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TEST REPORT

Covering the
DYNAMIC FREQUENCY SELECTION (DFS)
REQUIREMENTS
OF

FCC Part 15 Subpart E (UNII), RSS-210 Annex 9

Cambium Networks
Model(s): C058900P112A (FCC) / C050900P011A (IC)

COMPANY:	Cambium Networks 3800 Golf Road Suite #360 Rolling Meadows, IL, 60008
TEST SITE:	National Technical Systems - Silicon Valley 41039 Boyce Road Fremont, CA 94538
REPORT DATE:	November 27, 2013
FINAL TEST DATE:	October 14 - 18, 2013
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ACCREDITED
Testing Cert #0214.26

REVISION HISTORY

Rev #	Date	Comments	Modified By
-	November 27, 2013	Initial release	-

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

SCOPE

Test data has been taken pursuant to the relevant DFS requirements of the following standard(s):

- FCC Part 15 Subpart E Unlicensed National Information Infrastructure (U-NII) Devices.
- RSS-210 Annex 9 Local Area Network Devices.

Tests were performed in accordance with these standards together with the current published versions of the basic standards referenced therein including FCC KDB 848637 and the appendix to FCC 06-96 MO&O as outlined in NTS Silicon Valley test procedures. The test results recorded herein are based on a single type test of the Cambium Networks model C058900P112A (FCC) / C050900P011A (IC) and therefore apply only to the tested sample. The sample was selected and prepared by Steve Payne of Cambium Networks.

OBJECTIVE

The objective of the manufacturer is to comply with the standards identified in the previous section. In order to demonstrate compliance, the manufacturer or a contracted laboratory makes measurements and takes the necessary steps to ensure that the equipment complies with the appropriate technical standards. Compliance with some DFS features is covered through a manufacturer statement or through observation of the device.

STATEMENT OF COMPLIANCE

The tested sample of the Cambium Networks model C058900P112A (FCC) / C050900P011A (IC) complied with the DFS requirements of FCC Part 15.407(h)(2), RSS-210 Annex 9.3.

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

DEVIATIONS FROM THE STANDARD

No deviations were made from the test methods and requirements covered by the scope of this report.

TEST RESULTS

TEST RESULTS SUMMARY – FCC Part 15, MASTER DEVICE

Table 1 - FCC Part 15 Subpart E Master Device Test Result Summary

Description	Radar Type	EUT Frequency	Measured Value	Requirement	Test Data	Status
Channel Availability Check (CAC) Time	Type 1	5550MHz	67s	≥ 60s	Appendix D	Pass
CAC Detection Threshold	Type 1	5550MHz	-64 dBm (note 2)	-64dBm (See note 2)	Appendix D	Pass
In-Service Monitoring Detection Threshold	Type 1 Type 2 Type 3 Type 4 Type 5 Type 6		-64 dBm (note 2)	-64dBm (See note 2)	Appendix B	Pass
Bandwidth Detection	Type 1	Varies	+/- 17 MHz	80% of the 99% BW (36.7 MHz)	-	Pass
Channel closing transmission time	Type 1 Type 5	5550MHz	0ms 0ms	≤ 260ms	Appendix C	Pass
Channel move time	Type 1 Type 5	5550MHz	4ms 0ms	≤ 10s	Appendix C	Pass
Non-occupancy period	-	5550MHz	1800s	> 30 minutes	Appendix C	Pass
Uniform Loading		-	-	Uniform Loading	Refer to operational description	N/A

1) Tests were performed using the conducted test method with re-checks of In-Service Monitoring using the radiated test method.
2) The measured detection threshold is based on the master device having an antenna gain of 16 dBi. The measured detection threshold is based on testing the master device using the radiated test method when connected to an antenna with a nominal gain of 16 dBi. The limit is based on an eirp of more than 23 dBm.
3) The in-service monitoring detection threshold and detection probability measurements were made with the device operating in the 5500-5700 MHz band.

TEST RESULTS SUMMARY – FCC Part 15, CLIENT DEVICE

Table 2 - FCC Part 15 Subpart E Client Device Test Result Summary

Description	Radar Type	EUT Frequency	Measured Value	Requirement	Test Data	Status
Channel closing transmission time	Type 1	5550MHz	0ms	≤ 260ms	Appendix C	Pass
Channel move time	Type 1	5550MHz	0ms	≤ 10s	Appendix C	Pass
Non-occupancy period - associated	Type 1	5550MHz		> 30 minutes	Appendix C	Pass
Passive Scanning	N/A	N/A	Refer to manufacturer attestation			

1) Tests were performed using the conducted test method.
2) Channel availability check and detection threshold are not applicable to client devices.

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level, with a coverage factor (k=2) and were calculated in accordance with UKAS document LAB 34.

Measurement	Measurement Unit	Expanded Uncertainty
Timing (Channel move time, aggregate transmission time)	ms	Timing resolution +/- 0.24%
Timing (non occupancy period)	seconds	5 seconds
DFS Threshold (radiated)	dBm	1.6
DFS Threshold (conducted)	dBm	1.2

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The Cambium Networks models C058900P112A (FCC) / C050900P011A (IC) is an enhanced Point to Multipoint 802.11 frame based wireless radios. The C058900P112A (FCC) / C050900P011A (IC) is part of a managed network professionally installed.

The sample was received on October 14, 2013 and tested on October 14 - 18, 2013. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Mac Address
Cambium Networks	C058900P112A (FCC) / C050900P011A (ROW)	Access Point FCC: Z8H89FT0006 / IC:109W-0006	000456C00D8A

The EUT can be operated also as a station and was tested as such.

The manufacturer declared values for the EUT operational characteristics that affect DFS are as follows:

Operating Modes (5250 – 5350 MHz, 5470 – 5725 MHz)

☒ Master Device 5250-5350 MHz

☒ Master Device 5470-5725 MHz (excluding 5600-5650 MHz)

☒ Client Device (no In Service Monitoring, no Ad-Hoc mode)

Antenna Gains / EIRP (5250 – 5350 MHz, 5470 – 5725 MHz)

	5250 – 5350 MHz	5470 – 5725 MHz
Lowest Antenna Gain (dBi)	16	16
Highest Antenna Gain (dBi)	16	16
EIRP Output Power (dBm)	30	30

☒ Power can exceed 200mW eirp

Channel Protocol

☐ IP Based

☒ Frame Based

ENCLOSURE

The EUT enclosure measures approximately 8.5 by 22 by 3.5 centimeters. It is primarily constructed of uncoated plastic.

MODIFICATIONS

The EUT did not require modifications during testing in order to comply with the requirements of the standard(s) referenced in this test report.

SUPPORT EQUIPMENT

The following equipment was used as local support equipment for testing:

Manufacturer	Model	Description	Serial Number	FCC ID
Cambium Networks	*C050900P132A*	*Station radio (conducted mode testing)*	*000456C02702*	*Z8H89FT0006*
Cambium Networks	*C050900P132A*	*Station radio (radiated mode testing)*	*000456C1CFAF*	*Z8H89FT0005*
Motorola	ML900	Laptop Computer	3433FQ0285	DoC
Motorola	ML910	Laptop Computer	3433JG0021	DoC

The italicized device was the client device.

EUT INTERFACE PORTS

The I/O cabling configuration during testing was as follows:

Port	Connected To	Cable(s)		
		Description	Shielded or Unshielded	Length (m)
Ethernet (EUT)	POE Injector	CAT5	Unshielded	10
Ethernet (POE Injector)	Motorola Laptop 1	CAT5	Unshielded	1
Ethernet(Slave)	POE Injector	CAT5	Unshielded	10
Ethernet(POE Injector	Motorola Laptop 2	CAT5	Unshielded	1

EUT OPERATION

The EUT was operating with the following software. The software is secured by digital software signature, anti-cloning mechanism and hardware security bits so no software or user can change power, operating frequency or disable DFS function.

Master Device: 1.1.6 RC16

Client Device: 1.1.6 RC16

The manufacturer provided special software that over-rode the non-occupancy mechanism (allowing return to the same channel) for the purposes of determining the probability of detection. This test feature was disabled and the normal operating software enabled for verifying the 30-minute non-occupancy period and channel move time.

The start of the Channel Availability Check was 32 seconds after power was applied to the radio.

During the in-service monitoring detection probability and channel moving tests the system was configured with a streaming video file from the master device (sourced by the PC connected to the master device via an Ethernet interface) to the client device.

The streamed file was the “FCC” test file and the client device was using Windows Media Player Classic as required by FCC Part 15 Subpart E

The data stream is frame based, and configured with 75/25 downlink/uplink traffic.

RADAR WAVEFORMS

Table 3 - FCC Short Pulse Radar Test Waveforms					
Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses / burst	Minimum Detection Percentage	Minimum Number of Trials
1	1	1428	18	60%	30
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

Table 4 - FCC Long Pulse Radar Test Waveforms							
Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses / burst	Number of *Bursts*	Minimum Detection Percentage	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 5 - FCC Frequency Hopping Radar Test Waveforms							
Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses / hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Detection Percentage	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

DFS TEST METHODS

CONDUCTED TEST METHOD

The combination of master and slave devices is located in an anechoic chamber. The simulated radar waveform is coupled into the unit performing the radar detection (radar detection device, RDD) via couplers and attenuators.

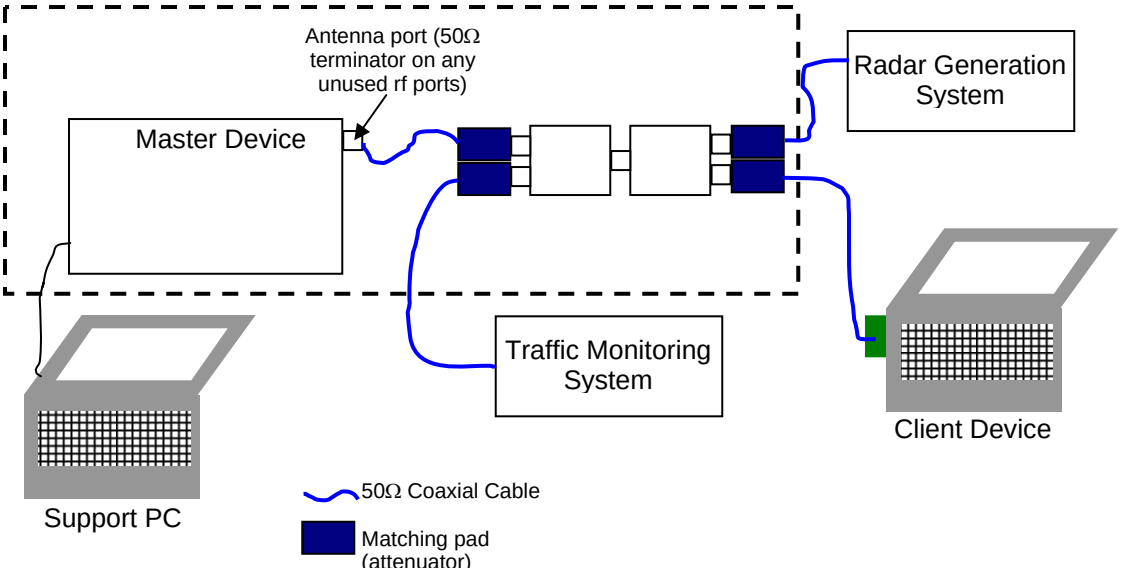


Figure 1 Test Configuration for Conducted Measurement Method

The signal level of the simulated waveform is set to a reference level equal to the threshold level (plus 1dB if testing against FCC requirements). Lower levels may also be applied on request of the manufacturer.

The signal level is verified by measuring the CW signal level at the coupling point to the RDD antenna port. The radar signal level is calculated from the measured level, R (dBm) and the lowest gain antenna assembly intended for use with the RDD, G_{RDD} (dBi):

$$\text{Applied level (dBm)} = R - G_{RDD}$$

If both master and client devices have radar detection capability then the radar level at the non RDD is verified to be at least 20dB below the threshold level to ensure that any responses are due to the RDD detecting radar.

The antenna connected to the channel monitoring subsystem is positioned to allow both master and client transmissions to be observed, with the level of the EUT's transmissions between 6 and 10dB higher than those from the other device.

DFS MEASUREMENT INSTRUMENTATION

RADAR GENERATION SYSTEM

An Agilent PSG is used as the radar-generating source. The integral arbitrary waveform generators are programmed using Agilent's "Pulse Building" software and NTS Silicon Valley custom software to produce the required waveforms, with the capability to produce both un-modulated and modulated (FM Chirp) pulses. Where there are multiple values for a specific radar parameter then the software selects a value at random and, for FCC tests, the software verifies that the resulting waveform is truly unique.

With the exception of the hopping waveforms required by the FCC's rules (see below), the radar generator is set to a single frequency within the radar detection bandwidth of the EUT. The frequency is varied from trial to trial by stepping in 5MHz steps.

Frequency hopping radar waveforms are simulated using a time domain model. A randomly hopping sequence algorithm (which uses each channel in the hopping radar's range once in a hopping sequence) generates a hop sequence. A segment of the first 100 elements of the hop sequence are then examined to determine if it contains one or more frequencies within the radar detection bandwidth of the EUT. If it does not then the first element of the segment is discarded and the next frequency in the sequence is added. The process repeats until a valid segment is produced. The radar system is then programmed to produce bursts at time slots coincident with the frequencies within the segment that fall in the detection bandwidth. The frequency of the generator is stepped in 1 MHz increments across the EUT's detection range.

The radar signal level is verified during testing using a CW signal with the AGC function switched on. Correction factors to account for the fact that pulses are generated with the AGC functions switched off are measured annually and an offset is used to account for this in the software.

The generator output is connected to the coupling port of the conducted set-up or to the radar-generating antenna.

CHANNEL MONITORING SYSTEM

Channel monitoring is achieved using a spectrum analyzer and digital storage oscilloscope. The analyzer is configured in a zero-span mode, center frequency set to the radar waveform's frequency or the center frequency of the EUT's operating channel. The IF output of the analyzer is connected to one input of the oscilloscope.

A signal generator output is set to send either the modulating signal directly or a pulse gate with an output pulse co-incident with each radar pulse. This output is connected to a second input on the oscilloscope and the oscilloscope displays both the channel traffic (via the if input) and the radar pulses on its display.

For in service monitoring tests the analyzer sweep time is set to > 20 seconds and the oscilloscope is configured with a data record length of 10 seconds for the short duration and frequency hopping waveforms, 20 seconds for the long duration waveforms. Both instruments are set for a single acquisition sequence. The analyzer is triggered 500ms before the start of the waveform and the oscilloscope is triggered directly by the modulating pulse train. Timing measurements for aggregate channel transmission time and channel move time are made from the oscilloscope data, with the end of the waveform clearly identified by the pulse train on one trace. The analyzer trace data is used to confirm that the last transmission occurred within the 10-second record of the oscilloscope. If necessary the record length of the oscilloscope is expanded to capture the last transmission on the channel prior to the channel move.

Channel availability check time timing plots are made using the analyzer. The analyzer is triggered at start of the EUT's channel availability check and used to verify that the EUT does not transmit when radar is applied during the check time.

The analyzer detector and oscilloscope sampling mode is set to peak detect for all plots.

DFS MEASUREMENT METHODS

DFS RADAR DETECTION BANDWIDTH

The radar detection bandwidth is determined by using FCC radar waveform 1 and applying radar pulses at offsets from the center channel frequency by multiples of 1MHz. These bursts are applied with no traffic on the channel. The first frequencies above and below the center channel frequency that have a detection rate below 90% define the radar bandwidth, the actual range being 1MHz below the upper frequency and 1MHz above the lower frequency.

DFS – CHANNEL CLOSING TRANSMISSION TIME AND CHANNEL MOVE TIME

Channel clearing and closing times are measured by applying a burst of radar with the device configured to change channel and by observing the channel for transmissions. The time between the end of the applied radar waveform and the final transmission on the channel is the channel move time.

The aggregate transmission closing time is measured in one of two ways:

FCC/KCC Notice No. 2010-48 – the total time of all individual transmissions from the EUT that are observed starting 200ms at the end of the last radar pulse in the waveform. This value is required to be less than 60ms.

ETSI – the total time of all individual transmissions from the EUT that are observed from the end of the last radar pulse in the waveform. This value is required to be less than 1000ms in the 5250-5350MHz, 5470-5725MHz bands and 260ms in the 5725-5850MHz band.

DFS – CHANNEL NON-OCCUPANCY AND VERIFICATION OF PASSIVE SCANNING

The channel that was in use prior to radar detection by the master is additionally monitored for 30 minutes to ensure no transmissions on the vacated channel over the required non-occupancy period. This is achieved by tuning the spectrum analyzer to the vacated channel in zero-span mode and connecting the IF output to an oscilloscope. The oscilloscope is triggered by the radar pulse and set to provide a single sweep (in peak detect mode) that lasts for at least 30 minutes after the end of the channel move time.

For devices with a client-mode that are being evaluated against FCC rules the manufacturer must supply an attestation letter stating that the client device does not employ any active scanning techniques (i.e. does not transmit in the DFS bands without authorization from a Master device).

DFS CHANNEL AVAILABILITY CHECK TIME

It is preferred that the EUT report when it starts the radar channel availability check. If the EUT does not report the start of the check time, then the time to start transmitting on a channel after switching the device on is measured to approximate the time from power-on to the end of the channel availability check. The start of the channel availability check is assumed to be 60 seconds prior to the first transmission on the channel.

To evaluate the channel availability check, a single burst of one radar type is applied within the first 2 seconds of the start of the channel availability check and it is verified that the device does not use the channel by continuing to monitor the channel for a period of at least 60 seconds. The test is repeated by applying a burst of radar in the last 2 seconds (i.e. between 58 and 60 seconds after the start of CAC when evaluating a 60-second CAC) of the channel availability check.

UNIFORM LOADING

Compliance with the FCC's channel loading requirement is demonstrated through the manufacturer's operational description for the device under test.

TRANSMIT POWER CONTROL (TPC)

Compliance with the transmit power control requirements for devices is demonstrated through measurements showing multiple power levels and manufacturer statements explaining how the power control is implemented.

SAMPLE CALCULATIONS

DETECTION PROBABILITY / SUCCESS RATE

The detection probability, or success rate, for any one radar waveform equals the number of successful trials divided by the total number of trials for that waveform.

In the case of the FCC requirements, for radar waveform types 1 through 4 an additional calculation is made to determine the average detection probability over all four radar waveform types. This calculation is the arithmetic mean of the four individual probabilities.

THRESHOLD LEVEL

The threshold level is the level of the simulated radar waveform at the EUT's antenna. If the test is performed in a conducted fashion then the level at the rf input equals the level at the antenna plus the gain of the antenna assembly, in dBi. The gain of the antenna assembly equals the gain of the antenna minus the loss of the cabling between the rf input and the antenna. The lowest gain value for all antenna assemblies intended for use with the device is used when making this calculation.

If the test is performed using the radiated method then the threshold level is the level at the antenna.

