

# DFS MEASUREMENT REPORT

## FCC PART 15 Subpart E

**FCC ID:** 2ALJ3AP211

**APPLICANT:** HAN Networks Co., Ltd

**Application Type:** Certification

**Product:** HAN Access Point

**Model No.:** AP211

**Brand Name:** HAN NETWORKS

**FCC Classification:** Unlicensed National Information Infrastructure (NII)

**FCC Rule Part(s):** Part 15 Subpart E – 15.407 Section (h)(2)

KDB 905462 D02v02, KDB 905462 D04v01

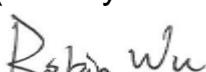
**Type of Device:** Master Device

**Test Date:** August 19 ~ September 08, 2018

Reviewed By:

  
( Sunny Sun )

Approved By:

  
( Robin Wu )



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 905462 D02v02. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

## Revision History

| Report No.    | Version | Description    | Issue Date | Note  |
|---------------|---------|----------------|------------|-------|
| 1808RSU025-U7 | Rev. 01 | Initial Report | 11-22-2018 | Valid |
|               |         |                |            |       |

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## §2.1033 General Information

|                                |   |                                     |  |                                      |
|--------------------------------|---|-------------------------------------|--|--------------------------------------|
| <b>Applicant:</b>              | HAN Networks Co., Ltd   |                                     |  |                                      |
| <b>Applicant Address:</b>      | 5/F, Building 37, No. 8 Dongbeiwang West Road, Haidian District<br>Beijing 100194, P.R. China |                                     |  |                                      |
| <b>Manufacturer:</b>           | HAN Networks Co., Ltd   |                                     |  |                                      |
| <b>Manufacturer Address:</b>   | 5/F, Building 37, No. 8 Dongbeiwang West Road, Haidian District<br>Beijing 100194, P.R. China |                                     |  |                                      |
| <b>Test Site:</b>              | MRT Technology (Suzhou) Co., Ltd  |                                     |  |                                      |
| <b>Test Site Address:</b>      | D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development<br>Zone, Suzhou, China         |                                     |  |                                      |
| <b>FCC Registration No.:</b>   | 893164  |                                     |  |                                      |
| <b>Test Device Serial No.:</b> | N/A   | <input type="checkbox"/> Production | <input checked="" type="checkbox"/> Pre-Production | <input type="checkbox"/> Engineering |

### Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.



## 1. INTRODUCTION

### 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

### 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.



## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

|                          |   |
|--------------------------|---|
| Product Name:            | HAN Access Point  |
| Model No.:               | AP211   |
| Brand Name:              | HAN NETWORKS  |
| Wi-Fi Specification      | 802.11a/b/g/n/ac  |
| Bluetooth Specification: | v5.0  |
| Operating Temperature:   | 0 ~ 45 °C   |
| Power Type:              | POE input or AC adapter input   |
| Operating Environment:   | Indoor Use  |
| <b>Accessories</b>       |   |
| Adapter 1#               | Model No.: ADP-30HR B<br>Input Power: 100 - 240V ~ 50/60Hz, 1.0A<br>Output Power: 48VDC/0.66A       |
| Adapter 2#               | Model No.: PD-9001 GR/AT/AC<br>Input Power: 100 - 240V ~ 50/60Hz, 0.67A<br>Output Power: 55VDC/0.6A |

### 2.2. Product Specification Subjective to this Report

|   |  |
|---|--|
| Frequency Range:                            | For 802.11a/n-HT20/ac-VHT20:<br>5260~5320MHz, 5500~5720MHz<br>For 802.11n-HT40/ac-VHT40:<br>5270~5310MHz, 5510~5710MHz,<br>For 802.11ac-VHT80:<br>5290MHz, 5530MHz, 5610MHz, 5690MHz   |
| Type of Modulation:                         | 802.11a/n/ac: OFDM   |
| Data Rate:                                  | 802.11a: 6/9/12/18/24/36/48/54Mbps<br>802.11n: up to 300Mbps<br>802.11ac: up to 866.6Mbps  |
| Power-on cycle:                             | Requires 108.0 seconds to complete its power-on cycle  |
| Uniform Spreading (For DFS Frequency Band): | For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm. |

Note: For other features of this EUT, test report will be issued separately.

## 2.3. Description of Available Antennas

| Antenna Type                      | Frequency Band (GHz) | Tx Paths | Per Chain Max Antenna Gain (dBi) |       | Beam-Forming Directional Gain (dBi) | CDD Directional Gain(dBi) |         |
|-----------------------------------|----------------------|----------|----------------------------------|-------|-------------------------------------|---------------------------|---------|
|                                   |                      |          | Ant 0                            | Ant 1 |                                     | For Power                 | For PSD |
| <b>Wi-Fi Internal Antenna</b>     |                      |          |                                  |       |                                     |                           |         |
| PCB                               | 2412 ~ 2462          | 2        | 4.70                             | 3.70  | 7.22                                | 4.70                      | 7.71    |
|                                   | 5150 ~ 5250          | 2        | 3.80                             | 3.00  | 6.42                                | 3.80                      | 6.81    |
|                                   | 5250 ~ 5350          | 2        | 3.80                             | 3.00  | 6.42                                | 3.80                      | 6.81    |
|                                   | 5470 ~ 5725          | 2        | 4.60                             | 3.80  | 7.22                                | 4.60                      | 7.61    |
|                                   | 5725 ~ 5850          | 2        | 4.60                             | 3.00  | 6.85                                | 4.60                      | 7.61    |
| <b>Bluetooth Internal Antenna</b> |                      |          |                                  |       |                                     |                           |         |
| PCB                               | 2402 ~ 2480          | 1        | 3.70                             |       | --                                  |                           |         |

Note:

1. The EUT supports SISO technology for 802.11b mode only.
2. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

For CDD transmissions, directional gain is calculated as follows,  $N_{ANT} = 2$ ,  $N_{SS} = 1$ .

If all antennas have the same gain,  $G_{ANT}$ , Directional gain =  $G_{ANT} + \text{Array Gain}$ , where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,

Array Gain =  $10 \log (N_{ANT}/ N_{SS})$  dB = 3.01;

- For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB for  $N_{ANT} \leq 4$ ;

If antenna gains are not equal, Directional gain may be calculated by using the formulas applicable to equal gain antennas with  $G_{ANT}$  set equal to the gain of the antenna having the highest gain.

The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac, not include 802.11a/b/g. The directional gain =  $10 * \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}]$  dB.

## 2.4. Description of Antenna RF Port

| Antenna RF Port       |                |       |              |       |
|-----------------------|----------------|-------|--------------|-------|
| --                    | 2.4GHz RF Port |       | 5GHz RF Port |       |
| Software Control Port | Ant 0          | Ant 1 | Ant 0        | Ant 1 |
|                       |                |       |              |       |

Bluetooth RF Port

2.4GHz / 5GHz RF Port 1

2.4GHz / 5GHz RF Port 0

## 2.5. DFS Band Carrier Frequencies Operation

802.11a/n-HT20/ac-VHT20

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 52      | 5260 MHz  | 56      | 5280 MHz  | 60      | 5300 MHz  |
| 64      | 5320 MHz  | 100     | 5500 MHz  | 104     | 5520 MHz  |
| 108     | 5540 MHz  | 112     | 5560 MHz  | 116     | 5580 MHz  |
| 120     | 5600 MHz  | 124     | 5620 MHz  | 128     | 5640 MHz  |
| 132     | 5660 MHz  | 136     | 5680 MHz  | 140     | 5700 MHz  |
| 144     | 5720 MHz  | --      | --        | --      | --        |

802.11n-HT40/ac-VHT40

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 54      | 5270 MHz  | 62      | 5310 MHz  | 102     | 5510 MHz  |
| 110     | 5550 MHz  | 118     | 5590 MHz  | 126     | 5630 MHz  |
| 134     | 5670 MHz  | 142     | 5710 MHz  | --      | --        |

802.11ac-VHT80

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 58      | 5290 MHz  | 106     | 5530 MHz  | 122     | 5610 MHz  |
| 138     | 5690 MHz  | --      | --        | --      | --        |

## 2.6. Test Mode

|           |                                     |
|-----------|-------------------------------------|
| Test Mode | Mode 1: Communication with Notebook |
|-----------|-------------------------------------|

### 3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

#### 3.1. Applicability

The following table from FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 lists the applicable requirements for the DFS testing.

| Requirement                     | Operational Mode |                                |                             |
|---------------------------------|------------------|--------------------------------|-----------------------------|
|                                 | Master           | Client Without Radar Detection | Client With Radar Detection |
| Non-Occupancy Period            | Yes              | Not required                   | Yes                         |
| DFS Detection Threshold         | Yes              | Not required                   | Yes                         |
| Channel Availability Check Time | Yes              | Not required                   | Not required                |
| U-NII Detection Bandwidth       | Yes              | Not required                   | Yes                         |

**Table 3-1: Applicability of DFS Requirements Prior to Use of a Channel**

| Requirement                       | Operational Mode                             |                                |
|-----------------------------------|--|--------------------------------|
|                                   | Master Device or Client With Radar Detection | Client Without Radar Detection |
| DFS Detection Threshold           | Yes  | Not required                   |
| Channel Closing Transmission Time | Yes  | Yes                            |
| Channel Move Time                 | Yes  | Yes                            |
| U-NII Detection Bandwidth         | Yes  | Not required                   |

|   |  |  |
|---|--|--|
| Additional requirements for devices with multiple bandwidth modes   | Master Device 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 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 each of the bonded 20 MHz channels and the channel center frequency. |  |  |

**Table 3-2: Applicability of DFS Requirements during normal operation**

### 3.2. DFS Devices Requirements

**Per FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 the following are the requirements for Master Devices:**

- (a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5250 ~ 5350 MHz and 5470 ~ 5725 MHz bands. DFS is not required in the 5150 ~ 5250 MHz or 5725 ~ 5825 MHz bands.
- (b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.
- (c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.
- (d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).
- (e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.
- (f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period.
- (g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

**Channel Move Time and Channel Closing Transmission Time requirements are listed in the following table.**

| 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.

**Table 3-3: DFS Response Requirements**

### 3.3. DFS Detection Threshold Values

The DFS detection thresholds are defined for Master devices and Client Devices with In-service monitoring. These detection thresholds are listed in the following table.

| Maximum Transmit Power   | Value<br>(See Notes 1, 2, and 3) |
|--|----------------------------------|
| EIRP $\geq$ 200 milliwatt  | -64 dBm                          |
| EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz                 | -62 dBm                          |
| EIRP < 200 milliwatt that do not meet the 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 3-4: Detection Thresholds for Master Devices and Client Devices with Radar Detection**

### 3.4. Parameters of DFS Test Signals

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. 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.

**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 3-6  | Roundup $\left\lceil \frac{1}{\left( \frac{360}{19 \cdot 10^6} \right) \cdot \left( \frac{1}{\text{PRI}_{\mu\text{sec}}} \right)} \right\rceil$ | 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 3-5: Parameters for Short Pulse Radar Waveforms**

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

| Pulse Repetition Frequency Number | Pulse Repetition Frequency (Pulses Per Second) | Pulse Repetition Interval (Microseconds) |
|-----------------------------------|--|--|
| 1                                 | 1930.5   | 518                                      |
| 2                                 | 1858.7   | 538                                      |
| 3                                 | 1792.1   | 558                                      |
| 4                                 | 1730.1   | 578                                      |
| 5                                 | 1672.2   | 598                                      |
| 6                                 | 1618.1   | 618                                      |
| 7                                 | 1567.4   | 638                                      |
| 8                                 | 1519.8   | 658                                      |
| 9                                 | 1474.9   | 678                                      |
| 10                                | 1432.7   | 698                                      |
| 11                                | 1392.8   | 718                                      |
| 12                                | 1355   | 738                                      |
| 13                                | 1319.3   | 758                                      |
| 14                                | 1285.3   | 778                                      |
| 15                                | 1253.1   | 798                                      |
| 16                                | 1222.5   | 818                                      |
| 17                                | 1193.3   | 838                                      |
| 18                                | 1165.6   | 858                                      |
| 19                                | 1139   | 878                                      |
| 20                                | 1113.6   | 898                                      |
| 21                                | 1089.3   | 918                                      |
| 22                                | 1066.1   | 938                                      |
| 23                                | 326.2  | 3066                                     |

**Table 3-6: Pulse Repetition Intervals Values for Test A**

**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 3-7: Parameters for Long Pulse Radar Waveforms**

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

**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                       |

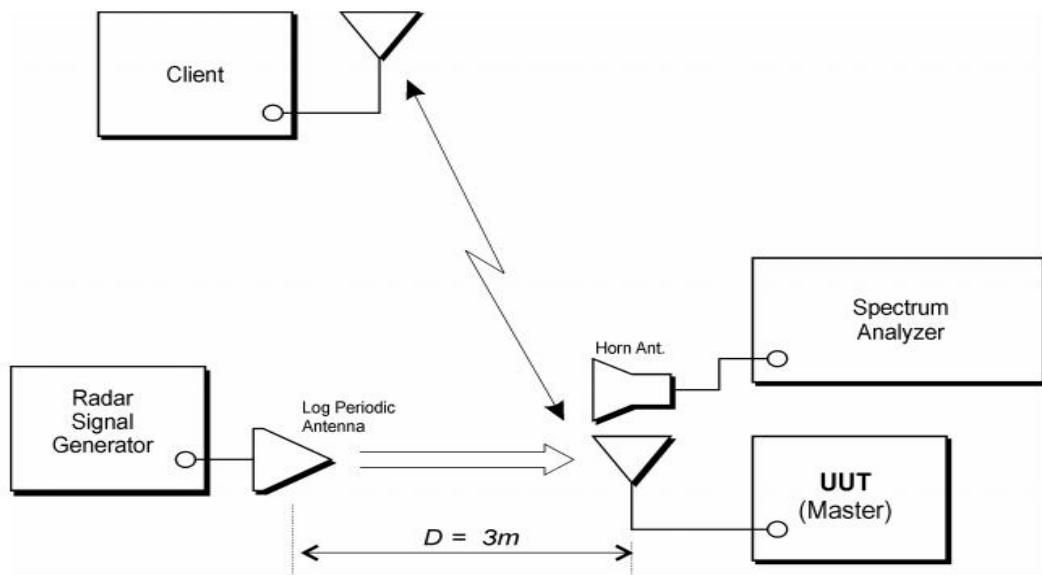
**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

### 3.5. Test Setup

The FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 describes a radiated test setup and a conducted test setup. The Radiated test setup was used for this testing. Figure 3-1 shows the typical test setup.



**Figure 3-1: Radiated Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters**

#### 4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS) - SR5

| Instrument              | Manufacturer | Type No. | Asset No.   | Cali. Interval | Cali. Due Date |
|-------------------------|--------------|----------|-------------|----------------|----------------|
| Spectrum Analyzer       | Agilent      | N9020A   | MRTSUE06106 | 1 year         | 2019/04/20     |
| Vector Signal Generator | Agilent      | E4438C   | MRTSUE06026 | 1 year         | 2018/12/08     |
| Thermohygrometer        | Testo        | 608-H1   | MRTSUE06222 | 1 year         | 2018/11/21     |

Client Information

| Instrument               | Manufacturer | Type No. |
|--------------------------|--------------|----------|
| Wireless Network Adapter | Intel        | 7260HMW  |

| Software       | Version | Manufacturer | Function                         |
|----------------|---------|--------------|----------------------------------|
| Pulse Building | N/A     | Agilent      | Radar Signal Generation Software |
| DFS Tool       | V 6.9.2 | Agilent      | DFS Test Software                |

## 5. TEST RESULT

### 5.1. Summary

**Product Name:** HAN Access Point

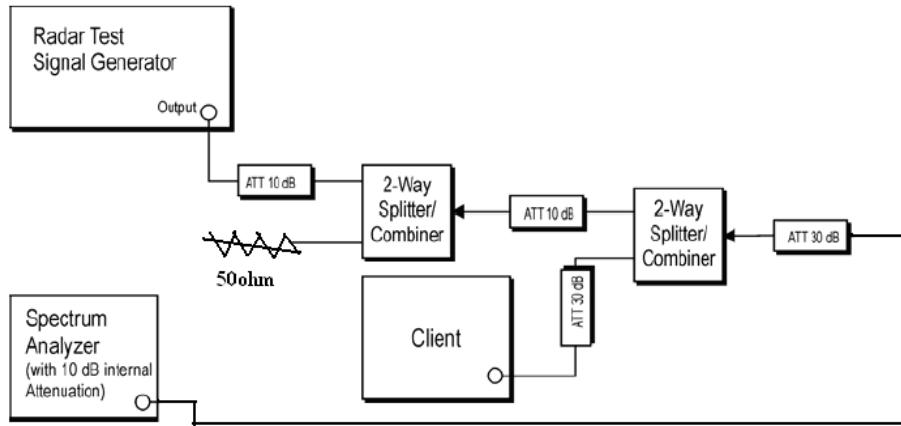
**FCC ID:** 2ALJ3AP211

| Parameter  | Limit           | Test Result | Reference   |
|--|-----------------|-------------|-------------|
| NII Detection Bandwidth Measurement  | Refer Table 3-3 | Pass        | Section 5.3 |
| Initial Channel Availability Check Time  | Refer Table 3-3 | Pass        | Section 5.4 |
| Radar Burst at the Beginning of the Channel Availability Check Time            | Refer Table 3-3 | Pass        | Section 5.5 |
| Radar Burst at the End of the Channel Availability Check Time                  | Refer Table 3-3 | Pass        | Section 5.6 |
| In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time | Refer Table 3-3 | Pass        | Section 5.7 |
| Non-Occupancy Period   | Refer Table 3-3 | Pass        | Section 5.7 |
| Statistical Performance Check  | Refer Table 3-3 | Pass        | Section 5.8 |

## 5.2. Radar Waveform Calibration

### 5.2.1. Calibration Setup

The conducted test setup was used for this calibration testing. Figure 3-2 shows the typical test setup.



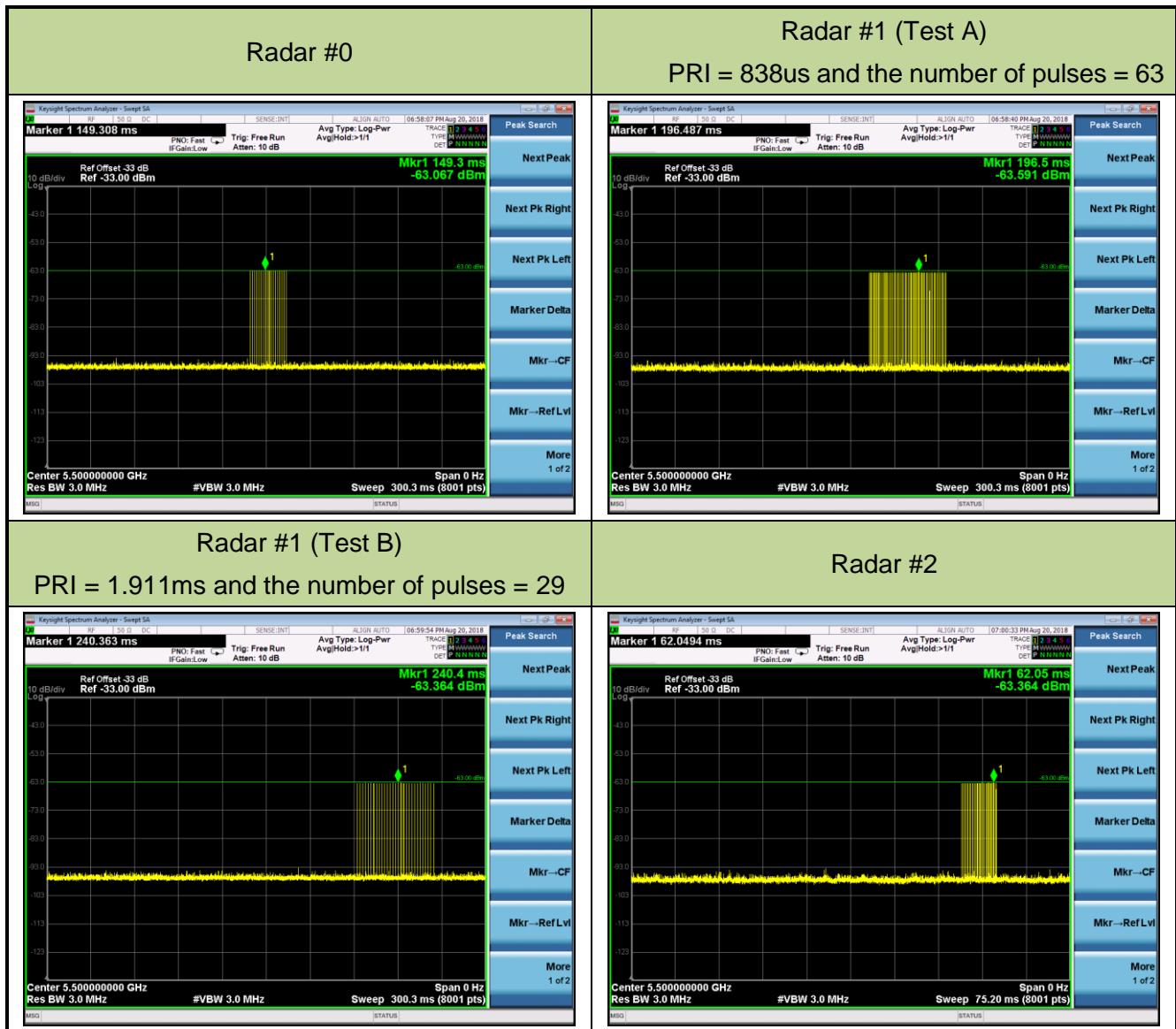
**Figure 3-2: Conducted Test Setup**

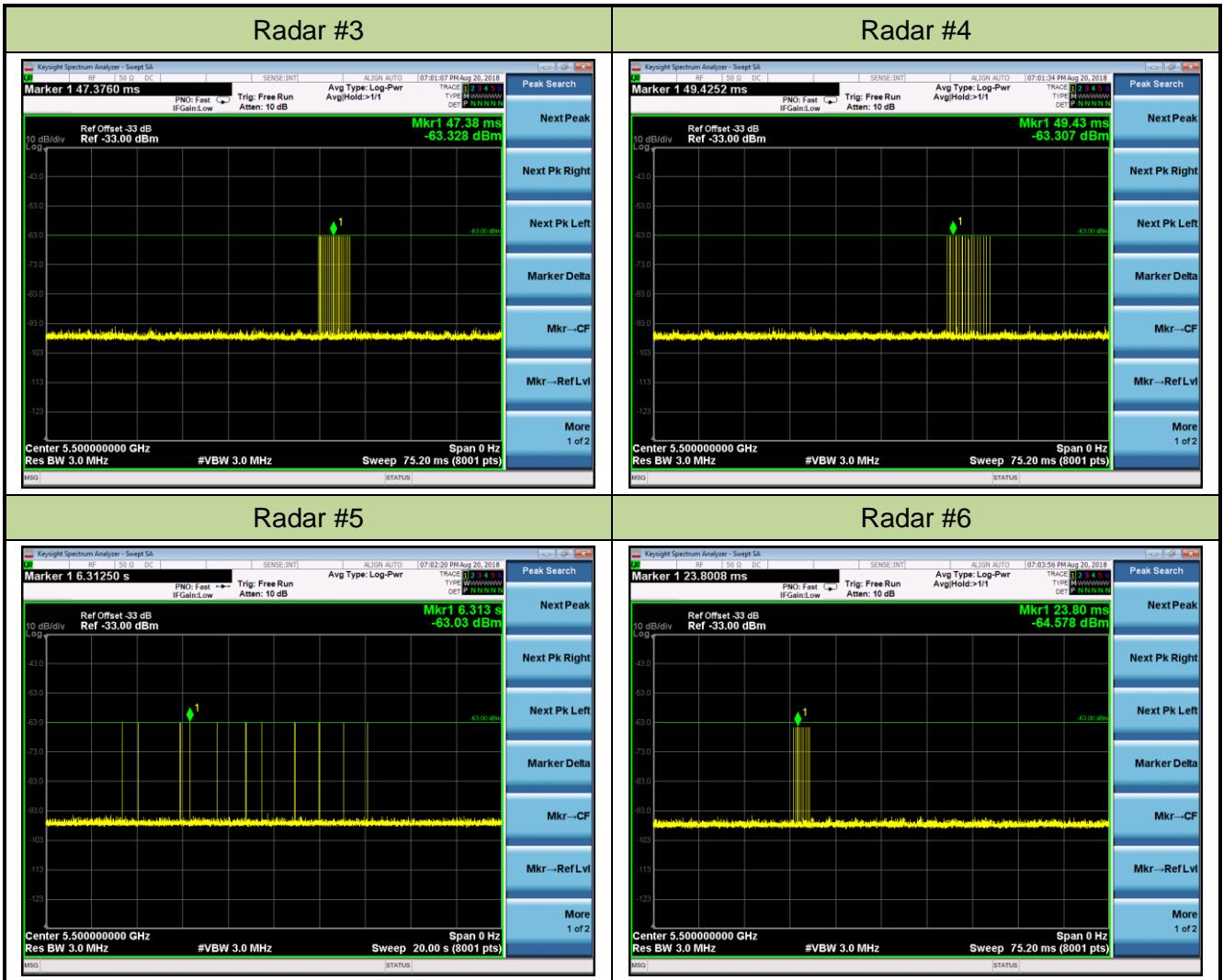
### 5.2.2. Calibration Procedure

The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

### 5.2.3. Cablibration Result

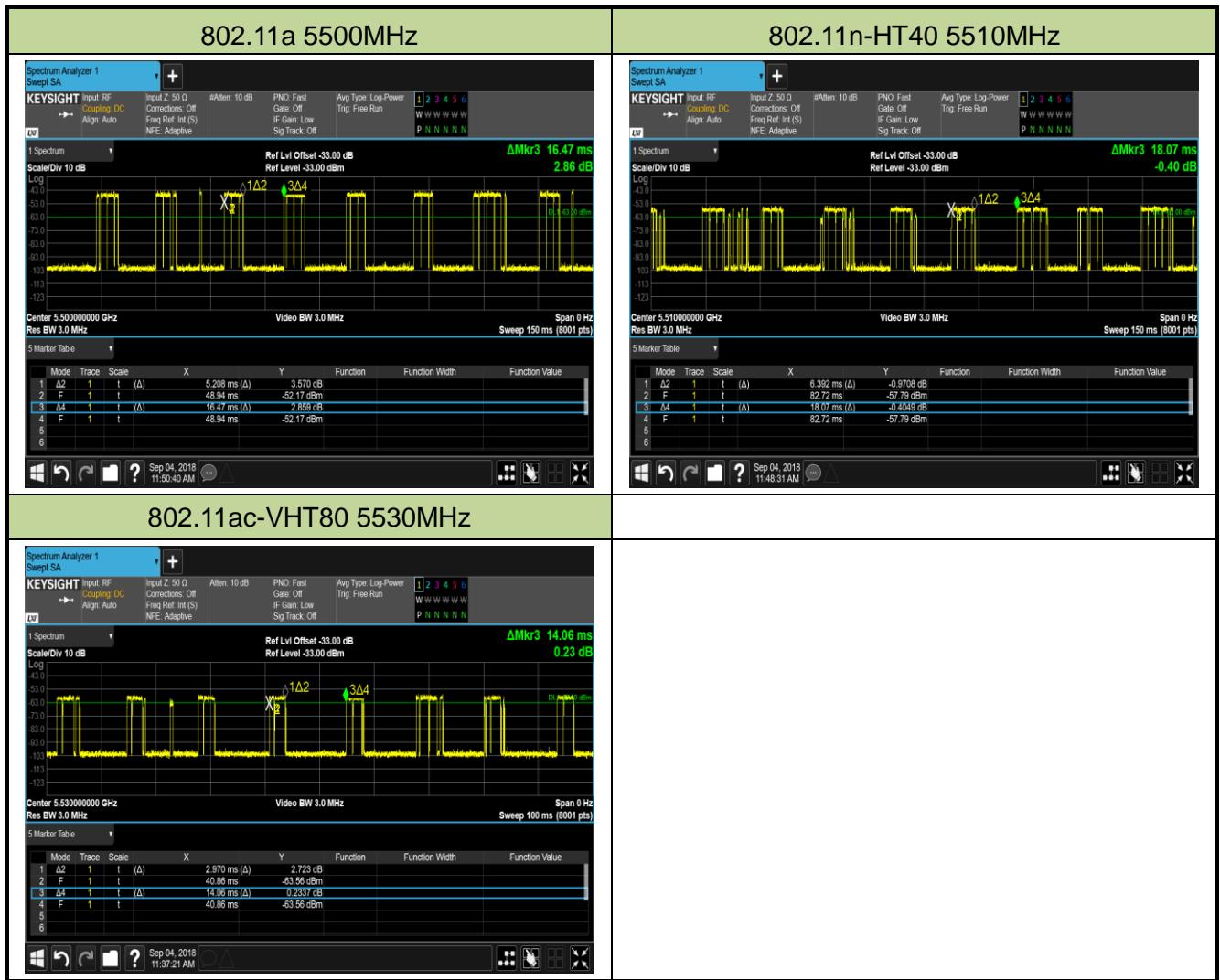
|               |                            |                   |            |
|---------------|----------------------------|-------------------|------------|
| Product       | HAN Access Point           | Temperature       | 27°C       |
| Test Engineer | Amy Zhang                  | Relative Humidity | 65%        |
| Test Site     | SR5                        | Test Date         | 2018/08/20 |
| Test Item     | Radar Waveform Calibration |                   |            |





### 5.2.4. Channel Loading Test Result

|               |                  |                   |            |
|---------------|------------------|-------------------|------------|
| Product       | HAN Access Point | Temperature       | 27°C       |
| Test Engineer | Amy Zhang        | Relative Humidity | 65%        |
| Test Site     | SR5              | Test Date         | 2018/09/04 |
| Test Item     | Channel Loading  |                   |            |



| Test Mode      | Test Frequency | Packet ratio | Requirement ratio | Test Result |
|----------------|----------------|--------------|-------------------|-------------|
| 802.11a        | 5500 MHz       | 31.62%       | ≥ 17%             | Pass        |
| 802.11n-HT40   | 5510 MHz       | 35.37%       | ≥ 17%             | Pass        |
| 802.11ac-VHT80 | 5530 MHz       | 21.12%       | ≥ 17%             | Pass        |

Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. Packet ratio = Time On / (Time On + Off Time).

### **5.3. NII Detection Bandwidth Measurement**

#### **5.3.1. Test Limit**

Minimum 100% of the NII 99% transmission power bandwidth. During the U-NII Detection Bandwidth detection test, each frequency step the minimum percentage of detection is 90 percent.

Measurements are performed with no data traffic.

#### **5.3.2. Test Procedure**

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.

7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

### 5.3.3. Test Result

|               |  |                   |            |
|---------------|--|-------------------|------------|
| Product       | HAN Access Point                             | Temperature       | 27°C       |
| Test Engineer | Amy Zhang                                    | Relative Humidity | 65%        |
| Test Site     | SR5  | Test Date         | 2018/08/24 |
| Test Item     | Detection Bandwidth (802.11a mode – 5500MHz) |                   |            |

| Radar Frequency<br>(MHz) | DFS Detection Trials (1=Detection, 0= No Detection) |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|--------------------------|---|---|---|---|---|---|---|---|---|----|--------------------|
|                          | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5490                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5491 FL                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5492                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5493                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5494                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5495                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5500                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5505                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5506                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5507                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5508                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5509 FH                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5510                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 16.69MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5509MHz - 5491MHz = 18MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $16.69\text{MHz} \times 100\% = 16.69\text{MHz}$ .

|               |   |                   |            |
|---------------|---|-------------------|------------|
| Product       | HAN Access Point                                  | Temperature       | 27°C       |
| Test Engineer | Amy Zhang   | Relative Humidity | 65%        |
| Test Site     | SR5   | Test Date         | 2018/08/24 |
| Test Item     | Detection Bandwidth (802.11n-HT40 mode – 5510MHz) |                   |            |

| Radar Frequency<br>(MHz) | DFS Detection Trials (1=Detection, 0= No Detection) |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|--------------------------|---|---|---|---|---|---|---|---|---|----|--------------------|
|                          | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5490                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5491                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5492 FH                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5493                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5494                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5495                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5500                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5505                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5510                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5515                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5520                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5525                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5526                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5527                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5528                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5529 FH                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5530                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 36.38MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5529MHz - 5492MHz = 37MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $36.38\text{MHz} \times 100\% = 36.38\text{MHz}$ .

|               |   |                   |            |
|---------------|---|-------------------|------------|
| Product       | HAN Access Point                                    | Temperature       | 27°C       |
| Test Engineer | Amy Zhang   | Relative Humidity | 65%        |
| Test Site     | SR5   | Test Date         | 2018/08/25 |
| Test Item     | Detection Bandwidth (802.11ac-VHT80 mode – 5530MHz) |                   |            |

| Radar Frequency<br>(MHz) | DFS Detection Trials (1=Detection, 0= No Detection) |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|--------------------------|---|---|---|---|---|---|---|---|---|----|--------------------|
|                          | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5490                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5491 FL                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5492                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5493                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5494                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5495                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5500                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5505                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5510                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5515                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5520                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5525                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5530                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5535                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5540                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5545                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5550                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5555                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5560                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5565                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5566                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5567                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5568                     | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5569 FH                  | 1   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5570                     | 0   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 76.23MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $76.23\text{MHz} \times 100\% = 76.23\text{MHz}$ .

## **5.4. Initial Channel Availability Check Time Measurement**

### **5.4.1. Test Limit**

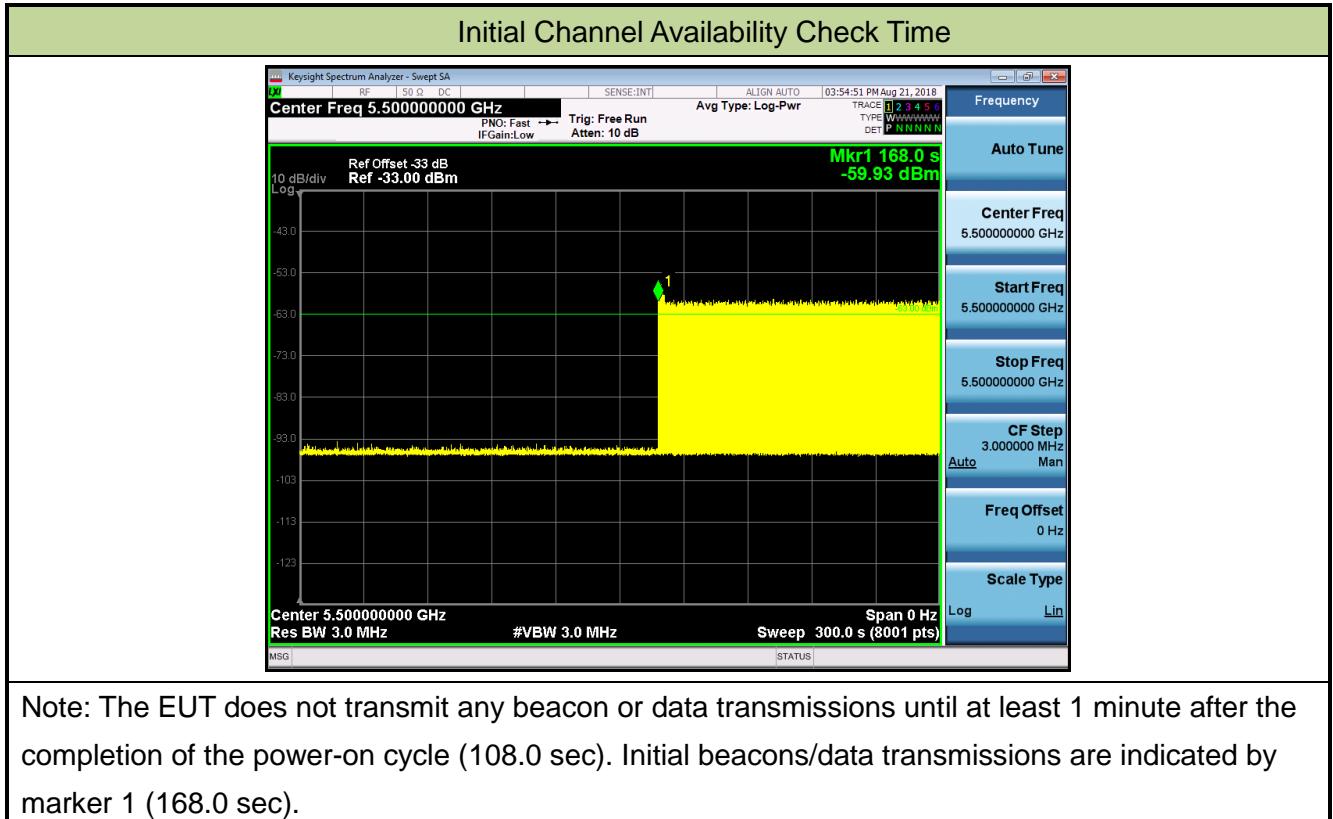
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

### **5.4.2. Test Procedure**

1. The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII Channel that must incorporate DFS functions. At the same time the EUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the Channel occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.
2. The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.
3. Confirm that the EUT initiates transmission on the channel. Measurement system showing its nominal noise floor is marker1.

