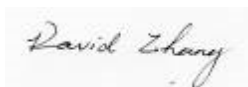


# DFS TEST REPORT



Report No.: FCC\_DFS\_SL15022401-AER-001

Supersede Report No.: NONE

|                                                                                                                                      |                                                         |                                                                                       |  |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| Applicant                                                                                                                            | Aerohive Networks, Inc.                                 |                                                                                       |  |
| Product Name                                                                                                                         | AP Router                                               |                                                                                       |  |
| Model No.                                                                                                                            | AP130                                                   |                                                                                       |  |
| Test Standard                                                                                                                        | 47CFR15.407 (h)                                         |                                                                                       |  |
| Test Method                                                                                                                          | 905462 D02 UNII DFS Compliance Procedures New Rules v01 |                                                                                       |  |
| FCC ID                                                                                                                               | WBV-AP130                                               |                                                                                       |  |
| IC ID                                                                                                                                | 7774A-AP130                                             |                                                                                       |  |
| Date of test                                                                                                                         | 03/02/2015                                              |                                                                                       |  |
| Issue Date                                                                                                                           | 03/25/2015                                              |                                                                                       |  |
| Test Result                                                                                                                          | <u>Pass</u> Fail                                        |                                                                                       |  |
| Equipment complied with the specification [ x ]                                                                                      |                                                         |                                                                                       |  |
| Equipment did not comply with the specification [ ]                                                                                  |                                                         |                                                                                       |  |
|                                                                                                                                      |                                                         |                                                                                       |  |
|                                                                                                                                      |                                                         |                                                                                       |  |
|                                                   |                                                         |  |  |
| David Zhang                                                                                                                          |                                                         | Nima Molaei                                                                           |  |
| Test Engineer                                                                                                                        |                                                         | Engineer Reviewer                                                                     |  |
| This test report may be reproduced in full only<br>Test result presented in this test report is applicable to the tested sample only |                                                         |                                                                                       |  |

Issued By:  
SIEMIC Laboratories  
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## Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

| Country/Region | Accreditation Body     | Scope                             |
|----------------|------------------------|-----------------------------------|
| USA            | FCC, A2LA              | EMC, RF/Wireless, Telecom         |
| Canada         | IC, A2LA, NIST         | EMC, RF/Wireless, Telecom         |
| Taiwan         | BSMI, NCC, NIST        | EMC, RF, Telecom, Safety          |
| Hong Kong      | OFTA, NIST             | RF/Wireless, Telecom              |
| Australia      | NATA, NIST             | EMC, RF, Telecom, Safety          |
| Korea          | KCC/RRR, NIST          | EMI, EMS, RF, Telecom, Safety     |
| Japan          | VCCI, JATE, TELEC, RFT | EMI, RF/Wireless, Telecom         |
| Mexico         | NOM, COFETEL, Caniety  | Safety, EMC, RF/Wireless, Telecom |
| Europe         | A2LA, NIST             | EMC, RF, Telecom, Safety          |
| Israel         | MOC, NIST              | EMC, RF, Telecom, Safety          |

### Accreditations for Product Certifications

| Country   | Accreditation Body | Scope                 |
|-----------|--------------------|-----------------------|
| USA       | FCC TCB, NIST      | EMC , RF , Telecom    |
| Canada    | IC FCB , NIST      | EMC , RF , Telecom    |
| Singapore | iDA, NIST          | EMC , RF , Telecom    |
| EU        | NB                 | EMC & R&TTE Directive |
| Japan     | MIC (RCB 208)      | RF , Telecom          |
| HongKong  | OFTA (US002)       | RF , Telecom          |

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## 1 Report Revision History

| Report No.                 | Report Version | Description | Issue Date |
|----------------------------|----------------|-------------|------------|
| FCC_DFS_SL15022401-AER-001 | None           | Original    | 03/25/2015 |
|                            |                |             |            |
|                            |                |             |            |
|                            |                |             |            |
|                            |                |             |            |
|                            |                |             |            |

## 2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company: Aerohive Networks, Inc.  
Product: AP Router  
Model: AP130

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1<sup>st</sup> page.

## 3 Customer information

|                      |                                            |
|----------------------|--------------------------------------------|
| Applicant Name       | Aerohive Networks, Inc.                    |
| Applicant Address    | 330 Gibraltar Dr. Sunnyvale, CA 94089, USA |
| Manufacturer Name    | Aerohive Networks, Inc.                    |
| Manufacturer Address | 330 Gibraltar Dr. Sunnyvale, CA 94089, USA |

## 4 Test site information

|                      |                                             |
|----------------------|---------------------------------------------|
| Lab performing tests | SIEMIC Laboratories                         |
| Lab Address          | 775 Montague Expressway, Milpitas, CA 95035 |
| FCC Test Site No.    | 881796                                      |
| IC Test Site No.     | 4842D-2                                     |
| VCCI Test Site No.   | A0133                                       |

## 5 Modification

| Index | Item | Description | Note |
|-------|------|-------------|------|
| -     | -    | -           | -    |
|       |      |             |      |
|       |      |             |      |
|       |      |             |      |
|       |      |             |      |
|       |      |             |      |

## 6 EUT Information

### 6.1 EUT Description

|                           |   |               |
|---------------------------|---|---------------|
| Product Name              | : | AP Router     |
| Model No.                 | : | AP130         |
| Trade Name                | : | Aerohive      |
| Serial No.                | : | N/A           |
| Host Model No.            | : | N/A           |
| Input Power               | : | 48VDC (PoE)   |
| Power Adapter Manu/Model  | : | N/A           |
| Power Adapter SN          | : | N/A           |
| Date of EUT received      | : | 03/11/2015    |
| Equipment Class/ Category | : | DTS, UNII     |
| Clock Frequencies         | : | N/A           |
| Port/Connectors           | : | PoE, Ethernet |

### 6.2 Radio Description

| Radio Type             | 802.11b                             | 802.11g                             | 802.11a                                      | 802.11n-20M                                                  | 802.11n-40M                                  | 802.11ac-80M                                    |
|------------------------|-------------------------------------|-------------------------------------|----------------------------------------------|--------------------------------------------------------------|----------------------------------------------|-------------------------------------------------|
| Operating Frequency    | 2412-2462MHz                        | 2412-2462MHz                        | 5180-5320MHz<br>5500-5720MHz<br>5745-5825MHz | 2412-2462MHz<br>5180-5320MHz<br>5500-5720MHz<br>5745-5825MHz | 5190-5310MHz<br>5510-5710MHz<br>5755-5795MHz | 5210MHz, 5290MHz<br>5530MHz, 5690MHz<br>5775MHz |
| Modulation             | DSSS (CCK, DQPSK, DBPSK)            | OFDM-CCK (BPSK, QPSK, 16QAM, 64QAM) | OFDM (BPSK, QPSK, 16QAM, 64QAM)              | OFDM (BPSK, QPSK, 16QAM, 64QAM)                              | OFDM (BPSK, QPSK, 16QAM, 64QAM)              | OFDM (BPSK, QPSK, 16QAM, 64QAM)                 |
| Channel Spacing        | 5MHz                                | 5MHz                                | 20MHz                                        | 5MHz(2.4GHz), 20MHz (5GHz)                                   | 40MHz                                        | 80MHz                                           |
| Number of Channels     | 11                                  | 11                                  | 20                                           | 11(2.4GH)<br>20 (5GHz)                                       | 10(5GHz)                                     | 5                                               |
| Antenna Type           | Internal Patch Antenna              |                                     |                                              |                                                              |                                              |                                                 |
| Antenna Gain (Peak)    | 3.86 dBi (2.4GHz), 5.29 dBi (5 GHz) |                                     |                                              |                                                              |                                              |                                                 |
| Antenna Connector Type | U.FL                                |                                     |                                              |                                                              |                                              |                                                 |
| Note                   | N/A                                 |                                     |                                              |                                                              |                                              |                                                 |

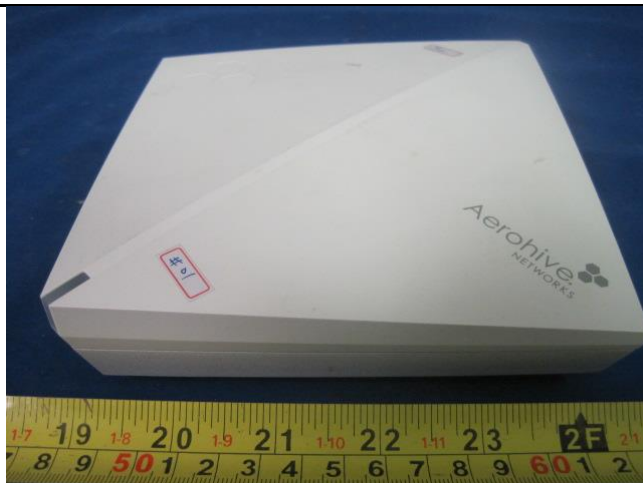
### 6.3 EUT Photos - External



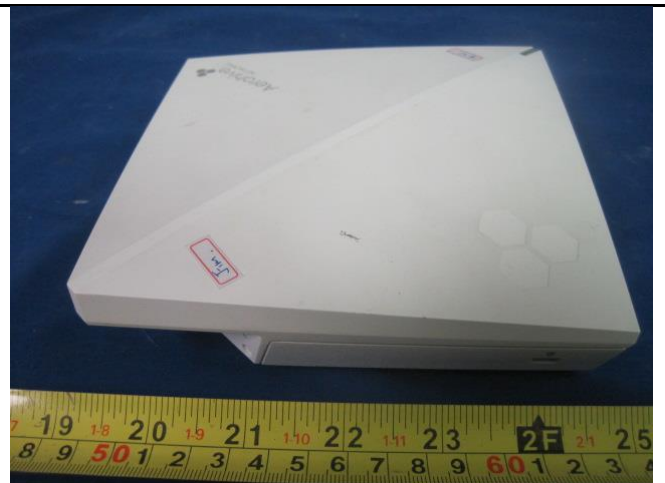
Top View



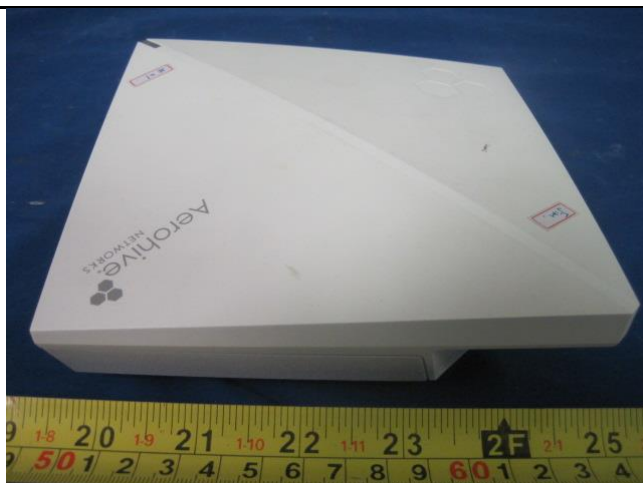
Bottom View



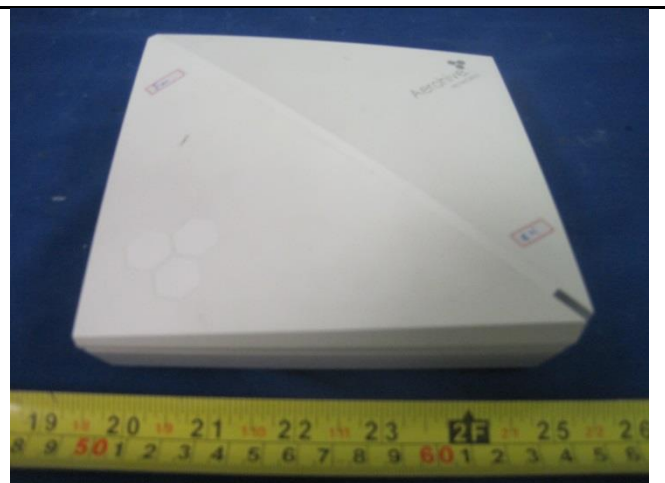
Front View



Rear View

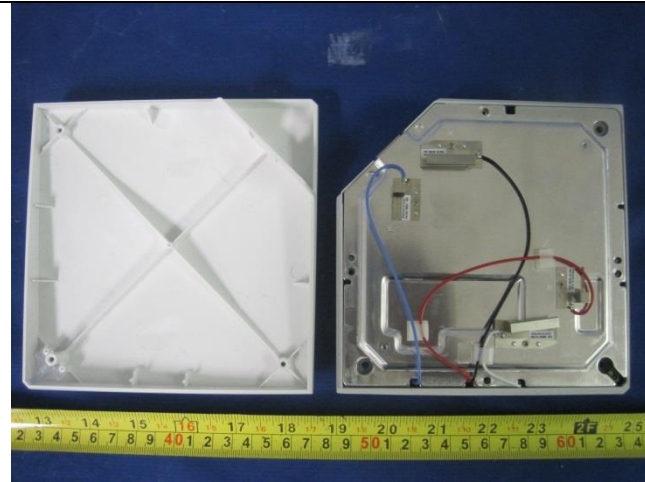


Left Side View

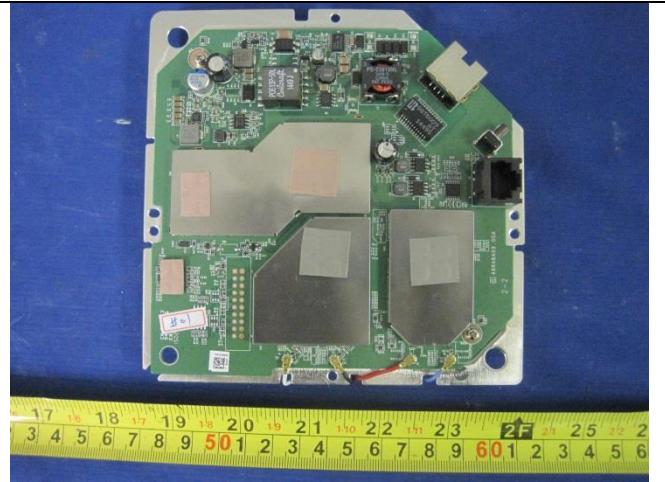


Right Side View

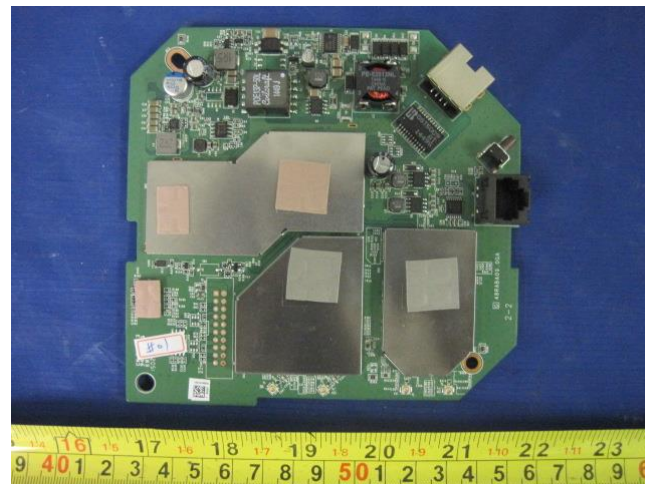
## 6.4 EUT Photos - Internal



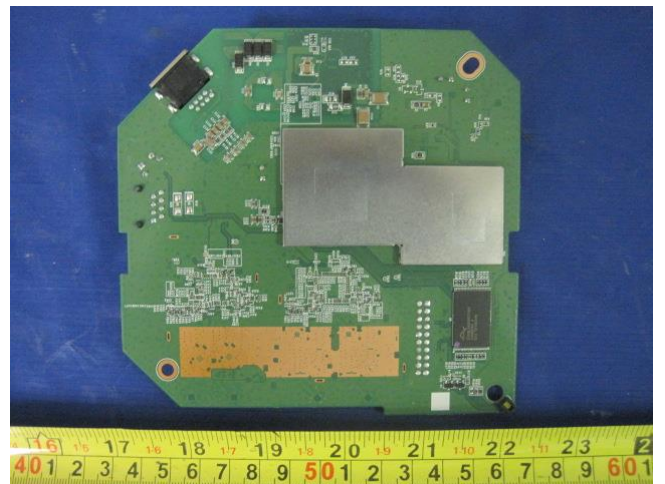
EUT Cover off Top View-1



EUT Cover off Top View-2



Main PCBA Top View



Main PCBA Bottom View

## 7 Supporting Equipment/Software and cabling Description

### 7.1 Supporting Equipment

| Index | Supporting Equipment Description | Model               | Serial No.               | Manu    | Note |
|-------|----------------------------------|---------------------|--------------------------|---------|------|
| 1     | Laptop                           | PP01L Latitude C610 | CN-06P823-48643-37P-4153 | Dell    | -    |
| 2     | WLAN USB adapter                 | WUSB6300            | 13E10S07313904           | Linksys |      |
|       |                                  |                     |                          |         |      |

### 7.2 Cabling Description

| Name | Connection Start |          | Connection Stop |          | Length / shielding Info |            | Note |
|------|------------------|----------|-----------------|----------|-------------------------|------------|------|
|      | From             | I/O Port | To              | I/O Port | Length (m)              | Shielding  |      |
| RJ45 | EUT              | RJ45     | POE             | RJ45     | 2                       | Unshielded | -    |
| RJ45 | POE              | RJ45     | Laptop          | RJ45     | 3                       | Unshielded | -    |

### 7.3 Test Software Description

| Test Item   | Software  | Description                                     |
|-------------|-----------|-------------------------------------------------|
| DFS Testing | Putty.exe | Set the EUT to different modulation and channel |

## 8 Test Summary

| Test Item                                                           | Test standard   | Test Method/Procedure                                   | Pass / Fail                                                           |
|---------------------------------------------------------------------|-----------------|---------------------------------------------------------|-----------------------------------------------------------------------|
| UNII Detection Bandwidth                                            | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| Initial Channel Availability Check Time                             | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| Radar Burst at the Beginning of the Channel Availability Check Time | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| Radar Burst at the End of the Channel Availability Check Time       | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| In-Service Monitoring - Channel Move Time                           | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| In-Service Monitoring - Channel Closing Transmission Time           | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| In-Service Monitoring - Non-Occupancy Period                        | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| Statistical Performance Check                                       | 47CFR15.407 (h) | 905462 D02 UNII DFS Compliance Procedures New Rules v01 | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> N/A |
| Remark                                                              | N/A             |                                                         |                                                                       |

## 9 Measurement Uncertainty

| Test Item                                                  | Frequency Range | Description                                                                                                     | Uncertainty        |
|------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------|--------------------|
| Dynamic frequency selection (DFS)<br>Conducted Measurement | 5GHz – 6GHz     | Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2 | $\pm 1.5\text{dB}$ |

## 10 Measurements, examination and derived results

### 10.1 Dynamic Frequency Selection (DFS)

#### 10.1.1 General introduction

##### Interference Threshold values, Master or Client incorporating In-Service Monitoring

| Maximum Transmit Power                                                      | Value (see note) |
|-----------------------------------------------------------------------------|------------------|
| ≥ 200 milliwatt                                                             | -64 dBm          |
| EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz                | -62 dBm          |
| EIRP < 200 milliwatt that do not meet the power spectra 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.