Appendix A Test Equipment Calibration Data

Manufacturer	Description	Model #	Asset #	Cal Due
Hewlett Packard	EMC Spectrum Analyzer, 9 kHz - 6.5 GHz	8595EM	780	7-Mar-14
Agilent Technologies	PSG Vector Signal Generator (250kHz - 20GHz)	E8267C	1877	05-Jun-14
Tektronix	500MHz, 2CH, 5GS/s Scope	TDS5052B	2118	22-Oct-13
EMCO	Antenna, Horn, 1-18 GHz	3115	786	19-Dec-13
EMCO	Antenna, Horn, 1-18 GHz	3117	1662	25-May-14

Appendix B Test Data Tables for Radar Detection Probability

Table 6 - Detection Bandwidth Measurements (Bandwidth: +17MHz /-17MHz)					
EUT Frequency	Radar Type	Radar Frequency	# Detected	# Not Detected	Success (%)
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5532.00 MHz	1	3	25
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5533.00 MHz	9	1	90
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5534.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5535.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5536.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5537.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5538.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5539.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5540.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5541.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5542.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5543.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5544.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5545.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5546.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5547.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5548.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5549.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5550.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5551.00 MHz	9	1	90
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5552.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5553.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5554.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5555.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5556.00 MHz	10	0	100

Table 6 - Detection Bandwidth Measurements (Bandwidth: +17MHz /-17MHz)					
EUT Frequency	Radar Type	Radar Frequency	# Detected	# Not Detected	Success (%)
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5557.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5558.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5559.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5560.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5561.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5562.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5563.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5564.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5565.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5566.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5567.00 MHz	9	1	90
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5568.00 MHz	0	3	0

Table 7 - Summary of All Results -Conducted				
Waveform Name	Pd (%)	Pd Required (%)	Number of Trials	Status
FCC Short Pulse Radar (Type 1)	93.3 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 2)	100.0 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 3)	96.7 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 4)	93.3 %	60.0 %	30	PASSED
Aggregate of above results	95.8 %	80.0 %	120	PASSED
Long Sequence	100.0 %	80.0 %	30	PASSED
FCC frequency hopping radar (Type 6)	100.0 %	70.0 %	33	PASSED

Table 8 - FCC Short Pulse Radar (Type 1) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	18	1.0	1428.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:05:46 PM)
2	18	1.0	1428.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:07:42 PM)
3	18	1.0	1428.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 01:11:21 PM)
4	18	1.0	1428.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 01:12:50 PM)
5	18	1.0	1428.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 01:14:11 PM)
6	18	1.0	1428.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:16:11 PM)

Table 8 - FCC Short Pulse Radar (Type 1) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
7	18	1.0	1428.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:18:29 PM)
8	18	1.0	1428.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 01:19:34 PM)
9	18	1.0	1428.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 01:21:10 PM)
10	18	1.0	1428.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 01:22:19 PM)
11	18	1.0	1428.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:23:51 PM)
12	18	1.0	1428.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:25:37 PM)
13	18	1.0	1428.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 01:27:14 PM)
14	18	1.0	1428.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 01:28:30 PM)
15	18	1.0	1428.0	No	5555.0MHz, -64.0dBm	Single burst (10/14/2013 01:29:58 PM)
16	18	1.0	1428.0	No	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:31:33 PM)
17	18	1.0	1428.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:31:55 PM)
18	18	1.0	1428.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 01:34:12 PM)
19	18	1.0	1428.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 01:36:04 PM)
20	18	1.0	1428.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 01:37:51 PM)
21	18	1.0	1428.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:39:21 PM)
22	18	1.0	1428.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:40:56 PM)
23	18	1.0	1428.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 01:42:44 PM)
24	18	1.0	1428.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 01:44:10 PM)
25	18	1.0	1428.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 01:45:38 PM)
26	18	1.0	1428.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:47:02 PM)
27	18	1.0	1428.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:48:23 PM)
28	18	1.0	1428.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 01:49:39 PM)
29	18	1.0	1428.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 01:51:13 PM)
30	18	1.0	1428.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 01:53:36 PM)

Table 9 - FCC Short Pulse Radar (Type 2) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	28	3.2	180.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 01:56:15 PM)
2	24	2.9	221.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 01:58:23 PM)
3	25	2.1	165.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:00:23 PM)
4	27	4.5	194.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:02:19 PM)
5	23	2.9	224.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 02:03:49 PM)
6	27	1.6	187.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 02:05:14 PM)
7	26	1.1	181.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 02:07:04 PM)
8	25	3.3	166.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:08:44 PM)
9	28	3.3	169.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:10:32 PM)
10	26	2.3	166.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 02:11:56 PM)
11	28	4.7	177.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 02:13:24 PM)
12	26	3.3	174.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 02:15:02 PM)
13	27	1.4	163.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:16:38 PM)
14	25	4.7	212.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:18:07 PM)
15	28	1.6	220.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 02:19:43 PM)
16	29	2.3	154.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 02:21:54 PM)
17	23	4.4	209.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 02:23:22 PM)
18	27	4.4	157.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:25:17 PM)
19	24	4.6	213.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:26:39 PM)
20	26	1.8	165.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 02:33:16 PM)
21	29	4.1	177.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 02:35:44 PM)
22	27	1.5	167.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 02:38:11 PM)
23	26	2.8	208.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:39:30 PM)
24	27	4.8	197.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:41:36 PM)
25	29	1.8	196.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 02:42:53 PM)
26	26	2.6	205.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 02:44:21 PM)

Table 9 - FCC Short Pulse Radar (Type 2) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
27	29	5.0	175.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 02:45:47 PM)
28	25	2.5	199.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:47:17 PM)
29	26	2.8	197.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:48:32 PM)
30	28	1.0	169.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 02:50:15 PM)

Table 10 - FCC Short Pulse Radar (Type 3) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	16	7.4	331.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 02:51:40 PM)
2	17	7.0	203.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 02:55:37 PM)
3	17	7.0	331.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 02:57:02 PM)
4	17	9.9	411.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 02:58:29 PM)
5	17	9.1	476.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:00:04 PM)
6	17	7.1	223.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:01:47 PM)
7	18	9.8	424.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:03:16 PM)
8	18	8.3	206.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:05:21 PM)
9	16	8.1	498.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:06:52 PM)
10	18	9.7	209.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:08:13 PM)
11	18	8.5	394.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:09:32 PM)
12	18	8.5	466.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:10:57 PM)
13	17	6.4	315.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:12:48 PM)
14	17	6.1	280.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:14:04 PM)
15	17	8.1	409.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:15:31 PM)
16	16	8.3	476.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:17:09 PM)
17	17	7.0	458.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:18:51 PM)
18	16	6.1	253.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:20:07 PM)
19	16	9.9	333.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:21:49 PM)
20	16	7.3	432.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:24:11 PM)

Table 10 - FCC Short Pulse Radar (Type 3) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
21	18	7.9	320.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:25:28 PM)
22	17	9.0	333.0	No	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:26:38 PM)
23	17	9.5	293.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:27:07 PM)
24	17	6.2	421.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:29:19 PM)
25	18	6.2	333.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:31:07 PM)
26	16	8.4	207.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:32:22 PM)
27	18	9.4	246.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:34:52 PM)
28	17	8.0	384.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:36:36 PM)
29	18	9.8	358.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:37:41 PM)
30	17	7.1	338.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:39:05 PM)

Table 11 - FCC Short Pulse Radar (Type 4) Results -Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	13	16.0	465.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:40:28 PM)
2	12	16.3	476.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:43:09 PM)
3	15	19.5	424.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:45:21 PM)
4	13	16.4	392.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:46:54 PM)
5	13	15.7	316.0	No	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:48:25 PM)
6	14	14.7	322.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:48:45 PM)
7	15	11.1	277.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:51:24 PM)
8	16	14.5	369.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 03:53:20 PM)
9	16	17.8	499.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 03:54:56 PM)
10	13	17.9	369.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 03:56:05 PM)
11	13	14.1	237.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 03:57:32 PM)
12	16	18.7	412.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 03:59:04 PM)
13	15	11.5	269.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 04:00:51 PM)
14	14	16.2	493.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 04:02:27 PM)

Table 11 - FCC Short Pulse Radar (Type 4) Results -Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
15	13	13.2	246.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 04:04:04 PM)
16	13	18.8	297.0	No	5550.0MHz, -64.0dBm	Single burst (10/14/2013 04:05:50 PM)
17	14	17.9	422.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 04:06:15 PM)
18	14	15.7	254.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 04:07:58 PM)
19	14	17.7	313.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 04:10:14 PM)
20	14	14.3	443.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 04:11:42 PM)
21	13	12.9	206.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 04:13:51 PM)
22	13	18.3	335.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 04:15:23 PM)
23	14	16.2	352.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 04:17:25 PM)
24	13	16.5	343.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 04:18:36 PM)
25	12	18.5	446.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 04:19:54 PM)
26	15	12.7	278.0	Yes	5550.0MHz, -64.0dBm	Single burst (10/14/2013 04:21:32 PM)
27	13	17.6	304.0	Yes	5545.0MHz, -64.0dBm	Single burst (10/14/2013 04:22:55 PM)
28	15	15.6	390.0	Yes	5540.0MHz, -64.0dBm	Single burst (10/14/2013 04:24:19 PM)
29	15	19.2	488.0	Yes	5560.0MHz, -64.0dBm	Single burst (10/14/2013 04:26:46 PM)
30	15	13.3	339.0	Yes	5555.0MHz, -64.0dBm	Single burst (10/14/2013 04:28:20 PM)

Table 12 - Long Sequence Waveform Summary - Conducted		
Long Sequence Trial	Result	Radar Frequency / Amplitude
Trial #1	Detected	5550.0MHz, -64.0dBm
Trial #2	Detected	5545.0MHz, -64.0dBm
Trial #3	Detected	5540.0MHz, -64.0dBm
Trial #4	Detected	5560.0MHz, -64.0dBm
Trial #5	Detected	5555.0MHz, -64.0dBm
Trial #6	Detected	5550.0MHz, -64.0dBm
Trial #7	Detected	5545.0MHz, -64.0dBm
Trial #8	Detected	5540.0MHz, -64.0dBm
Trial #9	Detected	5560.0MHz, -64.0dBm

Table 12 - Long Sequence Waveform Summary - Conducted		
Long Sequence Trial	Result	Radar Frequency / Amplitude
Trial #10	Detected	5555.0MHz, -64.0dBm
Trial #11	Detected	5550.0MHz, -64.0dBm
Trial #12	Detected	5545.0MHz, -64.0dBm
Trial #13	Detected	5540.0MHz, -64.0dBm
Trial #14	Detected	5560.0MHz, -64.0dBm
Trial #15	Detected	5555.0MHz, -64.0dBm
Trial #16	Detected	5550.0MHz, -64.0dBm
Trial #17	Detected	5545.0MHz, -64.0dBm
Trial #18	Detected	5540.0MHz, -64.0dBm
Trial #19	Detected	5560.0MHz, -64.0dBm
Trial #20	Detected	5555.0MHz, -64.0dBm
Trial #21	Detected	5550.0MHz, -64.0dBm
Trial #22	Detected	5545.0MHz, -64.0dBm
Trial #23	Detected	5540.0MHz, -64.0dBm
Trial #24	Detected	5560.0MHz, -64.0dBm
Trial #25	Detected	5555.0MHz, -64.0dBm
Trial #26	Detected	5550.0MHz, -64.0dBm
Trial #27	Detected	5545.0MHz, -64.0dBm
Trial #28	Detected	5540.0MHz, -64.0dBm
Trial #29	Detected	5560.0MHz, -64.0dBm
Trial #30	Detected	5555.0MHz, -64.0dBm

Table 13 - Long Sequence Waveform Trial#1 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	81.7	8	1012.0	-	0.665056
2	2	86.0	18	1750.0	-	1.147540
3	2	94.1	6	1774.0	-	2.512827
4	1	70.8	6	-	-	3.401494
5	1	94.1	17	-	-	4.248555
6	2	69.3	17	1481.0	-	4.702924
7	1	98.1	12	-	-	6.189439

Table 13 - Long Sequence Waveform Trial#1 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
8	2	87.1	12	1530.0	-	6.767326
9	2	54.2	16	1820.0	-	8.184220
10	2	98.4	9	1554.0	-	9.123418
11	1	100.0	15	-	-	9.291649
12	2	55.3	20	1828.0	-	10.594505
13	2	86.4	18	1920.0	-	11.899412

Table 14 - Long Sequence Waveform Trial#2 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	79.6	15	1771.0	-	0.188815
2	2	85.1	17	1322.0	-	2.509553
3	2	62.0	7	1943.0	-	4.444651
4	1	72.6	18	-	-	5.427215
5	1	67.4	13	-	-	6.526023
6	2	72.0	13	1920.0	-	7.536714
7	2	94.7	11	1815.0	-	9.379483
8	2	91.8	11	1125.0	-	10.952643

Table 15 - Long Sequence Waveform Trial#3 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	60.5	7	-	-	0.137629
2	3	73.6	14	1709.0	1911.0	1.193190
3	1	68.3	9	-	-	2.783489
4	3	85.0	7	1920.0	1059.0	3.903559
5	1	84.4	13	-	-	4.882948
6	2	92.0	7	1267.0	-	5.636972
7	1	82.5	17	-	-	6.192495
8	2	73.3	20	1090.0	-	7.417412
9	2	80.5	12	1781.0	-	8.396851
10	3	66.2	13	1694.0	1629.0	9.359600
11	3	56.6	20	1352.0	1618.0	10.419050
12	3	98.2	9	1390.0	1285.0	11.777101

Table 16 - Long Sequence Waveform Trial#4 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	95.8	13	1168.0	-	0.460798
2	2	62.2	9	1235.0	-	1.214580
3	2	57.5	17	1644.0	-	1.842711
4	2	87.9	16	1962.0	-	2.784608
5	3	72.0	7	1494.0	1746.0	3.342350
6	2	81.6	17	1380.0	-	4.034121
7	2	65.2	13	1223.0	-	4.466151
8	1	82.9	14	-	-	5.083265
9	2	71.1	9	1637.0	-	5.955999
10	2	58.3	20	1025.0	-	6.480403
11	2	58.3	8	1966.0	-	7.679036

Table 16 - Long Sequence Waveform Trial#4 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
12	1	59.5	16	-	-	7.828742
13	3	86.9	20	1046.0	1584.0	9.035405
14	2	76.2	8	1708.0	-	9.837909
15	3	78.5	10	1762.0	1736.0	10.406630
16	2	69.1	10	1365.0	-	10.743678
17	2	59.9	13	1130.0	-	11.420555

Table 17 - Long Sequence Waveform Trial#5 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	80.5	15	-	-	0.524096
2	3	80.6	16	1306.0	1823.0	0.839612
3	2	75.0	9	1118.0	-	1.785264
4	1	76.9	19	-	-	2.392655
5	3	90.8	8	1945.0	1853.0	2.681119
6	2	54.4	6	1558.0	-	3.158295
7	3	63.3	8	1650.0	1111.0	4.194155
8	3	71.0	19	1081.0	1734.0	4.521730
9	1	84.1	10	-	-	5.432703
10	1	70.8	16	-	-	5.898908
11	1	51.1	11	-	-	6.319651
12	2	99.2	5	1424.0	-	7.313757
13	1	90.1	5	-	-	8.023907
14	1	98.6	17	-	-	8.484923
15	2	57.1	13	1684.0	-	8.922760
16	1	57.0	18	-	-	9.920292
17	1	79.8	9	-	-	10.620460
18	3	60.6	19	1396.0	1239.0	10.857682
19	2	55.3	14	1239.0	-	11.432472

Table 18 - Long Sequence Waveform Trial#6 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	75.9	9	1786.0	1146.0	0.393702
2	2	86.9	10	1779.0	-	0.683786
3	2	76.3	5	1077.0	-	1.266528
4	1	51.6	11	-	-	2.152805
5	1	75.0	8	-	-	3.035201
6	2	73.4	19	1472.0	-	3.518175
7	1	74.9	6	-	-	4.020135
8	3	56.9	6	1139.0	1404.0	4.820889
9	2	58.8	13	1959.0	-	5.540816
10	3	87.3	13	1743.0	1251.0	6.255172
11	3	94.6	16	1259.0	1068.0	6.375802
12	2	72.1	18	1989.0	-	7.296963
13	3	60.1	9	1164.0	1942.0	8.101412
14	2	87.3	19	1573.0	-	8.463259
15	2	80.9	10	1565.0	-	9.194640
16	3	95.9	17	1528.0	1615.0	9.942983
17	3	50.4	13	1833.0	1539.0	10.685461

Table 18 - Long Sequence Waveform Trial#6 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
18	3	87.1	8	1107.0	1727.0	11.258169
19	2	63.2	20	1719.0	-	11.872140

Table 19 - Long Sequence Waveform Trial#7 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	75.5	18	1374.0	-	0.525112
2	2	73.0	14	1610.0	-	1.783876
3	3	89.8	11	1761.0	1429.0	2.357196
4	2	59.1	14	1705.0	-	4.099014
5	2	83.6	13	1149.0	-	4.638954
6	3	58.2	8	1487.0	1732.0	5.877175
7	1	59.6	10	-	-	7.221113
8	2	77.2	10	1995.0	-	8.141084
9	3	72.4	14	1203.0	1006.0	9.341145
10	1	50.3	19	-	-	10.840637
11	2	71.4	18	1073.0	-	11.515206

Table 20 - Long Sequence Waveform Trial#8 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	51.8	17	1569.0	-	0.129073
2	1	80.0	9	-	-	1.132144
3	2	96.7	7	1604.0	-	2.638521
4	2	61.9	20	1881.0	-	3.266793
5	3	97.6	14	1660.0	1588.0	4.375497
6	2	68.6	11	1353.0	-	5.436389
7	1	57.8	15	-	-	5.724498
8	2	71.0	18	1003.0	-	6.602973
9	1	63.3	11	-	-	7.950061
10	2	76.0	8	1723.0	-	8.584706
11	3	54.1	15	1568.0	1777.0	9.568612
12	3	66.7	13	1795.0	1221.0	10.191793
13	3	75.9	5	1920.0	1642.0	11.612774

Table 21 - Long Sequence Waveform Trial#9 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	51.7	17	1695.0	1611.0	0.062495
2	3	71.1	9	1722.0	1412.0	1.203175
3	1	90.3	8	-	-	2.913666
4	1	71.6	11	-	-	3.297022
5	3	94.3	17	1436.0	1736.0	4.345095
6	2	73.5	16	1930.0	-	5.622158
7	2	52.2	8	1255.0	-	6.997306
8	3	66.1	12	1484.0	1211.0	7.200042
9	1	88.0	19	-	-	8.630371
10	2	52.4	7	1146.0	-	9.623398
11	2	95.0	9	1832.0	-	10.652943

Table 21 - Long Sequence Waveform Trial#9 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
12	2	99.6	15	1819.0	-	11.870169

Table 22 - Long Sequence Waveform Trial#10 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	65.7	10	1072.0	-	1.260664
2	3	69.5	19	1911.0	1026.0	2.107546
3	2	82.1	12	1148.0	-	3.389325
4	1	58.9	11	-	-	4.149541
5	3	88.8	10	1358.0	1941.0	6.191249
6	2	78.4	19	1392.0	-	7.251386
7	1	56.2	7	-	-	8.882073
8	2	99.7	18	1238.0	-	10.634654
9	2	96.6	6	1506.0	-	11.216471

Table 23 - Long Sequence Waveform Trial#11 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	91.3	18	1871.0	-	0.871664
2	3	61.7	8	1035.0	1992.0	1.058895
3	1	65.3	18	-	-	1.854971
4	2	59.2	15	1450.0	-	3.426644
5	2	81.5	9	1011.0	-	4.254106
6	2	97.9	12	1515.0	-	5.409793
7	3	95.6	14	1078.0	1326.0	6.152077
8	1	80.0	17	-	-	7.337515
9	3	79.9	6	1582.0	1863.0	7.709840
10	3	94.5	7	1756.0	1242.0	8.700566
11	3	83.1	6	1351.0	1068.0	9.347948
12	2	53.5	18	1480.0	-	10.924382
13	2	60.0	8	1157.0	-	11.884225

