



# DFS MEASUREMENT REPORT

## FCC PART 15 Subpart E / RSS-247 Issue 2

**FCC ID:** 2AI9TOAW-AP1201

**APPLICANT:** ALE USA Inc.

**Application Type:** Certification

**Product:** OmniAccess Stellar

**Model No.:** OAW-AP1201

**Brand Name:** Alcatel-Lucent Enterprise

**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

**IC Part(s):** RSS-247 Issue 2

**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  |
|---------------|---------|----------------|------------|-------|
| 1810RSU015-U7 | Rev. 01 | Initial Report | 10-31-2018 | Valid |
|               |         |                |            |       |

Note: This report is supplemented to MRT Original “1808RSU025-U7” Report updating applicant, product name and model number.

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## §2.1033 General Information

|                                |                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant:</b>              | ALE USA Inc.                                                                                                                    |
| <b>Applicant Address:</b>      | 26801 West Agoura Road, Calabasas, CA 91301, United States.                                                                     |
| <b>Manufacturer:</b>           | ALE USA Inc.                                                                                                                    |
| <b>Manufacturer Address:</b>   | 26801 West Agoura Road, Calabasas, CA 91301, United States.                                                                     |
| <b>Test Site:</b>              | MRT Technology (Suzhou) Co., Ltd                                                                                                |
| <b>Test Site Address:</b>      | D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China                                              |
| <b>FCC Registration No.:</b>   | 893164                                                                                                                          |
| <b>IC Registration No.:</b>    | 11384A-1                                                                                                                        |
| <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:            | OmniAccess Stellar                                                                                  |
| Model No.:               | OAW-AP1201                                                                                          |
| Brand Name:              | Alcatel-Lucent Enterprise                                                                           |
| 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 |
| Wi-Fi Internal Antenna     |                      |          |                                  |       |                                     |                           |         |
| 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    |
| Bluetooth Internal Antenna |                      |          |                                  |       |                                     |                           |         |
| 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 =  $10 \log (N_{ANT} / N_{SS}) \text{ dB} = 3.01$ ;

- 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 =  $10 \cdot \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{ dBi}$ .



## 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 |


## 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  | --      | --        | --      | --        |

Note: The device can't operate in 5600~5650 MHz band in Canada (The frequency of blue font).

## 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<br>power spectral density < 10 dBm/MHz                 | -62 dBm                          |
| EIRP < 200 milliwatt that do not meet the power<br>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 $\left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{PRI_{\mu sec}} \right) \right\}$ | 60%                                        | 30                       |
|                                                                                                                                      |                    | Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A |                                                                                                                  |                                            |                          |
| 2                                                                                                                                    | 1-5                | 150-230                                                                                                                                                       | 23-29                                                                                                            | 60%                                        | 30                       |
| 3                                                                                                                                    | 6-10               | 200-500                                                                                                                                                       | 16-18                                                                                                            | 60%                                        | 30                       |
| 4                                                                                                                                    | 11-20              | 200-500                                                                                                                                                       | 12-16                                                                                                            | 60%                                        | 30                       |
| Aggregate (Radar Types 1-4)                                                                                                          |                    |                                                                                                                                                               |                                                                                                                  | 80%                                        | 120                      |
| Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests. |                    |                                                                                                                                                               |                                                                                                                  |                                            |                          |

**Table 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<br>Number | Pulse Repetition Frequency<br>(Pulses Per Second) | Pulse Repetition Interval<br>(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                       |

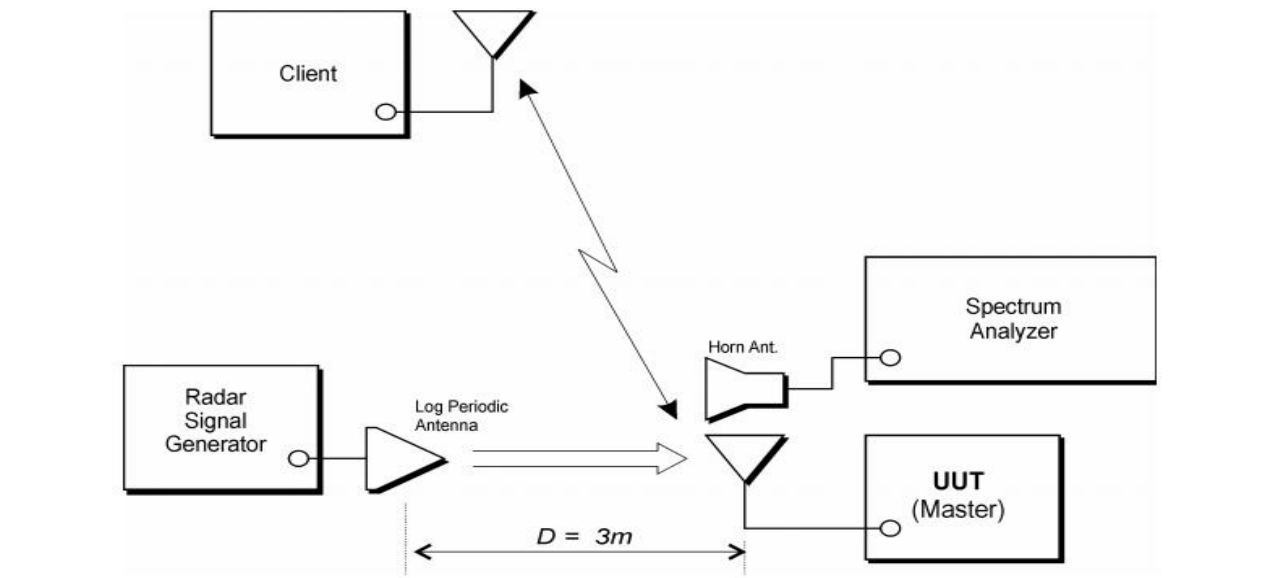
**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

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

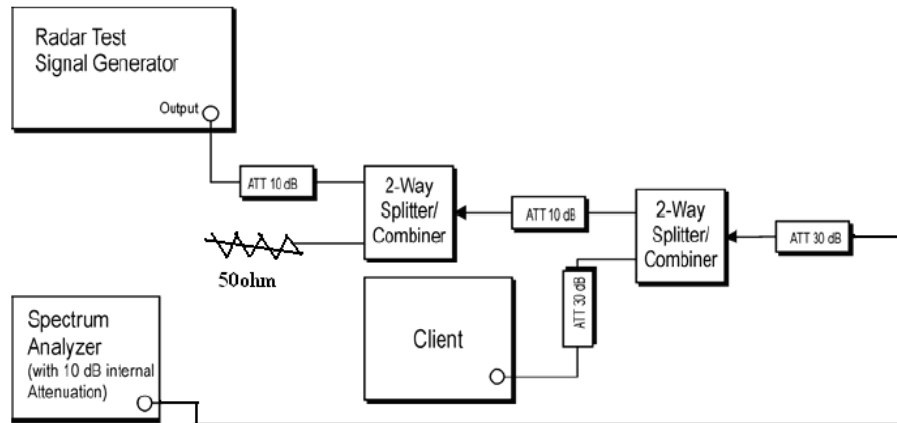
**Product Name:** OmniAccess Stellar  
**FCC ID:** 2AI9TOAW-AP1201

| 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.