##### DFS Response requirement values

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

## Radar Test Waveforms

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

### 1. Short Pulse Radar Test Waveforms

| Radar Type                                                                                                                           | Pulse Width (μsec) | PRI (μsec)                                                                                                                                                    | Number of Pulses                                                 | Minimum Percentage of Successful Detection | Minimum Trials |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------|----------------|
| 0                                                                                                                                    | 1                  | 1428                                                                                                                                                          | 18                                                               | See Note 1                                 | See Note 1     |
| 1                                                                                                                                    | 1                  | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a                                                                     | Roundup { (1/360) * (19*10 <sup>6</sup> /PRI <sub>μsec</sub> ) } | 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. |                    |                                                                                                                                                               |                                                                  |                                            |                |

### 2. 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 Trials |
|------------|--------------------|-------------------|------------|----------------------------|------------------|--------------------------------------------|----------------|
| 5          | 50-100             | 5-20              | 1000-2000  | 1-3                        | 8-20             | 80%                                        | 30             |

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

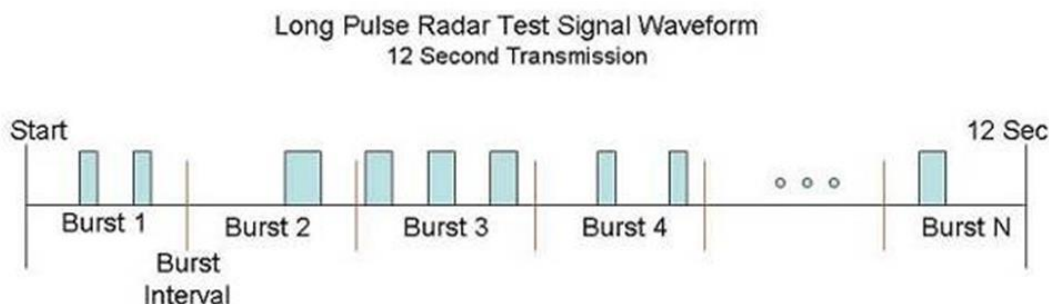
Each waveform is defined as follows:

- 1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
- 2) There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst\_Count.
- 3) Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
- 4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
- 5) Each pulse has a linear FM chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a Burst will have the same chirp width. Pulses in different Bursts may have different chirp widths. The chirp is centered on the pulse. For example, with a radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.

- 6) If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the time between the first and second pulses is chosen independently of the time between the second and third pulses.
- 7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst\_Count. Each interval is of length  $(12,000,000 / \text{Burst\_Count})$  microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and  $[(12,000,000 / \text{Burst\_Count}) - (\text{Total Burst Length}) + (\text{One Random PRI Interval})]$  microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen independently.

#### A representative example of a Long Pulse radar test waveform:

- 1) The total test signal length is 12 seconds.
- 2) 8 Bursts are randomly generated for the Burst Count.
- 3) Burst 1 has 2 randomly generated pulses.
- 4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
- 5) The PRI is randomly selected to be at 1213 microseconds.
- 6) Bursts 2 through 8 are generated using steps 3 – 5.
- 7) Each Burst is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, Burst 1 is randomly generated (1 to 1,500,000 minus the total Burst 1 length + 1 random PRI interval) at the 325,001 microsecond step. Bursts 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. Burst 2 falls in the 1,500,001 – 3,000,000 microsecond range).



### 3. Frequency Hopping Radar Type

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

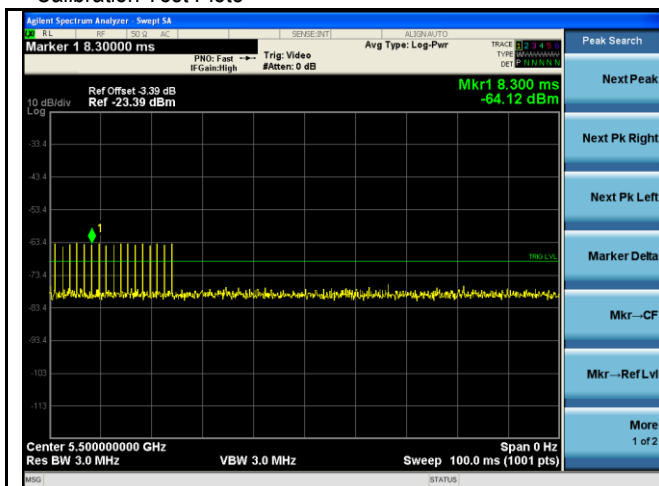
For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected 1 from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. 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.

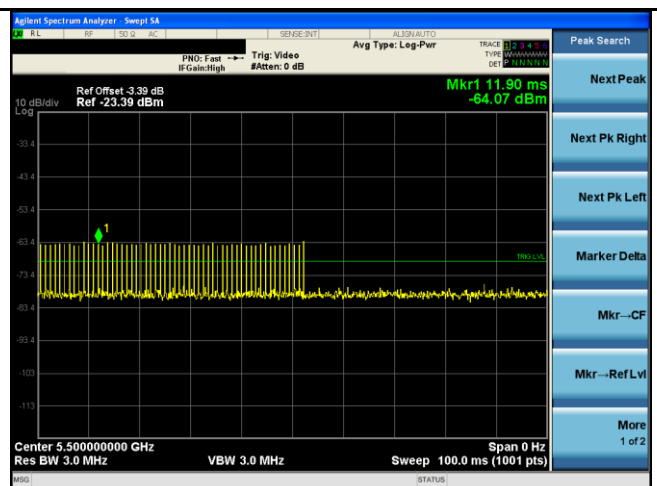
### 10.1.2 Radar Waveform Calibration

The following equipment setup was used to calibrate the conducted Radar Waveform. A spectrum analyzer was used to establish the test signal level for each radar type. During this process there were no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) mode at the frequency of the Radar Waveform generator. Peak detection was utilized. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz.

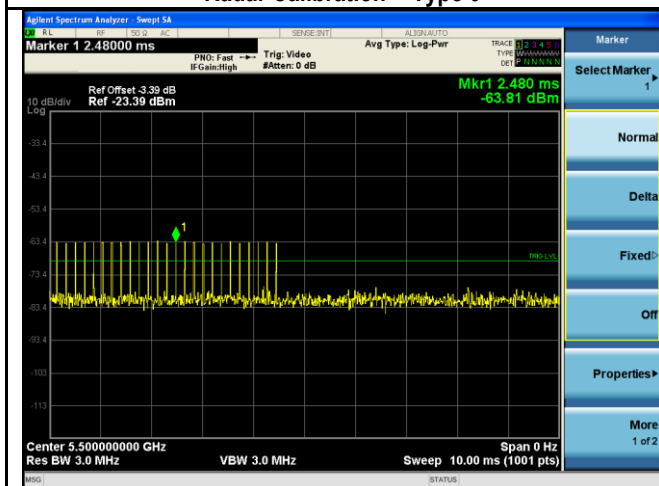
## Calibration Test Plots



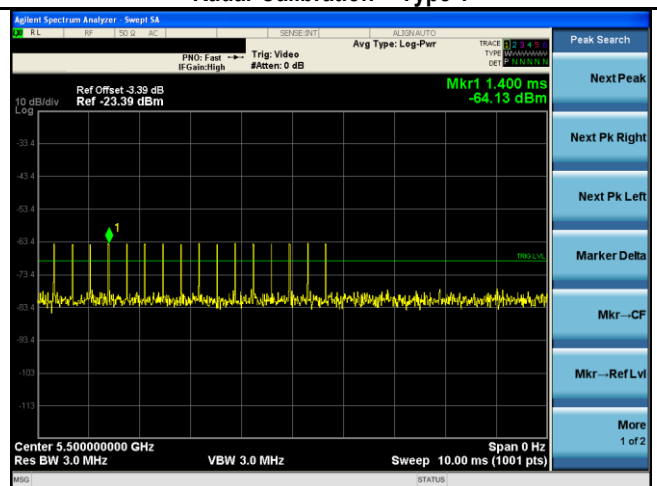
Radar Calibration - Type 0



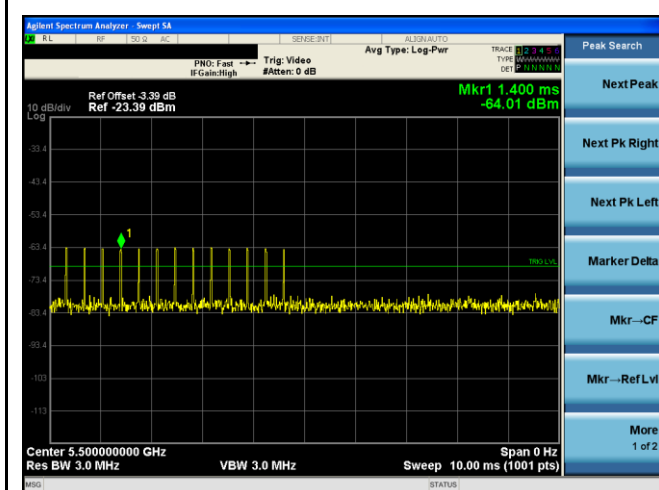
Radar Calibration - Type 1



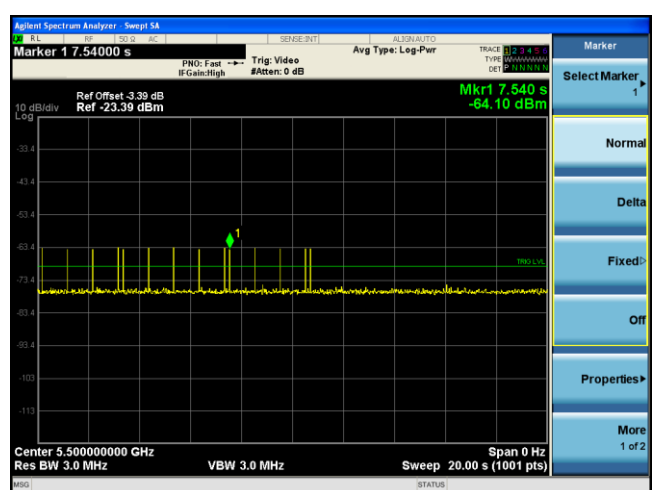
Radar Calibration - Type 2



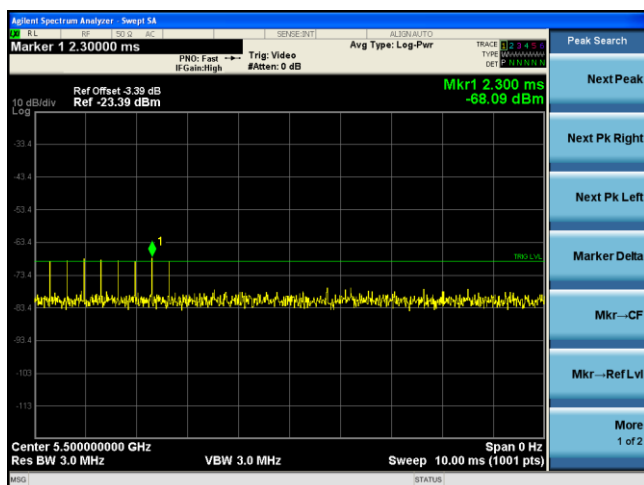
Radar Calibration - Type 3



Radar Calibration - Type 4



Radar Calibration - Type 5



**Radar Calibration - Type 6**

### 10.1.3 Test Procedure

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

These tests define how the following DFS parameters are verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time, and Non-Occupancy Period.

The steps below define the procedure to determine the above mentioned parameters 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.

UUT operating as a Client Device will associate with the (Master) at Mid Channel. DFS testing while the System testing was performed with the designated MPEG test file that streams full motion video at 30 frames per second from the Master to the Client IP based system

At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types.

Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time results to the limits defined in the DFS Response requirement values table.

#### **Channel Closing Transmission Time- Measurement**

A type 1 waveform was introduced to the EUT and the Spectrum Analyzer sweep time was set to 1s for monitoring and capturing the plot. A LabView program was created to collect trace data and capturing the plot. The program will calculate the channel closing time base on the spectrum analyzer result. The result will be calculated based on FCC procedure.

$$C = N * Dwell$$

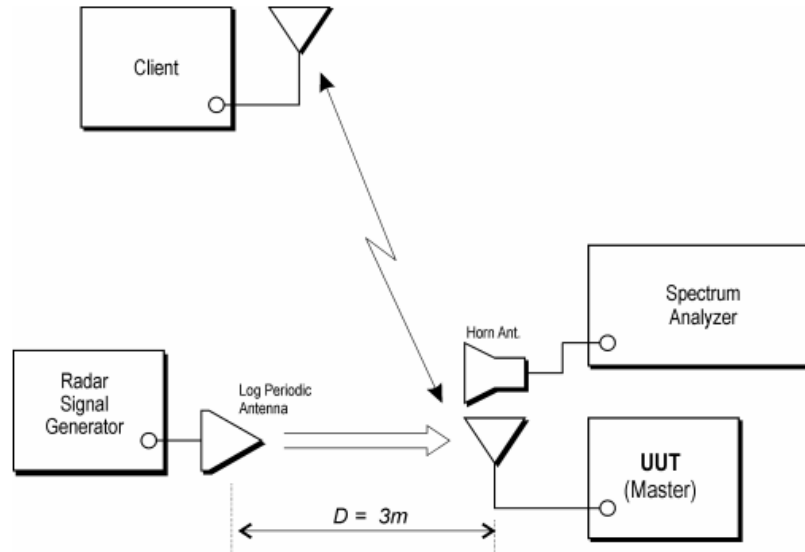
C is the closing time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and dwell is the dwell time per bin.

$$Dwell = S/B$$

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.

#### 10.1.4 DFS Test Setup

Test Setup Block Diagram



The radio was set at the center channel frequency of tested Channel.

A FCC approved Client device – (FCC ID: Q87-WUSB6300) USB wireless adapter was used to link with the UUT (master) device.

For the frequency bands 5470MHz to 5725MHz 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.

The rated output power of the Master unit is  $> 23$  dBm (EIRP). Therefore the required interference threshold is  $-64$  dBm. After correction for procedural adjustment, the required radiated threshold at the antenna port is  $-64 + 1 = -63$  dBm.

The calibrated radiated DFS detection threshold level is set to  $-64$  dBm. The tested level is lower than the required level hence it provides margining to the limit.

## 10.1.5 DFS Test Results

### 10.1.5.1 UNII Detection Bandwidth

**UNII Detection Bandwidth: All UNII channels for this device have identical Channel bandwidths and testing was performed on Mid Channel**

The generating equipment is configured as shown in the Conducted Test Setup above. A single *Burst* of the short pulse radar type 0 is produced at Mid Channel at a -63 dBm level. The UUT is set up as a standalone device (no associated Client and no traffic).

A single radar Burst is generated for a minimum of 10 trials, and the response of the UUT is noted. The UUT must detect the Radar Waveform 90% or more of the time.

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. 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.

Starting at the center frequency of the UUT operating Channel, decrease 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 4. Repeat this measurement in 1MHz steps at frequencies 5 MHz above where the detection rate begins to fall. 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.

The U-NII Detection Bandwidth is calculated as follows:

$$\text{U-NII Detection Bandwidth} = \text{FH} - \text{FL}$$

The U-NII Detection Bandwidth must be at least 100% of the UUT transmitter 99% power, otherwise, the UUT does not comply with DFS requirements.

## Test Result

EUT Frequency = 5500MHz (11a mode)

| Frequency (MHz)                                                 | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Trial 7 | Trial 8 | Trial 9 | Trial 10 | Detection Rate % |
|-----------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|------------------|
| 5490                                                            | No      | No      | No      | No      | No      | No      | No      | No      | No      | No       | 0.00%            |
| 5491                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5492                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5493                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5494                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5495                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5500                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5505                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5506                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5507                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5508                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5509                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5510                                                            | No      | No      | No      | No      | No      | No      | No      | No      | No      | No       | 0.00%            |
| Detection Bandwidth: 18 MHz                                     |         |         |         |         |         |         |         |         |         |          |                  |
| Specification: at least 100% of 99% of EUT bandwidth= 17.97 MHz |         |         |         |         |         |         |         |         |         |          |                  |

EUT Frequency = 5510MHz (11n-40MHz mode)

| Frequency (MHz)                                                 | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Trial 7 | Trial 8 | Trial 9 | Trial 10 | Detection Rate % |
|-----------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|------------------|
| 5490                                                            | No      | No      | No      | No      | No      | No      | No      | No      | No      | No       | 0.00%            |
| 5491                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5492                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5493                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5494                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5495                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5500                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5505                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5510                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5515                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5520                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5525                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5526                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5527                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5528                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5529                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5530                                                            | No      | No      | No      | No      | No      | No      | No      | No      | No      | No       | 0.00%            |
| Detection Bandwidth: 38 MHz                                     |         |         |         |         |         |         |         |         |         |          |                  |
| Specification: at least 100% of 99% of EUT bandwidth= 36.46 MHz |         |         |         |         |         |         |         |         |         |          |                  |

EUT Frequency = 5530MHz (11ac-80MHz mode)

| Frequency (MHz)                                                 | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Trial 7 | Trial 8 | Trial 9 | Trial 10 | Detection Rate % |
|-----------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|------------------|
| 5490                                                            | No      | No      | No      | No      | No      | No      | No      | No      | No      | No       | 0.00%            |
| 5491                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5492                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5493                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5494                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5495                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5500                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5505                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5510                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5515                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5520                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5525                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5530                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5535                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5540                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5545                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5550                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5555                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5560                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5565                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5566                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5567                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5568                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5569                                                            | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes     | Yes      | 100.00%          |
| 5570                                                            | No      | No      | No      | No      | No      | No      | No      | No      | No      | No       | 0.00%            |
| Detection Bandwidth: 78 MHz                                     |         |         |         |         |         |         |         |         |         |          |                  |
| Specification: at least 100% of 99% of EUT bandwidth= 75.83 MHz |         |         |         |         |         |         |         |         |         |          |                  |

### 10.1.5.2 Initial Channel Availability Check Time

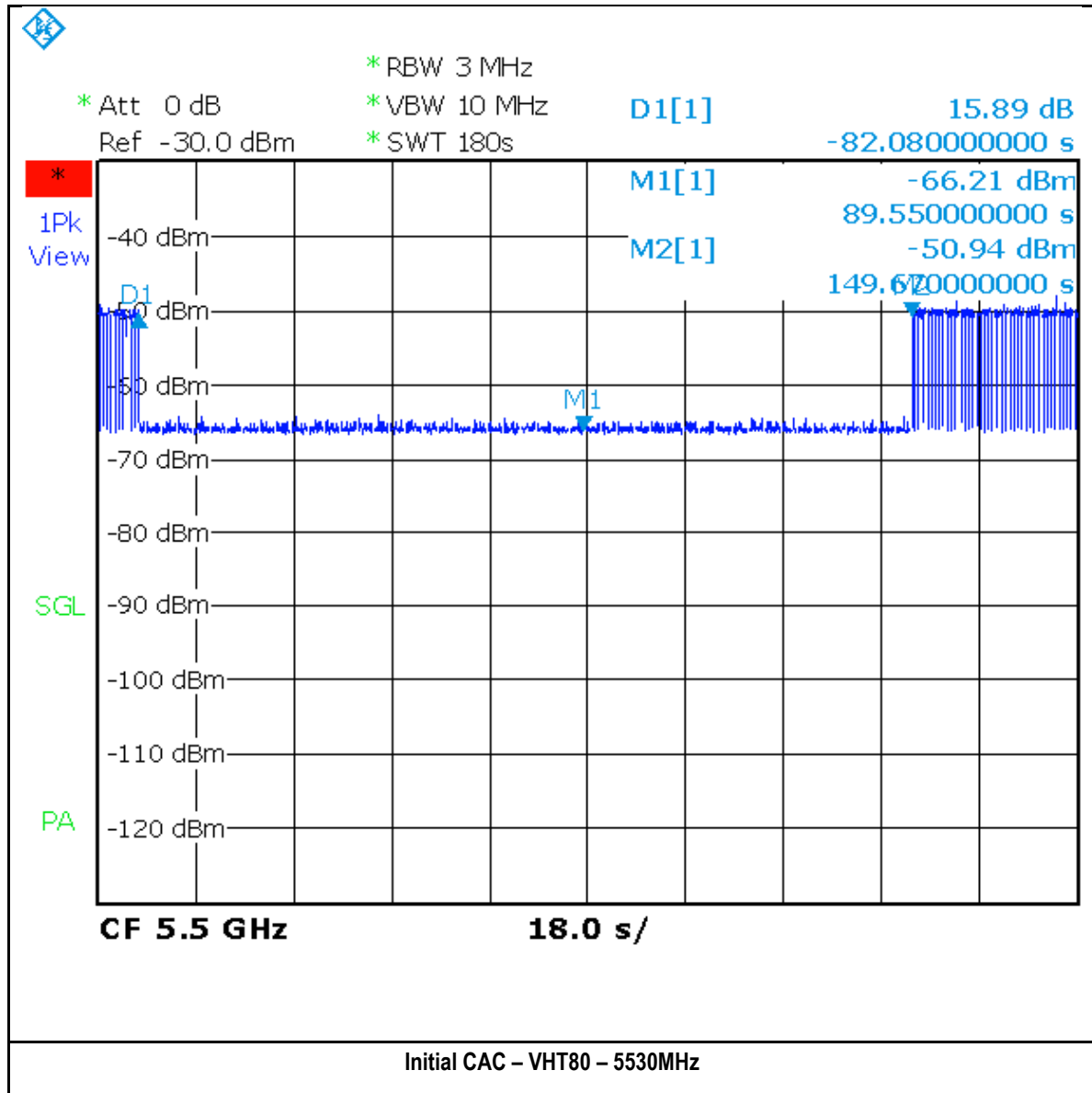
The Initial Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test Channel until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. This test does not use any Radar Waveforms and only needs to be performed one time.