Table 24 - Long Sequence Waveform Trial#12 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	60.9	16	1100.0	-	0.764297
2	3	70.3	11	1927.0	1890.0	1.246101
3	2	91.0	19	1025.0	-	2.945226
4	2	57.4	7	1476.0	-	3.503371
5	3	71.6	7	1224.0	1704.0	4.600711
6	3	73.6	6	1957.0	1518.0	5.087728
7	3	70.6	10	1511.0	1260.0	6.576308
8	2	55.6	9	1544.0	-	7.139690
9	2	73.5	6	1563.0	-	8.225269
10	3	75.1	16	1747.0	1124.0	9.945714
11	2	83.3	17	1188.0	-	10.610779
12	2	80.8	18	1223.0	-	11.213686

Table 25 - Long Sequence Waveform Trial#13 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	70.9	18	-	-	0.247481
2	3	69.4	11	1420.0	1207.0	1.099669
3	1	71.0	17	-	-	1.755942
4	1	70.0	16	-	-	2.115448
5	1	77.1	18	-	-	2.885061
6	3	63.1	6	1423.0	1422.0	3.175081
7	3	93.9	17	1161.0	1906.0	3.786286
8	1	99.4	16	-	-	4.692046
9	2	79.0	15	1242.0	-	5.243783
10	2	59.4	9	1190.0	-	5.698139
11	1	52.2	6	-	-	6.143062
12	2	96.1	15	1273.0	-	6.660304
13	1	55.8	15	-	-	7.796893
14	2	69.9	18	1969.0	-	8.002426
15	1	78.4	5	-	-	8.728181
16	2	56.7	15	1411.0	-	9.107016
17	3	97.8	19	1469.0	1525.0	9.816256
18	1	73.2	14	-	-	10.460056
19	2	63.7	15	1410.0	-	10.921413
20	1	96.3	17	-	-	11.609104

Table 26 - Long Sequence Waveform Trial#14 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	83.5	12	-	-	0.581642
2	2	77.0	14	1218.0	-	1.315685
3	2	64.0	15	1981.0	-	1.582824
4	1	57.2	15	-	-	2.026597
5	3	77.5	12	1976.0	1982.0	3.251323
6	1	56.3	6	-	-	3.663352
7	3	57.5	18	1432.0	1858.0	4.088724
8	3	96.2	20	1727.0	1561.0	5.293453
9	2	51.6	7	1281.0	-	5.577779
10	1	97.1	10	-	-	6.072022
11	2	67.0	6	1995.0	-	6.726083
12	3	77.6	13	1977.0	1647.0	7.680996
13	1	57.0	15	-	-	8.552393
14	2	78.7	9	1820.0	-	8.676070
15	3	63.3	10	1662.0	1243.0	9.537006
16	2	84.0	19	1657.0	-	10.065643
17	3	98.8	9	1899.0	1298.0	10.880349
18	2	51.2	9	1584.0	-	11.537942

Table 27 - Long Sequence Waveform Trial#15 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	94.3	9	1273.0	-	0.641946
2	2	92.0	14	1617.0	-	1.239992
3	3	79.5	8	1563.0	1853.0	1.535180
4	2	55.1	7	1231.0	-	2.295151

Table 27 - Long Sequence Waveform Trial#15 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
5	3	70.8	12	1326.0	1831.0	2.683962
6	3	55.5	9	1599.0	1604.0	3.808129
7	2	50.1	11	1531.0	-	4.396385
8	2	63.5	10	1699.0	-	5.296855
9	2	89.6	13	1029.0	-	5.841139
10	2	73.2	13	1364.0	-	6.630610
11	2	52.7	18	1661.0	-	7.162333
12	1	60.3	6	-	-	7.704120
13	3	55.0	6	1050.0	1720.0	8.170264
14	2	70.5	16	1901.0	-	9.085724
15	3	83.3	15	1270.0	1458.0	9.806400
16	3	95.7	14	1304.0	1254.0	10.186941
17	2	71.1	6	1086.0	-	11.152603
18	2	91.8	13	1610.0	-	11.437095

Table 28 - Long Sequence Waveform Trial#16 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	75.7	18	1037.0	-	0.303901
2	2	57.4	10	1667.0	-	0.888969
3	3	83.3	5	1648.0	1022.0	2.336856
4	2	93.0	15	1040.0	-	2.638333
5	3	85.0	10	1818.0	1952.0	3.465576
6	2	59.0	18	1317.0	-	4.682585
7	1	84.4	10	-	-	5.134108
8	3	65.9	18	1760.0	1949.0	5.761103
9	1	73.8	11	-	-	6.481674
10	1	63.0	19	-	-	7.854297
11	2	85.7	6	1627.0	-	8.394895
12	2	55.0	7	1817.0	-	8.896807
13	2	86.6	9	1856.0	-	9.931963
14	1	52.5	16	-	-	11.181894
15	3	57.6	13	1366.0	1451.0	11.420576

Table 29 - Long Sequence Waveform Trial#17 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	87.3	13	1751.0	-	0.434782
2	2	64.0	10	1947.0	-	0.902739
3	1	50.3	7	-	-	1.379675
4	2	62.6	20	1778.0	-	2.384924
5	2	77.4	17	1319.0	-	2.700467
6	3	63.2	12	1659.0	1248.0	3.967591
7	3	62.8	17	1742.0	1573.0	4.318485
8	1	89.7	7	-	-	5.309458
9	3	75.1	11	1375.0	1611.0	5.611088
10	1	78.5	15	-	-	6.182711
11	2	74.2	11	1922.0	-	6.741002
12	2	89.8	8	1501.0	-	7.804501
13	2	75.5	11	1736.0	-	8.494298

Table 29 - Long Sequence Waveform Trial#17 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
14	3	53.8	5	1470.0	1470.0	8.671370
15	1	71.9	15	-	-	9.424922
16	3	71.8	13	1542.0	1980.0	10.438921
17	2	69.8	16	1375.0	-	10.837768
18	2	93.9	9	1984.0	-	11.620660

Table 30 - Long Sequence Waveform Trial#18 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	55.6	7	1234.0	-	0.237103
2	1	67.8	14	-	-	1.977380
3	2	79.8	11	1097.0	-	3.240802
4	3	97.9	14	1000.0	1216.0	4.124301
5	2	87.4	18	1885.0	-	5.405406
6	1	67.1	5	-	-	5.487312
7	1	67.1	9	-	-	7.108165
8	3	83.4	8	1413.0	1129.0	8.038229
9	3	62.0	11	1697.0	1426.0	8.965427
10	2	87.7	6	1976.0	-	10.716572
11	2	93.0	13	1055.0	-	11.635339

Table 31 - Long Sequence Waveform Trial#19 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	92.6	17	1555.0	1658.0	0.209902
2	2	61.6	9	1167.0	-	1.191932
3	3	84.7	6	1553.0	1311.0	1.760739
4	1	96.2	15	-	-	2.577071
5	2	83.9	6	1563.0	-	4.085401
6	3	58.1	9	1046.0	1564.0	4.568528
7	2	76.2	13	1584.0	-	5.429626
8	3	94.2	13	1291.0	1561.0	6.240946
9	2	59.0	19	1315.0	-	6.923333
10	1	67.1	16	-	-	8.152759
11	1	65.9	17	-	-	9.349358
12	2	72.2	7	1295.0	-	9.481428
13	2	65.3	9	1613.0	-	10.484294
14	1	82.7	12	-	-	11.158807

Table 32 - Long Sequence Waveform Trial#20 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	83.0	8	1511.0	1152.0	0.527863
2	1	80.3	16	-	-	1.101027
3	2	77.4	10	1498.0	-	1.708864
4	3	61.4	19	1480.0	1812.0	2.267962
5	1	66.8	13	-	-	3.326750
6	2	66.5	7	1499.0	-	4.340468
7	2	93.5	11	1084.0	-	4.668492

Table 32 - Long Sequence Waveform Trial#20 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
8	3	69.0	18	1983.0	1202.0	5.980607
9	1	74.9	11	-	-	6.153000
10	2	85.6	10	1254.0	-	6.880231
11	1	60.1	6	-	-	8.159265
12	3	89.7	17	1588.0	1377.0	8.284174
13	3	66.7	17	1421.0	1921.0	9.173339
14	2	76.7	14	1940.0	-	10.403925
15	1	73.8	18	-	-	10.574676
16	2	84.7	10	1993.0	-	11.793733

Table 33 - Long Sequence Waveform Trial#21 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	72.4	11	1428.0	-	1.046657
2	3	92.4	9	1967.0	1798.0	1.250039
3	2	63.9	13	1582.0	-	2.500615
4	1	69.6	8	-	-	3.872650
5	2	56.5	8	1858.0	-	5.854263
6	2	95.2	18	1341.0	-	7.061830
7	1	56.4	6	-	-	7.489857
8	2	59.3	8	1876.0	-	8.643884
9	2	58.2	8	1551.0	-	10.081816
10	1	69.0	15	-	-	11.071005

Table 34 - Long Sequence Waveform Trial#22 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	52.6	11	1217.0	1620.0	0.196129
2	3	55.8	17	1026.0	1543.0	1.590376
3	2	97.3	8	1350.0	-	1.997229
4	3	75.6	16	1399.0	1147.0	2.741476
5	3	91.1	7	1779.0	1798.0	3.431985
6	1	71.7	20	-	-	5.074093
7	3	76.1	6	1658.0	1027.0	5.810017
8	1	98.0	13	-	-	6.799037
9	2	80.9	9	1815.0	-	7.568085
10	2	81.3	12	1636.0	-	8.437255
11	2	88.5	19	1033.0	-	9.066893
12	3	54.6	19	1681.0	1648.0	10.199253
13	2	59.3	10	1218.0	-	11.022318
14	3	81.2	15	1580.0	1447.0	11.710765

Table 35 - Long Sequence Waveform Trial#23 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	52.3	19	1927.0	-	0.020988
2	2	62.0	6	1132.0	-	1.473708
3	3	57.8	8	1621.0	1815.0	1.790561
4	2	67.2	15	1921.0	-	2.270274

Table 35 - Long Sequence Waveform Trial#23 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
5	2	84.0	13	1937.0	-	3.571224
6	2	66.1	9	1483.0	-	4.380218
7	3	89.5	10	1326.0	1525.0	4.802646
8	3	96.1	18	1636.0	1069.0	5.607347
9	3	56.7	17	1190.0	1450.0	6.528524
10	3	96.3	7	1450.0	1021.0	7.285512
11	1	50.1	17	-	-	7.951772
12	1	97.1	7	-	-	8.674009
13	2	72.6	10	1544.0	-	9.699776
14	1	83.2	16	-	-	9.973167
15	3	60.3	15	1403.0	1241.0	10.709490
16	1	52.5	16	-	-	11.315132

Table 36 - Long Sequence Waveform Trial#24 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	93.2	9	1694.0	1899.0	0.274934
2	1	74.5	5	-	-	1.048561
3	3	88.6	14	1768.0	1154.0	1.743876
4	2	60.0	14	1937.0	-	2.788920
5	2	59.9	16	1962.0	-	3.820407
6	2	82.6	11	1284.0	-	4.740915
7	2	72.3	15	1264.0	-	5.068788
8	2	69.5	9	1891.0	-	5.607140
9	2	85.0	6	1727.0	-	7.157284
10	3	98.5	10	1111.0	1693.0	7.368479
11	2	94.0	12	1222.0	-	8.435590
12	1	74.4	10	-	-	8.930984
13	1	53.9	8	-	-	10.193887
14	3	74.4	15	1406.0	1073.0	11.046480
15	1	84.0	10	-	-	11.553625

Table 37 - Long Sequence Waveform Trial#25 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	60.4	7	1314.0	-	0.611235
2	2	67.0	12	1961.0	-	0.869469
3	2	70.1	13	1914.0	-	2.309627
4	1	93.5	15	-	-	2.641032
5	2	76.8	12	1693.0	-	3.290819
6	2	70.6	11	1492.0	-	4.261177
7	2	70.9	10	1343.0	-	5.359882
8	2	52.3	19	1248.0	-	5.793351
9	1	86.5	13	-	-	6.886778
10	3	63.3	18	1300.0	1201.0	7.655765
11	2	57.2	9	1848.0	-	8.540637
12	3	83.1	6	1766.0	1357.0	9.443783
13	1	53.6	8	-	-	10.392742
14	2	91.5	10	1708.0	-	10.688818
15	2	77.1	7	1717.0	-	11.481147

Table 38 - Long Sequence Waveform Trial#26 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	92.3	12	1343.0	-	0.171416
2	3	93.7	17	1592.0	1604.0	1.740871
3	1	75.8	7	-	-	2.706395
4	3	80.7	12	1387.0	1707.0	2.967613
5	2	97.1	16	1138.0	-	4.199952
6	2	54.1	9	1738.0	-	5.046226
7	2	85.2	17	1717.0	-	6.238374
8	1	80.9	10	-	-	7.003776
9	2	99.6	9	1940.0	-	8.295192
10	1	78.7	13	-	-	8.630559
11	2	75.3	16	1747.0	-	9.417411
12	3	83.4	18	1133.0	1207.0	10.805830
13	1	76.1	10	-	-	11.462687

Table 39 - Long Sequence Waveform Trial#27 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	62.2	10	-	-	1.180375
2	1	78.3	18	-	-	2.129774
3	2	54.3	14	1197.0	-	3.404059
4	2	88.6	20	1584.0	-	4.197038
5	1	88.4	19	-	-	5.943918
6	1	65.9	5	-	-	7.343830
7	2	71.7	13	1706.0	-	9.260802
8	2	70.8	12	1088.0	-	9.606097
9	2	90.8	12	1590.0	-	11.492996

Table 40 - Long Sequence Waveform Trial#28 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	94.2	6	-	-	0.649925
2	2	98.4	18	1470.0	-	0.835787
3	3	77.0	11	1714.0	1076.0	1.753584
4	2	59.3	6	1728.0	-	2.697385
5	2	72.0	10	1140.0	-	2.888529
6	2	79.8	18	1827.0	-	3.572308
7	3	77.3	6	1140.0	1423.0	4.606568
8	2	89.3	19	1487.0	-	5.533095
9	1	68.6	14	-	-	6.258447
10	3	52.7	7	1086.0	1524.0	6.999568
11	2	83.7	15	1730.0	-	7.540289
12	1	93.1	11	-	-	8.187184
13	2	89.9	17	1043.0	-	8.812966
14	2	63.0	15	1035.0	-	9.289113
15	1	56.7	12	-	-	10.298252
16	1	89.7	18	-	-	11.241569
17	2	81.1	19	1202.0	-	11.382081

Table 41 - Long Sequence Waveform Trial#29 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	53.3	14	1952.0	1060.0	0.202010
2	3	77.2	10	1694.0	1984.0	1.442164
3	3	57.6	9	1980.0	1013.0	2.058833
4	1	76.3	10	-	-	2.877698
5	1	72.0	15	-	-	3.580360
6	3	55.7	17	1073.0	1930.0	4.276701
7	2	76.2	6	1396.0	-	5.140175
8	2	58.9	20	1185.0	-	5.518471
9	1	94.3	16	-	-	6.383533
10	1	71.4	9	-	-	7.087930
11	1	98.1	19	-	-	7.678327
12	1	81.7	17	-	-	8.625185
13	1	61.5	15	-	-	9.379865
14	3	68.7	10	1681.0	1585.0	10.286347
15	1	60.5	14	-	-	11.221617
16	2	54.5	16	1613.0	-	11.978659

Table 42 - Long Sequence Waveform Trial#30 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	71.1	14	1938.0	-	0.241408
2	2	80.9	16	1886.0	-	0.625819
3	2	72.4	7	1660.0	-	1.497773
4	3	78.8	7	1139.0	1673.0	2.361654
5	2	66.5	20	1421.0	-	2.690689
6	2	60.4	10	1196.0	-	3.513718
7	1	85.5	13	-	-	3.998373
8	3	68.9	7	1540.0	1581.0	4.408661
9	2	55.2	7	1797.0	-	5.259872
10	2	82.2	7	1062.0	-	5.832508
11	2	81.2	17	1717.0	-	6.120964
12	1	96.0	13	-	-	6.943919
13	3	56.5	13	1323.0	1425.0	7.438756
14	2	66.2	9	1393.0	-	8.162303
15	1	62.7	15	-	-	8.697597
16	2	88.9	17	1182.0	-	9.425967
17	2	96.3	6	1960.0	-	9.887280
18	2	63.2	11	1634.0	-	10.722563
19	2	80.5	14	1472.0	-	10.840726
20	2	59.9	6	1201.0	-	11.805449