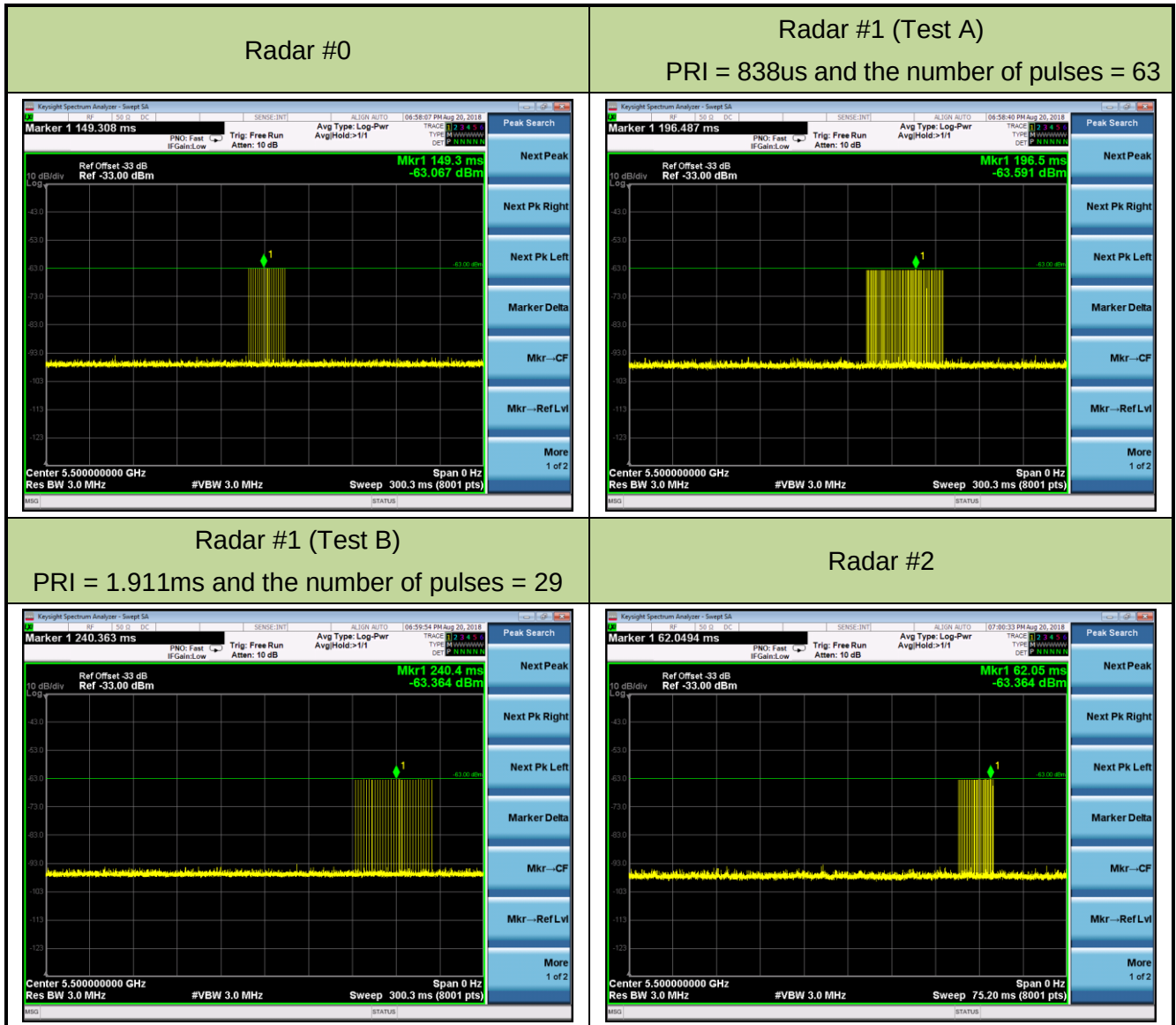
**Figure 3-2: Conducted Test Setup**

### 5.2.2. Calibration Procedure

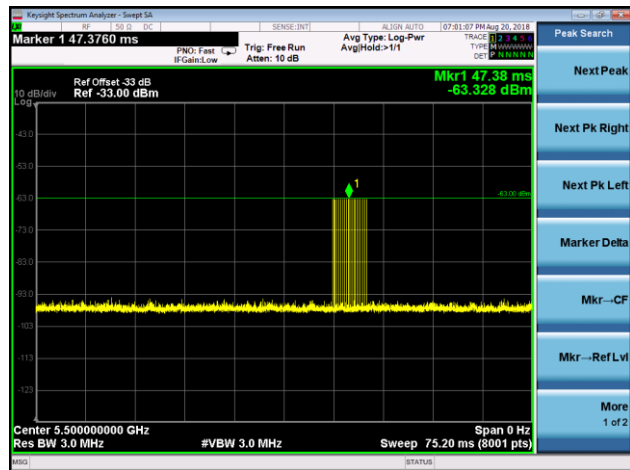
The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator 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

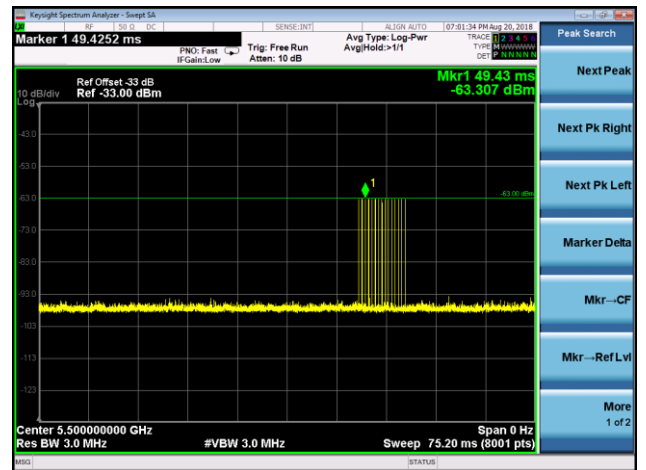
|               |                            |                   |            |
|---------------|----------------------------|-------------------|------------|
| Product       | OmniAccess Stellar         | Temperature       | 27°C       |
| Test Engineer | Amy Zhang                  | Relative Humidity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