The U-NII device is powered on and be instructed to operate at Low channel, Mid Channel or High channel. At the same time the UUT is powered on, the spectrum analyzer is set to zero span modes with a 3 MHz resolution bandwidth at low, mid can high channel with a 2.5 minute sweep time. The analyzer's sweep will be started the same time power is applied to the UNII device.

The UUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.

The initial power up time of the UUT is indicated by marker 1 in the plot. Initial beacons/data transmissions are indicated by marker.

## Test Plots



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

**Radar Burst at the Beginning of the Channel Availability Check Time:** 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.

The UUT is powered on at T0. T1 denotes the instant when the UUT 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 short pulse of radar type 1 at -62 dBm will commence within a 6 second window.

Verify that during the 2.5 minute measurement window no UUT transmissions occurred at mid channel. Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported.

Observation of emissions at center frequency of low channel, mid channel and high channel will continue for 2.5 minutes after the radar Burst has been generated.

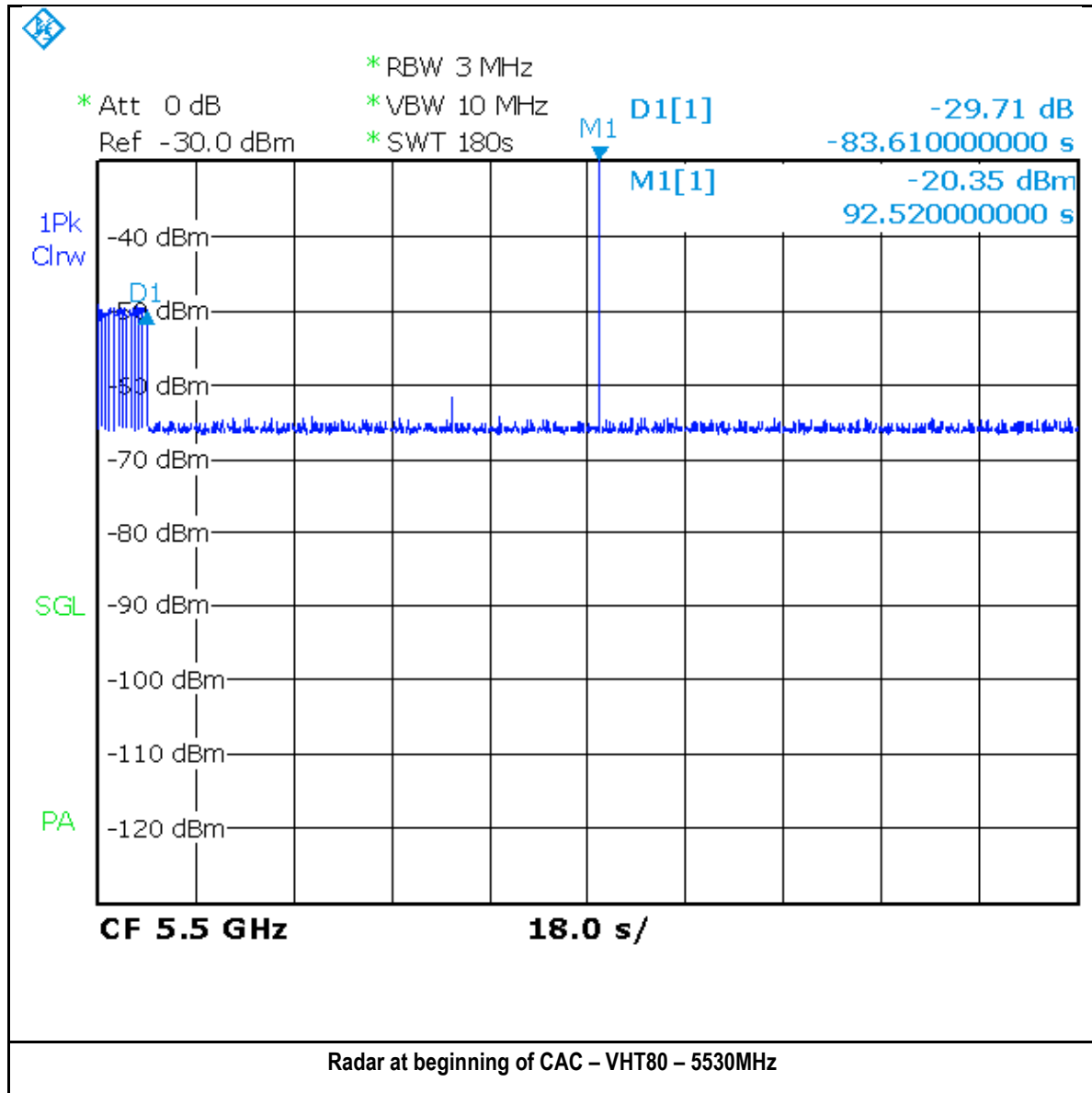
**Note:**

**EUT power on cycle time  $\approx$  82.08 Sec**

**For CAC at the beginning, the radar signal was injected within 2 sec after 82.08 sec.**

**For CAC at the end, the radar signal was injected within 2 sec before 142.08 sec.**

## Test Plots



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

**Radar Burst at the End of the Channel Availability Check Time:** 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 end of the Channel Availability Check Time.

The UUT is powered on at T0. T1 denotes the instant when the UUT 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 short pulse of radar type 1 at -62 dBm will commence within a last 6 second window.

Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported.

Observation of emissions at center frequency of mid channel will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window no UUT transmissions occurred at mid channel.

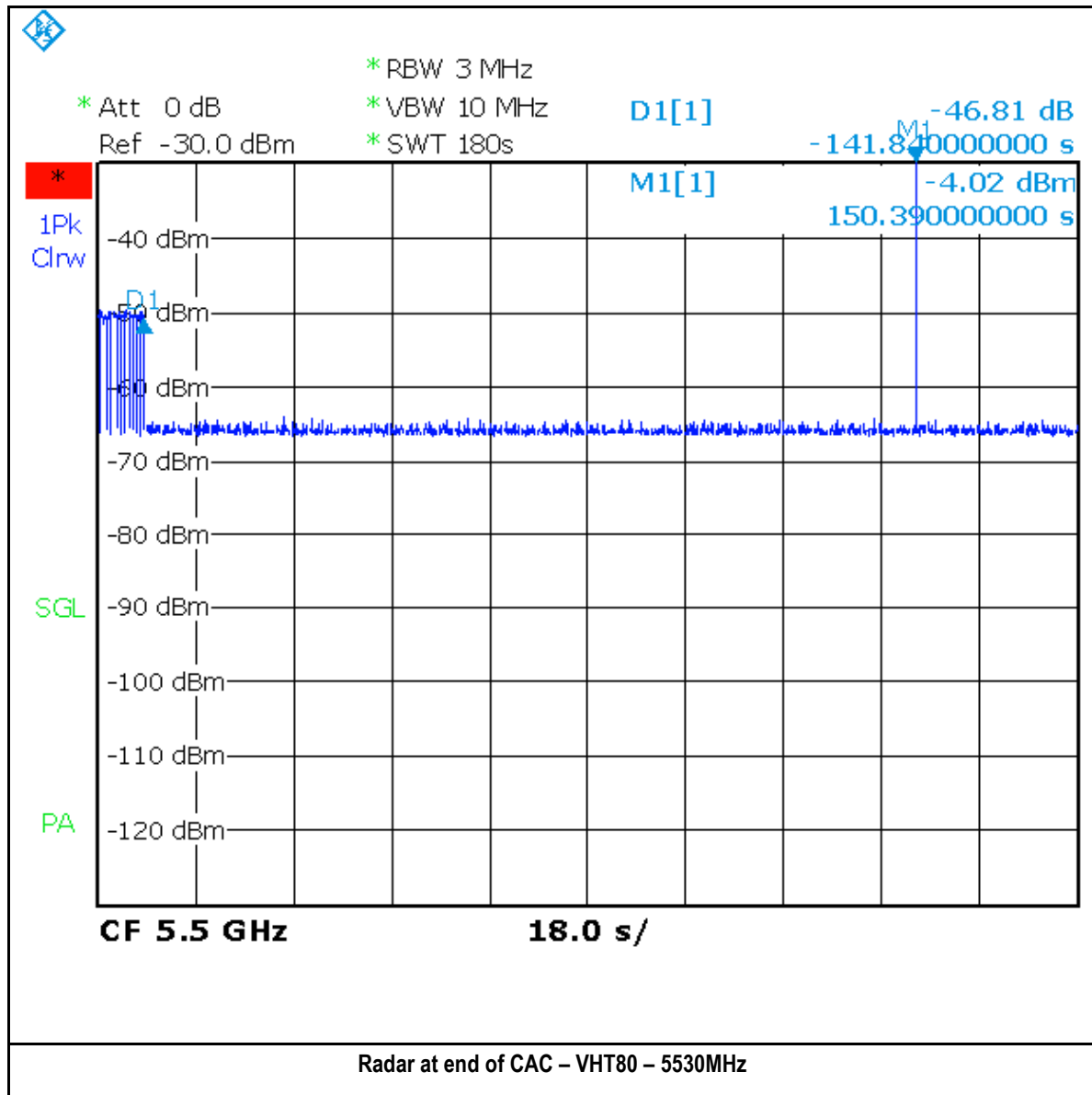
**Note:**

**EUT power on cycle time  $\approx$  82.08 Sec**

**For CAC at the beginning, the radar signal was injected within 2 sec after 82.08 sec.**

**For CAC at the end, the radar signal was injected within 2 sec before 142.08 sec.**

## Test Plots



### 10.1.5.5 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period

These tests define how the following DFS parameters are verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time, and Non-Occupancy Period.

The steps below define the procedure to determine the above mentioned parameters 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.

A U-NII device operating as a Client Device will associate with the UUT (Master) at Mid 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 -62dBm.

Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time results to the limits defined in the DFS Response requirement values table.

#### Channel Closing Transmission Time- Measurement

A type 1 waveform was introduced to the EUT and the Spectrum Analyzer sweep time was set to 1s for monitoring and capturing the plot. A LabView program was created to collect trace data and capturing the plot. The program will calculate the channel closing time base on the spectrum analyzer result. The result will be calculated base on FCC procedure.

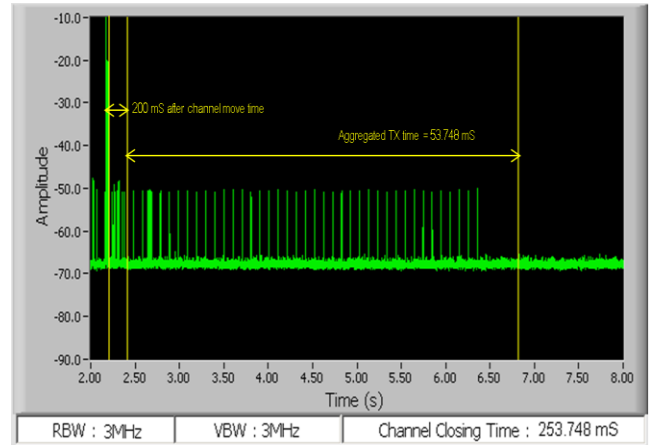
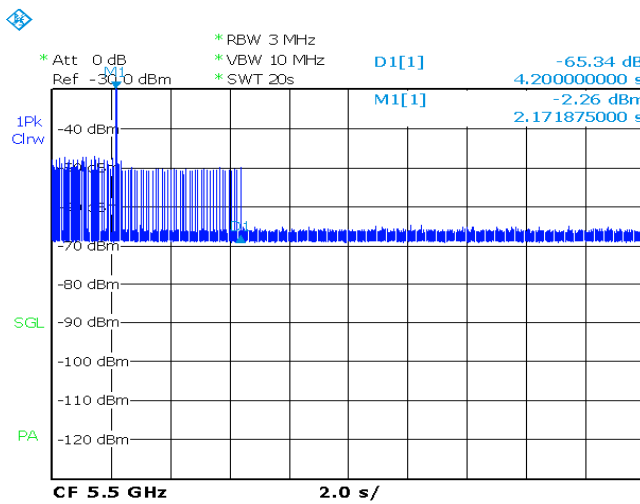
$$C = N * Dwell$$

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.

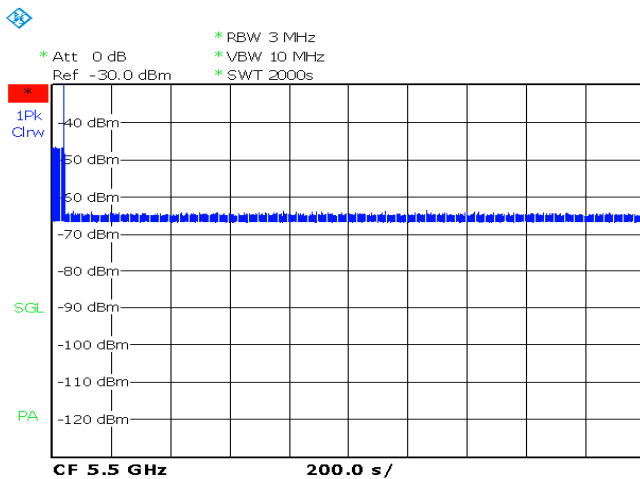
$$Dwell = S/B$$

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.

## Test Result



### Channel Move Time - 802.11ac-5530MHz (Type0)



### Channel Closing Time - 802.11ac-5530MHz (Type0)

### Non-Occupancy Period - 802.11ac-5530MHz

### 10.1.5.6 Statistical Performance Check

Statistical Performance Check, the steps below define the procedure to determine the minimum percentage of detection 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.

A U-NII device operating as a Client Device will associate with the UUT (Master) at Low, Mid and High 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.

The Radar Waveform generator sends the individual waveform for each of the radar types 0-6 at -62dbm. Statistical data will be gathered to determine the ability of the device to detect the radar test waveforms. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device

$$\frac{\text{TotalWaveformDetections}}{\text{TotalWaveformTrials}} \times 100 = \text{Probability of Detection Radar Waveform calculated by:}$$

The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in the Radar Test Waveforms section.

Test Result-5500MHz – 802.11a

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5500            | FCC Radar Type 1 | Waveform 1    | Completed | Yes    |
| 2                                     | 5500            | FCC Radar Type 1 | Waveform 2    | Completed | Yes    |
| 3                                     | 5500            | FCC Radar Type 1 | Waveform 3    | Completed | Yes    |
| 4                                     | 5500            | FCC Radar Type 1 | Waveform 4    | Completed | Yes    |
| 5                                     | 5500            | FCC Radar Type 1 | Waveform 5    | Completed | Yes    |
| 6                                     | 5500            | FCC Radar Type 1 | Waveform 6    | Completed | Yes    |
| 7                                     | 5500            | FCC Radar Type 1 | Waveform 7    | Completed | Yes    |
| 8                                     | 5500            | FCC Radar Type 1 | Waveform 8    | Completed | Yes    |
| 9                                     | 5500            | FCC Radar Type 1 | Waveform 9    | Completed | Yes    |
| 10                                    | 5500            | FCC Radar Type 1 | Waveform 10   | Completed | Yes    |
| 11                                    | 5500            | FCC Radar Type 1 | Waveform 11   | Completed | Yes    |
| 12                                    | 5500            | FCC Radar Type 1 | Waveform 12   | Completed | Yes    |
| 13                                    | 5500            | FCC Radar Type 1 | Waveform 13   | Completed | Yes    |
| 14                                    | 5500            | FCC Radar Type 1 | Waveform 14   | Completed | Yes    |
| 15                                    | 5500            | FCC Radar Type 1 | Waveform 15   | Completed | Yes    |
| 16                                    | 5500            | FCC Radar Type 1 | Waveform 16   | Completed | Yes    |
| 17                                    | 5500            | FCC Radar Type 1 | Waveform 17   | Completed | Yes    |
| 18                                    | 5500            | FCC Radar Type 1 | Waveform 18   | Completed | Yes    |
| 19                                    | 5500            | FCC Radar Type 1 | Waveform 19   | Completed | Yes    |
| 20                                    | 5500            | FCC Radar Type 1 | Waveform 20   | Completed | Yes    |
| 21                                    | 5500            | FCC Radar Type 1 | Waveform 21   | Completed | Yes    |
| 22                                    | 5500            | FCC Radar Type 1 | Waveform 22   | Completed | Yes    |
| 23                                    | 5500            | FCC Radar Type 1 | Waveform 23   | Completed | Yes    |
| 24                                    | 5500            | FCC Radar Type 1 | Waveform 24   | Completed | Yes    |
| 25                                    | 5500            | FCC Radar Type 1 | Waveform 25   | Completed | Yes    |
| 26                                    | 5500            | FCC Radar Type 1 | Waveform 26   | Completed | Yes    |
| 27                                    | 5500            | FCC Radar Type 1 | Waveform 27   | Completed | Yes    |
| 28                                    | 5500            | FCC Radar Type 1 | Waveform 28   | Completed | Yes    |
| 29                                    | 5500            | FCC Radar Type 1 | Waveform 29   | Completed | Yes    |
| 30                                    | 5500            | FCC Radar Type 1 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5500MHz – 802.11a