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	9	1.0	333.0	Yes	5565.0MHz, -64.0dBm	Hop sequence: 5397, 5725, 5578, 5470, 5679, 5388, 5561, 5420, 5531, 5279, 5603, 5308, 5401, 5650, 5564, 5431, 5631, 5493, 5554, 5490, 5270, 5685, 5265, 5476, 5469, 5618, 5421, 5545, 5250, 5524, 5563, 5305, 5271, 5443, 5404, 5426, 5529, 5526, 5509, 5612, 5523, 5661, 5498, 5342, 5705, 5439, 5276, 5362, 5684, 5348, 5686, 5588, 5263, 5356, 5287, 5678, 5648, 5434, 5546, 5514, 5292, 5502, 5655, 5415, 5432, 5413, 5344, 5528, 5665, 5674, 5336, 5376, 5423, 5435, 5405, 5424, 5577, 5427, 5580, 5286, 5572, 5448, 5699, 5394, 5330, 5718, 5641, 5459, 5477, 5649, 5402, 5701, 5711, 5609, 5360, 5284, 5373, 5575, 5624, 5324 (6 hits) (10/15/2013 08:53:57 AM)
2	9	1.0	333.0	Yes	5566.0MHz, -64.0dBm	Hop sequence: 5469, 5623, 5323, 5675, 5488, 5507, 5725, 5585, 5513, 5670, 5626, 5711, 5633, 5578, 5723, 5486, 5366, 5416, 5359, 5571, 5467, 5347, 5411, 5304, 5593, 5701, 5262, 5709, 5533, 5529, 5713, 5255, 5517, 5549, 5515, 5266, 5378, 5587, 5722, 5421, 5653, 5631, 5568, 5333, 5530, 5372, 5431, 5650, 5573, 5681, 5572, 5408, 5523, 5634, 5420, 5381, 5264, 5708, 5676, 5476, 5630, 5464, 5695, 5341, 5278, 5286, 5446, 5267, 5298, 5632, 5687, 5516, 5422, 5401, 5460, 5673, 5330, 5449, 5342, 5570, 5614, 5481, 5616, 5280, 5625, 5335, 5603, 5459, 5303, 5332, 5526, 5638, 5576, 5518, 5615, 5491, 5718, 5566, 5496, 5698 (2 hits) (10/15/2013 08:56:19 AM)
3	9	1.0	333.0	Yes	5534.0MHz, -64.0dBm	Hop sequence: 5473, 5681, 5713, 5637, 5666, 5372, 5724, 5388, 5260, 5575, 5369, 5291, 5627, 5251, 5472, 5406, 5281, 5488, 5536, 5448, 5718, 5549, 5631, 5682, 5397, 5485, 5568, 5423, 5669, 5623, 5667, 5599, 5491, 5562, 5691, 5407, 5546, 5644, 5609, 5709, 5528, 5432, 5619, 5519, 5492, 5292, 5542, 5658,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5700, 5329, 5280, 5611, 5382, 5294, 5333, 5535, 5545, 5481, 5583, 5530, 5403, 5571, 5588, 5659, 5693, 5464, 5639, 5479, 5635, 5391, 5331, 5555, 5348, 5315, 5521, 5307, 5332, 5471, 5552, 5275, 5616, 5676, 5525, 5285, 5367, 5495, 5399, 5262, 5330, 5304, 5531, 5387, 5577, 5596, 5638, 5259, 5322, 5335, 5688, 5268 (9 hits) (10/15/2013 08:58:02 AM)
4	9	1.0	333.0	Yes	5535.0MHz, -64.0dBm	Hop sequence: 5312, 5271, 5327, 5434, 5512, 5661, 5309, 5455, 5714, 5498, 5513, 5486, 5604, 5649, 5330, 5335, 5703, 5263, 5251, 5524, 5285, 5390, 5694, 5605, 5490, 5723, 5519, 5583, 5648, 5470, 5603, 5365, 5689, 5424, 5491, 5511, 5325, 5548, 5492, 5563, 5487, 5724, 5663, 5482, 5704, 5475, 5468, 5725, 5259, 5364, 5270, 5371, 5302, 5278, 5360, 5288, 5331, 5631, 5431, 5565, 5276, 5345, 5676, 5718, 5562, 5267, 5316, 5272, 5458, 5634, 5544, 5556, 5279, 5584, 5626, 5442, 5683, 5303, 5265, 5581, 5529, 5640, 5706, 5633, 5445, 5292, 5264, 5632, 5392, 5411, 5357, 5405, 5477, 5621, 5476, 5577, 5358, 5310, 5298, 5590 (6 hits) (10/15/2013 09:00:30 AM)
5	9	1.0	333.0	Yes	5536.0MHz, -64.0dBm	Hop sequence: 5425, 5622, 5305, 5672, 5397, 5471, 5275, 5553, 5604, 5343, 5467, 5502, 5485, 5273, 5396, 5312, 5516, 5325, 5678, 5418, 5430, 5387, 5386, 5317, 5345, 5464, 5593, 5725, 5638, 5493, 5279, 5700, 5415, 5658, 5662, 5635, 5642, 5576, 5315, 5310, 5289, 5530, 5684, 5413, 5423, 5657, 5269, 5538, 5435, 5482, 5346, 5547, 5692, 5609, 5690, 5652, 5570, 5372, 5468, 5567, 5589, 5472, 5696, 5523, 5549, 5533, 5278, 5636, 5355, 5608, 5358, 5295, 5254, 5431, 5477, 5353, 5706, 5266, 5330, 5577, 5627, 5339, 5610, 5512, 5347, 5324, 5361, 5492, 5539, 5560, 5650, 5564, 5410, 5298, 5341, 5412, 5251, 5334, 5653, 5500 (7 hits) (10/15/2013

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						09:02:34 AM)
6	9	1.0	333.0	Yes	5537.0MHz, -64.0dBm	Hop sequence: 5419, 5501, 5256, 5723, 5539, 5585, 5685, 5510, 5464, 5626, 5578, 5410, 5608, 5601, 5325, 5674, 5698, 5429, 5551, 5565, 5310, 5725, 5531, 5406, 5461, 5298, 5439, 5586, 5571, 5252, 5323, 5593, 5603, 5291, 5322, 5706, 5582, 5438, 5499, 5320, 5711, 5332, 5529, 5452, 5678, 5428, 5382, 5456, 5474, 5396, 5485, 5306, 5359, 5394, 5317, 5484, 5681, 5338, 5282, 5254, 5321, 5383, 5609, 5686, 5581, 5496, 5668, 5554, 5372, 5354, 5693, 5445, 5537, 5473, 5604, 5400, 5663, 5311, 5468, 5629, 5307, 5517, 5351, 5475, 5521, 5349, 5405, 5489, 5326, 5327, 5460, 5370, 5411, 5300, 5375, 5258, 5285, 5516, 5611, 5344 (5 hits) (10/15/2013 09:04:37 AM)
7	9	1.0	333.0	Yes	5538.0MHz, -64.0dBm	Hop sequence: 5522, 5480, 5302, 5553, 5657, 5582, 5345, 5725, 5669, 5467, 5392, 5608, 5682, 5656, 5721, 5569, 5589, 5720, 5631, 5466, 5251, 5328, 5486, 5675, 5383, 5603, 5436, 5636, 5381, 5586, 5493, 5510, 5492, 5271, 5465, 5724, 5702, 5322, 5255, 5531, 5679, 5694, 5707, 5710, 5666, 5367, 5611, 5487, 5681, 5604, 5665, 5341, 5453, 5647, 5561, 5349, 5366, 5295, 5717, 5431, 5568, 5591, 5628, 5348, 5409, 5575, 5294, 5264, 5462, 5389, 5641, 5457, 5588, 5336, 5562, 5443, 5437, 5534, 5433, 5291, 5687, 5545, 5485, 5296, 5503, 5441, 5451, 5698, 5595, 5689, 5519, 5293, 5649, 5260, 5686, 5535, 5530, 5709, 5250, 5579 (6 hits) (10/15/2013 09:07:28 AM)
8	9	1.0	333.0	Yes	5539.0MHz, -64.0dBm	Hop sequence: 5330, 5392, 5332, 5430, 5570, 5393, 5676, 5632, 5534, 5581, 5597, 5583, 5406, 5376, 5359, 5311, 5360, 5390, 5346, 5695, 5347, 5588, 5451, 5387, 5687, 5493, 5550, 5516, 5420, 5482, 5666, 5453, 5639, 5490, 5519, 5553, 5564, 5533, 5414, 5475, 5394, 5304, 5385, 5285, 5675, 5685, 5630, 5402,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5349, 5704, 5381, 5366, 5642, 5369, 5422, 5542, 5384, 5661, 5288, 5464, 5468, 5481, 5613, 5277, 5726, 5375, 5658, 5316, 5521, 5483, 5557, 5469, 5302, 5562, 5455, 5354, 5535, 5571, 5651, 5278, 5454, 5399, 5637, 5575, 5665, 5377, 5720, 5315, 5494, 5343, 5437, 5518, 5273, 5312, 5499, 5578, 5504, 5593, 5660, 5261 (8 hits) (10/15/2013 09:09:50 AM)
9	9	1.0	333.0	Yes	5540.0MHz, -64.0dBm	Hop sequence: 5697, 5403, 5324, 5439, 5546, 5595, 5297, 5610, 5278, 5570, 5552, 5718, 5641, 5251, 5646, 5720, 5350, 5520, 5474, 5337, 5344, 5495, 5476, 5272, 5373, 5389, 5288, 5551, 5536, 5397, 5650, 5716, 5349, 5290, 5533, 5499, 5407, 5436, 5501, 5556, 5363, 5380, 5408, 5410, 5681, 5447, 5372, 5645, 5526, 5485, 5634, 5584, 5402, 5578, 5662, 5414, 5442, 5640, 5260, 5341, 5314, 5361, 5478, 5386, 5574, 5352, 5343, 5437, 5398, 5401, 5433, 5678, 5531, 5711, 5466, 5654, 5509, 5301, 5332, 5257, 5629, 5316, 5726, 5268, 5336, 5498, 5446, 5432, 5704, 5309, 5434, 5483, 5561, 5429, 5310, 5376, 5644, 5651, 5673, 5282 (6 hits) (10/15/2013 09:12:46 AM)
10	9	1.0	333.0	Yes	5541.0MHz, -64.0dBm	Hop sequence: 5607, 5588, 5513, 5642, 5637, 5344, 5287, 5539, 5628, 5537, 5411, 5286, 5435, 5551, 5465, 5614, 5687, 5624, 5514, 5451, 5268, 5587, 5579, 5680, 5410, 5312, 5581, 5601, 5641, 5456, 5369, 5405, 5667, 5352, 5507, 5253, 5408, 5429, 5385, 5289, 5298, 5673, 5655, 5696, 5310, 5659, 5658, 5374, 5663, 5684, 5540, 5278, 5522, 5430, 5412, 5401, 5612, 5556, 5700, 5321, 5704, 5715, 5497, 5553, 5308, 5654, 5516, 5660, 5474, 5366, 5541, 5571, 5297, 5255, 5256, 5724, 5419, 5463, 5347, 5512, 5318, 5548, 5693, 5424, 5586, 5563, 5329, 5260, 5311, 5388, 5630, 5368, 5362, 5409, 5520, 5350, 5263, 5721, 5616, 5477 (9 hits) (10/15/2013

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						09:15:44 AM)
11	9	1.0	333.0	Yes	5542.0MHz, -64.0dBm	Hop sequence: 5651, 5591, 5462, 5544, 5485, 5710, 5428, 5645, 5281, 5646, 5412, 5546, 5474, 5380, 5509, 5436, 5639, 5536, 5375, 5280, 5572, 5475, 5288, 5492, 5443, 5379, 5385, 5715, 5560, 5701, 5367, 5664, 5464, 5634, 5355, 5414, 5555, 5286, 5636, 5256, 5633, 5623, 5586, 5377, 5609, 5401, 5422, 5392, 5517, 5366, 5411, 5627, 5349, 5696, 5482, 5706, 5333, 5291, 5716, 5643, 5350, 5532, 5425, 5346, 5556, 5430, 5493, 5514, 5362, 5615, 5304, 5604, 5588, 5677, 5626, 5564, 5530, 5611, 5479, 5312, 5446, 5302, 5584, 5444, 5570, 5659, 5461, 5457, 5504, 5695, 5516, 5660, 5557, 5427, 5574, 5704, 5705, 5439, 5687, 5334 (8 hits) (10/15/2013 09:17:19 AM)
12	9	1.0	333.0	Yes	5543.0MHz, -64.0dBm	Hop sequence: 5548, 5726, 5404, 5663, 5411, 5689, 5369, 5610, 5275, 5578, 5399, 5392, 5375, 5639, 5431, 5260, 5705, 5262, 5499, 5670, 5263, 5415, 5457, 5422, 5604, 5410, 5671, 5443, 5368, 5432, 5605, 5491, 5680, 5687, 5382, 5642, 5658, 5267, 5436, 5601, 5306, 5702, 5360, 5279, 5502, 5577, 5386, 5550, 5666, 5465, 5503, 5359, 5646, 5408, 5276, 5583, 5439, 5678, 5567, 5318, 5659, 5438, 5295, 5651, 5565, 5261, 5627, 5288, 5277, 5292, 5537, 5653, 5340, 5314, 5446, 5629, 5319, 5717, 5636, 5412, 5323, 5501, 5526, 5395, 5268, 5326, 5697, 5317, 5638, 5572, 5700, 5302, 5536, 5664, 5493, 5614, 5296, 5427, 5521, 5554 (6 hits) (10/15/2013 09:19:10 AM)
13	9	1.0	333.0	Yes	5544.0MHz, -64.0dBm	Hop sequence: 5270, 5641, 5271, 5489, 5365, 5690, 5370, 5389, 5681, 5299, 5554, 5666, 5329, 5259, 5320, 5328, 5718, 5413, 5567, 5286, 5466, 5558, 5360, 5538, 5671, 5705, 5649, 5452, 5396, 5287, 5325, 5294, 5613, 5403, 5492, 5368, 5512, 5582, 5465, 5361, 5685, 5708, 5279, 5394, 5442, 5422, 5421, 5552,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5700, 5364, 5572, 5397, 5470, 5715, 5568, 5309, 5391, 5478, 5355, 5312, 5504, 5579, 5395, 5463, 5341, 5444, 5419, 5321, 5439, 5595, 5256, 5631, 5529, 5293, 5251, 5378, 5530, 5565, 5704, 5684, 5310, 5496, 5698, 5665, 5652, 5515, 5562, 5426, 5545, 5359, 5399, 5502, 5632, 5362, 5351, 5260, 5336, 5586, 5591, 5642 (7 hits) (10/15/2013 09:21:50 AM)
14	9	1.0	333.0	Yes	5545.0MHz, -64.0dBm	Hop sequence: 5587, 5633, 5477, 5341, 5259, 5263, 5324, 5555, 5255, 5549, 5585, 5526, 5662, 5315, 5481, 5448, 5523, 5408, 5557, 5700, 5428, 5592, 5724, 5275, 5664, 5440, 5658, 5427, 5502, 5506, 5459, 5575, 5599, 5330, 5462, 5271, 5458, 5636, 5419, 5264, 5378, 5373, 5657, 5363, 5301, 5535, 5574, 5258, 5466, 5398, 5291, 5451, 5661, 5642, 5410, 5445, 5478, 5643, 5621, 5406, 5293, 5298, 5453, 5716, 5273, 5253, 5595, 5469, 5584, 5313, 5698, 5675, 5455, 5648, 5713, 5304, 5656, 5367, 5588, 5546, 5512, 5685, 5464, 5278, 5331, 5582, 5591, 5578, 5294, 5702, 5529, 5329, 5712, 5393, 5607, 5564, 5322, 5598, 5519, 5465 (6 hits) (10/15/2013 09:24:03 AM)
15	9	1.0	333.0	Yes	5546.0MHz, -64.0dBm	Hop sequence: 5493, 5666, 5599, 5674, 5351, 5292, 5581, 5691, 5416, 5376, 5363, 5478, 5667, 5468, 5450, 5511, 5709, 5319, 5714, 5653, 5279, 5299, 5503, 5442, 5472, 5486, 5444, 5693, 5516, 5531, 5451, 5338, 5664, 5353, 5584, 5508, 5624, 5308, 5368, 5702, 5257, 5465, 5536, 5590, 5484, 5530, 5696, 5560, 5278, 5281, 5690, 5721, 5658, 5412, 5705, 5277, 5384, 5670, 5613, 5323, 5433, 5440, 5303, 5362, 5669, 5573, 5683, 5557, 5266, 5679, 5318, 5389, 5408, 5317, 5469, 5725, 5618, 5676, 5291, 5417, 5373, 5636, 5640, 5267, 5479, 5629, 5542, 5701, 5517, 5434, 5554, 5448, 5631, 5558, 5392, 5455, 5262, 5443, 5406, 5388 (6 hits) (10/15/2013

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						09:25:36 AM)
16	9	1.0	333.0	Yes	5547.0MHz, -64.0dBm	Hop sequence: 5266, 5673, 5498, 5322, 5652, 5654, 5647, 5614, 5624, 5333, 5397, 5554, 5368, 5274, 5436, 5260, 5357, 5332, 5351, 5426, 5518, 5267, 5596, 5512, 5638, 5461, 5578, 5429, 5669, 5304, 5582, 5663, 5627, 5502, 5407, 5701, 5282, 5629, 5542, 5707, 5319, 5438, 5588, 5499, 5409, 5584, 5354, 5398, 5699, 5481, 5346, 5419, 5556, 5713, 5324, 5253, 5487, 5548, 5364, 5452, 5316, 5714, 5515, 5280, 5268, 5566, 5711, 5349, 5579, 5722, 5489, 5257, 5483, 5451, 5313, 5342, 5450, 5334, 5609, 5683, 5616, 5675, 5591, 5659, 5503, 5610, 5291, 5391, 5383, 5388, 5350, 5602, 5454, 5516, 5592, 5472, 5674, 5285, 5420, 5500 (5 hits) (10/15/2013 09:27:06 AM)
17	9	1.0	333.0	Yes	5548.0MHz, -64.0dBm	Hop sequence: 5531, 5473, 5256, 5522, 5349, 5496, 5623, 5335, 5477, 5514, 5407, 5449, 5709, 5351, 5439, 5676, 5495, 5443, 5378, 5277, 5678, 5440, 5330, 5371, 5417, 5475, 5515, 5471, 5301, 5410, 5512, 5653, 5474, 5340, 5602, 5318, 5707, 5540, 5390, 5703, 5453, 5568, 5255, 5476, 5302, 5305, 5609, 5700, 5723, 5286, 5331, 5375, 5632, 5544, 5655, 5289, 5642, 5601, 5353, 5530, 5630, 5604, 5673, 5598, 5266, 5258, 5438, 5297, 5485, 5657, 5575, 5663, 5291, 5536, 5500, 5403, 5668, 5265, 5348, 5593, 5463, 5433, 5565, 5591, 5705, 5389, 5397, 5720, 5725, 5362, 5498, 5452, 5621, 5488, 5273, 5652, 5561, 5706, 5325, 5532 (5 hits) (10/15/2013 09:29:07 AM)
18	9	1.0	333.0	Yes	5549.0MHz, -64.0dBm	Hop sequence: 5475, 5290, 5549, 5543, 5645, 5701, 5665, 5308, 5554, 5396, 5669, 5675, 5468, 5419, 5370, 5406, 5493, 5640, 5663, 5690, 5448, 5495, 5720, 5476, 5490, 5710, 5300, 5376, 5664, 5529, 5514, 5717, 5550, 5317, 5309, 5625, 5446, 5597, 5504, 5393, 5395, 5384, 5622, 5599, 5682, 5726, 5333, 5590,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5614, 5567, 5422, 5618, 5501, 5439, 5354, 5531, 5649, 5464, 5452, 5492, 5535, 5568, 5628, 5400, 5431, 5301, 5556, 5566, 5321, 5546, 5559, 5413, 5361, 5651, 5386, 5513, 5668, 5443, 5627, 5539, 5442, 5255, 5325, 5652, 5457, 5482, 5283, 5412, 5292, 5714, 5306, 5404, 5323, 5496, 5454, 5636, 5469, 5377, 5319, 5659 (10 hits) (10/15/2013 09:30:41 AM)
19	9	1.0	333.0	Yes	5550.0MHz, -64.0dBm	Hop sequence: 5410, 5608, 5671, 5633, 5524, 5570, 5419, 5676, 5279, 5649, 5359, 5325, 5518, 5342, 5507, 5667, 5552, 5352, 5344, 5683, 5433, 5529, 5271, 5546, 5435, 5457, 5259, 5612, 5273, 5701, 5624, 5251, 5311, 5269, 5272, 5290, 5516, 5499, 5476, 5607, 5286, 5718, 5672, 5590, 5606, 5504, 5695, 5506, 5617, 5327, 5274, 5385, 5448, 5684, 5725, 5485, 5705, 5537, 5345, 5539, 5421, 5581, 5626, 5466, 5330, 5293, 5554, 5276, 5565, 5611, 5440, 5309, 5482, 5473, 5704, 5488, 5532, 5282, 5579, 5670, 5463, 5690, 5302, 5417, 5589, 5706, 5596, 5308, 5328, 5628, 5386, 5513, 5367, 5364, 5642, 5382, 5646, 5535, 5654, 5647 (7 hits) (10/15/2013 09:32:09 AM)
20	9	1.0	333.0	Yes	5551.0MHz, -64.0dBm	Hop sequence: 5500, 5376, 5542, 5589, 5345, 5499, 5405, 5465, 5655, 5404, 5546, 5425, 5617, 5471, 5657, 5421, 5387, 5411, 5327, 5342, 5567, 5555, 5344, 5335, 5293, 5259, 5415, 5384, 5599, 5503, 5554, 5268, 5614, 5298, 5594, 5491, 5348, 5504, 5271, 5412, 5273, 5461, 5409, 5691, 5621, 5443, 5590, 5367, 5355, 5487, 5664, 5413, 5363, 5606, 5536, 5325, 5435, 5584, 5526, 5633, 5603, 5334, 5600, 5382, 5593, 5679, 5697, 5451, 5449, 5424, 5427, 5544, 5408, 5549, 5358, 5272, 5386, 5311, 5377, 5561, 5577, 5434, 5641, 5378, 5674, 5685, 5564, 5582, 5318, 5673, 5484, 5642, 5383, 5539, 5631, 5719, 5287, 5433, 5505, 5346 (10 hits) (10/15/2013