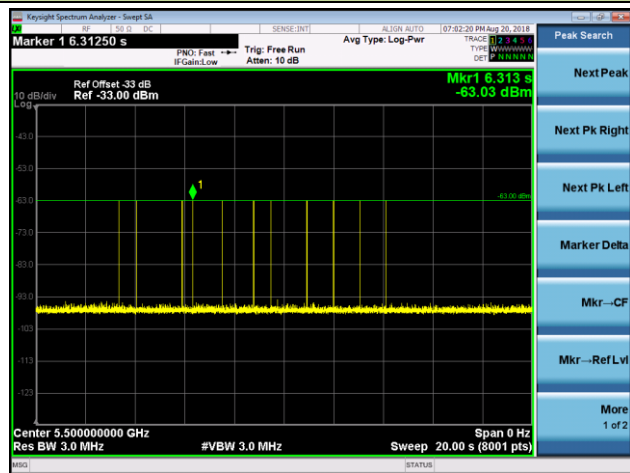
Radars #3



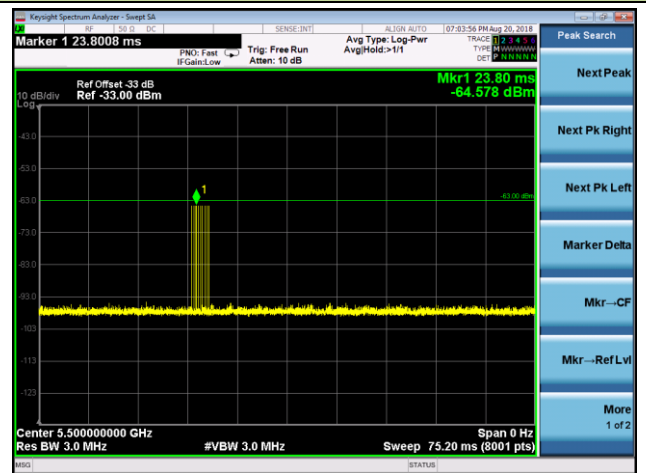
Radars #4



Radars #5

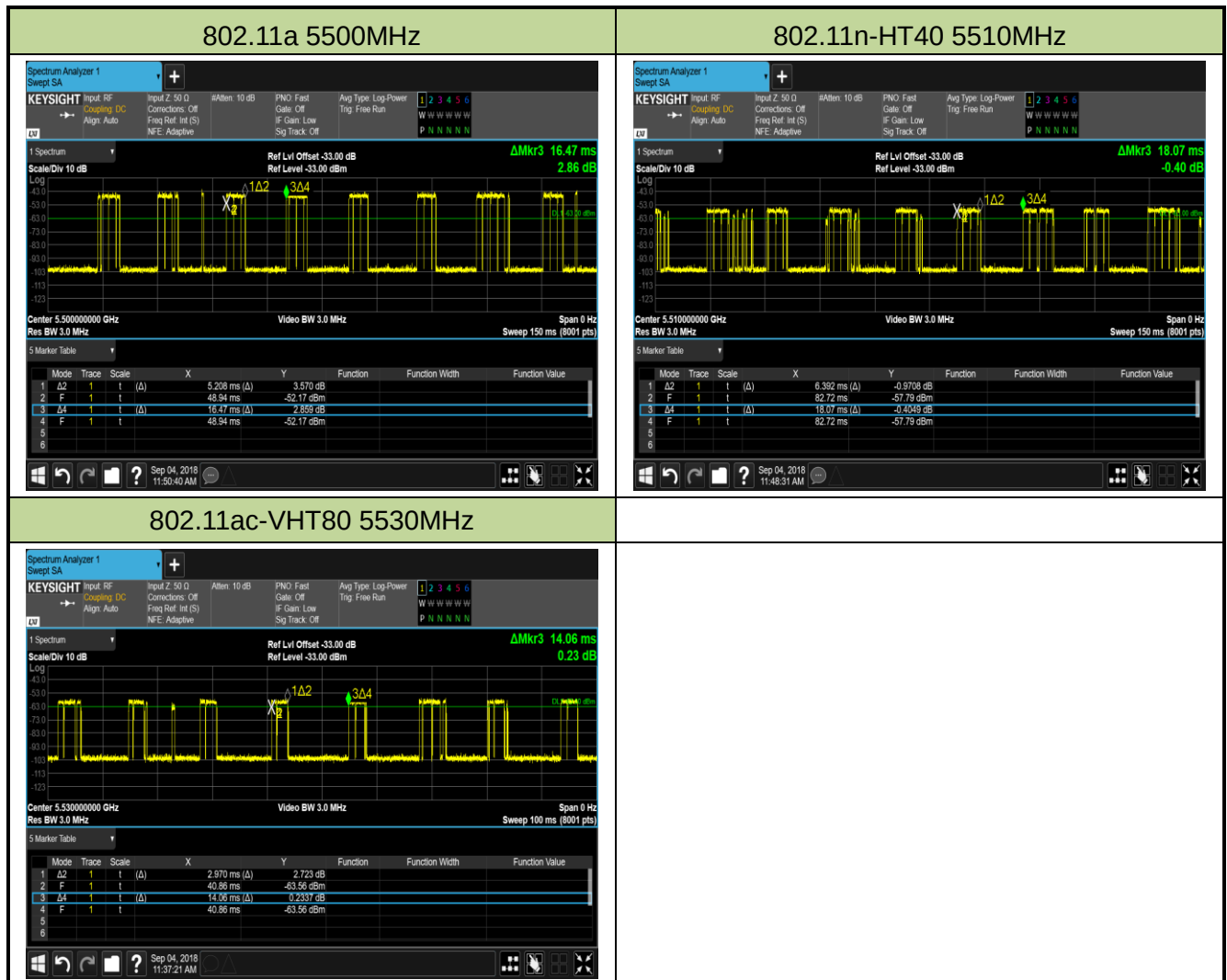


Radars #6



### 5.2.4. Channel Loading Test Result

|               |                    |                   |            |
|---------------|--------------------|-------------------|------------|
| Product       | OmniAccess Stellar | 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:  $\text{U-NII Detection Bandwidth} = \text{FH} - \text{FL}$
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       | OmniAccess Stellar                           | 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): 16.69MHz x 100% = 16.69MHz.

|               |                                                   |                   |            |
|---------------|---------------------------------------------------|-------------------|------------|
| Product       | OmniAccess Stellar                                | 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 FL                  | 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): 36.38MHz x 100% = 36.38MHz.

|               |                                                     |                   |            |
|---------------|-----------------------------------------------------|-------------------|------------|
| Product       | OmniAccess Stellar                                  | 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): 76.23MHz x 100% = 76.23MHz.

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

### **5.4.1. Test Limit**

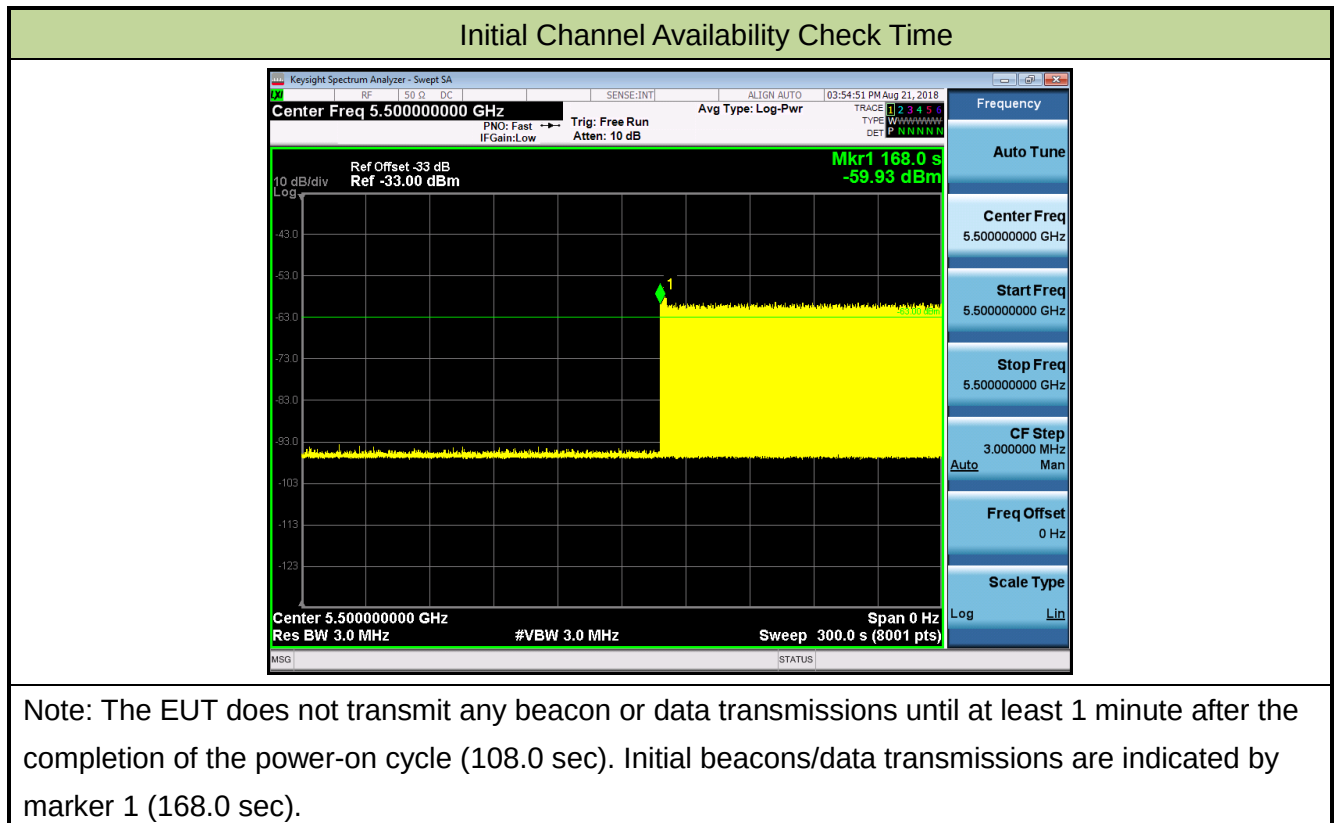
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

### **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       | OmniAccess Stellar                                               | 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.

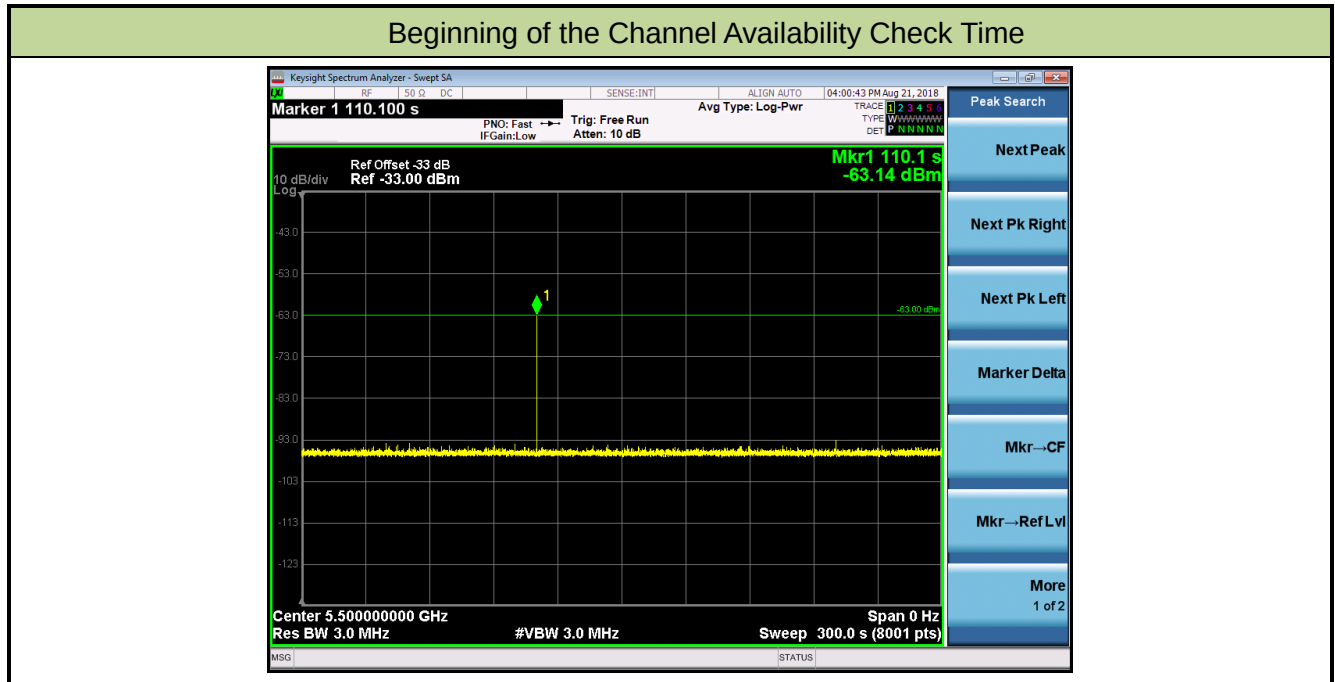
### **5.5.2. Test Procedure**

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       | OmniAccess Stellar                                                        | 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**