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5500            | FCC Radar Type 2 | Waveform 1    | Completed | Yes    |
| 2                                     | 5500            | FCC Radar Type 2 | Waveform 2    | Completed | Yes    |
| 3                                     | 5500            | FCC Radar Type 2 | Waveform 3    | Completed | Yes    |
| 4                                     | 5500            | FCC Radar Type 2 | Waveform 4    | Completed | Yes    |
| 5                                     | 5500            | FCC Radar Type 2 | Waveform 5    | Completed | Yes    |
| 6                                     | 5500            | FCC Radar Type 2 | Waveform 6    | Completed | Yes    |
| 7                                     | 5500            | FCC Radar Type 2 | Waveform 7    | Completed | Yes    |
| 8                                     | 5500            | FCC Radar Type 2 | Waveform 8    | Completed | Yes    |
| 9                                     | 5500            | FCC Radar Type 2 | Waveform 9    | Completed | Yes    |
| 10                                    | 5500            | FCC Radar Type 2 | Waveform 10   | Completed | Yes    |
| 11                                    | 5500            | FCC Radar Type 2 | Waveform 11   | Completed | Yes    |
| 12                                    | 5500            | FCC Radar Type 2 | Waveform 12   | Completed | Yes    |
| 13                                    | 5500            | FCC Radar Type 2 | Waveform 13   | Completed | Yes    |
| 14                                    | 5500            | FCC Radar Type 2 | Waveform 14   | Completed | Yes    |
| 15                                    | 5500            | FCC Radar Type 2 | Waveform 15   | Completed | Yes    |
| 16                                    | 5500            | FCC Radar Type 2 | Waveform 16   | Completed | Yes    |
| 17                                    | 5500            | FCC Radar Type 2 | Waveform 17   | Completed | Yes    |
| 18                                    | 5500            | FCC Radar Type 2 | Waveform 18   | Completed | Yes    |
| 19                                    | 5500            | FCC Radar Type 2 | Waveform 19   | Completed | Yes    |
| 20                                    | 5500            | FCC Radar Type 2 | Waveform 20   | Completed | Yes    |
| 21                                    | 5500            | FCC Radar Type 2 | Waveform 21   | Completed | Yes    |
| 22                                    | 5500            | FCC Radar Type 2 | Waveform 22   | Completed | Yes    |
| 23                                    | 5500            | FCC Radar Type 2 | Waveform 23   | Completed | Yes    |
| 24                                    | 5500            | FCC Radar Type 2 | Waveform 24   | Completed | Yes    |
| 25                                    | 5500            | FCC Radar Type 2 | Waveform 25   | Completed | Yes    |
| 26                                    | 5500            | FCC Radar Type 2 | Waveform 26   | Completed | Yes    |
| 27                                    | 5500            | FCC Radar Type 2 | Waveform 27   | Completed | Yes    |
| 28                                    | 5500            | FCC Radar Type 2 | Waveform 28   | Completed | Yes    |
| 29                                    | 5500            | FCC Radar Type 2 | Waveform 29   | Completed | Yes    |
| 30                                    | 5500            | FCC Radar Type 2 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5500MHz – 802.11a

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5500            | FCC Radar Type 3 | Waveform 1    | Completed | Yes    |
| 2                                     | 5500            | FCC Radar Type 3 | Waveform 2    | Completed | Yes    |
| 3                                     | 5500            | FCC Radar Type 3 | Waveform 3    | Completed | Yes    |
| 4                                     | 5500            | FCC Radar Type 3 | Waveform 4    | Completed | Yes    |
| 5                                     | 5500            | FCC Radar Type 3 | Waveform 5    | Completed | Yes    |
| 6                                     | 5500            | FCC Radar Type 3 | Waveform 6    | Completed | Yes    |
| 7                                     | 5500            | FCC Radar Type 3 | Waveform 7    | Completed | Yes    |
| 8                                     | 5500            | FCC Radar Type 3 | Waveform 8    | Completed | Yes    |
| 9                                     | 5500            | FCC Radar Type 3 | Waveform 9    | Completed | Yes    |
| 10                                    | 5500            | FCC Radar Type 3 | Waveform 10   | Completed | Yes    |
| 11                                    | 5500            | FCC Radar Type 3 | Waveform 11   | Completed | Yes    |
| 12                                    | 5500            | FCC Radar Type 3 | Waveform 12   | Completed | Yes    |
| 13                                    | 5500            | FCC Radar Type 3 | Waveform 13   | Completed | Yes    |
| 14                                    | 5500            | FCC Radar Type 3 | Waveform 14   | Completed | Yes    |
| 15                                    | 5500            | FCC Radar Type 3 | Waveform 15   | Completed | Yes    |
| 16                                    | 5500            | FCC Radar Type 3 | Waveform 16   | Completed | Yes    |
| 17                                    | 5500            | FCC Radar Type 3 | Waveform 17   | Completed | Yes    |
| 18                                    | 5500            | FCC Radar Type 3 | Waveform 18   | Completed | Yes    |
| 19                                    | 5500            | FCC Radar Type 3 | Waveform 19   | Completed | Yes    |
| 20                                    | 5500            | FCC Radar Type 3 | Waveform 20   | Completed | Yes    |
| 21                                    | 5500            | FCC Radar Type 3 | Waveform 21   | Completed | Yes    |
| 22                                    | 5500            | FCC Radar Type 3 | Waveform 22   | Completed | Yes    |
| 23                                    | 5500            | FCC Radar Type 3 | Waveform 23   | Completed | Yes    |
| 24                                    | 5500            | FCC Radar Type 3 | Waveform 24   | Completed | Yes    |
| 25                                    | 5500            | FCC Radar Type 3 | Waveform 25   | Completed | Yes    |
| 26                                    | 5500            | FCC Radar Type 3 | Waveform 26   | Completed | Yes    |
| 27                                    | 5500            | FCC Radar Type 3 | Waveform 27   | Completed | Yes    |
| 28                                    | 5500            | FCC Radar Type 3 | Waveform 28   | Completed | Yes    |
| 29                                    | 5500            | FCC Radar Type 3 | Waveform 29   | Completed | Yes    |
| 30                                    | 5500            | FCC Radar Type 3 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5500MHz – 802.11a

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5500            | FCC Radar Type 4 | Waveform 1    | Completed | Yes    |
| 2                                     | 5500            | FCC Radar Type 4 | Waveform 2    | Completed | Yes    |
| 3                                     | 5500            | FCC Radar Type 4 | Waveform 3    | Completed | Yes    |
| 4                                     | 5500            | FCC Radar Type 4 | Waveform 4    | Completed | Yes    |
| 5                                     | 5500            | FCC Radar Type 4 | Waveform 5    | Completed | Yes    |
| 6                                     | 5500            | FCC Radar Type 4 | Waveform 6    | Completed | Yes    |
| 7                                     | 5500            | FCC Radar Type 4 | Waveform 7    | Completed | Yes    |
| 8                                     | 5500            | FCC Radar Type 4 | Waveform 8    | Completed | Yes    |
| 9                                     | 5500            | FCC Radar Type 4 | Waveform 9    | Completed | Yes    |
| 10                                    | 5500            | FCC Radar Type 4 | Waveform 10   | Completed | Yes    |
| 11                                    | 5500            | FCC Radar Type 4 | Waveform 11   | Completed | Yes    |
| 12                                    | 5500            | FCC Radar Type 4 | Waveform 12   | Completed | Yes    |
| 13                                    | 5500            | FCC Radar Type 4 | Waveform 13   | Completed | Yes    |
| 14                                    | 5500            | FCC Radar Type 4 | Waveform 14   | Completed | Yes    |
| 15                                    | 5500            | FCC Radar Type 4 | Waveform 15   | Completed | Yes    |
| 16                                    | 5500            | FCC Radar Type 4 | Waveform 16   | Completed | Yes    |
| 17                                    | 5500            | FCC Radar Type 4 | Waveform 17   | Completed | Yes    |
| 18                                    | 5500            | FCC Radar Type 4 | Waveform 18   | Completed | Yes    |
| 19                                    | 5500            | FCC Radar Type 4 | Waveform 19   | Completed | Yes    |
| 20                                    | 5500            | FCC Radar Type 4 | Waveform 20   | Completed | Yes    |
| 21                                    | 5500            | FCC Radar Type 4 | Waveform 21   | Completed | Yes    |
| 22                                    | 5500            | FCC Radar Type 4 | Waveform 22   | Completed | Yes    |
| 23                                    | 5500            | FCC Radar Type 4 | Waveform 23   | Completed | Yes    |
| 24                                    | 5500            | FCC Radar Type 4 | Waveform 24   | Completed | Yes    |
| 25                                    | 5500            | FCC Radar Type 4 | Waveform 25   | Completed | Yes    |
| 26                                    | 5500            | FCC Radar Type 4 | Waveform 26   | Completed | Yes    |
| 27                                    | 5500            | FCC Radar Type 4 | Waveform 27   | Completed | Yes    |
| 28                                    | 5500            | FCC Radar Type 4 | Waveform 28   | Completed | Yes    |
| 29                                    | 5500            | FCC Radar Type 4 | Waveform 29   | Completed | Yes    |
| 30                                    | 5500            | FCC Radar Type 4 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5500MHz – 802.11a

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5500            | FCC Radar Type 5 | Waveform 1    | Completed | Yes    |
| 2                                     | 5500            | FCC Radar Type 5 | Waveform 2    | Completed | Yes    |
| 3                                     | 5500            | FCC Radar Type 5 | Waveform 3    | Completed | Yes    |
| 4                                     | 5500            | FCC Radar Type 5 | Waveform 4    | Completed | Yes    |
| 5                                     | 5500            | FCC Radar Type 5 | Waveform 5    | Completed | Yes    |
| 6                                     | 5500            | FCC Radar Type 5 | Waveform 6    | Completed | Yes    |
| 7                                     | 5500            | FCC Radar Type 5 | Waveform 7    | Completed | Yes    |
| 8                                     | 5500            | FCC Radar Type 5 | Waveform 8    | Completed | Yes    |
| 9                                     | 5500            | FCC Radar Type 5 | Waveform 9    | Completed | Yes    |
| 10                                    | 5500            | FCC Radar Type 5 | Waveform 10   | Completed | Yes    |
| 11                                    | 5500            | FCC Radar Type 5 | Waveform 11   | Completed | Yes    |
| 12                                    | 5500            | FCC Radar Type 5 | Waveform 12   | Completed | Yes    |
| 13                                    | 5500            | FCC Radar Type 5 | Waveform 13   | Completed | Yes    |
| 14                                    | 5500            | FCC Radar Type 5 | Waveform 14   | Completed | Yes    |
| 15                                    | 5500            | FCC Radar Type 5 | Waveform 15   | Completed | Yes    |
| 16                                    | 5500            | FCC Radar Type 5 | Waveform 16   | Completed | Yes    |
| 17                                    | 5500            | FCC Radar Type 5 | Waveform 17   | Completed | Yes    |
| 18                                    | 5500            | FCC Radar Type 5 | Waveform 18   | Completed | Yes    |
| 19                                    | 5500            | FCC Radar Type 5 | Waveform 19   | Completed | Yes    |
| 20                                    | 5500            | FCC Radar Type 5 | Waveform 20   | Completed | Yes    |
| 21                                    | 5500            | FCC Radar Type 5 | Waveform 21   | Completed | Yes    |
| 22                                    | 5500            | FCC Radar Type 5 | Waveform 22   | Completed | Yes    |
| 23                                    | 5500            | FCC Radar Type 5 | Waveform 23   | Completed | Yes    |
| 24                                    | 5500            | FCC Radar Type 5 | Waveform 24   | Completed | Yes    |
| 25                                    | 5500            | FCC Radar Type 5 | Waveform 25   | Completed | Yes    |
| 26                                    | 5500            | FCC Radar Type 5 | Waveform 26   | Completed | Yes    |
| 27                                    | 5500            | FCC Radar Type 5 | Waveform 27   | Completed | Yes    |
| 28                                    | 5500            | FCC Radar Type 5 | Waveform 28   | Completed | Yes    |
| 29                                    | 5500            | FCC Radar Type 5 | Waveform 29   | Completed | Yes    |
| 30                                    | 5500            | FCC Radar Type 5 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5500MHz – 802.11a