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						09:33:35 AM)
21	9	1.0	333.0	Yes	5552.0MHz, -64.0dBm	Hop sequence: 5592, 5254, 5271, 5404, 5558, 5357, 5712, 5355, 5691, 5627, 5346, 5463, 5721, 5375, 5401, 5531, 5671, 5274, 5321, 5386, 5633, 5546, 5615, 5367, 5722, 5287, 5664, 5585, 5251, 5649, 5320, 5342, 5467, 5504, 5540, 5542, 5551, 5283, 5512, 5449, 5456, 5364, 5340, 5385, 5305, 5483, 5611, 5292, 5536, 5644, 5583, 5584, 5630, 5414, 5368, 5587, 5688, 5352, 5394, 5709, 5281, 5527, 5264, 5505, 5580, 5256, 5395, 5622, 5675, 5572, 5621, 5510, 5302, 5670, 5289, 5336, 5453, 5455, 5327, 5478, 5431, 5445, 5428, 5541, 5372, 5513, 5488, 5284, 5496, 5349, 5318, 5707, 5568, 5576, 5403, 5678, 5648, 5275, 5698, 5322 (7 hits) (10/15/2013 09:35:32 AM)
22	9	1.0	333.0	Yes	5553.0MHz, -64.0dBm	Hop sequence: 5448, 5581, 5333, 5323, 5257, 5542, 5477, 5281, 5655, 5432, 5572, 5305, 5389, 5505, 5399, 5445, 5465, 5602, 5279, 5463, 5597, 5378, 5438, 5362, 5623, 5437, 5318, 5678, 5654, 5703, 5312, 5588, 5277, 5264, 5533, 5423, 5565, 5450, 5534, 5554, 5715, 5720, 5485, 5375, 5659, 5374, 5480, 5712, 5473, 5601, 5514, 5486, 5322, 5679, 5306, 5490, 5309, 5321, 5642, 5308, 5692, 5416, 5560, 5315, 5482, 5271, 5376, 5363, 5251, 5551, 5405, 5278, 5635, 5596, 5662, 5290, 5567, 5262, 5457, 5425, 5395, 5440, 5539, 5354, 5428, 5575, 5296, 5510, 5709, 5404, 5454, 5556, 5384, 5314, 5393, 5704, 5563, 5388, 5295, 5479 (9 hits) (10/15/2013 09:37:56 AM)
23	9	1.0	333.0	Yes	5554.0MHz, -64.0dBm	Hop sequence: 5603, 5367, 5654, 5631, 5406, 5456, 5502, 5574, 5454, 5451, 5606, 5601, 5356, 5428, 5429, 5282, 5655, 5341, 5617, 5629, 5594, 5404, 5352, 5518, 5598, 5391, 5363, 5544, 5426, 5537, 5465, 5708, 5357, 5690, 5554, 5418, 5339, 5434, 5580, 5610, 5320, 5417, 5638, 5281, 5608, 5553, 5383, 5269,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5332, 5624, 5642, 5270, 5632, 5381, 5413, 5688, 5524, 5661, 5511, 5408, 5388, 5473, 5604, 5369, 5345, 5474, 5568, 5676, 5695, 5296, 5321, 5519, 5416, 5571, 5307, 5611, 5667, 5267, 5292, 5333, 5683, 5493, 5254, 5360, 5585, 5509, 5627, 5371, 5630, 5462, 5262, 5387, 5496, 5490, 5599, 5648, 5445, 5516, 5322, 5488 (4 hits) (10/15/2013 09:40:24 AM)
24	9	1.0	333.0	Yes	5555.0MHz, -64.0dBm	Hop sequence: 5719, 5323, 5328, 5596, 5508, 5407, 5534, 5545, 5326, 5285, 5634, 5462, 5661, 5370, 5563, 5334, 5670, 5650, 5369, 5337, 5282, 5681, 5592, 5700, 5656, 5504, 5686, 5463, 5551, 5345, 5391, 5611, 5455, 5354, 5507, 5281, 5442, 5485, 5676, 5687, 5533, 5380, 5376, 5498, 5300, 5486, 5691, 5465, 5392, 5510, 5272, 5614, 5527, 5499, 5675, 5425, 5421, 5302, 5394, 5289, 5324, 5538, 5511, 5355, 5619, 5574, 5255, 5658, 5374, 5331, 5292, 5694, 5478, 5316, 5457, 5336, 5470, 5262, 5288, 5708, 5418, 5305, 5604, 5709, 5647, 5702, 5575, 5329, 5257, 5280, 5615, 5505, 5525, 5607, 5409, 5609, 5396, 5530, 5711, 5430 (5 hits) (10/15/2013 09:42:21 AM)
25	9	1.0	333.0	Yes	5556.0MHz, -64.0dBm	Hop sequence: 5663, 5510, 5380, 5620, 5307, 5581, 5654, 5561, 5677, 5635, 5726, 5642, 5602, 5528, 5473, 5481, 5383, 5500, 5494, 5626, 5254, 5591, 5308, 5371, 5661, 5343, 5296, 5398, 5647, 5579, 5719, 5611, 5348, 5255, 5369, 5573, 5486, 5313, 5441, 5497, 5512, 5603, 5485, 5384, 5424, 5427, 5563, 5491, 5643, 5336, 5347, 5482, 5657, 5698, 5615, 5634, 5575, 5279, 5706, 5578, 5639, 5467, 5278, 5449, 5435, 5712, 5692, 5552, 5366, 5475, 5529, 5495, 5583, 5301, 5275, 5274, 5508, 5567, 5681, 5616, 5322, 5353, 5673, 5334, 5601, 5723, 5346, 5445, 5689, 5329, 5260, 5547, 5701, 5504, 5288, 5715, 5372, 5277, 5618, 5628 (4 hits) (10/15/2013

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						09:46:37 AM)
26	9	1.0	333.0	Yes	5557.0MHz, -64.0dBm	Hop sequence: 5462, 5258, 5329, 5569, 5483, 5380, 5439, 5463, 5570, 5461, 5429, 5645, 5615, 5405, 5555, 5355, 5371, 5419, 5595, 5683, 5359, 5330, 5605, 5432, 5591, 5341, 5660, 5349, 5281, 5282, 5326, 5324, 5714, 5353, 5586, 5719, 5557, 5722, 5525, 5489, 5468, 5366, 5721, 5655, 5652, 5291, 5369, 5515, 5632, 5607, 5306, 5268, 5453, 5449, 5488, 5537, 5335, 5575, 5596, 5611, 5667, 5376, 5589, 5372, 5561, 5511, 5364, 5358, 5601, 5673, 5492, 5392, 5552, 5328, 5394, 5622, 5593, 5251, 5337, 5588, 5634, 5395, 5320, 5495, 5332, 5321, 5465, 5391, 5562, 5642, 5666, 5540, 5698, 5590, 5635, 5715, 5389, 5531, 5438, 5532 (7 hits) (10/15/2013 09:49:10 AM)
27	9	1.0	333.0	Yes	5558.0MHz, -64.0dBm	Hop sequence: 5661, 5596, 5710, 5595, 5476, 5583, 5666, 5309, 5447, 5489, 5427, 5441, 5509, 5679, 5411, 5471, 5597, 5357, 5448, 5637, 5539, 5725, 5623, 5473, 5546, 5288, 5316, 5693, 5415, 5507, 5438, 5571, 5460, 5662, 5608, 5576, 5718, 5536, 5384, 5676, 5658, 5651, 5377, 5365, 5334, 5578, 5664, 5439, 5344, 5572, 5483, 5504, 5502, 5721, 5613, 5472, 5428, 5317, 5375, 5254, 5711, 5358, 5329, 5632, 5263, 5726, 5550, 5444, 5250, 5692, 5513, 5319, 5401, 5330, 5552, 5423, 5612, 5544, 5668, 5301, 5488, 5466, 5258, 5387, 5549, 5511, 5704, 5680, 5399, 5518, 5586, 5541, 5660, 5496, 5501, 5376, 5282, 5514, 5440, 5363 (8 hits) (10/15/2013 09:52:55 AM)
28	9	1.0	333.0	Yes	5559.0MHz, -64.0dBm	Hop sequence: 5454, 5711, 5400, 5499, 5354, 5307, 5569, 5306, 5493, 5459, 5433, 5537, 5646, 5351, 5497, 5460, 5620, 5256, 5387, 5365, 5363, 5654, 5322, 5394, 5672, 5676, 5404, 5465, 5625, 5402, 5606, 5513, 5485, 5345, 5578, 5436, 5523, 5260, 5467, 5348, 5469, 5713, 5699, 5412, 5536, 5585, 5641, 5678,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5301, 5368, 5320, 5374, 5395, 5582, 5429, 5709, 5628, 5341, 5398, 5607, 5603, 5588, 5651, 5458, 5489, 5664, 5600, 5329, 5687, 5396, 5707, 5721, 5694, 5293, 5692, 5500, 5273, 5292, 5702, 5657, 5327, 5490, 5669, 5413, 5380, 5405, 5540, 5376, 5366, 5619, 5715, 5598, 5498, 5261, 5334, 5660, 5390, 5589, 5511, 5613 (3 hits) (10/15/2013 09:54:50 AM)
29	9	1.0	333.0	Yes	5560.0MHz, -64.0dBm	Hop sequence: 5590, 5436, 5520, 5281, 5563, 5560, 5261, 5499, 5614, 5478, 5326, 5546, 5533, 5383, 5522, 5552, 5445, 5462, 5675, 5370, 5544, 5295, 5416, 5276, 5404, 5698, 5550, 5412, 5435, 5587, 5726, 5535, 5393, 5712, 5481, 5271, 5701, 5446, 5720, 5636, 5428, 5673, 5268, 5574, 5659, 5455, 5309, 5507, 5278, 5577, 5686, 5345, 5611, 5290, 5709, 5504, 5451, 5595, 5373, 5585, 5449, 5380, 5695, 5342, 5403, 5505, 5391, 5548, 5285, 5332, 5299, 5706, 5335, 5565, 5480, 5707, 5304, 5461, 5582, 5395, 5450, 5506, 5716, 5498, 5662, 5279, 5541, 5639, 5619, 5328, 5508, 5458, 5424, 5460, 5688, 5467, 5604, 5689, 5274, 5649 (10 hits) (10/15/2013 09:56:52 AM)
30	9	1.0	333.0	Yes	5561.0MHz, -64.0dBm	Hop sequence: 5615, 5388, 5297, 5492, 5557, 5488, 5510, 5263, 5319, 5408, 5617, 5722, 5546, 5414, 5348, 5275, 5695, 5334, 5394, 5371, 5426, 5581, 5584, 5606, 5513, 5633, 5647, 5357, 5483, 5697, 5276, 5699, 5654, 5574, 5266, 5482, 5537, 5494, 5400, 5437, 5541, 5416, 5632, 5671, 5610, 5718, 5422, 5684, 5479, 5636, 5688, 5450, 5648, 5360, 5497, 5720, 5377, 5322, 5608, 5471, 5301, 5345, 5588, 5515, 5478, 5399, 5270, 5395, 5627, 5415, 5277, 5272, 5260, 5314, 5274, 5298, 5344, 5317, 5687, 5698, 5500, 5572, 5305, 5466, 5560, 5293, 5700, 5401, 5463, 5693, 5402, 5325, 5311, 5362, 5324, 5364, 5353, 5438, 5421, 5506 (5 hits) (10/15/2013

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						09:58:29 AM)
31	9	1.0	333.0	Yes	5562.0MHz, -64.0dBm	Hop sequence: 5707, 5604, 5416, 5583, 5618, 5373, 5488, 5669, 5272, 5418, 5518, 5667, 5694, 5256, 5557, 5478, 5451, 5331, 5257, 5423, 5713, 5454, 5567, 5385, 5413, 5298, 5310, 5631, 5377, 5588, 5448, 5491, 5370, 5342, 5576, 5503, 5366, 5534, 5394, 5644, 5645, 5594, 5559, 5494, 5511, 5471, 5542, 5303, 5372, 5561, 5452, 5647, 5349, 5410, 5575, 5473, 5587, 5712, 5629, 5486, 5654, 5340, 5493, 5592, 5436, 5680, 5676, 5411, 5435, 5259, 5558, 5643, 5719, 5279, 5477, 5674, 5258, 5334, 5325, 5382, 5375, 5367, 5580, 5294, 5496, 5386, 5722, 5695, 5419, 5550, 5530, 5472, 5314, 5440, 5655, 5297, 5578, 5409, 5571, 5341 (7 hits) (10/15/2013 10:00:06 AM)
32	9	1.0	333.0	Yes	5563.0MHz, -64.0dBm	Hop sequence: 5465, 5641, 5453, 5634, 5332, 5306, 5523, 5726, 5648, 5440, 5287, 5693, 5396, 5409, 5446, 5472, 5522, 5615, 5443, 5464, 5415, 5420, 5266, 5361, 5628, 5360, 5613, 5256, 5598, 5358, 5552, 5688, 5653, 5346, 5713, 5623, 5264, 5573, 5381, 5313, 5362, 5295, 5656, 5480, 5345, 5299, 5706, 5302, 5501, 5307, 5298, 5675, 5543, 5511, 5676, 5348, 5310, 5581, 5276, 5406, 5398, 5340, 5288, 5424, 5336, 5657, 5559, 5252, 5702, 5567, 5532, 5493, 5455, 5324, 5602, 5604, 5321, 5516, 5620, 5665, 5375, 5701, 5448, 5637, 5724, 5429, 5294, 5504, 5572, 5542, 5439, 5526, 5632, 5564, 5496, 5333, 5568, 5562, 5500, 5368 (6 hits) (10/15/2013 10:02:20 AM)
33	9	1.0	333.0	Yes	5564.0MHz, -64.0dBm	Hop sequence: 5578, 5313, 5501, 5270, 5399, 5544, 5312, 5487, 5500, 5705, 5651, 5709, 5508, 5681, 5300, 5478, 5328, 5447, 5577, 5419, 5381, 5484, 5469, 5623, 5663, 5462, 5554, 5565, 5589, 5430, 5563, 5513, 5646, 5412, 5519, 5395, 5621, 5311, 5564, 5665, 5326, 5716, 5449, 5583, 5282, 5421, 5403, 5287,

Table 43 - FCC frequency hopping radar (Type 6) Results - Conducted						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5720, 5680, 5413, 5408, 5670, 5657, 5359, 5251, 5633, 5499, 5293, 5541, 5353, 5272, 5692, 5254, 5274, 5317, 5572, 5341, 5379, 5525, 5539, 5269, 5605, 5534, 5547, 5457, 5477, 5345, 5290, 5351, 5533, 5261, 5409, 5486, 5352, 5625, 5260, 5684, 5604, 5322, 5596, 5559, 5685, 5426, 5368, 5672, 5255, 5640, 5461, 5388 (10 hits) (10/15/2013 10:03:50 AM)

Table 44 - Summary of All Results - Radiated				
Waveform Name	Pd (%)	Pd Required (%)	Number of Trials	Status
FCC Short Pulse Radar (Type 1)	90.0 %	60.0 %	10	PASSED
FCC Short Pulse Radar (Type 2)	100.0 %	60.0 %	10	PASSED
FCC Short Pulse Radar (Type 3)	100.0 %	60.0 %	10	PASSED
FCC Short Pulse Radar (Type 4)	100.0 %	60.0 %	10	PASSED
Aggregate of above results	97.5 %	0.0 %	40	PASSED
Long Sequence	100.0 %	80.0 %	1	PASSED
FCC frequency hopping radar (Type 6)	100.0 %	70.0 %	10	PASSED

Table 45 - FCC Short Pulse Radar (Type 1) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 02:29:37 PM)
2	18	1.0	1428.0	No	5545.0MHz, -63.0dBm	Single burst (10/18/2013 02:38:18 PM)
3	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 02:38:46 PM)
4	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 02:40:19 PM)
5	18	1.0	1428.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 02:41:54 PM)
6	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 02:43:19 PM)
7	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 02:45:42 PM)
8	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 02:47:32 PM)
9	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 02:48:58 PM)
10	18	1.0	1428.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 02:50:09 PM)

Table 46 - FCC Short Pulse Radar (Type 2) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	24	2.9	160.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 02:51:58 PM)
2	24	3.3	164.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 02:53:27 PM)
3	23	3.1	207.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 02:54:52 PM)
4	24	3.7	227.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 02:55:52 PM)
5	25	4.2	168.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 02:57:09 PM)
6	25	4.9	159.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 02:59:11 PM)
7	28	2.9	184.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 03:00:10 PM)

Table 46 - FCC Short Pulse Radar (Type 2) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
8	25	3.7	221.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 03:02:03 PM)
9	28	2.1	219.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 03:03:21 PM)
10	26	2.4	173.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 03:04:52 PM)

Table 47 - FCC Short Pulse Radar (Type 3) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	17	8.8	328.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 03:06:38 PM)
2	17	6.8	260.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 03:08:09 PM)
3	17	8.5	260.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 03:10:05 PM)
4	17	9.2	203.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 03:11:20 PM)
5	17	9.3	232.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 03:13:05 PM)
6	18	7.1	451.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 03:14:37 PM)
7	17	7.0	417.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 03:16:06 PM)
8	17	6.7	403.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 03:18:13 PM)
9	16	7.6	259.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 03:19:34 PM)
10	18	6.1	346.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 03:21:24 PM)

Table 48 - FCC Short Pulse Radar (Type 4) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	16	14.0	432.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 03:22:58 PM)
2	13	12.0	278.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 03:24:17 PM)
3	13	14.4	461.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 03:25:49 PM)
4	14	15.9	439.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 03:27:38 PM)
5	16	15.5	290.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 03:29:27 PM)
6	15	18.1	452.0	Yes	5550.0MHz, -63.0dBm	Single burst (10/18/2013 03:31:07 PM)
7	15	16.4	468.0	Yes	5545.0MHz, -63.0dBm	Single burst (10/18/2013 03:32:42 PM)
8	15	16.6	276.0	Yes	5540.0MHz, -63.0dBm	Single burst (10/18/2013 03:33:58 PM)

Table 48 - FCC Short Pulse Radar (Type 4) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
9	16	14.5	480.0	Yes	5560.0MHz, -63.0dBm	Single burst (10/18/2013 03:35:40 PM)
10	14	13.5	403.0	Yes	5555.0MHz, -63.0dBm	Single burst (10/18/2013 03:36:56 PM)

Table 49 - Long Sequence Waveform Summary - Radiated		
Long Sequence Trial	Result	Radar Frequency / Amplitude
Trial #1	Detected	5550.0MHz, -63.0dBm

Table 50 - Long Sequence Waveform Trial#1 (Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	94.1	20	1108.0	-	0.837176
2	1	96.8	17	-	-	2.144799
3	2	54.7	15	1955.0	-	3.081543
4	2	54.5	11	1251.0	-	3.838687
5	2	94.5	6	1812.0	-	4.600313
6	2	61.6	20	1035.0	-	6.031003
7	2	96.9	6	1757.0	-	7.311192
8	3	97.0	15	1692.0	1224.0	8.182394
9	2	87.4	9	1873.0	-	9.398945
10	2	66.0	19	1224.0	-	10.900674
11	3	94.2	12	1000.0	1283.0	11.946236

Table 51 - FCC frequency hopping radar (Type 6) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	9	1.0	333.0	Yes	5565.0MHz, -63.0dBm	Hop sequence: 5297, 5684, 5720, 5631, 5344, 5289, 5571, 5310, 5400, 5677, 5380, 5691, 5259, 5577, 5544, 5429, 5685, 5583, 5447, 5469, 5468, 5636, 5357, 5484, 5449, 5371, 5426, 5327, 5552, 5402, 5609, 5387, 5272, 5270, 5578, 5521, 5542, 5535, 5326, 5607, 5465, 5523, 5384, 5343, 5514, 5700, 5454, 5476, 5479, 5475, 5284, 5657, 5362, 5365, 5376, 5423, 5563, 5615, 5363, 5569, 5675, 5574, 5548, 5669, 5437, 5539, 5483, 5600, 5306, 5350, 5440, 5370, 5338, 5369, 5589, 5294, 5546, 5255, 5601, 5281, 5557, 5628, 5441, 5508, 5323, 5304, 5317, 5288, 5451, 5624, 5408, 5634, 5652, 5492, 5721, 5312, 5391, 5503, 5588, 5329 (9 hits) (10/18/2013 03:40:26 PM)

Table 51 - FCC frequency hopping radar (Type 6) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
2	9	1.0	333.0	Yes	5566.0MHz, -63.0dBm	Hop sequence: 5637, 5290, 5723, 5463, 5615, 5335, 5512, 5405, 5296, 5708, 5329, 5435, 5699, 5448, 5634, 5667, 5321, 5554, 5427, 5552, 5655, 5640, 5498, 5349, 5370, 5372, 5462, 5707, 5254, 5698, 5559, 5646, 5382, 5260, 5273, 5466, 5645, 5300, 5569, 5278, 5609, 5391, 5396, 5309, 5582, 5251, 5499, 5263, 5443, 5257, 5253, 5334, 5531, 5535, 5330, 5398, 5530, 5291, 5432, 5453, 5529, 5677, 5608, 5310, 5426, 5633, 5641, 5613, 5368, 5596, 5722, 5576, 5413, 5352, 5381, 5652, 5509, 5318, 5469, 5375, 5424, 5544, 5328, 5520, 5320, 5454, 5411, 5339, 5417, 5488, 5605, 5619, 5436, 5429, 5390, 5302, 5350, 5526, 5705, 5506 (5 hits) (10/18/2013 03:44:00 PM)
3	9	1.0	333.0	Yes	5534.0MHz, -63.0dBm	Hop sequence: 5669, 5543, 5670, 5313, 5548, 5358, 5329, 5332, 5403, 5632, 5627, 5483, 5514, 5602, 5266, 5455, 5300, 5460, 5451, 5426, 5309, 5422, 5598, 5328, 5597, 5666, 5391, 5268, 5446, 5604, 5338, 5330, 5519, 5673, 5465, 5700, 5681, 5336, 5498, 5709, 5513, 5301, 5436, 5443, 5629, 5397, 5623, 5448, 5588, 5251, 5306, 5385, 5428, 5610, 5412, 5691, 5671, 5677, 5641, 5522, 5628, 5667, 5331, 5374, 5571, 5395, 5404, 5292, 5657, 5529, 5554, 5535, 5337, 5606, 5414, 5383, 5382, 5279, 5494, 5595, 5339, 5288, 5466, 5312, 5447, 5327, 5617, 5615, 5379, 5624, 5547, 5333, 5259, 5345, 5526, 5432, 5389, 5278, 5386, 5427 (5 hits) (10/18/2013 03:46:24 PM)
4	9	1.0	333.0	Yes	5535.0MHz, -63.0dBm	Hop sequence: 5269, 5632, 5254, 5494, 5325, 5435, 5318, 5573, 5568, 5501, 5439, 5624, 5425, 5271, 5387, 5563, 5695, 5441, 5650, 5653, 5402, 5485, 5482, 5690, 5637, 5646, 5497, 5309, 5367, 5723, 5668, 5434, 5662, 5467, 5395, 5470, 5280, 5553, 5440, 5555, 5478, 5458, 5461, 5475, 5315, 5617, 5566, 5574, 5643, 5496, 5635, 5636, 5654,

Table 51 - FCC frequency hopping radar (Type 6) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5615, 5344, 5707, 5599, 5407, 5294, 5576, 5300, 5614, 5338, 5544, 5393, 5477, 5607, 5480, 5703, 5339, 5684, 5630, 5334, 5289, 5345, 5554, 5670, 5399, 5261, 5358, 5324, 5578, 5456, 5323, 5720, 5692, 5688, 5313, 5250, 5381, 5283, 5360, 5346, 5556, 5312, 5722, 5330, 5316, 5362, 5357 (7 hits) (10/18/2013 03:47:58 PM)
5	9	1.0	333.0	Yes	5536.0MHz, -63.0dBm	Hop sequence: 5273, 5466, 5547, 5542, 5442, 5452, 5331, 5400, 5485, 5287, 5475, 5368, 5367, 5497, 5499, 5365, 5632, 5448, 5710, 5668, 5670, 5377, 5498, 5496, 5492, 5525, 5338, 5458, 5462, 5316, 5396, 5561, 5312, 5354, 5540, 5613, 5720, 5699, 5332, 5526, 5717, 5269, 5617, 5425, 5500, 5416, 5619, 5444, 5419, 5256, 5409, 5253, 5352, 5669, 5520, 5554, 5414, 5325, 5264, 5440, 5307, 5461, 5511, 5673, 5387, 5254, 5366, 5643, 5616, 5501, 5413, 5255, 5304, 5326, 5318, 5388, 5544, 5648, 5487, 5503, 5698, 5515, 5424, 5451, 5607, 5281, 5375, 5701, 5682, 5465, 5679, 5703, 5708, 5295, 5724, 5625, 5285, 5386, 5371, 5411 (6 hits) (10/18/2013 03:49:27 PM)
6	9	1.0	333.0	Yes	5537.0MHz, -63.0dBm	Hop sequence: 5463, 5571, 5438, 5319, 5352, 5324, 5452, 5380, 5564, 5492, 5406, 5442, 5341, 5705, 5594, 5404, 5579, 5488, 5265, 5619, 5532, 5471, 5706, 5566, 5518, 5462, 5546, 5435, 5626, 5608, 5298, 5368, 5277, 5268, 5687, 5690, 5430, 5274, 5603, 5286, 5454, 5276, 5628, 5630, 5289, 5689, 5472, 5338, 5397, 5673, 5575, 5491, 5676, 5553, 5516, 5256, 5711, 5458, 5287, 5434, 5303, 5661, 5401, 5669, 5453, 5402, 5651, 5528, 5524, 5254, 5596, 5541, 5407, 5653, 5520, 5431, 5506, 5427, 5312, 5721, 5418, 5622, 5361, 5433, 5598, 5572, 5350, 5272, 5717, 5357, 5700, 5295, 5486, 5573, 5414, 5326, 5679, 5684, 5354, 5544 (6 hits) (10/18/2013 03:51:49 PM)

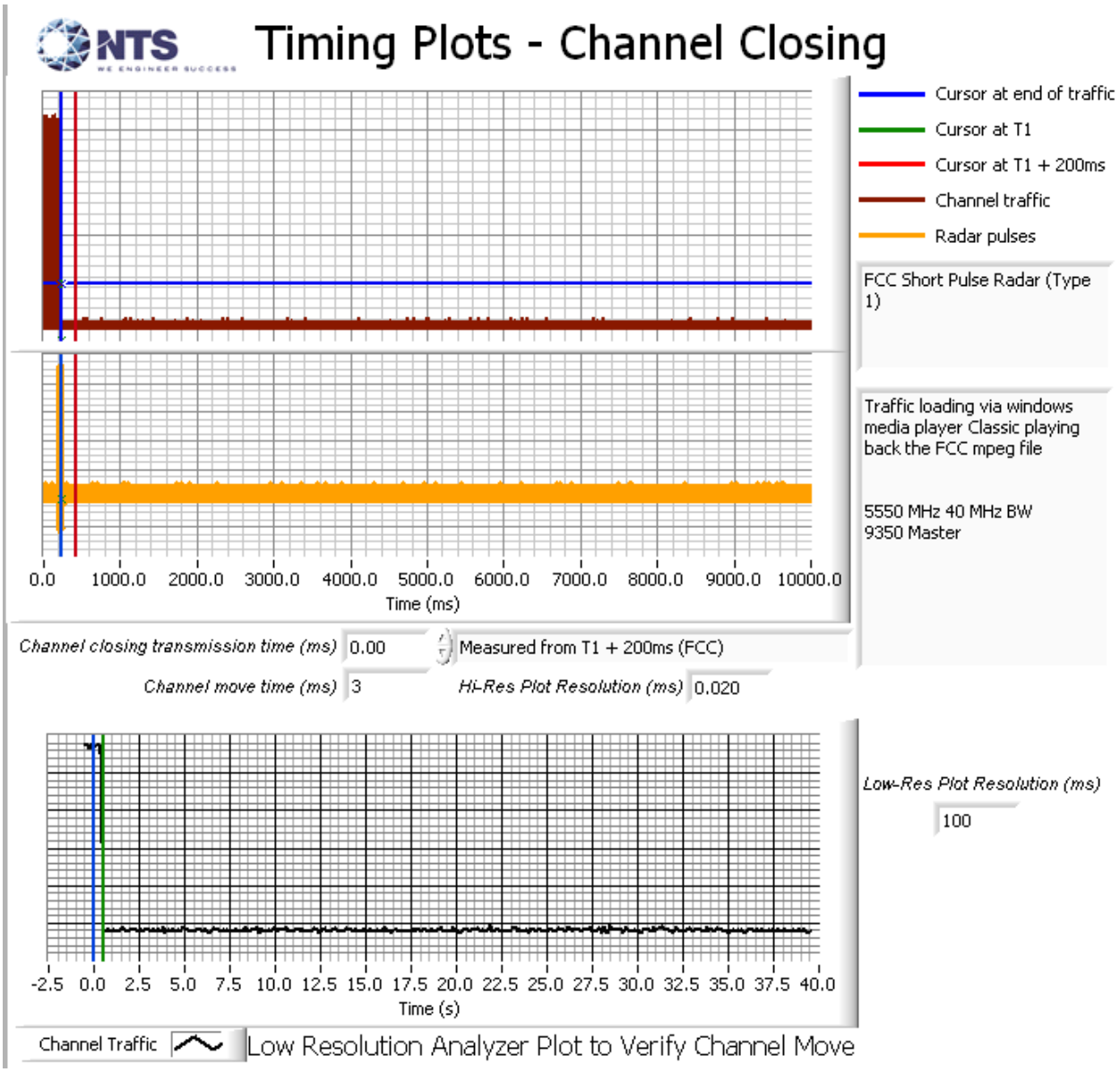
Table 51 - FCC frequency hopping radar (Type 6) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
7	9	1.0	333.0	Yes	5538.0MHz, -63.0dBm	Hop sequence: 5375, 5568, 5300, 5270, 5553, 5494, 5541, 5421, 5309, 5414, 5451, 5547, 5546, 5458, 5422, 5664, 5427, 5262, 5548, 5690, 5722, 5552, 5466, 5446, 5429, 5708, 5530, 5607, 5518, 5368, 5435, 5676, 5629, 5606, 5673, 5324, 5675, 5250, 5635, 5394, 5533, 5289, 5711, 5540, 5599, 5719, 5582, 5669, 5473, 5587, 5700, 5415, 5536, 5527, 5620, 5667, 5471, 5625, 5698, 5332, 5637, 5646, 5443, 5525, 5436, 5474, 5508, 5628, 5506, 5699, 5366, 5557, 5380, 5398, 5554, 5526, 5479, 5364, 5501, 5633, 5256, 5598, 5363, 5641, 5586, 5647, 5580, 5560, 5631, 5344, 5351, 5472, 5419, 5269, 5254, 5563, 5584, 5296, 5706, 5535 (13 hits) (10/18/2013 03:53:21 PM)
8	9	1.0	333.0	Yes	5539.0MHz, -63.0dBm	Hop sequence: 5333, 5419, 5336, 5685, 5389, 5637, 5715, 5363, 5346, 5519, 5451, 5526, 5347, 5285, 5292, 5312, 5527, 5697, 5522, 5334, 5436, 5483, 5338, 5511, 5315, 5535, 5579, 5586, 5626, 5614, 5706, 5537, 5446, 5689, 5413, 5415, 5310, 5460, 5481, 5531, 5391, 5674, 5683, 5299, 5597, 5417, 5399, 5655, 5702, 5456, 5328, 5684, 5604, 5582, 5367, 5454, 5282, 5666, 5291, 5287, 5340, 5418, 5707, 5645, 5587, 5290, 5693, 5633, 5600, 5395, 5500, 5542, 5276, 5319, 5301, 5345, 5695, 5471, 5656, 5540, 5279, 5397, 5498, 5601, 5425, 5513, 5322, 5256, 5714, 5275, 5339, 5344, 5690, 5585, 5598, 5252, 5622, 5360, 5701, 5257 (4 hits) (10/18/2013 03:55:16 PM)
9	9	1.0	333.0	Yes	5540.0MHz, -63.0dBm	Hop sequence: 5525, 5264, 5321, 5282, 5293, 5416, 5506, 5400, 5478, 5403, 5609, 5483, 5509, 5562, 5482, 5560, 5344, 5288, 5628, 5665, 5467, 5582, 5302, 5370, 5541, 5552, 5471, 5286, 5607, 5335, 5661, 5685, 5427, 5505, 5502, 5394, 5472, 5612, 5572, 5251, 5550, 5399, 5369, 5375, 5470, 5715, 5306, 5617, 5387, 5650, 5605, 5407, 5690,

Table 51 - FCC frequency hopping radar (Type 6) Results - Radiated						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5699, 5334, 5711, 5260, 5601, 5355, 5689, 5421, 5708, 5568, 5493, 5651, 5604, 5669, 5409, 5501, 5537, 5658, 5475, 5673, 5318, 5439, 5364, 5660, 5271, 5706, 5378, 5380, 5360, 5428, 5320, 5352, 5564, 5626, 5644, 5425, 5417, 5257, 5510, 5469, 5390, 5520, 5277, 5327, 5602, 5331, 5446 (7 hits) (10/18/2013 03:56:27 PM)
10	9	1.0	333.0	Yes	5541.0MHz, -63.0dBm	Hop sequence: 5514, 5520, 5280, 5482, 5660, 5371, 5493, 5415, 5436, 5334, 5576, 5452, 5387, 5541, 5621, 5615, 5310, 5420, 5445, 5369, 5519, 5468, 5390, 5724, 5522, 5636, 5379, 5526, 5439, 5496, 5531, 5433, 5616, 5511, 5361, 5346, 5578, 5467, 5284, 5512, 5509, 5646, 5684, 5618, 5442, 5347, 5373, 5326, 5356, 5348, 5425, 5422, 5527, 5376, 5556, 5534, 5309, 5599, 5626, 5336, 5488, 5341, 5719, 5392, 5320, 5706, 5316, 5399, 5459, 5561, 5549, 5393, 5661, 5571, 5463, 5544, 5680, 5370, 5508, 5696, 5523, 5678, 5443, 5299, 5587, 5324, 5424, 5595, 5562, 5530, 5643, 5335, 5453, 5591, 5722, 5351, 5270, 5635, 5472, 5296 (7 hits) (10/18/2013 03:57:45 PM)

Appendix C Test Data Tables and Plots for Channel Closing

FCC PART 15 SUBPART E Channel Closing Measurements

Table 52 - FCC Part 15 Subpart E Channel Closing Test Results					
Waveform Type	Channel Closing Transmission Time [1]		Channel Move Time		Result
	Measured	Limit	Measured	Limit	
Radar Type 1	0ms	60 ms	3ms	10 s	Pass
Radar Type 5	0ms	60 ms	0ms	10 s	Pass



[1] Channel closing time for FCC measurements is the aggregate transmission time starting from 200ms after the end of the radar signal to the completion of the channel move.

Figure 2 Channel Closing Time and Channel Move Time – 40 second plot Type 1 (Master Mode)

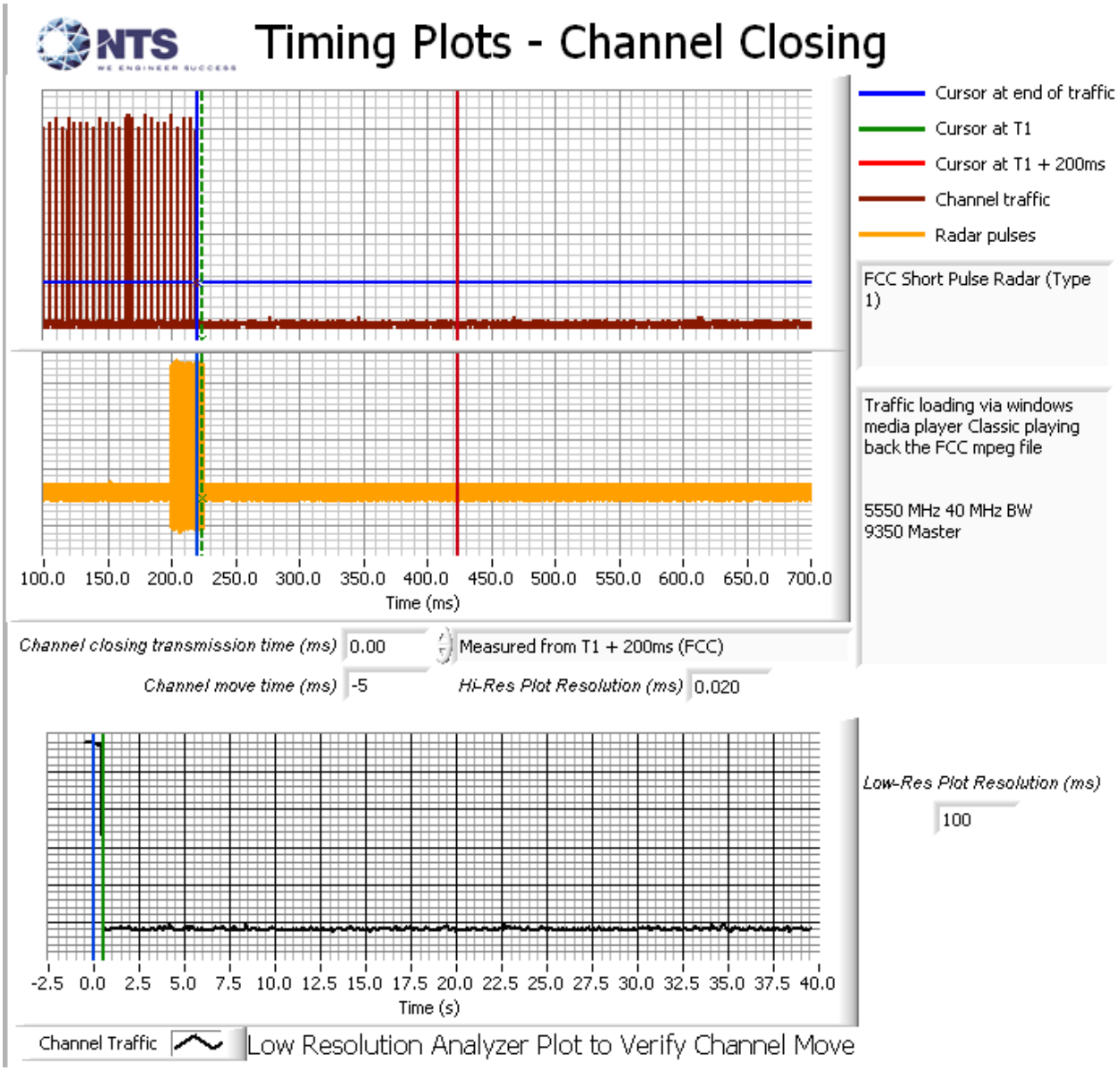


Figure 3 Close-Up of Transmissions Occurring More Than 200ms After The End of Radar Type 1 (Master mode)