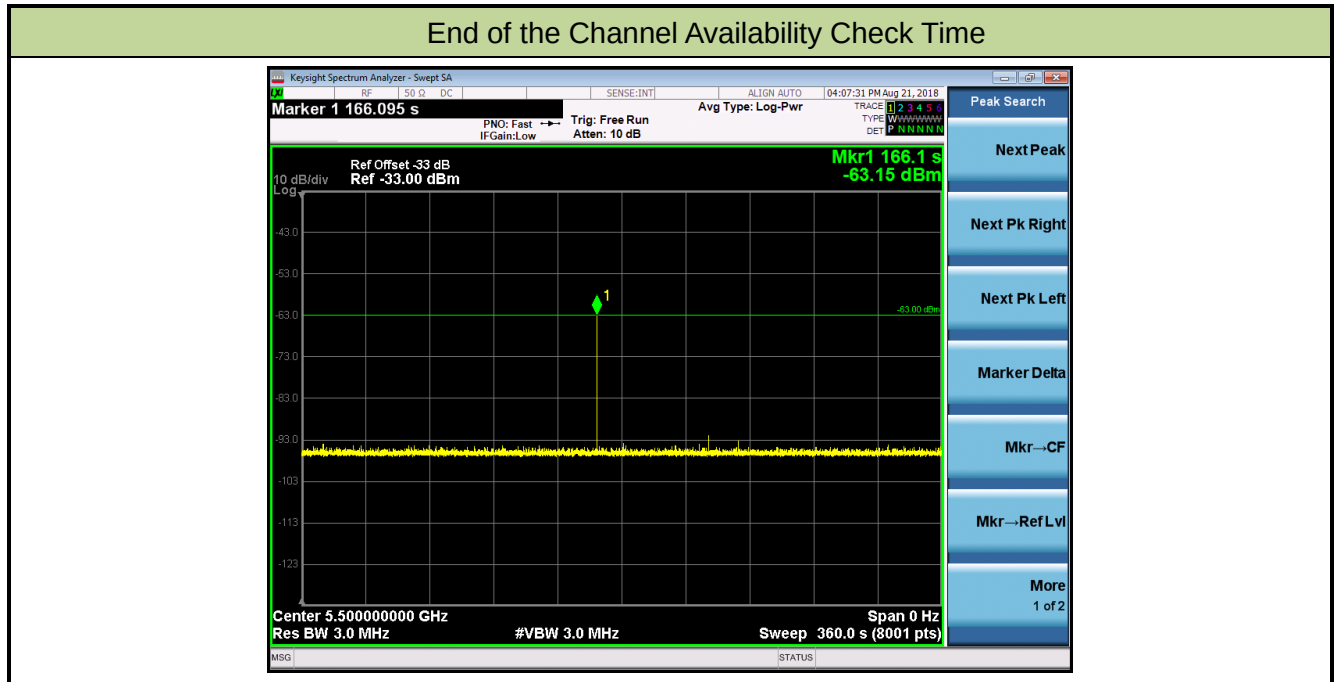
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **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       | OmniAccess Stellar                                                  | 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.

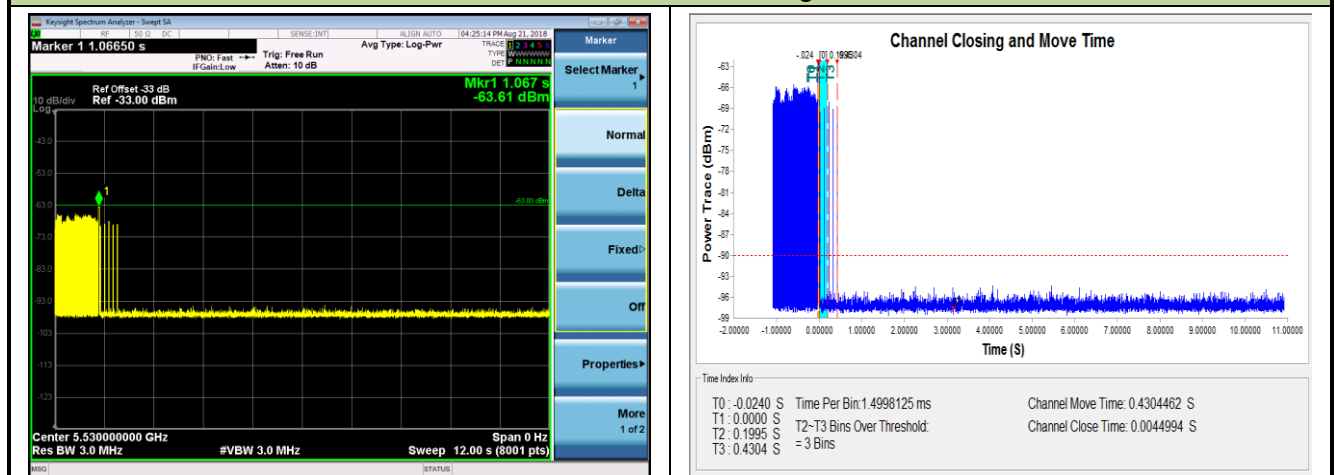
### **5.7.2. Test Procedure Used**

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:  $Dwell (1.5ms) = S (12 \text{ sec}) / B (8000)$ ; 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       | OmniAccess Stellar                                                                         | 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) |                   |            |

#### Channel Move Time and Channel Closing Transmission Time



#### Non-Occupancy Period



| 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:  

$$(\text{Total Waveform Detections} / \text{Total Waveform Trails}) * 100 = \text{Probability of Detection Radar Waveform}$$
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       | OmniAccess Stellar                                           | 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:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 100\%) / 4 = 100\% (>80\%)$



## 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

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## 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

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## 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                | 5720809        | 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                | 11078868       | 10588230                  | 11294111                |
| 17      | 275394        | 1        | 18          | 65      | 1199             | 0                | 0                | 11356916       | 11294112                  | 11999993                |

Total number of pulses in waveform = 28

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## 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         | 666667                    | 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                | 3593818        | 3333335                   | 4000001                 |
| 7       | 780353        | 3        | 6           | 75      | 1188             | 1685             | 1202             | 4375480        | 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      | 838522        | 2        | 6           | 95      | 1877             | 1596             | 0                | 10651281       | 10000005                  | 10666671                |
| 17      | 196758        | 2        | 6           | 80      | 1555             | 1340             | 0                | 10851512       | 10666672                  | 11333338                |
| 18      | 490087        | 1        | 6           | 90      | 1560             | 0                | 0                | 11344494       | 11333339                  | 12000005                |

Total number of pulses in waveform = 40

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

Total number of pulses in waveform = 27

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## 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      | 157848        | 1        | 19          | 50      | 1909             | 0                | 0                | 6478781        | 6352938                   | 7058819                 |
| 11      | 1199035       | 1        | 19          | 75      | 1181             | 0                | 0                | 7679725        | 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

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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       | 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     | 1897             | 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      | 718901        | 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                | 9729637        | 9600000                   | 10199999                |
| 18      | 624568        | 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             | 11758477       | 11400000                  | 11999999                |

