G            | 100  | 5.428G            |