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5500            | FCC Radar Type 6 | Waveform 1    | Completed | Yes    |
| 2                                     | 5500            | FCC Radar Type 6 | Waveform 2    | Completed | Yes    |
| 3                                     | 5500            | FCC Radar Type 6 | Waveform 3    | Completed | Yes    |
| 4                                     | 5500            | FCC Radar Type 6 | Waveform 4    | Completed | Yes    |
| 5                                     | 5500            | FCC Radar Type 6 | Waveform 5    | Completed | Yes    |
| 6                                     | 5500            | FCC Radar Type 6 | Waveform 6    | Completed | Yes    |
| 7                                     | 5500            | FCC Radar Type 6 | Waveform 7    | Completed | Yes    |
| 8                                     | 5500            | FCC Radar Type 6 | Waveform 8    | Completed | Yes    |
| 9                                     | 5500            | FCC Radar Type 6 | Waveform 9    | Completed | Yes    |
| 10                                    | 5500            | FCC Radar Type 6 | Waveform 10   | Completed | Yes    |
| 11                                    | 5500            | FCC Radar Type 6 | Waveform 11   | Completed | Yes    |
| 12                                    | 5500            | FCC Radar Type 6 | Waveform 12   | Completed | Yes    |
| 13                                    | 5500            | FCC Radar Type 6 | Waveform 13   | Completed | Yes    |
| 14                                    | 5500            | FCC Radar Type 6 | Waveform 14   | Completed | Yes    |
| 15                                    | 5500            | FCC Radar Type 6 | Waveform 15   | Completed | Yes    |
| 16                                    | 5500            | FCC Radar Type 6 | Waveform 16   | Completed | Yes    |
| 17                                    | 5500            | FCC Radar Type 6 | Waveform 17   | Completed | Yes    |
| 18                                    | 5500            | FCC Radar Type 6 | Waveform 18   | Completed | Yes    |
| 19                                    | 5500            | FCC Radar Type 6 | Waveform 19   | Completed | Yes    |
| 20                                    | 5500            | FCC Radar Type 6 | Waveform 20   | Completed | Yes    |
| 21                                    | 5500            | FCC Radar Type 6 | Waveform 21   | Completed | Yes    |
| 22                                    | 5500            | FCC Radar Type 6 | Waveform 22   | Completed | Yes    |
| 23                                    | 5500            | FCC Radar Type 6 | Waveform 23   | Completed | Yes    |
| 24                                    | 5500            | FCC Radar Type 6 | Waveform 24   | Completed | Yes    |
| 25                                    | 5500            | FCC Radar Type 6 | Waveform 25   | Completed | Yes    |
| 26                                    | 5500            | FCC Radar Type 6 | Waveform 26   | Completed | Yes    |
| 27                                    | 5500            | FCC Radar Type 6 | Waveform 27   | Completed | Yes    |
| 28                                    | 5500            | FCC Radar Type 6 | Waveform 28   | Completed | Yes    |
| 29                                    | 5500            | FCC Radar Type 6 | Waveform 29   | Completed | Yes    |
| 30                                    | 5500            | FCC Radar Type 6 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5510MHz – 802.11n-40MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5510            | FCC Radar Type 1 | Waveform 1    | Completed | Yes    |
| 2                                     | 5510            | FCC Radar Type 1 | Waveform 2    | Completed | Yes    |
| 3                                     | 5510            | FCC Radar Type 1 | Waveform 3    | Completed | Yes    |
| 4                                     | 5510            | FCC Radar Type 1 | Waveform 4    | Completed | Yes    |
| 5                                     | 5510            | FCC Radar Type 1 | Waveform 5    | Completed | Yes    |
| 6                                     | 5510            | FCC Radar Type 1 | Waveform 6    | Completed | Yes    |
| 7                                     | 5510            | FCC Radar Type 1 | Waveform 7    | Completed | Yes    |
| 8                                     | 5510            | FCC Radar Type 1 | Waveform 8    | Completed | Yes    |
| 9                                     | 5510            | FCC Radar Type 1 | Waveform 9    | Completed | Yes    |
| 10                                    | 5510            | FCC Radar Type 1 | Waveform 10   | Completed | Yes    |
| 11                                    | 5510            | FCC Radar Type 1 | Waveform 11   | Completed | Yes    |
| 12                                    | 5510            | FCC Radar Type 1 | Waveform 12   | Completed | Yes    |
| 13                                    | 5510            | FCC Radar Type 1 | Waveform 13   | Completed | Yes    |
| 14                                    | 5510            | FCC Radar Type 1 | Waveform 14   | Completed | Yes    |
| 15                                    | 5510            | FCC Radar Type 1 | Waveform 15   | Completed | Yes    |
| 16                                    | 5510            | FCC Radar Type 1 | Waveform 16   | Completed | Yes    |
| 17                                    | 5510            | FCC Radar Type 1 | Waveform 17   | Completed | Yes    |
| 18                                    | 5510            | FCC Radar Type 1 | Waveform 18   | Completed | Yes    |
| 19                                    | 5510            | FCC Radar Type 1 | Waveform 19   | Completed | Yes    |
| 20                                    | 5510            | FCC Radar Type 1 | Waveform 20   | Completed | Yes    |
| 21                                    | 5510            | FCC Radar Type 1 | Waveform 21   | Completed | Yes    |
| 22                                    | 5510            | FCC Radar Type 1 | Waveform 22   | Completed | Yes    |
| 23                                    | 5510            | FCC Radar Type 1 | Waveform 23   | Completed | Yes    |
| 24                                    | 5510            | FCC Radar Type 1 | Waveform 24   | Completed | Yes    |
| 25                                    | 5510            | FCC Radar Type 1 | Waveform 25   | Completed | Yes    |
| 26                                    | 5510            | FCC Radar Type 1 | Waveform 26   | Completed | Yes    |
| 27                                    | 5510            | FCC Radar Type 1 | Waveform 27   | Completed | Yes    |
| 28                                    | 5510            | FCC Radar Type 1 | Waveform 28   | Completed | Yes    |
| 29                                    | 5510            | FCC Radar Type 1 | Waveform 29   | Completed | Yes    |
| 30                                    | 5510            | FCC Radar Type 1 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5510MHz – 802.11n-40MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5510            | FCC Radar Type 2 | Waveform 1    | Completed | Yes    |
| 2                                     | 5510            | FCC Radar Type 2 | Waveform 2    | Completed | Yes    |
| 3                                     | 5510            | FCC Radar Type 2 | Waveform 3    | Completed | Yes    |
| 4                                     | 5510            | FCC Radar Type 2 | Waveform 4    | Completed | Yes    |
| 5                                     | 5510            | FCC Radar Type 2 | Waveform 5    | Completed | Yes    |
| 6                                     | 5510            | FCC Radar Type 2 | Waveform 6    | Completed | Yes    |
| 7                                     | 5510            | FCC Radar Type 2 | Waveform 7    | Completed | Yes    |
| 8                                     | 5510            | FCC Radar Type 2 | Waveform 8    | Completed | Yes    |
| 9                                     | 5510            | FCC Radar Type 2 | Waveform 9    | Completed | Yes    |
| 10                                    | 5510            | FCC Radar Type 2 | Waveform 10   | Completed | Yes    |
| 11                                    | 5510            | FCC Radar Type 2 | Waveform 11   | Completed | Yes    |
| 12                                    | 5510            | FCC Radar Type 2 | Waveform 12   | Completed | Yes    |
| 13                                    | 5510            | FCC Radar Type 2 | Waveform 13   | Completed | Yes    |
| 14                                    | 5510            | FCC Radar Type 2 | Waveform 14   | Completed | Yes    |
| 15                                    | 5510            | FCC Radar Type 2 | Waveform 15   | Completed | Yes    |
| 16                                    | 5510            | FCC Radar Type 2 | Waveform 16   | Completed | Yes    |
| 17                                    | 5510            | FCC Radar Type 2 | Waveform 17   | Completed | Yes    |
| 18                                    | 5510            | FCC Radar Type 2 | Waveform 18   | Completed | Yes    |
| 19                                    | 5510            | FCC Radar Type 2 | Waveform 19   | Completed | Yes    |
| 20                                    | 5510            | FCC Radar Type 2 | Waveform 20   | Completed | Yes    |
| 21                                    | 5510            | FCC Radar Type 2 | Waveform 21   | Completed | Yes    |
| 22                                    | 5510            | FCC Radar Type 2 | Waveform 22   | Completed | Yes    |
| 23                                    | 5510            | FCC Radar Type 2 | Waveform 23   | Completed | Yes    |
| 24                                    | 5510            | FCC Radar Type 2 | Waveform 24   | Completed | Yes    |
| 25                                    | 5510            | FCC Radar Type 2 | Waveform 25   | Completed | Yes    |
| 26                                    | 5510            | FCC Radar Type 2 | Waveform 26   | Completed | Yes    |
| 27                                    | 5510            | FCC Radar Type 2 | Waveform 27   | Completed | Yes    |
| 28                                    | 5510            | FCC Radar Type 2 | Waveform 28   | Completed | Yes    |
| 29                                    | 5510            | FCC Radar Type 2 | Waveform 29   | Completed | Yes    |
| 30                                    | 5510            | FCC Radar Type 2 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5510MHz – 802.11n-40MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5510            | FCC Radar Type 3 | Waveform 1    | Completed | Yes    |
| 2                                     | 5510            | FCC Radar Type 3 | Waveform 2    | Completed | Yes    |
| 3                                     | 5510            | FCC Radar Type 3 | Waveform 3    | Completed | Yes    |
| 4                                     | 5510            | FCC Radar Type 3 | Waveform 4    | Completed | Yes    |
| 5                                     | 5510            | FCC Radar Type 3 | Waveform 5    | Completed | Yes    |
| 6                                     | 5510            | FCC Radar Type 3 | Waveform 6    | Completed | Yes    |
| 7                                     | 5510            | FCC Radar Type 3 | Waveform 7    | Completed | Yes    |
| 8                                     | 5510            | FCC Radar Type 3 | Waveform 8    | Completed | Yes    |
| 9                                     | 5510            | FCC Radar Type 3 | Waveform 9    | Completed | Yes    |
| 10                                    | 5510            | FCC Radar Type 3 | Waveform 10   | Completed | Yes    |
| 11                                    | 5510            | FCC Radar Type 3 | Waveform 11   | Completed | Yes    |
| 12                                    | 5510            | FCC Radar Type 3 | Waveform 12   | Completed | Yes    |
| 13                                    | 5510            | FCC Radar Type 3 | Waveform 13   | Completed | Yes    |
| 14                                    | 5510            | FCC Radar Type 3 | Waveform 14   | Completed | Yes    |
| 15                                    | 5510            | FCC Radar Type 3 | Waveform 15   | Completed | Yes    |
| 16                                    | 5510            | FCC Radar Type 3 | Waveform 16   | Completed | Yes    |
| 17                                    | 5510            | FCC Radar Type 3 | Waveform 17   | Completed | Yes    |
| 18                                    | 5510            | FCC Radar Type 3 | Waveform 18   | Completed | Yes    |
| 19                                    | 5510            | FCC Radar Type 3 | Waveform 19   | Completed | Yes    |
| 20                                    | 5510            | FCC Radar Type 3 | Waveform 20   | Completed | Yes    |
| 21                                    | 5510            | FCC Radar Type 3 | Waveform 21   | Completed | Yes    |
| 22                                    | 5510            | FCC Radar Type 3 | Waveform 22   | Completed | Yes    |
| 23                                    | 5510            | FCC Radar Type 3 | Waveform 23   | Completed | Yes    |
| 24                                    | 5510            | FCC Radar Type 3 | Waveform 24   | Completed | Yes    |
| 25                                    | 5510            | FCC Radar Type 3 | Waveform 25   | Completed | Yes    |
| 26                                    | 5510            | FCC Radar Type 3 | Waveform 26   | Completed | Yes    |
| 27                                    | 5510            | FCC Radar Type 3 | Waveform 27   | Completed | Yes    |
| 28                                    | 5510            | FCC Radar Type 3 | Waveform 28   | Completed | Yes    |
| 29                                    | 5510            | FCC Radar Type 3 | Waveform 29   | Completed | Yes    |
| 30                                    | 5510            | FCC Radar Type 3 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5510MHz – 802.11n-40MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5510            | FCC Radar Type 4 | Waveform 1    | Completed | Yes    |
| 2                                     | 5510            | FCC Radar Type 4 | Waveform 2    | Completed | Yes    |
| 3                                     | 5510            | FCC Radar Type 4 | Waveform 3    | Completed | Yes    |
| 4                                     | 5510            | FCC Radar Type 4 | Waveform 4    | Completed | Yes    |
| 5                                     | 5510            | FCC Radar Type 4 | Waveform 5    | Completed | Yes    |
| 6                                     | 5510            | FCC Radar Type 4 | Waveform 6    | Completed | Yes    |
| 7                                     | 5510            | FCC Radar Type 4 | Waveform 7    | Completed | Yes    |
| 8                                     | 5510            | FCC Radar Type 4 | Waveform 8    | Completed | Yes    |
| 9                                     | 5510            | FCC Radar Type 4 | Waveform 9    | Completed | Yes    |
| 10                                    | 5510            | FCC Radar Type 4 | Waveform 10   | Completed | Yes    |
| 11                                    | 5510            | FCC Radar Type 4 | Waveform 11   | Completed | Yes    |
| 12                                    | 5510            | FCC Radar Type 4 | Waveform 12   | Completed | Yes    |
| 13                                    | 5510            | FCC Radar Type 4 | Waveform 13   | Completed | Yes    |
| 14                                    | 5510            | FCC Radar Type 4 | Waveform 14   | Completed | Yes    |
| 15                                    | 5510            | FCC Radar Type 4 | Waveform 15   | Completed | Yes    |
| 16                                    | 5510            | FCC Radar Type 4 | Waveform 16   | Completed | Yes    |
| 17                                    | 5510            | FCC Radar Type 4 | Waveform 17   | Completed | Yes    |
| 18                                    | 5510            | FCC Radar Type 4 | Waveform 18   | Completed | Yes    |
| 19                                    | 5510            | FCC Radar Type 4 | Waveform 19   | Completed | Yes    |
| 20                                    | 5510            | FCC Radar Type 4 | Waveform 20   | Completed | Yes    |
| 21                                    | 5510            | FCC Radar Type 4 | Waveform 21   | Completed | Yes    |
| 22                                    | 5510            | FCC Radar Type 4 | Waveform 22   | Completed | Yes    |
| 23                                    | 5510            | FCC Radar Type 4 | Waveform 23   | Completed | Yes    |
| 24                                    | 5510            | FCC Radar Type 4 | Waveform 24   | Completed | Yes    |
| 25                                    | 5510            | FCC Radar Type 4 | Waveform 25   | Completed | Yes    |
| 26                                    | 5510            | FCC Radar Type 4 | Waveform 26   | Completed | Yes    |
| 27                                    | 5510            | FCC Radar Type 4 | Waveform 27   | Completed | Yes    |
| 28                                    | 5510            | FCC Radar Type 4 | Waveform 28   | Completed | Yes    |
| 29                                    | 5510            | FCC Radar Type 4 | Waveform 29   | Completed | Yes    |
| 30                                    | 5510            | FCC Radar Type 4 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5510MHz – 802.11n-40MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5510            | FCC Radar Type 5 | Waveform 1    | Completed | Yes    |
| 2                                     | 5510            | FCC Radar Type 5 | Waveform 2    | Completed | Yes    |
| 3                                     | 5510            | FCC Radar Type 5 | Waveform 3    | Completed | Yes    |
| 4                                     | 5510            | FCC Radar Type 5 | Waveform 4    | Completed | Yes    |
| 5                                     | 5510            | FCC Radar Type 5 | Waveform 5    | Completed | Yes    |
| 6                                     | 5510            | FCC Radar Type 5 | Waveform 6    | Completed | Yes    |
| 7                                     | 5510            | FCC Radar Type 5 | Waveform 7    | Completed | Yes    |
| 8                                     | 5510            | FCC Radar Type 5 | Waveform 8    | Completed | Yes    |
| 9                                     | 5510            | FCC Radar Type 5 | Waveform 9    | Completed | Yes    |
| 10                                    | 5510            | FCC Radar Type 5 | Waveform 10   | Completed | Yes    |
| 11                                    | 5510            | FCC Radar Type 5 | Waveform 11   | Completed | Yes    |
| 12                                    | 5510            | FCC Radar Type 5 | Waveform 12   | Completed | Yes    |
| 13                                    | 5510            | FCC Radar Type 5 | Waveform 13   | Completed | Yes    |
| 14                                    | 5510            | FCC Radar Type 5 | Waveform 14   | Completed | Yes    |
| 15                                    | 5510            | FCC Radar Type 5 | Waveform 15   | Completed | Yes    |
| 16                                    | 5510            | FCC Radar Type 5 | Waveform 16   | Completed | Yes    |
| 17                                    | 5510            | FCC Radar Type 5 | Waveform 17   | Completed | Yes    |
| 18                                    | 5510            | FCC Radar Type 5 | Waveform 18   | Completed | Yes    |
| 19                                    | 5510            | FCC Radar Type 5 | Waveform 19   | Completed | Yes    |
| 20                                    | 5510            | FCC Radar Type 5 | Waveform 20   | Completed | Yes    |
| 21                                    | 5510            | FCC Radar Type 5 | Waveform 21   | Completed | Yes    |
| 22                                    | 5510            | FCC Radar Type 5 | Waveform 22   | Completed | Yes    |
| 23                                    | 5510            | FCC Radar Type 5 | Waveform 23   | Completed | Yes    |
| 24                                    | 5510            | FCC Radar Type 5 | Waveform 24   | Completed | Yes    |
| 25                                    | 5510            | FCC Radar Type 5 | Waveform 25   | Completed | Yes    |
| 26                                    | 5510            | FCC Radar Type 5 | Waveform 26   | Completed | Yes    |
| 27                                    | 5510            | FCC Radar Type 5 | Waveform 27   | Completed | Yes    |
| 28                                    | 5510            | FCC Radar Type 5 | Waveform 28   | Completed | Yes    |
| 29                                    | 5510            | FCC Radar Type 5 | Waveform 29   | Completed | Yes    |
| 30                                    | 5510            | FCC Radar Type 5 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5510MHz – 802.11n-40MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5510            | FCC Radar Type 6 | Waveform 1    | Completed | Yes    |
| 2                                     | 5510            | FCC Radar Type 6 | Waveform 2    | Completed | Yes    |
| 3                                     | 5510            | FCC Radar Type 6 | Waveform 3    | Completed | Yes    |
| 4                                     | 5510            | FCC Radar Type 6 | Waveform 4    | Completed | Yes    |
| 5                                     | 5510            | FCC Radar Type 6 | Waveform 5    | Completed | Yes    |
| 6                                     | 5510            | FCC Radar Type 6 | Waveform 6    | Completed | Yes    |
| 7                                     | 5510            | FCC Radar Type 6 | Waveform 7    | Completed | Yes    |
| 8                                     | 5510            | FCC Radar Type 6 | Waveform 8    | Completed | Yes    |
| 9                                     | 5510            | FCC Radar Type 6 | Waveform 9    | Completed | Yes    |
| 10                                    | 5510            | FCC Radar Type 6 | Waveform 10   | Completed | Yes    |
| 11                                    | 5510            | FCC Radar Type 6 | Waveform 11   | Completed | Yes    |
| 12                                    | 5510            | FCC Radar Type 6 | Waveform 12   | Completed | Yes    |
| 13                                    | 5510            | FCC Radar Type 6 | Waveform 13   | Completed | Yes    |
| 14                                    | 5510            | FCC Radar Type 6 | Waveform 14   | Completed | Yes    |
| 15                                    | 5510            | FCC Radar Type 6 | Waveform 15   | Completed | Yes    |
| 16                                    | 5510            | FCC Radar Type 6 | Waveform 16   | Completed | Yes    |
| 17                                    | 5510            | FCC Radar Type 6 | Waveform 17   | Completed | Yes    |
| 18                                    | 5510            | FCC Radar Type 6 | Waveform 18   | Completed | Yes    |
| 19                                    | 5510            | FCC Radar Type 6 | Waveform 19   | Completed | Yes    |
| 20                                    | 5510            | FCC Radar Type 6 | Waveform 20   | Completed | Yes    |
| 21                                    | 5510            | FCC Radar Type 6 | Waveform 21   | Completed | Yes    |
| 22                                    | 5510            | FCC Radar Type 6 | Waveform 22   | Completed | Yes    |
| 23                                    | 5510            | FCC Radar Type 6 | Waveform 23   | Completed | Yes    |
| 24                                    | 5510            | FCC Radar Type 6 | Waveform 24   | Completed | Yes    |
| 25                                    | 5510            | FCC Radar Type 6 | Waveform 25   | Completed | Yes    |
| 26                                    | 5510            | FCC Radar Type 6 | Waveform 26   | Completed | Yes    |
| 27                                    | 5510            | FCC Radar Type 6 | Waveform 27   | Completed | Yes    |
| 28                                    | 5510            | FCC Radar Type 6 | Waveform 28   | Completed | Yes    |
| 29                                    | 5510            | FCC Radar Type 6 | Waveform 29   | Completed | Yes    |
| 30                                    | 5510            | FCC Radar Type 6 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5530MHz – 802.11ac-80MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5530            | FCC Radar Type 1 | Waveform 1    | Completed | Yes    |
| 2                                     | 5530            | FCC Radar Type 1 | Waveform 2    | Completed | Yes    |
| 3                                     | 5530            | FCC Radar Type 1 | Waveform 3    | Completed | Yes    |
| 4                                     | 5530            | FCC Radar Type 1 | Waveform 4    | Completed | Yes    |
| 5                                     | 5530            | FCC Radar Type 1 | Waveform 5    | Completed | Yes    |
| 6                                     | 5530            | FCC Radar Type 1 | Waveform 6    | Completed | Yes    |
| 7                                     | 5530            | FCC Radar Type 1 | Waveform 7    | Completed | Yes    |
| 8                                     | 5530            | FCC Radar Type 1 | Waveform 8    | Completed | Yes    |
| 9                                     | 5530            | FCC Radar Type 1 | Waveform 9    | Completed | Yes    |
| 10                                    | 5530            | FCC Radar Type 1 | Waveform 10   | Completed | Yes    |
| 11                                    | 5530            | FCC Radar Type 1 | Waveform 11   | Completed | Yes    |
| 12                                    | 5530            | FCC Radar Type 1 | Waveform 12   | Completed | Yes    |
| 13                                    | 5530            | FCC Radar Type 1 | Waveform 13   | Completed | Yes    |
| 14                                    | 5530            | FCC Radar Type 1 | Waveform 14   | Completed | Yes    |
| 15                                    | 5530            | FCC Radar Type 1 | Waveform 15   | Completed | Yes    |
| 16                                    | 5530            | FCC Radar Type 1 | Waveform 16   | Completed | Yes    |
| 17                                    | 5530            | FCC Radar Type 1 | Waveform 17   | Completed | Yes    |
| 18                                    | 5530            | FCC Radar Type 1 | Waveform 18   | Completed | Yes    |
| 19                                    | 5530            | FCC Radar Type 1 | Waveform 19   | Completed | Yes    |
| 20                                    | 5530            | FCC Radar Type 1 | Waveform 20   | Completed | Yes    |
| 21                                    | 5530            | FCC Radar Type 1 | Waveform 21   | Completed | Yes    |
| 22                                    | 5530            | FCC Radar Type 1 | Waveform 22   | Completed | Yes    |
| 23                                    | 5530            | FCC Radar Type 1 | Waveform 23   | Completed | Yes    |
| 24                                    | 5530            | FCC Radar Type 1 | Waveform 24   | Completed | Yes    |
| 25                                    | 5530            | FCC Radar Type 1 | Waveform 25   | Completed | Yes    |
| 26                                    | 5530            | FCC Radar Type 1 | Waveform 26   | Completed | Yes    |
| 27                                    | 5530            | FCC Radar Type 1 | Waveform 27   | Completed | Yes    |
| 28                                    | 5530            | FCC Radar Type 1 | Waveform 28   | Completed | Yes    |
| 29                                    | 5530            | FCC Radar Type 1 | Waveform 29   | Completed | Yes    |
| 30                                    | 5530            | FCC Radar Type 1 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5530MHz – 802.11ac-80MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5530            | FCC Radar Type 2 | Waveform 1    | Completed | Yes    |
| 2                                     | 5530            | FCC Radar Type 2 | Waveform 2    | Completed | Yes    |
| 3                                     | 5530            | FCC Radar Type 2 | Waveform 3    | Completed | Yes    |
| 4                                     | 5530            | FCC Radar Type 2 | Waveform 4    | Completed | Yes    |
| 5                                     | 5530            | FCC Radar Type 2 | Waveform 5    | Completed | Yes    |
| 6                                     | 5530            | FCC Radar Type 2 | Waveform 6    | Completed | Yes    |
| 7                                     | 5530            | FCC Radar Type 2 | Waveform 7    | Completed | Yes    |
| 8                                     | 5530            | FCC Radar Type 2 | Waveform 8    | Completed | Yes    |
| 9                                     | 5530            | FCC Radar Type 2 | Waveform 9    | Completed | Yes    |
| 10                                    | 5530            | FCC Radar Type 2 | Waveform 10   | Completed | Yes    |
| 11                                    | 5530            | FCC Radar Type 2 | Waveform 11   | Completed | Yes    |
| 12                                    | 5530            | FCC Radar Type 2 | Waveform 12   | Completed | Yes    |
| 13                                    | 5530            | FCC Radar Type 2 | Waveform 13   | Completed | Yes    |
| 14                                    | 5530            | FCC Radar Type 2 | Waveform 14   | Completed | Yes    |
| 15                                    | 5530            | FCC Radar Type 2 | Waveform 15   | Completed | Yes    |
| 16                                    | 5530            | FCC Radar Type 2 | Waveform 16   | Completed | Yes    |
| 17                                    | 5530            | FCC Radar Type 2 | Waveform 17   | Completed | Yes    |
| 18                                    | 5530            | FCC Radar Type 2 | Waveform 18   | Completed | Yes    |
| 19                                    | 5530            | FCC Radar Type 2 | Waveform 19   | Completed | Yes    |
| 20                                    | 5530            | FCC Radar Type 2 | Waveform 20   | Completed | Yes    |
| 21                                    | 5530            | FCC Radar Type 2 | Waveform 21   | Completed | Yes    |
| 22                                    | 5530            | FCC Radar Type 2 | Waveform 22   | Completed | Yes    |
| 23                                    | 5530            | FCC Radar Type 2 | Waveform 23   | Completed | Yes    |
| 24                                    | 5530            | FCC Radar Type 2 | Waveform 24   | Completed | Yes    |
| 25                                    | 5530            | FCC Radar Type 2 | Waveform 25   | Completed | Yes    |
| 26                                    | 5530            | FCC Radar Type 2 | Waveform 26   | Completed | Yes    |
| 27                                    | 5530            | FCC Radar Type 2 | Waveform 27   | Completed | Yes    |
| 28                                    | 5530            | FCC Radar Type 2 | Waveform 28   | Completed | Yes    |
| 29                                    | 5530            | FCC Radar Type 2 | Waveform 29   | Completed | Yes    |
| 30                                    | 5530            | FCC Radar Type 2 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5530MHz – 802.11ac-80MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5530            | FCC Radar Type 3 | Waveform 1    | Completed | Yes    |
| 2                                     | 5530            | FCC Radar Type 3 | Waveform 2    | Completed | Yes    |
| 3                                     | 5530            | FCC Radar Type 3 | Waveform 3    | Completed | Yes    |
| 4                                     | 5530            | FCC Radar Type 3 | Waveform 4    | Completed | Yes    |
| 5                                     | 5530            | FCC Radar Type 3 | Waveform 5    | Completed | Yes    |
| 6                                     | 5530            | FCC Radar Type 3 | Waveform 6    | Completed | Yes    |
| 7                                     | 5530            | FCC Radar Type 3 | Waveform 7    | Completed | Yes    |
| 8                                     | 5530            | FCC Radar Type 3 | Waveform 8    | Completed | Yes    |
| 9                                     | 5530            | FCC Radar Type 3 | Waveform 9    | Completed | Yes    |
| 10                                    | 5530            | FCC Radar Type 3 | Waveform 10   | Completed | Yes    |
| 11                                    | 5530            | FCC Radar Type 3 | Waveform 11   | Completed | Yes    |
| 12                                    | 5530            | FCC Radar Type 3 | Waveform 12   | Completed | Yes    |
| 13                                    | 5530            | FCC Radar Type 3 | Waveform 13   | Completed | Yes    |
| 14                                    | 5530            | FCC Radar Type 3 | Waveform 14   | Completed | Yes    |
| 15                                    | 5530            | FCC Radar Type 3 | Waveform 15   | Completed | Yes    |
| 16                                    | 5530            | FCC Radar Type 3 | Waveform 16   | Completed | Yes    |
| 17                                    | 5530            | FCC Radar Type 3 | Waveform 17   | Completed | Yes    |
| 18                                    | 5530            | FCC Radar Type 3 | Waveform 18   | Completed | Yes    |
| 19                                    | 5530            | FCC Radar Type 3 | Waveform 19   | Completed | Yes    |
| 20                                    | 5530            | FCC Radar Type 3 | Waveform 20   | Completed | Yes    |
| 21                                    | 5530            | FCC Radar Type 3 | Waveform 21   | Completed | Yes    |
| 22                                    | 5530            | FCC Radar Type 3 | Waveform 22   | Completed | Yes    |
| 23                                    | 5530            | FCC Radar Type 3 | Waveform 23   | Completed | Yes    |
| 24                                    | 5530            | FCC Radar Type 3 | Waveform 24   | Completed | Yes    |
| 25                                    | 5530            | FCC Radar Type 3 | Waveform 25   | Completed | Yes    |
| 26                                    | 5530            | FCC Radar Type 3 | Waveform 26   | Completed | Yes    |
| 27                                    | 5530            | FCC Radar Type 3 | Waveform 27   | Completed | Yes    |
| 28                                    | 5530            | FCC Radar Type 3 | Waveform 28   | Completed | Yes    |
| 29                                    | 5530            | FCC Radar Type 3 | Waveform 29   | Completed | Yes    |
| 30                                    | 5530            | FCC Radar Type 3 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5530MHz – 802.11ac-80MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5530            | FCC Radar Type 4 | Waveform 1    | Completed | Yes    |
| 2                                     | 5530            | FCC Radar Type 4 | Waveform 2    | Completed | Yes    |
| 3                                     | 5530            | FCC Radar Type 4 | Waveform 3    | Completed | Yes    |
| 4                                     | 5530            | FCC Radar Type 4 | Waveform 4    | Completed | Yes    |
| 5                                     | 5530            | FCC Radar Type 4 | Waveform 5    | Completed | Yes    |
| 6                                     | 5530            | FCC Radar Type 4 | Waveform 6    | Completed | Yes    |
| 7                                     | 5530            | FCC Radar Type 4 | Waveform 7    | Completed | Yes    |
| 8                                     | 5530            | FCC Radar Type 4 | Waveform 8    | Completed | Yes    |
| 9                                     | 5530            | FCC Radar Type 4 | Waveform 9    | Completed | Yes    |
| 10                                    | 5530            | FCC Radar Type 4 | Waveform 10   | Completed | Yes    |
| 11                                    | 5530            | FCC Radar Type 4 | Waveform 11   | Completed | Yes    |
| 12                                    | 5530            | FCC Radar Type 4 | Waveform 12   | Completed | Yes    |
| 13                                    | 5530            | FCC Radar Type 4 | Waveform 13   | Completed | Yes    |
| 14                                    | 5530            | FCC Radar Type 4 | Waveform 14   | Completed | Yes    |
| 15                                    | 5530            | FCC Radar Type 4 | Waveform 15   | Completed | Yes    |
| 16                                    | 5530            | FCC Radar Type 4 | Waveform 16   | Completed | Yes    |
| 17                                    | 5530            | FCC Radar Type 4 | Waveform 17   | Completed | Yes    |
| 18                                    | 5530            | FCC Radar Type 4 | Waveform 18   | Completed | Yes    |
| 19                                    | 5530            | FCC Radar Type 4 | Waveform 19   | Completed | Yes    |
| 20                                    | 5530            | FCC Radar Type 4 | Waveform 20   | Completed | Yes    |
| 21                                    | 5530            | FCC Radar Type 4 | Waveform 21   | Completed | Yes    |
| 22                                    | 5530            | FCC Radar Type 4 | Waveform 22   | Completed | Yes    |
| 23                                    | 5530            | FCC Radar Type 4 | Waveform 23   | Completed | Yes    |
| 24                                    | 5530            | FCC Radar Type 4 | Waveform 24   | Completed | Yes    |
| 25                                    | 5530            | FCC Radar Type 4 | Waveform 25   | Completed | Yes    |
| 26                                    | 5530            | FCC Radar Type 4 | Waveform 26   | Completed | Yes    |
| 27                                    | 5530            | FCC Radar Type 4 | Waveform 27   | Completed | Yes    |
| 28                                    | 5530            | FCC Radar Type 4 | Waveform 28   | Completed | Yes    |
| 29                                    | 5530            | FCC Radar Type 4 | Waveform 29   | Completed | Yes    |
| 30                                    | 5530            | FCC Radar Type 4 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5530MHz – 802.11ac-80MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5530            | FCC Radar Type 5 | Waveform 1    | Completed | Yes    |
| 2                                     | 5530            | FCC Radar Type 5 | Waveform 2    | Completed | Yes    |
| 3                                     | 5530            | FCC Radar Type 5 | Waveform 3    | Completed | Yes    |
| 4                                     | 5530            | FCC Radar Type 5 | Waveform 4    | Completed | Yes    |
| 5                                     | 5530            | FCC Radar Type 5 | Waveform 5    | Completed | Yes    |
| 6                                     | 5530            | FCC Radar Type 5 | Waveform 6    | Completed | Yes    |
| 7                                     | 5530            | FCC Radar Type 5 | Waveform 7    | Completed | Yes    |
| 8                                     | 5530            | FCC Radar Type 5 | Waveform 8    | Completed | Yes    |
| 9                                     | 5530            | FCC Radar Type 5 | Waveform 9    | Completed | Yes    |
| 10                                    | 5530            | FCC Radar Type 5 | Waveform 10   | Completed | Yes    |
| 11                                    | 5530            | FCC Radar Type 5 | Waveform 11   | Completed | Yes    |
| 12                                    | 5530            | FCC Radar Type 5 | Waveform 12   | Completed | Yes    |
| 13                                    | 5530            | FCC Radar Type 5 | Waveform 13   | Completed | Yes    |
| 14                                    | 5530            | FCC Radar Type 5 | Waveform 14   | Completed | Yes    |
| 15                                    | 5530            | FCC Radar Type 5 | Waveform 15   | Completed | Yes    |
| 16                                    | 5530            | FCC Radar Type 5 | Waveform 16   | Completed | Yes    |
| 17                                    | 5530            | FCC Radar Type 5 | Waveform 17   | Completed | Yes    |
| 18                                    | 5530            | FCC Radar Type 5 | Waveform 18   | Completed | Yes    |
| 19                                    | 5530            | FCC Radar Type 5 | Waveform 19   | Completed | Yes    |
| 20                                    | 5530            | FCC Radar Type 5 | Waveform 20   | Completed | Yes    |
| 21                                    | 5530            | FCC Radar Type 5 | Waveform 21   | Completed | Yes    |
| 22                                    | 5530            | FCC Radar Type 5 | Waveform 22   | Completed | Yes    |
| 23                                    | 5530            | FCC Radar Type 5 | Waveform 23   | Completed | Yes    |
| 24                                    | 5530            | FCC Radar Type 5 | Waveform 24   | Completed | Yes    |
| 25                                    | 5530            | FCC Radar Type 5 | Waveform 25   | Completed | Yes    |
| 26                                    | 5530            | FCC Radar Type 5 | Waveform 26   | Completed | Yes    |
| 27                                    | 5530            | FCC Radar Type 5 | Waveform 27   | Completed | Yes    |
| 28                                    | 5530            | FCC Radar Type 5 | Waveform 28   | Completed | Yes    |
| 29                                    | 5530            | FCC Radar Type 5 | Waveform 29   | Completed | Yes    |
| 30                                    | 5530            | FCC Radar Type 5 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