Total number of pulses in waveform = 33

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## Type 5 Radar Waveform\_8

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       | 169441        | 3        | 8           | 85      | 1351             | 1145             | 1031             | 169441         | 0                         | 666666                  |
| 2       | 926560        | 3        | 8           | 70      | 1430             | 1579             | 1784             | 1099528        | 666667                    | 1333333                 |
| 3       | 593754        | 1        | 8           | 100     | 1002             | 0                | 0                | 1698075        | 1333334                   | 2000000                 |
| 4       | 356659        | 1        | 8           | 75      | 1666             | 0                | 0                | 2055736        | 2000001                   | 2666667                 |
| 5       | 1235216       | 2        | 8           | 100     | 1945             | 1186             | 0                | 3292618        | 2666668                   | 3333334                 |
| 6       | 308318        | 3        | 8           | 100     | 1491             | 1293             | 1264             | 3604067        | 3333335                   | 4000001                 |
| 7       | 459987        | 1        | 8           | 80      | 1287             | 0                | 0                | 4068102        | 4000002                   | 4666668                 |
| 8       | 1216728       | 3        | 8           | 90      | 1134             | 1165             | 1994             | 5286117        | 4666669                   | 5333335                 |
| 9       | 264323        | 1        | 8           | 50      | 1657             | 0                | 0                | 5554733        | 5333336                   | 6000002                 |
| 10      | 930053        | 3        | 8           | 80      | 1341             | 1772             | 1242             | 6486443        | 6000003                   | 6666669                 |
| 11      | 310806        | 3        | 8           | 90      | 1689             | 1392             | 1952             | 6801604        | 6666670                   | 7333336                 |
| 12      | 1014339       | 3        | 8           | 55      | 1503             | 1018             | 1684             | 7820976        | 7333337                   | 8000003                 |
| 13      | 224016        | 2        | 8           | 75      | 1687             | 1687             | 0                | 8049197        | 8000004                   | 8666670                 |
| 14      | 885915        | 1        | 8           | 75      | 1421             | 0                | 0                | 8938486        | 8666671                   | 9333337                 |
| 15      | 411281        | 2        | 8           | 80      | 1072             | 1878             | 0                | 9351188        | 9333338                   | 10000004                |
| 16      | 802281        | 1        | 8           | 60      | 1910             | 0                | 0                | 10156419       | 10000005                  | 10666671                |
| 17      | 1104436       | 1        | 8           | 100     | 1101             | 0                | 0                | 11262765       | 10666672                  | 11333338                |
| 18      | 692999        | 2        | 8           | 85      | 1697             | 1622             | 0                | 11956865       | 11333339                  | 12000005                |

Total number of pulses in waveform = 36

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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       | 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                | 5604039        | 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                |

Total number of pulses in waveform = 33

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## Type 5 Radar Waveform\_10

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       | 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                |

Total number of pulses in waveform = 25

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**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                | 1119700        | 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

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**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      | 179113        | 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

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**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

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       | 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

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## Type 5 Radar Waveform\_15

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       | 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             | 1670             | 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                | 5128930        | 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      | 633125        | 3        | 19          | 100     | 1699             | 1191             | 1378             | 7901979        | 7578948                   | 8210526                 |
| 14      | 432980        | 3        | 19          | 90      | 1389             | 1194             | 1394             | 8339227        | 8210527                   | 8842105                 |
| 15      | 541693        | 1        | 19          | 80      | 1090             | 0                | 0                | 8884877        | 8842106                   | 9473684                 |
| 16      | 636838        | 3        | 19          | 65      | 1907             | 1142             | 1618             | 9522805        | 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

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## Type 5 Radar Waveform\_16

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       | 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                   | 5999999                 |
| 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      | 715439        | 2        | 10          | 90      | 1478             | 1146             | 0                | 10178503       | 9750000                   | 10499999                |
| 15      | 490346        | 3        | 10          | 70      | 1065             | 1256             | 1004             | 10671473       | 10500000                  | 11249999                |
| 16      | 635793        | 3        | 10          | 55      | 1834             | 1151             | 1030             | 11310591       | 11250000                  | 11999999                |

Total number of pulses in waveform = 35

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## 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

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## 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        | 3        | 6           | 85      | 1891             | 1354             | 1550             | 6971690        | 6545454                   | 7636362                 |
| 8       | 732664        | 1        | 6           | 75      | 1669             | 0                | 0                | 7709149        | 7636363                   | 8727271                 |
| 9       | 1469513       | 3        | 6           | 75      | 1958             | 1547             | 1549             | 9180331        | 8727272                   | 9818180                 |
| 10      | 1547316       | 2        | 6           | 75      | 1375             | 1298             | 0                | 10732701       | 9818181                   | 10909089                |
| 11      | 836977        | 1        | 6           | 50      | 1730             | 0                | 0                | 11572351       | 10909090                  | 11999998                |

Total number of pulses in waveform = 24

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## 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       | 1088070       | 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      | 228848        | 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

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## 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

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## 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             | 1739             | 1825             | 8146773        | 7578948                   | 8210526                 |
| 14      | 257963        | 2        | 10          | 55      | 1691             | 1724             | 0                | 8409362        | 8210527                   | 8842105                 |
| 15      | 637699        | 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

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## Type 5 Radar Waveform\_22

Num of Bursts = 20

Burst Interval (us)= 6000000

| 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      | 1588             | 1731             | 0                | 271144         | 0                         | 599999                  |
| 2       | 437945        | 1        | 9           | 70      | 1807             | 0                | 0                | 712408         | 6000000                   | 1199999                 |
| 3       | 589795        | 1        | 9           | 60      | 1051             | 0                | 0                | 1304010        | 12000000                  | 1799999                 |
| 4       | 950139        | 1        | 9           | 70      | 1522             | 0                | 0                | 2255200        | 18000000                  | 2399999                 |
| 5       | 474203        | 3        | 9           | 60      | 1762             | 1364             | 1779             | 2730925        | 24000000                  | 2999999                 |
| 6       | 714286        | 1        | 9           | 50      | 1487             | 0                | 0                | 3450116        | 30000000                  | 3599999                 |
| 7       | 202213        | 3        | 9           | 65      | 1155             | 1996             | 1201             | 3653816        | 36000000                  | 4199999                 |
| 8       | 1033404       | 3        | 9           | 55      | 1953             | 1337             | 1034             | 4691572        | 42000000                  | 4799999                 |
| 9       | 632541        | 2        | 9           | 85      | 1719             | 1765             | 0                | 5328437        | 48000000                  | 5399999                 |
| 10      | 130901        | 3        | 9           | 90      | 1448             | 1901             | 1382             | 5462822        | 54000000                  | 5999999                 |
| 11      | 1120405       | 2        | 9           | 95      | 1062             | 1222             | 0                | 6587958        | 60000000                  | 6599999                 |
| 12      | 160754        | 2        | 9           | 55      | 1996             | 1006             | 0                | 6750996        | 66000000                  | 7199999                 |
| 13      | 932917        | 2        | 9           | 90      | 1066             | 1036             | 0                | 7686915        | 72000000                  | 7799999                 |
| 14      | 407760        | 3        | 9           | 60      | 1981             | 1653             | 1262             | 8096777        | 78000000                  | 8399999                 |
| 15      | 379101        | 3        | 9           | 95      | 1626             | 1212             | 1910             | 8480774        | 84000000                  | 8999999                 |
| 16      | 1064104       | 2        | 9           | 80      | 1576             | 1129             | 0                | 9549626        | 90000000                  | 9599999                 |
| 17      | 617856        | 2        | 9           | 80      | 1111             | 1716             | 0                | 10170187       | 96000000                  | 10199999                |
| 18      | 585517        | 1        | 9           | 80      | 1865             | 0                | 0                | 10758531       | 102000000                 | 10799999                |
| 19      | 231775        | 1        | 9           | 75      | 1178             | 0                | 0                | 10992171       | 108000000                 | 11399999                |
| 20      | 750172        | 3        | 9           | 70      | 1074             | 1701             | 1385             | 11743521       | 114000000                 | 11999999                |

Total number of pulses in waveform = 41

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## Type 5 Radar Waveform\_23

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       | 223634        | 3        | 18          | 55      | 1796             | 1956             | 1484             | 223634         | 0                         | 705881                  |
| 2       | 697073        | 1        | 18          | 80      | 1208             | 0                | 0                | 925943         | 705882                    | 1411763                 |
| 3       | 711923        | 3        | 18          | 75      | 1556             | 1055             | 1791             | 1639074        | 1411764                   | 2117645                 |
| 4       | 1074999       | 1        | 18          | 100     | 1976             | 0                | 0                | 2718475        | 2117646                   | 2823527                 |
| 5       | 733700        | 2        | 18          | 100     | 1512             | 1729             | 0                | 3454151        | 2823528                   | 3529409                 |
| 6       | 756928        | 2        | 18          | 70      | 1500             | 1129             | 0                | 4214320        | 3529410                   | 4235291                 |
| 7       | 494325        | 1        | 18          | 50      | 1576             | 0                | 0                | 4711274        | 4235292                   | 4941173                 |
| 8       | 590452        | 2        | 18          | 70      | 1416             | 1510             | 0                | 5303302        | 4941174                   | 5647055                 |
| 9       | 603040        | 1        | 18          | 55      | 1833             | 0                | 0                | 5909268        | 5647056                   | 6352937                 |
| 10      | 691568        | 2        | 18          | 50      | 1704             | 1657             | 0                | 6602669        | 6352938                   | 7058819                 |
| 11      | 544917        | 1        | 18          | 100     | 1486             | 0                | 0                | 7150947        | 7058820                   | 7764701                 |
| 12      | 1037316       | 3        | 18          | 70      | 1939             | 1879             | 1478             | 8189749        | 7764702                   | 8470583                 |
| 13      | 555264        | 3        | 18          | 95      | 1549             | 1281             | 1127             | 8750309        | 8470584                   | 9176465                 |
| 14      | 562022        | 2        | 18          | 100     | 1350             | 1537             | 0                | 9316288        | 9176466                   | 9882347                 |
| 15      | 1005497       | 1        | 18          | 55      | 1542             | 0                | 0                | 10324672       | 9882348                   | 10588229                |
| 16      | 816609        | 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  
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## Type 5 Radar Waveform\_24