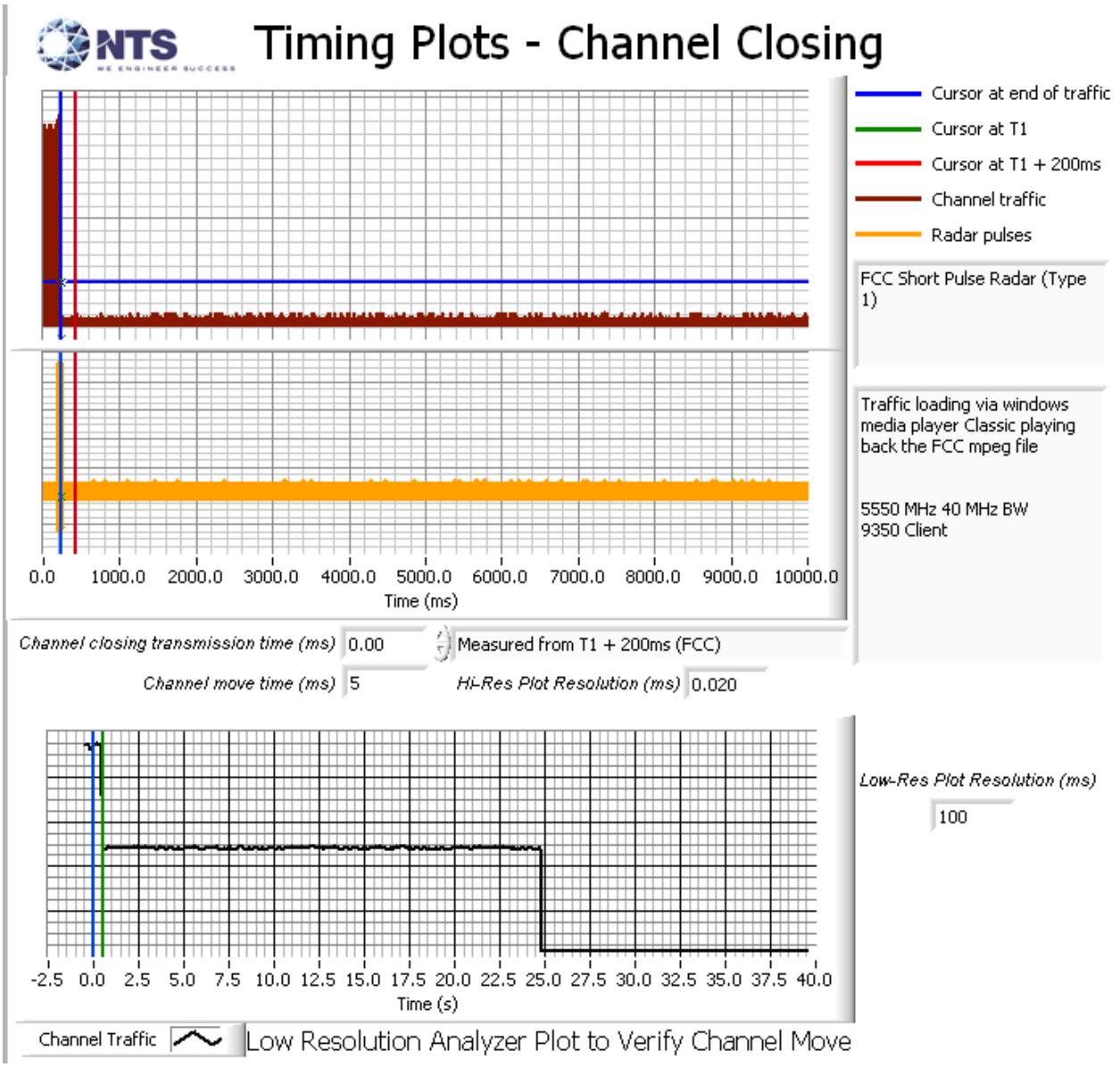


Figure 5 Channel Closing Time and Channel Move Time (mode) – 40 second plot Type 1 (Client Mode)

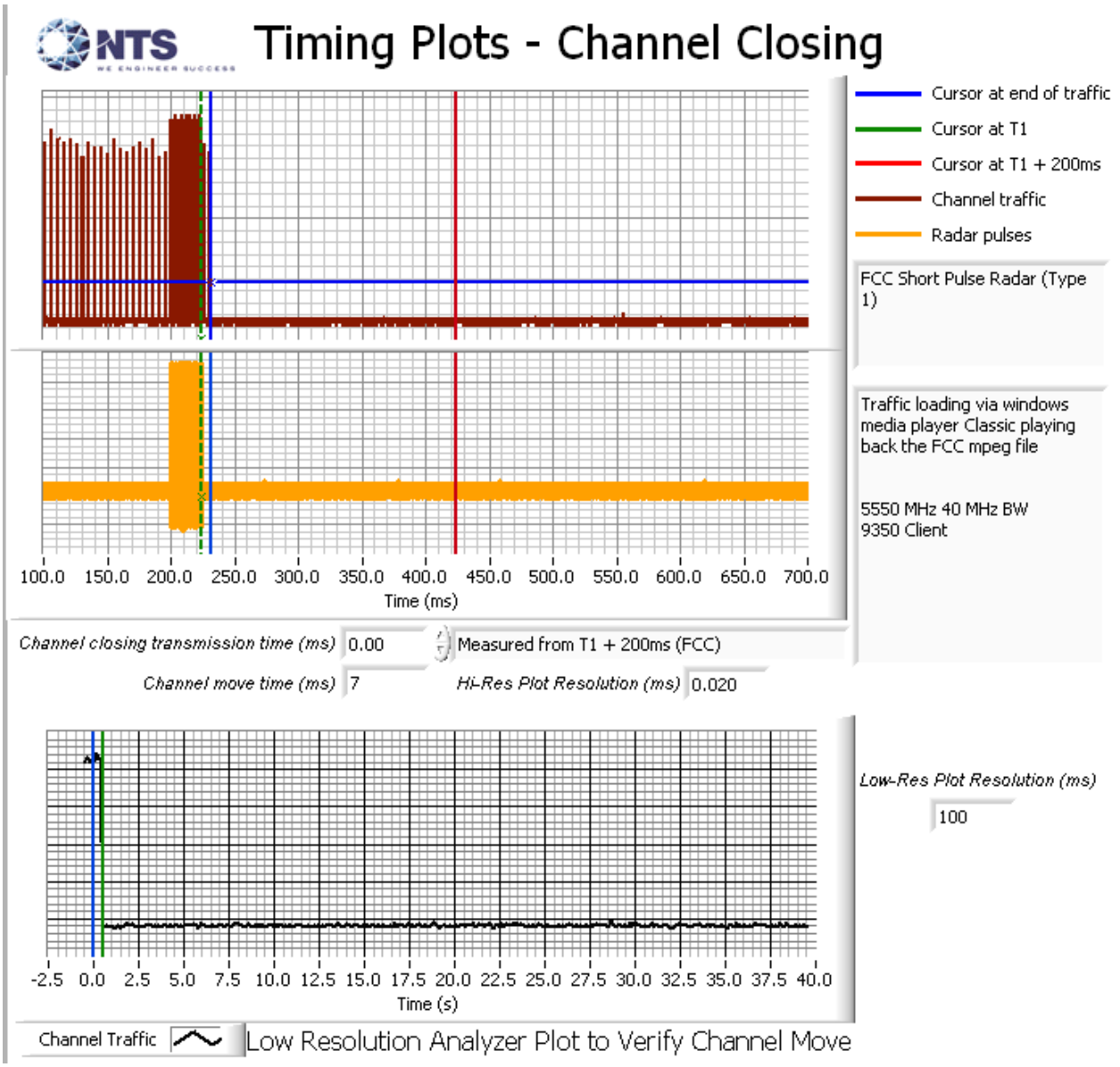


Figure 6 Close-Up of Transmissions Occurring More Than 200ms After The End of Radar Type 1 (Client mode)

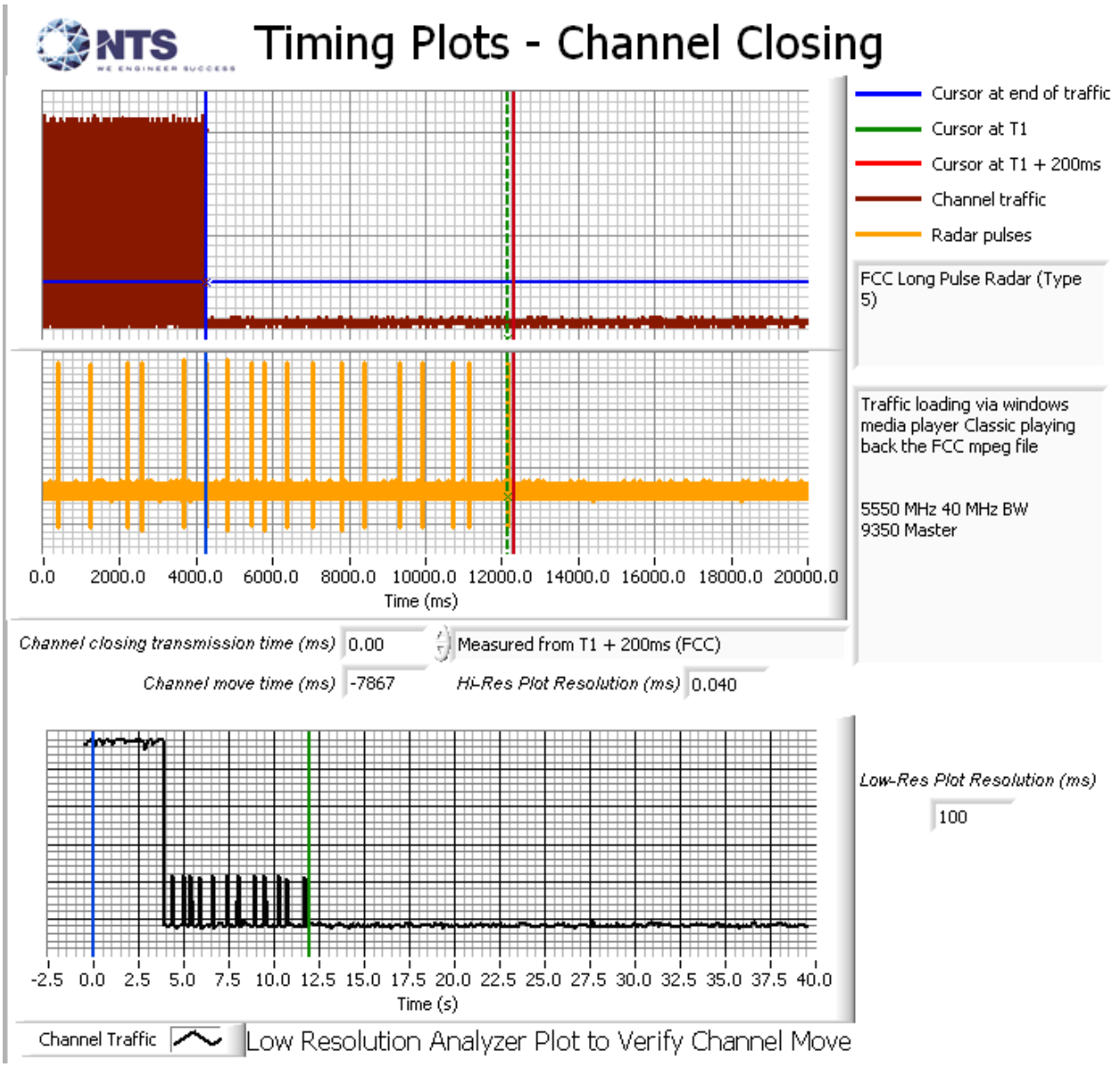


Figure 7 Channel Closing Time and Channel Move Time (mode) – 40 second plot Type 5 (Master Mode)

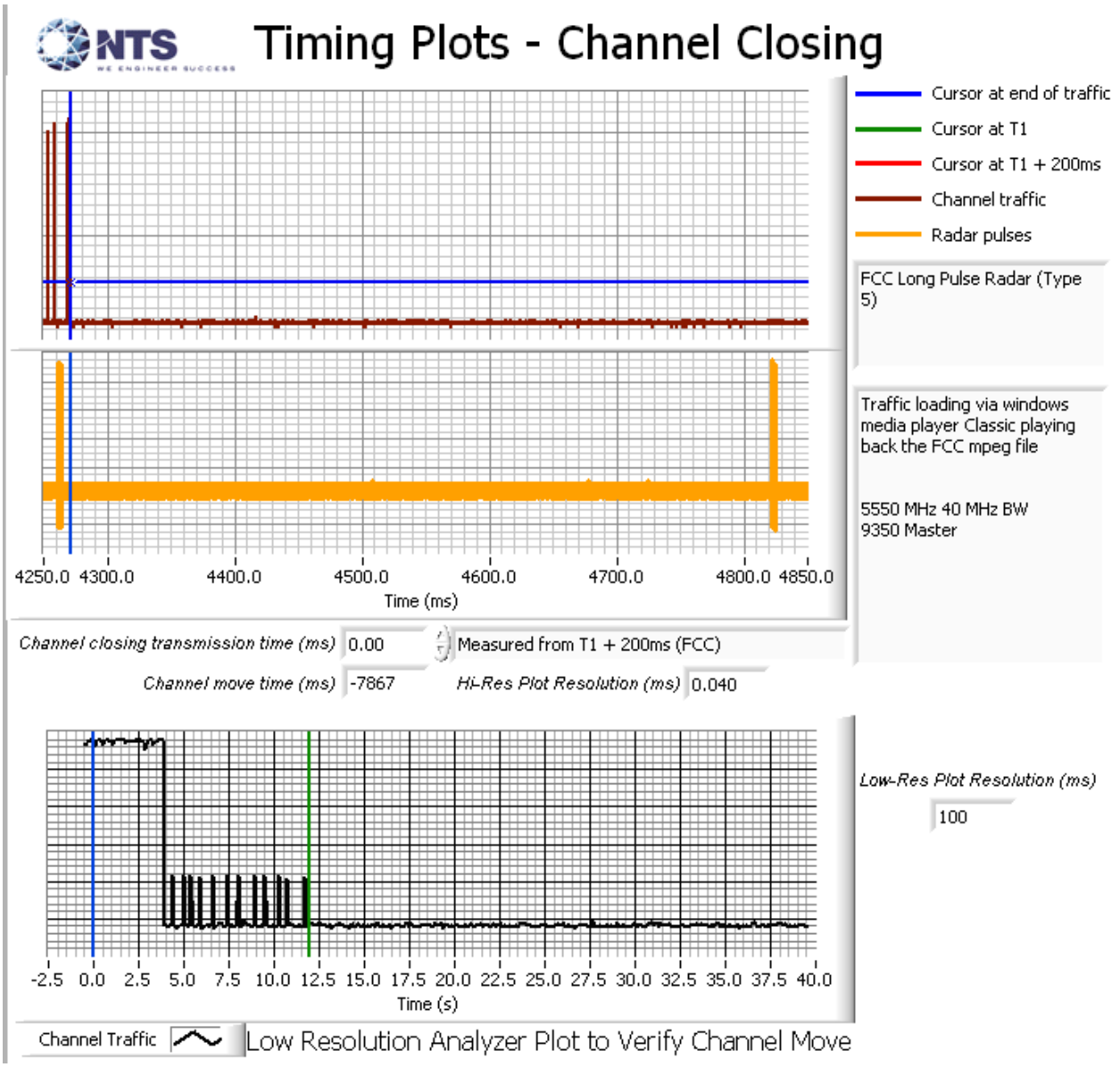


Figure 8 Close-Up of Transmissions Occurring More Than 200ms After The End of Radar Type 5 (Master mode)

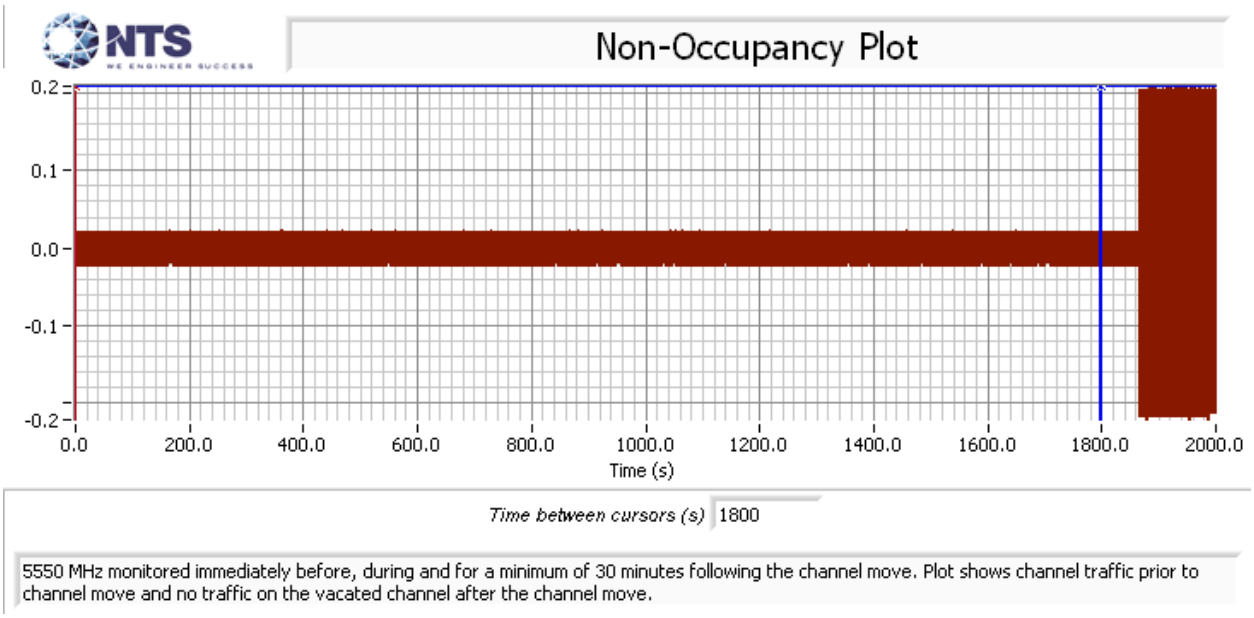


Figure 9 Radar Channel Non-Occupancy Plot (Master mode)

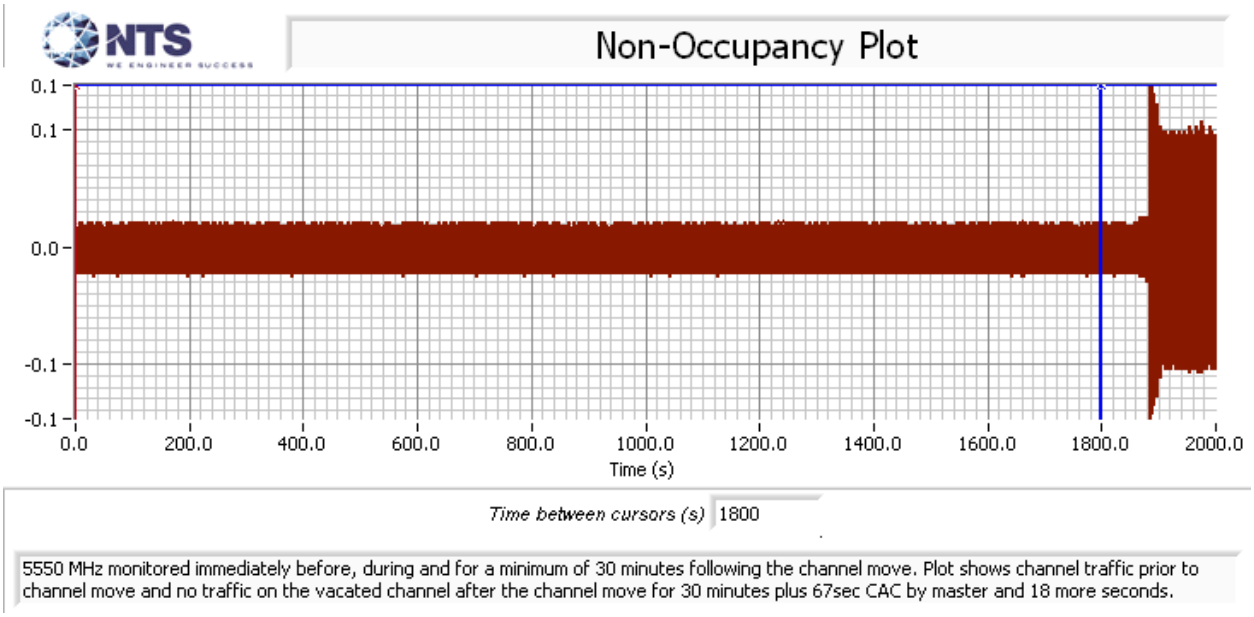


Figure 10 Radar Channel Non-Occupancy Plot (Slave mode)

The non-occupancy plot was made over a 30-minute time period following the channel move time with the analyzer IF output connected to the scope and tuned to the vacated channel. No transmissions were observed on the vacated channel after the channel move had been completed.

After the channel move the client device stopped transmitting on the vacated channel.

Appendix D Test Data – Channel Availability Check

5250- 5350 MHz, 5470 – 5725 MHz

The first plot shows the first transmissions on a channel after restarting/power cycling the master device, with no radar applied during the CAC. The start of CAC is assumed to be 67 seconds before the first transmission as indicated by the green cursor line.

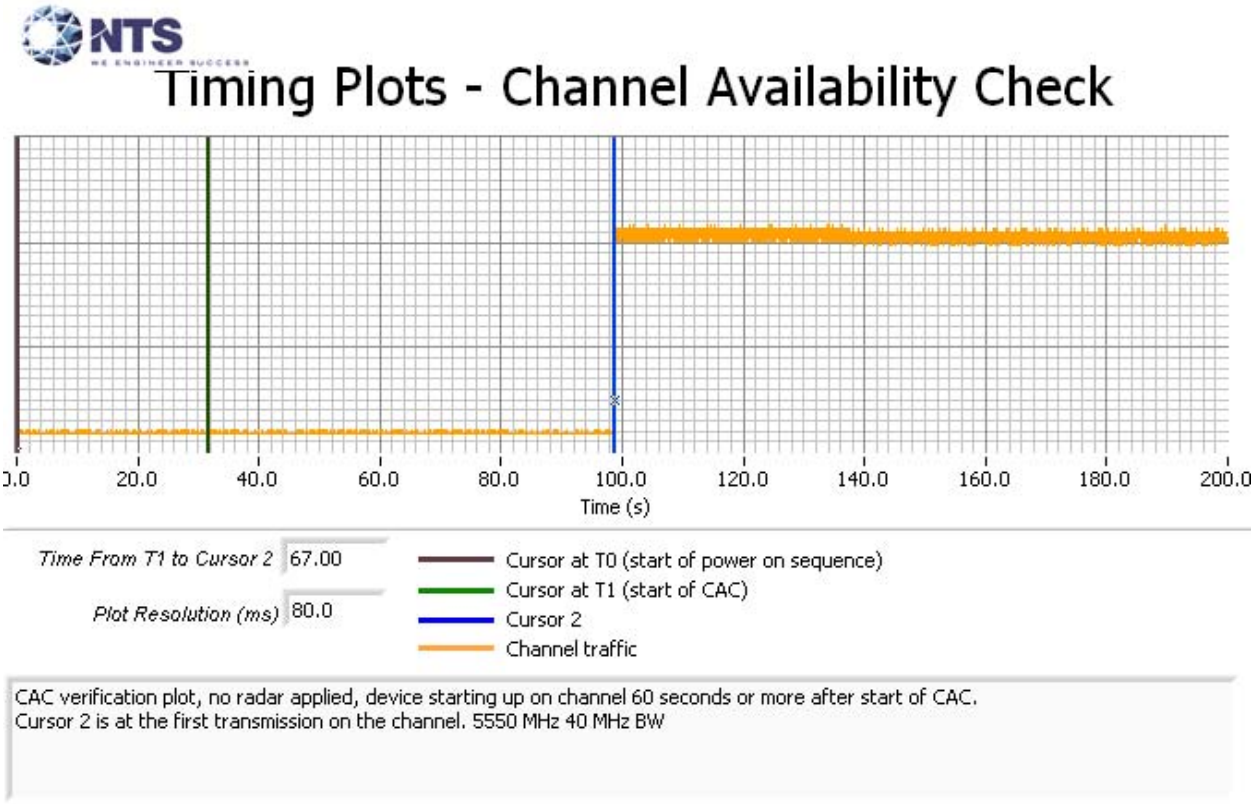


Figure 11 Plot of EUT Start-Up After CAC

The channel availability check (CAC) was made by applying type 1 radar during either the first 6 seconds or last 6 seconds of the CAC period.

The level of the radar signal applied was -64dBm. Measurements were made on channel 110 (5550 MHz).

The start time is the same for each of the plots and the green cursor is positioned to coincide with the start of the Channel Availability Check period based on the plot taken with no radar applied during the CAC.

The plots show that there were no transmissions on the channel after the radar burst was applied during the CAC, and confirm that the CAC is at least 60 seconds. The description of "Channel Traffic" in the plot legend indicates the transmissions from both the radar system and the EUT on the start-up channel. In all cases only the radar burst is observed. The resolution of the plot is not fine enough to resolve the individual pulses within the burst.

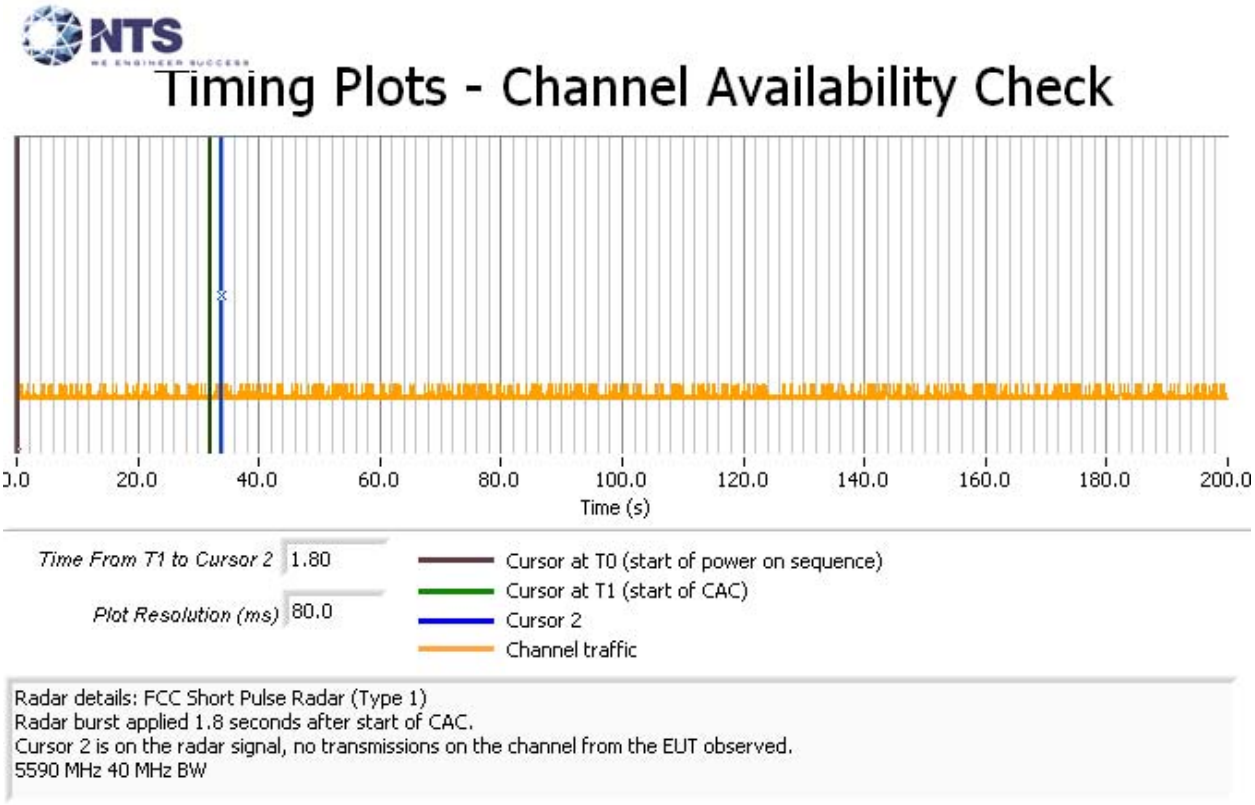


Figure 12 Radar Applied At Start of CAC

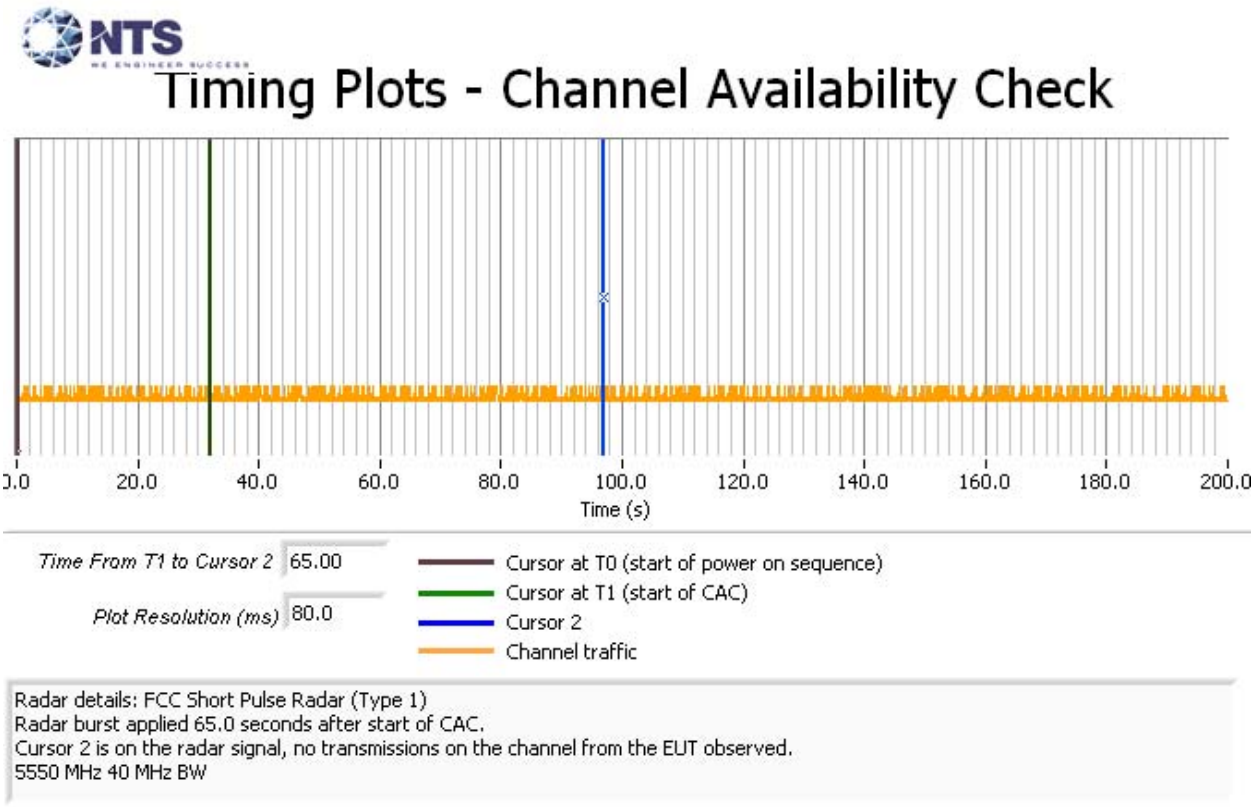


Figure 13 Radar Applied At End of CAC

Appendix E Test Data – Uniform Loading

Uniform Loading tests are not applicable; this device is part of a managed network and is professionally installed. Field units will be configured with one primary channel and two alternate channels.

Appendix F Antenna Specification

Antenna 85009324001 with feed cable (1 dB loss) = 16 dBi gain

Cambium Networks

Application Brief
PMP 450 ACCESS POINT ANTENNA OPTIONS

Application

The PMP 450 Access Point is connectorized to allow network operators the ability to select the antenna that best meets the needs of their specific application. This family of antennas was specifically designed for use with the PMP 450 platform of products, and delivers optimized performance, including maximized spectral efficiency, triple null fill, and easy installation.

The following detailed information is useful in understanding antenna performance.

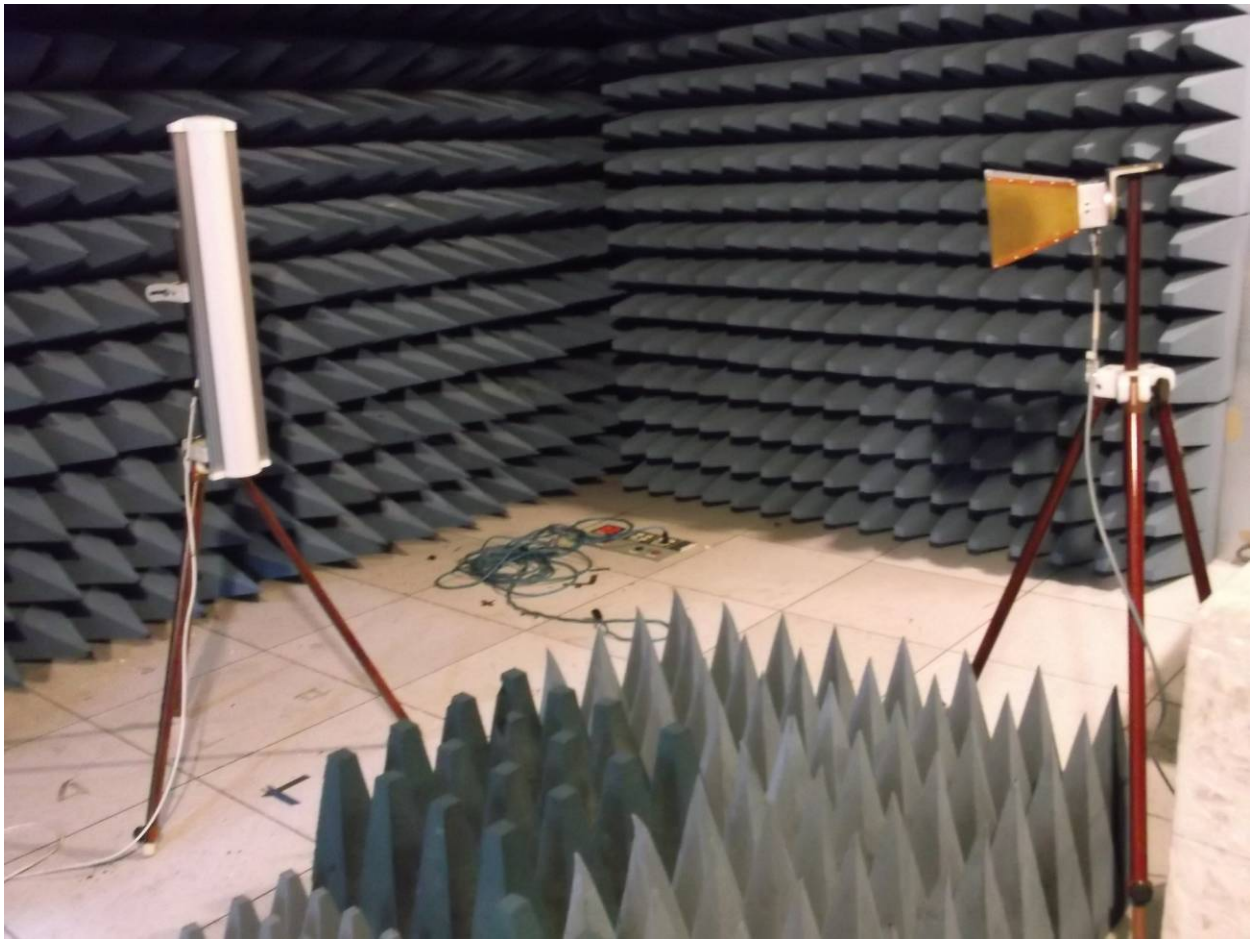
Specification Table

Specifications	85009324001	85009325001	
		OFDM	FSK
Frequency Range	5.4-6.0 GHz	5.4-6.0 GHz	
Antenna Type	Access Point Sector	Access Point Sector	
Gain	17dBi +1dBi /-1dBi	17 dBi +/- 1 dBi	10 dBi +/- 1 dBi
VSWR	1.5:1 max	1.5:1 max	
Port To Port Isolation	33 dB	>30 dB to all ports	
3dB Beamwidth-Azimuth	65°	45°	60°
3dB Beamwidth-Elevation	6°	8°	50°
Elevation Null Fill	Down to -23°	Down to -25°	N/A
1st Null	-18dB min	-18dB min	N/A
2nd Null	-33dB min	-33dB min	N/A
3rd Null	-36dB min	-36dB min	N/A
Azimuth Sidelobes	ETSI EN 302.326-3 SS2	ETSI EN 302.326-3 SS2	ETSI EN 302.326-3 SS1
Polarization	Dual Linear, Horizontal / Vertical	Dual Linear, Horizontal / Vertical	Linear, Vertical
Maximum Input Power	30 W	30 W	10 W
Input Impedance	50 Ohms	50 Ohms	
Front-to-Back Ratio	V-pol>32 dB, H-pol>35 dB	>35 dB	
Cross Polarization	>28 dB	>25 dB	>20 dB
Dimensions (HxWxD) (mm)	570 x 146 x 64	468 x 146 x 64	
Antenna Weight (kg)	2.9 kg, w/o bracket kit	2.8 kg, w/o bracket kit	
Antenna Connector	2 x N-Type Female, Straight	3 x Type N Female, Straight	
Wind Survival	216 km/h	216 km/h	
Pole Mounting Hardware	Quick Release, 1.5" to 4.5" Dia. Pole	Quick Release, 1.5" to 4.5" Dia. Pole	
Mechanical Downtilt	0° to 11°	0° to 11°	

Appendix G Test Configuration Photograph(s)

Conducted Test setup

Radiated Test setup picture 1



Radiated Test setup picture 2