Test Result-5530MHz – 802.11ac-80MHz

| Trials                                | Frequency (MHz) | Radar Type       | Waveform Type | Status    | Result |
|---------------------------------------|-----------------|------------------|---------------|-----------|--------|
| 1                                     | 5530            | FCC Radar Type 6 | Waveform 1    | Completed | Yes    |
| 2                                     | 5530            | FCC Radar Type 6 | Waveform 2    | Completed | Yes    |
| 3                                     | 5530            | FCC Radar Type 6 | Waveform 3    | Completed | Yes    |
| 4                                     | 5530            | FCC Radar Type 6 | Waveform 4    | Completed | Yes    |
| 5                                     | 5530            | FCC Radar Type 6 | Waveform 5    | Completed | Yes    |
| 6                                     | 5530            | FCC Radar Type 6 | Waveform 6    | Completed | Yes    |
| 7                                     | 5530            | FCC Radar Type 6 | Waveform 7    | Completed | Yes    |
| 8                                     | 5530            | FCC Radar Type 6 | Waveform 8    | Completed | Yes    |
| 9                                     | 5530            | FCC Radar Type 6 | Waveform 9    | Completed | Yes    |
| 10                                    | 5530            | FCC Radar Type 6 | Waveform 10   | Completed | Yes    |
| 11                                    | 5530            | FCC Radar Type 6 | Waveform 11   | Completed | Yes    |
| 12                                    | 5530            | FCC Radar Type 6 | Waveform 12   | Completed | Yes    |
| 13                                    | 5530            | FCC Radar Type 6 | Waveform 13   | Completed | Yes    |
| 14                                    | 5530            | FCC Radar Type 6 | Waveform 14   | Completed | Yes    |
| 15                                    | 5530            | FCC Radar Type 6 | Waveform 15   | Completed | Yes    |
| 16                                    | 5530            | FCC Radar Type 6 | Waveform 16   | Completed | Yes    |
| 17                                    | 5530            | FCC Radar Type 6 | Waveform 17   | Completed | Yes    |
| 18                                    | 5530            | FCC Radar Type 6 | Waveform 18   | Completed | Yes    |
| 19                                    | 5530            | FCC Radar Type 6 | Waveform 19   | Completed | Yes    |
| 20                                    | 5530            | FCC Radar Type 6 | Waveform 20   | Completed | Yes    |
| 21                                    | 5530            | FCC Radar Type 6 | Waveform 21   | Completed | Yes    |
| 22                                    | 5530            | FCC Radar Type 6 | Waveform 22   | Completed | Yes    |
| 23                                    | 5530            | FCC Radar Type 6 | Waveform 23   | Completed | Yes    |
| 24                                    | 5530            | FCC Radar Type 6 | Waveform 24   | Completed | Yes    |
| 25                                    | 5530            | FCC Radar Type 6 | Waveform 25   | Completed | Yes    |
| 26                                    | 5530            | FCC Radar Type 6 | Waveform 26   | Completed | Yes    |
| 27                                    | 5530            | FCC Radar Type 6 | Waveform 27   | Completed | Yes    |
| 28                                    | 5530            | FCC Radar Type 6 | Waveform 28   | Completed | Yes    |
| 29                                    | 5530            | FCC Radar Type 6 | Waveform 29   | Completed | Yes    |
| 30                                    | 5530            | FCC Radar Type 6 | Waveform 30   | Completed | Yes    |
| Detection Probability Rate %: 100.000 |                 |                  |               |           |        |

## Annex A. TEST INSTRUMENT

| Instrument                                                         | Model      | Serial #     | Cal Date   | Cal Cycle | Cal Due    | In use                              |
|--------------------------------------------------------------------|------------|--------------|------------|-----------|------------|-------------------------------------|
| <b>Conducted RF Measurement</b>                                    |            |              |            |           |            |                                     |
| Agilent Signal Analyzer                                            | N9010A     | MY50210206   | 08/13/2014 | 1 Year    | 08/13/2015 | <input checked="" type="checkbox"/> |
| Dual Channels Arbitrary Waveform Generator (Tabor Electronics Ltd) | WWW-1072   | 207593       | 08/07/2014 | 1 Year    | 08/07/2015 | <input checked="" type="checkbox"/> |
| Synthesized Signal Generator (Agilent/HP)                          | HP8665B    | 3744A01304   | 05/14/2014 | 1 Year    | 05/14/2015 | <input checked="" type="checkbox"/> |
| Synthesized Sweep Generator (10M-40GHz)                            | 68169B     | 973407       | 10/27/2014 | 1 Year    | 10/27/2015 | <input checked="" type="checkbox"/> |
| Splitter/Combiner (Mini-Circuit)                                   | ZFSC-2-9G+ | S F030000719 | N/A        | 1 Year    | N/A        | <input checked="" type="checkbox"/> |
| Splitter/Combiner (Mini-Circuit)                                   | ZFSC-2-9G+ | S F030000718 | N/A        | 1 Year    | N/A        | <input checked="" type="checkbox"/> |
| EMI Test Receiver 9 kHz to 6 GHz                                   | ESL6       | 100178       | 03/04/2014 | 1 Year    | 03/04/2015 | <input checked="" type="checkbox"/> |

## Annex B. Radar Type 5 waveform characteristic

### Waveform 1

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.5         | 2                | 60               | 1728              | 0.51            | 20                |
| 2       | 1.5 - 3.0         | 3                | 76               | 1076, 1580        | 2.55            | 10                |
| 3       | 3.0 - 4.5         | 3                | 72               | 1872, 1208        | 3.96            | 20                |
| 4       | 4.5 - 6.0         | 2                | 76               | 1860              | 5.655           | 10                |
| 5       | 6.0 - 7.5         | 3                | 100              | 1400, 1860        | 6.825           | 20                |
| 6       | 7.5 - 9.0         | 1                | 52               | /                 | 7.89            | 10                |
| 7       | 9.0 - 10.5        | 3                | 92               | 1460, 1720        | 9.735           | 20                |
| 8       | 10.5 - 12.0       | 3                | 64               | 1704, 1240        | 10.98           | 10                |

### Waveform 2

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.5         | 1                | 96               | /                 | 0.315           | 20                |
| 2       | 1.5 - 3.0         | 2                | 56               | 1784              | 1.68            | 10                |
| 3       | 3.0 - 4.5         | 3                | 100              | 1204, 1064        | 3.675           | 20                |
| 4       | 4.5 - 6.0         | 1                | 72               | /                 | 4.905           | 10                |
| 5       | 6.0 - 7.5         | 1                | 92               | /                 | 6.75            | 20                |
| 6       | 7.5 - 9.0         | 3                | 68               | 1060, 1808        | 7.71            | 10                |
| 7       | 9.0 - 10.5        | 3                | 72               | 1824, 1700        | 9.45            | 20                |
| 8       | 10.5 - 12.0       | 1                | 64               | /                 | 11.355          | 10                |

### Waveform 3

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.5         | 1                | 76               | /                 | 0.705           | 20                |
| 2       | 1.5 - 3.0         | 2                | 88               | 1964              | 2.505           | 10                |
| 3       | 3.0 - 4.5         | 1                | 100              | /                 | 3.375           | 20                |
| 4       | 4.5 - 6.0         | 1                | 60               | /                 | 5.19            | 10                |
| 5       | 6.0 - 7.5         | 1                | 64               | /                 | 6.585           | 20                |
| 6       | 7.5 - 9.0         | 1                | 56               | /                 | 7.905           | 10                |
| 7       | 9.0 - 10.5        | 1                | 100              | /                 | 9.75            | 20                |
| 8       | 10.5 - 12.0       | 3                | 96               | 1256, 1104        | 11.04           | 10                |

#### Waveform 4

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.5         | 1                | 52               | /                 | 0.645           | 20                |
| 2       | 1.5 - 3.0         | 3                | 56               | 1836, 1788        | 1.845           | 10                |
| 3       | 3.0 - 4.5         | 2                | 52               | 1416              | 3.66            | 20                |
| 4       | 4.5 - 6.0         | 2                | 56               | 1812              | 5.52            | 10                |
| 5       | 6.0 - 7.5         | 1                | 80               | /                 | 6.6             | 20                |
| 6       | 7.5 - 9.0         | 3                | 92               | 1928, 1036        | 8.58            | 10                |
| 7       | 9.0 - 10.5        | 2                | 84               | 2000              | 9.24            | 20                |
| 8       | 10.5 - 12.0       | 2                | 88               | 1036              | 11.115          | 10                |

#### Waveform 5

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.5         | 2                | 56               | 1952              | 0.435           | 20                |
| 2       | 1.5 - 3.0         | 1                | 60               | /                 | 2.04            | 10                |
| 3       | 3.0 - 4.5         | 2                | 92               | 1064              | 3.99            | 20                |
| 4       | 4.5 - 6.0         | 2                | 64               | 1540              | 4.875           | 10                |
| 5       | 6.0 - 7.5         | 1                | 72               | /                 | 6.525           | 20                |
| 6       | 7.5 - 9.0         | 2                | 76               | 1692              | 7.785           | 10                |
| 7       | 9.0 - 10.5        | 3                | 80               | 1900, 1072        | 9.465           | 20                |
| 8       | 10.5 - 12.0       | 2                | 76               | 1136              | 10.74           | 10                |