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       | 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  
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## Type 5 Radar Waveform\_25

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       | 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  
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**Type 5 Radar Waveform\_26**

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       | 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

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**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       | 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

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**Type 5 Radar Waveform\_28**

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       | 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

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**Type 5 Radar Waveform\_29**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       | 238642        | 2        | 17          | 85      | 1205             | 1309             | 0                | 238642         | 0                         | 666666                  |
| 2       | 598960        | 3        | 17          | 50      | 1733             | 1155             | 1412             | 840116         | 666667                    | 1333333                 |
| 3       | 709309        | 1        | 17          | 85      | 1115             | 0                | 0                | 1553725        | 1333334                   | 2000000                 |
| 4       | 541707        | 2        | 17          | 85      | 1434             | 1940             | 0                | 2096547        | 2000001                   | 2666667                 |
| 5       | 816816        | 2        | 17          | 90      | 1978             | 1565             | 0                | 2916737        | 2666668                   | 3333334                 |
| 6       | 992281        | 3        | 17          | 50      | 1406             | 1961             | 1017             | 3912561        | 3333335                   | 4000001                 |
| 7       | 424500        | 2        | 17          | 55      | 1440             | 1088             | 0                | 4341445        | 4000002                   | 4666668                 |
| 8       | 652151        | 1        | 17          | 60      | 1542             | 0                | 0                | 4996124        | 4666669                   | 5333335                 |
| 9       | 443048        | 2        | 17          | 85      | 1776             | 1821             | 0                | 5440714        | 5333336                   | 6000002                 |
| 10      | 982760        | 2        | 17          | 60      | 1273             | 1140             | 0                | 6427071        | 6000003                   | 6666669                 |
| 11      | 448904        | 1        | 17          | 90      | 1801             | 0                | 0                | 6878388        | 6666670                   | 7333336                 |
| 12      | 815050        | 3        | 17          | 75      | 1735             | 1322             | 1207             | 7695239        | 7333337                   | 8000003                 |
| 13      | 754177        | 3        | 17          | 80      | 1938             | 1563             | 1751             | 8453680        | 8000004                   | 8666670                 |
| 14      | 862198        | 1        | 17          | 65      | 1295             | 0                | 0                | 9321130        | 8666671                   | 9333337                 |
| 15      | 631609        | 1        | 17          | 75      | 1956             | 0                | 0                | 9954034        | 9333338                   | 10000004                |
| 16      | 438068        | 1        | 17          | 70      | 1365             | 0                | 0                | 10394058       | 10000005                  | 10666671                |
| 17      | 522548        | 2        | 17          | 75      | 1540             | 1535             | 0                | 10917971       | 10666672                  | 11333338                |
| 18      | 1011808       | 2        | 17          | 80      | 1978             | 1102             | 0                | 11932854       | 11333339                  | 12000005                |

Total number of pulses in waveform = 34  
\*\*\*\*\***Type 5 Radar Waveform\_30**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       | 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  
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## 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       | OmniAccess Stellar                                                | 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:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 100\%) / 4 = 100\% (>80\%)$



## 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  
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

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## 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      | 1489             | 0                | 0                | 11116089       | 11076924                  | 12000000                |

Total number of pulses in waveform = 27

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## 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

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## 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             | 1488723        | 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

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**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      | 1265             | 1350             | 0                | 4686769        | 4200000                   | 4799999                 |
| 9       | 583994        | 3        | 17          | 70      | 1522             | 1496             | 1520             | 5273379        | 4800000                   | 5399999                 |
| 10      | 436255        | 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      | 630854        | 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

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## 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      | 788957        | 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

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## 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        | 3        | 19          | 65      | 1476             | 1580             | 1869             | 10503105       | 10105264                  | 10736842                |
| 18      | 441278        | 1        | 19          | 75      | 1549             | 0                | 0                | 10949308       | 10736843                  | 11368421                |
| 19      | 684524        | 3        | 19          | 75      | 1343             | 1494             | 1324             | 11635381       | 11368422                  | 12000000                |

Total number of pulses in waveform = 31

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## Type 5 Radar Waveform\_11

| Num of Bursts = 20<br>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                                                 | 359468        | 1        | 18          | 50      | 1350             | 0                | 0                | 359468         | 0                         | 599999                  |
| 2                                                 | 293351        | 3        | 18          | 85      | 1073             | 1904             | 1610             | 654169         | 600000                    | 1199999                 |
| 3                                                 | 811686        | 1        | 18          | 70      | 1015             | 0                | 0                | 1470442        | 1200000                   | 1799999                 |
| 4                                                 | 535354        | 2        | 18          | 80      | 1069             | 1746             | 0                | 2006811        | 1800000                   | 2399999                 |
| 5                                                 | 461614        | 3        | 18          | 90      | 1945             | 1259             | 1258             | 2471240        | 2400000                   | 2999999                 |
| 6                                                 | 1031589       | 3        | 18          | 75      | 1240             | 1160             | 1254             | 3507291        | 3000000                   | 3599999                 |
| 7                                                 | 204300        | 1        | 18          | 100     | 1316             | 0                | 0                | 3715245        | 3600000                   | 4199999                 |
| 8                                                 | 967471        | 3        | 18          | 50      | 1615             | 1808             | 1747             | 4684032        | 4200000                   | 4799999                 |
| 9                                                 | 205273        | 2        | 18          | 85      | 1762             | 1405             | 0                | 4894475        | 4800000                   | 5399999                 |
| 10                                                | 1019604       | 1        | 18          | 90      | 1004             | 0                | 0                | 5917246        | 5400000                   | 5999999                 |
| 11                                                | 151723        | 1        | 18          | 55      | 1353             | 0                | 0                | 6069973        | 6000000                   | 6599999                 |
| 12                                                | 584642        | 2        | 18          | 85      | 1868             | 1423             | 0                | 6655968        | 6600000                   | 7199999                 |
| 13                                                | 892946        | 1        | 18          | 70      | 1299             | 0                | 0                | 7552204        | 7200000                   | 7799999                 |
| 14                                                | 496695        | 1        | 18          | 55      | 1813             | 0                | 0                | 8053198        | 7800000                   | 8399999                 |
| 15                                                | 800436        | 2        | 18          | 100     | 1486             | 1217             | 0                | 8855447        | 8400000                   | 8999999                 |
| 16                                                | 264126        | 1        | 18          | 55      | 1235             | 0                | 0                | 9122276        | 9000000                   | 9599999                 |
| 17                                                | 768515        | 3        | 18          | 60      | 1707             | 1987             | 1970             | 9892026        | 9600000                   | 10199999                |
| 18                                                | 538852        | 3        | 18          | 50      | 1262             | 1255             | 1176             | 10436542       | 10200000                  | 10799999                |
| 19                                                | 545151        | 3        | 18          | 100     | 1544             | 1227             | 1869             | 10985386       | 10800000                  | 11399999                |
| 20                                                | 970943        | 2        | 18          | 65      | 1775             | 1689             | 0                | 11960969       | 11400000                  | 11999999                |
| Total number of pulses in waveform = 39<br>*****  |               |          |             |         |                  |                  |                  |                |                           |                         |

## Type 5 Radar Waveform\_12

| 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                                                 | 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<br>*****  |               |          |             |         |                  |                  |                  |                |                           |                         |

## Type 5 Radar Waveform\_13

| 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                                                 | 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                                                 | 862599        | 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                                                | 896651        | 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                                                | 687655        | 3        | 6           | 50      | 1338             | 1332             | 1592             | 11697389       | 11368422                  | 12000000                |
| Total number of pulses in waveform = 33<br>*****  |               |          |             |         |                  |                  |                  |                |                           |                         |

**Type 5 Radar Waveform\_14**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       | 213505        | 1        | 8           | 75      | 1318             | 0                | 0                | 213505         | 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                | 4935785        | 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

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**Type 5 Radar Waveform\_15**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       | 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

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**Type 5 Radar Waveform\_16**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       | 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

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**Type 5 Radar Waveform\_17**

| Num of Bursts = 17<br>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                                                 | 190105        | 1        | 19          | 55      | 1114             | 0                | 0                | 190105         | 0                         | 705881                  |
| 2                                                 | 908881        | 2        | 19          | 85      | 1103             | 1450             | 0                | 1100100        | 705882                    | 1411763                 |
| 3                                                 | 416806        | 3        | 19          | 100     | 1027             | 1085             | 1305             | 1519459        | 1411764                   | 2117645                 |
| 4                                                 | 688569        | 1        | 19          | 100     | 1026             | 0                | 0                | 2211445        | 2117646                   | 2823527                 |
| 5                                                 | 1085876       | 1        | 19          | 75      | 1913             | 0                | 0                | 3298347        | 2823528                   | 3529409                 |
| 6                                                 | 404440        | 2        | 19          | 90      | 1907             | 1558             | 0                | 3704700        | 3529410                   | 4235291                 |
| 7                                                 | 1169460       | 1        | 19          | 65      | 1045             | 0                | 0                | 4877625        | 4235292                   | 4941173                 |
| 8                                                 | 383873        | 1        | 19          | 100     | 1846             | 0                | 0                | 5262543        | 4941174                   | 5647055                 |
| 9                                                 | 595317        | 2        | 19          | 90      | 1876             | 1929             | 0                | 5859706        | 5647056                   | 6352937                 |
| 10                                                | 501997        | 2        | 19          | 75      | 1838             | 1429             | 0                | 6365508        | 6352938                   | 7058819                 |
| 11                                                | 1298971       | 2        | 19          | 95      | 1706             | 1548             | 0                | 7667746        | 7058820                   | 7764701                 |
| 12                                                | 247636        | 1        | 19          | 80      | 1927             | 0                | 0                | 7918636        | 7764702                   | 8470583                 |
| 13                                                | 871651        | 1        | 19          | 50      | 1658             | 0                | 0                | 8792214        | 8470584                   | 9176465                 |
| 14                                                | 402660        | 3        | 19          | 95      | 1067             | 1852             | 1792             | 9196532        | 9176466                   | 9882347                 |
| 15                                                | 987162        | 2        | 19          | 100     | 1677             | 1966             | 0                | 10188405       | 9882348                   | 10588229                |
| 16                                                | 700750        | 3        | 19          | 95      | 1748             | 1623             | 1724             | 10892798       | 10588230                  | 11294111                |
| 17                                                | 786228        | 3        | 19          | 90      | 1492             | 1289             | 1588             | 11684121       | 11294112                  | 11999993                |
| Total number of pulses in waveform = 31<br>*****  |               |          |             |         |                  |                  |                  |                |                           |                         |

**Type 5 Radar Waveform\_18**

| 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                                                  | 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<br>*****   |               |          |             |         |                  |                  |                  |                |                           |                         |

**Type 5 Radar Waveform\_19**

| 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                                                 | 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<br>*****  |               |          |             |         |                  |                  |                  |                |                           |                         |

**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) |
|---------|---------------|----------|-------------|---------|------------------|------------------|------------------|----------------|---------------------------|-------------------------|
| 1       | 688341        | 1        | 14          | 70      | 1549             | 0                | 0                | 688341         | 0                         | 1333332                 |
| 2       | 972246        | 2        | 14          | 95      | 1243             | 1345             | 0                | 1662136        | 1333333                   | 2666665                 |
| 3       | 1461088       | 3        | 14          | 85      | 1019             | 1231             | 1315             | 3125812        | 2666666                   | 3999998                 |
| 4       | 1483186       | 1        | 14          | 85      | 1124             | 0                | 0                | 4612563        | 3999999                   | 5333331                 |
| 5       | 1650633       | 1        | 14          | 90      | 1441             | 0                | 0                | 6264320        | 5333332                   | 6666664                 |
| 6       | 1111650       | 2        | 14          | 85      | 1896             | 1621             | 0                | 7377411        | 6666665                   | 7999997                 |
| 7       | 827171        | 1        | 14          | 100     | 1938             | 0                | 0                | 8208099        | 7999998                   | 9333330                 |
| 8       | 1894789       | 3        | 14          | 55      | 1204             | 1898             | 1401             | 10104826       | 9333331                   | 10666663                |
| 9       | 1391712       | 2        | 14          | 95      | 1390             | 1634             | 0                | 11501041       | 10666664                  | 11999996                |

Total number of pulses in waveform = 16

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**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      | 1665             | 0                | 0                | 939686         | 631579                    | 1263157                 |
| 3       | 339951        | 3        | 19          | 70      | 1631             | 1452             | 1265             | 1281202        | 1263158                   | 1894736                 |
| 4       | 999457        | 1        | 19          | 60      | 1271             | 0                | 0                | 2284907        | 1894737                   | 2526315                 |
| 5       | 819570        | 2        | 19          | 60      | 1162             | 1854             | 0                | 3105748        | 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      | 506954        | 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

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**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

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## Type 5 Radar Waveform\_23

| Num of Bursts = 20<br>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                                                 | 585679        | 3        | 5           | 80      | 1787             | 1773             | 1543             | 585679         | 0                         | 599999                  |
| 2                                                 | 205397        | 2        | 5           | 85      | 1552             | 1129             | 0                | 796179         | 600000                    | 1199999                 |
| 3                                                 | 881843        | 2        | 5           | 60      | 1818             | 1964             | 0                | 1680703        | 1200000                   | 1799999                 |
| 4                                                 | 362126        | 2        | 5           | 60      | 1745             | 1950             | 0                | 2046611        | 1800000                   | 2399999                 |
| 5                                                 | 697220        | 2        | 5           | 55      | 1321             | 1369             | 0                | 2747526        | 2400000                   | 2999999                 |
| 6                                                 | 341550        | 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                | 8796902        | 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                                                | 1064741       | 1        | 5           | 100     | 1520             | 0                | 0                | 10831734       | 10800000                  | 11399999                |
| 20                                                | 1064741       | 2        | 5           | 60      | 1998             | 1746             | 0                | 11917995       | 11400000                  | 11999999                |
| Total number of pulses in waveform = 33<br>*****  |               |          |             |         |                  |                  |                  |                |                           |                         |

## Type 5 Radar Waveform\_24

| 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                                                  | 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<br>*****   |               |          |             |         |                  |                  |                  |                |                           |                         |

## Type 5 Radar Waveform\_25

| Num of Bursts = 10<br>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                                                  | 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      | 1838             | 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<br>*****   |               |          |             |         |                  |                  |                  |                |                           |                         |





## 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                | 9329497        | 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

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## 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

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## 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       | 394865        | 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       | 625791        | 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                | 7258817        | 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             | 1855             | 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

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## Type 5 Radar Waveform\_29

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       | 545210        | 2        | 17          | 50      | 1655             | 1288             | 0                | 545210         | 0                         | 666666                  |
| 2       | 139323        | 1        | 17          | 80      | 1970             | 0                | 0                | 687476         | 666667                    | 1333333                 |
| 3       | 687317        | 2        | 17          | 80      | 1194             | 1407             | 0                | 1376763        | 1333334                   | 2000000                 |
| 4       | 1157809       | 1        | 17          | 85      | 1623             | 0                | 0                | 2537173        | 2000001                   | 2666667                 |
| 5       | 404780        | 1        | 17          | 90      | 1378             | 0                | 0                | 2943576        | 2666668                   | 3333334                 |
| 6       | 618492        | 2        | 17          | 85      | 1126             | 1296             | 0                | 3563446        | 3333335                   | 4000001                 |
| 7       | 510508        | 2        | 17          | 70      | 1984             | 1778             | 0                | 4076376        | 4000002                   | 4666668                 |
| 8       | 643651        | 2        | 17          | 85      | 1943             | 1573             | 0                | 4723789        | 4666669                   | 5333335                 |
| 9       | 910852        | 1        | 17          | 85      | 1418             | 0                | 0                | 5638157        | 5333336                   | 6000002                 |
| 10      | 900024        | 3        | 17          | 85      | 1828             | 1621             | 1892             | 6539599        | 6000003                   | 6666669                 |
| 11      | 186564        | 3        | 17          | 50      | 1754             | 1912             | 1878             | 6731504        | 6666670                   | 7333336                 |
| 12      | 1029723       | 3        | 17          | 65      | 1746             | 1237             | 1306             | 7766771        | 7333337                   | 8000003                 |
| 13      | 506489        | 2        | 17          | 95      | 1746             | 1312             | 0                | 8277549        | 8000004                   | 8666670                 |
| 14      | 744709        | 2        | 17          | 60      | 1139             | 1932             | 0                | 9025316        | 8666671                   | 9333337                 |
| 15      | 461475        | 1        | 17          | 90      | 1421             | 0                | 0                | 9489862        | 9333338                   | 10000004                |
| 16      | 929931        | 2        | 17          | 65      | 1030             | 1005             | 0                | 10421214       | 10000005                  | 10666671                |
| 17      | 542104        | 1        | 17          | 75      | 1217             | 0                | 0                | 10965353       | 10666672                  | 11333338                |
| 18      | 418149        | 1        | 17          | 60      | 1379             | 0                | 0                | 11384719       | 11333339                  | 12000005                |

Total number of pulses in waveform = 32  
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## Type 5 Radar Waveform\_30

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       | 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                |

Total number of pulses in waveform = 27  
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## 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       | OmniAccess Stellar                                                  | 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:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 100\%) / 4 = 100\% (>80\%)$



## 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

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**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             | 8150562        | 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

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**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       | 1017789       | 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             | 6508874        | 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          | 65      | 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

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**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      | 1098             | 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

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**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

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       | 381275        | 2        | 12          | 80      | 1264             | 1364             | 0                | 381275         | 0                         | 666666                  |
| 2       | 380727        | 3        | 12          | 80      | 1835             | 1357             | 1847             | 764630         | 666667                    | 1333333                 |
| 3       | 755792        | 1        | 12          | 80      | 1058             | 0                | 0                | 1525461        | 1333334                   | 2000000                 |
| 4       | 822092        | 1        | 12          | 50      | 1265             | 0                | 0                | 2348611        | 2000001                   | 2666667                 |
| 5       | 563123        | 3        | 12          | 55      | 1031             | 1284             | 1450             | 2912999        | 2666668                   | 3333334                 |
| 6       | 783429        | 3        | 12          | 75      | 1620             | 1859             | 1276             | 3700193        | 3333335                   | 4000001                 |
| 7       | 878550        | 1        | 12          | 65      | 1081             | 0                | 0                | 4583498        | 4000002                   | 4666668                 |
| 8       | 197617        | 3        | 12          | 95      | 1994             | 1012             | 1735             | 4782196        | 4666669                   | 5333335                 |
| 9       | 1085972       | 1        | 12          | 80      | 1848             | 0                | 0                | 5872909        | 5333336                   | 6000002                 |
| 10      | 649610        | 1        | 12          | 60      | 1767             | 0                | 0                | 6524367        | 6000003                   | 6666669                 |
| 11      | 718736        | 3        | 12          | 60      | 1065             | 1615             | 1412             | 7244870        | 6666670                   | 7333336                 |
| 12      | 333113        | 2        | 12          | 55      | 1081             | 1692             | 0                | 7333375        | 7333337                   | 8000003                 |
| 13      | 796774        | 3        | 12          | 60      | 1881             | 1880             | 1429             | 8381622        | 8000004                   | 8666670                 |
| 14      | 907343        | 2        | 12          | 80      | 1722             | 1416             | 0                | 9294155        | 8666671                   | 9333337                 |
| 15      | 42295         | 3        | 12          | 50      | 1722             | 1757             | 1781             | 9339588        | 9333338                   | 10000004                |
| 16      | 1071891       | 2        | 12          | 70      | 1553             | 1546             | 0                | 10416739       | 10000005                  | 10666671                |
| 17      | 257770        | 2        | 12          | 100     | 1524             | 1921             | 0                | 10677608       | 10666672                  | 11333338                |
| 18      | 1142248       | 3        | 12          | 60      | 1814             | 1872             | 1080             | 11823301       | 11333339                  | 12000005                |

Total number of pulses in waveform = 39  
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## Type 5 Radar Waveform\_12

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       | 829073        | 2        | 5           | 55      | 1585             | 1416             | 0                | 829073         | 0                         | 1499999                 |
| 2       | 1175345       | 3        | 5           | 85      | 1497             | 1232             | 1324             | 2007419        | 1500000                   | 2999999                 |
| 3       | 1483545       | 3        | 5           | 100     | 1158             | 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  
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## Type 5 Radar Waveform\_13

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       | 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       | 454581        | 3        | 8           | 55      | 1952             | 1246             | 1149             | 2558197        | 2400000                   | 2999999                 |
| 6       | 904535        | 3        | 8           | 75      | 1239             | 1471             | 1778             | 3467079        | 3000000                   | 3599999                 |
| 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      | 756939        | 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  
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**Type 5 Radar Waveform\_14**

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       | 916330        | 1        | 10          | 100     | 1702             | 0                | 0                | 916330         | 0                         | 923076                  |
| 2       | 747360        | 1        | 10          | 50      | 1934             | 0                | 0                | 1665392        | 923077                    | 1846153                 |
| 3       | 1037823       | 3        | 10          | 55      | 1459             | 1342             | 1822             | 2705149        | 1846154                   | 2769230                 |
| 4       | 917334        | 1        | 10          | 80      | 1640             | 0                | 0                | 3627106        | 2769231                   | 3692307                 |
| 5       | 878187        | 2        | 10          | 70      | 1436             | 1658             | 0                | 4506933        | 3692308                   | 4615384                 |
| 6       | 538811        | 2        | 10          | 60      | 1305             | 1319             | 0                | 5048838        | 4615385                   | 5538461                 |
| 7       | 1296315       | 3        | 10          | 80      | 1584             | 1775             | 1598             | 6347777        | 5538462                   | 6461538                 |
| 8       | 395720        | 3        | 10          | 100     | 1720             | 1864             | 1653             | 6748454        | 6461539                   | 7384615                 |
| 9       | 1050810       | 1        | 10          | 95      | 1688             | 0                | 0                | 7804501        | 7384616                   | 8307692                 |
| 10      | 542898        | 2        | 10          | 75      | 1661             | 1346             | 0                | 8349087        | 8307693                   | 9230769                 |
| 11      | 1363074       | 2        | 10          | 50      | 1143             | 1520             | 0                | 9715168        | 9230770                   | 10153846                |
| 12      | 608090        | 1        | 10          | 50      | 1947             | 0                | 0                | 10325921       | 10153847                  | 11076923                |
| 13      | 853561        | 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**

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       | 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                | 3488504        | 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**

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       | 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             | 5597286        | 5052632                   | 5684210                 |
| 10      | 232644        | 3        | 14          | 55      | 1765             | 1963             | 1789             | 5834289        | 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       | 395647        | 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       | 996856        | 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      | 1125             | 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                   | 9599999                 |
| 17      | 556112        | 3        | 18          | 70      | 1389             | 1758             | 1583             | 10048853       | 9600000                   | 10199999                |
| 18      | 700289        | 3        | 18          | 50      | 1998             | 1391             | 1613             | 10753872       | 10200000                  | 10799999                |
| 19      | 597681        | 2        | 18          | 75      | 1584             | 1720             | 0                | 11365555       | 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

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       | 607192        | 3        | 6           | 55      | 1317             | 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             | 4506974        | 4000002                   | 4666668                 |
| 8       | 333480        | 1        | 6           | 90      | 1262             | 0                | 0                | 4848230        | 4666669                   | 5333335                 |
| 9       | 1098560       | 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      | 891754        | 2        | 6           | 75      | 1738             | 1671             | 0                | 9102966        | 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             | 10960882       | 10666672                  | 11333338                |
| 18      | 689259        | 2        | 6           | 75      | 1397             | 1545             | 0                | 11684574       | 11333339                  | 12000005                |

Total number of pulses in waveform = 37

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## Type 5 Radar Waveform\_21

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       | 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

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## Type 5 Radar Waveform\_22

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       | 354567        | 3        | 18          | 70      | 1911             | 1284             | 1793             | 354567         | 0                         | 631578                  |
| 2       | 491978        | 3        | 18          | 85      | 1391             | 1390             | 1388             | 851533         | 631579                    | 1263157                 |
| 3       | 436470        | 3        | 18          | 85      | 1563             | 1827             | 1044             | 1292172        | 1263158                   | 1894736                 |
| 4       | 1153683       | 1        | 18          | 95      | 1426             | 0                | 0                | 2450289        | 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

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**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

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**Type 5 Radar Waveform\_24**

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       | 461009        | 3        | 12          | 75      | 1141             | 1458             | 1112             | 461009         | 0                         | 599999                  |
| 2       | 317713        | 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          | 55      | 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             | 1351             | 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      | 185896        | 1        | 12          | 90      | 1464             | 0                | 0                | 7816990        | 7800000                   | 8399999                 |
| 15      | 984725        | 3        | 12          | 70      | 1828             | 1384             | 1061             | 8803179        | 8400000                   | 8999999                 |
| 16      | 234116        | 3        | 12          | 65      | 1138             | 1391             | 1287             | 9041568        | 9000000                   | 9599999                 |
| 17      | 965044        | 3        | 12          | 60      | 1367             | 1061             | 1524             | 10010428       | 9600000                   | 10199999                |
| 18      | 476211        | 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

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**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             | 1871             | 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       | 3        | 5           | 100     | 1999             | 1624             | 1024             | 8505048        | 7714287                   | 8571429                 |
| 11      | 442592        | 1        | 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

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**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**

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       | 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

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**Type 5 Radar Waveform\_30**

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       | 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

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### 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 **OmniAccess Stellar, FCC ID: 2AI9TOAW-AP1201** is in compliance with FCC Rules & ISED Rules.

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The End

## **Appendix A – Test Setup Photograph**

Refer to “1808RSU025-UT” file.

## **Appendix B – EUT Photograph**

Refer to “1808RSU025-UE” file.