### 5.4.3. Test Result

|               |  |                   |            |
|---------------|--|-------------------|------------|
| Product       | HAN Access Point   | Temperature       | 27°C       |
| Test Engineer | Amy Zhang  | Relative Humidity | 65%        |
| Test Site     | SR5  | Test Date         | 2018/08/21 |
| Test Item     | Initial Channel Availability Check Time (802.11a mode – 5500MHz) |                   |            |



## **5.5. Radar Burst at the Beginning of the Channel Availability Check Time Measurement**

### **5.5.1. Test Limit**

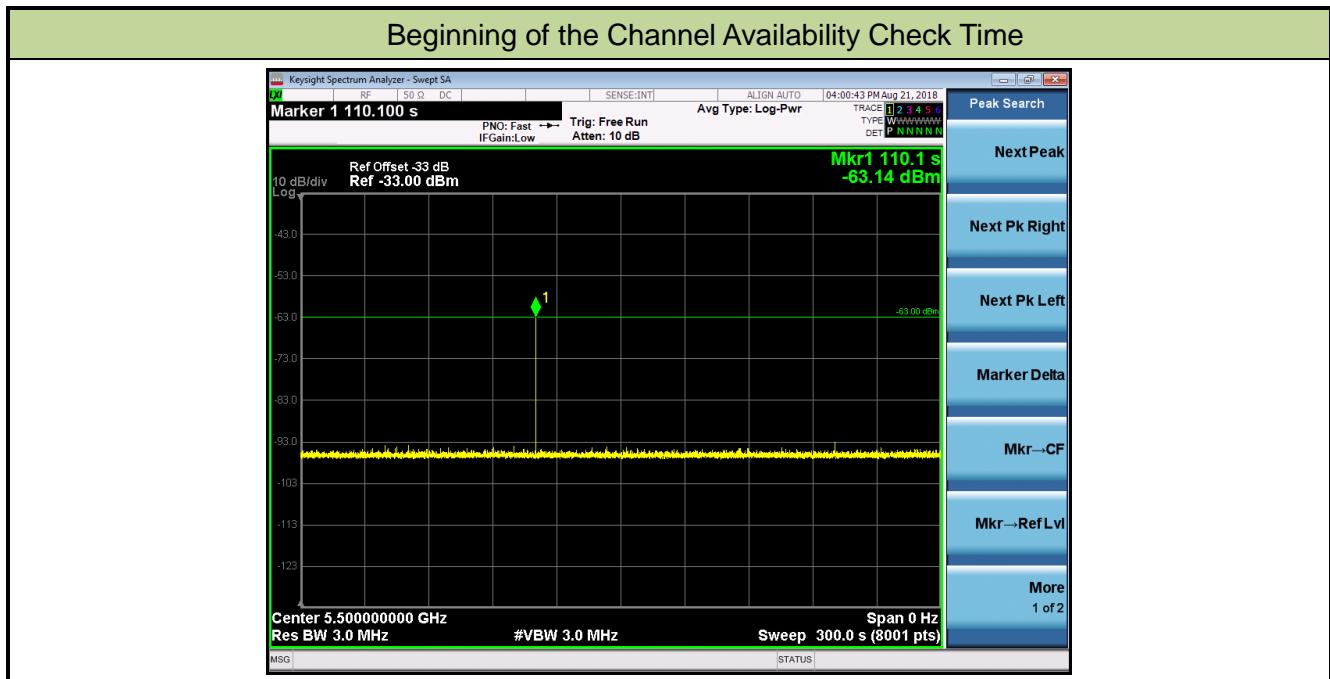
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.5.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is in completion power-up cycle (from T0 to T1). T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

### 5.5.3. Test Result

|               |   |                   |            |
|---------------|---|-------------------|------------|
| Product       | HAN Access Point  | Temperature       | 27°C       |
| Test Engineer | Amy Zhang   | Relative Humidity | 65%        |
| Test Site     | SR5   | Test Date         | 2018/08/21 |
| Test Item     | Beginning of the Channel Availability Check Time (802.11a mode – 5500MHz) |                   |            |



## **5.6. Radar Burst at the End of the Channel Availability Check Time Measurement**

### **5.6.1. Test Limit**

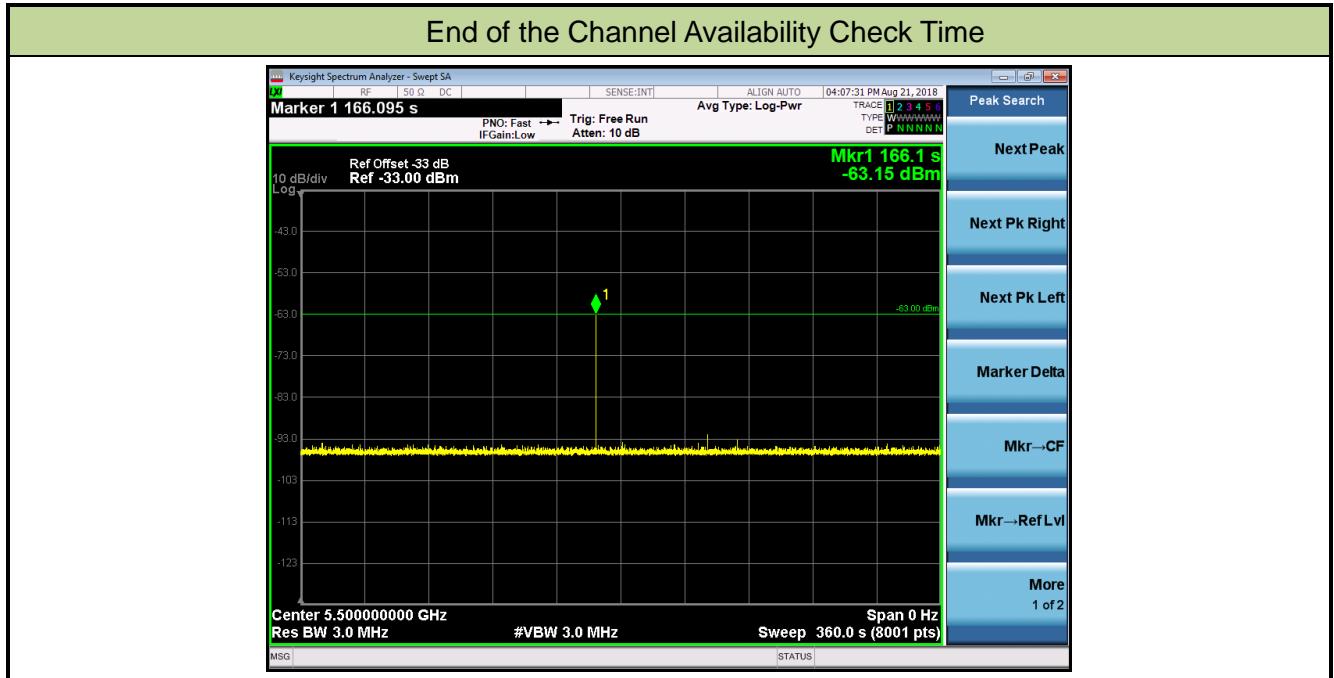
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.6.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than  $T1 + 60$  seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at  $T1 + 54$  seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

### 5.6.3. Test Result

|               |   |                   |            |
|---------------|---|-------------------|------------|
| Product       | HAN Access Point  | Temperature       | 27°C       |
| Test Engineer | Amy Zhang   | Relative Humidity | 65%        |
| Test Site     | SR5   | Test Date         | 2018/08/21 |
| Test Item     | End of the Channel Availability Check Time (802.11a mode – 5500MHz) |                   |            |



## **5.7. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement**

### **5.7.1. Test Limit**

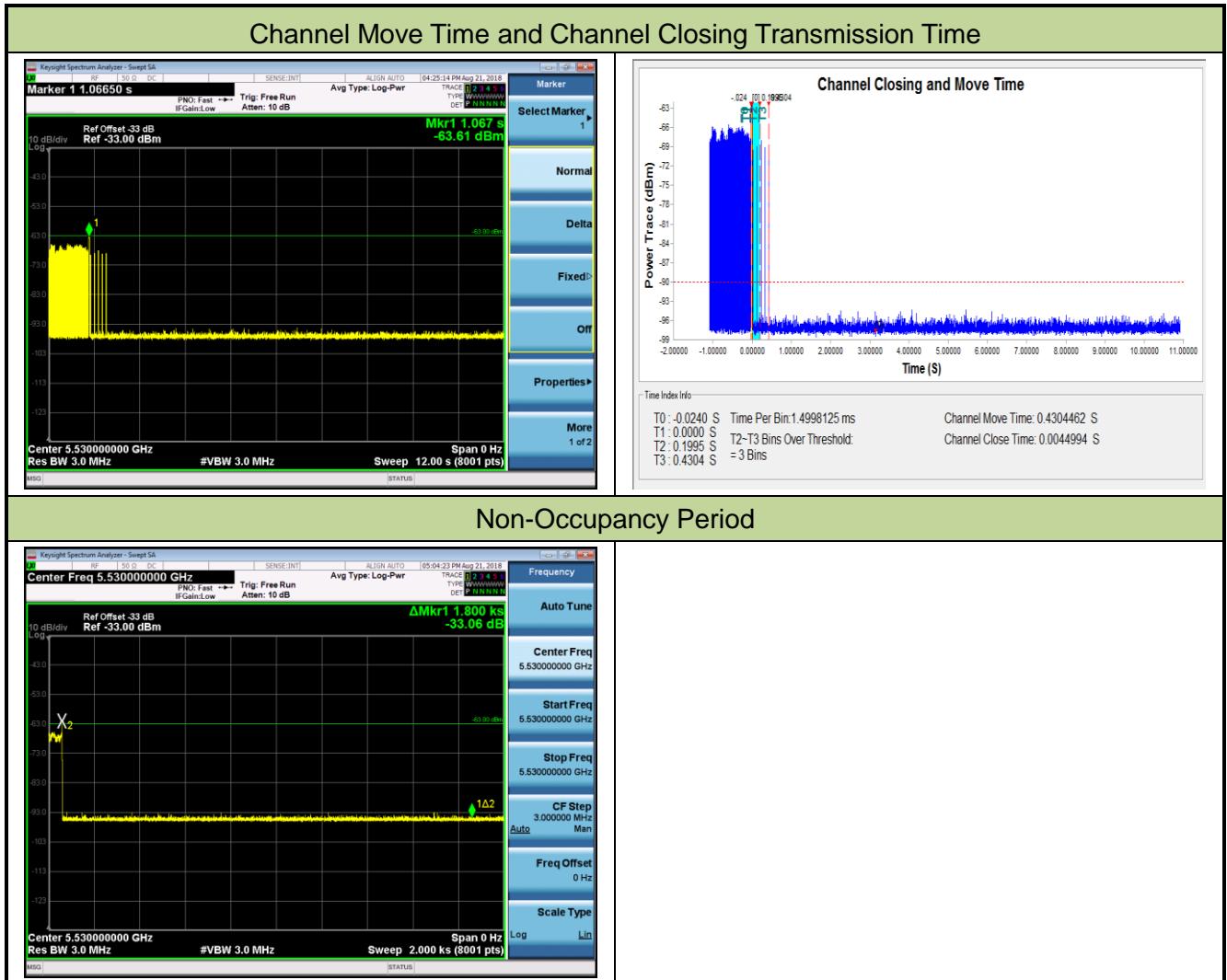
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec. The total duration of Channel Closing Transmission Time is 260ms, consisting of data signals and the aggregate of control signals, by a U-NII device during the Channel Move Time. The Non-Occupancy Period time is 30 minute during which a Channel will not be utilized after a Radar Waveform is detected on that Channel.

### **5.7.2. Test Procedure Used**

1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.
3. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).
4. Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell\ (1.5ms) = S\ (12\ sec) / B\ (8000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C = N \times Dwell$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and Dwell is the dwell time per bin.
5. Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this Channel.

### 5.7.3. Test Result

|               |  |                   |            |
|---------------|--|-------------------|------------|
| Product       | HAN Access Point   | Temperature       | 27°C       |
| Test Engineer | Amy Zhang  | Relative Humidity | 65%        |
| Test Site     | SR5  | Test Date         | 2018/08/21 |
| Test Item     | Channel Move Time and Channel Closing Transmission Time<br>(802.11ac-VHT80 mode – 5530MHz) |                   |            |



| Parameter  | Test Result | Limit    |
|--|-------------|----------|
|  | Type 0      |          |
| Channel Move Time (s)                            | 0.430s      | <10s     |
| Channel Closing Transmission Time (ms)<br>(Note) | 4.5ms       | < 60ms   |
| Non-Occupancy Period (min)                       | ≥ 30min     | ≥ 30 min |

Note: 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 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.

## 5.8. Statistical Performance Check Measurement

### 5.8.1. Test Limit

The minimum percentage of successful detection requirements found in below table when a radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

| Radar Type                  | Minimum Number of Trails          | Detection Probability |
|-----------------------------|-----------------------------------|-----------------------|
| 0                           | 30                                | Pd > 60%              |
| 1                           | 30(15 of test A and 15 of test B) | Pd > 60%              |
| 2                           | 30                                | Pd > 60%              |
| 3                           | 30                                | Pd > 60%              |
| 4                           | 30                                | Pd > 60%              |
| Aggregate (Radar Types 1-4) | 120                               | Pd > 80%              |
| 5                           | 30                                | Pd > 80%              |
| 6                           | 30                                | Pd > 70%              |

Note: The percentage of successful detection is calculated by:  
(Total Waveform Detections / Total Waveform Trails) \* 100 = Probability of Detection Radar Waveform In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: (Pd1 + Pd2 + Pd3 + Pd4) / 4.

### 5.8.2. Test Procedure

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. At time T0 the Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels equal to the DFS Detection Threshold + 1dB, on the Operating Channel.
3. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 0 to ensure detection occurs.
4. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
6. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table.

### 5.8.3. Test Result

|               |  |                   |            |
|---------------|--|-------------------|------------|
| Product       | HAN Access Point   | Temperature       | 27°C       |
| Test Engineer | Amy Zhang  | Relative Humidity | 65%        |
| Test Site     | SR5  | Test Date         | 2018/08/25 |
| Test Item     | Radar Statistical Performance Check (802.11a mode – 5500MHz) |                   |            |

| Trail # | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|---------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1       | 5491                | 1                   | 618      | 86             | 1                             |
| 2       | 5491                | 1                   | 518      | 102            | 1                             |
| 3       | 5491                | 1                   | 938      | 57             | 1                             |
| 4       | 5491                | 1                   | 558      | 95             | 1                             |
| 5       | 5491                | 1                   | 858      | 62             | 1                             |
| 6       | 5491                | 1                   | 738      | 72             | 1                             |
| 7       | 5491                | 1                   | 698      | 76             | 1                             |
| 8       | 5491                | 1                   | 898      | 59             | 1                             |
| 9       | 5491                | 1                   | 3066     | 18             | 1                             |
| 10      | 5491                | 1                   | 758      | 70             | 1                             |
| 11      | 5500                | 1                   | 798      | 67             | 1                             |
| 12      | 5500                | 1                   | 838      | 63             | 1                             |
| 13      | 5500                | 1                   | 678      | 78             | 1                             |
| 14      | 5500                | 1                   | 638      | 83             | 1                             |
| 15      | 5500                | 1                   | 818      | 65             | 1                             |
| 16      | 5500                | 1                   | 2625     | 21             | 1                             |
| 17      | 5500                | 1                   | 746      | 71             | 1                             |
| 18      | 5500                | 1                   | 1276     | 42             | 1                             |
| 19      | 5500                | 1                   | 1676     | 32             | 1                             |
| 20      | 5500                | 1                   | 894      | 59             | 1                             |
| 21      | 5509                | 1                   | 881      | 60             | 1                             |
| 22      | 5509                | 1                   | 1522     | 35             | 1                             |
| 23      | 5509                | 1                   | 2427     | 22             | 1                             |
| 24      | 5509                | 1                   | 2323     | 23             | 1                             |
| 25      | 5509                | 1                   | 1525     | 35             | 1                             |
| 26      | 5509                | 1                   | 1794     | 30             | 1                             |

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 27                       | 5509                | 1                   | 1333     | 40             | 1                             |
| 28                       | 5509                | 1                   | 1226     | 43             | 1                             |
| 29                       | 5509                | 1                   | 827      | 64             | 1                             |
| 30                       | 5509                | 1                   | 1725     | 31             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 2 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 5.0                 | 178      | 26             | 1                             |
| 2                        | 5491                | 1.2                 | 204      | 27             | 1                             |
| 3                        | 5491                | 1.7                 | 164      | 26             | 1                             |
| 4                        | 5491                | 4.3                 | 203      | 26             | 1                             |
| 5                        | 5491                | 5.0                 | 225      | 25             | 1                             |
| 6                        | 5491                | 3.4                 | 152      | 28             | 1                             |
| 7                        | 5491                | 2.8                 | 200      | 27             | 1                             |
| 8                        | 5491                | 1.4                 | 165      | 27             | 1                             |
| 9                        | 5491                | 2.7                 | 201      | 25             | 1                             |
| 10                       | 5491                | 4.5                 | 158      | 26             | 1                             |
| 11                       | 5500                | 5.0                 | 164      | 26             | 1                             |
| 12                       | 5500                | 4.8                 | 159      | 25             | 1                             |
| 13                       | 5500                | 2.1                 | 206      | 24             | 1                             |
| 14                       | 5500                | 2.5                 | 152      | 28             | 1                             |
| 15                       | 5500                | 2.6                 | 151      | 23             | 1                             |
| 16                       | 5500                | 4.8                 | 188      | 28             | 1                             |
| 17                       | 5500                | 4.4                 | 203      | 23             | 1                             |
| 18                       | 5500                | 3.2                 | 155      | 29             | 1                             |
| 19                       | 5500                | 2.5                 | 179      | 28             | 1                             |
| 20                       | 5500                | 3.6                 | 206      | 23             | 1                             |
| 21                       | 5509                | 4.8                 | 196      | 27             | 1                             |
| 22                       | 5509                | 1.4                 | 203      | 24             | 1                             |
| 23                       | 5509                | 3.3                 | 162      | 23             | 1                             |
| 24                       | 5509                | 2.7                 | 176      | 24             | 1                             |
| 25                       | 5509                | 4.9                 | 185      | 26             | 1                             |
| 26                       | 5509                | 3.5                 | 223      | 28             | 1                             |
| 27                       | 5509                | 2.2                 | 172      | 26             | 1                             |
| 28                       | 5509                | 4.8                 | 219      | 24             | 1                             |
| 29                       | 5509                | 2.3                 | 195      | 27             | 1                             |
| 30                       | 5509                | 1.7                 | 211      | 29             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 3 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 7.1                 | 261      | 17             | 1                             |
| 2                        | 5491                | 9.8                 | 458      | 18             | 1                             |
| 3                        | 5491                | 10.0                | 220      | 16             | 1                             |
| 4                        | 5491                | 6.7                 | 388      | 17             | 1                             |
| 5                        | 5491                | 8.0                 | 407      | 16             | 1                             |
| 6                        | 5491                | 8.4                 | 493      | 18             | 1                             |
| 7                        | 5491                | 7.1                 | 294      | 16             | 1                             |
| 8                        | 5491                | 7.3                 | 210      | 18             | 1                             |
| 9                        | 5491                | 7.1                 | 431      | 16             | 1                             |
| 10                       | 5491                | 6.6                 | 223      | 17             | 1                             |
| 11                       | 5500                | 7.1                 | 393      | 17             | 1                             |
| 12                       | 5500                | 7.6                 | 393      | 17             | 1                             |
| 13                       | 5500                | 9.7                 | 205      | 17             | 1                             |
| 14                       | 5500                | 6.1                 | 372      | 18             | 1                             |
| 15                       | 5500                | 7.5                 | 226      | 18             | 1                             |
| 16                       | 5500                | 9.8                 | 373      | 18             | 1                             |
| 17                       | 5500                | 9.3                 | 280      | 16             | 1                             |
| 18                       | 5500                | 10.0                | 252      | 17             | 1                             |
| 19                       | 5500                | 9.2                 | 491      | 16             | 1                             |
| 20                       | 5500                | 6.7                 | 225      | 17             | 1                             |
| 21                       | 5509                | 9.4                 | 201      | 17             | 1                             |
| 22                       | 5509                | 8.6                 | 249      | 17             | 1                             |
| 23                       | 5509                | 9.9                 | 263      | 17             | 1                             |
| 24                       | 5509                | 6.2                 | 410      | 16             | 1                             |
| 25                       | 5509                | 6.2                 | 293      | 18             | 1                             |
| 26                       | 5509                | 8.4                 | 436      | 18             | 1                             |
| 27                       | 5509                | 8.7                 | 343      | 18             | 1                             |
| 28                       | 5509                | 8.5                 | 262      | 16             | 1                             |
| 29                       | 5509                | 8.0                 | 346      | 18             | 1                             |
| 30                       | 5509                | 6.8                 | 218      | 17             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 4 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 16.4                | 310      | 15             | 1                             |
| 2                        | 5491                | 14.8                | 402      | 12             | 1                             |
| 3                        | 5491                | 12.3                | 247      | 13             | 1                             |
| 4                        | 5491                | 11.3                | 277      | 15             | 1                             |
| 5                        | 5491                | 13.6                | 242      | 15             | 1                             |
| 6                        | 5491                | 20.0                | 203      | 13             | 1                             |
| 7                        | 5491                | 13.8                | 473      | 15             | 1                             |
| 8                        | 5491                | 16.0                | 399      | 14             | 1                             |
| 9                        | 5491                | 12.4                | 348      | 14             | 1                             |
| 10                       | 5491                | 14.3                | 431      | 15             | 1                             |
| 11                       | 5500                | 12.7                | 252      | 12             | 1                             |
| 12                       | 5500                | 17.1                | 443      | 13             | 1                             |
| 13                       | 5500                | 11.7                | 229      | 12             | 1                             |
| 14                       | 5500                | 19.5                | 369      | 13             | 1                             |
| 15                       | 5500                | 19.1                | 228      | 13             | 1                             |
| 16                       | 5500                | 12.0                | 339      | 13             | 1                             |
| 17                       | 5500                | 18.1                | 236      | 13             | 1                             |
| 18                       | 5500                | 15.1                | 243      | 14             | 1                             |
| 19                       | 5500                | 15.4                | 206      | 16             | 1                             |
| 20                       | 5500                | 17.6                | 241      | 16             | 1                             |
| 21                       | 5509                | 11.5                | 347      | 15             | 1                             |
| 22                       | 5509                | 14.4                | 412      | 15             | 1                             |
| 23                       | 5509                | 13.3                | 344      | 13             | 1                             |
| 24                       | 5509                | 17.6                | 268      | 15             | 1                             |
| 25                       | 5509                | 18.6                | 429      | 14             | 1                             |
| 26                       | 5509                | 16.3                | 227      | 13             | 1                             |
| 27                       | 5509                | 16.7                | 316      | 16             | 1                             |
| 28                       | 5509                | 19.3                | 469      | 13             | 1                             |
| 29                       | 5509                | 14.3                | 253      | 13             | 1                             |
| 30                       | 5509                | 16.6                | 275      | 15             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows:  $\frac{P_d\ 1 + P_d\ 2 + P_d\ 3 + P_d\ 4}{4} = (100\% + 100\% + 100\% + 100\%)/4 = 100\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5497.6              | 1                             | 16      | 5500.0              | 1                             |
| 2                        | 5496.8              | 1                             | 17      | 5500.0              | 1                             |
| 3                        | 5499.2              | 1                             | 18      | 5500.0              | 1                             |
| 4                        | 5494.4              | 1                             | 19      | 5500.0              | 1                             |
| 5                        | 5494.0              | 1                             | 20      | 5500.0              | 1                             |
| 6                        | 5499.6              | 1                             | 21      | 5504.0              | 1                             |
| 7                        | 5495.6              | 1                             | 22      | 5504.4              | 1                             |
| 8                        | 5495.2              | 1                             | 23      | 5500.8              | 1                             |
| 9                        | 5496.0              | 1                             | 24      | 5500.4              | 1                             |
| 10                       | 5498.8              | 1                             | 25      | 5506.0              | 1                             |
| 11                       | 5500.0              | 1                             | 26      | 5502.4              | 1                             |
| 12                       | 5500.0              | 1                             | 27      | 5505.6              | 1                             |
| 13                       | 5500.0              | 1                             | 28      | 5504.8              | 1                             |
| 14                       | 5500.0              | 1                             | 29      | 5503.2              | 1                             |
| 15                       | 5500.0              | 1                             | 30      | 5503.2              | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 100%                          |

| Type 5 Radar Waveform_1                 |               |          |             |         |                  |                  |                  |                |                           |                         |                              |
|---|---------------|----------|-------------|---------|------------------|------------------|------------------|----------------|---------------------------|-------------------------|------------------------------|
| Num of Bursts = 9                       |               |          |             |         |                  |                  |                  |                |                           |                         | Burst Interval (us)= 1333333 |
| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri (us) | Pulse 2 Pri (us) | Pulse 3 Pri (us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |                              |
| 1                                       | 111251        | 3        | 14          | 95      | 1439             | 1774             | 1347             | 111251         | 0                         | 1333332                 |                              |
| 2                                       | 1443517       | 3        | 14          | 85      | 1820             | 1871             | 1907             | 1559328        | 1333333                   | 2666665                 |                              |
| 3                                       | 1271838       | 2        | 14          | 85      | 1032             | 1483             | 0                | 2836764        | 2666666                   | 3999998                 |                              |
| 4                                       | 1910494       | 3        | 14          | 70      | 1217             | 1653             | 1323             | 4749773        | 3999999                   | 5333331                 |                              |
| 5                                       | 809324        | 2        | 14          | 50      | 1884             | 1438             | 0                | 5563290        | 5333332                   | 6666664                 |                              |
| 6                                       | 1506031       | 3        | 14          | 80      | 1035             | 1541             | 1566             | 7072643        | 6666665                   | 7999997                 |                              |
| 7                                       | 2184241       | 2        | 14          | 85      | 1503             | 1995             | 0                | 9261026        | 7999998                   | 9333330                 |                              |
| 8                                       | 587374        | 3        | 14          | 65      | 1343             | 1584             | 1727             | 9851898        | 9333331                   | 10666663                |                              |
| 9                                       | 1229153       | 1        | 14          | 75      | 1117             | 0                | 0                | 11085705       | 10666664                  | 11999996                |                              |
| Total number of pulses in waveform = 22 |               |          |             |         |                  |                  |                  |                |                           |                         |                              |
| *****                                   |               |          |             |         |                  |                  |                  |                |                           |                         |                              |

### Type 5 Radar Waveform\_2

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 728782        | 1        | 12          | 80      | 1071            | 0               | 0               | 728782         | 0                         | 857142                  |
| 2                                       | 691264        | 3        | 12          | 65      | 1865            | 1676            | 1856            | 1421117        | 857143                    | 1714285                 |
| 3                                       | 1008036       | 2        | 12          | 100     | 1580            | 1532            | 0               | 2434550        | 1714286                   | 2571428                 |
| 4                                       | 243712        | 2        | 12          | 75      | 1365            | 1036            | 0               | 2681374        | 2571429                   | 3428571                 |
| 5                                       | 930030        | 3        | 12          | 65      | 1001            | 1415            | 1498            | 3613805        | 3428572                   | 4285714                 |
| 6                                       | 891805        | 2        | 12          | 95      | 1085            | 1130            | 0               | 4509524        | 4285715                   | 5142857                 |
| 7                                       | 1422027       | 3        | 12          | 80      | 1590            | 1642            | 1529            | 5933766        | 5142858                   | 6000000                 |
| 8                                       | 585330        | 3        | 12          | 95      | 1863            | 1865            | 1299            | 6523857        | 6000001                   | 6857143                 |
| 9                                       | 455431        | 3        | 12          | 90      | 1329            | 2000            | 1101            | 6984315        | 6857144                   | 7714286                 |
| 10                                      | 1134441       | 3        | 12          | 50      | 1720            | 1030            | 1470            | 8123186        | 7714287                   | 8571429                 |
| 11                                      | 747229        | 1        | 12          | 60      | 1893            | 0               | 0               | 8874635        | 8571430                   | 9428572                 |
| 12                                      | 603115        | 1        | 12          | 55      | 1406            | 0               | 0               | 9479643        | 9428573                   | 10285715                |
| 13                                      | 1362081       | 3        | 12          | 90      | 1271            | 1746            | 1648            | 10843130       | 10285716                  | 11142858                |
| 14                                      | 730600        | 2        | 12          | 80      | 1907            | 1494            | 0               | 11578395       | 11142859                  | 12000001                |
| Total number of pulses in waveform = 32 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_3

Num of Bursts = 17  
Burst Interval (us)= 705882

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 73192         | 1        | 18          | 100     | 1149            | 0               | 0               | 73192          | 0                         | 705881                  |
| 2                                       | 798956        | 1        | 18          | 95      | 1022            | 0               | 0               | 873297         | 705882                    | 1411763                 |
| 3                                       | 719973        | 1        | 18          | 65      | 1708            | 0               | 0               | 1594292        | 1411764                   | 2117645                 |
| 4                                       | 1176577       | 3        | 18          | 60      | 1683            | 1763            | 1222            | 2772577        | 2117646                   | 2823527                 |
| 5                                       | 736701        | 3        | 18          | 50      | 1414            | 1044            | 1509            | 3513946        | 2823528                   | 3529409                 |
| 6                                       | 18194         | 1        | 18          | 65      | 1469            | 0               | 0               | 3536107        | 3529410                   | 4235291                 |
| 7                                       | 1046505       | 1        | 18          | 75      | 1150            | 0               | 0               | 4584081        | 4235292                   | 4941173                 |
| 8                                       | 907479        | 3        | 18          | 50      | 1133            | 1393            | 1885            | 5492710        | 4941174                   | 5647055                 |
| 9                                       | 223688        | 2        | 18          | 60      | 1766            | 1001            | 0               | 5720309        | 5647056                   | 6352937                 |
| 10                                      | 1125170       | 1        | 18          | 75      | 1657            | 0               | 0               | 6848746        | 6352938                   | 7058819                 |
| 11                                      | 449926        | 1        | 18          | 60      | 1084            | 0               | 0               | 7300329        | 7058820                   | 7764701                 |
| 12                                      | 1001239       | 1        | 18          | 70      | 1776            | 0               | 0               | 8302652        | 7764702                   | 8470583                 |
| 13                                      | 297733        | 2        | 18          | 75      | 1495            | 1758            | 0               | 8602161        | 8470584                   | 9176465                 |
| 14                                      | 613328        | 2        | 18          | 75      | 1933            | 1770            | 0               | 9218742        | 9176466                   | 9882347                 |
| 15                                      | 1287316       | 2        | 18          | 80      | 1767            | 1358            | 0               | 10509761       | 9882348                   | 10588229                |
| 16                                      | 565982        | 2        | 18          | 100     | 1399            | 1255            | 0               | 11078368       | 10588230                  | 11294111                |
| 17                                      | 275394        | 1        | 18          | 65      | 1199            | 0               | 0               | 11356916       | 11294112                  | 11999993                |
| Total number of pulses in waveform = 28 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_4

Num of Bursts = 18  
Burst Interval (us)= 666667

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 24166         | 2        | 6           | 75      | 1698            | 1552            | 0               | 24166          | 0                         | 666666                  |
| 2                                       | 720132        | 3        | 6           | 95      | 1295            | 1714            | 1066            | 747548         | 1333333                   | 1333333                 |
| 3                                       | 990142        | 3        | 6           | 55      | 1510            | 1018            | 1120            | 1741765        | 1333334                   | 2000000                 |
| 4                                       | 630009        | 2        | 6           | 70      | 1184            | 1776            | 0               | 2375422        | 2000001                   | 2666667                 |
| 5                                       | 355417        | 3        | 6           | 50      | 1972            | 1704            | 1293            | 2733799        | 2666668                   | 3333334                 |
| 6                                       | 855050        | 1        | 6           | 85      | 1309            | 0               | 0               | 3693818        | 3333335                   | 4000001                 |
| 7                                       | 780353        | 3        | 6           | 75      | 1188            | 1685            | 1202            | 4376480        | 4000002                   | 4666668                 |
| 8                                       | 802097        | 3        | 6           | 50      | 1062            | 1957            | 1520            | 5181652        | 4666669                   | 5333335                 |
| 9                                       | 450323        | 1        | 6           | 90      | 1357            | 0               | 0               | 5636514        | 5333336                   | 6000002                 |
| 10                                      | 541554        | 3        | 6           | 95      | 1032            | 1951            | 1571            | 6179425        | 6000003                   | 6666669                 |
| 11                                      | 893612        | 2        | 6           | 85      | 1873            | 1859            | 0               | 7077591        | 6666670                   | 7333336                 |
| 12                                      | 562188        | 2        | 6           | 65      | 1818            | 1696            | 0               | 7643511        | 7333337                   | 8000003                 |
| 13                                      | 497571        | 3        | 6           | 85      | 1327            | 1481            | 1544            | 8144596        | 8000004                   | 8666670                 |
| 14                                      | 745314        | 1        | 6           | 90      | 1299            | 0               | 0               | 8894262        | 8666671                   | 9333337                 |
| 15                                      | 912093        | 3        | 6           | 55      | 1369            | 1814            | 1922            | 9807654        | 9333338                   | 10000004                |
| 16                                      | 838622        | 2        | 6           | 95      | 1877            | 1596            | 0               | 10651281       | 10000005                  | 10666671                |
| 17                                      | 196758        | 2        | 6           | 80      | 1555            | 1340            | 0               | 10861512       | 10666672                  | 11333338                |
| 18                                      | 490087        | 1        | 6           | 90      | 1560            | 0               | 0               | 11344494       | 11333339                  | 12000005                |
| Total number of pulses in waveform = 40 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_5

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 1260105       | 2        | 5           | 100     | 1389            | 1091            | 0               | 282362         | 0                         | 857142                  |
| 2       | 635975        | 1        | 5           | 85      | 1733            | 0               | 0               | 1544947        | 857143                    | 1714285                 |
| 3       | 684051        | 1        | 5           | 55      | 1367            | 0               | 0               | 2182655        | 1714286                   | 2571428                 |
| 4       | 615174        | 2        | 5           | 100     | 1832            | 1424            | 0               | 2868073        | 2571429                   | 3428571                 |
| 5       | 1104594       | 3        | 5           | 95      | 1491            | 1496            | 1360            | 3486503        | 3428572                   | 4285714                 |
| 6       | 1157639       | 1        | 5           | 100     | 1174            | 0               | 0               | 4595444        | 4285715                   | 5142857                 |
| 7       | 625082        | 3        | 5           | 75      | 1828            | 1986            | 1143            | 5754257        | 5142858                   | 6000000                 |
| 8       | 885712        | 1        | 5           | 55      | 1573            | 0               | 0               | 6384296        | 6000001                   | 6857143                 |
| 9       | 950170        | 2        | 5           | 85      | 1396            | 1034            | 0               | 7271581        | 6857144                   | 7714286                 |
| 10      | 1077678       | 3        | 5           | 50      | 1738            | 1610            | 1330            | 8224181        | 7714287                   | 8571429                 |
| 11      | 257205        | 1        | 5           | 65      | 1214            | 0               | 0               | 9306537        | 8571430                   | 9428572                 |
| 12      | 850796        | 3        | 5           | 65      | 1922            | 1513            | 1007            | 9564956        | 9428573                   | 10285715                |
| 13      | 1384118       | 2        | 5           | 80      | 1516            | 1481            | 0               | 10420194       | 10285716                  | 11142858                |
| 14      |               | 2        | 5           | 100     | 1921            | 1250            | 0               | 11807309       | 11142859                  | 12000001                |

Total number of pulses in waveform = 27

### Type 5 Radar Waveform\_6

Num of Bursts = 17  
Burst Interval (us)= 705882

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 302722        | 3        | 19          | 70      | 1800            | 1348            | 1282            | 302722         | 0                         | 705881                  |
| 2       | 1019107       | 1        | 19          | 85      | 1802            | 0               | 0               | 1326259        | 705882                    | 1411763                 |
| 3       | 87113         | 1        | 19          | 70      | 1076            | 0               | 0               | 1415174        | 1411764                   | 2117645                 |
| 4       | 1234309       | 2        | 19          | 70      | 1605            | 1509            | 0               | 2650559        | 2117646                   | 2823527                 |
| 5       | 736692        | 1        | 19          | 55      | 1115            | 0               | 0               | 3390365        | 2823528                   | 3529409                 |
| 6       | 458584        | 3        | 19          | 70      | 1873            | 1601            | 1857            | 3850064        | 3529410                   | 4235291                 |
| 7       | 1024703       | 2        | 19          | 75      | 1974            | 1450            | 0               | 4880098        | 4235292                   | 4941173                 |
| 8       | 325416        | 1        | 19          | 50      | 1164            | 0               | 0               | 5208938        | 4941174                   | 5647055                 |
| 9       | 1106409       | 3        | 19          | 55      | 1933            | 1412            | 1077            | 6316511        | 5647056                   | 6352937                 |
| 10      | 157348        | 1        | 19          | 50      | 1909            | 0               | 0               | 6478781        | 6352938                   | 7058819                 |
| 11      | 1199035       | 1        | 19          | 75      | 1181            | 0               | 0               | 7673725        | 7058820                   | 7764701                 |
| 12      | 297446        | 3        | 19          | 75      | 1148            | 1388            | 1462            | 7978352        | 7764702                   | 8470583                 |
| 13      | 1146314       | 1        | 19          | 50      | 1169            | 0               | 0               | 9128664        | 8470584                   | 9176465                 |
| 14      | 715377        | 1        | 19          | 60      | 1220            | 0               | 0               | 9845210        | 9176466                   | 9882347                 |
| 15      | 188321        | 1        | 19          | 95      | 1887            | 0               | 0               | 10034751       | 9882348                   | 10588229                |
| 16      | 1115463       | 1        | 19          | 55      | 1522            | 0               | 0               | 11152101       | 10588230                  | 11294111                |
| 17      | 405245        | 1        | 19          | 60      | 1522            | 0               | 0               | 11558868       | 11294112                  | 11999993                |

Total number of pulses in waveform = 27

### Type 5 Radar Waveform\_7

Num of Bursts = 20  
Burst Interval (us)= 600000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 152277        | 1        | 9           | 65      | 1789            | 0               | 0               | 152277         | 0                         | 599999                  |
| 2       | 536384        | 3        | 9           | 65      | 1880            | 1368            | 1569            | 690450         | 600000                    | 1199999                 |
| 3       | 956331        | 1        | 9           | 100     | 1389            | 0               | 0               | 1651598        | 1200000                   | 1799999                 |
| 4       | 147649        | 1        | 9           | 50      | 1241            | 0               | 0               | 1800636        | 1800000                   | 2399999                 |
| 5       | 796829        | 1        | 9           | 70      | 1741            | 0               | 0               | 2598706        | 2400000                   | 2999999                 |
| 6       | 849266        | 1        | 9           | 50      | 1884            | 0               | 0               | 3449713        | 3000000                   | 3599999                 |
| 7       | 245579        | 1        | 9           | 50      | 1432            | 0               | 0               | 3697176        | 3600000                   | 4199999                 |
| 8       | 670262        | 2        | 9           | 100     | 1887            | 1738            | 0               | 4368870        | 4200000                   | 4799999                 |
| 9       | 653056        | 2        | 9           | 100     | 1248            | 1659            | 0               | 5025551        | 4800000                   | 5399999                 |
| 10      | 423245        | 1        | 9           | 60      | 1584            | 0               | 0               | 5451703        | 5400000                   | 5999999                 |
| 11      | 574920        | 3        | 9           | 55      | 1723            | 1331            | 1381            | 6028207        | 6000000                   | 6599999                 |
| 12      | 718801        | 1        | 9           | 100     | 1086            | 0               | 0               | 6751443        | 6600000                   | 7199999                 |
| 13      | 592527        | 3        | 9           | 65      | 1898            | 1167            | 1554            | 7345056        | 7200000                   | 7799999                 |
| 14      | 791525        | 1        | 9           | 60      | 1015            | 0               | 0               | 8141200        | 7800000                   | 8399999                 |
| 15      | 654871        | 2        | 9           | 100     | 1199            | 1154            | 0               | 8797086        | 8400000                   | 8999999                 |
| 16      | 416852        | 2        | 9           | 60      | 1384            | 1656            | 0               | 9216291        | 9000000                   | 9599999                 |
| 17      | 510206        | 2        | 9           | 55      | 1754            | 1355            | 0               | 9729537        | 9600000                   | 10199999                |
| 18      | 624968        | 1        | 9           | 60      | 1875            | 0               | 0               | 10357214       | 10200000                  | 10799999                |
| 19      | 1034445       | 1        | 9           | 90      | 1981            | 0               | 0               | 11393534       | 10800000                  | 11399999                |
| 20      | 362962        | 3        | 9           | 65      | 1020            | 1137            | 1122            | 11768477       | 11400000                  | 11999999                |

Total number of pulses in waveform = 33

### Type 5 Radar Waveform\_8

| Type 5 Radar Waveform_8                           |               |          |             |         |                 |                 |                 |                |                          |                        |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|--|
| Num of Bursts = 18<br>Burst Interval (us)= 666667 |               |          |             |         |                 |                 |                 |                |                          |                        |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |  |
| 1   | 926560        | 3        | 8           | 85      | 1351            | 1145            | 1031            | 169441         | 0                        | 666666                 |  |
| 2   | 593754        | 3        | 8           | 70      | 1430            | 1579            | 1784            | 1099528        | 666667                   | 1333333                |  |
| 3   | 356659        | 1        | 8           | 100     | 1002            | 0               | 0               | 1698075        | 1333334                  | 2000000                |  |
| 4   | 1235216       | 1        | 8           | 75      | 1666            | 0               | 0               | 2055736        | 2000001                  | 2666667                |  |
| 5   | 308318        | 2        | 8           | 100     | 1945            | 1186            | 0               | 3292618        | 2666668                  | 3333334                |  |
| 6   | 459987        | 3        | 8           | 100     | 1491            | 1293            | 1264            | 3604067        | 3333335                  | 4000001                |  |
| 7   | 1216728       | 1        | 8           | 80      | 1287            | 0               | 0               | 4068102        | 4000002                  | 4666668                |  |
| 8   | 264323        | 3        | 8           | 90      | 1134            | 1165            | 1994            | 5286117        | 4666669                  | 5333335                |  |
| 9   | 930053        | 1        | 8           | 50      | 1657            | 0               | 0               | 5554733        | 5333336                  | 6000002                |  |
| 10  | 310806        | 3        | 8           | 80      | 1341            | 1772            | 1242            | 6486443        | 6000003                  | 6666669                |  |
| 11  | 1014339       | 3        | 8           | 90      | 1689            | 1392            | 1952            | 6801604        | 6666670                  | 7333336                |  |
| 12  | 224016        | 3        | 8           | 55      | 1503            | 1018            | 1684            | 7820976        | 7333337                  | 8000003                |  |
| 13  | 885915        | 2        | 8           | 75      | 1687            | 1687            | 0               | 8049197        | 8000004                  | 8666670                |  |
| 14  | 411281        | 1        | 8           | 75      | 1421            | 0               | 0               | 8938486        | 8666671                  | 9333337                |  |
| 15  | 802281        | 2        | 8           | 80      | 1072            | 1878            | 0               | 9351188        | 9333338                  | 10000004               |  |
| 16  | 1104436       | 1        | 8           | 60      | 1910            | 0               | 0               | 10166419       | 10000005                 | 10666671               |  |
| 17  | 692999        | 1        | 8           | 100     | 1101            | 0               | 0               | 11262765       | 10666672                 | 11333338               |  |
| 18  | 2             | 8        | 85          | 1697    | 1622            | 0               | 11966865        | 11333339       | 12000005                 |                        |  |