#### Waveform 6

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.2         | 3                | 56               | 1484, 1292        | 0.252           | 20                |
| 2       | 1.2 - 2.4         | 3                | 68               | 1028, 1424        | 1.764           | 10                |
| 3       | 2.4 - 3.6         | 1                | 56               | /                 | 3.252           | 20                |
| 4       | 3.6 - 4.8         | 2                | 64               | 1956              | 3.9             | 10                |
| 5       | 4.8 - 6.0         | 2                | 100              | 1004              | 5.088           | 20                |
| 6       | 6.0 - 7.2         | 3                | 88               | 1368, 1652        | 6.672           | 10                |
| 7       | 7.2 - 8.4         | 3                | 52               | 1208, 1656        | 7.836           | 20                |
| 8       | 8.4 - 9.6         | 1                | 96               | /                 | 8.832           | 10                |
| 9       | 9.6 - 10.8        | 2                | 84               | 1288              | 9.972           | 20                |
| 10      | 10.8 - 12.0       | 1                | 100              | /                 | 11.16           | 10                |

#### Waveform 7

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.2         | 3                | 80               | 1656, 1788        | 0.852           | 20                |
| 2       | 1.2 - 2.4         | 1                | 96               | /                 | 1.404           | 10                |
| 3       | 2.4 - 3.6         | 1                | 84               | /                 | 3.108           | 20                |
| 4       | 3.6 - 4.8         | 3                | 56               | 1728, 1768        | 4.536           | 10                |
| 5       | 4.8 - 6.0         | 3                | 76               | 1596, 1656        | 5.496           | 20                |
| 6       | 6.0 - 7.2         | 3                | 64               | 1232, 1696        | 6.36            | 10                |
| 7       | 7.2 - 8.4         | 2                | 92               | 1924              | 7.848           | 20                |
| 8       | 8.4 - 9.6         | 1                | 96               | /                 | 8.544           | 10                |
| 9       | 9.6 - 10.8        | 1                | 60               | /                 | 9.78            | 20                |
| 10      | 10.8 - 12.0       | 1                | 76               | /                 | 10.992          | 10                |

#### Waveform 8

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.2         | 3                | 96               | 1940, 1260        | 0.636           | 20                |
| 2       | 1.2 - 2.4         | 1                | 72               | /                 | 1.368           | 10                |
| 3       | 2.4 - 3.6         | 3                | 60               | 1820, 1556        | 3.276           | 20                |
| 4       | 3.6 - 4.8         | 2                | 92               | 1416              | 3.72            | 10                |
| 5       | 4.8 - 6.0         | 3                | 96               | 1480, 1604        | 5.496           | 20                |
| 6       | 6.0 - 7.2         | 1                | 56               | /                 | 6.528           | 10                |
| 7       | 7.2 - 8.4         | 1                | 68               | /                 | 7.764           | 20                |
| 8       | 8.4 - 9.6         | 1                | 64               | /                 | 8.772           | 10                |
| 9       | 9.6 - 10.8        | 2                | 88               | 1232              | 10.08           | 20                |
| 10      | 10.8 - 12.0       | 2                | 76               | 1396              | 11.124          | 10                |

#### Waveform 9

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.2         | 1                | 76               | /                 | 0.588           | 20                |
| 2       | 1.2 - 2.4         | 1                | 56               | /                 | 1.86            | 10                |
| 3       | 2.4 - 3.6         | 3                | 92               | 1860, 1084        | 3.3             | 20                |
| 4       | 3.6 - 4.8         | 1                | 96               | /                 | 4.236           | 10                |
| 5       | 4.8 - 6.0         | 3                | 92               | 1432, 1860        | 5.28            | 20                |
| 6       | 6.0 - 7.2         | 1                | 100              | /                 | 6.264           | 10                |
| 7       | 7.2 - 8.4         | 3                | 64               | 1544, 1368        | 8.064           | 20                |
| 8       | 8.4 - 9.6         | 2                | 72               | 1248              | 8.724           | 10                |
| 9       | 9.6 - 10.8        | 1                | 76               | /                 | 9.828           | 20                |
| 10      | 10.8 - 12.0       | 3                | 84               | 1136, 1992        | 11.568          | 10                |

### Waveform 10

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.0 - 1.2         | 1                | 68               | /                 | 0.576           | 20                |
| 2       | 1.2 - 2.4         | 1                | 84               | /                 | 1.44            | 10                |
| 3       | 2.4 - 3.6         | 3                | 64               | 1620, 1340        | 2.928           | 20                |
| 4       | 3.6 - 4.8         | 2                | 72               | 1552              | 4.2             | 10                |
| 5       | 4.8 - 6.0         | 3                | 64               | 1608, 1880        | 5.388           | 20                |
| 6       | 6.0 - 7.2         | 2                | 60               | 1672              | 6.192           | 10                |
| 7       | 7.2 - 8.4         | 3                | 52               | 1080, 1344        | 8.04            | 20                |
| 8       | 8.4 - 9.6         | 3                | 76               | 1828, 1868        | 8.568           | 10                |
| 9       | 9.6 - 10.8        | 2                | 56               | 1032              | 10.08           | 20                |
| 10      | 10.8 - 12.0       | 3                | 64               | 1728, 1256        | 11.088          | 10                |

### Waveform 11

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 1                 | 3                | 72               | 1440, 1968        | 0.14            | 20                |
| 2       | 2                 | 1                | 64               | /                 | 1.42            | 10                |
| 3       | 3                 | 2                | 60               | 1924              | 2.79            | 20                |
| 4       | 4                 | 3                | 88               | 1188, 1956        | 3.17            | 10                |
| 5       | 5                 | 3                | 52               | 1380, 1472        | 4.75            | 20                |
| 6       | 6                 | 1                | 64               | /                 | 5.57            | 10                |
| 7       | 7                 | 2                | 68               | 1856              | 6.76            | 20                |
| 8       | 8                 | 1                | 100              | /                 | 7.59            | 10                |
| 9       | 9                 | 1                | 72               | /                 | 8.7             | 20                |
| 10      | 10                | 3                | 60               | 1328, 1160        | 9.24            | 10                |
| 11      | 11                | 3                | 80               | 1740, 1248        | 10.72           | 20                |
| 12      | 12                | 2                | 88               | 1448              | 11.28           | 10                |

### Waveform 12

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 1                 | 1                | 100              | /                 | 0.61            | 20                |
| 2       | 2                 | 3                | 92               | 1680, 1104        | 1.2             | 10                |
| 3       | 3                 | 1                | 88               | /                 | 2.46            | 20                |
| 4       | 4                 | 3                | 80               | 1628, 1052        | 3.22            | 10                |
| 5       | 5                 | 2                | 68               | 1356              | 4.5             | 20                |
| 6       | 6                 | 2                | 80               | 1532              | 5.15            | 10                |
| 7       | 7                 | 1                | 52               | /                 | 6.33            | 20                |
| 8       | 8                 | 2                | 60               | 1828              | 7.57            | 10                |
| 9       | 9                 | 2                | 72               | 1492              | 8.74            | 20                |
| 10      | 10                | 2                | 80               | 1096              | 9.21            | 10                |
| 11      | 11                | 1                | 88               | /                 | 10.62           | 20                |
| 12      | 12                | 3                | 100              | 1744, 1860        | 11.65           | 10                |

### Waveform13

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 1                 | 3                | 84               | 1576, 1216        | 0.72            | 20                |
| 2       | 2                 | 1                | 92               | /                 | 1.27            | 10                |
| 3       | 3                 | 3                | 52               | 1356, 1236        | 2.68            | 20                |
| 4       | 4                 | 3                | 80               | 1096, 1252        | 3.79            | 10                |
| 5       | 5                 | 2                | 52               | 1224              | 4.7             | 20                |
| 6       | 6                 | 3                | 76               | 1532, 1684        | 5.47            | 10                |
| 7       | 7                 | 1                | 60               | /                 | 6.16            | 20                |
| 8       | 8                 | 1                | 56               | /                 | 7.1             | 10                |
| 9       | 9                 | 2                | 100              | 1572              | 8.44            | 20                |
| 10      | 10                | 1                | 72               | /                 | 9.41            | 10                |
| 11      | 11                | 2                | 80               | 1004              | 10.61           | 20                |
| 12      | 12                | 1                | 84               | /                 | 11.21           | 10                |

### Waveform 14

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 1                 | 1                | 80               | /                 | 0.48            | 20                |
| 2       | 2                 | 1                | 92               | /                 | 1.66            | 10                |
| 3       | 3                 | 1                | 88               | /                 | 2.51            | 20                |
| 4       | 4                 | 2                | 96               | 1372              | 3.29            | 10                |
| 5       | 5                 | 1                | 84               | /                 | 4.27            | 20                |
| 6       | 6                 | 2                | 64               | 1396              | 5.28            | 10                |
| 7       | 7                 | 2                | 80               | 1572              | 6.79            | 20                |
| 8       | 8                 | 2                | 68               | 1932              | 7.21            | 10                |
| 9       | 9                 | 1                | 60               | /                 | 8.11            | 20                |
| 10      | 10                | 1                | 68               | /                 | 9.15            | 10                |
| 11      | 11                | 1                | 84               | /                 | 10.2            | 20                |
| 12      | 12                | 3                | 100              | 1328, 1812        | 11.33           | 10                |

### Waveform 15

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 1                 | 1                | 80               | /                 | 0.71            | 20                |
| 2       | 2                 | 3                | 96               | 1508, 1240        | 1.38            | 10                |
| 3       | 3                 | 2                | 60               | 1072              | 2.7             | 20                |
| 4       | 4                 | 2                | 64               | 1812              | 3.5             | 10                |
| 5       | 5                 | 2                | 60               | 1672              | 4.57            | 20                |
| 6       | 6                 | 2                | 92               | 1412              | 5.23            | 10                |
| 7       | 7                 | 1                | 56               | /                 | 6.29            | 20                |
| 8       | 8                 | 3                | 96               | 1812, 1336        | 7.3             | 10                |
| 9       | 9                 | 2                | 88               | 1584              | 8.15            | 20                |
| 10      | 10                | 2                | 72               | 1700              | 9.49            | 10                |
| 11      | 11                | 1                | 76               | /                 | 10.37           | 20                |
| 12      | 12                | 2                | 68               | 1060              | 11.52           | 10                |

### Waveform 16

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.80       | 3                | 92               | 1244, 1572        | 0.496           | 20                |
| 2       | 0.80 - 1.60       | 1                | 80               | /                 | 1.232           | 10                |
| 3       | 1.60 - 2.40       | 3                | 84               | 1432, 1632        | 1.688           | 20                |
| 4       | 2.40 - 3.20       | 3                | 60               | 1448, 1972        | 2.816           | 10                |
| 5       | 3.20 - 4.00       | 3                | 92               | 1080, 1184        | 3.32            | 20                |
| 6       | 4.00 - 4.80       | 3                | 96               | 1160, 1228        | 4.28            | 10                |
| 7       | 4.80 - 5.60       | 3                | 60               | 1036, 1736        | 4.936           | 20                |
| 8       | 5.60 - 6.40       | 2                | 56               | 1172              | 6.008           | 10                |
| 9       | 6.40 - 7.20       | 1                | 52               | /                 | 6.6             | 20                |
| 10      | 7.20 - 8.00       | 2                | 76               | 1980              | 7.512           | 10                |
| 11      | 8.00 - 8.80       | 3                | 80               | 1280, 1588        | 8.224           | 20                |
| 12      | 8.80 - 9.60       | 2                | 68               | 1664              | 9.008           | 10                |
| 13      | 9.60 - 10.40      | 2                | 92               | 1676              | 10.168          | 20                |
| 14      | 10.40 - 11.20     | 2                | 84               | 1332              | 10.728          | 10                |
| 15      | 11.20 - 12.00     | 2                | 60               | 1684              | 11.496          | 20                |

### Waveform 17

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.80       | 1                | 72               | /                 | 0.632           | 20                |
| 2       | 0.80 - 1.60       | 3                | 92               | 1884, 1104        | 1.424           | 10                |
| 3       | 1.60 - 2.40       | 1                | 84               | /                 | 2.08            | 20                |
| 4       | 2.40 - 3.20       | 2                | 60               | 1912              | 2.912           | 10                |
| 5       | 3.20 - 4.00       | 3                | 72               | 1584, 1492        | 3.608           | 20                |
| 6       | 4.00 - 4.80       | 3                | 60               | 1588, 1752        | 4.272           | 10                |
| 7       | 4.80 - 5.60       | 2                | 64               | 1780              | 5.168           | 20                |
| 8       | 5.60 - 6.40       | 3                | 76               | 1588, 1744        | 5.808           | 10                |
| 9       | 6.40 - 7.20       | 1                | 56               | /                 | 6.888           | 20                |
| 10      | 7.20 - 8.00       | 2                | 76               | 1940              | 7.512           | 10                |
| 11      | 8.00 - 8.80       | 2                | 92               | 1444              | 8.592           | 20                |
| 12      | 8.80 - 9.60       | 3                | 60               | 1988, 1864        | 9.4             | 10                |
| 13      | 9.60 - 10.40      | 1                | 100              | /                 | 9.864           | 20                |
| 14      | 10.40 - 11.20     | 3                | 84               | 1284, 1748        | 10.728          | 10                |
| 15      | 11.20 - 12.00     | 2                | 100              | 1900              | 11.752          | 20                |

### Waveform 18

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.80       | 1                | 56               | /                 | 0.504           | 20                |
| 2       | 0.80 - 1.60       | 3                | 76               | 1116, 1584        | 1.208           | 10                |
| 3       | 1.60 - 2.40       | 1                | 80               | /                 | 1.72            | 20                |
| 4       | 2.40 - 3.20       | 1                | 100              | /                 | 2.664           | 10                |
| 5       | 3.20 - 4.00       | 3                | 84               | 1264, 1140        | 3.568           | 20                |
| 6       | 4.00 - 4.80       | 1                | 72               | /                 | 4.544           | 10                |
| 7       | 4.80 - 5.60       | 3                | 56               | 1872, 1108        | 4.944           | 20                |
| 8       | 5.60 - 6.40       | 3                | 60               | 1320, 1920        | 6.208           | 10                |
| 9       | 6.40 - 7.20       | 2                | 76               | 1756              | 6.744           | 20                |
| 10      | 7.20 - 8.00       | 3                | 60               | 1596, 1400        | 7.776           | 10                |
| 11      | 8.00 - 8.80       | 1                | 56               | /                 | 8.36            | 20                |
| 12      | 8.80 - 9.60       | 3                | 88               | 1356, 1840        | 9.336           | 10                |
| 13      | 9.60 - 10.40      | 2                | 64               | 1712              | 9.896           | 20                |
| 14      | 10.40 - 11.20     | 1                | 100              | /                 | 10.984          | 10                |
| 15      | 11.20 - 12.00     | 3                | 76               | 1028, 1688        | 11.76           | 20                |

### Waveform 19

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.80       | 1                | 84               | /                 | 0.408           | 20                |
| 2       | 0.80 - 1.60       | 3                | 64               | 1780, 1296        | 1.304           | 10                |
| 3       | 1.60 - 2.40       | 3                | 68               | 1400, 1292        | 1.824           | 20                |
| 4       | 2.40 - 3.20       | 1                | 92               | /                 | 2.944           | 10                |
| 5       | 3.20 - 4.00       | 1                | 64               | /                 | 3.352           | 20                |
| 6       | 4.00 - 4.80       | 2                | 56               | 1264              | 4.232           | 10                |
| 7       | 4.80 - 5.60       | 1                | 72               | /                 | 4.92            | 20                |
| 8       | 5.60 - 6.40       | 2                | 76               | 1460              | 5.992           | 10                |
| 9       | 6.40 - 7.20       | 1                | 84               | /                 | 6.528           | 20                |
| 10      | 7.20 - 8.00       | 2                | 68               | 1188              | 7.44            | 10                |
| 11      | 8.00 - 8.80       | 3                | 72               | 1576, 1536        | 8.456           | 20                |
| 12      | 8.80 - 9.60       | 2                | 64               | 1056              | 8.968           | 10                |
| 13      | 9.60 - 10.40      | 1                | 100              | /                 | 9.808           | 20                |
| 14      | 10.40 - 11.20     | 2                | 52               | 1092              | 10.616          | 10                |
| 15      | 11.20 - 12.00     | 3                | 68               | 1936, 1464        | 11.528          | 20                |

### Waveform 20

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.80       | 1                | 88               | /                 | 0.2             | 20                |
| 2       | 0.80 - 1.60       | 1                | 68               | /                 | 1.376           | 10                |
| 3       | 1.60 - 2.40       | 2                | 88               | 1496              | 1.92            | 20                |
| 4       | 2.40 - 3.20       | 1                | 64               | /                 | 2.608           | 10                |
| 5       | 3.20 - 4.00       | 3                | 84               | 1768, 1184        | 3.584           | 20                |
| 6       | 4.00 - 4.80       | 3                | 52               | 1620, 1552        | 4.568           | 10                |
| 7       | 4.80 - 5.60       | 3                | 80               | 1908, 1884        | 5.432           | 20                |
| 8       | 5.60 - 6.40       | 3                | 92               | 1728, 1684        | 6.032           | 10                |
| 9       | 6.40 - 7.20       | 3                | 60               | 1536, 1496        | 6.928           | 20                |
| 10      | 7.20 - 8.00       | 3                | 76               | 1776, 1580        | 7.304           | 10                |
| 11      | 8.00 - 8.80       | 1                | 80               | /                 | 8.36            | 20                |
| 12      | 8.80 - 9.60       | 3                | 56               | 1020, 1292        | 9.072           | 10                |
| 13      | 9.60 - 10.40      | 2                | 60               | 1380              | 9.712           | 20                |
| 14      | 10.40 - 11.20     | 3                | 96               | 1324, 1664        | 10.992          | 10                |
| 15      | 11.20 - 12.00     | 2                | 72               | 1896              | 11.416          | 20                |

### Waveform 21

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.75       | 3                | 52               | 1384, 1180        | 0.3225          | 20                |
| 2       | 0.75 - 1.50       | 2                | 60               | 1096              | 1.2525          | 10                |
| 3       | 1.50 - 2.25       | 3                | 72               | 1520, 1716        | 1.755           | 20                |
| 4       | 2.25 - 3.00       | 1                | 60               | /                 | 2.4675          | 10                |
| 5       | 3.00 - 3.75       | 2                | 56               | 1292              | 3.5475          | 20                |
| 6       | 3.75 - 4.50       | 2                | 64               | 1704              | 4.23            | 10                |
| 7       | 4.50 - 5.25       | 2                | 84               | 1708              | 4.9575          | 20                |
| 8       | 5.25 - 6.00       | 3                | 56               | 1008, 1624        | 5.565           | 10                |
| 9       | 6.00 - 6.75       | 3                | 80               | 1468, 1056        | 6.5325          | 20                |
| 10      | 6.75 - 7.50       | 2                | 88               | 1160              | 7.1325          | 10                |
| 11      | 7.50 - 8.25       | 3                | 56               | 1216, 1852        | 7.6575          | 20                |
| 12      | 8.25 - 9.00       | 1                | 52               | /                 | 8.37            | 10                |
| 13      | 9.00 - 9.75       | 1                | 80               | /                 | 9.45            | 20                |
| 14      | 9.75 - 10.50      | 3                | 60               | 1020, 1996        | 9.99            | 10                |
| 15      | 10.50 - 11.25     | 3                | 88               | 1960, 1620        | 10.6125         | 20                |
| 16      | 11.25 - 12.00     | 3                | 92               | 1760, 1496        | 11.46           | 10                |