### Type 5 Radar Waveform\_9

| Type 5 Radar Waveform_9                           |               |          |             |         |                 |                 |                 |                |                          |                        |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|--|
| Num of Bursts = 19<br>Burst Interval (us)= 631579 |               |          |             |         |                 |                 |                 |                |                          |                        |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |  |
| 1   | 227457        | 1        | 10          | 60      | 1733            | 0               | 0               | 227457         | 0                        | 631578                 |  |
| 2   | 753214        | 3        | 10          | 60      | 1868            | 1948            | 1819            | 982404         | 631579                   | 1263157                |  |
| 3   | 727595        | 1        | 10          | 85      | 1500            | 0               | 0               | 1715634        | 1263158                  | 1894736                |  |
| 4   | 636635        | 2        | 10          | 90      | 1463            | 1028            | 0               | 2353769        | 1894737                  | 2526315                |  |
| 5   | 561837        | 1        | 10          | 70      | 1275            | 0               | 0               | 2918097        | 2526316                  | 3157894                |  |
| 6   | 409338        | 3        | 10          | 60      | 1985            | 1614            | 1837            | 3328710        | 3157895                  | 3789473                |  |
| 7   | 875372        | 2        | 10          | 90      | 1565            | 1157            | 0               | 4209518        | 3789474                  | 4421052                |  |
| 8   | 709084        | 2        | 10          | 75      | 1928            | 1236            | 0               | 4921324        | 4421053                  | 5052631                |  |
| 9   | 579551        | 2        | 10          | 85      | 1512            | 1520            | 0               | 5504039        | 5052632                  | 5684210                |  |
| 10  | 582573        | 2        | 10          | 70      | 1347            | 1091            | 0               | 6089644        | 5684211                  | 6315789                |  |
| 11  | 749083        | 1        | 10          | 90      | 1804            | 0               | 0               | 6841165        | 6315790                  | 6947368                |  |
| 12  | 233967        | 3        | 10          | 60      | 1609            | 1817            | 1252            | 7076936        | 6947369                  | 7578947                |  |
| 13  | 840925        | 1        | 10          | 80      | 1690            | 0               | 0               | 7922539        | 7578948                  | 8210526                |  |
| 14  | 780423        | 2        | 10          | 85      | 1927            | 1209            | 0               | 8704652        | 8210527                  | 8842105                |  |
| 15  | 148107        | 1        | 10          | 80      | 1594            | 0               | 0               | 8855895        | 8842106                  | 9473684                |  |
| 16  | 1153902       | 1        | 10          | 75      | 1147            | 0               | 0               | 10011391       | 9473685                  | 10105263               |  |
| 17  | 176848        | 2        | 10          | 65      | 1364            | 1495            | 0               | 10189386       | 10105264                 | 10736842               |  |
| 18  | 777522        | 2        | 10          | 85      | 1873            | 1588            | 0               | 10969767       | 10736843                 | 11368421               |  |
| 19  | 768808        | 1        | 10          | 85      | 1161            | 0               | 0               | 11742036       | 11368422                 | 12000000               |  |

### Type 5 Radar Waveform\_10

| Type 5 Radar Waveform_10                           |               |          |             |         |                 |                 |                 |                |                          |                        |  |
|--|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|--|
| Num of Bursts = 11<br>Burst Interval (us)= 1090909 |               |          |             |         |                 |                 |                 |                |                          |                        |  |
| Burst #  | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |  |
| 1  | 935952        | 1        | 17          | 55      | 1679            | 0               | 0               | 935952         | 0                        | 1090908                |  |
| 2  | 964935        | 2        | 17          | 65      | 1034            | 1648            | 0               | 1902566        | 1090909                  | 2181817                |  |
| 3  | 468616        | 3        | 17          | 75      | 1321            | 1119            | 1208            | 2373864        | 2181818                  | 3272726                |  |
| 4  | 1611954       | 2        | 17          | 70      | 1958            | 1934            | 0               | 3989466        | 3272727                  | 4363635                |  |
| 5  | 447842        | 3        | 17          | 75      | 1394            | 1560            | 1347            | 4441200        | 4363636                  | 5454544                |  |
| 6  | 1247370       | 3        | 17          | 85      | 1221            | 1145            | 1205            | 5692871        | 5454545                  | 6545453                |  |
| 7  | 1887348       | 2        | 17          | 55      | 1425            | 1892            | 0               | 7583790        | 6545454                  | 7636362                |  |
| 8  | 184832        | 3        | 17          | 55      | 1268            | 1602            | 1484            | 7771939        | 7636363                  | 8727271                |  |
| 9  | 1590384       | 2        | 17          | 70      | 1469            | 1585            | 0               | 9366677        | 8727272                  | 9818180                |  |
| 10   | 474020        | 1        | 17          | 50      | 1903            | 0               | 0               | 9843751        | 9818181                  | 10909089               |  |
| 11   | 1073906       | 3        | 17          | 95      | 1876            | 1312            | 1875            | 10919560       | 10909090                 | 11999998               |  |

### Type 5 Radar Waveform\_11

Num of Bursts = 12  
Burst Interval (us)= 1000000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 589863        | 1        | 18          | 60      | 1798            | 0               | 0               | 589863         | 0                         | 999999                  |
| 2       | 528039        | 1        | 18          | 100     | 1603            | 0               | 0               | 1113700        | 1000000                   | 1999999                 |
| 3       | 1839171       | 2        | 18          | 80      | 1903            | 1977            | 0               | 2960474        | 2000000                   | 2999999                 |
| 4       | 441186        | 2        | 18          | 100     | 1454            | 1888            | 0               | 3405540        | 3000000                   | 3999999                 |
| 5       | 1510946       | 1        | 18          | 50      | 1133            | 0               | 0               | 4919828        | 4000000                   | 4999999                 |
| 6       | 1049630       | 3        | 18          | 95      | 1516            | 1680            | 1413            | 5970591        | 5000000                   | 5999999                 |
| 7       | 295106        | 3        | 18          | 75      | 1405            | 1793            | 1036            | 6270306        | 6000000                   | 6999999                 |
| 8       | 828266        | 1        | 18          | 90      | 1399            | 0               | 0               | 7102806        | 7000000                   | 7999999                 |
| 9       | 1642120       | 3        | 18          | 80      | 1026            | 1855            | 1824            | 8746325        | 8000000                   | 8999999                 |
| 10      | 739814        | 3        | 18          | 70      | 1363            | 1175            | 1437            | 9490844        | 9000000                   | 9999999                 |
| 11      | 713899        | 3        | 18          | 75      | 1581            | 1147            | 1453            | 10208718       | 10000000                  | 10999999                |
| 12      | 1496431       | 3        | 18          | 100     | 1428            | 1049            | 1485            | 11709330       | 11000000                  | 11999999                |

Total number of pulses in waveform = 26

### Type 5 Radar Waveform\_12

Num of Bursts = 16  
Burst Interval (us)= 750000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 60173         | 1        | 12          | 65      | 1327            | 0               | 0               | 60173          | 0                         | 749999                  |
| 2       | 939985        | 2        | 12          | 100     | 1483            | 1616            | 0               | 1001485        | 750000                    | 1499999                 |
| 3       | 848673        | 1        | 12          | 75      | 1191            | 0               | 0               | 1853257        | 1500000                   | 2249999                 |
| 4       | 742139        | 1        | 12          | 90      | 1740            | 0               | 0               | 2596587        | 2250000                   | 2999999                 |
| 5       | 595892        | 2        | 12          | 80      | 1777            | 1522            | 0               | 3194219        | 3000000                   | 3749999                 |
| 6       | 1097055       | 2        | 12          | 80      | 1865            | 1540            | 0               | 4294573        | 3750000                   | 4499999                 |
| 7       | 935405        | 2        | 12          | 85      | 1499            | 1609            | 0               | 5233383        | 4500000                   | 5249999                 |
| 8       | 655867        | 1        | 12          | 100     | 1373            | 0               | 0               | 5892358        | 5250000                   | 5999999                 |
| 9       | 471551        | 3        | 12          | 55      | 1250            | 1639            | 1607            | 6365282        | 6000000                   | 6749999                 |
| 10      | 1118315       | 3        | 12          | 50      | 1898            | 1885            | 1874            | 7488093        | 6750000                   | 7499999                 |
| 11      | 1791113       | 2        | 12          | 80      | 1810            | 1591            | 0               | 7672863        | 7500000                   | 8249999                 |
| 12      | 936894        | 1        | 12          | 75      | 1308            | 0               | 0               | 8613158        | 8250000                   | 8999999                 |
| 13      | 1040596       | 1        | 12          | 95      | 1903            | 0               | 0               | 9655062        | 9000000                   | 9749999                 |
| 14      | 331705        | 3        | 12          | 95      | 1874            | 1807            | 1362            | 9988670        | 9750000                   | 10499999                |
| 15      | 1117335       | 2        | 12          | 50      | 1036            | 1998            | 0               | 11111048       | 10500000                  | 11249999                |
| 16      | 350958        | 3        | 12          | 55      | 1049            | 1119            | 1346            | 11465040       | 11250000                  | 11999999                |

Total number of pulses in waveform = 30

### Type 5 Radar Waveform\_13

Num of Bursts = 9  
Burst Interval (us)= 1333333

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 140394        | 3        | 5           | 95      | 1199            | 1091            | 1220            | 140394         | 0                         | 1333332                 |
| 2       | 2208305       | 2        | 5           | 90      | 1232            | 1462            | 0               | 2352209        | 1333333                   | 2666665                 |
| 3       | 1422331       | 1        | 5           | 50      | 1077            | 0               | 0               | 3777234        | 2666666                   | 3999998                 |
| 4       | 1401356       | 1        | 5           | 90      | 1589            | 0               | 0               | 5179667        | 3999999                   | 5333331                 |
| 5       | 482709        | 2        | 5           | 50      | 1779            | 1061            | 0               | 5663965        | 5333332                   | 6666664                 |
| 6       | 1809282       | 1        | 5           | 55      | 1626            | 0               | 0               | 7476087        | 6666665                   | 7999997                 |
| 7       | 639593        | 3        | 5           | 100     | 1037            | 1735            | 1447            | 8117306        | 7999998                   | 9333330                 |
| 8       | 1246971       | 1        | 5           | 65      | 1485            | 0               | 0               | 9368496        | 9333331                   | 10666663                |
| 9       | 1707784       | 1        | 5           | 75      | 1099            | 0               | 0               | 11077765       | 10666664                  | 11999996                |

Total number of pulses in waveform = 15

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### Type 5 Radar Waveform\_14

| Type 5 Radar Waveform_14                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 15<br>Burst Interval (us)= 800000 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 774583        | 1        | 17          | 65      | 1671            | 0               | 0               | 774583         | 0                         | 799999                  |  |
| 2   | 340048        | 1        | 17          | 55      | 1908            | 0               | 0               | 1116302        | 800000                    | 1599999                 |  |
| 3   | 1070657       | 2        | 17          | 60      | 1572            | 1885            | 0               | 2188867        | 1600000                   | 2399999                 |  |
| 4   | 865674        | 3        | 17          | 100     | 1129            | 1314            | 1017            | 3057998        | 2400000                   | 3199999                 |  |
| 5   | 177664        | 2        | 17          | 70      | 1188            | 1398            | 0               | 3239122        | 3200000                   | 3999999                 |  |
| 6   | 762267        | 3        | 17          | 50      | 1297            | 1724            | 1487            | 4003975        | 4000000                   | 4799999                 |  |
| 7   | 1405047       | 1        | 17          | 80      | 1013            | 0               | 0               | 5413530        | 4800000                   | 5599999                 |  |
| 8   | 488149        | 2        | 17          | 65      | 1141            | 1600            | 0               | 5902692        | 5600000                   | 6399999                 |  |
| 9   | 610096        | 2        | 17          | 100     | 1958            | 1145            | 0               | 6515529        | 6400000                   | 7199999                 |  |
| 10  | 1438128       | 3        | 17          | 55      | 1384            | 1974            | 1705            | 7956760        | 7200000                   | 7999999                 |  |
| 11  | 714746        | 1        | 17          | 65      | 1466            | 0               | 0               | 8676569        | 8000000                   | 8799999                 |  |
| 12  | 743093        | 2        | 17          | 85      | 1796            | 1468            | 0               | 9421128        | 8800000                   | 9599999                 |  |
| 13  | 201036        | 3        | 17          | 85      | 1091            | 1938            | 1683            | 9625428        | 9600000                   | 10399999                |  |
| 14  | 873628        | 3        | 17          | 80      | 1298            | 1149            | 1859            | 10503768       | 10400000                  | 11199999                |  |
| 15  | 996158        | 2        | 17          | 60      | 1337            | 1264            | 0               | 11504232       | 11200000                  | 11999999                |  |
| Total number of pulses in waveform = 31           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****   |               |          |             |         |                 |                 |                 |                |                           |                         |  |

### Type 5 Radar Waveform\_15

| Type 5 Radar Waveform_15                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 19<br>Burst Interval (us)= 631579 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 499118        | 3        | 19          | 75      | 1214            | 1238            | 1772            | 499118         | 0                         | 631578                  |  |
| 2   | 555078        | 2        | 19          | 80      | 1644            | 1996            | 0               | 1058420        | 631579                    | 1263157                 |  |
| 3   | 289139        | 2        | 19          | 55      | 1531            | 1566            | 0               | 1351199        | 1263158                   | 1894736                 |  |
| 4   | 575834        | 1        | 19          | 100     | 1375            | 0               | 0               | 1930130        | 1894737                   | 2526315                 |  |
| 5   | 960676        | 2        | 19          | 80      | 1069            | 1570            | 0               | 2892181        | 2526316                   | 3157894                 |  |
| 6   | 264083        | 2        | 19          | 85      | 1420            | 1870            | 0               | 3158903        | 3157895                   | 3789473                 |  |
| 7   | 700923        | 1        | 19          | 85      | 1607            | 0               | 0               | 3863116        | 3789474                   | 4421052                 |  |
| 8   | 1088767       | 1        | 19          | 90      | 1639            | 0               | 0               | 4953490        | 4421053                   | 5052631                 |  |
| 9   | 173801        | 1        | 19          | 75      | 1956            | 0               | 0               | 5128990        | 5052632                   | 5684210                 |  |
| 10  | 1173697       | 3        | 19          | 65      | 1570            | 1926            | 1511            | 6304583        | 5684211                   | 6315789                 |  |
| 11  | 106248        | 1        | 19          | 75      | 1593            | 0               | 0               | 6415838        | 6315790                   | 6947368                 |  |
| 12  | 848810        | 2        | 19          | 100     | 1586            | 1027            | 0               | 7266241        | 6947369                   | 7578947                 |  |
| 13  | 633126        | 3        | 19          | 100     | 1699            | 1191            | 1378            | 7901979        | 7578948                   | 8210526                 |  |
| 14  | 432980        | 3        | 19          | 90      | 1369            | 1194            | 1394            | 8339227        | 8210527                   | 8842105                 |  |
| 15  | 541893        | 1        | 19          | 80      | 1090            | 0               | 0               | 8884877        | 8842106                   | 9473684                 |  |
| 16  | 636838        | 3        | 19          | 65      | 1907            | 1142            | 1618            | 9522806        | 9473685                   | 10105263                |  |
| 17  | 895026        | 3        | 19          | 80      | 1170            | 1698            | 1224            | 10422498       | 10105264                  | 10736842                |  |
| 18  | 705063        | 2        | 19          | 95      | 1707            | 1919            | 0               | 11131653       | 10736843                  | 11368421                |  |
| 19  | 257370        | 2        | 19          | 55      | 1155            | 1907            | 0               | 11392649       | 11368422                  | 12000000                |  |
| Total number of pulses in waveform = 38           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****   |               |          |             |         |                 |                 |                 |                |                           |                         |  |

### Type 5 Radar Waveform\_16

| Type 5 Radar Waveform_16                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 16<br>Burst Interval (us)= 750000 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 127043        | 2        | 10          | 75      | 1733            | 1989            | 0               | 127043         | 0                         | 749999                  |  |
| 2   | 1064885       | 3        | 10          | 65      | 1031            | 1113            | 1607            | 1195650        | 750000                    | 1499999                 |  |
| 3   | 1020825       | 1        | 10          | 95      | 1463            | 0               | 0               | 2220226        | 1500000                   | 2249999                 |  |
| 4   | 337654        | 3        | 10          | 95      | 1842            | 1810            | 1884            | 2559343        | 2250000                   | 2999999                 |  |
| 5   | 790624        | 2        | 10          | 85      | 1580            | 1615            | 0               | 3355503        | 3000000                   | 3749999                 |  |
| 6   | 774264        | 2        | 10          | 90      | 1457            | 1689            | 0               | 4132962        | 3750000                   | 4499999                 |  |
| 7   | 794537        | 2        | 10          | 50      | 1991            | 1607            | 0               | 4930645        | 4500000                   | 5249999                 |  |
| 8   | 479657        | 2        | 10          | 65      | 1049            | 1975            | 0               | 5413900        | 5250000                   | 5939999                 |  |
| 9   | 623771        | 2        | 10          | 95      | 1216            | 1813            | 0               | 6040695        | 6000000                   | 6749999                 |  |
| 10  | 1222249       | 3        | 10          | 50      | 1473            | 1017            | 1891            | 7265973        | 6750000                   | 7499999                 |  |
| 11  | 806135        | 1        | 10          | 90      | 1175            | 0               | 0               | 8076489        | 7500000                   | 8249999                 |  |
| 12  | 834859        | 3        | 10          | 60      | 1242            | 1218            | 1514            | 8912523        | 8250000                   | 8999999                 |  |
| 13  | 544941        | 1        | 10          | 70      | 1626            | 0               | 0               | 9461438        | 9000000                   | 9749999                 |  |
| 14  | 490346        | 2        | 10          | 90      | 1478            | 1146            | 0               | 10178503       | 9750000                   | 10499999                |  |
| 15  | 715439        | 3        | 10          | 70      | 1065            | 1256            | 1004            | 10671473       | 10500000                  | 11249999                |  |
| 16  | 638793        | 3        | 10          | 55      | 1834            | 1151            | 1030            | 11310591       | 11250000                  | 11999999                |  |
| Total number of pulses in waveform = 35           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****   |               |          |             |         |                 |                 |                 |                |                           |                         |  |

**Type 5 Radar Waveform\_17**

Num of Bursts = 13  
 Burst Interval (us)= 923077

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 856285        | 1        | 8           | 75      | 1747            | 0               | 0               | 856285         | 0                         | 923076                  |
| 2       | 875211        | 2        | 8           | 65      | 1308            | 1381            | 0               | 1733243        | 923077                    | 1846153                 |
| 3       | 635894        | 2        | 8           | 85      | 1050            | 1298            | 0               | 2371826        | 1846154                   | 2769230                 |
| 4       | 1102290       | 2        | 8           | 75      | 1881            | 1333            | 0               | 3476464        | 2769231                   | 3692307                 |
| 5       | 934916        | 1        | 8           | 95      | 1550            | 0               | 0               | 4414594        | 3692308                   | 4615384                 |
| 6       | 1037398       | 3        | 8           | 85      | 1826            | 1626            | 1315            | 5453542        | 4615385                   | 5538461                 |
| 7       | 851424        | 1        | 8           | 55      | 1366            | 0               | 0               | 6309733        | 5538462                   | 6461538                 |
| 8       | 528258        | 3        | 8           | 50      | 1488            | 1237            | 1442            | 6839357        | 6461539                   | 7384615                 |
| 9       | 1325744       | 3        | 8           | 55      | 1294            | 1764            | 1838            | 8169268        | 7384616                   | 8307692                 |
| 10      | 905131        | 1        | 8           | 95      | 1333            | 0               | 0               | 9079295        | 8307693                   | 9230769                 |
| 11      | 867904        | 1        | 8           | 50      | 1490            | 0               | 0               | 9948532        | 9230770                   | 10153846                |
| 12      | 808952        | 3        | 8           | 55      | 1519            | 1351            | 1979            | 10758974       | 10153847                  | 11076923                |
| 13      | 761934        | 1        | 8           | 95      | 1650            | 0               | 0               | 11525757       | 11076924                  | 12000000                |

Total number of pulses in waveform = 24

**Type 5 Radar Waveform\_18**

Num of Bursts = 11  
 Burst Interval (us)= 1090909

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 910064        | 3        | 6           | 90      | 1976            | 1614            | 1356            | 910064         | 0                         | 1090908                 |
| 2       | 455990        | 1        | 6           | 55      | 1386            | 0               | 0               | 1371000        | 1090909                   | 2181817                 |
| 3       | 1863320       | 3        | 6           | 60      | 1874            | 1479            | 1830            | 3235706        | 2181818                   | 3272726                 |
| 4       | 684594        | 3        | 6           | 70      | 1321            | 1184            | 1635            | 3925483        | 3272727                   | 4363635                 |
| 5       | 1385825       | 2        | 6           | 95      | 1839            | 1920            | 0               | 5315448        | 4363636                   | 5454544                 |
| 6       | 1003522       | 2        | 6           | 65      | 1421            | 1872            | 0               | 6322729        | 5454545                   | 6545453                 |
| 7       | 645668        | 2        | 6           | 85      | 1891            | 1354            | 1550            | 6971690        | 6545454                   | 7636362                 |
| 8       | 732664        | 3        | 6           | 75      | 1669            | 0               | 0               | 7709149        | 7636363                   | 8727271                 |
| 9       | 1469513       | 1        | 6           | 75      | 1958            | 1547            | 1549            | 9180331        | 8727272                   | 9818180                 |
| 10      | 1547316       | 3        | 6           | 75      | 1375            | 1298            | 0               | 10732701       | 9818181                   | 10909089                |
| 11      | 836977        | 2        | 6           | 75      | 1730            | 0               | 0               | 11572351       | 10909090                  | 11999998                |

Total number of pulses in waveform = 24

**Type 5 Radar Waveform\_19**

Num of Bursts = 18  
 Burst Interval (us)= 666667

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 396379        | 2        | 14          | 95      | 1844            | 1470            | 0               | 396379         | 0                         | 666666                  |
| 2       | 774993        | 1        | 14          | 80      | 1021            | 0               | 0               | 1174686        | 666667                    | 1333333                 |
| 3       | 333143        | 2        | 14          | 55      | 1868            | 1499            | 0               | 1508850        | 1333334                   | 2000000                 |
| 4       | 813795        | 3        | 14          | 65      | 1202            | 1892            | 1769            | 2326012        | 2000001                   | 2666667                 |
| 5       | 538474        | 3        | 14          | 50      | 1259            | 1811            | 1307            | 2869349        | 2666668                   | 3333334                 |
| 6       | 1086070       | 1        | 14          | 85      | 1510            | 0               | 0               | 3959796        | 3333335                   | 4000001                 |
| 7       | 244908        | 1        | 14          | 90      | 1704            | 0               | 0               | 4206214        | 4000002                   | 4666668                 |
| 8       | 1016683       | 1        | 14          | 85      | 1621            | 0               | 0               | 5224601        | 4666669                   | 5333335                 |
| 9       | 290270        | 3        | 14          | 95      | 1382            | 1579            | 1973            | 5516492        | 5333336                   | 6000002                 |
| 10      | 628792        | 2        | 14          | 70      | 1936            | 1758            | 0               | 6150218        | 6000003                   | 6666669                 |
| 11      | 1015042       | 1        | 14          | 60      | 1773            | 0               | 0               | 7168954        | 6666670                   | 7333336                 |
| 12      | 229848        | 2        | 14          | 80      | 1934            | 1251            | 0               | 7400575        | 7333337                   | 8000003                 |
| 13      | 886710        | 1        | 14          | 65      | 1471            | 0               | 0               | 8290470        | 8000004                   | 8666670                 |
| 14      | 806744        | 2        | 14          | 65      | 1747            | 1116            | 0               | 9098685        | 8666671                   | 9333337                 |
| 15      | 243252        | 3        | 14          | 80      | 1688            | 1533            | 1553            | 9344800        | 9333338                   | 10000004                |
| 16      | 753400        | 2        | 14          | 85      | 1527            | 1435            | 0               | 10102974       | 10000005                  | 10666671                |
| 17      | 1206935       | 2        | 14          | 85      | 1475            | 1438            | 0               | 11312871       | 10666672                  | 11333338                |
| 18      | 118609        | 2        | 14          | 90      | 1789            | 1667            | 0               | 11434393       | 11333339                  | 12000005                |

Total number of pulses in waveform = 34

### Type 5 Radar Waveform\_20

Num of Bursts = 11  
Burst Interval (us)= 1090909

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|-------------------------|
| 1       | 76854         | 2        | 9           | 100     | 1491            | 1325            | 0               | 76854          | 0                        | 1090908                 |
| 2       | 1923217       | 1        | 9           | 85      | 1591            | 0               | 0               | 2002887        | 1090909                  | 2181817                 |
| 3       | 1167290       | 3        | 9           | 70      | 1158            | 1247            | 1342            | 3171768        | 2181818                  | 3272726                 |
| 4       | 1103530       | 3        | 9           | 60      | 1243            | 1794            | 1114            | 4279045        | 3272727                  | 4363635                 |
| 5       | 432760        | 1        | 9           | 100     | 1160            | 0               | 0               | 4715956        | 4363636                  | 5454544                 |
| 6       | 918552        | 3        | 9           | 80      | 1431            | 1789            | 1206            | 5635668        | 5454545                  | 6545453                 |
| 7       | 1487647       | 2        | 9           | 55      | 1458            | 1703            | 0               | 7127741        | 6545454                  | 7636362                 |
| 8       | 1404973       | 3        | 9           | 95      | 1464            | 1264            | 1498            | 8535875        | 7636363                  | 8727271                 |
| 9       | 928753        | 3        | 9           | 65      | 1199            | 1429            | 1701            | 9468854        | 8727272                  | 9818180                 |
| 10      | 1035922       | 1        | 9           | 80      | 1132            | 0               | 0               | 10509105       | 9818181                  | 10909089                |
| 11      | 1098307       | 1        | 9           | 85      | 1637            | 0               | 0               | 11608544       | 10909090                 | 11999998                |

Total number of pulses in waveform = 23

### Type 5 Radar Waveform\_21

Num of Bursts = 19  
Burst Interval (us)= 631579

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 313386        | 3        | 10          | 70      | 1436            | 1919            | 1320            | 313386         | 0                         | 631578                  |
| 2       | 449572        | 3        | 10          | 50      | 1097            | 1894            | 1332            | 767633         | 631579                    | 1263157                 |
| 3       | 896521        | 3        | 10          | 75      | 1164            | 1982            | 1265            | 1668477        | 1263158                   | 1894736                 |
| 4       | 361092        | 2        | 10          | 95      | 1652            | 1142            | 0               | 2033980        | 1894737                   | 2526315                 |
| 5       | 984576        | 2        | 10          | 95      | 1872            | 1197            | 0               | 3021350        | 2526316                   | 3157894                 |
| 6       | 307061        | 1        | 10          | 85      | 1273            | 0               | 0               | 3331480        | 3157895                   | 3789473                 |
| 7       | 551357        | 2        | 10          | 80      | 1142            | 1616            | 0               | 3884110        | 3789474                   | 4421052                 |
| 8       | 861477        | 1        | 10          | 100     | 1728            | 0               | 0               | 4748345        | 4421053                   | 5052631                 |
| 9       | 682808        | 3        | 10          | 75      | 1929            | 1286            | 1616            | 5432881        | 5052632                   | 5684210                 |
| 10      | 311004        | 1        | 10          | 60      | 1864            | 0               | 0               | 5748716        | 5684211                   | 6315789                 |
| 11      | 663847        | 3        | 10          | 65      | 1760            | 1450            | 1904            | 6414427        | 6315790                   | 6947368                 |
| 12      | 751530        | 3        | 10          | 70      | 1735            | 1918            | 1889            | 7171071        | 6947369                   | 7578947                 |
| 13      | 970160        | 3        | 10          | 100     | 1062            | 1730            | 1825            | 8146773        | 7578948                   | 8210526                 |
| 14      | 257963        | 2        | 10          | 55      | 1691            | 1724            | 0               | 8409362        | 8210527                   | 8842105                 |
| 15      | 637698        | 3        | 10          | 70      | 1117            | 1271            | 1570            | 9050476        | 8842106                   | 9473684                 |
| 16      | 807989        | 1        | 10          | 75      | 1918            | 0               | 0               | 9862423        | 9473685                   | 10105263                |
| 17      | 418907        | 1        | 10          | 70      | 1622            | 0               | 0               | 10283248       | 10105264                  | 10736842                |
| 18      | 595716        | 3        | 10          | 50      | 1214            | 1313            | 1389            | 10880586       | 10736843                  | 11368421                |
| 19      | 819130        | 3        | 10          | 60      | 1128            | 1165            | 1612            | 11703632       | 11368422                  | 12000000                |

Total number of pulses in waveform = 43

### Type 5 Radar Waveform\_22

Num of Bursts = 20  
Burst Interval (us)= 600000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 271144        | 2        | 9           | 90      | 1888            | 1731            | 0               | 271144         | 0                         | 599999                  |
| 2       | 437945        | 1        | 9           | 70      | 1807            | 0               | 0               | 712408         | 600000                    | 1199999                 |
| 3       | 689795        | 1        | 9           | 60      | 1051            | 0               | 0               | 1304010        | 1200000                   | 1799999                 |
| 4       | 950139        | 1        | 9           | 70      | 1522            | 0               | 0               | 2255200        | 1800000                   | 2399999                 |
| 5       | 474203        | 3        | 9           | 60      | 1762            | 1364            | 1779            | 2730925        | 2400000                   | 2999999                 |
| 6       | 714286        | 1        | 9           | 50      | 1487            | 0               | 0               | 3450116        | 3000000                   | 3599999                 |
| 7       | 202213        | 3        | 9           | 65      | 1155            | 1996            | 1201            | 3653816        | 3600000                   | 4199999                 |
| 8       | 1033404       | 3        | 9           | 55      | 1953            | 1337            | 1034            | 4691572        | 4200000                   | 4799999                 |
| 9       | 632541        | 2        | 9           | 85      | 1719            | 1765            | 0               | 5328437        | 4800000                   | 5399999                 |
| 10      | 130901        | 3        | 9           | 90      | 1448            | 1901            | 1382            | 5462822        | 5400000                   | 5999999                 |
| 11      | 1120405       | 2        | 9           | 95      | 1062            | 1222            | 0               | 6587958        | 6000000                   | 6599999                 |
| 12      | 160754        | 2        | 9           | 55      | 1996            | 1006            | 0               | 6750996        | 6600000                   | 7199999                 |
| 13      | 932917        | 2        | 9           | 90      | 1066            | 1036            | 0               | 7686915        | 7200000                   | 7799999                 |
| 14      | 407760        | 3        | 9           | 60      | 1981            | 1653            | 1262            | 8096777        | 7800000                   | 8399999                 |
| 15      | 379101        | 3        | 9           | 95      | 1626            | 1212            | 1910            | 8480774        | 8400000                   | 8999999                 |
| 16      | 1064104       | 2        | 9           | 80      | 1876            | 1129            | 0               | 9549626        | 9000000                   | 9599999                 |
| 17      | 617856        | 2        | 9           | 80      | 1111            | 1716            | 0               | 10170187       | 9600000                   | 10199999                |
| 18      | 585517        | 1        | 9           | 80      | 1865            | 0               | 0               | 10758531       | 10200000                  | 10799999                |
| 19      | 231775        | 1        | 9           | 75      | 1178            | 0               | 0               | 10992171       | 10800000                  | 11399999                |
| 20      | 750172        | 3        | 9           | 70      | 1074            | 1701            | 1385            | 11743521       | 11400000                  | 11999999                |

Total number of pulses in waveform = 41

### Type 5 Radar Waveform\_23

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 697073        | 3        | 18          | 55      | 1796            | 1956            | 1484            | 223634         | 0                         | 705881                  |
| 2                                       | 711923        | 1        | 18          | 80      | 1208            | 0               | 0               | 925943         | 705882                    | 1411763                 |
| 3                                       | 1074999       | 3        | 18          | 75      | 1556            | 1055            | 1791            | 1639074        | 1411764                   | 2117645                 |
| 4                                       | 733700        | 1        | 18          | 100     | 1976            | 0               | 0               | 2718475        | 2117646                   | 2823527                 |
| 5                                       | 756928        | 2        | 18          | 100     | 1512            | 1729            | 0               | 3454151        | 2823528                   | 3529409                 |
| 6                                       | 494325        | 2        | 18          | 70      | 1500            | 1129            | 0               | 4214320        | 3529410                   | 4235291                 |
| 7                                       | 590452        | 1        | 18          | 50      | 1576            | 0               | 0               | 4711274        | 4235292                   | 4941173                 |
| 8                                       | 603040        | 2        | 18          | 70      | 1416            | 1510            | 0               | 5303302        | 4941174                   | 5647055                 |
| 9                                       | 691568        | 1        | 18          | 55      | 1833            | 0               | 0               | 5909268        | 5647056                   | 6352937                 |
| 10                                      | 544917        | 2        | 18          | 50      | 1704            | 1657            | 0               | 6602669        | 6352938                   | 7058819                 |
| 11                                      | 1037316       | 1        | 18          | 100     | 1486            | 0               | 0               | 7150947        | 7058820                   | 7764701                 |
| 12                                      | 555264        | 3        | 18          | 70      | 1939            | 1879            | 1478            | 8189749        | 7764702                   | 8470583                 |
| 13                                      | 562022        | 3        | 18          | 95      | 1549            | 1281            | 1127            | 8750309        | 8470584                   | 9176465                 |
| 14                                      | 1005497       | 2        | 18          | 100     | 1350            | 1537            | 0               | 9316288        | 9176466                   | 9822347                 |
| 15                                      | 816609        | 1        | 18          | 55      | 1542            | 0               | 0               | 10324672       | 9822348                   | 10588229                |
| 16                                      | 234591        | 3        | 18          | 90      | 1382            | 1264            | 1858            | 11142823       | 10588230                  | 11294111                |
| 17                                      | 234591        | 2        | 18          | 90      | 1619            | 1416            | 0               | 11381918       | 11294112                  | 11999993                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 33 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_24

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 522995        | 3        | 19          | 50      | 1427            | 1860            | 1753            | 522995         | 0                         | 1199999                 |
| 2                                       | 1146145       | 2        | 19          | 85      | 1310            | 1063            | 0               | 1674180        | 1200000                   | 2399999                 |
| 3                                       | 1499922       | 1        | 19          | 50      | 1729            | 0               | 0               | 3176475        | 2400000                   | 3599999                 |
| 4                                       | 1183892       | 3        | 19          | 60      | 1947            | 1610            | 1699            | 4362096        | 3600000                   | 4799999                 |
| 5                                       | 1610884       | 3        | 19          | 50      | 1840            | 1051            | 1322            | 5978236        | 4800000                   | 5999999                 |
| 6                                       | 541165        | 1        | 19          | 95      | 1107            | 0               | 0               | 6523614        | 6000000                   | 7199999                 |
| 7                                       | 973651        | 1        | 19          | 90      | 1830            | 0               | 0               | 7498372        | 7200000                   | 8399999                 |
| 8                                       | 1836617       | 3        | 19          | 95      | 1464            | 1933            | 1607            | 9336819        | 8400000                   | 9599999                 |
| 9                                       | 665934        | 2        | 19          | 80      | 1749            | 1269            | 0               | 10007757       | 9600000                   | 10799999                |
| 10                                      | 1233315       | 2        | 19          | 85      | 1949            | 1276            | 0               | 11244090       | 10800000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 21 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_25

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 804959        | 2        | 5           | 80      | 1685            | 1226            | 0               | 804959         | 0                         | 1199999                 |
| 2                                       | 1085810       | 1        | 5           | 55      | 1109            | 0               | 0               | 1893680        | 1200000                   | 2399999                 |
| 3                                       | 1422578       | 2        | 5           | 95      | 1504            | 1116            | 0               | 3317367        | 2400000                   | 3599999                 |
| 4                                       | 1136517       | 1        | 5           | 55      | 1433            | 0               | 0               | 4456504        | 3600000                   | 4799999                 |
| 5                                       | 406058        | 1        | 5           | 75      | 1733            | 0               | 0               | 4863995        | 4800000                   | 5999999                 |
| 6                                       | 2208572       | 1        | 5           | 55      | 1655            | 0               | 0               | 7074300        | 6000000                   | 7199999                 |
| 7                                       | 1228647       | 3        | 5           | 85      | 1237            | 1774            | 1415            | 8304602        | 7200000                   | 8399999                 |
| 8                                       | 1209704       | 2        | 5           | 95      | 1692            | 1766            | 0               | 9518732        | 8400000                   | 9599999                 |
| 9                                       | 349530        | 1        | 5           | 85      | 1865            | 0               | 0               | 9871720        | 9600000                   | 10799999                |
| 10                                      | 1102210       | 3        | 5           | 90      | 1308            | 1886            | 1732            | 10975795       | 10800000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 17 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_26

| Type 5 Radar Waveform_26                |               |          |             |         |                 |                 |                 |                |                           |                         |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
| 1                                       | 17392         | 2        | 14          | 70      | 1598            | 1663            | 0               | 17392          | 0                         | 857142                  |
| 2                                       | 936843        | 3        | 14          | 60      | 1931            | 1729            | 1001            | 957496         | 857143                    | 1714285                 |
| 3                                       | 848837        | 1        | 14          | 85      | 1981            | 0               | 0               | 1810994        | 1714286                   | 2571428                 |
| 4                                       | 1595366       | 1        | 14          | 75      | 1733            | 0               | 0               | 3408341        | 2571429                   | 3428571                 |
| 5                                       | 316535        | 1        | 14          | 90      | 1544            | 0               | 0               | 3726609        | 3428572                   | 4285714                 |
| 6                                       | 1174794       | 3        | 14          | 100     | 1715            | 1902            | 1288            | 4902947        | 4285715                   | 5142857                 |
| 7                                       | 498557        | 1        | 14          | 100     | 1271            | 0               | 0               | 5406409        | 5142858                   | 6000000                 |
| 8                                       | 781045        | 1        | 14          | 55      | 1742            | 0               | 0               | 6188725        | 6000001                   | 6857143                 |
| 9                                       | 864055        | 3        | 14          | 90      | 1730            | 1554            | 1673            | 7054522        | 6857144                   | 7714286                 |
| 10                                      | 925671        | 3        | 14          | 55      | 1062            | 1505            | 1033            | 7985150        | 7714287                   | 8571429                 |
| 11                                      | 743331        | 2        | 14          | 80      | 1732            | 1362            | 0               | 8732081        | 8571430                   | 9428572                 |
| 12                                      | 1419135       | 3        | 14          | 50      | 1988            | 1738            | 1502            | 10154310       | 9428573                   | 10285715                |
| 13                                      | 526661        | 3        | 14          | 65      | 1372            | 1901            | 1123            | 10686199       | 10285716                  | 11142858                |
| 14                                      | 966888        | 1        | 14          | 100     | 1702            | 0               | 0               | 11657483       | 11142859                  | 12000001                |
| Total number of pulses in waveform = 28 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_27

| Type 5 Radar Waveform_27                |               |          |             |         |                 |                 |                 |                |                           |                         |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
| 1                                       | 851865        | 3        | 6           | 70      | 1480            | 1950            | 1303            | 851865         | 0                         | 1333332                 |
| 2                                       | 955050        | 2        | 6           | 70      | 1478            | 1452            | 0               | 1811648        | 1333333                   | 2666665                 |
| 3                                       | 950951        | 2        | 6           | 85      | 1797            | 1084            | 0               | 2765529        | 2666666                   | 3999998                 |
| 4                                       | 1456904       | 2        | 6           | 60      | 1159            | 1088            | 0               | 4225314        | 3999999                   | 5333331                 |
| 5                                       | 2325317       | 3        | 6           | 60      | 1366            | 1768            | 1602            | 6552878        | 5333332                   | 6666664                 |
| 6                                       | 350296        | 3        | 6           | 100     | 1808            | 1499            | 1055            | 6907910        | 6666665                   | 7999997                 |
| 7                                       | 1555661       | 2        | 6           | 55      | 1067            | 1570            | 0               | 8467933        | 7999998                   | 9333330                 |
| 8                                       | 1442459       | 2        | 6           | 95      | 1166            | 1970            | 0               | 9913029        | 9333331                   | 10666663                |
| 9                                       | 1525248       | 2        | 6           | 50      | 1135            | 1889            | 0               | 11441413       | 10666664                  | 11999996                |
| Total number of pulses in waveform = 21 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_28

| Type 5 Radar Waveform_28                |               |          |             |         |                 |                 |                 |                |                           |                         |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
| 1                                       | 592192        | 2        | 8           | 95      | 1227            | 1618            | 0               | 592192         | 0                         | 857142                  |
| 2                                       | 774548        | 3        | 8           | 70      | 1018            | 1055            | 1818            | 1369585        | 857143                    | 1714285                 |
| 3                                       | 407761        | 3        | 8           | 85      | 1455            | 1072            | 1849            | 1781237        | 1714286                   | 2571428                 |
| 4                                       | 1216025       | 2        | 8           | 50      | 1936            | 1961            | 0               | 3001638        | 2571429                   | 3428571                 |
| 5                                       | 442605        | 1        | 8           | 100     | 1399            | 0               | 0               | 3448140        | 3428572                   | 4285714                 |
| 6                                       | 961542        | 3        | 8           | 80      | 1898            | 1379            | 1146            | 4411081        | 4285715                   | 5142857                 |
| 7                                       | 779533        | 2        | 8           | 95      | 1067            | 1942            | 0               | 5195037        | 5142858                   | 6000000                 |
| 8                                       | 1057688       | 1        | 8           | 65      | 1163            | 0               | 0               | 6255734        | 6000001                   | 6857143                 |
| 9                                       | 1419529       | 3        | 8           | 85      | 1158            | 1227            | 1843            | 7676426        | 6857144                   | 7714286                 |
| 10                                      | 586268        | 2        | 8           | 75      | 1614            | 1628            | 0               | 8266922        | 7714287                   | 8571429                 |
| 11                                      | 1023008       | 2        | 8           | 90      | 1705            | 1939            | 0               | 9293172        | 8571430                   | 9428572                 |
| 12                                      | 532315        | 3        | 8           | 60      | 1412            | 1277            | 1319            | 9829131        | 9428573                   | 10285715                |
| 13                                      | 674130        | 2        | 8           | 55      | 1892            | 1662            | 0               | 10507269       | 10285716                  | 11142858                |
| 14                                      | 1409236       | 3        | 8           | 95      | 1427            | 1835            | 1774            | 11920059       | 11142859                  | 12000001                |
| Total number of pulses in waveform = 32 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_29

| Type 5 Radar Waveform_29                          |               |          |             |         |                 |                 |                 |                |                          |                        |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|--|
| Num of Bursts = 18<br>Burst Interval (us)= 666667 |               |          |             |         |                 |                 |                 |                |                          |                        |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |  |
| 1   | 598960        | 2        | 17          | 85      | 1205            | 1309            | 0               | 238642         | 0                        | 666666                 |  |
| 2   | 709309        | 3        | 17          | 50      | 1733            | 1155            | 1412            | 840116         | 666667                   | 1333333                |  |
| 3   | 541707        | 1        | 17          | 85      | 1115            | 0               | 0               | 1553725        | 1333334                  | 2000000                |  |
| 4   | 816816        | 2        | 17          | 85      | 1434            | 1940            | 0               | 2096547        | 2000001                  | 2666667                |  |
| 5   | 982281        | 2        | 17          | 90      | 1978            | 1565            | 0               | 2916737        | 2666668                  | 3333334                |  |
| 6   | 424500        | 3        | 17          | 50      | 1406            | 1961            | 1017            | 3912561        | 3333335                  | 4000001                |  |
| 7   | 652151        | 2        | 17          | 55      | 1440            | 1088            | 0               | 4341445        | 4000002                  | 4666668                |  |
| 8   | 443048        | 1        | 17          | 60      | 1542            | 0               | 0               | 4996124        | 4666669                  | 5333335                |  |
| 9   | 982760        | 2        | 17          | 85      | 1776            | 1821            | 0               | 5440714        | 5333336                  | 6000002                |  |
| 10  | 448904        | 2        | 17          | 60      | 1273            | 1140            | 0               | 6427071        | 6000003                  | 6666669                |  |
| 11  | 815050        | 1        | 17          | 90      | 1801            | 0               | 0               | 6878388        | 6666670                  | 7333336                |  |
| 12  | 754177        | 3        | 17          | 75      | 1735            | 1322            | 1207            | 7695239        | 7333337                  | 8000003                |  |
| 13  | 862198        | 3        | 17          | 80      | 1938            | 1563            | 1751            | 8453680        | 8000004                  | 8666670                |  |
| 14  | 631609        | 1        | 17          | 65      | 1295            | 0               | 0               | 9321130        | 8666671                  | 9333337                |  |
| 15  | 438068        | 1        | 17          | 75      | 1956            | 0               | 0               | 9954034        | 9333338                  | 10000004               |  |
| 16  | 522548        | 1        | 17          | 70      | 1365            | 0               | 0               | 10394058       | 10000005                 | 10666671               |  |
| 17  | 1011808       | 2        | 17          | 75      | 1540            | 1535            | 0               | 10917971       | 10666672                 | 11333338               |  |
| 18  |               | 2        | 17          | 80      | 1978            | 1102            | 0               | 11932854       | 11333339                 | 12000005               |  |

Total number of pulses in waveform = 94

### Type 5 Radar Waveform\_30

| Type 5 Radar Waveform_30                          |               |          |             |         |                 |                 |                 |                |                          |                        |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|--|
| Num of Bursts = 8<br>Burst Interval (us)= 1500000 |               |          |             |         |                 |                 |                 |                |                          |                        |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |  |
| 1   | 40074         | 2        | 12          | 55      | 1060            | 1781            | 0               | 40074          | 0                        | 1499999                |  |
| 2   | 2247313       | 1        | 12          | 50      | 1071            | 0               | 0               | 2290228        | 1500000                  | 2999999                |  |
| 3   | 1671373       | 3        | 12          | 100     | 1170            | 1902            | 1375            | 3962672        | 3000000                  | 4499999                |  |
| 4   | 971776        | 3        | 12          | 80      | 1874            | 1874            | 1277            | 4938895        | 4500000                  | 5999999                |  |
| 5   | 1074317       | 1        | 12          | 80      | 1673            | 0               | 0               | 6018237        | 6000000                  | 7499999                |  |
| 6   | 2396112       | 2        | 12          | 95      | 1254            | 1704            | 0               | 8416022        | 7500000                  | 8999999                |  |
| 7   | 1928645       | 2        | 12          | 90      | 1190            | 1815            | 0               | 10347625       | 9000000                  | 10499999               |  |
| 8   | 331378        | 3        | 12          | 50      | 1174            | 1581            | 1828            | 10682008       | 10500000                 | 11999999               |  |

Total number of pulses in waveform = 17

## Radar Type 6 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5491                | 1                             | 16      | 5500                | 1                             |
| 2                        | 5491                | 1                             | 17      | 5500                | 1                             |
| 3                        | 5491                | 1                             | 18      | 5500                | 1                             |
| 4                        | 5491                | 1                             | 19      | 5500                | 1                             |
| 5                        | 5491                | 1                             | 20      | 5500                | 1                             |
| 6                        | 5491                | 1                             | 21      | 5509                | 1                             |
| 7                        | 5491                | 1                             | 22      | 5509                | 1                             |
| 8                        | 5491                | 1                             | 23      | 5509                | 1                             |
| 9                        | 5491                | 1                             | 24      | 5509                | 1                             |
| 10                       | 5491                | 1                             | 25      | 5509                | 1                             |
| 11                       | 5500                | 1                             | 26      | 5509                | 1                             |
| 12                       | 5500                | 1                             | 27      | 5509                | 1                             |
| 13                       | 5500                | 1                             | 28      | 5509                | 1                             |
| 14                       | 5500                | 1                             | 29      | 5509                | 1                             |
| 15                       | 5500                | 1                             | 30      | 5509                | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 100%                          |

| Radar waveform #1 |                 |                  | Radar waveform #2 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 11                | 5528            | 33               | 5                 | 5514            | 15               |
| 35                | 5495            | 105              | 14                | 5528            | 42               |
| 41                | 5519            | 123              | 15                | 5496            | 45               |
| 46                | 5471            | 138              | 22                | 5474            | 66               |
| 67                | 5473            | 201              | 43                | 5527            | 129              |
| 72                | 5509            | 216              | 48                | 5481            | 144              |
| 87                | 5523            | 261              | 55                | 5530            | 165              |
| --                | --              | --               | 59                | 5477            | 177              |
| --                | --              | --               | 83                | 5529            | 249              |
| --                | --              | --               | 91                | 5482            | 273              |

| Radar waveform #3 |                 |                  | Radar waveform #4 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 4                 | 5527            | 12               | 0                 | 5499            | 0                |
| 6                 | 5504            | 18               | 3                 | 5497            | 9                |
| 9                 | 5514            | 27               | 6                 | 5508            | 18               |
| 14                | 5490            | 42               | 12                | 5503            | 36               |
| 26                | 5474            | 78               | 34                | 5523            | 102              |
| 32                | 5492            | 96               | 36                | 5475            | 108              |
| 33                | 5471            | 99               | 38                | 5500            | 114              |
| 36                | 5529            | 108              | 48                | 5480            | 144              |
| 42                | 5524            | 126              | 56                | 5502            | 168              |
| 49                | 5501            | 147              | 99                | 5515            | 297              |
| 51                | 5530            | 153              | --                | --              | --               |
| 58                | 5494            | 174              | --                | --              | --               |
| 61                | 5489            | 183              | --                | --              | --               |
| 74                | 5499            | 222              | --                | --              | --               |
| 75                | 5477            | 225              | --                | --              | --               |
| 91                | 5493            | 273              | --                | --              | --               |
| 97                | 5523            | 291              | --                | --              | --               |

| Radar waveform #5 |                 |                  | Radar waveform #6 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 13                | 5497            | 39               | 5                 | 5526            | 15               |
| 26                | 5525            | 78               | 11                | 5471            | 33               |
| 47                | 5482            | 141              | 13                | 5496            | 39               |
| 62                | 5505            | 186              | 18                | 5518            | 54               |
| 85                | 5483            | 255              | 27                | 5513            | 81               |
| --                | --              | --               | 30                | 5494            | 90               |
| --                | --              | --               | 38                | 5476            | 114              |
| --                | --              | --               | 42                | 5487            | 126              |
| --                | --              | --               | 57                | 5500            | 171              |
| --                | --              | --               | 59                | 5504            | 177              |
| --                | --              | --               | 60                | 5488            | 180              |
| --                | --              | --               | 61                | 5524            | 183              |
| --                | --              | --               | 68                | 5511            | 204              |
| --                | --              | --               | 84                | 5502            | 252              |
| --                | --              | --               | 85                | 5507            | 255              |
| --                | --              | --               | 86                | 5474            | 258              |

| Radar waveform #7 |                 |                  | Radar waveform #8 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 0                 | 5483            | 0                | 1                 | 5487            | 3                |
| 3                 | 5514            | 9                | 6                 | 5526            | 18               |
| 7                 | 5491            | 21               | 8                 | 5488            | 24               |
| 21                | 5482            | 63               | 13                | 5523            | 39               |
| 24                | 5474            | 72               | 20                | 5481            | 60               |
| 27                | 5510            | 81               | 23                | 5524            | 69               |
| 39                | 5478            | 117              | 39                | 5530            | 117              |
| 50                | 5487            | 150              | 42                | 5495            | 126              |
| 55                | 5511            | 165              | 51                | 5527            | 153              |
| 60                | 5517            | 180              | 86                | 5499            | 258              |
| 76                | 5488            | 228              | 93                | 5491            | 279              |
| 78                | 5504            | 234              | 98                | 5472            | 294              |
| 79                | 5530            | 237              | --                | --              | --               |
| 81                | 5497            | 243              | --                | --              | --               |
| 82                | 5496            | 246              | --                | --              | --               |
| 87                | 5494            | 261              | --                | --              | --               |
| 91                | 5480            | 273              | --                | --              | --               |
| 92                | 5498            | 276              | --                | --              | --               |

| Radar waveform #9 |                 |                  | Radar waveform #10 |                 |                  |
|-------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 7                 | 5523            | 21               | 0                  | 5484            | 0                |
| 18                | 5527            | 54               | 15                 | 5491            | 45               |
| 23                | 5488            | 69               | 19                 | 5523            | 57               |
| 24                | 5493            | 72               | 21                 | 5473            | 63               |
| 27                | 5530            | 81               | 27                 | 5478            | 81               |
| 28                | 5474            | 84               | 33                 | 5483            | 99               |
| 36                | 5511            | 108              | 47                 | 5494            | 141              |
| 44                | 5512            | 132              | 49                 | 5482            | 147              |
| 51                | 5519            | 153              | 61                 | 5475            | 183              |
| 70                | 5528            | 210              | 71                 | 5517            | 213              |
| --                | --              | --               | 74                 | 5486            | 222              |
| --                | --              | --               | 80                 | 5520            | 240              |

| Radar waveform #11 |                 |                  | Radar waveform #12 |                |                  |
|--------------------|-----------------|------------------|--------------------|----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Frequency (MHz)    | Hopping Number | Pulse Start (ms) |
| 6                  | 5501            | 18               | 3                  | 5472           | 9                |
| 9                  | 5508            | 27               | 9                  | 5506           | 27               |
| 17                 | 5510            | 51               | 32                 | 5494           | 96               |
| 20                 | 5526            | 60               | 37                 | 5514           | 111              |
| 25                 | 5477            | 75               | 39                 | 5476           | 117              |
| 33                 | 5473            | 99               | 48                 | 5482           | 144              |
| 37                 | 5530            | 111              | 49                 | 5509           | 147              |
| 48                 | 5512            | 144              | 50                 | 5484           | 150              |
| 63                 | 5500            | 189              | 64                 | 5499           | 192              |
| 67                 | 5513            | 201              | 75                 | 5495           | 225              |
| 68                 | 5524            | 204              | 79                 | 5524           | 237              |
| 69                 | 5474            | 207              | 84                 | 5483           | 252              |
| 70                 | 5528            | 210              | 86                 | 5522           | 258              |
| 74                 | 5518            | 222              | 90                 | 5491           | 270              |
| 79                 | 5516            | 237              | 93                 | 5502           | 279              |
| 81                 | 5515            | 243              | --                 | --             | --               |
| 87                 | 5475            | 261              | --                 | --             | --               |
| 94                 | 5529            | 282              | --                 | --             | --               |

| Radar waveform #13 |                 |                  | Radar waveform #14 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5519            | 0                | 0                  | 5510            | 0                |
| 1                  | 5503            | 3                | 5                  | 5484            | 15               |
| 2                  | 5475            | 6                | 7                  | 5501            | 21               |
| 14                 | 5489            | 42               | 11                 | 5475            | 33               |
| 18                 | 5507            | 54               | 12                 | 5529            | 36               |
| 24                 | 5505            | 72               | 14                 | 5483            | 42               |
| 40                 | 5530            | 120              | 32                 | 5490            | 96               |
| 42                 | 5502            | 126              | 36                 | 5528            | 108              |
| 50                 | 5527            | 150              | 40                 | 5524            | 120              |
| 51                 | 5482            | 153              | 49                 | 5489            | 147              |
| 54                 | 5516            | 162              | 77                 | 5477            | 231              |
| 68                 | 5504            | 204              | 78                 | 5507            | 234              |
| 72                 | 5483            | 216              | 87                 | 5500            | 261              |
| 89                 | 5471            | 267              | 93                 | 5481            | 279              |
| --                 | --              | --               | 95                 | 5502            | 285              |

| Radar waveform #15 |                 |                  | Radar waveform #16 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5478            | 0                | 6                  | 5511            | 18               |
| 16                 | 5474            | 48               | 8                  | 5484            | 24               |
| 18                 | 5486            | 54               | 12                 | 5523            | 36               |
| 19                 | 5493            | 57               | 13                 | 5525            | 39               |
| 21                 | 5515            | 63               | 27                 | 5502            | 81               |
| 22                 | 5489            | 66               | 29                 | 5513            | 87               |
| 25                 | 5497            | 75               | 31                 | 5520            | 93               |
| 36                 | 5527            | 108              | 39                 | 5495            | 117              |
| 37                 | 5488            | 111              | 49                 | 5515            | 147              |
| 49                 | 5503            | 147              | 50                 | 5496            | 150              |
| 58                 | 5491            | 174              | 53                 | 5485            | 159              |
| 66                 | 5487            | 198              | 74                 | 5501            | 222              |
| 72                 | 5475            | 216              | 75                 | 5529            | 225              |
| 91                 | 5525            | 273              | 86                 | 5471            | 258              |
| 97                 | 5510            | 291              | --                 | --              | --               |

| Radar waveform #17 |                 |                  | Radar waveform #18 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5522            | 6                | 7                  | 5491            | 21               |
| 9                  | 5497            | 27               | 8                  | 5505            | 24               |
| 17                 | 5502            | 51               | 51                 | 5475            | 153              |
| 19                 | 5490            | 57               | 53                 | 5477            | 159              |
| 28                 | 5504            | 84               | 54                 | 5474            | 162              |
| 35                 | 5485            | 105              | 61                 | 5530            | 183              |
| 48                 | 5530            | 144              | 67                 | 5510            | 201              |
| 72                 | 5507            | 216              | 72                 | 5513            | 216              |
| 85                 | 5529            | 255              | 74                 | 5484            | 222              |
| --                 | --              | --               | 85                 | 5515            | 255              |
| --                 | --              | --               | 92                 | 5488            | 276              |
| --                 | --              | --               | 95                 | 5500            | 285              |
| --                 | --              | --               | 96                 | 5504            | 288              |
| --                 | --              | --               | 99                 | 5523            | 297              |

| Radar waveform #19 |                 |                  | Radar waveform #20 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 11                 | 5474            | 33               | 2                  | 5495            | 6                |
| 14                 | 5479            | 42               | 4                  | 5507            | 12               |
| 18                 | 5500            | 54               | 16                 | 5512            | 48               |
| 22                 | 5485            | 66               | 21                 | 5510            | 63               |
| 27                 | 5471            | 81               | 22                 | 5498            | 66               |
| 30                 | 5472            | 90               | 24                 | 5473            | 72               |
| 32                 | 5495            | 96               | 25                 | 5509            | 75               |
| 36                 | 5518            | 108              | 36                 | 5485            | 108              |
| 51                 | 5506            | 153              | 40                 | 5478            | 120              |
| 53                 | 5475            | 159              | 57                 | 5494            | 171              |
| 54                 | 5512            | 162              | 59                 | 5502            | 177              |
| 59                 | 5525            | 177              | 61                 | 5528            | 183              |
| 71                 | 5488            | 213              | 62                 | 5471            | 186              |
| 74                 | 5477            | 222              | 80                 | 5522            | 240              |
| 79                 | 5501            | 237              | 97                 | 5472            | 291              |
| 89                 | 5480            | 267              | --                 | --              | --               |
| 90                 | 5524            | 270              | --                 | --              | --               |

| Radar waveform #21 |                 |                  | Radar waveform #22 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 9                  | 5485            | 27               | 35                 | 5498            | 105              |
| 16                 | 5525            | 48               | 49                 | 5489            | 147              |
| 21                 | 5512            | 63               | 53                 | 5488            | 159              |
| 31                 | 5471            | 93               | 56                 | 5508            | 168              |
| 43                 | 5517            | 129              | 59                 | 5529            | 177              |
| 56                 | 5516            | 168              | 61                 | 5482            | 183              |
| 61                 | 5475            | 183              | 77                 | 5472            | 231              |
| 84                 | 5507            | 252              | 83                 | 5470            | 249              |
| 89                 | 5496            | 267              | 91                 | 5503            | 273              |
| 98                 | 5513            | 294              | 93                 | 5490            | 279              |
| 99                 | 5482            | 297              | --                 | --              | --               |

| Radar waveform #23 |                 |                  | Radar waveform #24 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5507            | 0                | 0                  | 5494            | 0                |
| 29                 | 5509            | 87               | 8                  | 5518            | 24               |
| 37                 | 5506            | 111              | 9                  | 5473            | 27               |
| 40                 | 5512            | 120              | 10                 | 5525            | 30               |
| 42                 | 5482            | 126              | 21                 | 5502            | 63               |
| 43                 | 5508            | 129              | 23                 | 5526            | 69               |
| 44                 | 5479            | 132              | 42                 | 5480            | 126              |
| 46                 | 5500            | 138              | 49                 | 5513            | 147              |
| 54                 | 5477            | 162              | 51                 | 5470            | 153              |
| 58                 | 5485            | 174              | 56                 | 5512            | 168              |
| 68                 | 5502            | 204              | 58                 | 5511            | 174              |
| 73                 | 5491            | 219              | 75                 | 5520            | 225              |
| 77                 | 5487            | 231              | 83                 | 5486            | 249              |
| 78                 | 5486            | 234              | 84                 | 5476            | 252              |
| 80                 | 5484            | 240              | 86                 | 5495            | 258              |
| 81                 | 5515            | 243              | --                 | --              | --               |
| 91                 | 5480            | 273              | --                 | --              | --               |
| 92                 | 5505            | 276              | --                 | --              | --               |
| 94                 | 5526            | 282              | --                 | --              | --               |
| 95                 | 5528            | 285              | --                 | --              | --               |
| 99                 | 5483            | 297              | --                 | --              | --               |

| Radar waveform #25 |                 |                  | Radar waveform #26 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5507            | 0                | 1                  | 5514            | 3                |
| 2                  | 5513            | 6                | 2                  | 5493            | 6                |
| 19                 | 5498            | 57               | 19                 | 5478            | 57               |
| 36                 | 5474            | 108              | 22                 | 5511            | 66               |
| 38                 | 5476            | 114              | 25                 | 5479            | 75               |
| 39                 | 5512            | 117              | 38                 | 5513            | 114              |
| 40                 | 5502            | 120              | 44                 | 5473            | 132              |
| 41                 | 5489            | 123              | 61                 | 5470            | 183              |
| 43                 | 5479            | 129              | 68                 | 5509            | 204              |
| 51                 | 5514            | 153              | 71                 | 5507            | 213              |
| 62                 | 5526            | 186              | 73                 | 5471            | 219              |
| 70                 | 5520            | 210              | 76                 | 5499            | 228              |
| 75                 | 5471            | 225              | 83                 | 5492            | 249              |
| 77                 | 5518            | 231              | 86                 | 5501            | 258              |
| 78                 | 5486            | 234              | 94                 | 5488            | 282              |
| 82                 | 5509            | 246              | --                 | --              | --               |

| Radar waveform #27 |                 |                  | Radar waveform #28 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5477            | 0                | 3                  | 5477            | 9                |
| 2                  | 5514            | 6                | 6                  | 5516            | 18               |
| 3                  | 5529            | 9                | 12                 | 5495            | 36               |
| 4                  | 5498            | 12               | 18                 | 5478            | 54               |
| 6                  | 5475            | 18               | 62                 | 5482            | 186              |
| 16                 | 5508            | 48               | 65                 | 5493            | 195              |
| 26                 | 5487            | 78               | 71                 | 5530            | 213              |
| 54                 | 5493            | 162              | 81                 | 5522            | 243              |
| 63                 | 5485            | 189              | 84                 | 5485            | 252              |
| 71                 | 5513            | 213              | 94                 | 5491            | 282              |
| 74                 | 5494            | 222              | 96                 | 5525            | 288              |
| 90                 | 5523            | 270              | --                 | --              | --               |
| 98                 | 5519            | 294              | --                 | --              | --               |

| Radar waveform #29 |                 |                  | Radar waveform #30 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 10                 | 5530            | 30               | 0                  | 5493            | 0                |
| 22                 | 5472            | 66               | 4                  | 5511            | 12               |
| 23                 | 5481            | 69               | 6                  | 5499            | 18               |
| 28                 | 5493            | 84               | 7                  | 5507            | 21               |
| 34                 | 5497            | 102              | 10                 | 5517            | 30               |
| 44                 | 5526            | 132              | 15                 | 5478            | 45               |
| 50                 | 5482            | 150              | 20                 | 5501            | 60               |
| 56                 | 5518            | 168              | 42                 | 5487            | 126              |
| 58                 | 5522            | 174              | 53                 | 5500            | 159              |
| 62                 | 5488            | 186              | 56                 | 5524            | 168              |
| 65                 | 5509            | 195              | 60                 | 5470            | 180              |
| --                 | --              | --               | 77                 | 5486            | 231              |
| --                 | --              | --               | 89                 | 5497            | 267              |

|               |   |                   |            |
|---------------|---|-------------------|------------|
| Product       | HAN Access Point  | Temperature       | 27°C       |
| Test Engineer | Amy Zhang   | Relative Humidity | 65%        |
| Test Site     | SR5   | Test Date         | 2018/08/26 |
| Test Item     | Radar Statistical Performance Check (802.11n-HT40 mode – 5510MHz) |                   |            |

#### Radar Type 1 - Radar Statistical Performance

| Trail # | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|---------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1       | 5492                | 1                   | 558      | 95             | 1                             |
| 2       | 5492                | 1                   | 738      | 72             | 1                             |
| 3       | 5492                | 1                   | 678      | 78             | 1                             |
| 4       | 5492                | 1                   | 858      | 62             | 1                             |
| 5       | 5500                | 1                   | 758      | 70             | 1                             |
| 6       | 5500                | 1                   | 638      | 83             | 1                             |
| 7       | 5500                | 1                   | 938      | 57             | 1                             |
| 8       | 5500                | 1                   | 778      | 68             | 1                             |
| 9       | 5508                | 1                   | 718      | 74             | 1                             |
| 10      | 5508                | 1                   | 518      | 102            | 1                             |
| 11      | 5508                | 1                   | 798      | 67             | 1                             |
| 12      | 5508                | 1                   | 538      | 98             | 1                             |
| 13      | 5510                | 1                   | 878      | 61             | 1                             |
| 14      | 5510                | 1                   | 838      | 63             | 1                             |
| 15      | 5510                | 1                   | 818      | 65             | 1                             |
| 16      | 5510                | 1                   | 2773     | 20             | 1                             |
| 17      | 5510                | 1                   | 1871     | 29             | 1                             |
| 18      | 5510                | 1                   | 2397     | 22             | 1                             |
| 19      | 5512                | 1                   | 2640     | 20             | 1                             |
| 20      | 5512                | 1                   | 1638     | 33             | 1                             |
| 21      | 5512                | 1                   | 2229     | 24             | 1                             |
| 22      | 5512                | 1                   | 1186     | 45             | 1                             |
| 23      | 5520                | 1                   | 2431     | 22             | 1                             |
| 24      | 5520                | 1                   | 1204     | 44             | 1                             |
| 25      | 5520                | 1                   | 1603     | 33             | 1                             |
| 26      | 5520                | 1                   | 773      | 69             | 1                             |

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 27                       | 5529                | 1                   | 2665     | 20             | 1                             |
| 28                       | 5529                | 1                   | 1836     | 29             | 1                             |
| 29                       | 5529                | 1                   | 916      | 58             | 1                             |
| 30                       | 5529                | 1                   | 711      | 75             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 2 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5492                | 4.6                 | 208      | 27             | 1                             |
| 2                        | 5492                | 4.2                 | 222      | 29             | 1                             |
| 3                        | 5492                | 4.8                 | 229      | 29             | 1                             |
| 4                        | 5492                | 1.6                 | 225      | 25             | 1                             |
| 5                        | 5500                | 1.5                 | 228      | 27             | 1                             |
| 6                        | 5500                | 2.4                 | 224      | 28             | 1                             |
| 7                        | 5500                | 4.0                 | 197      | 26             | 1                             |
| 8                        | 5500                | 1.0                 | 219      | 24             | 1                             |
| 9                        | 5508                | 3.4                 | 209      | 24             | 1                             |
| 10                       | 5508                | 1.0                 | 185      | 27             | 1                             |
| 11                       | 5508                | 2.3                 | 191      | 27             | 1                             |
| 12                       | 5508                | 1.0                 | 171      | 24             | 1                             |
| 13                       | 5510                | 3.0                 | 220      | 28             | 1                             |
| 14                       | 5510                | 4.6                 | 151      | 27             | 1                             |
| 15                       | 5510                | 1.4                 | 182      | 27             | 1                             |
| 16                       | 5510                | 1.7                 | 205      | 26             | 1                             |
| 17                       | 5510                | 1.3                 | 214      | 24             | 1                             |
| 18                       | 5510                | 4.6                 | 157      | 26             | 1                             |
| 19                       | 5512                | 2.3                 | 154      | 28             | 1                             |
| 20                       | 5512                | 2.9                 | 222      | 24             | 1                             |
| 21                       | 5512                | 1.6                 | 158      | 28             | 1                             |
| 22                       | 5512                | 2.8                 | 151      | 25             | 1                             |
| 23                       | 5520                | 4.4                 | 211      | 24             | 1                             |
| 24                       | 5520                | 1.4                 | 191      | 27             | 1                             |
| 25                       | 5520                | 1.6                 | 152      | 24             | 1                             |
| 26                       | 5520                | 2.9                 | 230      | 26             | 1                             |
| 27                       | 5529                | 1.4                 | 222      | 24             | 1                             |
| 28                       | 5529                | 3.7                 | 200      | 29             | 1                             |
| 29                       | 5529                | 3.6                 | 190      | 28             | 1                             |
| 30                       | 5529                | 4.2                 | 202      | 27             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 3 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5492                | 7.1                 | 397      | 17             | 1                             |
| 2                        | 5492                | 10.0                | 372      | 17             | 1                             |
| 3                        | 5492                | 7.4                 | 314      | 16             | 1                             |
| 4                        | 5492                | 7.3                 | 407      | 18             | 1                             |
| 5                        | 5500                | 9.5                 | 334      | 17             | 1                             |
| 6                        | 5500                | 9.4                 | 359      | 18             | 1                             |
| 7                        | 5500                | 9.7                 | 284      | 18             | 1                             |
| 8                        | 5500                | 7.2                 | 381      | 16             | 1                             |
| 9                        | 5508                | 7.3                 | 367      | 17             | 1                             |
| 10                       | 5508                | 7.8                 | 465      | 16             | 1                             |
| 11                       | 5508                | 8.7                 | 411      | 18             | 1                             |
| 12                       | 5508                | 7.0                 | 320      | 18             | 1                             |
| 13                       | 5510                | 9.1                 | 397      | 17             | 1                             |
| 14                       | 5510                | 8.2                 | 344      | 17             | 1                             |
| 15                       | 5510                | 6.9                 | 257      | 17             | 1                             |
| 16                       | 5510                | 9.3                 | 475      | 17             | 1                             |
| 17                       | 5510                | 6.5                 | 359      | 16             | 1                             |
| 18                       | 5510                | 8.8                 | 464      | 17             | 1                             |
| 19                       | 5512                | 7.2                 | 431      | 17             | 1                             |
| 20                       | 5512                | 7.6                 | 432      | 17             | 1                             |
| 21                       | 5512                | 9.7                 | 449      | 17             | 1                             |
| 22                       | 5512                | 8.0                 | 287      | 17             | 1                             |
| 23                       | 5520                | 8.3                 | 221      | 18             | 1                             |
| 24                       | 5520                | 7.2                 | 320      | 16             | 1                             |
| 25                       | 5520                | 7.0                 | 385      | 17             | 1                             |
| 26                       | 5520                | 7.5                 | 498      | 18             | 1                             |
| 27                       | 5529                | 6.9                 | 265      | 17             | 1                             |
| 28                       | 5529                | 7.8                 | 382      | 16             | 1                             |
| 29                       | 5529                | 7.3                 | 377      | 17             | 1                             |
| 30                       | 5529                | 7.3                 | 202      | 16             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 4 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5492                | 17.5                | 211      | 15             | 1                             |
| 2                        | 5492                | 14.2                | 218      | 12             | 1                             |
| 3                        | 5492                | 14.9                | 337      | 15             | 1                             |
| 4                        | 5492                | 12.6                | 335      | 14             | 1                             |
| 5                        | 5500                | 14.1                | 416      | 14             | 1                             |
| 6                        | 5500                | 16.6                | 202      | 14             | 1                             |
| 7                        | 5500                | 18.8                | 390      | 15             | 1                             |
| 8                        | 5500                | 17.9                | 395      | 16             | 1                             |
| 9                        | 5508                | 11.9                | 220      | 13             | 1                             |
| 10                       | 5508                | 17.4                | 201      | 14             | 1                             |
| 11                       | 5508                | 14.0                | 326      | 13             | 1                             |
| 12                       | 5508                | 12.0                | 440      | 14             | 1                             |
| 13                       | 5510                | 16.0                | 298      | 12             | 1                             |
| 14                       | 5510                | 19.3                | 303      | 13             | 1                             |
| 15                       | 5510                | 16.9                | 434      | 15             | 1                             |
| 16                       | 5510                | 15.1                | 316      | 13             | 1                             |
| 17                       | 5510                | 11.9                | 209      | 15             | 1                             |
| 18                       | 5510                | 11.6                | 203      | 13             | 1                             |
| 19                       | 5512                | 14.3                | 234      | 14             | 1                             |
| 20                       | 5512                | 14.9                | 203      | 15             | 1                             |
| 21                       | 5512                | 11.5                | 346      | 16             | 1                             |
| 22                       | 5512                | 16.0                | 365      | 12             | 1                             |
| 23                       | 5520                | 16.2                | 383      | 16             | 1                             |
| 24                       | 5520                | 15.0                | 472      | 15             | 1                             |
| 25                       | 5520                | 15.6                | 267      | 14             | 1                             |
| 26                       | 5520                | 17.9                | 219      | 14             | 1                             |
| 27                       | 5529                | 19.8                | 270      | 14             | 1                             |
| 28                       | 5529                | 13.5                | 276      | 14             | 1                             |
| 29                       | 5529                | 12.2                | 223      | 14             | 1                             |
| 30                       | 5529                | 19.9                | 313      | 14             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows:  $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\%+100\%+100\%+100\%)/4 = 100\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5497.6              | 1                             | 16      | 5510.0              | 1                             |
| 2                        | 5499.2              | 1                             | 17      | 5510.0              | 1                             |
| 3                        | 5496.8              | 1                             | 18      | 5510.0              | 1                             |
| 4                        | 5495.6              | 1                             | 19      | 5510.0              | 1                             |
| 5                        | 5494.4              | 1                             | 20      | 5510.0              | 1                             |
| 6                        | 5495.2              | 1                             | 21      | 5520.4              | 1                             |
| 7                        | 5498.8              | 1                             | 22      | 5524.4              | 1                             |
| 8                        | 5494.0              | 1                             | 23      | 5526.0              | 1                             |
| 9                        | 5496.0              | 1                             | 24      | 5523.2              | 1                             |
| 10                       | 5499.6              | 1                             | 25      | 5520.8              | 1                             |
| 11                       | 5510.0              | 1                             | 26      | 5524.8              | 1                             |
| 12                       | 5510.0              | 1                             | 27      | 5522.4              | 1                             |
| 13                       | 5510.0              | 1                             | 28      | 5525.6              | 1                             |
| 14                       | 5510.0              | 1                             | 29      | 5521.2              | 1                             |
| 15                       | 5510.0              | 1                             | 30      | 5524.0              | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 5296.8                        |

| Type 5 Radar Waveform_1                           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 14<br>Burst Interval (us)= 857143 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 533023        | 1        | 14          | 75      | 1460            | 0               | 0               | 533023         | 0                         | 857142                  |  |
| 2   | 943430        | 2        | 14          | 75      | 1364            | 1708            | 0               | 1477913        | 857143                    | 1714285                 |  |
| 3   | 867243        | 2        | 14          | 60      | 1449            | 1641            | 0               | 2348228        | 1714286                   | 2571428                 |  |
| 4   | 1062991       | 3        | 14          | 55      | 1293            | 1602            | 1756            | 3414309        | 2571429                   | 3428571                 |  |
| 5   | 237292        | 2        | 14          | 95      | 1142            | 1545            | 0               | 3656252        | 3428572                   | 4285714                 |  |
| 6   | 737479        | 1        | 14          | 70      | 1336            | 0               | 0               | 4396418        | 4285715                   | 5142857                 |  |
| 7   | 1304421       | 3        | 14          | 55      | 1919            | 1084            | 1359            | 5702175        | 5142858                   | 6000000                 |  |
| 8   | 405286        | 1        | 14          | 50      | 1878            | 0               | 0               | 6111823        | 6000001                   | 6857143                 |  |
| 9   | 980442        | 3        | 14          | 100     | 1268            | 1732            | 1076            | 7094143        | 6857144                   | 7714286                 |  |
| 10  | 1348838       | 2        | 14          | 55      | 1269            | 1818            | 0               | 8447057        | 7714287                   | 8571429                 |  |
| 11  | 142322        | 3        | 14          | 70      | 1167            | 1135            | 1752            | 8592466        | 8571430                   | 9428572                 |  |
| 12  | 1597731       | 3        | 14          | 70      | 1634            | 1293            | 1672            | 10194251       | 9428573                   | 10285715                |  |
| 13  | 406726        | 3        | 14          | 90      | 1350            | 1574            | 1848            | 10605576       | 10285716                  | 11142858                |  |
| 14  | 781215        | 1        | 14          | 70      | 1831            | 0               | 0               | 11391563       | 11142859                  | 12000001                |  |
| Total number of pulses in waveform = 30           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****   |               |          |             |         |                 |                 |                 |                |                           |                         |  |

### Type 5 Radar Waveform\_2

Num of Bursts = 13  
Burst Interval (us)= 923077

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 59260         | 2        | 18          | 100     | 1171            | 1253            | 0               | 59260          | 0                         | 923076                  |
| 2       | 1104942       | 3        | 18          | 70      | 1431            | 1651            | 1721            | 1166626        | 923077                    | 1846153                 |
| 3       | 1327440       | 2        | 18          | 80      | 1752            | 1807            | 0               | 2498869        | 1846154                   | 2769230                 |
| 4       | 526878        | 2        | 18          | 95      | 1447            | 1648            | 0               | 3029306        | 2769231                   | 3692307                 |
| 5       | 1353560       | 3        | 18          | 100     | 1408            | 1532            | 1202            | 4385961        | 3692308                   | 4615384                 |
| 6       | 695446        | 2        | 18          | 55      | 1040            | 1376            | 0               | 5085549        | 4615385                   | 5538461                 |
| 7       | 1036288       | 1        | 18          | 70      | 1466            | 0               | 0               | 6124253        | 5538462                   | 6461538                 |
| 8       | 690711        | 2        | 18          | 95      | 1636            | 1431            | 0               | 6816430        | 6461539                   | 7384615                 |
| 9       | 1452231       | 3        | 18          | 75      | 1410            | 1036            | 1660            | 8271728        | 7384616                   | 8307692                 |
| 10      | 646097        | 2        | 18          | 60      | 1142            | 1781            | 0               | 8921931        | 8307693                   | 9230769                 |
| 11      | 404508        | 1        | 18          | 65      | 1614            | 0               | 0               | 9329362        | 9230770                   | 10153846                |
| 12      | 889294        | 3        | 18          | 90      | 1081            | 1647            | 1581            | 10220270       | 10153847                  | 11076923                |
| 13      | 891510        | 1        | 18          | 75      | 1429            | 0               | 0               | 11116089       | 11076924                  | 12000000                |

Total number of pulses in waveform = 27

### Type 5 Radar Waveform\_3

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 105207        | 2        | 12          | 60      | 1913            | 1048            | 0               | 105207         | 0                         | 857142                  |
| 2       | 1394862       | 3        | 12          | 100     | 1684            | 1774            | 1203            | 1503030        | 857143                    | 1714285                 |
| 3       | 230676        | 3        | 12          | 55      | 1496            | 1431            | 1766            | 1738367        | 1714286                   | 2571428                 |
| 4       | 830918        | 2        | 12          | 50      | 1533            | 1013            | 0               | 2573978        | 2571429                   | 3428571                 |
| 5       | 976783        | 1        | 12          | 90      | 1071            | 0               | 0               | 3553307        | 3428572                   | 4285714                 |
| 6       | 1236396       | 3        | 12          | 50      | 1687            | 1353            | 1142            | 4790774        | 4285715                   | 5142857                 |
| 7       | 513946        | 1        | 12          | 70      | 1302            | 0               | 0               | 5308902        | 5142858                   | 6000000                 |
| 8       | 1035435       | 1        | 12          | 55      | 1489            | 0               | 0               | 6345639        | 6000001                   | 6857143                 |
| 9       | 558209        | 2        | 12          | 65      | 1940            | 1186            | 0               | 6905337        | 6857144                   | 7714286                 |
| 10      | 1468593       | 1        | 12          | 85      | 1603            | 0               | 0               | 8377056        | 7714287                   | 8571429                 |
| 11      | 339022        | 3        | 12          | 70      | 1511            | 1346            | 1516            | 8717681        | 8571430                   | 9428572                 |
| 12      | 1049980       | 1        | 12          | 80      | 1200            | 0               | 0               | 9772034        | 9428573                   | 10285715                |
| 13      | 662561        | 2        | 12          | 55      | 1107            | 1800            | 0               | 10435795       | 10285716                  | 11142858                |
| 14      | 1000572       | 3        | 12          | 50      | 1435            | 1306            | 1067            | 11439274       | 11142859                  | 12000001                |

Total number of pulses in waveform = 28

### Type 5 Radar Waveform\_4

Num of Bursts = 17  
Burst Interval (us)= 705882

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 597818        | 2        | 9           | 55      | 1844            | 1678            | 0               | 597818         | 0                         | 705881                  |
| 2       | 486831        | 1        | 9           | 85      | 1856            | 0               | 0               | 1088171        | 705882                    | 1411763                 |
| 3       | 398696        | 3        | 9           | 60      | 1315            | 1193            | 1567            | 1482723        | 1411764                   | 2117645                 |
| 4       | 1109572       | 2        | 9           | 55      | 1485            | 1262            | 0               | 2602370        | 2117646                   | 2823527                 |
| 5       | 777456        | 2        | 9           | 90      | 1942            | 1456            | 0               | 3382573        | 2823528                   | 3529409                 |
| 6       | 663951        | 1        | 9           | 80      | 1707            | 0               | 0               | 4049922        | 3529410                   | 4235291                 |
| 7       | 495634        | 2        | 9           | 60      | 1047            | 1366            | 0               | 4547263        | 4235292                   | 4941173                 |
| 8       | 505023        | 3        | 9           | 60      | 1816            | 1209            | 1347            | 5054699        | 4941174                   | 5647055                 |
| 9       | 662581        | 2        | 9           | 50      | 1091            | 1596            | 0               | 5721652        | 5647056                   | 6352937                 |
| 10      | 1153449       | 2        | 9           | 100     | 1986            | 1544            | 0               | 6877788        | 6352938                   | 7058819                 |
| 11      | 685997        | 3        | 9           | 80      | 1570            | 1492            | 1173            | 7567315        | 7058820                   | 7764701                 |
| 12      | 800841        | 2        | 9           | 70      | 1540            | 1391            | 0               | 8372391        | 7764702                   | 8470583                 |
| 13      | 464378        | 1        | 9           | 95      | 1018            | 0               | 0               | 8839700        | 8470584                   | 9176465                 |
| 14      | 416118        | 2        | 9           | 55      | 1769            | 1224            | 0               | 9256836        | 9176466                   | 9882347                 |
| 15      | 918864        | 1        | 9           | 85      | 1402            | 0               | 0               | 10178693       | 9882348                   | 10588229                |
| 16      | 642367        | 2        | 9           | 100     | 1495            | 1526            | 0               | 10822462       | 10588230                  | 11294111                |
| 17      | 887265        | 2        | 9           | 75      | 1358            | 1667            | 0               | 11712748       | 11294112                  | 11999993                |

Total number of pulses in waveform = 33

### Type 5 Radar Waveform\_5

Num of Bursts = 8  
Burst Interval (us)= 1500000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 987033        | 1        | 6           | 55      | 1116            | 0               | 0               | 987033         | 0                         | 1499999                 |
| 2       | 1351787       | 2        | 6           | 55      | 1897            | 1344            | 0               | 2339936        | 1500000                   | 2999999                 |
| 3       | 1632597       | 2        | 6           | 90      | 1775            | 1824            | 0               | 3975774        | 3000000                   | 4499999                 |
| 4       | 2014854       | 3        | 6           | 80      | 1500            | 1817            | 1047            | 5994227        | 4500000                   | 5999999                 |
| 5       | 652399        | 2        | 6           | 80      | 1499            | 1180            | 0               | 6650990        | 6000000                   | 7499999                 |
| 6       | 1982319       | 3        | 6           | 70      | 1029            | 1098            | 1529            | 8635988        | 7500000                   | 8999999                 |
| 7       | 877604        | 1        | 6           | 50      | 1527            | 0               | 0               | 9517248        | 9000000                   | 10499999                |
| 8       | 2301190       | 3        | 6           | 70      | 1056            | 1927            | 1057            | 11819965       | 10500000                  | 11999999                |

Total number of pulses in waveform = 17

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### Type 5 Radar Waveform\_6

Num of Bursts = 10  
Burst Interval (us)= 1200000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 209374        | 2        | 8           | 90      | 1363            | 1698            | 0               | 209374         | 0                         | 1199999                 |
| 2       | 1660727       | 3        | 8           | 75      | 1877            | 1196            | 1935            | 1873162        | 1200000                   | 2399999                 |
| 3       | 635589        | 2        | 8           | 65      | 1755            | 1655            | 0               | 2513759        | 2400000                   | 3599999                 |
| 4       | 1754977       | 1        | 8           | 60      | 1711            | 0               | 0               | 4272146        | 3600000                   | 4799999                 |
| 5       | 776150        | 3        | 8           | 70      | 1227            | 1896            | 1717            | 5050007        | 4800000                   | 5999999                 |
| 6       | 1444082       | 2        | 8           | 65      | 1828            | 1929            | 0               | 6498929        | 6000000                   | 7199999                 |
| 7       | 1860720       | 3        | 8           | 80      | 1595            | 1620            | 1242            | 8363406        | 7200000                   | 8399999                 |
| 8       | 324993        | 3        | 8           | 70      | 1776            | 1252            | 1885            | 8692856        | 8400000                   | 9599999                 |
| 9       | 996373        | 1        | 8           | 65      | 1336            | 0               | 0               | 9694142        | 9600000                   | 10799999                |
| 10      | 1262160       | 1        | 8           | 80      | 1349            | 0               | 0               | 10957638       | 10800000                  | 11999999                |

Total number of pulses in waveform = 21

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### Type 5 Radar Waveform\_7

Num of Bursts = 20  
Burst Interval (us)= 600000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 546421        | 1        | 17          | 60      | 1829            | 0               | 0               | 546421         | 0                         | 599999                  |
| 2       | 435827        | 2        | 17          | 90      | 1138            | 1863            | 0               | 984077         | 600000                    | 1199999                 |
| 3       | 297577        | 1        | 17          | 50      | 1071            | 0               | 0               | 1284655        | 1200000                   | 1799999                 |
| 4       | 651165        | 2        | 17          | 80      | 1344            | 1843            | 0               | 1936891        | 1800000                   | 2399999                 |
| 5       | 596446        | 3        | 17          | 95      | 1544            | 1879            | 1593            | 2536524        | 2400000                   | 2999999                 |
| 6       | 927897        | 1        | 17          | 100     | 1011            | 0               | 0               | 3469437        | 3000000                   | 3599999                 |
| 7       | 578285        | 3        | 17          | 70      | 1800            | 1969            | 1496            | 4048733        | 3600000                   | 4199999                 |
| 8       | 632771        | 2        | 17          | 70      | 1266            | 1360            | 0               | 4686769        | 4200000                   | 4799999                 |
| 9       | 583994        | 3        | 17          | 70      | 1522            | 1496            | 1520            | 5273379        | 4800000                   | 5399999                 |
| 10      | 436265        | 2        | 17          | 65      | 1365            | 1657            | 0               | 5714172        | 5400000                   | 5999999                 |
| 11      | 488708        | 2        | 17          | 70      | 1189            | 1179            | 0               | 6205902        | 6000000                   | 6599999                 |
| 12      | 712186        | 3        | 17          | 50      | 1108            | 1379            | 1248            | 6920456        | 6600000                   | 7199999                 |
| 13      | 434029        | 1        | 17          | 100     | 1973            | 0               | 0               | 7358220        | 7200000                   | 7799999                 |
| 14      | 700608        | 3        | 17          | 75      | 1189            | 1093            | 1986            | 8060801        | 7800000                   | 8399999                 |
| 15      | 422401        | 3        | 17          | 55      | 1392            | 1764            | 1956            | 8487470        | 8400000                   | 8999999                 |
| 16      | 792367        | 1        | 17          | 85      | 1167            | 0               | 0               | 9284949        | 9000000                   | 9599999                 |
| 17      | 572899        | 3        | 17          | 65      | 1106            | 1522            | 1730            | 9859015        | 9600000                   | 10199999                |
| 18      | 639864        | 1        | 17          | 50      | 1655            | 0               | 0               | 10503227       | 10200000                  | 10799999                |
| 19      | 722431        | 3        | 17          | 50      | 1134            | 1170            | 1335            | 11227313       | 10800000                  | 11399999                |
| 20      | 648749        | 3        | 17          | 100     | 1849            | 1766            | 1395            | 11879701       | 11400000                  | 11999999                |

Total number of pulses in waveform = 43

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### Type 5 Radar Waveform\_8

Num of Bursts = 16  
Burst Interval (us)= 750000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 258984        | 1        | 5           | 85      | 1998            | 0               | 0               | 258984         | 0                         | 749999                  |
| 2       | 991985        | 2        | 5           | 90      | 1548            | 1182            | 0               | 1252967        | 750000                    | 1499999                 |
| 3       | 904791        | 1        | 5           | 100     | 1972            | 0               | 0               | 2160488        | 1500000                   | 2249999                 |
| 4       | 201945        | 2        | 5           | 70      | 1195            | 1766            | 0               | 2364405        | 2250000                   | 2999999                 |
| 5       | 1028652       | 2        | 5           | 80      | 1833            | 1976            | 0               | 3396018        | 3000000                   | 3749999                 |
| 6       | 570372        | 2        | 5           | 50      | 1658            | 1006            | 0               | 3970199        | 3750000                   | 4499999                 |
| 7       | 998016        | 2        | 5           | 65      | 1735            | 1064            | 0               | 4970879        | 4500000                   | 5249999                 |
| 8       | 451842        | 3        | 5           | 60      | 1789            | 1435            | 1298            | 5425520        | 5250000                   | 5999999                 |
| 9       | 1058857       | 1        | 5           | 70      | 1310            | 0               | 0               | 6488899        | 6000000                   | 6749999                 |
| 10      | 361523        | 1        | 5           | 75      | 1538            | 0               | 0               | 6851732        | 6750000                   | 7499999                 |
| 11      | 947072        | 1        | 5           | 90      | 1982            | 0               | 0               | 7800342        | 7500000                   | 8249999                 |
| 12      | 752395        | 3        | 5           | 65      | 1570            | 1299            | 1452            | 8554719        | 8250000                   | 8999999                 |
| 13      | 755831        | 3        | 5           | 85      | 1556            | 1692            | 1539            | 9314871        | 9000000                   | 9749999                 |
| 14      | 891652        | 3        | 5           | 100     | 1156            | 1316            | 1955            | 10211310       | 9750000                   | 10499999                |
| 15      | 758261        | 1        | 5           | 50      | 1158            | 0               | 0               | 10973998       | 10500000                  | 11249999                |
| 16      | 752718        | 3        | 5           | 55      | 1088            | 1480            | 1330            | 11727874       | 11250000                  | 11999999                |

Total number of pulses in waveform = 31

### Type 5 Radar Waveform\_9

Num of Bursts = 15  
Burst Interval (us)= 800000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 709327        | 1        | 10          | 55      | 1287            | 0               | 0               | 709327         | 0                         | 799999                  |
| 2       | 873128        | 3        | 10          | 55      | 1196            | 1352            | 1684            | 1583742        | 800000                    | 1599999                 |
| 3       | 556618        | 1        | 10          | 65      | 1152            | 0               | 0               | 2144592        | 1600000                   | 2399999                 |
| 4       | 900133        | 1        | 10          | 90      | 1832            | 0               | 0               | 3045877        | 2400000                   | 3199999                 |
| 5       | 559264        | 3        | 10          | 100     | 1539            | 1620            | 1683            | 3606973        | 3200000                   | 3999999                 |
| 6       | 940735        | 1        | 10          | 80      | 1811            | 0               | 0               | 4552550        | 4000000                   | 4799999                 |
| 7       | 954011        | 2        | 10          | 65      | 1953            | 1091            | 0               | 5508372        | 4800000                   | 5599999                 |
| 8       | 212842        | 3        | 10          | 55      | 1927            | 1318            | 1133            | 5724258        | 5600000                   | 6399999                 |
| 9       | 982455        | 2        | 10          | 70      | 1395            | 1958            | 0               | 6711091        | 6400000                   | 7199999                 |
| 10      | 845931        | 3        | 10          | 100     | 1638            | 1968            | 1015            | 7560375        | 7200000                   | 7999999                 |
| 11      | 783957        | 2        | 10          | 55      | 1369            | 1310            | 0               | 8353953        | 8000000                   | 8799999                 |
| 12      | 1161858       | 2        | 10          | 80      | 1471            | 1311            | 0               | 9518490        | 8800000                   | 9599999                 |
| 13      | 399633        | 3        | 10          | 60      | 1251            | 1604            | 1497            | 9920905        | 9600000                   | 10399999                |
| 14      | 869419        | 2        | 10          | 65      | 1891            | 1364            | 0               | 10794676       | 10400000                  | 11199999                |
| 15      | 440486        | 2        | 10          | 100     | 1546            | 1934            | 0               | 11238417       | 11200000                  | 11999999                |

Total number of pulses in waveform = 31

### Type 5 Radar Waveform\_10

Num of Bursts = 19  
Burst Interval (us)= 631579

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 62747         | 2        | 19          | 100     | 1786            | 1827            | 0               | 62747          | 0                         | 631578                  |
| 2       | 877140        | 2        | 19          | 65      | 1894            | 1829            | 0               | 943500         | 631579                    | 1263157                 |
| 3       | 944438        | 1        | 19          | 65      | 1794            | 0               | 0               | 1891661        | 1263158                   | 1894736                 |
| 4       | 540230        | 3        | 19          | 55      | 1495            | 1158            | 1162            | 2433685        | 1894737                   | 2526315                 |
| 5       | 328655        | 2        | 19          | 80      | 1533            | 1074            | 0               | 2766155        | 2526316                   | 3157894                 |
| 6       | 825018        | 1        | 19          | 85      | 1755            | 0               | 0               | 3593780        | 3157895                   | 3789473                 |
| 7       | 299176        | 1        | 19          | 70      | 1688            | 0               | 0               | 3894711        | 3789474                   | 4421052                 |
| 8       | 708881        | 1        | 19          | 85      | 1874            | 0               | 0               | 4605280        | 4421053                   | 5052631                 |
| 9       | 501659        | 1        | 19          | 70      | 1853            | 0               | 0               | 5108813        | 5052632                   | 5684210                 |
| 10      | 640561        | 1        | 19          | 85      | 1279            | 0               | 0               | 5751227        | 5684211                   | 6315789                 |
| 11      | 921779        | 1        | 19          | 95      | 1391            | 0               | 0               | 6674285        | 6315790                   | 6947368                 |
| 12      | 754915        | 2        | 19          | 90      | 1112            | 1184            | 0               | 7430591        | 6947369                   | 7578947                 |
| 13      | 570288        | 1        | 19          | 90      | 1255            | 0               | 0               | 8003175        | 7578948                   | 8210526                 |
| 14      | 469983        | 3        | 19          | 65      | 1345            | 1920            | 1823            | 8474413        | 8210527                   | 8842105                 |
| 15      | 816401        | 1        | 19          | 80      | 1060            | 0               | 0               | 9295902        | 8842106                   | 9473684                 |
| 16      | 227965        | 1        | 19          | 60      | 1892            | 0               | 0               | 9524927        | 9473685                   | 10105263                |
| 17      | 976286        | 1        | 19          | 65      | 1476            | 1580            | 1869            | 10503105       | 10105264                  | 10736842                |
| 18      | 441278        | 3        | 19          | 75      | 1549            | 0               | 0               | 10949308       | 10736843                  | 11368421                |
| 19      | 684524        | 1        | 19          | 75      | 1343            | 1494            | 1324            | 11635381       | 11368422                  | 12000000                |

Total number of pulses in waveform = 31

### Type 5 Radar Waveform\_11

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 293361        | 1        | 18          | 50      | 1360            | 0               | 0               | 369468         | 0                         | 599999                  |
| 2                                       | 811686        | 3        | 18          | 85      | 1073            | 1904            | 1610            | 654169         | 600000                    | 1199999                 |
| 3                                       | 535364        | 1        | 18          | 70      | 1015            | 0               | 0               | 1470442        | 1200000                   | 1799999                 |
| 4                                       | 461614        | 2        | 18          | 80      | 1069            | 1746            | 0               | 2006811        | 1800000                   | 2399999                 |
| 5                                       | 1031589       | 3        | 18          | 90      | 1945            | 1259            | 1258            | 2471240        | 2400000                   | 2999999                 |
| 6                                       | 204300        | 3        | 18          | 75      | 1240            | 1160            | 1254            | 3607291        | 3000000                   | 3599999                 |
| 7                                       | 967471        | 1        | 18          | 100     | 1316            | 0               | 0               | 3715245        | 3600000                   | 4199999                 |
| 8                                       | 205273        | 3        | 18          | 50      | 1615            | 1808            | 1747            | 4684032        | 4200000                   | 4799999                 |
| 9                                       | 1019604       | 2        | 18          | 85      | 1762            | 1405            | 0               | 4894475        | 4800000                   | 5399999                 |
| 10                                      | 151723        | 1        | 18          | 90      | 1004            | 0               | 0               | 5917246        | 5400000                   | 5999999                 |
| 11                                      | 584642        | 1        | 18          | 55      | 1353            | 0               | 0               | 6069973        | 6000000                   | 6599999                 |
| 12                                      | 895946        | 2        | 18          | 85      | 1868            | 1423            | 0               | 6655968        | 6600000                   | 7199999                 |
| 13                                      | 499695        | 1        | 18          | 70      | 1299            | 0               | 0               | 7552204        | 7200000                   | 7799999                 |
| 14                                      | 800436        | 1        | 18          | 55      | 1813            | 0               | 0               | 8063198        | 7800000                   | 8399999                 |
| 15                                      | 264126        | 2        | 18          | 100     | 1486            | 1217            | 0               | 8856447        | 8400000                   | 8999999                 |
| 16                                      | 768515        | 1        | 18          | 55      | 1235            | 0               | 0               | 9122276        | 9000000                   | 9599999                 |
| 17                                      | 538852        | 3        | 18          | 60      | 1707            | 1987            | 1970            | 9892026        | 9600000                   | 10199999                |
| 18                                      | 645151        | 3        | 18          | 50      | 1262            | 1255            | 1176            | 10436542       | 10200000                  | 10799999                |
| 19                                      | 970943        | 3        | 18          | 100     | 1544            | 1227            | 1869            | 10985386       | 10800000                  | 11399999                |
| 20                                      |               | 2        | 18          | 65      | 1775            | 1589            | 0               | 11960969       | 11400000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 39 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_12

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 1194015       | 2        | 17          | 90      | 1521            | 1504            | 0               | 1194015        | 0                         | 1499999                 |
| 2                                       | 924466        | 1        | 17          | 85      | 1156            | 0               | 0               | 2121506        | 1500000                   | 2999999                 |
| 3                                       | 1174644       | 3        | 17          | 55      | 1196            | 1842            | 1747            | 3297306        | 3000000                   | 4499999                 |
| 4                                       | 2182934       | 1        | 17          | 95      | 1158            | 0               | 0               | 5485025        | 4500000                   | 5999999                 |
| 5                                       | 627669        | 1        | 17          | 50      | 1630            | 0               | 0               | 6113852        | 6000000                   | 7499999                 |
| 6                                       | 2156146       | 1        | 17          | 60      | 1356            | 0               | 0               | 8271628        | 7500000                   | 8999999                 |
| 7                                       | 1483531       | 3        | 17          | 50      | 1414            | 1302            | 1901            | 9756515        | 9000000                   | 10499999                |
| 8                                       | 1609516       | 3        | 17          | 80      | 1752            | 1521            | 1112            | 11370648       | 10500000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 15 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_13

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 478650        | 3        | 6           | 85      | 1834            | 1262            | 1178            | 478650         | 0                         | 631578                  |
| 2                                       | 667279        | 1        | 6           | 50      | 1045            | 0               | 0               | 1150203        | 631579                    | 1263157                 |
| 3                                       | 423086        | 3        | 6           | 55      | 1030            | 1961            | 1968            | 1574334        | 1263158                   | 1894736                 |
| 4                                       | 882599        | 2        | 6           | 85      | 1158            | 1086            | 0               | 2441892        | 1894737                   | 2526315                 |
| 5                                       | 524818        | 2        | 6           | 85      | 1898            | 1151            | 0               | 2968954        | 2526316                   | 3157894                 |
| 6                                       | 223335        | 1        | 6           | 50      | 1563            | 0               | 0               | 3195338        | 3157895                   | 3789473                 |
| 7                                       | 843590        | 1        | 6           | 85      | 1352            | 0               | 0               | 4040491        | 3789474                   | 4421052                 |
| 8                                       | 518889        | 3        | 6           | 50      | 1100            | 1521            | 1661            | 4560732        | 4421053                   | 5052631                 |
| 9                                       | 596265        | 1        | 6           | 95      | 1757            | 0               | 0               | 5161279        | 5052632                   | 5684210                 |
| 10                                      | 825142        | 2        | 6           | 80      | 1435            | 1173            | 0               | 5988178        | 5684211                   | 6315789                 |
| 11                                      | 693730        | 1        | 6           | 100     | 1410            | 0               | 0               | 6684516        | 6315790                   | 6947368                 |
| 12                                      | 588220        | 1        | 6           | 85      | 1870            | 0               | 0               | 7274146        | 6947369                   | 7578947                 |
| 13                                      | 453224        | 1        | 6           | 95      | 1297            | 0               | 0               | 7729240        | 7578948                   | 8210526                 |
| 14                                      | 732105        | 2        | 6           | 65      | 1645            | 1612            | 0               | 8462642        | 8210527                   | 8842105                 |
| 15                                      | 896661        | 2        | 6           | 65      | 1980            | 1435            | 0               | 9362550        | 8842106                   | 9473684                 |
| 16                                      | 637687        | 1        | 6           | 80      | 1443            | 0               | 0               | 10003652       | 9473685                   | 10105263                |
| 17                                      | 147466        | 2        | 6           | 95      | 1177            | 1941            | 0               | 10152561       | 10105264                  | 10736842                |
| 18                                      | 852730        | 1        | 6           | 100     | 1425            | 0               | 0               | 11008409       | 10736843                  | 11368421                |
| 19                                      | 687555        | 3        | 6           | 50      | 1338            | 1332            | 1592            | 11697389       | 11368422                  | 12000000                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 33 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_14

| Type 5 Radar Waveform_14                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 16<br>Burst Interval (us)= 750000 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 213506        | 1        | 8           | 75      | 1318            | 0               | 0               | 213506         | 0                         | 749999                  |  |
| 2   | 1105333       | 2        | 8           | 60      | 1776            | 1679            | 0               | 1320156        | 750000                    | 1499999                 |  |
| 3   | 629680        | 3        | 8           | 65      | 1391            | 1880            | 1894            | 1953291        | 1500000                   | 2249999                 |  |
| 4   | 900889        | 2        | 8           | 90      | 1910            | 1542            | 0               | 2859345        | 2250000                   | 2999999                 |  |
| 5   | 247759        | 2        | 8           | 100     | 1114            | 1075            | 0               | 3110556        | 3000000                   | 3749999                 |  |
| 6   | 815315        | 2        | 8           | 90      | 1538            | 1821            | 0               | 3928060        | 3750000                   | 4499999                 |  |
| 7   | 1004366       | 1        | 8           | 55      | 1587            | 0               | 0               | 4935735        | 4500000                   | 5249999                 |  |
| 8   | 444370        | 2        | 8           | 70      | 1643            | 1350            | 0               | 5381742        | 5250000                   | 5999999                 |  |
| 9   | 766951        | 2        | 8           | 95      | 1296            | 1178            | 0               | 6151686        | 6000000                   | 6749999                 |  |
| 10  | 860271        | 1        | 8           | 50      | 1797            | 0               | 0               | 7014431        | 6750000                   | 7499999                 |  |
| 11  | 1196220       | 2        | 8           | 85      | 1846            | 1532            | 0               | 8212448        | 7500000                   | 8249999                 |  |
| 12  | 728324        | 1        | 8           | 75      | 1256            | 0               | 0               | 8944150        | 8250000                   | 8999999                 |  |
| 13  | 354713        | 1        | 8           | 95      | 1849            | 0               | 0               | 9300119        | 9000000                   | 9749999                 |  |
| 14  | 607166        | 3        | 8           | 95      | 1841            | 1951            | 1487            | 9909134        | 9750000                   | 10499999                |  |
| 15  | 891131        | 1        | 8           | 70      | 1523            | 0               | 0               | 10805544       | 10500000                  | 11249999                |  |
| 16  | 995958        | 2        | 8           | 90      | 1643            | 1997            | 0               | 11803025       | 11250000                  | 11999999                |  |
| Total number of pulses in waveform = 28           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****   |               |          |             |         |                 |                 |                 |                |                           |                         |  |

### Type 5 Radar Waveform\_15

| Type 5 Radar Waveform_15                           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|--|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 11<br>Burst Interval (us)= 1090909 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #  | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1  | 244411        | 1        | 9           | 100     | 1778            | 0               | 0               | 244411         | 0                         | 1090908                 |  |
| 2  | 1273998       | 3        | 9           | 60      | 1437            | 1228            | 1958            | 1520187        | 1090909                   | 2181817                 |  |
| 3  | 818001        | 2        | 9           | 70      | 1441            | 1992            | 0               | 2342811        | 2181818                   | 3272726                 |  |
| 4  | 1854154       | 3        | 9           | 60      | 1831            | 1204            | 1240            | 4200398        | 3272727                   | 4363635                 |  |
| 5  | 1208008       | 1        | 9           | 75      | 1736            | 0               | 0               | 5412681        | 4363636                   | 5454544                 |  |
| 6  | 829943        | 1        | 9           | 100     | 1463            | 0               | 0               | 6244360        | 5454545                   | 6545453                 |  |
| 7  | 793865        | 1        | 9           | 90      | 1202            | 0               | 0               | 7039688        | 6545454                   | 7636362                 |  |
| 8  | 1199223       | 2        | 9           | 60      | 1195            | 1084            | 0               | 8240113        | 7636363                   | 8727271                 |  |
| 9  | 1148077       | 2        | 9           | 65      | 1984            | 1205            | 0               | 9390469        | 8727272                   | 9818180                 |  |
| 10   | 678293        | 2        | 9           | 55      | 1054            | 1974            | 0               | 10071951       | 9818181                   | 10909089                |  |
| 11   | 1305001       | 1        | 9           | 65      | 1017            | 0               | 0               | 11379980       | 10909090                  | 11999998                |  |
| Total number of pulses in waveform = 19            |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****  |               |          |             |         |                 |                 |                 |                |                           |                         |  |

### Type 5 Radar Waveform\_16

| Type 5 Radar Waveform_16                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 9<br>Burst Interval (us)= 1333333 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 171705        | 2        | 12          | 75      | 1435            | 1327            | 0               | 171705         | 0                         | 1333332                 |  |
| 2   | 2022463       | 1        | 12          | 90      | 1930            | 0               | 0               | 2196930        | 1333333                   | 2666665                 |  |
| 3   | 644665        | 1        | 12          | 100     | 1710            | 0               | 0               | 2843525        | 2666666                   | 3999998                 |  |
| 4   | 1564285       | 3        | 12          | 60      | 1251            | 1735            | 1336            | 4409520        | 3999999                   | 5333331                 |  |
| 5   | 1153998       | 1        | 12          | 65      | 1949            | 0               | 0               | 5567840        | 5333332                   | 6666664                 |  |
| 6   | 1699147       | 1        | 12          | 100     | 1662            | 0               | 0               | 7268936        | 6666665                   | 7999997                 |  |
| 7   | 1018612       | 1        | 12          | 75      | 1356            | 0               | 0               | 8289210        | 7999998                   | 9333330                 |  |
| 8   | 1919486       | 2        | 12          | 65      | 1385            | 1043            | 0               | 10210052       | 9333331                   | 10666663                |  |
| 9   | 480710        | 2        | 12          | 95      | 1131            | 1759            | 0               | 10693190       | 10666664                  | 11999996                |  |
| Total number of pulses in waveform = 14           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| *****   |               |          |             |         |                 |                 |                 |                |                           |                         |  |

### Type 5 Radar Waveform\_17

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 908881        | 1        | 19          | 55      | 1114            | 0               | 0               | 190105         | 0                         | 705881                  |
| 2                                       | 416806        | 2        | 19          | 85      | 1103            | 1450            | 0               | 1100100        | 705882                    | 1411763                 |
| 3                                       | 6838569       | 3        | 19          | 100     | 1027            | 1085            | 1305            | 1519459        | 1411764                   | 2117645                 |
| 4                                       | 1085876       | 1        | 19          | 100     | 1026            | 0               | 0               | 2211445        | 2117646                   | 2823527                 |
| 5                                       | 404440        | 1        | 19          | 75      | 1913            | 0               | 0               | 3298347        | 2823528                   | 3529409                 |
| 6                                       | 1169460       | 2        | 19          | 90      | 1907            | 1558            | 0               | 3704700        | 3529410                   | 4235291                 |
| 7                                       | 383873        | 1        | 19          | 65      | 1045            | 0               | 0               | 4877625        | 4235292                   | 4941173                 |
| 8                                       | 595317        | 1        | 19          | 100     | 1846            | 0               | 0               | 5262543        | 4941174                   | 5647055                 |
| 9                                       | 501997        | 2        | 19          | 90      | 1876            | 1929            | 0               | 5859706        | 5647056                   | 6352937                 |
| 10                                      | 1298971       | 2        | 19          | 75      | 1838            | 1429            | 0               | 6365508        | 6352938                   | 7058819                 |
| 11                                      | 247636        | 2        | 19          | 95      | 1706            | 1548            | 0               | 7667746        | 7058820                   | 7764701                 |
| 12                                      | 871651        | 1        | 19          | 80      | 1927            | 0               | 0               | 7918636        | 7764702                   | 8470583                 |
| 13                                      | 402660        | 1        | 19          | 50      | 1658            | 0               | 0               | 8792214        | 8470584                   | 9176465                 |
| 14                                      | 987162        | 3        | 19          | 95      | 1067            | 1852            | 1792            | 9196532        | 9176466                   | 9882347                 |
| 15                                      | 700750        | 2        | 19          | 100     | 1677            | 1966            | 0               | 10188405       | 9882348                   | 10588229                |
| 16                                      | 786228        | 3        | 19          | 95      | 1748            | 1623            | 1724            | 10892798       | 10588230                  | 11294111                |
| 17                                      | 3             | 19       | 90          | 1492    | 1289            | 1588            | 0               | 11684121       | 11294112                  | 11999993                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 31 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_18

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 5293          | 2        | 5           | 75      | 1780            | 1476            | 0               | 5293           | 0                         | 999999                  |
| 2                                       | 1520675       | 1        | 5           | 65      | 1874            | 0               | 0               | 1529224        | 1000000                   | 1999999                 |
| 3                                       | 488774        | 1        | 5           | 80      | 1805            | 0               | 0               | 2019872        | 2000000                   | 2999999                 |
| 4                                       | 1500631       | 1        | 5           | 80      | 1662            | 0               | 0               | 3522308        | 3000000                   | 3999999                 |
| 5                                       | 1212419       | 3        | 5           | 80      | 1487            | 1096            | 1608            | 4736389        | 4000000                   | 4999999                 |
| 6                                       | 663216        | 1        | 5           | 55      | 1450            | 0               | 0               | 5403796        | 5000000                   | 5999999                 |
| 7                                       | 727768        | 1        | 5           | 60      | 1653            | 0               | 0               | 6133014        | 6000000                   | 6999999                 |
| 8                                       | 1314693       | 2        | 5           | 75      | 1493            | 1728            | 0               | 7449360        | 7000000                   | 7999999                 |
| 9                                       | 1051224       | 3        | 5           | 55      | 1165            | 1937            | 1522            | 8503805        | 8000000                   | 8999999                 |
| 10                                      | 1188443       | 1        | 5           | 80      | 1701            | 0               | 0               | 9696872        | 9000000                   | 9999999                 |
| 11                                      | 628973        | 2        | 5           | 85      | 1086            | 1880            | 0               | 10327546       | 10000000                  | 10999999                |
| 12                                      | 716504        | 3        | 5           | 65      | 1285            | 1869            | 1972            | 11047016       | 11000000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 21 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_19

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 690384        | 3        | 10          | 75      | 1934            | 1823            | 1975            | 690384         | 0                         | 923076                  |
| 2                                       | 1030639       | 2        | 10          | 55      | 1636            | 1131            | 0               | 1726755        | 923077                    | 1846153                 |
| 3                                       | 270132        | 2        | 10          | 65      | 1230            | 1419            | 0               | 1999654        | 1846154                   | 2769230                 |
| 4                                       | 1153729       | 3        | 10          | 100     | 1656            | 1341            | 1180            | 3156032        | 2769231                   | 3692307                 |
| 5                                       | 1232392       | 1        | 10          | 100     | 1570            | 0               | 0               | 4392601        | 3692308                   | 4615384                 |
| 6                                       | 526180        | 3        | 10          | 80      | 1628            | 1607            | 1587            | 4920351        | 4615385                   | 5538461                 |
| 7                                       | 665658        | 3        | 10          | 50      | 1828            | 1524            | 1602            | 5590831        | 5538462                   | 6461538                 |
| 8                                       | 1772114       | 1        | 10          | 55      | 1124            | 0               | 0               | 7367899        | 6461539                   | 7384615                 |
| 9                                       | 445390        | 3        | 10          | 95      | 1774            | 1896            | 1600            | 7814413        | 7384616                   | 8307692                 |
| 10                                      | 1306179       | 2        | 10          | 90      | 1164            | 1189            | 0               | 9125862        | 8307693                   | 9230769                 |
| 11                                      | 643142        | 2        | 10          | 60      | 1621            | 1952            | 0               | 9771357        | 9230770                   | 10153846                |
| 12                                      | 636440        | 1        | 10          | 95      | 1912            | 0               | 0               | 10411370       | 10153847                  | 11076923                |
| 13                                      | 1232099       | 2        | 10          | 70      | 1521            | 1856            | 0               | 11645381       | 11076924                  | 12000000                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 28 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_20

Num of Bursts = 9  
Burst Interval (us)= 1333333

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
|   | 688341        |          |             |         |                 |                 |                 |                |                           |                         |
| 1                                       | 972246        | 1        | 14          | 70      | 1549            | 0               | 0               | 688341         | 0                         | 1333332                 |
| 2                                       | 1461088       | 2        | 14          | 95      | 1243            | 1345            | 0               | 1662136        | 1333333                   | 2666665                 |
| 3                                       | 1483186       | 3        | 14          | 85      | 1019            | 1231            | 1315            | 3125812        | 2666666                   | 3999998                 |
| 4                                       | 1650633       | 1        | 14          | 85      | 1124            | 0               | 0               | 4612563        | 3999999                   | 5333331                 |
| 5                                       | 1111650       | 1        | 14          | 90      | 1441            | 0               | 0               | 6264320        | 5333332                   | 6666664                 |
| 6                                       | 827171        | 2        | 14          | 85      | 1896            | 1621            | 0               | 7377411        | 6666665                   | 7999997                 |
| 7                                       | 1894789       | 1        | 14          | 100     | 1938            | 0               | 0               | 8208099        | 7999998                   | 9333330                 |
| 8                                       | 1391712       | 3        | 14          | 55      | 1204            | 1898            | 1401            | 10104826       | 9333331                   | 10666663                |
| 9                                       |               | 2        | 14          | 95      | 1390            | 1634            | 0               | 11501041       | 10666664                  | 11999996                |
| Total number of pulses in waveform = 16 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_21

Num of Bursts = 19  
Burst Interval (us)= 631579

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 329450        | 2        | 19          | 55      | 1996            | 1076            | 0               | 329450         | 0                         | 631578                  |
| 2                                       | 607164        | 1        | 19          | 55      | 1565            | 0               | 0               | 9396386        | 631579                    | 1263157                 |
| 3                                       | 339951        | 3        | 19          | 70      | 1531            | 1452            | 1265            | 1281202        | 1263158                   | 1894736                 |
| 4                                       | 999457        | 1        | 19          | 60      | 1271            | 0               | 0               | 2284907        | 1894737                   | 2526315                 |
| 5                                       | 819570        | 2        | 19          | 60      | 1162            | 1854            | 0               | 3106748        | 2526316                   | 3157894                 |
| 6                                       | 67388         | 1        | 19          | 60      | 1538            | 0               | 0               | 3176152        | 3157895                   | 3789473                 |
| 7                                       | 879850        | 3        | 19          | 100     | 1120            | 1447            | 1801            | 4057540        | 3789474                   | 4421052                 |
| 8                                       | 371186        | 2        | 19          | 95      | 1867            | 1135            | 0               | 4433094        | 4421053                   | 5052631                 |
| 9                                       | 801507        | 3        | 19          | 100     | 1517            | 1832            | 1361            | 5237603        | 5052632                   | 5684210                 |
| 10                                      | 1055758       | 1        | 19          | 90      | 1191            | 0               | 0               | 6298071        | 5684211                   | 6315789                 |
| 11                                      | 307774        | 1        | 19          | 100     | 1180            | 0               | 0               | 6607036        | 6315790                   | 6947368                 |
| 12                                      | 506964        | 2        | 19          | 65      | 1977            | 1481            | 0               | 7115180        | 6947369                   | 7578947                 |
| 13                                      | 555264        | 1        | 19          | 80      | 1825            | 0               | 0               | 7673902        | 7578948                   | 8210526                 |
| 14                                      | 773209        | 2        | 19          | 90      | 1146            | 1343            | 0               | 8448936        | 8210527                   | 8842105                 |
| 15                                      | 869063        | 1        | 19          | 75      | 1782            | 0               | 0               | 9320488        | 8842106                   | 9473684                 |
| 16                                      | 410381        | 2        | 19          | 60      | 1856            | 1952            | 0               | 9732651        | 9473685                   | 10105263                |
| 17                                      | 936071        | 2        | 19          | 95      | 1502            | 1879            | 0               | 10672530       | 10105264                  | 10736842                |
| 18                                      | 467460        | 2        | 19          | 100     | 1745            | 1202            | 0               | 11143371       | 10736843                  | 11368421                |
| 19                                      | 245397        | 2        | 19          | 50      | 1094            | 1760            | 0               | 11391715       | 11368422                  | 12000000                |
| Total number of pulses in waveform = 34 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_22

Num of Bursts = 10  
Burst Interval (us)= 1200000

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 581511        | 2        | 9           | 90      | 1273            | 1292            | 0               | 581511         | 0                         | 1199999                 |
| 2                                       | 905493        | 2        | 9           | 75      | 1668            | 1385            | 0               | 1489569        | 1200000                   | 2399999                 |
| 3                                       | 1951742       | 2        | 9           | 65      | 1820            | 1699            | 0               | 3444364        | 2400000                   | 3599999                 |
| 4                                       | 1131467       | 1        | 9           | 70      | 1259            | 0               | 0               | 4579350        | 3600000                   | 4799999                 |
| 5                                       | 392805        | 1        | 9           | 60      | 1458            | 0               | 0               | 4973414        | 4800000                   | 5999999                 |
| 6                                       | 1038549       | 1        | 9           | 50      | 1495            | 0               | 0               | 6013421        | 6000000                   | 7199999                 |
| 7                                       | 1281117       | 3        | 9           | 95      | 1890            | 1889            | 1540            | 7296033        | 7200000                   | 8399999                 |
| 8                                       | 1913868       | 2        | 9           | 90      | 1926            | 1864            | 0               | 9215220        | 8400000                   | 9599999                 |
| 9                                       | 1208612       | 2        | 9           | 75      | 1583            | 1856            | 0               | 10427622       | 9600000                   | 10799999                |
| 10                                      | 1410442       | 3        | 9           | 75      | 1845            | 1176            | 1278            | 11841503       | 10800000                  | 11999999                |
| Total number of pulses in waveform = 19 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_23

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 205397        | 3        | 5           | 80      | 1787            | 1773            | 1543            | 585679         | 0                         | 599999                  |
| 2                                       | 881843        | 2        | 5           | 85      | 1852            | 1129            | 0               | 7961179        | 600000                    | 1199999                 |
| 3                                       | 362126        | 2        | 5           | 60      | 1818            | 1964            | 0               | 1680703        | 1200000                   | 1799999                 |
| 4                                       | 697220        | 2        | 5           | 60      | 1745            | 1950            | 0               | 2046611        | 1800000                   | 2399999                 |
| 5                                       | 341550        | 2        | 5           | 55      | 1321            | 1369            | 0               | 2747526        | 2400000                   | 2999999                 |
| 6                                       | 609069        | 1        | 5           | 60      | 1088            | 0               | 0               | 3091766        | 3000000                   | 3599999                 |
| 7                                       | 604462        | 3        | 5           | 100     | 1687            | 1839            | 1287            | 3701923        | 3600000                   | 4199999                 |
| 8                                       | 859914        | 1        | 5           | 60      | 1995            | 0               | 0               | 4311198        | 4200000                   | 4799999                 |
| 9                                       | 327414        | 1        | 5           | 80      | 1708            | 0               | 0               | 5173107        | 4800000                   | 5399999                 |
| 10                                      | 1040393       | 1        | 5           | 85      | 1010            | 0               | 0               | 5502229        | 5400000                   | 5999999                 |
| 11                                      | 135745        | 1        | 5           | 55      | 1201            | 0               | 0               | 6543632        | 6000000                   | 6599999                 |
| 12                                      | 761234        | 2        | 5           | 95      | 1913            | 1870            | 0               | 6680578        | 6600000                   | 7199999                 |
| 13                                      | 732673        | 2        | 5           | 55      | 1495            | 1429            | 0               | 7445595        | 7200000                   | 7799999                 |
| 14                                      | 614479        | 1        | 5           | 90      | 1231            | 0               | 0               | 8181192        | 7800000                   | 8399999                 |
| 15                                      | 672101        | 2        | 5           | 85      | 1471            | 1892            | 0               | 87965902       | 8400000                   | 8999999                 |
| 16                                      | 526662        | 1        | 5           | 55      | 1612            | 0               | 0               | 9472366        | 9000000                   | 9599999                 |
| 17                                      | 214540        | 2        | 5           | 75      | 1123            | 1756            | 0               | 10000640       | 9600000                   | 10199999                |
| 18                                      | 612026        | 1        | 5           | 80      | 1649            | 0               | 0               | 10218059       | 10200000                  | 10799999                |
| 19                                      | 1084741       | 1        | 5           | 100     | 1520            | 0               | 0               | 10831734       | 10800000                  | 11399999                |
| 20                                      |               | 2        | 5           | 60      | 1998            | 1746            | 0               | 11917995       | 11400000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 33 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_24

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 937826        | 1        | 12          | 80      | 1475            | 0               | 0               | 937826         | 0                         | 999999                  |
| 2                                       | 795563        | 1        | 12          | 90      | 1398            | 0               | 0               | 1734864        | 1000000                   | 1999999                 |
| 3                                       | 631578        | 2        | 12          | 60      | 1509            | 1562            | 0               | 2367840        | 2000000                   | 2999999                 |
| 4                                       | 1084624       | 3        | 12          | 60      | 1156            | 1028            | 1611            | 3455535        | 3000000                   | 3999999                 |
| 5                                       | 1499868       | 2        | 12          | 75      | 1762            | 1657            | 0               | 4959198        | 4000000                   | 4999999                 |
| 6                                       | 652848        | 1        | 12          | 60      | 1273            | 0               | 0               | 5615465        | 5000000                   | 5999999                 |
| 7                                       | 1147266       | 3        | 12          | 70      | 1190            | 1736            | 1686            | 6764004        | 6000000                   | 6999999                 |
| 8                                       | 966612        | 3        | 12          | 90      | 1783            | 1238            | 1405            | 7735228        | 7000000                   | 7999999                 |
| 9                                       | 487546        | 3        | 12          | 65      | 1815            | 1259            | 1303            | 8227200        | 8000000                   | 8999999                 |
| 10                                      | 882853        | 3        | 12          | 60      | 1214            | 1792            | 1075            | 9114430        | 9000000                   | 9999999                 |
| 11                                      | 1429188       | 2        | 12          | 55      | 1311            | 1203            | 0               | 10547699       | 10000000                  | 10999999                |
| 12                                      | 1020196       | 1        | 12          | 65      | 1496            | 0               | 0               | 11570409       | 11000000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 25 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_25

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 519760        | 1        | 18          | 60      | 1121            | 0               | 0               | 519760         | 0                         | 1199999                 |
| 2                                       | 1477319       | 2        | 18          | 55      | 1145            | 1308            | 0               | 1998200        | 1200000                   | 2399999                 |
| 3                                       | 1019819       | 3        | 18          | 95      | 1808            | 1414            | 1940            | 3020472        | 2400000                   | 3599999                 |
| 4                                       | 785593        | 3        | 18          | 60      | 1498            | 1912            | 1302            | 3811227        | 3600000                   | 4799999                 |
| 5                                       | 1026005       | 2        | 18          | 70      | 1312            | 1704            | 0               | 4841944        | 4800000                   | 5999999                 |
| 6                                       | 1155602       | 1        | 18          | 65      | 1588            | 0               | 0               | 6000562        | 6000000                   | 7199999                 |
| 7                                       | 1212299       | 2        | 18          | 65      | 1190            | 1108            | 0               | 7214449        | 7200000                   | 8399999                 |
| 8                                       | 1257287       | 3        | 18          | 90      | 1888            | 1889            | 1439            | 8474034        | 8400000                   | 9599999                 |
| 9                                       | 1451268       | 2        | 18          | 75      | 1046            | 1979            | 0               | 9930518        | 9600000                   | 10799999                |
| 10                                      | 1870051       | 3        | 18          | 70      | 1473            | 1826            | 1226            | 11803594       | 10800000                  | 11999999                |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |
| Total number of pulses in waveform = 22 |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_26

Num of Bursts = 16  
Burst Interval (us)= 750000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 351148        | 2        | 8           | 80      | 1809            | 1386            | 0               | 351148         | 0                         | 749999                  |
| 2       | 934280        | 2        | 8           | 75      | 1824            | 1301            | 0               | 1288623        | 750000                    | 1499999                 |
| 3       | 528705        | 1        | 8           | 70      | 1439            | 0               | 0               | 1820453        | 1500000                   | 2249999                 |
| 4       | 438256        | 1        | 8           | 75      | 1527            | 0               | 0               | 2260148        | 2250000                   | 2999999                 |
| 5       | 758084        | 3        | 8           | 80      | 1762            | 1793            | 1328            | 3019759        | 3000000                   | 3749999                 |
| 6       | 1053826       | 2        | 8           | 75      | 1166            | 1595            | 0               | 4078468        | 3750000                   | 4499999                 |
| 7       | 683168        | 2        | 8           | 60      | 1628            | 1647            | 0               | 4764397        | 4500000                   | 5249999                 |
| 8       | 1164274       | 2        | 8           | 55      | 1193            | 1267            | 0               | 5931946        | 5250000                   | 5999999                 |
| 9       | 727296        | 1        | 8           | 70      | 1855            | 0               | 0               | 6661702        | 6000000                   | 6749999                 |
| 10      | 162154        | 2        | 8           | 55      | 1871            | 1230            | 0               | 6825711        | 6750000                   | 7499999                 |
| 11      | 704515        | 1        | 8           | 85      | 1684            | 0               | 0               | 7533327        | 7500000                   | 8249999                 |
| 12      | 1153598       | 3        | 8           | 85      | 1918            | 1436            | 1759            | 8688609        | 8250000                   | 8999999                 |
| 13      | 635775        | 2        | 8           | 50      | 1636            | 1964            | 0               | 9529497        | 9000000                   | 9749999                 |
| 14      | 922018        | 3        | 8           | 85      | 1860            | 1357            | 1936            | 10255115       | 9750000                   | 10499999                |
| 15      | 924066        | 3        | 8           | 85      | 1432            | 1873            | 1758            | 11184334       | 10500000                  | 11249999                |
| 16      | 354332        | 3        | 8           | 55      | 1610            | 1972            | 1874            | 11543729       | 11250000                  | 11999999                |

Total number of pulses in waveform = 33

### Type 5 Radar Waveform\_27

Num of Bursts = 9  
Burst Interval (us)= 1333333

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 587406        | 3        | 14          | 60      | 1265            | 1594            | 1369            | 587406         | 0                         | 1333332                 |
| 2       | 1112337       | 3        | 14          | 90      | 1341            | 1863            | 1129            | 1703971        | 1333333                   | 2666665                 |
| 3       | 1199138       | 3        | 14          | 55      | 1088            | 1062            | 1523            | 2907442        | 2666666                   | 3999998                 |
| 4       | 1502479       | 2        | 14          | 100     | 1626            | 1384            | 0               | 4413594        | 3999999                   | 5333331                 |
| 5       | 2021136       | 3        | 14          | 85      | 1778            | 1390            | 1287            | 6437740        | 5333332                   | 6666664                 |
| 6       | 866767        | 1        | 14          | 85      | 1622            | 0               | 0               | 7308962        | 6666665                   | 7999997                 |
| 7       | 1515843       | 2        | 14          | 50      | 1431            | 1481            | 0               | 8826427        | 7999998                   | 9333330                 |
| 8       | 1679740       | 3        | 14          | 80      | 1999            | 1474            | 1925            | 10509079       | 9333331                   | 10666663                |
| 9       | 870739        | 1        | 14          | 85      | 1236            | 0               | 0               | 11385216       | 10666664                  | 11999996                |

Total number of pulses in waveform = 21

### Type 5 Radar Waveform\_28

Num of Bursts = 19  
Burst Interval (us)= 631579

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 113057        | 3        | 6           | 85      | 1393            | 1609            | 1193            | 113057         | 0                         | 631578                  |
| 2       | 1032884       | 3        | 6           | 55      | 1787            | 1950            | 1918            | 1150136        | 631579                    | 1263157                 |
| 3       | 715182        | 1        | 6           | 100     | 1960            | 0               | 0               | 1870973        | 1263158                   | 1894736                 |
| 4       | 394265        | 3        | 6           | 90      | 1384            | 1033            | 1790            | 2267798        | 1894737                   | 2526315                 |
| 5       | 383004        | 2        | 6           | 95      | 1155            | 1401            | 0               | 2655009        | 2526316                   | 3157894                 |
| 6       | 870826        | 1        | 6           | 85      | 1236            | 0               | 0               | 3528391        | 3157895                   | 3789473                 |
| 7       | 381718        | 3        | 6           | 100     | 1216            | 1783            | 1419            | 3911345        | 3789474                   | 4421052                 |
| 8       | 889651        | 3        | 6           | 100     | 1063            | 1237            | 1137            | 4805414        | 4421053                   | 5052631                 |
| 9       | 6257931       | 2        | 6           | 80      | 1605            | 1232            | 0               | 5434642        | 5052632                   | 5684210                 |
| 10      | 580530        | 3        | 6           | 60      | 1932            | 1931            | 1349            | 6018009        | 5684211                   | 6315789                 |
| 11      | 540373        | 2        | 6           | 90      | 1150            | 1606            | 0               | 6563594        | 6315790                   | 6947368                 |
| 12      | 692467        | 1        | 6           | 90      | 1381            | 0               | 0               | 7268817        | 6947369                   | 7578947                 |
| 13      | 736811        | 2        | 6           | 55      | 1616            | 1789            | 0               | 7997009        | 7578948                   | 8210526                 |
| 14      | 317902        | 1        | 6           | 95      | 1873            | 0               | 0               | 8318316        | 8210527                   | 8842105                 |
| 15      | 584647        | 3        | 6           | 100     | 1955            | 1051            | 1865            | 8904836        | 8842106                   | 9473684                 |
| 16      | 1122868       | 2        | 6           | 60      | 1158            | 1876            | 0               | 10032565       | 9473685                   | 10105263                |
| 17      | 92548         | 1        | 6           | 65      | 1215            | 0               | 0               | 10128147       | 10105264                  | 10736842                |
| 18      | 709932        | 1        | 6           | 50      | 1357            | 0               | 0               | 10839294       | 10736843                  | 11368421                |
| 19      | 750670        | 3        | 6           | 80      | 1050            | 1325            | 1162            | 11591321       | 11368422                  | 12000000                |

Total number of pulses in waveform = 40

**Type 5 Radar Waveform\_29**

| Type 5 Radar Waveform_29                          |               |          |             |         |                 |                 |                 |                |                          |                        |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|--|
| Num of Bursts = 18<br>Burst Interval (us)= 666667 |               |          |             |         |                 |                 |                 |                |                          |                        |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |  |
| 1   | 139323        | 2        | 17          | 50      | 1655            | 1288            | 0               | 545210         | 0                        | 666666                 |  |
| 2   | 687317        | 1        | 17          | 80      | 1970            | 0               | 0               | 687476         | 666667                   | 1333333                |  |
| 3   | 11578009      | 2        | 17          | 80      | 1194            | 1407            | 0               | 1376763        | 1333334                  | 2000000                |  |
| 4   | 404780        | 1        | 17          | 85      | 1623            | 0               | 0               | 2537173        | 2000001                  | 2666667                |  |
| 5   | 618492        | 1        | 17          | 90      | 1378            | 0               | 0               | 2943576        | 2666668                  | 3333334                |  |
| 6   | 510508        | 2        | 17          | 85      | 1126            | 1296            | 0               | 3563446        | 3333335                  | 4000001                |  |
| 7   | 643651        | 2        | 17          | 70      | 1984            | 1778            | 0               | 4076376        | 4000002                  | 4666668                |  |
| 8   | 910852        | 2        | 17          | 85      | 1943            | 1573            | 0               | 4723789        | 4666669                  | 5333335                |  |
| 9   | 900024        | 1        | 17          | 85      | 1418            | 0               | 0               | 5638157        | 5333336                  | 6000002                |  |
| 10  | 186564        | 3        | 17          | 85      | 1828            | 1621            | 1892            | 6539599        | 6000003                  | 6666669                |  |
| 11  | 1029723       | 3        | 17          | 50      | 1754            | 1912            | 1878            | 6731504        | 6666670                  | 7333336                |  |
| 12  | 506489        | 3        | 17          | 65      | 1746            | 1237            | 1306            | 7766771        | 7333337                  | 8000003                |  |
| 13  | 744709        | 2        | 17          | 95      | 1746            | 1312            | 0               | 8277549        | 8000004                  | 8666670                |  |
| 14  | 461475        | 2        | 17          | 60      | 1139            | 1932            | 0               | 9025316        | 8666671                  | 9333337                |  |
| 15  | 929931        | 1        | 17          | 90      | 1421            | 0               | 0               | 9489862        | 9333338                  | 10000004               |  |
| 16  | 542104        | 2        | 17          | 65      | 1030            | 1005            | 0               | 10421214       | 10000005                 | 10666671               |  |
| 17  | 418149        | 1        | 17          | 75      | 1217            | 0               | 0               | 10965353       | 10666672                 | 11333338               |  |
| 18  |               |          |             |         | 1379            | 0               | 0               | 11384719       | 11333339                 | 12000005               |  |

**Type 5 Radar Waveform\_30**

| Type 5 Radar Waveform_30                           |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|--|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 12<br>Burst Interval (us)= 1000000 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #  | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1  | 757886        | 2        | 10          | 70      | 1700            | 1897            | 0               | 757886         | 0                         | 999999                  |  |
| 2  | 533914        | 3        | 10          | 60      | 1789            | 1763            | 1641            | 1295397        | 1000000                   | 1999999                 |  |
| 3  | 1617461       | 2        | 10          | 70      | 1967            | 1961            | 0               | 2918051        | 2000000                   | 2999999                 |  |
| 4  | 573103        | 2        | 10          | 80      | 1859            | 1256            | 0               | 3495082        | 3000000                   | 3999999                 |  |
| 5  | 894800        | 2        | 10          | 100     | 1801            | 1589            | 0               | 4392997        | 4000000                   | 4999999                 |  |
| 6  | 1311767       | 3        | 10          | 65      | 1686            | 1491            | 1385            | 5708154        | 5000000                   | 5999999                 |  |
| 7  | 450902        | 3        | 10          | 95      | 1591            | 1264            | 1410            | 6163618        | 6000000                   | 6999999                 |  |
| 8  | 1816193       | 1        | 10          | 95      | 1545            | 0               | 0               | 7984076        | 7000000                   | 7999999                 |  |
| 9  | 40540         | 2        | 10          | 55      | 1855            | 1558            | 0               | 8026161        | 8000000                   | 8999999                 |  |
| 10   | 1867450       | 2        | 10          | 90      | 1962            | 1564            | 0               | 9897024        | 9000000                   | 9999999                 |  |
| 11   | 490924        | 2        | 10          | 100     | 1131            | 1707            | 0               | 10391474       | 10000000                  | 10999999                |  |
| 12   | 1246618       | 3        | 10          | 80      | 1306            | 1904            | 1517            | 11640930       | 11000000                  | 11999999                |  |

## Radar Type 6 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5492                | 1                             | 16      | 5510                | 1                             |
| 2                        | 5492                | 1                             | 17      | 5510                | 1                             |
| 3                        | 5492                | 1                             | 18      | 5510                | 1                             |
| 4                        | 5492                | 1                             | 19      | 5512                | 1                             |
| 5                        | 5500                | 1                             | 20      | 5512                | 1                             |
| 6                        | 5500                | 1                             | 21      | 5512                | 1                             |
| 7                        | 5500                | 1                             | 22      | 5512                | 1                             |
| 8                        | 5500                | 1                             | 23      | 5520                | 1                             |
| 9                        | 5508                | 1                             | 24      | 5520                | 1                             |
| 10                       | 5508                | 1                             | 25      | 5520                | 1                             |
| 11                       | 5508                | 1                             | 26      | 5520                | 1                             |
| 12                       | 5508                | 1                             | 27      | 5529                | 1                             |
| 13                       | 5510                | 1                             | 28      | 5529                | 1                             |
| 14                       | 5510                | 1                             | 29      | 5529                | 1                             |
| 15                       | 5510                | 1                             | 30      | 5529                | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 100%                          |

| Radar waveform #1 |                 |                  | Radar waveform #2 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 5                 | 5486            | 15               | 1                 | 5522            | 3                |
| 9                 | 5499            | 27               | 22                | 5500            | 66               |
| 14                | 5521            | 42               | 23                | 5495            | 69               |
| 21                | 5504            | 63               | 25                | 5539            | 75               |
| 23                | 5529            | 69               | 42                | 5511            | 126              |
| 28                | 5524            | 84               | 48                | 5483            | 144              |
| 31                | 5538            | 93               | 50                | 5534            | 150              |
| 49                | 5495            | 147              | 59                | 5484            | 177              |
| 85                | 5489            | 255              | 68                | 5531            | 204              |
| 89                | 5539            | 267              | 69                | 5514            | 207              |
| --                | --              | --               | 72                | 5488            | 216              |
| --                | --              | --               | 79                | 5509            | 237              |
| --                | --              | --               | 83                | 5524            | 249              |
| --                | --              | --               | 99                | 5489            | 297              |

| Radar waveform #3 |                 |                  | Radar waveform #4 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 3                 | 5503            | 9                | 0                 | 5505            | 0                |
| 12                | 5492            | 36               | 12                | 5480            | 36               |
| 14                | 5495            | 42               | 13                | 5517            | 39               |
| 44                | 5525            | 132              | 17                | 5506            | 51               |
| 49                | 5523            | 147              | 22                | 5492            | 66               |
| 54                | 5537            | 162              | 23                | 5522            | 69               |
| 63                | 5507            | 189              | 35                | 5529            | 105              |
| 75                | 5513            | 225              | 48                | 5501            | 144              |
| 87                | 5508            | 261              | 55                | 5514            | 165              |
| 88                | 5533            | 264              | 60                | 5531            | 180              |
| 97                | 5506            | 291              | 80                | 5503            | 240              |
| --                | --              | --               | 81                | 5539            | 243              |
| --                | --              | --               | 93                | 5509            | 279              |
| --                | --              | --               | 98                | 5536            | 294              |

| Radar waveform #5 |                 |                  | Radar waveform #6 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 6                 | 5496            | 18               | 1                 | 5529            | 3                |
| 7                 | 5526            | 21               | 4                 | 5488            | 12               |
| 12                | 5495            | 36               | 23                | 5480            | 69               |
| 17                | 5513            | 51               | 27                | 5497            | 81               |
| 24                | 5498            | 72               | 55                | 5496            | 165              |
| 37                | 5538            | 111              | 56                | 5514            | 168              |
| 51                | 5485            | 153              | 62                | 5487            | 186              |
| 69                | 5520            | 207              | 66                | 5483            | 198              |
| 74                | 5534            | 222              | 69                | 5502            | 207              |
| 85                | 5502            | 255              | 73                | 5494            | 219              |
| 88                | 5540            | 264              | 81                | 5508            | 243              |
| 89                | 5531            | 267              | 84                | 5495            | 252              |
| --                | --              | --               | 86                | 5540            | 258              |
| --                | --              | --               | 98                | 5504            | 294              |

| Radar waveform #7 |                 |                  | Radar waveform #8 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 0                 | 5508            | 0                | 0                 | 5485            | 0                |
| 5                 | 5502            | 15               | 9                 | 5532            | 27               |
| 6                 | 5488            | 18               | 14                | 5493            | 42               |
| 23                | 5505            | 69               | 16                | 5509            | 48               |
| 24                | 5511            | 72               | 17                | 5484            | 51               |
| 26                | 5520            | 78               | 30                | 5533            | 90               |
| 27                | 5481            | 81               | 55                | 5526            | 165              |
| 28                | 5526            | 84               | 61                | 5512            | 183              |
| 29                | 5509            | 87               | 71                | 5488            | 213              |
| 45                | 5516            | 135              | 73                | 5496            | 219              |
| 46                | 5501            | 138              | 77                | 5498            | 231              |
| 57                | 5533            | 171              | 78                | 5514            | 234              |
| 66                | 5519            | 198              | 87                | 5505            | 261              |
| 68                | 5521            | 204              | 88                | 5539            | 264              |
| 83                | 5494            | 249              | 97                | 5506            | 291              |
| 90                | 5483            | 270              | --                | --              | --               |
| 91                | 5487            | 273              | --                | --              | --               |
| 97                | 5540            | 291              | --                | --              | --               |

| Radar waveform #9 |                 |                  | Radar waveform #10 |                 |                  |
|-------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                 | 5502            | 0                | 16                 | 5537            | 48               |
| 5                 | 5480            | 15               | 20                 | 5491            | 60               |
| 9                 | 5526            | 27               | 26                 | 5518            | 78               |
| 11                | 5528            | 33               | 29                 | 5486            | 87               |
| 24                | 5511            | 72               | 38                 | 5496            | 114              |
| 44                | 5493            | 132              | 44                 | 5514            | 132              |
| 51                | 5531            | 153              | 50                 | 5495            | 150              |
| 62                | 5521            | 186              | 56                 | 5519            | 168              |
| 67                | 5492            | 201              | 64                 | 5522            | 192              |
| 86                | 5515            | 258              | 76                 | 5489            | 228              |
| 87                | 5499            | 261              | 89                 | 5484            | 267              |
| --                | --              | --               | 92                 | 5532            | 276              |

| Radar waveform #11 |                 |                  | Radar waveform #12 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5490            | 0                | 2                  | 5497            | 6                |
| 1                  | 5539            | 3                | 22                 | 5527            | 66               |
| 8                  | 5513            | 24               | 27                 | 5482            | 81               |
| 22                 | 5527            | 66               | 31                 | 5536            | 93               |
| 33                 | 5511            | 99               | 33                 | 5530            | 99               |
| 35                 | 5506            | 105              | 44                 | 5519            | 132              |
| 48                 | 5531            | 144              | 69                 | 5520            | 207              |
| 55                 | 5487            | 165              | 80                 | 5521            | 240              |
| 63                 | 5515            | 189              | 83                 | 5489            | 249              |
| 75                 | 5516            | 225              | 84                 | 5492            | 252              |
| 82                 | 5526            | 246              | 94                 | 5524            | 282              |
| 85                 | 5492            | 255              | --                 | --              | --               |
| 94                 | 5518            | 282              | --                 | --              | --               |

| Radar waveform #13 |                 |                  | Radar waveform #14 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 1                  | 5508            | 3                | 0                  | 5487            | 0                |
| 14                 | 5520            | 42               | 14                 | 5496            | 42               |
| 51                 | 5513            | 153              | 18                 | 5498            | 54               |
| 55                 | 5532            | 165              | 29                 | 5488            | 87               |
| 57                 | 5493            | 171              | 35                 | 5528            | 105              |
| 58                 | 5510            | 174              | 36                 | 5486            | 108              |
| 74                 | 5485            | 222              | 37                 | 5481            | 111              |
| 82                 | 5519            | 246              | 39                 | 5502            | 117              |
| 92                 | 5521            | 276              | 42                 | 5525            | 126              |
| 97                 | 5495            | 291              | 48                 | 5510            | 144              |
| --                 | --              | --               | 51                 | 5508            | 153              |
| --                 | --              | --               | 53                 | 5485            | 159              |
| --                 | --              | --               | 57                 | 5512            | 171              |
| --                 | --              | --               | 58                 | 5494            | 174              |
| --                 | --              | --               | 63                 | 5529            | 189              |
| --                 | --              | --               | 64                 | 5489            | 192              |
| --                 | --              | --               | 70                 | 5527            | 210              |
| --                 | --              | --               | 73                 | 5492            | 219              |
| --                 | --              | --               | 79                 | 5493            | 237              |
| --                 | --              | --               | 94                 | 5495            | 282              |

| Radar waveform #15 |                 |                  | Radar waveform #16 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 1                  | 5502            | 3                | 7                  | 5506            | 21               |
| 14                 | 5493            | 42               | 9                  | 5530            | 27               |
| 18                 | 5522            | 54               | 18                 | 5516            | 54               |
| 25                 | 5530            | 75               | 28                 | 5508            | 84               |
| 28                 | 5494            | 84               | 34                 | 5539            | 102              |
| 73                 | 5487            | 219              | 36                 | 5484            | 108              |
| 76                 | 5509            | 228              | 42                 | 5524            | 126              |
| 77                 | 5533            | 231              | 45                 | 5496            | 135              |
| 79                 | 5537            | 237              | 50                 | 5522            | 150              |
| 80                 | 5483            | 240              | 55                 | 5537            | 165              |
| 95                 | 5535            | 285              | 57                 | 5509            | 171              |
| --                 | --              | --               | 59                 | 5487            | 177              |
| --                 | --              | --               | 84                 | 5498            | 252              |
| --                 | --              | --               | 86                 | 5536            | 258              |
| --                 | --              | --               | 90                 | 5490            | 270              |

| Radar waveform #17 |                 |                  | Radar waveform #18 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 8                  | 5508            | 24               | 4                  | 5526            | 12               |
| 19                 | 5497            | 57               | 12                 | 5529            | 36               |
| 22                 | 5491            | 66               | 16                 | 5484            | 48               |
| 29                 | 5480            | 87               | 34                 | 5490            | 102              |
| 39                 | 5500            | 117              | 38                 | 5495            | 114              |
| 43                 | 5503            | 129              | 41                 | 5519            | 123              |
| 58                 | 5512            | 174              | 46                 | 5527            | 138              |
| 61                 | 5499            | 183              | 48                 | 5539            | 144              |
| 83                 | 5516            | 249              | 59                 | 5535            | 177              |
| 92                 | 5521            | 276              | 63                 | 5504            | 189              |
| 95                 | 5482            | 285              | 77                 | 5511            | 231              |
| --                 | --              | --               | 81                 | 5537            | 243              |
| --                 | --              | --               | 84                 | 5523            | 252              |
| --                 | --              | --               | 95                 | 5512            | 285              |
| --                 | --              | --               | 97                 | 5538            | 291              |

| Radar waveform #19 |                 |                  | Radar waveform #20 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5533            | 0                | 5                  | 5487            | 15               |
| 6                  | 5502            | 18               | 8                  | 5513            | 24               |
| 22                 | 5489            | 66               | 10                 | 5500            | 30               |
| 23                 | 5493            | 69               | 15                 | 5536            | 45               |
| 24                 | 5540            | 72               | 20                 | 5504            | 60               |
| 25                 | 5528            | 75               | 33                 | 5524            | 99               |
| 28                 | 5480            | 84               | 44                 | 5514            | 132              |
| 47                 | 5486            | 141              | 53                 | 5493            | 159              |
| 57                 | 5527            | 171              | 77                 | 5537            | 231              |
| 62                 | 5507            | 186              | 86                 | 5480            | 258              |
| 65                 | 5526            | 195              | --                 | --              | --               |
| 81                 | 5529            | 243              | --                 | --              | --               |
| 88                 | 5488            | 264              | --                 | --              | --               |
| 90                 | 5484            | 270              | --                 | --              | --               |
| 92                 | 5518            | 276              | --                 | --              | --               |
| 96                 | 5497            | 288              | --                 | --              | --               |

| Radar waveform #21 |                 |                  | Radar waveform #22 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 6                  | 5507            | 18               | 2                  | 5508            | 6                |
| 10                 | 5506            | 30               | 11                 | 5491            | 33               |
| 12                 | 5529            | 36               | 21                 | 5514            | 63               |
| 25                 | 5489            | 75               | 24                 | 5517            | 72               |
| 31                 | 5534            | 93               | 25                 | 5504            | 75               |
| 40                 | 5497            | 120              | 29                 | 5533            | 87               |
| 41                 | 5491            | 123              | 39                 | 5481            | 117              |
| 62                 | 5493            | 186              | 40                 | 5480            | 120              |
| 66                 | 5496            | 198              | 51                 | 5521            | 153              |
| 67                 | 5492            | 201              | 55                 | 5509            | 165              |
| 80                 | 5502            | 240              | 56                 | 5515            | 168              |
| 86                 | 5522            | 258              | 65                 | 5486            | 195              |
| 95                 | 5482            | 285              | 85                 | 5532            | 255              |
| --                 | --              | --               | 87                 | 5489            | 261              |
| --                 | --              | --               | 91                 | 5499            | 273              |
| --                 | --              | --               | 95                 | 5530            | 285              |
| --                 | --              | --               | 98                 | 5497            | 294              |

| Radar waveform #23 |                 |                  | Radar waveform #24 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 7                  | 5537            | 21               | 16                 | 5537            | 48               |
| 10                 | 5517            | 30               | 19                 | 5518            | 57               |
| 13                 | 5494            | 39               | 21                 | 5500            | 63               |
| 15                 | 5527            | 45               | 23                 | 5532            | 69               |
| 16                 | 5536            | 48               | 36                 | 5508            | 108              |
| 22                 | 5496            | 66               | 44                 | 5514            | 132              |
| 28                 | 5528            | 84               | 68                 | 5491            | 204              |
| 43                 | 5482            | 129              | 73                 | 5489            | 219              |
| 66                 | 5510            | 198              | 76                 | 5526            | 228              |
| 69                 | 5504            | 207              | 88                 | 5506            | 264              |
| 84                 | 5522            | 252              | 95                 | 5493            | 285              |
| 88                 | 5480            | 264              | --                 | --              | --               |
| 94                 | 5485            | 282              | --                 | --              | --               |
| 97                 | 5498            | 291              | --                 | --              | --               |

| Radar waveform #25 |                 |                  | Radar waveform #26 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 1                  | 5483            | 3                | 0                  | 5538            | 0                |
| 25                 | 5480            | 75               | 2                  | 5531            | 6                |
| 29                 | 5524            | 87               | 5                  | 5528            | 15               |
| 30                 | 5536            | 90               | 15                 | 5484            | 45               |
| 44                 | 5514            | 132              | 23                 | 5524            | 69               |
| 45                 | 5504            | 135              | 32                 | 5516            | 96               |
| 55                 | 5518            | 165              | 53                 | 5533            | 159              |
| 69                 | 5521            | 207              | 55                 | 5518            | 165              |
| 73                 | 5501            | 219              | 59                 | 5500            | 177              |
| 76                 | 5522            | 228              | 60                 | 5496            | 180              |
| 87                 | 5485            | 261              | 62                 | 5513            | 186              |
| --                 | --              | --               | 71                 | 5535            | 213              |
| --                 | --              | --               | 72                 | 5497            | 216              |
| --                 | --              | --               | 76                 | 5502            | 228              |
| --                 | --              | --               | 84                 | 5521            | 252              |
| --                 | --              | --               | 88                 | 5529            | 264              |
| --                 | --              | --               | 90                 | 5525            | 270              |

| Radar waveform #27 |                 |                  | Radar waveform #28 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 8                  | 5505            | 24               | 5                  | 5515            | 15               |
| 19                 | 5497            | 57               | 10                 | 5490            | 30               |
| 22                 | 5480            | 66               | 12                 | 5522            | 36               |
| 35                 | 5537            | 105              | 16                 | 5532            | 48               |
| 37                 | 5534            | 111              | 17                 | 5531            | 51               |
| 39                 | 5523            | 117              | 18                 | 5536            | 54               |
| 44                 | 5508            | 132              | 20                 | 5514            | 60               |
| 62                 | 5495            | 186              | 38                 | 5492            | 114              |
| 63                 | 5492            | 189              | 55                 | 5538            | 165              |
| 67                 | 5540            | 201              | 58                 | 5528            | 174              |
| 70                 | 5538            | 210              | 78                 | 5533            | 234              |
| 75                 | 5491            | 225              | 84                 | 5494            | 252              |
| 79                 | 5482            | 237              | 87                 | 5530            | 261              |
| 96                 | 5539            | 288              | 96                 | 5495            | 288              |
| 97                 | 5500            | 291              | 99                 | 5502            | 297              |
| 99                 | 5532            | 297              | --                 | --              | --               |

| Radar waveform #29 |                 |                  | Radar waveform #30 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 9                  | 5513            | 27               | 17                 | 5507            | 51               |
| 25                 | 5502            | 75               | 24                 | 5526            | 72               |
| 26                 | 5484            | 78               | 36                 | 5495            | 108              |
| 38                 | 5508            | 114              | 37                 | 5540            | 111              |
| 40                 | 5536            | 120              | 39                 | 5534            | 117              |
| 49                 | 5518            | 147              | 61                 | 5519            | 183              |
| 54                 | 5526            | 162              | 63                 | 5505            | 189              |
| 64                 | 5500            | 192              | 64                 | 5498            | 192              |
| 66                 | 5524            | 198              | 72                 | 5524            | 216              |
| 68                 | 5480            | 204              | 75                 | 5496            | 225              |
| 76                 | 5519            | 228              | 82                 | 5486            | 246              |
| 92                 | 5520            | 276              | 96                 | 5533            | 288              |
| 99                 | 5492            | 297              | --                 | --              | --               |

|               |   |                   |            |
|---------------|---|-------------------|------------|
| Product       | HAN Access Point  | Temperature       | 27°C       |
| Test Engineer | Amy Zhang   | Relative Humidity | 65%        |
| Test Site     | SR5   | Test Date         | 2018/08/27 |
| Test Item     | Radar Statistical Performance Check (802.11ac-VHT80 mode – 5530MHz) |                   |            |

#### Radar Type 1 - Radar Statistical Performance

| Trail # | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|---------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1       | 5491                | 1                   | 3066     | 18             | 1                             |
| 2       | 5491                | 1                   | 738      | 72             | 1                             |
| 3       | 5500                | 1                   | 658      | 81             | 1                             |
| 4       | 5500                | 1                   | 538      | 98             | 1                             |
| 5       | 5509                | 1                   | 698      | 76             | 1                             |
| 6       | 5509                | 1                   | 838      | 63             | 1                             |
| 7       | 5510                | 1                   | 618      | 86             | 1                             |
| 8       | 5510                | 1                   | 818      | 65             | 1                             |
| 9       | 5511                | 1                   | 778      | 68             | 1                             |
| 10      | 5511                | 1                   | 718      | 74             | 1                             |
| 11      | 5520                | 1                   | 918      | 58             | 1                             |
| 12      | 5520                | 1                   | 638      | 83             | 1                             |
| 13      | 5529                | 1                   | 758      | 70             | 1                             |
| 14      | 5529                | 1                   | 518      | 102            | 1                             |
| 15      | 5530                | 1                   | 558      | 95             | 1                             |
| 16      | 5530                | 1                   | 2306     | 23             | 1                             |
| 17      | 5531                | 1                   | 3003     | 18             | 1                             |
| 18      | 5531                | 1                   | 2368     | 23             | 1                             |
| 19      | 5540                | 1                   | 1033     | 52             | 1                             |
| 20      | 5540                | 1                   | 1872     | 29             | 1                             |
| 21      | 5549                | 1                   | 2778     | 19             | 1                             |
| 22      | 5549                | 1                   | 2156     | 25             | 1                             |
| 23      | 5550                | 1                   | 1590     | 34             | 1                             |
| 24      | 5550                | 1                   | 1844     | 29             | 1                             |
| 25      | 5551                | 1                   | 540      | 98             | 1                             |
| 26      | 5551                | 1                   | 1331     | 40             | 1                             |

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 27                       | 5560                | 1                   | 2429     | 22             | 1                             |
| 28                       | 5560                | 1                   | 1712     | 31             | 1                             |
| 29                       | 5569                | 1                   | 2867     | 19             | 1                             |
| 30                       | 5569                | 1                   | 2479     | 22             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 2 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 3.7                 | 184      | 25             | 1                             |
| 2                        | 5491                | 3.9                 | 220      | 28             | 1                             |
| 3                        | 5500                | 1.6                 | 182      | 26             | 1                             |
| 4                        | 5500                | 2.2                 | 161      | 26             | 1                             |
| 5                        | 5509                | 5.0                 | 228      | 29             | 1                             |
| 6                        | 5509                | 1.9                 | 189      | 24             | 1                             |
| 7                        | 5510                | 2.3                 | 155      | 26             | 1                             |
| 8                        | 5510                | 4.9                 | 222      | 25             | 1                             |
| 9                        | 5511                | 1.5                 | 209      | 27             | 1                             |
| 10                       | 5511                | 1.4                 | 218      | 25             | 1                             |
| 11                       | 5520                | 3.7                 | 161      | 28             | 1                             |
| 12                       | 5520                | 1.3                 | 220      | 24             | 1                             |
| 13                       | 5529                | 2.3                 | 209      | 29             | 1                             |
| 14                       | 5529                | 1.0                 | 173      | 25             | 1                             |
| 15                       | 5530                | 4.9                 | 226      | 27             | 1                             |
| 16                       | 5530                | 3.7                 | 191      | 29             | 1                             |
| 17                       | 5531                | 1.4                 | 157      | 26             | 1                             |
| 18                       | 5531                | 2.6                 | 228      | 25             | 1                             |
| 19                       | 5540                | 5.0                 | 206      | 26             | 1                             |
| 20                       | 5540                | 3.4                 | 217      | 23             | 1                             |
| 21                       | 5549                | 1.0                 | 205      | 25             | 1                             |
| 22                       | 5549                | 2.5                 | 197      | 24             | 1                             |
| 23                       | 5550                | 1.1                 | 206      | 26             | 1                             |
| 24                       | 5550                | 2.8                 | 178      | 27             | 1                             |
| 25                       | 5551                | 1.8                 | 172      | 23             | 1                             |
| 26                       | 5551                | 1.8                 | 221      | 25             | 1                             |
| 27                       | 5560                | 2.7                 | 191      | 26             | 1                             |
| 28                       | 5560                | 3.9                 | 186      | 26             | 1                             |
| 29                       | 5569                | 2.2                 | 175      | 24             | 1                             |
| 30                       | 5569                | 4.8                 | 185      | 27             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 3 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 6.7                 | 444      | 16             | 1                             |
| 2                        | 5491                | 10.0                | 355      | 16             | 1                             |
| 3                        | 5500                | 9.6                 | 233      | 17             | 1                             |
| 4                        | 5500                | 6.9                 | 406      | 16             | 1                             |
| 5                        | 5509                | 8.1                 | 230      | 17             | 1                             |
| 6                        | 5509                | 7.0                 | 366      | 16             | 1                             |
| 7                        | 5510                | 6.4                 | 289      | 16             | 1                             |
| 8                        | 5510                | 7.6                 | 289      | 17             | 1                             |
| 9                        | 5511                | 8.2                 | 411      | 17             | 1                             |
| 10                       | 5511                | 7.5                 | 293      | 17             | 1                             |
| 11                       | 5520                | 7.6                 | 220      | 17             | 1                             |
| 12                       | 5520                | 6.1                 | 371      | 16             | 1                             |
| 13                       | 5529                | 6.1                 | 434      | 17             | 1                             |
| 14                       | 5529                | 9.1                 | 439      | 17             | 1                             |
| 15                       | 5530                | 7.9                 | 491      | 17             | 1                             |
| 16                       | 5530                | 9.2                 | 281      | 17             | 1                             |
| 17                       | 5531                | 9.8                 | 486      | 18             | 1                             |
| 18                       | 5531                | 6.8                 | 449      | 17             | 1                             |
| 19                       | 5540                | 6.4                 | 296      | 18             | 1                             |
| 20                       | 5540                | 8.2                 | 325      | 18             | 1                             |
| 21                       | 5549                | 8.8                 | 382      | 18             | 1                             |
| 22                       | 5549                | 9.0                 | 331      | 17             | 1                             |
| 23                       | 5550                | 9.3                 | 459      | 18             | 1                             |
| 24                       | 5550                | 6.6                 | 366      | 16             | 1                             |
| 25                       | 5551                | 9.1                 | 466      | 18             | 1                             |
| 26                       | 5551                | 7.1                 | 354      | 16             | 1                             |
| 27                       | 5560                | 8.6                 | 339      | 18             | 1                             |
| 28                       | 5560                | 9.1                 | 262      | 17             | 1                             |
| 29                       | 5569                | 7.8                 | 211      | 17             | 1                             |
| 30                       | 5569                | 7.0                 | 393      | 17             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 4 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 14.7                | 399      | 16             | 1                             |
| 2                        | 5491                | 18.3                | 484      | 16             | 1                             |
| 3                        | 5500                | 18.2                | 290      | 14             | 1                             |
| 4                        | 5500                | 14.3                | 264      | 16             | 1                             |
| 5                        | 5509                | 11.6                | 434      | 13             | 1                             |
| 6                        | 5509                | 12.1                | 427      | 16             | 1                             |
| 7                        | 5510                | 19.1                | 210      | 12             | 1                             |
| 8                        | 5510                | 19.1                | 416      | 12             | 1                             |
| 9                        | 5511                | 12.3                | 212      | 14             | 1                             |
| 10                       | 5511                | 12.5                | 224      | 14             | 1                             |
| 11                       | 5520                | 13.4                | 281      | 13             | 1                             |
| 12                       | 5520                | 11.7                | 215      | 12             | 1                             |
| 13                       | 5529                | 19.7                | 202      | 13             | 1                             |
| 14                       | 5529                | 19.1                | 405      | 13             | 1                             |
| 15                       | 5530                | 11.9                | 430      | 14             | 1                             |
| 16                       | 5530                | 16.6                | 426      | 13             | 1                             |
| 17                       | 5531                | 14.4                | 492      | 14             | 1                             |
| 18                       | 5531                | 13.7                | 472      | 14             | 1                             |
| 19                       | 5540                | 17.8                | 218      | 15             | 1                             |
| 20                       | 5540                | 14.0                | 224      | 14             | 1                             |
| 21                       | 5549                | 19.1                | 430      | 16             | 1                             |
| 22                       | 5549                | 13.8                | 357      | 13             | 1                             |
| 23                       | 5550                | 16.4                | 376      | 13             | 1                             |
| 24                       | 5550                | 17.4                | 468      | 14             | 1                             |
| 25                       | 5551                | 15.6                | 276      | 13             | 1                             |
| 26                       | 5551                | 11.9                | 321      | 14             | 1                             |
| 27                       | 5560                | 12.9                | 207      | 13             | 1                             |
| 28                       | 5560                | 11.8                | 461      | 15             | 1                             |
| 29                       | 5569                | 17.9                | 270      | 16             | 1                             |
| 30                       | 5569                | 12.7                | 259      | 15             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows:  $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\%+100\%+100\%+100\%)/4 = 100\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5494.0              | 1                             | 16      | 5530.0              | 1                             |
| 2                        | 5499.6              | 1                             | 17      | 5530.0              | 1                             |
| 3                        | 5498.8              | 1                             | 18      | 5530.0              | 1                             |
| 4                        | 5495.2              | 1                             | 19      | 5530.0              | 1                             |
| 5                        | 5495.6              | 1                             | 20      | 5530.0              | 1                             |
| 6                        | 5499.2              | 1                             | 21      | 5562.4              | 1                             |
| 7                        | 5496.0              | 1                             | 22      | 5560.8              | 1                             |
| 8                        | 5497.6              | 1                             | 23      | 5560.4              | 1                             |
| 9                        | 5494.4              | 1                             | 24      | 5563.2              | 1                             |
| 10                       | 5496.8              | 1                             | 25      | 5566.0              | 1                             |
| 11                       | 5530.0              | 1                             | 26      | 5564.8              | 1                             |
| 12                       | 5530.0              | 1                             | 27      | 5565.6              | 1                             |
| 13                       | 5530.0              | 1                             | 28      | 5561.2              | 1                             |
| 14                       | 5530.0              | 1                             | 29      | 5564.0              | 1                             |
| 15                       | 5530.0              | 1                             | 30      | 5564.4              | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 100%                          |

| Type 5 Radar Waveform_1                 |               |          |             |         |                 |                 |                 |                |                           |                         |                              |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|------------------------------|
| Num of Bursts = 9                       |               |          |             |         |                 |                 |                 |                |                           |                         | Burst Interval (us)= 1333333 |
| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |                              |
| 1                                       | 551375        | 1        | 5           | 90      | 1478            | 0               | 0               | 551375         | 0                         | 1333332                 |                              |
| 2                                       | 1397215       | 2        | 5           | 60      | 1621            | 1899            | 0               | 1950068        | 1333333                   | 2666665                 |                              |
| 3                                       | 1587861       | 3        | 5           | 95      | 1455            | 1480            | 1338            | 3541449        | 2666666                   | 3999998                 |                              |
| 4                                       | 1232749       | 3        | 5           | 50      | 1408            | 1000            | 1704            | 4778471        | 3999999                   | 5333331                 |                              |
| 5                                       | 711255        | 2        | 5           | 60      | 1378            | 1361            | 0               | 5493838        | 5333332                   | 6666664                 |                              |
| 6                                       | 1936897       | 3        | 5           | 55      | 1161            | 1111            | 1446            | 7433474        | 6666665                   | 7999997                 |                              |
| 7                                       | 1160843       | 3        | 5           | 50      | 1172            | 1810            | 1221            | 8598035        | 7999998                   | 9333330                 |                              |
| 8                                       | 1175742       | 1        | 5           | 85      | 1754            | 0               | 0               | 9777980        | 9333331                   | 10666663                |                              |
| 9                                       | 1349395       | 1        | 5           | 50      | 1462            | 0               | 0               | 11129129       | 10666664                  | 11999996                |                              |
| Total number of pulses in waveform = 19 |               |          |             |         |                 |                 |                 |                |                           |                         |                              |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |                              |

### Type 5 Radar Waveform\_2

Num of Bursts = 9  
Burst Interval (us)= 1333333

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1       | 1292735       | 1        | 19          | 70      | 1751            | 0               | 0               | 1292735        | 0                        | 1333332                |
| 2       | 743079        | 3        | 19          | 100     | 1659            | 1553            | 1635            | 2037565        | 1333333                  | 2666665                |
| 3       | 1880444       | 1        | 19          | 100     | 1923            | 0               | 0               | 3922856        | 2666666                  | 3999998                |
| 4       | 462424        | 1        | 19          | 75      | 1386            | 0               | 0               | 4387203        | 3999999                  | 5333331                |
| 5       | 1287386       | 2        | 19          | 60      | 1777            | 1512            | 0               | 5675975        | 5333332                  | 6666664                |
| 6       | 1841602       | 3        | 19          | 75      | 1340            | 1075            | 1676            | 7520866        | 6666665                  | 7999997                |
| 7       | 1757891       | 3        | 19          | 95      | 1541            | 1245            | 1420            | 9282848        | 7999998                  | 9333330                |
| 8       | 838114        | 1        | 19          | 75      | 1848            | 0               | 0               | 10125168       | 9333331                  | 10666663               |
| 9       | 818271        | 2        | 19          | 90      | 1639            | 1091            | 0               | 10945287       | 10666664                 | 11999996               |

Total number of pulses in waveform = 17

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### Type 5 Radar Waveform\_3

Num of Bursts = 10  
Burst Interval (us)= 1200000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1       | 463949        | 1        | 17          | 70      | 1801            | 0               | 0               | 463949         | 0                        | 1199999                |
| 2       | 735615        | 2        | 17          | 95      | 1743            | 1282            | 0               | 1201365        | 1200000                  | 2399999                |
| 3       | 1408751       | 1        | 17          | 90      | 1166            | 0               | 0               | 2613141        | 2400000                  | 3599999                |
| 4       | 1021965       | 1        | 17          | 75      | 1960            | 0               | 0               | 3636272        | 3600000                  | 4799999                |
| 5       | 1697257       | 1        | 17          | 95      | 1116            | 0               | 0               | 5335489        | 4800000                  | 5999999                |
| 6       | 1318487       | 2        | 17          | 60      | 1787            | 1574            | 0               | 6655092        | 6000000                  | 7199999                |
| 7       | 970647        | 1        | 17          | 80      | 1327            | 0               | 0               | 7629100        | 7200000                  | 8399999                |
| 8       | 982715        | 3        | 17          | 55      | 1195            | 1558            | 1269            | 8613142        | 8400000                  | 9599999                |
| 9       | 1397057       | 1        | 17          | 95      | 1715            | 0               | 0               | 10014221       | 9600000                  | 10799999               |
| 10      | 1754578       | 1        | 17          | 80      | 1296            | 0               | 0               | 11770514       | 10800000                 | 11999999               |

Total number of pulses in waveform = 14

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### Type 5 Radar Waveform\_4

Num of Bursts = 16  
Burst Interval (us)= 750000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1       | 744723        | 3        | 8           | 55      | 1211            | 1007            | 1114            | 744723         | 0                        | 749999                 |
| 2       | 496615        | 3        | 8           | 55      | 1358            | 1167            | 1900            | 1244670        | 750000                   | 1499999                |
| 3       | 981645        | 1        | 8           | 90      | 1575            | 0               | 0               | 2230740        | 1500000                  | 2249999                |
| 4       | 340441        | 2        | 8           | 50      | 1831            | 1996            | 0               | 2572756        | 2250000                  | 2999999                |
| 5       | 514475        | 3        | 8           | 90      | 1366            | 1136            | 1140            | 3091058        | 3000000                  | 3749999                |
| 6       | 1074334       | 2        | 8           | 75      | 1541            | 1774            | 0               | 4169034        | 3750000                  | 4499999                |
| 7       | 805823        | 2        | 8           | 75      | 1460            | 1694            | 0               | 4978172        | 4500000                  | 5249999                |
| 8       | 596311        | 1        | 8           | 85      | 1526            | 0               | 0               | 5577637        | 5250000                  | 5999999                |
| 9       | 1089427       | 2        | 8           | 70      | 1637            | 1188            | 0               | 6668590        | 6000000                  | 6749999                |
| 10      | 465864        | 2        | 8           | 60      | 1969            | 1149            | 0               | 7137279        | 6750000                  | 7499999                |
| 11      | 542122        | 1        | 8           | 85      | 1097            | 0               | 0               | 7682519        | 7500000                  | 8249999                |
| 12      | 1017482       | 1        | 8           | 85      | 1841            | 0               | 0               | 8701098        | 8250000                  | 8999999                |
| 13      | 759115        | 2        | 8           | 60      | 1799            | 1054            | 0               | 9462054        | 9000000                  | 9749999                |
| 14      | 389049        | 2        | 8           | 50      | 1755            | 1595            | 0               | 9853956        | 9750000                  | 10499999               |
| 15      | 1311563       | 1        | 8           | 85      | 1162            | 0               | 0               | 11168869       | 10500000                 | 11249999               |
| 16      | 399561        | 1        | 8           | 95      | 1326            | 0               | 0               | 11569592       | 11250000                 | 11999999               |

Total number of pulses in waveform = 29

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### Type 5 Radar Waveform\_5

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 685796        | 2        | 9           | 50      | 1151            | 1213            | 0               | 685796         | 0                         | 857142                  |
| 2       | 709627        | 3        | 9           | 100     | 1001            | 1498            | 1314            | 1397787        | 857143                    | 1714285                 |
| 3       | 1075912       | 1        | 9           | 65      | 1038            | 0               | 0               | 2477512        | 1714286                   | 2571428                 |
| 4       | 156049        | 3        | 9           | 65      | 1531            | 1558            | 1943            | 2634599        | 2571429                   | 3428571                 |
| 5       | 1191536       | 3        | 9           | 80      | 1508            | 1268            | 1947            | 3831167        | 3428572                   | 4285714                 |
| 6       | 1175151       | 3        | 9           | 55      | 1320            | 1318            | 1652            | 5011041        | 4285715                   | 5142857                 |
| 7       | 194604        | 1        | 9           | 80      | 1252            | 0               | 0               | 5209935        | 5142858                   | 6000000                 |
| 8       | 1312550       | 1        | 9           | 95      | 1427            | 0               | 0               | 6523737        | 6000001                   | 6857143                 |
| 9       | 366244        | 3        | 9           | 100     | 1757            | 1515            | 1732            | 6891408        | 6857144                   | 7714286                 |
| 10      | 1254150       | 3        | 9           | 95      | 1116            | 1584            | 1393            | 8105062        | 7714287                   | 8571429                 |
| 11      | 1027677       | 3        | 9           | 55      | 1296            | 1568            | 1436            | 9182332        | 8571430                   | 9428572                 |
| 12      | 608624        | 2        | 9           | 55      | 1614            | 1227            | 0               | 9795256        | 9428573                   | 10285715                |
| 13      | 492444        | 2        | 9           | 55      | 1072            | 1757            | 0               | 10290541       | 10285716                  | 11142858                |
| 14      | 918066        | 2        | 9           | 70      | 1104            | 1342            | 0               | 11211436       | 11142859                  | 12000001                |

Total number of pulses in waveform = 32

### Type 5 Radar Waveform\_6

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 61557         | 2        | 18          | 65      | 1698            | 1359            | 0               | 61557          | 0                         | 857142                  |
| 2       | 1017739       | 3        | 18          | 60      | 1496            | 1311            | 1541            | 1082403        | 857143                    | 1714285                 |
| 3       | 660078        | 2        | 18          | 75      | 1877            | 1211            | 0               | 1746829        | 1714286                   | 2571428                 |
| 4       | 1602320       | 1        | 18          | 75      | 1878            | 0               | 0               | 3352237        | 2571429                   | 3428571                 |
| 5       | 639284        | 3        | 18          | 55      | 1516            | 1886            | 1051            | 3993399        | 3428572                   | 4285714                 |
| 6       | 499665        | 3        | 18          | 65      | 1328            | 1776            | 1212            | 4497517        | 4285715                   | 5142857                 |
| 7       | 1357501       | 1        | 18          | 95      | 1345            | 0               | 0               | 5859334        | 5142858                   | 6000000                 |
| 8       | 648195        | 3        | 18          | 75      | 1258            | 1028            | 1066            | 6508374        | 6000001                   | 6857143                 |
| 9       | 1094495       | 1        | 18          | 60      | 1134            | 0               | 0               | 7606721        | 6857144                   | 7714286                 |
| 10      | 113637        | 1        | 18          | 60      | 1787            | 0               | 0               | 7721492        | 7714287                   | 8571429                 |
| 11      | 1456510       | 1        | 18          | 60      | 1876            | 0               | 0               | 9179789        | 8571430                   | 9428572                 |
| 12      | 419992        | 1        | 18          | 80      | 1223            | 0               | 0               | 9601657        | 9428573                   | 10285715                |
| 13      | 1246795       | 1        | 18          | 60      | 1179            | 0               | 0               | 10849675       | 10285716                  | 11142858                |
| 14      | 988233        | 1        | 18          | 60      | 1227            | 0               | 0               | 11839087       | 11142859                  | 12000001                |

Total number of pulses in waveform = 24

### Type 5 Radar Waveform\_7

Num of Bursts = 12  
Burst Interval (us)= 1000000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 59283         | 3        | 10          | 95      | 1008            | 1771            | 1429            | 59283          | 0                         | 999999                  |
| 2       | 1840045       | 1        | 10          | 70      | 1277            | 0               | 0               | 1903536        | 1000000                   | 1999999                 |
| 3       | 773583        | 2        | 10          | 60      | 1998            | 1886            | 0               | 2678396        | 2000000                   | 2999999                 |
| 4       | 1073875       | 1        | 10          | 95      | 1550            | 0               | 0               | 3755255        | 3000000                   | 3999999                 |
| 5       | 529159        | 3        | 10          | 90      | 1025            | 1182            | 1117            | 4285964        | 4000000                   | 4999999                 |
| 6       | 1626330       | 1        | 10          | 70      | 1499            | 0               | 0               | 5915618        | 5000000                   | 5999999                 |
| 7       | 301389        | 1        | 10          | 65      | 1984            | 0               | 0               | 6218506        | 6000000                   | 6999999                 |
| 8       | 1658488       | 1        | 10          | 50      | 1090            | 0               | 0               | 7878978        | 7000000                   | 7999999                 |
| 9       | 664943        | 2        | 10          | 60      | 1633            | 1846            | 0               | 8545011        | 8000000                   | 8999999                 |
| 10      | 830208        | 1        | 10          | 55      | 1746            | 0               | 0               | 9378698        | 9000000                   | 9999999                 |
| 11      | 1275015       | 1        | 10          | 75      | 1683            | 0               | 0               | 10655459       | 10000000                  | 10999999                |
| 12      | 439625        | 2        | 10          | 80      | 1309            | 1739            | 0               | 11096767       | 11000000                  | 11999999                |

Total number of pulses in waveform = 19

### Type 5 Radar Waveform\_8

Num of Bursts = 8  
Burst Interval (us)= 1500000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 1180050       | 3        | 14          | 100     | 1939            | 1155            | 1627            | 1180050        | 0                         | 1499999                 |
| 2       | 936473        | 3        | 14          | 95      | 1503            | 1320            | 1367            | 2121244        | 1500000                   | 2999999                 |
| 3       | 1459050       | 2        | 14          | 55      | 1902            | 1396            | 0               | 3584484        | 3000000                   | 4499999                 |
| 4       | 943886        | 2        | 14          | 100     | 1852            | 1761            | 0               | 4531668        | 4500000                   | 5999999                 |
| 5       | 2322853       | 1        | 14          | 80      | 1102            | 0               | 0               | 6858134        | 6000000                   | 7499999                 |
| 6       | 1804490       | 1        | 14          | 85      | 1138            | 0               | 0               | 8663726        | 7500000                   | 8999999                 |
| 7       | 356244        | 2        | 14          | 55      | 1864            | 1412            | 0               | 9021108        | 9000000                   | 10499999                |
| 8       | 1770336       | 2        | 14          | 55      | 1128            | 1547            | 0               | 10794720       | 10500000                  | 11999999                |

Total number of pulses in waveform = 16

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### Type 5 Radar Waveform\_9

Num of Bursts = 19  
Burst Interval (us)= 631579

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 460395        | 1        | 6           | 55      | 1914            | 0               | 0               | 460395         | 0                         | 631578                  |
| 2       | 745885        | 1        | 6           | 60      | 1021            | 0               | 0               | 1208194        | 631579                    | 1263157                 |
| 3       | 668479        | 1        | 6           | 60      | 1833            | 0               | 0               | 1877694        | 1263158                   | 1894736                 |
| 4       | 468132        | 1        | 6           | 55      | 1921            | 0               | 0               | 2347659        | 1894737                   | 2526315                 |
| 5       | 791636        | 2        | 6           | 80      | 1949            | 1248            | 0               | 3141216        | 2526316                   | 3157894                 |
| 6       | 375226        | 3        | 6           | 65      | 1809            | 1457            | 1354            | 3519639        | 3157895                   | 3789473                 |
| 7       | 828617        | 3        | 6           | 60      | 1691            | 1661            | 1505            | 4352876        | 3789474                   | 4421052                 |
| 8       | 396340        | 2        | 6           | 85      | 1247            | 1916            | 0               | 4754073        | 4421053                   | 5052631                 |
| 9       | 473849        | 3        | 6           | 95      | 1086            | 1791            | 1111            | 5231085        | 5052632                   | 5684210                 |
| 10      | 656140        | 1        | 6           | 65      | 1606            | 0               | 0               | 5891213        | 5684211                   | 6315789                 |
| 11      | 650608        | 2        | 6           | 75      | 1483            | 1445            | 0               | 6543427        | 6315790                   | 6947368                 |
| 12      | 559696        | 2        | 6           | 65      | 1361            | 1375            | 0               | 7106051        | 6947369                   | 7578947                 |
| 13      | 1060539       | 3        | 6           | 70      | 1716            | 1314            | 1800            | 8169326        | 7578948                   | 8210526                 |
| 14      | 153910        | 2        | 6           | 50      | 1856            | 1593            | 0               | 8328066        | 8210527                   | 8842105                 |
| 15      | 517241        | 1        | 6           | 55      | 1766            | 0               | 0               | 8848756        | 8842106                   | 9473684                 |
| 16      | 805667        | 2        | 6           | 65      | 1799            | 1129            | 0               | 9656189        | 9473685                   | 10105263                |
| 17      | 671816        | 1        | 6           | 95      | 1720            | 0               | 0               | 10330933       | 10105264                  | 10736842                |
| 18      | 425132        | 1        | 6           | 95      | 1399            | 0               | 0               | 10757785       | 10736843                  | 11368421                |
| 19      | 842263        | 2        | 6           | 100     | 1639            | 1356            | 0               | 11601447       | 11368422                  | 12000000                |

Total number of pulses in waveform = 34

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### Type 5 Radar Waveform\_10

Num of Bursts = 12  
Burst Interval (us)= 1000000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 502674        | 2        | 12          | 55      | 1669            | 1810            | 0               | 502674         | 0                         | 999999                  |
| 2       | 1468936       | 2        | 12          | 60      | 1777            | 1465            | 0               | 1975089        | 1000000                   | 1999999                 |
| 3       | 657557        | 2        | 12          | 55      | 1934            | 1848            | 0               | 2635888        | 2000000                   | 2999999                 |
| 4       | 1275504       | 1        | 12          | 100     | 1725            | 0               | 0               | 3915174        | 3000000                   | 3999999                 |
| 5       | 706441        | 2        | 12          | 75      | 1392            | 1923            | 0               | 4623340        | 4000000                   | 4999999                 |
| 6       | 645162        | 3        | 12          | 55      | 1432            | 1263            | 1102            | 5271817        | 5000000                   | 5999999                 |
| 7       | 1580750       | 2        | 12          | 65      | 1348            | 1439            | 0               | 6856364        | 6000000                   | 6999999                 |
| 8       | 479866        | 3        | 12          | 75      | 1525            | 1559            | 1929            | 7339017        | 7000000                   | 7999999                 |
| 9       | 1253788       | 3        | 12          | 95      | 1889            | 1630            | 1039            | 8597818        | 8000000                   | 8999999                 |
| 10      | 747098        | 2        | 12          | 90      | 1084            | 1962            | 0               | 9349474        | 9000000                   | 9999999                 |
| 11      | 1420951       | 2        | 12          | 50      | 1607            | 1503            | 0               | 10773471       | 10000000                  | 10999999                |
| 12      | 755404        | 1        | 12          | 80      | 1539            | 0               | 0               | 11531985       | 11000000                  | 11999999                |

Total number of pulses in waveform = 25

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### Type 5 Radar Waveform\_11

| Type 5 Radar Waveform_11 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|--------------------------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Burst #                  | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1                        | 3807275       | 2        | 12          | 80      | 1264            | 1364            | 0               | 381275         | 0                         | 666666                  |  |
| 2                        | 755792        | 3        | 12          | 80      | 1835            | 1957            | 1847            | 764630         | 666667                    | 1333333                 |  |
| 3                        | 822092        | 1        | 12          | 80      | 1058            | 0               | 0               | 1525461        | 1333334                   | 2000000                 |  |
| 4                        | 563123        | 1        | 12          | 50      | 1265            | 0               | 0               | 2348611        | 2000001                   | 2666667                 |  |
| 5                        | 783429        | 3        | 12          | 55      | 1031            | 1284            | 1450            | 2912999        | 2666668                   | 3333334                 |  |
| 6                        | 878550        | 3        | 12          | 75      | 1620            | 1859            | 1276            | 3700193        | 3333335                   | 4000001                 |  |
| 7                        | 197617        | 1        | 12          | 65      | 1081            | 0               | 0               | 4583498        | 4000002                   | 4666668                 |  |
| 8                        | 1085972       | 3        | 12          | 95      | 1994            | 1012            | 1735            | 4782196        | 4666669                   | 5333335                 |  |
| 9                        | 649610        | 1        | 12          | 80      | 1848            | 0               | 0               | 5872909        | 5333336                   | 6000002                 |  |
| 10                       | 718736        | 1        | 12          | 60      | 1767            | 0               | 0               | 6524367        | 6000003                   | 6666669                 |  |
| 11                       | 333113        | 3        | 12          | 60      | 1065            | 1615            | 1412            | 7244870        | 6666670                   | 7333336                 |  |
| 12                       | 796774        | 2        | 12          | 55      | 1081            | 1692            | 0               | 7582075        | 7333337                   | 8000003                 |  |
| 13                       | 907343        | 3        | 12          | 60      | 1881            | 1880            | 1429            | 8381622        | 8000004                   | 8666670                 |  |
| 14                       | 42295         | 2        | 12          | 80      | 1722            | 1416            | 0               | 9294155        | 8666671                   | 9333337                 |  |
| 15                       | 1071891       | 3        | 12          | 50      | 1722            | 1757            | 1781            | 9339588        | 9333338                   | 10000004                |  |
| 16                       | 257770        | 2        | 12          | 70      | 1553            | 1546            | 0               | 10416739       | 10000005                  | 10666671                |  |
| 17                       | 1142248       | 2        | 12          | 100     | 1524            | 1921            | 0               | 10677608       | 10666672                  | 11333338                |  |
| 18                       |               | 3        | 12          | 60      | 1814            | 1872            | 1080            | 11823301       | 11333339                  | 12000005                |  |

### Type 5 Radar Waveform\_12

| Type 5 Radar Waveform_12 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|--------------------------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Burst #                  | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1                        | 8290703       | 2        | 5           | 55      | 1585            | 1416            | 0               | 8290703        | 0                         | 1499999                 |  |
| 2                        | 1175345       | 3        | 5           | 85      | 1497            | 1232            | 1324            | 2007419        | 1500000                   | 2999999                 |  |
| 3                        | 1483545       | 3        | 5           | 100     | 1188            | 1245            | 1859            | 3495017        | 3000000                   | 4499999                 |  |
| 4                        | 1778758       | 1        | 5           | 70      | 1326            | 0               | 0               | 5278037        | 4500000                   | 5999999                 |  |
| 5                        | 1590703       | 2        | 5           | 75      | 1589            | 1437            | 0               | 6870066        | 6000000                   | 7499999                 |  |
| 6                        | 1315074       | 1        | 5           | 60      | 1839            | 0               | 0               | 8188166        | 7500000                   | 8999999                 |  |
| 7                        | 2067811       | 2        | 5           | 75      | 1558            | 1451            | 0               | 10257816       | 9000000                   | 10499999                |  |
| 8                        | 1237938       | 1        | 5           | 95      | 1521            | 0               | 0               | 11498763       | 10500000                  | 11999999                |  |

Total number of pulses in waveform = 15

### Type 5 Radar Waveform\_13

| Type 5 Radar Waveform_13 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|--------------------------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Burst #                  | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1                        | 333827        | 3        | 8           | 100     | 1972            | 1384            | 1644            | 333827         | 0                         | 599999                  |  |
| 2                        | 700020        | 1        | 8           | 65      | 1822            | 0               | 0               | 1038847        | 600000                    | 1199999                 |  |
| 3                        | 292028        | 2        | 8           | 55      | 1418            | 1075            | 0               | 1332697        | 1200000                   | 1799999                 |  |
| 4                        | 765891        | 2        | 8           | 100     | 1535            | 1000            | 0               | 2101081        | 1800000                   | 2399999                 |  |
| 5                        | 454681        | 3        | 8           | 55      | 1952            | 1246            | 1149            | 2658197        | 2400000                   | 2999999                 |  |
| 6                        | 904535        | 3        | 8           | 75      | 1239            | 1471            | 1778            | 3467079        | 3000000                   | 3699999                 |  |
| 7                        | 275385        | 1        | 8           | 55      | 1077            | 0               | 0               | 3746952        | 3600000                   | 4199999                 |  |
| 8                        | 623461        | 2        | 8           | 80      | 1768            | 1885            | 0               | 4371490        | 4200000                   | 4799999                 |  |
| 9                        | 706076        | 3        | 8           | 55      | 1189            | 1303            | 1353            | 5081219        | 4800000                   | 5399999                 |  |
| 10                       | 448759        | 1        | 8           | 100     | 1569            | 0               | 0               | 5533823        | 5400000                   | 5999999                 |  |
| 11                       | 766462        | 3        | 8           | 60      | 1951            | 1440            | 1433            | 6301854        | 6000000                   | 6599999                 |  |
| 12                       | 509104        | 3        | 8           | 50      | 1721            | 1184            | 1352            | 6815782        | 6600000                   | 7199999                 |  |
| 13                       | 413342        | 1        | 8           | 65      | 1615            | 0               | 0               | 7233381        | 7200000                   | 7799999                 |  |
| 14                       | 588780        | 2        | 8           | 55      | 1955            | 1510            | 0               | 7823776        | 7800000                   | 8399999                 |  |
| 15                       | 1046988       | 1        | 8           | 80      | 1271            | 0               | 0               | 8874229        | 8400000                   | 8999999                 |  |
| 16                       | 360441        | 2        | 8           | 75      | 1499            | 1603            | 0               | 9235941        | 9000000                   | 9599999                 |  |
| 17                       | 576115        | 2        | 8           | 55      | 1395            | 1328            | 0               | 9815158        | 9600000                   | 10199999                |  |
| 18                       | 536564        | 1        | 8           | 100     | 1829            | 0               | 0               | 10354445       | 10200000                  | 10799999                |  |
| 19                       | 759939        | 1        | 8           | 90      | 1462            | 0               | 0               | 11116213       | 10800000                  | 11399999                |  |
| 20                       | 297697        | 1        | 8           | 95      | 1831            | 0               | 0               | 11415372       | 11400000                  | 11999999                |  |

Total number of pulses in waveform = 38

**Type 5 Radar Waveform\_14**

| Type 5 Radar Waveform_14                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 13<br>Burst Interval (us)= 923077 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 747360        | 1        | 10          | 100     | 1702            | 0               | 0               | 916330         | 0                         | 923076                  |  |
| 2   | 1037823       | 1        | 10          | 50      | 1934            | 0               | 0               | 1665392        | 923077                    | 1846153                 |  |
| 3   | 917334        | 3        | 10          | 55      | 1459            | 1342            | 1822            | 2705149        | 1846154                   | 2769230                 |  |
| 4   | 878187        | 1        | 10          | 80      | 1640            | 0               | 0               | 3627106        | 2769231                   | 3692307                 |  |
| 5   | 538811        | 2        | 10          | 70      | 1436            | 1658            | 0               | 4506933        | 3692308                   | 4615384                 |  |
| 6   | 1296315       | 2        | 10          | 60      | 1305            | 1319            | 0               | 5048838        | 4615385                   | 5538461                 |  |
| 7   | 395720        | 3        | 10          | 80      | 1584            | 1775            | 1598            | 6347777        | 5538462                   | 6461538                 |  |
| 8   | 1050810       | 3        | 10          | 100     | 1720            | 1864            | 1653            | 6748454        | 6461539                   | 7384615                 |  |
| 9   | 542898        | 1        | 10          | 95      | 1688            | 0               | 0               | 7804501        | 7384616                   | 8307692                 |  |
| 10  | 1363074       | 2        | 10          | 75      | 1661            | 1346            | 0               | 8349087        | 8307693                   | 9230769                 |  |
| 11  | 608090        | 2        | 10          | 50      | 1143            | 1520            | 0               | 9715168        | 9230770                   | 10153846                |  |
| 12  | 853561        | 1        | 10          | 50      | 1947            | 0               | 0               | 10325921       | 10153847                  | 11076923                |  |
| 13  |               | 1        | 10          | 65      | 1792            | 0               | 0               | 11181429       | 11076924                  | 12000000                |  |

Total number of pulses in waveform = 23

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**Type 5 Radar Waveform\_15**

| Type 5 Radar Waveform_15                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 15<br>Burst Interval (us)= 800000 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 229106        | 3        | 17          | 95      | 1013            | 1985            | 1414            | 229106         | 0                         | 799999                  |  |
| 2   | 865029        | 2        | 17          | 60      | 1146            | 1552            | 0               | 1098547        | 800000                    | 1599999                 |  |
| 3   | 836284        | 3        | 17          | 85      | 1545            | 1498            | 1486            | 1937529        | 1600000                   | 2399999                 |  |
| 4   | 669867        | 2        | 17          | 90      | 1477            | 1689            | 0               | 2611925        | 2400000                   | 3199999                 |  |
| 5   | 873413        | 1        | 17          | 95      | 1382            | 0               | 0               | 34828504       | 3200000                   | 3999999                 |  |
| 6   | 1176128       | 3        | 17          | 50      | 1964            | 1941            | 1190            | 4666014        | 4000000                   | 4799999                 |  |
| 7   | 248662        | 3        | 17          | 90      | 1807            | 1389            | 1726            | 4919771        | 4800000                   | 5599999                 |  |
| 8   | 997991        | 2        | 17          | 80      | 1237            | 1807            | 0               | 5922684        | 5600000                   | 6399999                 |  |
| 9   | 907054        | 1        | 17          | 90      | 1277            | 0               | 0               | 6832782        | 6400000                   | 7199999                 |  |
| 10  | 973423        | 1        | 17          | 65      | 1729            | 0               | 0               | 7807482        | 7200000                   | 7999999                 |  |
| 11  | 832031        | 3        | 17          | 50      | 1962            | 1421            | 1204            | 8641242        | 8000000                   | 8799999                 |  |
| 12  | 471415        | 3        | 17          | 95      | 1748            | 1121            | 1231            | 9117244        | 8800000                   | 9599999                 |  |
| 13  | 986834        | 3        | 17          | 65      | 1304            | 1058            | 1171            | 10108178       | 9600000                   | 10399999                |  |
| 14  | 1075362       | 1        | 17          | 60      | 1777            | 0               | 0               | 11187073       | 10400000                  | 11199999                |  |
| 15  | 627527        | 1        | 17          | 85      | 1396            | 0               | 0               | 11816377       | 11200000                  | 11999999                |  |

Total number of pulses in waveform = 32

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**Type 5 Radar Waveform\_16**

| Type 5 Radar Waveform_16                          |               |          |             |         |                 |                 |                 |                |                           |                         |  |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|--|
| Num of Bursts = 8<br>Burst Interval (us)= 1500000 |               |          |             |         |                 |                 |                 |                |                           |                         |  |
| Burst #   | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |  |
| 1   | 798699        | 2        | 19          | 90      | 1506            | 1518            | 0               | 798699         | 0                         | 1499999                 |  |
| 2   | 1879840       | 2        | 19          | 65      | 1113            | 1877            | 0               | 2681563        | 1500000                   | 2999999                 |  |
| 3   | 1613962       | 1        | 19          | 100     | 1642            | 0               | 0               | 4298515        | 3000000                   | 4499999                 |  |
| 4   | 1663037       | 3        | 19          | 80      | 1842            | 1037            | 1584            | 5963194        | 4500000                   | 5999999                 |  |
| 5   | 581731        | 2        | 19          | 50      | 1630            | 1777            | 0               | 6549388        | 6000000                   | 7499999                 |  |
| 6   | 2008835       | 3        | 19          | 75      | 1911            | 1026            | 1218            | 8561630        | 7500000                   | 8999999                 |  |
| 7   | 1226373       | 3        | 19          | 50      | 1809            | 1502            | 1336            | 9792158        | 9000000                   | 10499999                |  |
| 8   | 2024828       | 2        | 19          | 65      | 1221            | 1177            | 0               | 11821633       | 10500000                  | 11999999                |  |

Total number of pulses in waveform = 18

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### Type 5 Radar Waveform\_17

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 343199        | 1        | 9           | 80      | 1473            | 0               | 0               | 343199         | 0                         | 857142                  |
| 2       | 670500        | 2        | 9           | 95      | 1400            | 1443            | 0               | 1015172        | 857143                    | 1714285                 |
| 3       | 1247474       | 2        | 9           | 85      | 1729            | 1519            | 0               | 2265489        | 1714286                   | 2571428                 |
| 4       | 709708        | 2        | 9           | 90      | 1651            | 1477            | 0               | 2978445        | 2571429                   | 3428571                 |
| 5       | 636975        | 1        | 9           | 75      | 1966            | 0               | 0               | 3618548        | 3428572                   | 4285714                 |
| 6       | 1046475       | 1        | 9           | 70      | 1976            | 0               | 0               | 4666989        | 4285715                   | 5142857                 |
| 7       | 1230259       | 2        | 9           | 75      | 1215            | 1728            | 0               | 5899224        | 5142858                   | 6000000                 |
| 8       | 878099        | 2        | 9           | 70      | 1291            | 1089            | 0               | 6780266        | 6000001                   | 6857143                 |
| 9       | 755160        | 2        | 9           | 95      | 1448            | 1353            | 0               | 7537806        | 6857144                   | 7714286                 |
| 10      | 914557        | 1        | 9           | 80      | 1546            | 0               | 0               | 8455164        | 7714287                   | 8571429                 |
| 11      | 244101        | 3        | 9           | 60      | 1839            | 1694            | 1050            | 8700811        | 8571430                   | 9428572                 |
| 12      | 1200364       | 2        | 9           | 65      | 1640            | 1708            | 0               | 9905758        | 9428573                   | 10285715                |
| 13      | 565195        | 2        | 9           | 85      | 1886            | 1208            | 0               | 10474301       | 10285716                  | 11142858                |
| 14      | 726419        | 2        | 9           | 90      | 1209            | 1394            | 0               | 11203814       | 11142859                  | 12000001                |

Total number of pulses in waveform = 25

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### Type 5 Radar Waveform\_18

Num of Bursts = 19  
Burst Interval (us)= 631579

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 233215        | 1        | 14          | 95      | 1570            | 0               | 0               | 233215         | 0                         | 631578                  |
| 2       | 865714        | 3        | 14          | 95      | 1771            | 1613            | 1207            | 1100499        | 631579                    | 1263157                 |
| 3       | 629055        | 1        | 14          | 50      | 1062            | 0               | 0               | 1734145        | 1263158                   | 1894736                 |
| 4       | 747484        | 3        | 14          | 55      | 1252            | 1574            | 1860            | 2482691        | 1894737                   | 2526315                 |
| 5       | 164086        | 3        | 14          | 85      | 1016            | 1333            | 1478            | 2651463        | 2526316                   | 3157894                 |
| 6       | 617894        | 1        | 14          | 70      | 1468            | 0               | 0               | 3273184        | 3157895                   | 3789473                 |
| 7       | 918459        | 2        | 14          | 90      | 1387            | 1709            | 0               | 4193111        | 3789474                   | 4421052                 |
| 8       | 747867        | 2        | 14          | 90      | 1783            | 1313            | 0               | 4944074        | 4421053                   | 5052631                 |
| 9       | 650116        | 3        | 14          | 95      | 1196            | 1240            | 1923            | 5697286        | 5052632                   | 5684210                 |
| 10      | 232644        | 3        | 14          | 55      | 1765            | 1963            | 1789            | 6834289        | 5684211                   | 6315789                 |
| 11      | 999142        | 2        | 14          | 75      | 1285            | 1101            | 0               | 6838948        | 6315790                   | 6947368                 |
| 12      | 292203        | 1        | 14          | 95      | 1737            | 0               | 0               | 7133537        | 6947369                   | 7578947                 |
| 13      | 958954        | 3        | 14          | 100     | 1944            | 1055            | 1239            | 8094228        | 7578948                   | 8210526                 |
| 14      | 375482        | 2        | 14          | 100     | 1014            | 1263            | 0               | 8473948        | 8210527                   | 8842105                 |
| 15      | 427536        | 3        | 14          | 95      | 1154            | 1456            | 1372            | 8903761        | 8842106                   | 9473684                 |
| 16      | 1143517       | 3        | 14          | 60      | 1883            | 1673            | 1337            | 10051260       | 9473685                   | 10105263                |
| 17      | 537988        | 2        | 14          | 85      | 1860            | 1811            | 0               | 10594141       | 10105264                  | 10736842                |
| 18      | 275138        | 3        | 14          | 65      | 1842            | 1874            | 1936            | 10872950       | 10736843                  | 11368421                |
| 19      | 942154        | 1        | 14          | 100     | 1101            | 0               | 0               | 11820756       | 11368422                  | 12000000                |

Total number of pulses in waveform = 42

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### Type 5 Radar Waveform\_19

Num of Bursts = 20

Burst Interval (us)= 600000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 398647        | 1        | 18          | 90      | 1655            | 0               | 0               | 395647         | 0                         | 599999                  |
| 2       | 642678        | 2        | 18          | 60      | 1112            | 1886            | 0               | 1039980        | 600000                    | 1199999                 |
| 3       | 348308        | 2        | 18          | 60      | 1813            | 1052            | 0               | 1391286        | 1200000                   | 1799999                 |
| 4       | 979140        | 3        | 18          | 55      | 1194            | 1995            | 1098            | 2373291        | 1800000                   | 2399999                 |
| 5       | 520035        | 3        | 18          | 65      | 1363            | 1895            | 1238            | 2897613        | 2400000                   | 2999999                 |
| 6       | 192839        | 3        | 18          | 80      | 1373            | 1066            | 1437            | 3094948        | 3000000                   | 3599999                 |
| 7       | 996866        | 3        | 18          | 55      | 1526            | 1936            | 1407            | 4095680        | 3600000                   | 4199999                 |
| 8       | 552213        | 1        | 18          | 50      | 1128            | 0               | 0               | 4652762        | 4200000                   | 4799999                 |
| 9       | 561770        | 3        | 18          | 55      | 1655            | 1331            | 1628            | 5215660        | 4800000                   | 5399999                 |
| 10      | 554307        | 3        | 18          | 65      | 1126            | 1953            | 1467            | 5774581        | 5400000                   | 5999999                 |
| 11      | 589594        | 3        | 18          | 90      | 1486            | 1438            | 1375            | 6368721        | 6000000                   | 6599999                 |
| 12      | 486752        | 2        | 18          | 75      | 1264            | 1313            | 0               | 6859772        | 6600000                   | 7199999                 |
| 13      | 501461        | 2        | 18          | 85      | 1298            | 1935            | 0               | 7363810        | 7200000                   | 7799999                 |
| 14      | 522388        | 1        | 18          | 75      | 1361            | 0               | 0               | 7889431        | 7800000                   | 8399999                 |
| 15      | 909565        | 1        | 18          | 75      | 1654            | 0               | 0               | 8800357        | 8400000                   | 8999999                 |
| 16      | 685626        | 3        | 18          | 90      | 1858            | 1320            | 1926            | 9487637        | 9000000                   | 9699999                 |
| 17      | 556112        | 3        | 18          | 70      | 1389            | 1758            | 1583            | 10048853       | 9600000                   | 10199999                |
| 18      | 700289        | 3        | 18          | 60      | 1998            | 1391            | 1613            | 10753872       | 10200000                  | 10799999                |
| 19      | 597681        | 2        | 18          | 75      | 1584            | 1720            | 0               | 11356555       | 10800000                  | 11399999                |
| 20      | 327928        | 2        | 18          | 75      | 1174            | 1805            | 0               | 11687787       | 11400000                  | 11999999                |

Total number of pulses in waveform = 46

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### Type 5 Radar Waveform\_20

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1                                       | 607192        | 3        | 6           | 55      | 1517            | 1693            | 1309            | 607192         | 0                        | 666666                 |
| 2                                       | 688603        | 2        | 6           | 55      | 1036            | 1350            | 0               | 1300114        | 666667                   | 1333333                |
| 3                                       | 613286        | 3        | 6           | 75      | 1623            | 1077            | 1686            | 1915786        | 1333334                  | 2000000                |
| 4                                       | 606018        | 2        | 6           | 55      | 1565            | 1449            | 0               | 2526190        | 2000001                  | 2666667                |
| 5                                       | 514461        | 2        | 6           | 70      | 1599            | 1247            | 0               | 3043665        | 2666668                  | 3333334                |
| 6                                       | 662524        | 3        | 6           | 95      | 1618            | 1449            | 1066            | 3709035        | 3333335                  | 4000001                |
| 7                                       | 796806        | 3        | 6           | 90      | 1034            | 1867            | 1875            | 4509974        | 4000002                  | 4666668                |
| 8                                       | 333480        | 1        | 6           | 90      | 1262            | 0               | 0               | 4848230        | 4666669                  | 5333335                |
| 9                                       | 10986560      | 3        | 6           | 70      | 1863            | 1762            | 1797            | 5948052        | 5333336                  | 6000002                |
| 10                                      | 555508        | 2        | 6           | 50      | 1528            | 1320            | 0               | 6508982        | 6000003                  | 6666669                |
| 11                                      | 604125        | 1        | 6           | 90      | 1511            | 0               | 0               | 7115955        | 6666670                  | 7333336                |
| 12                                      | 782278        | 2        | 6           | 60      | 1014            | 1212            | 0               | 7899744        | 7333337                  | 8000003                |
| 13                                      | 308035        | 1        | 6           | 60      | 1237            | 0               | 0               | 8210005        | 8000004                  | 8666670                |
| 14                                      | 891764        | 2        | 6           | 75      | 1738            | 1671            | 0               | 9102996        | 8666671                  | 9333337                |
| 15                                      | 440516        | 1        | 6           | 80      | 1892            | 0               | 0               | 9546921        | 9333338                  | 10000004               |
| 16                                      | 591587        | 1        | 6           | 65      | 1060            | 0               | 0               | 10140400       | 10000005                 | 10666671               |
| 17                                      | 849422        | 3        | 6           | 95      | 1279            | 1529            | 1625            | 10990882       | 10666672                 | 11333338               |
| 18                                      | 689259        | 2        | 6           | 75      | 1397            | 1545            | 0               | 11684574       | 11333339                 | 12000005               |
| Total number of pulses in waveform = 37 |               |          |             |         |                 |                 |                 |                |                          |                        |
| *****                                   |               |          |             |         |                 |                 |                 |                |                          |                        |

### Type 5 Radar Waveform\_21

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1                                       | 33725         | 2        | 14          | 80      | 1594            | 1081            | 0               | 33725          | 0                        | 705881                 |
| 2                                       | 687825        | 1        | 14          | 80      | 1766            | 0               | 0               | 724225         | 705882                   | 1411763                |
| 3                                       | 1181575       | 1        | 14          | 65      | 1655            | 0               | 0               | 1907566        | 1411764                  | 2117645                |
| 4                                       | 571077        | 1        | 14          | 55      | 1013            | 0               | 0               | 2480298        | 2117646                  | 2823527                |
| 5                                       | 425113        | 3        | 14          | 50      | 1971            | 1253            | 1310            | 2906424        | 2823528                  | 3529409                |
| 6                                       | 621534        | 3        | 14          | 85      | 1063            | 1863            | 1883            | 3532492        | 3529410                  | 4235291                |
| 7                                       | 769416        | 3        | 14          | 50      | 1320            | 1642            | 1209            | 4306717        | 4235292                  | 4941173                |
| 8                                       | 1219610       | 1        | 14          | 55      | 1455            | 0               | 0               | 5530498        | 4941174                  | 5647055                |
| 9                                       | 536286        | 2        | 14          | 90      | 1337            | 1509            | 0               | 6068239        | 5647056                  | 6352937                |
| 10                                      | 486121        | 3        | 14          | 70      | 1237            | 1393            | 1070            | 6557206        | 6352938                  | 7058819                |
| 11                                      | 848376        | 3        | 14          | 55      | 1498            | 1975            | 1299            | 7409282        | 7058820                  | 7764701                |
| 12                                      | 429052        | 1        | 14          | 70      | 1555            | 0               | 0               | 7843106        | 7764702                  | 8470583                |
| 13                                      | 1152789       | 1        | 14          | 65      | 1282            | 0               | 0               | 8997450        | 8470584                  | 9176465                |
| 14                                      | 262414        | 2        | 14          | 70      | 1996            | 1831            | 0               | 9261146        | 9176466                  | 9882347                |
| 15                                      | 1182527       | 2        | 14          | 55      | 1762            | 1047            | 0               | 10447500       | 9882348                  | 10588229               |
| 16                                      | 471503        | 3        | 14          | 55      | 1232            | 1976            | 1876            | 10921812       | 10588230                 | 11294111               |
| 17                                      | 741199        | 3        | 14          | 50      | 1343            | 1924            | 1245            | 11668095       | 11294112                 | 11999993               |
| Total number of pulses in waveform = 35 |               |          |             |         |                 |                 |                 |                |                          |                        |
| *****                                   |               |          |             |         |                 |                 |                 |                |                          |                        |

### Type 5 Radar Waveform\_22

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1                                       | 354567        | 3        | 18          | 70      | 1911            | 1284            | 1793            | 354567         | 0                        | 631578                 |
| 2                                       | 491978        | 3        | 18          | 85      | 1391            | 1390            | 1388            | 851563         | 631579                   | 1263157                |
| 3                                       | 436470        | 3        | 18          | 85      | 1563            | 1827            | 1044            | 1292172        | 1263158                  | 1894736                |
| 4                                       | 1153683       | 1        | 18          | 95      | 1426            | 0               | 0               | 2460289        | 1894737                  | 2526315                |
| 5                                       | 611619        | 1        | 18          | 75      | 1459            | 0               | 0               | 3063334        | 2526316                  | 3157894                |
| 6                                       | 252736        | 2        | 18          | 50      | 1188            | 1802            | 0               | 3317529        | 3157895                  | 3789473                |
| 7                                       | 938377        | 3        | 18          | 75      | 1973            | 1202            | 1166            | 4258896        | 3789474                  | 4421052                |
| 8                                       | 496080        | 1        | 18          | 95      | 1801            | 0               | 0               | 4759317        | 4421053                  | 5052631                |
| 9                                       | 314298        | 1        | 18          | 80      | 1771            | 0               | 0               | 5075416        | 5052632                  | 5684210                |
| 10                                      | 977888        | 3        | 18          | 90      | 1833            | 1214            | 1790            | 6055075        | 5684211                  | 6315789                |
| 11                                      | 840190        | 2        | 18          | 100     | 1259            | 1394            | 0               | 6900102        | 6315790                  | 6947368                |
| 12                                      | 198113        | 3        | 18          | 100     | 1020            | 1972            | 1993            | 7100868        | 6947369                  | 7578947                |
| 13                                      | 999701        | 3        | 18          | 90      | 1825            | 1805            | 1570            | 8105554        | 7578948                  | 8210526                |
| 14                                      | 413645        | 1        | 18          | 95      | 1432            | 0               | 0               | 8524399        | 8210527                  | 8842105                |
| 15                                      | 657088        | 1        | 18          | 50      | 1162            | 0               | 0               | 9182919        | 8842106                  | 9473684                |
| 16                                      | 898533        | 3        | 18          | 60      | 1187            | 1498            | 1831            | 10082614       | 9473685                  | 10105263               |
| 17                                      | 141757        | 1        | 18          | 80      | 1950            | 0               | 0               | 10228887       | 10105264                 | 10736842               |
| 18                                      | 943827        | 2        | 18          | 80      | 1734            | 1159            | 0               | 11174664       | 10736843                 | 11368421               |
| 19                                      | 626270        | 2        | 18          | 90      | 1031            | 1109            | 0               | 11803827       | 11368422                 | 12000000               |
| Total number of pulses in waveform = 39 |               |          |             |         |                 |                 |                 |                |                          |                        |
| *****                                   |               |          |             |         |                 |                 |                 |                |                          |                        |

### Type 5 Radar Waveform\_23

Num of Bursts = 8  
Burst Interval (us)= 1500000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1       | 1471690       | 2        | 19          | 85      | 1290            | 1892            | 0               | 1471690        | 0                        | 1499999                |
| 2       | 80289         | 1        | 19          | 70      | 1055            | 0               | 0               | 1555161        | 1500000                  | 2999999                |
| 3       | 2649275       | 1        | 19          | 50      | 1911            | 0               | 0               | 4205491        | 3000000                  | 4499999                |
| 4       | 1555750       | 3        | 19          | 50      | 1859            | 1741            | 1770            | 5763152        | 4500000                  | 5999999                |
| 5       | 806579        | 2        | 19          | 85      | 1301            | 1067            | 0               | 6575101        | 6000000                  | 7499999                |
| 6       | 2174551       | 2        | 19          | 65      | 1830            | 1763            | 0               | 8752020        | 7500000                  | 8999999                |
| 7       | 302401        | 2        | 19          | 85      | 1863            | 1074            | 0               | 9058014        | 9000000                  | 10499999               |
| 8       | 2856485       | 1        | 19          | 65      | 1554            | 0               | 0               | 11917436       | 10500000                 | 11999999               |

Total number of pulses in waveform = 14

### Type 5 Radar Waveform\_24

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1       | 461009        | 3        | 12          | 75      | 1141            | 1458            | 1112            | 461009         | 0                        | 599999                 |
| 2       | 5177113       | 2        | 12          | 60      | 1825            | 1453            | 0               | 782433         | 600000                   | 1199999                |
| 3       | 451027        | 3        | 12          | 60      | 1235            | 1453            | 1477            | 1236738        | 1200000                  | 1799999                |
| 4       | 614879        | 1        | 12          | 85      | 1186            | 0               | 0               | 1855782        | 1800000                  | 2399999                |
| 5       | 702535        | 1        | 12          | 80      | 1008            | 0               | 0               | 2559503        | 2400000                  | 2999999                |
| 6       | 471325        | 2        | 12          | 65      | 1871            | 1519            | 0               | 3031836        | 3000000                  | 3599999                |
| 7       | 724667        | 3        | 12          | 65      | 1800            | 1540            | 1949            | 3759893        | 3600000                  | 4199999                |
| 8       | 927014        | 2        | 12          | 55      | 1507            | 1885            | 0               | 4692196        | 4200000                  | 4799999                |
| 9       | 211667        | 3        | 12          | 90      | 1441            | 1361            | 1485            | 4907255        | 4800000                  | 5399999                |
| 10      | 923243        | 3        | 12          | 70      | 1550            | 1547            | 1402            | 5834775        | 5400000                  | 5999999                |
| 11      | 419085        | 3        | 12          | 75      | 1861            | 1204            | 1977            | 6258359        | 6000000                  | 6599999                |
| 12      | 820846        | 1        | 12          | 90      | 1047            | 0               | 0               | 7084247        | 6600000                  | 7199999                |
| 13      | 544107        | 1        | 12          | 85      | 1693            | 0               | 0               | 7629401        | 7200000                  | 7799999                |
| 14      | 186896        | 1        | 12          | 90      | 1464            | 0               | 0               | 7816990        | 7800000                  | 8399999                |
| 15      | 984725        | 3        | 12          | 70      | 1828            | 1384            | 1061            | 8893179        | 8400000                  | 8999999                |
| 16      | 234116        | 3        | 12          | 65      | 1138            | 1391            | 1287            | 9041565        | 9000000                  | 9599999                |
| 17      | 965044        | 3        | 12          | 60      | 1367            | 1061            | 1524            | 10010428       | 9600000                  | 10199999               |
| 18      | 475211        | 3        | 12          | 95      | 1056            | 1604            | 1629            | 10489591       | 10200000                 | 10799999               |
| 19      | 808527        | 1        | 12          | 75      | 1822            | 0               | 0               | 11302407       | 10800000                 | 11399999               |
| 20      | 463402        | 1        | 12          | 80      | 1605            | 0               | 0               | 11767631       | 11400000                 | 11999999               |

Total number of pulses in waveform = 43

### Type 5 Radar Waveform\_25

Num of Bursts = 14  
Burst Interval (us)= 857143

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval(us) | End Burst Interval(us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|--------------------------|------------------------|
| 1       | 54986         | 2        | 5           | 55      | 1420            | 1276            | 0               | 54986          | 0                        | 857142                 |
| 2       | 846151        | 2        | 5           | 55      | 1289            | 1271            | 0               | 903833         | 857143                   | 1714285                |
| 3       | 1465543       | 1        | 5           | 100     | 1809            | 0               | 0               | 2372536        | 1714286                  | 2571428                |
| 4       | 718025        | 2        | 5           | 70      | 1380            | 1902            | 0               | 3092370        | 2571429                  | 3428571                |
| 5       | 728634        | 3        | 5           | 75      | 1984            | 1639            | 1632            | 3824286        | 3428572                  | 4285714                |
| 6       | 1229730       | 2        | 5           | 80      | 1786            | 1567            | 0               | 5059271        | 4285715                  | 5142857                |
| 7       | 549462        | 1        | 5           | 100     | 1994            | 0               | 0               | 5612086        | 5142858                  | 6000000                |
| 8       | 609981        | 2        | 5           | 75      | 1910            | 1248            | 0               | 6224061        | 6000001                  | 6857143                |
| 9       | 994329        | 1        | 5           | 80      | 1941            | 0               | 0               | 7221548        | 6857144                  | 7714286                |
| 10      | 1281559       | 1        | 5           | 100     | 1999            | 1624            | 1024            | 8505048        | 7714287                  | 8571429                |
| 11      | 442592        | 3        | 5           | 80      | 1345            | 0               | 0               | 8952287        | 8571430                  | 9428572                |
| 12      | 621758        | 3        | 5           | 50      | 1574            | 1992            | 1390            | 9575390        | 9428573                  | 10285715               |
| 13      | 916167        | 1        | 5           | 95      | 1329            | 0               | 0               | 10496513       | 10285716                 | 11142858               |
| 14      | 1419555       | 3        | 5           | 100     | 1848            | 1017            | 1521            | 11917397       | 11142859                 | 12000001               |

Total number of pulses in waveform = 27

### Type 5 Radar Waveform\_26

Num of Bursts = 8  
Burst Interval (us)= 1500000

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 487771        | 3        | 8           | 80      | 1148            | 1923            | 1636            | 487771         | 0                         | 1499999                 |
| 2       | 1325058       | 3        | 8           | 85      | 1727            | 1107            | 1138            | 1817536        | 1500000                   | 2999999                 |
| 3       | 1362349       | 2        | 8           | 90      | 1732            | 1946            | 0               | 3183857        | 3000000                   | 4499999                 |
| 4       | 2226459       | 2        | 8           | 75      | 1781            | 1520            | 0               | 5413994        | 4500000                   | 5999999                 |
| 5       | 1286158       | 2        | 8           | 75      | 1663            | 1782            | 0               | 6703453        | 6000000                   | 7499999                 |
| 6       | 1680685       | 3        | 8           | 55      | 1444            | 1749            | 1018            | 8387583        | 7500000                   | 8999999                 |
| 7       | 756511        | 3        | 8           | 90      | 1157            | 1723            | 1567            | 9148305        | 9000000                   | 10499999                |
| 8       | 1683604       | 1        | 8           | 90      | 1892            | 0               | 0               | 10836356       | 10500000                  | 11999999                |

Total number of pulses in waveform = 19

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### Type 5 Radar Waveform\_27

Num of Bursts = 13  
Burst Interval (us)= 923077

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 470054        | 1        | 6           | 80      | 1581            | 0               | 0               | 470054         | 0                         | 923076                  |
| 2       | 1214193       | 2        | 6           | 90      | 1873            | 1043            | 0               | 1685828        | 923077                    | 1846153                 |
| 3       | 504201        | 3        | 6           | 55      | 1328            | 1892            | 1518            | 2192945        | 1846154                   | 2769230                 |
| 4       | 1260883       | 2        | 6           | 85      | 1688            | 1657            | 0               | 3458566        | 2769231                   | 3692307                 |
| 5       | 459095        | 3        | 6           | 100     | 1175            | 1856            | 1541            | 3921006        | 3692308                   | 4615384                 |
| 6       | 1086473       | 1        | 6           | 80      | 1823            | 0               | 0               | 5012051        | 4615385                   | 5538461                 |
| 7       | 1231232       | 1        | 6           | 80      | 1666            | 0               | 0               | 6245106        | 5538462                   | 6461538                 |
| 8       | 537993        | 2        | 6           | 100     | 1734            | 1539            | 0               | 6784765        | 6461539                   | 7384615                 |
| 9       | 747712        | 2        | 6           | 95      | 1075            | 1704            | 0               | 7535750        | 7384616                   | 8307692                 |
| 10      | 1624581       | 2        | 6           | 60      | 1133            | 1802            | 0               | 9163110        | 8307693                   | 9230769                 |
| 11      | 915689        | 2        | 6           | 55      | 1671            | 1977            | 0               | 10081734       | 9230770                   | 10153846                |
| 12      | 923448        | 1        | 6           | 70      | 1533            | 0               | 0               | 11008830       | 10153847                  | 11076923                |
| 13      | 490288        | 1        | 6           | 100     | 1152            | 0               | 0               | 11500651       | 11076924                  | 12000000                |

Total number of pulses in waveform = 23

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### Type 5 Radar Waveform\_28

Num of Bursts = 17  
Burst Interval (us)= 705882

| Burst # | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---------|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1       | 367828        | 3        | 17          | 85      | 1165            | 1187            | 1769            | 367828         | 0                         | 705881                  |
| 2       | 796837        | 2        | 17          | 65      | 1795            | 1314            | 0               | 1168786        | 705882                    | 1411763                 |
| 3       | 687925        | 1        | 17          | 75      | 1204            | 0               | 0               | 1859820        | 1411764                   | 2117645                 |
| 4       | 354409        | 3        | 17          | 80      | 1356            | 1647            | 1413            | 2215433        | 2117646                   | 2823527                 |
| 5       | 970918        | 1        | 17          | 95      | 1056            | 0               | 0               | 3190767        | 2823528                   | 3529409                 |
| 6       | 616226        | 3        | 17          | 75      | 1178            | 1968            | 1849            | 3808049        | 3529410                   | 4235291                 |
| 7       | 754652        | 2        | 17          | 85      | 1270            | 1527            | 0               | 4567696        | 4235292                   | 4941173                 |
| 8       | 485694        | 1        | 17          | 95      | 1302            | 0               | 0               | 5056187        | 4941174                   | 5647055                 |
| 9       | 1285191       | 1        | 17          | 55      | 1727            | 0               | 0               | 6342680        | 5647056                   | 6352937                 |
| 10      | 372175        | 3        | 17          | 85      | 1544            | 1362            | 1996            | 6716582        | 6352938                   | 7058819                 |
| 11      | 750646        | 2        | 17          | 90      | 1746            | 1138            | 0               | 7472130        | 7058820                   | 7764701                 |
| 12      | 506399        | 3        | 17          | 95      | 1425            | 1479            | 1805            | 7981413        | 7764702                   | 8470583                 |
| 13      | 948311        | 2        | 17          | 80      | 1858            | 1823            | 0               | 8934433        | 8470584                   | 9176465                 |
| 14      | 810172        | 2        | 17          | 70      | 1823            | 1996            | 0               | 9748286        | 9176466                   | 9882347                 |
| 15      | 167133        | 2        | 17          | 100     | 1162            | 1258            | 0               | 9919238        | 9882348                   | 10588229                |
| 16      | 1205742       | 1        | 17          | 85      | 1532            | 0               | 0               | 11127400       | 10588230                  | 11294111                |
| 17      | 255404        | 2        | 17          | 60      | 1114            | 1871            | 0               | 11384336       | 11294112                  | 11999993                |

Total number of pulses in waveform = 34

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### Type 5 Radar Waveform\_29

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 720140        | 3        | 10          | 95      | 1805            | 1564            | 1567            | 720140         | 0                         | 799999                  |
| 2                                       | 415107        | 1        | 10          | 95      | 1288            | 0               | 0               | 1140183        | 800000                    | 1599999                 |
| 3                                       | 1076385       | 2        | 10          | 50      | 1076            | 1413            | 0               | 2217856        | 1600000                   | 2399999                 |
| 4                                       | 660781        | 3        | 10          | 65      | 1023            | 1990            | 1665            | 2881126        | 2400000                   | 3199999                 |
| 5                                       | 1059258       | 3        | 10          | 60      | 1155            | 1464            | 1701            | 3945062        | 3200000                   | 3999999                 |
| 6                                       | 805634        | 1        | 10          | 55      | 1371            | 0               | 0               | 4755016        | 4000000                   | 4799999                 |
| 7                                       | 684788        | 1        | 10          | 75      | 1547            | 0               | 0               | 5441175        | 4800000                   | 5599999                 |
| 8                                       | 253795        | 3        | 10          | 95      | 1376            | 1138            | 1107            | 5696517        | 5600000                   | 6399999                 |
| 9                                       | 959461        | 1        | 10          | 55      | 1555            | 0               | 0               | 6659599        | 6400000                   | 7199999                 |
| 10                                      | 1319468       | 2        | 10          | 90      | 1908            | 1987            | 0               | 7980622        | 7200000                   | 7999999                 |
| 11                                      | 647820        | 3        | 10          | 80      | 1780            | 1972            | 1099            | 8632337        | 8000000                   | 8799999                 |
| 12                                      | 550723        | 3        | 10          | 100     | 1327            | 1941            | 1916            | 9187911        | 8800000                   | 9599999                 |
| 13                                      | 722694        | 2        | 10          | 60      | 1152            | 1592            | 0               | 9915789        | 9600000                   | 10399999                |
| 14                                      | 525156        | 1        | 10          | 50      | 1322            | 0               | 0               | 10443689       | 10400000                  | 11199999                |
| 15                                      | 1208703       | 3        | 10          | 75      | 1694            | 1141            | 1538            | 11653714       | 11200000                  | 11999999                |
| Total number of pulses in waveform = 32 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

### Type 5 Radar Waveform\_30

| Burst #                                 | Off Time (us) | # Pulses | Chirp (MHz) | PW (us) | Pulse 1 Pri(us) | Pulse 2 Pri(us) | Pulse 3 Pri(us) | Start Loc (us) | Start Burst Interval (us) | End Burst Interval (us) |
|---|---------------|----------|-------------|---------|-----------------|-----------------|-----------------|----------------|---------------------------|-------------------------|
| 1                                       | 696855        | 2        | 9           | 85      | 1581            | 1786            | 0               | 696855         | 0                         | 857142                  |
| 2                                       | 423521        | 3        | 9           | 90      | 1944            | 1465            | 1845            | 1123743        | 857143                    | 1714285                 |
| 3                                       | 1120633       | 3        | 9           | 55      | 1804            | 1824            | 1264            | 2249630        | 1714286                   | 2571428                 |
| 4                                       | 421834        | 3        | 9           | 100     | 1948            | 1965            | 1690            | 2676356        | 2571429                   | 3428571                 |
| 5                                       | 894557        | 1        | 9           | 75      | 1153            | 0               | 0               | 3576516        | 3428572                   | 4285714                 |
| 6                                       | 1476266       | 2        | 9           | 70      | 1781            | 1305            | 0               | 5053935        | 4285715                   | 5142857                 |
| 7                                       | 257529        | 2        | 9           | 75      | 1886            | 1493            | 0               | 5314550        | 5142858                   | 6000000                 |
| 8                                       | 1371955       | 3        | 9           | 75      | 1362            | 1216            | 1948            | 6689884        | 6000001                   | 6857143                 |
| 9                                       | 632952        | 1        | 9           | 85      | 1899            | 0               | 0               | 7327362        | 6857144                   | 7714286                 |
| 10                                      | 1038782       | 3        | 9           | 90      | 1227            | 1030            | 1025            | 8368043        | 7714287                   | 8571429                 |
| 11                                      | 695664        | 2        | 9           | 50      | 1179            | 1479            | 0               | 9066989        | 8571430                   | 9428572                 |
| 12                                      | 1079519       | 3        | 9           | 55      | 1327            | 1582            | 1508            | 10149166       | 9428573                   | 10285715                |
| 13                                      | 696919        | 3        | 9           | 60      | 1905            | 1051            | 1052            | 10850502       | 10285716                  | 11142858                |
| 14                                      | 794552        | 1        | 9           | 60      | 1771            | 0               | 0               | 11649062       | 11142859                  | 12000001                |
| Total number of pulses in waveform = 32 |               |          |             |         |                 |                 |                 |                |                           |                         |
| *****                                   |               |          |             |         |                 |                 |                 |                |                           |                         |

## Radar Type 6 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5491                | 1                             | 16      | 5530                | 1                             |
| 2                        | 5491                | 1                             | 17      | 5531                | 1                             |
| 3                        | 5500                | 1                             | 18      | 5531                | 1                             |
| 4                        | 5500                | 1                             | 19      | 5540                | 1                             |
| 5                        | 5509                | 1                             | 20      | 5540                | 1                             |
| 6                        | 5509                | 1                             | 21      | 5549                | 1                             |
| 7                        | 5510                | 1                             | 22      | 5549                | 1                             |
| 8                        | 5510                | 1                             | 23      | 5550                | 1                             |
| 9                        | 5511                | 1                             | 24      | 5550                | 1                             |
| 10                       | 5511                | 1                             | 25      | 5551                | 1                             |
| 11                       | 5520                | 1                             | 26      | 5551                | 1                             |
| 12                       | 5520                | 1                             | 27      | 5560                | 1                             |
| 13                       | 5529                | 1                             | 28      | 5560                | 1                             |
| 14                       | 5529                | 1                             | 29      | 5569                | 1                             |
| 15                       | 5530                | 1                             | 30      | 5569                | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 100%                          |

| Radar waveform #1 |                 |                  | Radar waveform #2 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 0                 | 5494            | 0                | 0                 | 5526            | 0                |
| 2                 | 5537            | 6                | 10                | 5516            | 30               |
| 3                 | 5502            | 9                | 13                | 5537            | 39               |
| 11                | 5482            | 33               | 15                | 5525            | 45               |
| 13                | 5519            | 39               | 16                | 5522            | 48               |
| 16                | 5529            | 48               | 20                | 5520            | 60               |
| 20                | 5488            | 60               | 21                | 5489            | 63               |
| 28                | 5522            | 84               | 33                | 5508            | 99               |
| 57                | 5506            | 171              | 36                | 5535            | 108              |
| 58                | 5513            | 174              | 37                | 5490            | 111              |
| 60                | 5512            | 180              | 52                | 5483            | 156              |
| 64                | 5517            | 192              | 59                | 5524            | 177              |
| 67                | 5534            | 201              | 63                | 5517            | 189              |
| 99                | 5484            | 297              | 67                | 5487            | 201              |
| --                | --              | --               | 83                | 5538            | 249              |

| Radar waveform #3 |                 |                  | Radar waveform #4 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 7                 | 5488            | 21               | 2                 | 5529            | 6                |
| 26                | 5485            | 78               | 5                 | 5488            | 15               |
| 37                | 5516            | 111              | 7                 | 5480            | 21               |
| 38                | 5535            | 114              | 15                | 5486            | 45               |
| 54                | 5480            | 162              | 25                | 5499            | 75               |
| 58                | 5502            | 174              | 26                | 5533            | 78               |
| 62                | 5528            | 186              | 32                | 5497            | 96               |
| 66                | 5520            | 198              | 42                | 5525            | 126              |
| 70                | 5511            | 210              | 49                | 5498            | 147              |
| 84                | 5508            | 252              | 72                | 5523            | 216              |
| 85                | 5496            | 255              | 82                | 5492            | 246              |
| 87                | 5521            | 261              | 85                | 5481            | 255              |
| --                | --              | --               | 94                | 5503            | 282              |

| Radar waveform #5 |                 |                  | Radar waveform #6 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 1                 | 5527            | 3                | 4                 | 5494            | 12               |
| 7                 | 5487            | 21               | 6                 | 5503            | 18               |
| 21                | 5537            | 63               | 7                 | 5484            | 21               |
| 26                | 5503            | 78               | 28                | 5504            | 84               |
| 38                | 5483            | 114              | 42                | 5495            | 126              |
| 46                | 5521            | 138              | 55                | 5534            | 165              |
| 47                | 5493            | 141              | 59                | 5535            | 177              |
| 49                | 5489            | 147              | 69                | 5523            | 207              |
| 71                | 5529            | 213              | 79                | 5528            | 237              |
| 78                | 5484            | 234              | 81                | 5488            | 243              |

| Radar waveform #7 |                 |                  | Radar waveform #8 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 3                 | 5480            | 9                | 3                 | 5501            | 9                |
| 5                 | 5502            | 15               | 11                | 5503            | 33               |
| 7                 | 5531            | 21               | 18                | 5493            | 54               |
| 21                | 5516            | 63               | 31                | 5509            | 93               |
| 23                | 5482            | 69               | 37                | 5514            | 111              |
| 38                | 5507            | 114              | 40                | 5540            | 120              |
| 61                | 5534            | 183              | 42                | 5495            | 126              |
| 62                | 5503            | 186              | 59                | 5491            | 177              |
| 63                | 5511            | 189              | 67                | 5532            | 201              |
| 69                | 5540            | 207              | --                | --              | --               |
| 75                | 5514            | 225              | --                | --              | --               |
| 76                | 5524            | 228              | --                | --              | --               |
| 81                | 5532            | 243              | --                | --              | --               |

| Radar waveform #9 |                 |                  | Radar waveform #10 |                 |                  |
|-------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 19                | 5527            | 57               | 3                  | 5534            | 9                |
| 29                | 5507            | 87               | 10                 | 5514            | 30               |
| 30                | 5505            | 90               | 11                 | 5487            | 33               |
| 40                | 5510            | 120              | 23                 | 5499            | 69               |
| 43                | 5491            | 129              | 28                 | 5506            | 84               |
| 58                | 5536            | 174              | 30                 | 5505            | 90               |
| 59                | 5502            | 177              | 37                 | 5480            | 111              |
| 89                | 5512            | 267              | 53                 | 5501            | 159              |
| 94                | 5538            | 282              | 55                 | 5538            | 165              |
| --                | --              | --               | 72                 | 5502            | 216              |
| --                | --              | --               | 78                 | 5520            | 234              |
| --                | --              | --               | 81                 | 5490            | 243              |
| --                | --              | --               | 84                 | 5539            | 252              |

| Radar waveform #11 |                 |                  | Radar waveform #12 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 14                 | 5535            | 42               | 5                  | 5502            | 15               |
| 17                 | 5489            | 51               | 6                  | 5482            | 18               |
| 27                 | 5532            | 81               | 16                 | 5509            | 48               |
| 37                 | 5485            | 111              | 19                 | 5533            | 57               |
| 53                 | 5514            | 159              | 26                 | 5538            | 78               |
| 57                 | 5522            | 171              | 29                 | 5485            | 87               |
| 58                 | 5523            | 174              | 30                 | 5511            | 90               |
| 76                 | 5494            | 228              | 34                 | 5507            | 102              |
| 78                 | 5487            | 234              | 42                 | 5487            | 126              |
| 82                 | 5483            | 246              | 54                 | 5515            | 162              |
| 83                 | 5526            | 249              | 59                 | 5492            | 177              |
| 91                 | 5530            | 273              | 65                 | 5493            | 195              |
| 97                 | 5517            | 291              | 67                 | 5480            | 201              |
| --                 | --              | --               | 69                 | 5514            | 207              |
| --                 | --              | --               | 71                 | 5512            | 213              |
| --                 | --              | --               | 72                 | 5537            | 216              |
| --                 | --              | --               | 76                 | 5526            | 228              |
| --                 | --              | --               | 80                 | 5481            | 240              |
| --                 | --              | --               | 81                 | 5494            | 243              |
| --                 | --              | --               | 83                 | 5488            | 249              |

| Radar waveform #13 |                 |                  | Radar waveform #14 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5520            | 6                | 8                  | 5484            | 24               |
| 7                  | 5533            | 21               | 13                 | 5523            | 39               |
| 24                 | 5499            | 72               | 18                 | 5534            | 54               |
| 29                 | 5492            | 87               | 37                 | 5495            | 111              |
| 33                 | 5539            | 99               | 43                 | 5508            | 129              |
| 36                 | 5535            | 108              | 48                 | 5518            | 144              |
| 40                 | 5509            | 120              | 52                 | 5485            | 156              |
| 42                 | 5493            | 126              | 55                 | 5501            | 165              |
| 52                 | 5489            | 156              | 60                 | 5525            | 180              |
| 63                 | 5521            | 189              | 63                 | 5515            | 189              |
| 65                 | 5480            | 195              | 66                 | 5538            | 198              |
| 83                 | 5529            | 249              | 71                 | 5497            | 213              |
| 86                 | 5494            | 258              | 75                 | 5505            | 225              |
| 90                 | 5491            | 270              | 77                 | 5517            | 231              |
| 92                 | 5526            | 276              | 86                 | 5536            | 258              |
| 95                 | 5522            | 285              | 91                 | 5488            | 273              |
| --                 | --              | --               | 93                 | 5529            | 279              |

| Radar waveform #15 |                 |                  | Radar waveform #16 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 4                  | 5502            | 12               | 13                 | 5488            | 39               |
| 11                 | 5489            | 33               | 30                 | 5480            | 90               |
| 17                 | 5532            | 51               | 36                 | 5527            | 108              |
| 22                 | 5488            | 66               | 41                 | 5504            | 123              |
| 28                 | 5540            | 84               | 63                 | 5491            | 189              |
| 40                 | 5536            | 120              | 68                 | 5503            | 204              |
| 43                 | 5486            | 129              | 74                 | 5536            | 222              |
| 53                 | 5485            | 159              | 77                 | 5481            | 231              |
| 55                 | 5504            | 165              | 85                 | 5519            | 255              |
| 67                 | 5511            | 201              | 88                 | 5501            | 264              |
| 86                 | 5493            | 258              | --                 | --              | --               |
| 87                 | 5531            | 261              | --                 | --              | --               |
| 91                 | 5517            | 273              | --                 | --              | --               |
| 97                 | 5534            | 291              | --                 | --              | --               |

| Radar waveform #17 |                 |                  | Radar waveform #18 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 3                  | 5531            | 9                | 1                  | 5494            | 3                |
| 36                 | 5516            | 108              | 8                  | 5488            | 24               |
| 60                 | 5537            | 180              | 12                 | 5484            | 36               |
| 76                 | 5491            | 228              | 17                 | 5508            | 51               |
| 91                 | 5483            | 273              | 25                 | 5510            | 75               |
| 96                 | 5528            | 288              | 32                 | 5531            | 96               |
| 98                 | 5508            | 294              | 46                 | 5506            | 138              |
| --                 | --              | --               | 60                 | 5532            | 180              |
| --                 | --              | --               | 65                 | 5537            | 195              |
| --                 | --              | --               | 69                 | 5480            | 207              |
| --                 | --              | --               | 72                 | 5489            | 216              |
| --                 | --              | --               | 76                 | 5520            | 228              |
| --                 | --              | --               | 80                 | 5501            | 240              |
| --                 | --              | --               | 88                 | 5492            | 264              |
| --                 | --              | --               | 90                 | 5538            | 270              |
| --                 | --              | --               | 92                 | 5490            | 276              |

| Radar waveform #19 |                 |                  | Radar waveform #20 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5488            | 6                | 4                  | 5521            | 12               |
| 5                  | 5513            | 15               | 24                 | 5492            | 72               |
| 10                 | 5526            | 30               | 28                 | 5504            | 84               |
| 16                 | 5522            | 48               | 29                 | 5488            | 87               |
| 26                 | 5481            | 78               | 30                 | 5493            | 90               |
| 27                 | 5483            | 81               | 39                 | 5509            | 117              |
| 34                 | 5506            | 102              | 45                 | 5535            | 135              |
| 44                 | 5531            | 132              | 56                 | 5518            | 168              |
| 60                 | 5515            | 180              | 74                 | 5512            | 222              |
| 74                 | 5537            | 222              | 79                 | 5506            | 237              |
| 82                 | 5484            | 246              | 84                 | 5513            | 252              |
| 89                 | 5508            | 267              | 86                 | 5482            | 258              |
| 95                 | 5535            | 285              | --                 | --              | --               |
| 97                 | 5494            | 291              | --                 | --              | --               |
| 98                 | 5539            | 294              | --                 | --              | --               |

| Radar waveform #21 |                 |                  | Radar waveform #22 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 19                 | 5531            | 57               | 4                  | 5487            | 12               |
| 20                 | 5525            | 60               | 11                 | 5534            | 33               |
| 21                 | 5540            | 63               | 23                 | 5480            | 69               |
| 23                 | 5507            | 69               | 31                 | 5490            | 93               |
| 27                 | 5533            | 81               | 34                 | 5499            | 102              |
| 36                 | 5505            | 108              | 37                 | 5520            | 111              |
| 37                 | 5526            | 111              | 41                 | 5536            | 123              |
| 40                 | 5491            | 120              | 42                 | 5489            | 126              |
| 41                 | 5493            | 123              | 43                 | 5510            | 129              |
| 45                 | 5503            | 135              | 45                 | 5529            | 135              |
| 56                 | 5523            | 168              | 48                 | 5492            | 144              |
| 82                 | 5517            | 246              | 60                 | 5500            | 180              |
| 88                 | 5510            | 264              | 75                 | 5497            | 225              |
| 92                 | 5536            | 276              | 99                 | 5503            | 297              |

| Radar waveform #23 |                 |                  | Radar waveform #24 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 7                  | 5516            | 21               | 5                  | 5482            | 15               |
| 15                 | 5497            | 45               | 9                  | 5488            | 27               |
| 20                 | 5508            | 60               | 15                 | 5525            | 45               |
| 53                 | 5511            | 159              | 30                 | 5527            | 90               |
| 57                 | 5504            | 171              | 38                 | 5538            | 114              |
| 64                 | 5495            | 192              | 59                 | 5504            | 177              |
| 94                 | 5503            | 282              | 68                 | 5492            | 204              |
| 96                 | 5485            | 288              | 69                 | 5518            | 207              |
| 98                 | 5517            | 294              | 73                 | 5506            | 219              |
| 99                 | 5499            | 297              | 74                 | 5530            | 222              |
| --                 | --              | --               | 75                 | 5486            | 225              |

| Radar waveform #25 |                 |                  | Radar waveform #26 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 6                  | 5507            | 18               | 32                 | 5480            | 96               |
| 12                 | 5486            | 36               | 37                 | 5482            | 111              |
| 13                 | 5489            | 39               | 44                 | 5494            | 132              |
| 21                 | 5495            | 63               | 46                 | 5504            | 138              |
| 26                 | 5521            | 78               | 56                 | 5525            | 168              |
| 32                 | 5483            | 96               | 61                 | 5500            | 183              |
| 56                 | 5527            | 168              | 62                 | 5534            | 186              |
| 57                 | 5525            | 171              | 75                 | 5505            | 225              |
| 68                 | 5510            | 204              | 83                 | 5519            | 249              |
| 79                 | 5480            | 237              | 91                 | 5516            | 273              |
| 86                 | 5539            | 258              | --                 | --              | --               |
| 96                 | 5481            | 288              | --                 | --              | --               |
| 98                 | 5524            | 294              | --                 | --              | --               |

| Radar waveform #27 |                 |                  | Radar waveform #28 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 0                  | 5531            | 0                | 0                  | 5512            | 0                |
| 3                  | 5500            | 9                | 4                  | 5519            | 12               |
| 4                  | 5540            | 12               | 6                  | 5483            | 18               |
| 28                 | 5480            | 84               | 10                 | 5502            | 30               |
| 41                 | 5522            | 123              | 12                 | 5481            | 36               |
| 44                 | 5488            | 132              | 14                 | 5484            | 42               |
| 68                 | 5489            | 204              | 15                 | 5523            | 45               |
| 73                 | 5496            | 219              | 17                 | 5487            | 51               |
| 77                 | 5490            | 231              | 19                 | 5525            | 57               |
| --                 | --              | --               | 20                 | 5508            | 60               |
| --                 | --              | --               | 26                 | 5486            | 78               |
| --                 | --              | --               | 31                 | 5514            | 93               |
| --                 | --              | --               | 48                 | 5526            | 144              |
| --                 | --              | --               | 53                 | 5485            | 159              |
| --                 | --              | --               | 57                 | 5521            | 171              |
| --                 | --              | --               | 64                 | 5480            | 192              |
| --                 | --              | --               | 69                 | 5516            | 207              |
| --                 | --              | --               | 72                 | 5492            | 216              |
| --                 | --              | --               | 88                 | 5494            | 264              |
| --                 | --              | --               | 89                 | 5527            | 267              |
| --                 | --              | --               | 95                 | 5489            | 285              |
| --                 | --              | --               | 97                 | 5537            | 291              |

| Radar waveform #29 |                 |                  | Radar waveform #30 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5520            | 6                | 6                  | 5534            | 18               |
| 8                  | 5485            | 24               | 15                 | 5509            | 45               |
| 17                 | 5494            | 51               | 30                 | 5512            | 90               |
| 22                 | 5523            | 66               | 35                 | 5495            | 105              |
| 25                 | 5519            | 75               | 47                 | 5486            | 141              |
| 31                 | 5517            | 93               | 48                 | 5537            | 144              |
| 32                 | 5496            | 96               | 63                 | 5520            | 189              |
| 40                 | 5528            | 120              | 65                 | 5519            | 195              |
| 58                 | 5513            | 174              | 85                 | 5491            | 255              |
| 79                 | 5498            | 237              | 87                 | 5526            | 261              |
| 84                 | 5488            | 252              | 89                 | 5510            | 267              |
| 97                 | 5508            | 291              | 90                 | 5493            | 270              |
| 99                 | 5526            | 297              | --                 | --              | --               |

## 6. CONCLUSION

The data collected relate only the item(s) tested and show that the **HAN Access Point, FCC ID: 2ALJ3AP211** is in compliance with FCC Rules.

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The End

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## Appendix A – Test Setup Photograph

Refer to “1808RSU025-UT” file.

## Appendix B – EUT Photograph

Refer to “1808RSU025-UE” file.