### Waveform 22

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.75       | 3                | 56               | 1704, 1692        | 0.3825          | 20                |
| 2       | 0.75 - 1.50       | 1                | 100              | /                 | 1.335           | 10                |
| 3       | 1.50 - 2.25       | 2                | 92               | 1068              | 2.025           | 20                |
| 4       | 2.25 - 3.00       | 2                | 84               | 1844              | 2.715           | 10                |
| 5       | 3.00 - 3.75       | 2                | 68               | 1896              | 3.0975          | 20                |
| 6       | 3.75 - 4.50       | 2                | 100              | 1656              | 3.8775          | 10                |
| 7       | 4.50 - 5.25       | 2                | 60               | 1960              | 5.0175          | 20                |
| 8       | 5.25 - 6.00       | 1                | 88               | /                 | 5.73            | 10                |
| 9       | 6.00 - 6.75       | 1                | 84               | /                 | 6.3975          | 20                |
| 10      | 6.75 - 7.50       | 3                | 56               | 1784, 1692        | 7.0125          | 10                |
| 11      | 7.50 - 8.25       | 3                | 52               | 1784, 1648        | 7.83            | 20                |
| 12      | 8.25 - 9.00       | 1                | 60               | /                 | 8.655           | 10                |
| 13      | 9.00 - 9.75       | 3                | 80               | 1460, 1564        | 9.195           | 20                |
| 14      | 9.75 - 10.50      | 2                | 68               | 1604              | 10.0875         | 10                |
| 15      | 10.50 - 11.25     | 1                | 76               | /                 | 10.77           | 20                |
| 16      | 11.25 - 12.00     | 2                | 96               | 1276              | 11.415          | 10                |

### Waveform 23

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.75       | 3                | 52               | 1240, 1024        | 0.2025          | 20                |
| 2       | 0.75 - 1.50       | 2                | 100              | 1632              | 0.825           | 10                |
| 3       | 1.50 - 2.25       | 3                | 76               | 1112, 1156        | 1.6725          | 20                |
| 4       | 2.25 - 3.00       | 2                | 56               | 1808              | 2.43            | 10                |
| 5       | 3.00 - 3.75       | 1                | 64               | /                 | 3.585           | 20                |
| 6       | 3.75 - 4.50       | 3                | 68               | 1960, 1672        | 4.3425          | 10                |
| 7       | 4.50 - 5.25       | 2                | 52               | 1700              | 4.7625          | 20                |
| 8       | 5.25 - 6.00       | 1                | 100              | /                 | 5.385           | 10                |
| 9       | 6.00 - 6.75       | 3                | 60               | 1084, 1112        | 6.42            | 20                |
| 10      | 6.75 - 7.50       | 3                | 64               | 1972, 1164        | 7.0875          | 10                |
| 11      | 7.50 - 8.25       | 3                | 92               | 1752, 1168        | 7.845           | 20                |
| 12      | 8.25 - 9.00       | 3                | 80               | 1448, 1432        | 8.775           | 10                |
| 13      | 9.00 - 9.75       | 2                | 88               | 1744              | 9.39            | 20                |
| 14      | 9.75 - 10.50      | 2                | 92               | 1548              | 10.125          | 10                |
| 15      | 10.50 - 11.25     | 2                | 80               | 1812              | 11.0625         | 20                |
| 16      | 11.25 - 12.00     | 2                | 52               | 1508              | 11.3475         | 10                |

#### Waveform 24

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.75       | 2                | 56               | 1404              | 0.2775          | 20                |
| 2       | 0.75 - 1.50       | 3                | 64               | 1964, 1024        | 1.1625          | 10                |
| 3       | 1.50 - 2.25       | 3                | 84               | 1708, 1640        | 2.0475          | 20                |
| 4       | 2.25 - 3.00       | 2                | 88               | 1128              | 2.79            | 10                |
| 5       | 3.00 - 3.75       | 1                | 100              | /                 | 3.0825          | 20                |
| 6       | 3.75 - 4.50       | 1                | 60               | /                 | 3.885           | 10                |
| 7       | 4.50 - 5.25       | 2                | 96               | 1436              | 5.07            | 20                |
| 8       | 5.25 - 6.00       | 1                | 68               | /                 | 5.64            | 10                |
| 9       | 6.00 - 6.75       | 3                | 72               | 1496, 1800        | 6.3375          | 20                |
| 10      | 6.75 - 7.50       | 1                | 100              | /                 | 6.975           | 10                |
| 11      | 7.50 - 8.25       | 2                | 68               | 1752              | 8.0025          | 20                |
| 12      | 8.25 - 9.00       | 1                | 84               | /                 | 8.6025          | 10                |
| 13      | 9.00 - 9.75       | 1                | 72               | /                 | 9.3225          | 20                |
| 14      | 9.75 - 10.50      | 2                | 88               | 1552              | 10.215          | 10                |
| 15      | 10.50 - 11.25     | 3                | 52               | 1884, 1864        | 10.9425         | 20                |
| 16      | 11.25 - 12.00     | 3                | 60               | 1776, 1700        | 11.34           | 10                |

#### Waveform 25

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.75       | 1                | 88               | /                 | 0.105           | 20                |
| 2       | 0.75 - 1.50       | 1                | 96               | /                 | 1.0125          | 10                |
| 3       | 1.50 - 2.25       | 1                | 60               | /                 | 2.055           | 20                |
| 4       | 2.25 - 3.00       | 1                | 80               | /                 | 2.5875          | 10                |
| 5       | 3.00 - 3.75       | 3                | 76               | 1344, 1716        | 3.2475          | 20                |
| 6       | 3.75 - 4.50       | 2                | 64               | 1560              | 4.3275          | 10                |
| 7       | 4.50 - 5.25       | 2                | 84               | 1964              | 4.935           | 20                |
| 8       | 5.25 - 6.00       | 3                | 60               | 1760, 1532        | 5.7225          | 10                |
| 9       | 6.00 - 6.75       | 2                | 80               | 1432              | 6.375           | 20                |
| 10      | 6.75 - 7.50       | 1                | 96               | /                 | 7.1925          | 10                |
| 11      | 7.50 - 8.25       | 3                | 60               | 1904, 1676        | 7.6125          | 20                |
| 12      | 8.25 - 9.00       | 1                | 80               | /                 | 8.535           | 10                |
| 13      | 9.00 - 9.75       | 2                | 68               | 1724              | 9.465           | 20                |
| 14      | 9.75 - 10.50      | 3                | 76               | 1936, 1648        | 10.2            | 10                |
| 15      | 10.50 - 11.25     | 2                | 88               | 1728              | 10.92           | 20                |
| 16      | 11.25 - 12.00     | 3                | 84               | 1908, 1144        | 11.64           | 10                |

### Waveform 26

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.60       | 1                | 96               | /                 | 0.36            | 20                |
| 2       | 0.60 - 1.20       | 3                | 80               | 1072, 1772        | 0.84            | 10                |
| 3       | 1.20 - 1.80       | 1                | 88               | /                 | 1.392           | 20                |
| 4       | 1.80 - 2.40       | 1                | 100              | /                 | 2.202           | 10                |
| 5       | 2.40 - 3.00       | 2                | 56               | 1692              | 2.718           | 20                |
| 6       | 3.00 - 3.60       | 3                | 84               | 1572, 1816        | 3.084           | 10                |
| 7       | 3.60 - 4.20       | 1                | 60               | /                 | 3.678           | 20                |
| 8       | 4.20 - 4.80       | 1                | 92               | /                 | 4.674           | 10                |
| 9       | 4.80 - 5.40       | 3                | 52               | 1628, 1704        | 5.13            | 20                |
| 10      | 5.40 - 6.00       | 3                | 84               | 1200, 1716        | 5.466           | 10                |
| 11      | 6.00 - 6.60       | 2                | 80               | 1580              | 6.432           | 20                |
| 12      | 6.60 - 7.20       | 3                | 68               | 1552, 1236        | 6.66            | 10                |
| 13      | 7.20 - 7.80       | 1                | 60               | /                 | 7.482           | 20                |
| 14      | 7.80 - 8.40       | 3                | 88               | 1192, 1516        | 8.094           | 10                |
| 15      | 8.40 - 9.00       | 3                | 56               | 1372, 1284        | 8.598           | 20                |
| 16      | 9.00 - 9.60       | 3                | 88               | 1824, 1280        | 9.354           | 10                |
| 17      | 9.60 - 10.20      | 1                | 60               | /                 | 10.014          | 20                |
| 18      | 10.20 - 10.80     | 3                | 84               | 1644, 1420        | 10.272          | 10                |
| 19      | 10.80 - 11.40     | 3                | 72               | 1348, 1724        | 11.226          | 20                |
| 20      | 11.40 - 12.00     | 1                | 88               | /                 | 11.742          | 10                |

### Waveform 27

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.60       | 2                | 56               | 1976              | 0.192           | 20                |
| 2       | 0.60 - 1.20       | 2                | 100              | 1968              | 0.78            | 10                |
| 3       | 1.20 - 1.80       | 3                | 60               | 1892, 1628        | 1.476           | 20                |
| 4       | 1.80 - 2.40       | 3                | 64               | 1752, 1328        | 2.268           | 10                |
| 5       | 2.40 - 3.00       | 2                | 92               | 1664              | 2.484           | 20                |
| 6       | 3.00 - 3.60       | 2                | 84               | 1236              | 3.234           | 10                |
| 7       | 3.60 - 4.20       | 1                | 64               | /                 | 3.858           | 20                |
| 8       | 4.20 - 4.80       | 2                | 80               | 1280              | 4.572           | 10                |
| 9       | 4.80 - 5.40       | 3                | 76               | 1588, 1452        | 4.92            | 20                |
| 10      | 5.40 - 6.00       | 1                | 64               | /                 | 5.688           | 10                |
| 11      | 6.00 - 6.60       | 3                | 80               | 1464, 1924        | 6.204           | 20                |
| 12      | 6.60 - 7.20       | 1                | 76               | /                 | 6.996           | 10                |
| 13      | 7.20 - 7.80       | 1                | 72               | /                 | 7.65            | 20                |
| 14      | 7.80 - 8.40       | 1                | 60               | /                 | 8.01            | 10                |
| 15      | 8.40 - 9.00       | 2                | 76               | 1320              | 8.694           | 20                |
| 16      | 9.00 - 9.60       | 2                | 100              | 1684              | 9.408           | 10                |
| 17      | 9.60 - 10.20      | 2                | 56               | 1656              | 9.822           | 20                |
| 18      | 10.20 - 10.80     | 3                | 80               | 1064, 1868        | 10.374          | 10                |
| 19      | 10.80 - 11.40     | 1                | 60               | /                 | 10.866          | 20                |
| 20      | 11.40 - 12.00     | 3                | 88               | 1124, 1952        | 11.718          | 10                |

### Waveform 28

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.60       | 2                | 68               | 1484              | 0.306           | 20                |
| 2       | 0.60 - 1.20       | 1                | 88               | /                 | 0.834           | 10                |
| 3       | 1.20 - 1.80       | 2                | 92               | 1832              | 1.398           | 20                |
| 4       | 1.80 - 2.40       | 2                | 72               | 1160              | 2.076           | 10                |
| 5       | 2.40 - 3.00       | 1                | 68               | /                 | 2.472           | 20                |
| 6       | 3.00 - 3.60       | 3                | 72               | 1320, 1844        | 3.18            | 10                |
| 7       | 3.60 - 4.20       | 1                | 92               | /                 | 3.768           | 20                |
| 8       | 4.20 - 4.80       | 2                | 72               | 1384              | 4.668           | 10                |
| 9       | 4.80 - 5.40       | 1                | 100              | /                 | 5.274           | 20                |
| 10      | 5.40 - 6.00       | 1                | 92               | /                 | 5.802           | 10                |
| 11      | 6.00 - 6.60       | 1                | 96               | /                 | 6.252           | 20                |
| 12      | 6.60 - 7.20       | 3                | 92               | 1364, 1348        | 6.732           | 10                |
| 13      | 7.20 - 7.80       | 3                | 72               | 1596, 1464        | 7.464           | 20                |
| 14      | 7.80 - 8.40       | 1                | 60               | /                 | 7.878           | 10                |
| 15      | 8.40 - 9.00       | 3                | 64               | 1444, 1224        | 8.508           | 20                |
| 16      | 9.00 - 9.60       | 1                | 100              | /                 | 9.438           | 10                |
| 17      | 9.60 - 10.20      | 3                | 72               | 1712, 1152        | 9.93            | 20                |
| 18      | 10.20 - 10.80     | 1                | 88               | /                 | 10.584          | 10                |
| 19      | 10.80 - 11.40     | 2                | 68               | 1368              | 11.022          | 20                |
| 20      | 11.40 - 12.00     | 1                | 88               | /                 | 11.544          | 10                |

### Waveform29

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.60       | 1                | 72               | /                 | 0.348           | 20                |
| 2       | 0.60 - 1.20       | 1                | 92               | /                 | 1.068           | 10                |
| 3       | 1.20 - 1.80       | 2                | 60               | 1624              | 1.41            | 20                |
| 4       | 1.80 - 2.40       | 2                | 100              | 1336              | 2.082           | 10                |
| 5       | 2.40 - 3.00       | 3                | 72               | 1924, 1172        | 2.67            | 20                |
| 6       | 3.00 - 3.60       | 3                | 88               | 1488, 1396        | 3.438           | 10                |
| 7       | 3.60 - 4.20       | 1                | 76               | /                 | 4.008           | 20                |
| 8       | 4.20 - 4.80       | 1                | 72               | /                 | 4.674           | 10                |
| 9       | 4.80 - 5.40       | 2                | 92               | 1864              | 5.1             | 20                |
| 10      | 5.40 - 6.00       | 2                | 64               | 1748              | 5.604           | 10                |
| 11      | 6.00 - 6.60       | 2                | 84               | 1356              | 6.198           | 20                |
| 12      | 6.60 - 7.20       | 1                | 68               | /                 | 6.996           | 10                |
| 13      | 7.20 - 7.80       | 3                | 96               | 1236, 1988        | 7.542           | 20                |
| 14      | 7.80 - 8.40       | 3                | 56               | 1328, 1864        | 8.034           | 10                |
| 15      | 8.40 - 9.00       | 3                | 76               | 1160, 1264        | 8.538           | 20                |
| 16      | 9.00 - 9.60       | 2                | 96               | 1224              | 9.18            | 10                |
| 17      | 9.60 - 10.20      | 3                | 84               | 1136, 1364        | 10.002          | 20                |
| 18      | 10.20 - 10.80     | 1                | 56               | /                 | 10.302          | 10                |
| 19      | 10.80 - 11.40     | 2                | 64               | 1388              | 11.124          | 20                |
| 20      | 11.40 - 12.00     | 1                | 88               | /                 | 11.628          | 10                |

## Waveform 30

| Burst # | Burst Interval(s) | Number of Pulses | Pulse Width (us) | Pulse Spacing(us) | Pulse Start (s) | Chirp Width (MHZ) |
|---------|-------------------|------------------|------------------|-------------------|-----------------|-------------------|
| 1       | 0.00 - 0.60       | 2                | 52               | 1352              | 0.12            | 20                |
| 2       | 0.60 - 1.20       | 1                | 100              | /                 | 0.876           | 10                |
| 3       | 1.20 - 1.80       | 1                | 96               | /                 | 1.314           | 20                |
| 4       | 1.80 - 2.40       | 3                | 60               | 1220, 1504        | 1.974           | 10                |
| 5       | 2.40 - 3.00       | 1                | 92               | /                 | 2.46            | 20                |
| 6       | 3.00 - 3.60       | 2                | 100              | 1100              | 3.45            | 10                |
| 7       | 3.60 - 4.20       | 1                | 88               | /                 | 3.99            | 20                |
| 8       | 4.20 - 4.80       | 1                | 68               | /                 | 4.428           | 10                |
| 9       | 4.80 - 5.40       | 2                | 72               | 1396              | 5.154           | 20                |
| 10      | 5.40 - 6.00       | 3                | 92               | 1240, 1216        | 5.67            | 10                |
| 11      | 6.00 - 6.60       | 1                | 72               | /                 | 6.21            | 20                |
| 12      | 6.60 - 7.20       | 1                | 92               | /                 | 6.858           | 10                |
| 13      | 7.20 - 7.80       | 2                | 96               | 1896              | 7.602           | 20                |
| 14      | 7.80 - 8.40       | 2                | 68               | 1552              | 7.926           | 10                |
| 15      | 8.40 - 9.00       | 1                | 64               | /                 | 8.838           | 20                |
| 16      | 9.00 - 9.60       | 1                | 60               | /                 | 9.396           | 10                |
| 17      | 9.60 - 10.20      | 3                | 72               | 1996, 1516        | 9.978           | 20                |
| 18      | 10.20 - 10.80     | 2                | 68               | 1992              | 10.518          | 10                |
| 19      | 10.80 - 11.40     | 3                | 60               | 1448, 1792        | 11.148          | 20                |
| 20      | 11.40 - 12.00     | 2                | 68               | 1156              | 11.736          | 10                |

## Annex C. SIEMIC Accreditation

| Accreditations                          | Document                                                                            | Scope / Remark                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| ISO 17025 (A2LA)                        |    | Please see the documents for the detailed scope                                         |
| ISO Guide 65 (A2LA)                     |    | Please see the documents for the detailed scope                                         |
| TCB Designation                         |                                                                                     | A1, A2, A3, A4, B1, B2, B3, B4, C                                                       |
| FCC DoC Accreditation                   |    | FCC Declaration of Conformity Accreditation                                             |
| FCC Site Registration                   |    | 3 meter site                                                                            |
| FCC Site Registration                   |    | 10 meter site                                                                           |
| IC Site Registration                    |    | 3 meter site                                                                            |
| IC Site Registration                    |    | 10 meter site                                                                           |
| EU NB                                   |   | <b>Radio &amp; Telecommunications Terminal Equipment:</b><br>EN45001 – EN ISO/IEC 17025 |
|                                         |  | <b>Electromagnetic Compatibility:</b><br>EN45001 – EN ISO/IEC 17025                     |
| Singapore iDA<br>CB(Certification Body) |  | Phase I, Phase II                                                                       |
| Vietnam MIC<br>CAB Accreditation        |  | Please see the document for the detailed scope                                          |
| HongKong OFCA                           |  | (Phase II) OFCA Foreign Certification Body for Radio and Telecom                        |
|                                         |  | (Phase I) Conformity Assessment Body for Radio and Telecom                              |
| Industry Canada CAB                     |  | <b>Radio:</b> Scope A – All Radio Standard Specification in Category I                  |
|                                         |  | <b>Telecom:</b> CS-03 Part I, II, V, VI, VII, VIII                                      |

|                                                 |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Japan Recognized Certification Body Designation |    | <p><b>Radio</b> : A1. Terminal equipment for purpose of calling</p> <p><b>Telecom</b> : B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Korea CAB Accreditation                         |    | <p><b>EMI</b>: KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI<br/>KN22: Test Method for EMI<br/><b>EMS</b>: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS<br/>KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS</p> <p><b>Radio</b>: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68</p> <p><b>Telecom</b>: President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4</p> |
| Taiwan NCC CAB Recognition                      |   | LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Taiwan BSMI CAB Recognition                     |  | CNS 13438                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Japan VCCI                                      |  | <p>R-3083: Radiation 3 meter site</p> <p>C-3421: Main Ports Conducted Interference Measurement</p> <p>T-1597: Telecommunication Ports Conducted Interference Measurement</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Australia CAB Recognition                       |  | <p><b>EMC</b>: AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4</p> <p><b>Radiocommunications</b>: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771</p> <p><b>Telecommunications</b>: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1</p>                                                                                                           |
| Australia NATA Recognition                      |  | AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |