Elliott Laboratories
www.elliottlabs.com
684 West Maude Avenue
Sunnyvale, CA 94085-3518
408-245-7800 Phone
408-245-3499 Fax

TEST REPORT

Covering the DYNAMIC FREQUENCY SELECTION (DFS) REQUIREMENTS OF

FCC Part 15 Subpart E (UNII)

Xirrus
Model(s): XN4

COMPANY:	Xirrus 370 North Westlake Blvd., Suite 200 Westlake Village, CA 91362
TEST SITE:	Elliott Laboratories 684 W. Maude Ave Sunnyvale, CA 94085
REPORT DATE:	October 27, 2009
FINAL TEST DATE:	February 19 and March 2, 2009
TEST ENGINEER:	Mehran Birgani
AUTHORIZED SIGNATORY:	Mark Briggs Staff Engineer

ACCREDITED
2016-01

REVISION HISTORY

Rev #	Date	Comments	Modified By
1	March 16, 2009	Initial Release	-
2	March 31, 2009	Added notes to Table 8 - Summary of All Results - 20MHz Channel (tested with external antenna) and Table 9 - Summary of All Results - 40MHz Channel (tested with internal antenna) justifying why only 30 trials were performed for the hopping radars. The detection probabilities were also updated to reflect the minimum number of trials required rather than the number of trials performed.	Mark Briggs
3	October 27, 2009	Removed data for 20MHz mode channel move/closing times for the long duration waveform (aka type 5) with rationale that 40MHz data is representative. Corrected typographical error stating that the channel availability check time was measured at 5500MHz and 5600 MHz in 20MHz mode to correctly how measurements were made at 5600 MHz.	Mark Briggs

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SCOPE

The Federal Communications Commission publish standard regarding ElectroMagnetic Compatibility and Radio spectrum Matters for radio-communications devices. Tests have been performed on the Xirrus model XN4 in accordance with these standards.

Test data has been taken pursuant to the relevant DFS requirements of the following standard.

- FCC Part 15 Subpart E Unlicensed National Information Infrastructure (U-NII) Devices

Tests were performed in accordance with these standards together with the current published versions of the basic standards referenced therein as outlined in Elliott Laboratories test procedures.

The test results recorded herein are based on a single type test of the Xirrus model XN4 and therefore apply only to the tested sample. The sample was selected and prepared by Steve Smith of Xirrus.

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 Xirrus model XN4 complied with the DFS requirements of:

FCC Part 15.407(h)(2)

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.

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The Xirrus models XN4 are multi-radio 802.11abgn Access Points which are designed to act as a hub for a wireless local area network (WLAN). The electrical rating of the device is 100/240Vac, 50/60Hz, and 0.5-3A. They can be powered via a PoE interface and dedicated PoE adapter (also sold with the device).

The sample was received on February 19, 2009 and tested on February 19 and March 2, 2009. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number
Xirrus Inc.	XN4	802.11abgn access point	Prototype

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

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

	5250 – 5350 MHz	5470 – 5725 MHz
Lowest Antenna Gain (dBi)	2.5	2.5
Highest Antenna Gain (dBi)	3.0	3.0
Output Power (dBm)	21.3	22.8

Note, Antenna gains are the gains per chain. In legacy MIMO mode the effective gain is 6dBi.
The 3dBi antenna is the internal antenna which supports MIMO modes of operation. The 2.5dBi antenna is the external antenna and this only supports legacy modes of operation in SISO mode.

☒ Power can exceed 200mW eirp

Channel Protocol

☒ IP Based

ENCLOSURE

The enclosure of the XN4 is primarily constructed of plastic. It is circular with a diameter of 32cm and a height of 8cm.

MODIFICATIONS

The EUT did not require modifications during testing in order to comply with the requirements of the standard 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
IBM	*T60*	*Laptop*	*L3-CR350*	*DoC*
IBM	R51	Laptop	99-MZ551	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 1	Laptop Ethernet	Cat 5	Unshielded	10.0
Console	USB Serial Adapter	Cat 5	Unshielded	5.0
AC Power	EUT AC power	3 wire	Unshielded	1.5

EUT OPERATION

The EUT was operating with the following software. The software is secured by password protection and professional installation to prevent the user from disabling the DFS function.

Master Device: XS-4.0-mad47.bin

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.

For the 20MHz and 40MHz channel bandwidth the start of the Channel Availability Check was the instant the command to change channel was sent.

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 model XN4 was fully evaluated against all requirements in both 40 MHz and 20MHz modes. In 20MHz mode the lower gain, external antenna was used. . In 40MHz mode the internal antennas were used, as the lower gain external antenna does not support the n-modes of operation.

RADAR WAVEFORMS

Table 1 - 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 2 - 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 3 - 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

TEST RESULTS SUMMARY

Table 4 - FCC Part 15 Subpart E Master Device Test Result Summary XN4 20MHz BW mode

Description	Radar Type	Radar Frequency	Measured Value	Requirement	Test Data	Status
Channel Availability Check (CAC) Time	Type 1	5500 MHz	77.3 s	≥ 60s	Appendix E	PASS
CAC Detection Threshold	Type 1	5500 MHz	-64dBm	-64dBm (See note 2)	Appendix E	PASS
In-Service Monitoring Detection Threshold	Type 1 Type 2 Type 3 Type 4 Type 5 Type 6	5500MHz 5500MHz 5500MHz 5500MHz 5500MHz 5300 MHz	-64dBm (note 2)	-64dBm (See note 2)	Appendix B	PASS
Bandwidth Detection	Type 1	Varies	± 8 MHz	80% of the 99% BW	-	PASS
Channel closing transmission time	Type 1 Type 5	5300MHz Note 4	1.1 ms Note 4	≤ 260ms	Appendix C	PASS
Channel move time	Type 1 Type 5	5300MHz 5600MHz	0.28 s 0.0 s	≤ 10s	Appendix C	PASS
Non-occupancy period	-	5300 MHz	More than 30 min.	> 30 minutes	Appendix C	PASS
Uniform Loading		-	-	Uniform Loading	Refer to operational description	PASS

Notes:

1) Tests were performed using the radiated test method.
2) 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 2.5dBi. 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 5250 – 5350 MHz and 5500-5700 MHz band.
4) Channel closing transmission time and channel move time measured for bin 5 radar type with the device operating in 40MHz mode as worst-case based on preliminary measurements of channel move/close time in 20MHz and 40MHz modes for bin 5 radar types.

TEST RESULTS SUMMARY – FCC Part 15, MASTER DEVICE

Table 5 - FCC Part 15 Subpart E Master Device Test Result Summary XN4 40MHz BW mode						
Description	Radar Type	Radar Frequency	Measured Value	Requirement	Test Data	Status
Channel Availability Check (CAC) Time	Type 1	5310 MHz	71.5 s	≥ 60s	Appendix E	PASS
CAC Detection Threshold	Type 1	5310 MHz	-64dBm	-64dBm (See note 2)	Appendix E	PASS
In-Service Monitoring Detection Threshold	Type 1 Type 2 Type 3 Type 4 Type 5 Type 6	5310MHz 5310MHz 5310MHz 5310MHz 5310MHz 5310MHz	-64dBm (note 2)	-64dBm (See note 2)	Appendix B	PASS
Bandwidth Detection	Type 1	Varies	± 18 MHz	80% of the 99% BW	-	PASS
Channel closing transmission time	Type 1 Type 5	5510MHz 5670MHz	0.16 ms 0.0 ms	≤ 260ms	Appendix C	PASS
Channel move time	Type 1 Type 5	5510MHz 5670MHz	0.38 s 0.0 s	≤ 10s	Appendix C	PASS
Non-occupancy period	-	5310 MHz	More than 30 min.	> 30 minutes	Appendix C	PASS
Uniform Loading		-	-	Uniform Loading	Refer to operational description	PASS

Notes:
1) Tests were performed using the conducted radiated test method.
2) The measured detection threshold is based on testing the master device using the radiated test method when the two active chains are connected to an antenna with a nominal gain of 3.0dBi per chain. 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 5250 – 5350 MHz band.

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

DFS TEST METHODS

RADIATED TEST METHOD

The combination of master and slave devices is located in an anechoic chamber. The simulated radar waveform is transmitted from a directional horn antenna (typically an EMCO 3115) toward the unit performing the radar detection (radar detection device, RDD). Every effort is made to ensure that the main beam of the EUT's antenna is aligned with the radar-generating antenna.

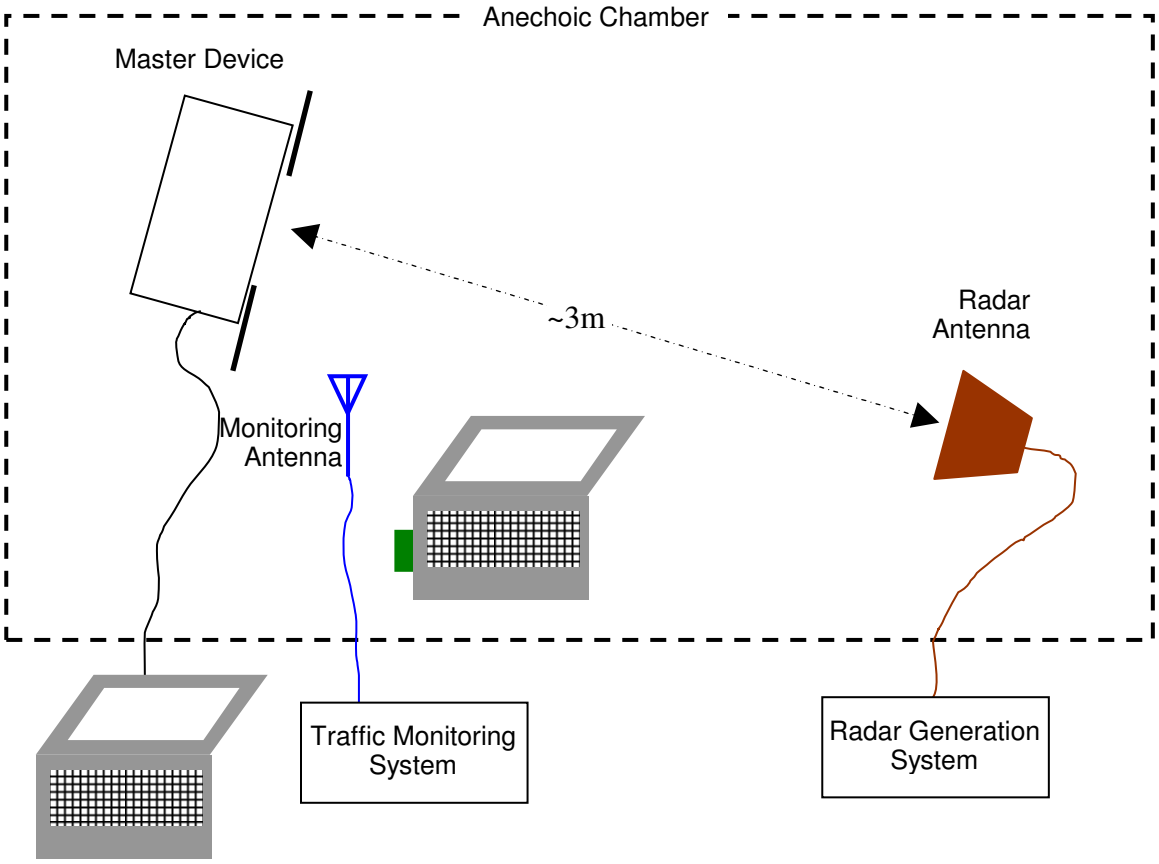

Figure 1: Test Configuration for radiated Measurement Method

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 level reported is the level at the RDD antenna and so it is not corrected for the RDD's antenna gain. The RDD is configured with the lowest gain antenna assembly intended for use with the device.

The signal level is verified by measuring the CW signal level from the radar generation system using a reference antenna of gain G (dBi). The radar signal level is calculated from the measured level, R (dBm), and any cable loss, L (dB), between the reference antenna and the measuring instrument:

Applied level (dBm) = R – GREF + L

If both master and client devices have radar detection capability then the device not under test is positioned with absorbing material between its antenna and the radar generating antenna, and 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 Elliott 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 – 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.

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) of the channel availability check.

To evaluate the channel availability check, a single burst of each radar type is applied at random periods during the 60-second 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 performed a total of four times for each radar type.

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 Analyzer	8595EM	787	30-Dec-09
Tektronix	Oscilloscope	TDS 5052B	2118	Cal before use
Agilent	PSG Vector Signal Generator	E8267C	1877	15-Feb-10
EMCO	1-18GHz Horn Antenna	3115	1561	10-Jun-10

Appendix B Test Data Tables for Radar Detection Probability

Table 6 - Detection Bandwidth Measurements, 20MHz Channel (+8MHz /-8MHz)					
EUT Frequency	Radar Type	Radar Frequency	# Detected	# Not Detected	Success (%)
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5291.00 MHz	2	3	40
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5292.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5293.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5294.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5295.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5296.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5297.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5298.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5299.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5300.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5301.00 MHz	9	1	90
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5302.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5303.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5304.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5305.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5306.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5307.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5308.00 MHz	10	0	100
5300.00 MHz	FCC Short Pulse Radar (Type 1)	5309.00 MHz	3	3	50

Table 7 - Detection Bandwidth Measurements, 40MHz Channel (+18MHz /-18MHz)					
EUT Frequency	Radar Type	Radar Frequency	# Detected	# Not Detected	Success (%)
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5291.00 MHz	2	3	40
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5292.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5293.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5294.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5295.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5296.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5297.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5298.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5299.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5300.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5301.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5302.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5303.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5304.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5305.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5306.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5307.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5308.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5309.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5310.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5311.00 MHz	9	1	90
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5312.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5313.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5314.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5315.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5316.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5317.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5318.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5319.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5320.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5321.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5322.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5323.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5324.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5325.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5326.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5327.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5328.00 MHz	10	0	100
5310.00 MHz	FCC Short Pulse Radar (Type 1)	5329.00 MHz	2	3	40

Appendix C Test Data Tables and Plots for Channel Closing

Table 8 - Summary of All Results - 20MHz Channel (tested with external antenna)				
Waveform Name	Pd (%)	Pd Required (%)	Number of Trials	Status
FCC Short Pulse Radar (Type 1)	80.0 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 2)	86.7 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 3)	90.0 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 4)	86.7 %	60.0 %	30	PASSED
Aggregate for types 1 through 4	85.9%	80.0%	-	PASSED
FCC frequency hopping radar (Type 6)	93.8 %	60.0 %	30 (Note 1)	PASSED
Long Sequence	83.3 %	60.0 %	30	PASSED
Note 1 – the minimum number of trials when using the alternate method for the evaluation of the detection of hopping radars should be a multiple of the detection bandwidth (16MHz) and at least 30 trials. Only 30 trials were performed rather than the minimum of 32 trials. The detection percentage is based on 30 detections out of 32 trials (the minimum number of trials required). As the detection percentage of 60% had been met after 30 trials was not considered necessary to perform the last two trials.				

Table 9 - Summary of All Results - 40MHz Channel (tested with internal antenna)				
Waveform Name	Pd (%)	Pd Required (%)	Number of Trials	Status
FCC Short Pulse Radar (Type 1)	96.7 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 2)	96.7 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 3)	100.0 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 4)	93.3 %	60.0 %	30	PASSED
Aggregate for types 1 through 4	96.7%	80.0%	-	PASSED
FCC frequency hopping radar (Type 6)	80.5 %	60.0 %	30 (Note 1)	PASSED
Long Sequence	96.7 %	60.0 %	30	PASSED
Note 1 – the minimum number of trials when using the alternate method for the evaluation of the detection of hopping radars should be a multiple of the detection bandwidth (36MHz) and at least 30 trials. Only 30 trials were performed rather than the minimum of 36 trials. The detection percentage is based on 29 detections out of 36 trials (the minimum number of trials required). As the detection percentage of 60% had been met after 30 trials was not considered necessary to perform the last six trials.				

Table 10 - FCC Short Pulse Radar (Type 1) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
2	18	1.0	1428.0	No	5495.0MHz, -64.0dBm	Single burst
3	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
4	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
5	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
6	18	1.0	1428.0	No	5505.0MHz, -64.0dBm	Single burst
7	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
8	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
9	18	1.0	1428.0	No	5505.0MHz, -64.0dBm	Single burst
10	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
11	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
12	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
13	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
14	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
15	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
16	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
17	18	1.0	1428.0	No	5495.0MHz, -64.0dBm	Single burst
18	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
19	18	1.0	1428.0	No	5500.0MHz, -64.0dBm	Single burst
20	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
21	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
22	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
23	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
24	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
25	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
26	18	1.0	1428.0	No	5495.0MHz, -64.0dBm	Single burst
27	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst
28	18	1.0	1428.0	Yes	5500.0MHz, -64.0dBm	Single burst
29	18	1.0	1428.0	Yes	5495.0MHz, -64.0dBm	Single burst
30	18	1.0	1428.0	Yes	5505.0MHz, -64.0dBm	Single burst

Table 11 - FCC Short Pulse Radar (Type 2) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	26	2.0	220.0	Yes	5500.0MHz, -64.0dBm	Single burst
2	24	1.6	201.0	Yes	5495.0MHz, -64.0dBm	Single burst
3	27	2.4	201.0	Yes	5505.0MHz, -64.0dBm	Single burst
4	26	3.0	191.0	Yes	5500.0MHz, -64.0dBm	Single burst
5	26	4.3	229.0	Yes	5495.0MHz, -64.0dBm	Single burst
6	28	4.1	151.0	No	5505.0MHz, -64.0dBm	Single burst
7	25	2.0	185.0	Yes	5500.0MHz, -64.0dBm	Single burst
8	25	4.9	201.0	Yes	5495.0MHz, -64.0dBm	Single burst
9	25	3.9	205.0	Yes	5505.0MHz, -64.0dBm	Single burst
10	29	4.3	203.0	Yes	5500.0MHz, -64.0dBm	Single burst
11	27	1.5	190.0	Yes	5495.0MHz, -64.0dBm	Single burst
12	28	3.5	155.0	Yes	5505.0MHz, -64.0dBm	Single burst
13	28	4.8	202.0	Yes	5500.0MHz, -64.0dBm	Single burst
14	23	4.9	221.0	Yes	5495.0MHz, -64.0dBm	Single burst
15	26	4.4	212.0	Yes	5505.0MHz, -64.0dBm	Single burst
16	25	4.6	150.0	No	5500.0MHz, -64.0dBm	Single burst
17	25	4.1	178.0	Yes	5495.0MHz, -64.0dBm	Single burst
18	25	2.9	224.0	Yes	5505.0MHz, -64.0dBm	Single burst
19	24	1.0	213.0	Yes	5500.0MHz, -64.0dBm	Single burst
20	26	4.4	226.0	Yes	5495.0MHz, -64.0dBm	Single burst
21	27	2.7	178.0	Yes	5505.0MHz, -64.0dBm	Single burst
22	29	3.1	228.0	Yes	5500.0MHz, -64.0dBm	Single burst
23	26	3.9	199.0	Yes	5495.0MHz, -64.0dBm	Single burst
24	27	2.0	179.0	Yes	5505.0MHz, -64.0dBm	Single burst
25	26	1.9	173.0	Yes	5500.0MHz, -64.0dBm	Single burst
26	28	3.3	156.0	Yes	5495.0MHz, -64.0dBm	Single burst
27	29	4.9	226.0	Yes	5505.0MHz, -64.0dBm	Single burst
28	27	4.0	150.0	Yes	5500.0MHz, -64.0dBm	Single burst
29	28	4.4	227.0	No	5495.0MHz, -64.0dBm	Single burst
30	25	4.1	195.0	No	5505.0MHz, -64.0dBm	Single burst

Table 12 - FCC Short Pulse Radar (Type 3) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	16	6.2	293.0	Yes	5500.0MHz, -64.0dBm	Single burst
2	16	7.8	410.0	No	5495.0MHz, -64.0dBm	Single burst
3	17	9.2	244.0	Yes	5505.0MHz, -64.0dBm	Single burst
4	17	7.4	229.0	No	5500.0MHz, -64.0dBm	Single burst
5	17	6.6	259.0	Yes	5495.0MHz, -64.0dBm	Single burst
6	16	6.4	419.0	Yes	5505.0MHz, -64.0dBm	Single burst
7	16	8.2	494.0	Yes	5500.0MHz, -64.0dBm	Single burst
8	18	7.2	260.0	Yes	5495.0MHz, -64.0dBm	Single burst
9	17	6.2	378.0	Yes	5505.0MHz, -64.0dBm	Single burst
10	16	8.3	248.0	Yes	5500.0MHz, -64.0dBm	Single burst
11	16	7.7	351.0	Yes	5495.0MHz, -64.0dBm	Single burst
12	18	7.6	493.0	Yes	5505.0MHz, -64.0dBm	Single burst
13	16	9.3	486.0	Yes	5500.0MHz, -64.0dBm	Single burst
14	16	6.5	319.0	Yes	5495.0MHz, -64.0dBm	Single burst
15	17	9.8	291.0	Yes	5505.0MHz, -64.0dBm	Single burst
16	16	9.4	425.0	Yes	5500.0MHz, -64.0dBm	Single burst
17	17	7.8	445.0	No	5495.0MHz, -64.0dBm	Single burst
18	17	8.9	216.0	Yes	5505.0MHz, -64.0dBm	Single burst
19	17	8.1	431.0	Yes	5500.0MHz, -64.0dBm	Single burst
20	17	6.7	454.0	Yes	5495.0MHz, -64.0dBm	Single burst
21	17	8.5	401.0	Yes	5505.0MHz, -64.0dBm	Single burst
22	17	9.5	497.0	Yes	5500.0MHz, -64.0dBm	Single burst
23	18	7.9	452.0	Yes	5495.0MHz, -64.0dBm	Single burst
24	16	9.2	202.0	Yes	5505.0MHz, -64.0dBm	Single burst
25	17	7.2	295.0	Yes	5500.0MHz, -64.0dBm	Single burst
26	16	7.2	453.0	Yes	5495.0MHz, -64.0dBm	Single burst
27	18	7.0	435.0	Yes	5505.0MHz, -64.0dBm	Single burst
28	18	8.6	317.0	Yes	5500.0MHz, -64.0dBm	Single burst
29	17	9.5	220.0	Yes	5495.0MHz, -64.0dBm	Single burst
30	17	6.2	478.0	Yes	5505.0MHz, -64.0dBm	Single burst

Table 13 - FCC Short Pulse Radar (Type 4) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	14	13.3	335.0	Yes	5500.0MHz, -64.0dBm	Single burst
2	12	13.6	383.0	Yes	5495.0MHz, -64.0dBm	Single burst
3	16	18.5	416.0	Yes	5505.0MHz, -64.0dBm	Single burst
4	15	18.6	492.0	No	5500.0MHz, -64.0dBm	Single burst
5	13	16.0	286.0	Yes	5495.0MHz, -64.0dBm	Single burst
6	15	17.5	350.0	Yes	5505.0MHz, -64.0dBm	Single burst
7	16	18.6	357.0	Yes	5500.0MHz, -64.0dBm	Single burst
8	12	15.0	345.0	Yes	5495.0MHz, -64.0dBm	Single burst
9	15	18.8	427.0	Yes	5505.0MHz, -64.0dBm	Single burst
10	15	17.9	433.0	Yes	5500.0MHz, -64.0dBm	Single burst
11	14	11.3	235.0	Yes	5495.0MHz, -64.0dBm	Single burst
12	13	18.0	330.0	Yes	5505.0MHz, -64.0dBm	Single burst
13	15	18.8	211.0	No	5500.0MHz, -64.0dBm	Single burst
14	15	17.5	213.0	No	5495.0MHz, -64.0dBm	Single burst
15	12	16.8	299.0	Yes	5505.0MHz, -64.0dBm	Single burst
16	15	17.3	451.0	Yes	5500.0MHz, -64.0dBm	Single burst
17	16	11.6	282.0	Yes	5495.0MHz, -64.0dBm	Single burst
18	14	14.5	242.0	Yes	5505.0MHz, -64.0dBm	Single burst
19	15	11.2	282.0	Yes	5500.0MHz, -64.0dBm	Single burst
20	12	17.9	270.0	Yes	5495.0MHz, -64.0dBm	Single burst
21	13	12.3	477.0	Yes	5505.0MHz, -64.0dBm	Single burst
22	12	19.8	442.0	No	5500.0MHz, -64.0dBm	Single burst
23	13	12.1	443.0	Yes	5495.0MHz, -64.0dBm	Single burst
24	13	12.3	464.0	Yes	5505.0MHz, -64.0dBm	Single burst
25	16	13.1	290.0	Yes	5500.0MHz, -64.0dBm	Single burst
26	14	14.8	285.0	Yes	5495.0MHz, -64.0dBm	Single burst
27	14	18.8	332.0	Yes	5505.0MHz, -64.0dBm	Single burst
28	14	14.5	321.0	Yes	5500.0MHz, -64.0dBm	Single burst
29	13	14.0	235.0	Yes	5495.0MHz, -64.0dBm	Single burst
30	16	16.9	357.0	Yes	5505.0MHz, -64.0dBm	Single burst

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	9	1.0	333.0	Yes	5307.0MHz, -64.0dBm	Hop sequence: 5424, 5324, 5436, 5369, 5445, 5267, 5426, 5298, 5411, 5307, 5263, 5251, 5356, 5283, 5339, 5322, 5332, 5413, 5335, 5365, 5340, 5438, 5325, 5308, 5354, 5401, 5285, 5464, 5304, 5321, 5370, 5361, 5302, 5320, 5408, 5392, 5318, 5422, 5349, 5317, 5343, 5371, 5388, 5384, 5328, 5366, 5465, 5262, 5351, 5379, 5387, 5303, 5409, 5274, 5310, 5391, 5448, 5348, 5374, 5290, 5381, 5434, 5396, 5380, 5311, 5433, 5352, 5316, 5272, 5447, 5450, 5382, 5399, 5415, 5417, 5331, 5373, 5429, 5252, 5443, 5451, 5319, 5270, 5287, 5462, 5360, 5291, 5347, 5456, 5449, 5268, 5277, 5260, 5444, 5292, 5333, 5323, 5255, 5334, 5313 (7 hits)
2	9	1.0	333.0	Yes	5308.0MHz, -64.0dBm	Hop sequence: 5256, 5425, 5262, 5348, 5371, 5335, 5455, 5466, 5257, 5363, 5293, 5332, 5306, 5406, 5469, 5370, 5254, 5403, 5445, 5394, 5318, 5275, 5343, 5408, 5266, 5388, 5380, 5323, 5405, 5287, 5432, 5260, 5308, 5368, 5377, 5290, 5393, 5291, 5391, 5272, 5273, 5431, 5303, 5414, 5356, 5271, 5268, 5360, 5449, 5264, 5331, 5302, 5457, 5364, 5366, 5464, 5378, 5283, 5362, 5410, 5372, 5351, 5338, 5299, 5382, 5404, 5300, 5317, 5337, 5456, 5416, 5263, 5347, 5301, 5423, 5460, 5419, 5383, 5421, 5352, 5278, 5367, 5418, 5437, 5344, 5379, 5465, 5375, 5292, 5265, 5355, 5415, 5426, 5438, 5289, 5282, 5461, 5345, 5304, 5305 (11 hits)
3	9	1.0	333.0	Yes	5292.0MHz, -64.0dBm	Hop sequence: 5393, 5357, 5334, 5359, 5323, 5322, 5330, 5284, 5313, 5361, 5370, 5325, 5408, 5400, 5467, 5281, 5423, 5320, 5324, 5298, 5349, 5305, 5382, 5372, 5348, 5377, 5375, 5443, 5331, 5279, 5328, 5462, 5343, 5458, 5431, 5426, 5416, 5391, 5268, 5440, 5421, 5301, 5321, 5311, 5410, 5272, 5396, 5362, 5436, 5315, 5314, 5355, 5358, 5341, 5411, 5401, 5307, 5340, 5347, 5365, 5374, 5289, 5442, 5296, 5413, 5460, 5360, 5353, 5445, 5327, 5261, 5285, 5470, 5422, 5425, 5264, 5364, 5337, 5435, 5381, 5308, 5385, 5363, 5390, 5456, 5371, 5259, 5402, 5336, 5335, 5302, 5366, 5267, 5304, 5407, 5424, 5398, 5342, 5280, 5419 (8 hits)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
4	9	1.0	333.0	Yes	5293.0MHz, -64.0dBm	Hop sequence: 5415, 5348, 5354, 5365, 5324, 5267, 5318, 5449, 5345, 5349, 5350, 5358, 5445, 5403, 5286, 5377, 5352, 5435, 5351, 5434, 5329, 5255, 5397, 5423, 5328, 5372, 5310, 5387, 5355, 5432, 5356, 5428, 5287, 5465, 5262, 5386, 5293, 5334, 5401, 5460, 5417, 5278, 5322, 5279, 5416, 5263, 5399, 5440, 5326, 5323, 5319, 5336, 5422, 5454, 5304, 5297, 5332, 5342, 5283, 5469, 5269, 5277, 5462, 5315, 5404, 5257, 5300, 5266, 5437, 5368, 5459, 5436, 5333, 5468, 5307, 5431, 5370, 5344, 5281, 5308, 5325, 5402, 5353, 5282, 5347, 5268, 5378, 5363, 5290, 5272, 5429, 5439, 5280, 5265, 5320, 5425, 5364, 5321, 5309, 5390 (6 hits)
5	9	1.0	333.0	Yes	5294.0MHz, -64.0dBm	Hop sequence: 5357, 5398, 5429, 5302, 5279, 5286, 5466, 5373, 5468, 5352, 5462, 5467, 5325, 5283, 5316, 5448, 5268, 5359, 5361, 5390, 5291, 5383, 5326, 5428, 5394, 5313, 5263, 5355, 5275, 5328, 5423, 5256, 5431, 5274, 5356, 5346, 5362, 5457, 5432, 5433, 5343, 5305, 5330, 5404, 5345, 5277, 5450, 5435, 5318, 5372, 5406, 5348, 5386, 5405, 5278, 5427, 5351, 5273, 5261, 5376, 5397, 5378, 5344, 5371, 5385, 5252, 5284, 5438, 5288, 5311, 5437, 5407, 5285, 5402, 5460, 5347, 5451, 5421, 5322, 5317, 5323, 5337, 5312, 5265, 5349, 5370, 5315, 5382, 5307, 5251, 5293, 5296, 5324, 5254, 5319, 5412, 5414, 5280, 5295, 5461 (6 hits)
6	9	1.0	333.0	Yes	5295.0MHz, -64.0dBm	Hop sequence: 5272, 5393, 5261, 5391, 5346, 5439, 5306, 5437, 5408, 5427, 5441, 5373, 5277, 5312, 5330, 5337, 5322, 5435, 5396, 5442, 5319, 5383, 5270, 5320, 5384, 5360, 5394, 5354, 5305, 5331, 5338, 5455, 5431, 5425, 5321, 5447, 5390, 5334, 5293, 5400, 5333, 5302, 5367, 5295, 5438, 5325, 5401, 5251, 5296, 5406, 5465, 5340, 5290, 5317, 5359, 5471, 5258, 5454, 5327, 5426, 5269, 5323, 5287, 5404, 5369, 5364, 5428, 5467, 5285, 5378, 5315, 5464, 5283, 5271, 5361, 5309, 5459, 5274, 5440, 5402, 5413, 5357, 5398, 5381, 5273, 5419, 5347, 5377, 5469, 5466, 5453, 5356, 5294, 5252, 5457, 5463, 5289, 5388, 5414, 5411 (7 hits)
7	9	1.0	333.0	Yes	5296.0MHz, -64.0dBm	Hop sequence: 5417, 5293, 5257, 5327, 5312, 5262, 5284, 5305, 5400, 5360, 5394, 5265, 5344, 5444, 5458, 5254, 5446, 5273, 5253, 5375, 5352, 5449, 5403, 5294, 5318, 5303, 5374, 5365, 5466, 5467, 5252, 5338, 5434, 5258, 5463, 5404, 5328, 5339, 5433, 5451, 5440, 5438, 5296, 5283, 5468, 5324, 5276, 5311, 5471, 5350, 5363, 5427, 5329, 5282, 5388, 5342, 5416, 5428, 5322, 5448, 5255, 5277, 5280, 5286, 5387, 5397, 5456, 5422, 5402, 5372, 5270, 5290, 5306, 5410, 5278, 5469, 5432, 5464, 5309, 5356, 5431, 5408, 5295, 5409, 5348, 5336, 5266, 5358, 5370, 5313, 5425, 5384, 5429, 5251, 5319, 5315, 5420, 5366, 5368, 5271 (7 hits)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
8	9	1.0	333.0	Yes	5297.0MHz, -64.0dBm	Hop sequence: 5360, 5385, 5456, 5391, 5311, 5470, 5467, 5387, 5364, 5373, 5277, 5259, 5371, 5468, 5463, 5282, 5379, 5334, 5351, 5469, 5255, 5290, 5449, 5278, 5377, 5401, 5251, 5307, 5263, 5258, 5296, 5422, 5289, 5409, 5269, 5454, 5418, 5316, 5338, 5370, 5423, 5274, 5265, 5406, 5381, 5327, 5412, 5326, 5308, 5297, 5424, 5343, 5345, 5324, 5320, 5441, 5448, 5462, 5393, 5410, 5346, 5339, 5361, 5280, 5260, 5291, 5398, 5388, 5438, 5348, 5365, 5407, 5440, 5344, 5464, 5298, 5254, 5402, 5426, 5455, 5279, 5309, 5286, 5366, 5445, 5261, 5275, 5271, 5378, 5300, 5413, 5419, 5253, 5466, 5386, 5340, 5319, 5368, 5358, 5336 (6 hits)
9	9	1.0	333.0	Yes	5298.0MHz, -64.0dBm	Hop sequence: 5385, 5344, 5443, 5421, 5307, 5464, 5364, 5460, 5259, 5378, 5251, 5358, 5365, 5431, 5327, 5433, 5280, 5425, 5267, 5286, 5388, 5345, 5402, 5356, 5449, 5379, 5452, 5462, 5400, 5299, 5411, 5468, 5399, 5269, 5354, 5253, 5437, 5306, 5268, 5423, 5254, 5275, 5465, 5396, 5393, 5398, 5341, 5372, 5355, 5311, 5414, 5313, 5362, 5335, 5314, 5382, 5413, 5427, 5357, 5288, 5453, 5318, 5285, 5336, 5375, 5337, 5302, 5383, 5304, 5380, 5265, 5339, 5255, 5367, 5418, 5466, 5386, 5401, 5419, 5353, 5376, 5454, 5283, 5284, 5266, 5424, 5369, 5303, 5448, 5407, 5363, 5467, 5387, 5340, 5366, 5322, 5404, 5392, 5325, 5457 (6 hits)
10	9	1.0	333.0	Yes	5299.0MHz, -64.0dBm	Hop sequence: 5269, 5275, 5361, 5273, 5335, 5414, 5307, 5329, 5435, 5300, 5391, 5427, 5280, 5305, 5309, 5263, 5272, 5390, 5342, 5337, 5470, 5410, 5364, 5443, 5313, 5412, 5441, 5345, 5293, 5464, 5251, 5374, 5277, 5350, 5423, 5444, 5415, 5346, 5326, 5419, 5306, 5460, 5395, 5459, 5397, 5299, 5341, 5271, 5465, 5285, 5400, 5380, 5462, 5308, 5388, 5405, 5276, 5327, 5267, 5254, 5452, 5315, 5351, 5370, 5387, 5353, 5377, 5469, 5402, 5284, 5266, 5323, 5287, 5426, 5461, 5352, 5303, 5295, 5451, 5468, 5338, 5349, 5356, 5381, 5282, 5372, 5318, 5360, 5291, 5432, 5274, 5261, 5259, 5373, 5449, 5385, 5455, 5310, 5339, 5292 (10 hits)
11	9	1.0	333.0	Yes	5300.0MHz, -64.0dBm	Hop sequence: 5415, 5448, 5387, 5343, 5310, 5427, 5306, 5439, 5308, 5456, 5417, 5419, 5446, 5320, 5322, 5425, 5267, 5396, 5424, 5333, 5276, 5395, 5298, 5288, 5409, 5297, 5460, 5313, 5410, 5457, 5271, 5282, 5422, 5344, 5466, 5421, 5365, 5370, 5296, 5433, 5398, 5462, 5357, 5273, 5394, 5378, 5373, 5323, 5426, 5262, 5379, 5465, 5402, 5281, 5447, 5286, 5341, 5414, 5347, 5400, 5458, 5269, 5255, 5432, 5438, 5350, 5325, 5469, 5327, 5253, 5331, 5329, 5404, 5266, 5356, 5406, 5399, 5354, 5272, 5342, 5340, 5408, 5391, 5384, 5367, 5366, 5436, 5352, 5461, 5345, 5290, 5261, 5314, 5376, 5471, 5260, 5358, 5437, 5418, 5371 (5 hits)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
12	9	1.0	333.0	Yes	5301.0MHz, -64.0dBm	Hop sequence: 5402, 5468, 5426, 5336, 5267, 5276, 5279, 5307, 5316, 5435, 5253, 5272, 5460, 5422, 5319, 5263, 5373, 5349, 5462, 5439, 5382, 5444, 5436, 5441, 5448, 5259, 5297, 5446, 5257, 5289, 5442, 5469, 5428, 5467, 5423, 5340, 5395, 5293, 5361, 5337, 5355, 5412, 5360, 5351, 5306, 5264, 5275, 5383, 5456, 5260, 5363, 5255, 5302, 5251, 5308, 5411, 5322, 5332, 5418, 5457, 5288, 5388, 5420, 5318, 5359, 5397, 5453, 5347, 5354, 5262, 5393, 5329, 5400, 5283, 5413, 5465, 5282, 5341, 5376, 5387, 5364, 5353, 5417, 5314, 5365, 5390, 5396, 5301, 5331, 5330, 5304, 5271, 5371, 5325, 5362, 5392, 5385, 5305, 5256, 5407 (9 hits)
13	9	1.0	333.0	Yes	5302.0MHz, -64.0dBm	Hop sequence: 5449, 5259, 5422, 5267, 5272, 5374, 5319, 5273, 5327, 5354, 5410, 5260, 5380, 5450, 5376, 5463, 5278, 5469, 5338, 5420, 5398, 5323, 5434, 5437, 5284, 5302, 5266, 5359, 5309, 5459, 5287, 5352, 5452, 5388, 5348, 5419, 5387, 5279, 5366, 5270, 5400, 5441, 5413, 5358, 5316, 5332, 5303, 5310, 5318, 5405, 5461, 5342, 5424, 5305, 5455, 5291, 5433, 5320, 5299, 5325, 5429, 5408, 5393, 5372, 5304, 5381, 5340, 5370, 5256, 5254, 5328, 5399, 5440, 5371, 5470, 5343, 5297, 5330, 5351, 5401, 5337, 5307, 5456, 5365, 5418, 5292, 5425, 5384, 5377, 5390, 5293, 5367, 5357, 5389, 5362, 5286, 5353, 5416, 5313, 5464 (9 hits)
14	9	1.0	333.0	Yes	5303.0MHz, -64.0dBm	Hop sequence: 5362, 5441, 5342, 5261, 5420, 5335, 5436, 5434, 5470, 5317, 5410, 5340, 5393, 5262, 5358, 5364, 5266, 5286, 5267, 5422, 5366, 5413, 5321, 5381, 5440, 5251, 5271, 5297, 5319, 5305, 5433, 5387, 5255, 5388, 5467, 5382, 5298, 5430, 5333, 5380, 5359, 5392, 5456, 5314, 5414, 5418, 5424, 5292, 5320, 5343, 5462, 5302, 5423, 5276, 5421, 5253, 5323, 5281, 5313, 5360, 5363, 5348, 5357, 5310, 5307, 5341, 5346, 5451, 5316, 5356, 5452, 5469, 5397, 5391, 5290, 5457, 5379, 5394, 5404, 5272, 5278, 5446, 5385, 5347, 5465, 5282, 5439, 5463, 5280, 5294, 5416, 5304, 5329, 5428, 5411, 5301, 5444, 5328, 5445, 5407 (9 hits)
15	9	1.0	333.0	Yes	5304.0MHz, -64.0dBm	Hop sequence: 5386, 5418, 5376, 5290, 5353, 5458, 5299, 5408, 5327, 5466, 5379, 5373, 5443, 5451, 5367, 5447, 5445, 5289, 5437, 5395, 5294, 5298, 5317, 5417, 5337, 5350, 5260, 5278, 5404, 5412, 5444, 5331, 5310, 5371, 5295, 5425, 5276, 5382, 5338, 5305, 5313, 5254, 5279, 5364, 5392, 5363, 5421, 5339, 5391, 5426, 5291, 5302, 5406, 5365, 5388, 5328, 5435, 5264, 5314, 5304, 5385, 5312, 5369, 5273, 5342, 5315, 5323, 5311, 5399, 5456, 5286, 5322, 5352, 5375, 5424, 5446, 5285, 5308, 5397, 5394, 5415, 5389, 5464, 5287, 5288, 5280, 5283, 5449, 5257, 5270, 5454, 5268, 5300, 5354, 5402, 5400, 5465, 5380, 5469, 5347 (9 hits)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
16	9	1.0	333.0	Yes	5305.0MHz, -64.0dBm	Hop sequence: 5350, 5465, 5406, 5460, 5289, 5390, 5284, 5412, 5270, 5293, 5301, 5262, 5323, 5347, 5335, 5291, 5336, 5455, 5303, 5405, 5434, 5424, 5365, 5328, 5427, 5468, 5283, 5340, 5426, 5300, 5458, 5315, 5381, 5252, 5250, 5318, 5395, 5409, 5258, 5413, 5290, 5450, 5277, 5327, 5253, 5442, 5339, 5360, 5288, 5333, 5275, 5469, 5273, 5325, 5267, 5358, 5264, 5377, 5266, 5357, 5467, 5341, 5337, 5259, 5451, 5463, 5393, 5251, 5269, 5366, 5408, 5314, 5263, 5379, 5416, 5334, 5389, 5305, 5312, 5302, 5446, 5436, 5429, 5260, 5348, 5397, 5452, 5414, 5304, 5352, 5362, 5326, 5349, 5439, 5371, 5265, 5449, 5380, 5384, 5430 (7 hits)
17	9	1.0	333.0	Yes	5306.0MHz, -64.0dBm	Hop sequence: 5316, 5275, 5416, 5400, 5457, 5375, 5321, 5268, 5251, 5420, 5380, 5351, 5373, 5455, 5263, 5421, 5329, 5258, 5462, 5311, 5442, 5434, 5328, 5423, 5403, 5397, 5433, 5404, 5408, 5409, 5357, 5350, 5394, 5461, 5445, 5418, 5366, 5324, 5399, 5342, 5459, 5431, 5385, 5296, 5256, 5440, 5346, 5382, 5446, 5354, 5269, 5432, 5334, 5313, 5338, 5376, 5437, 5337, 5402, 5407, 5365, 5386, 5336, 5271, 5449, 5368, 5450, 5345, 5383, 5314, 5406, 5295, 5288, 5417, 5463, 5364, 5392, 5466, 5317, 5426, 5284, 5413, 5388, 5252, 5362, 5322, 5458, 5430, 5370, 5389, 5443, 5377, 5393, 5352, 5452, 5265, 5326, 5361, 5315, 5308 (3 hits)
18	9	1.0	333.0	Yes	5307.0MHz, -64.0dBm	Hop sequence: 5407, 5394, 5374, 5363, 5311, 5280, 5315, 5419, 5387, 5273, 5322, 5329, 5276, 5455, 5350, 5283, 5399, 5417, 5325, 5259, 5448, 5262, 5444, 5456, 5263, 5358, 5277, 5332, 5355, 5359, 5313, 5471, 5464, 5346, 5360, 5304, 5251, 5297, 5347, 5291, 5469, 5319, 5375, 5264, 5416, 5414, 5274, 5371, 5289, 5389, 5340, 5390, 5393, 5348, 5298, 5367, 5403, 5254, 5286, 5308, 5423, 5442, 5279, 5402, 5253, 5409, 5309, 5424, 5395, 5361, 5428, 5343, 5421, 5468, 5434, 5438, 5307, 5404, 5446, 5391, 5364, 5460, 5362, 5397, 5385, 5440, 5373, 5256, 5342, 5290, 5410, 5337, 5443, 5284, 5432, 5453, 5282, 5275, 5466, 5430 (5 hits)
19	9	1.0	333.0	Yes	5308.0MHz, -64.0dBm	Hop sequence: 5308, 5418, 5460, 5374, 5260, 5332, 5387, 5358, 5276, 5451, 5379, 5321, 5271, 5372, 5252, 5410, 5279, 5337, 5406, 5341, 5273, 5300, 5277, 5382, 5353, 5281, 5266, 5336, 5306, 5408, 5448, 5397, 5278, 5274, 5453, 5356, 5466, 5261, 5359, 5331, 5344, 5355, 5442, 5420, 5333, 5360, 5380, 5342, 5403, 5269, 5362, 5471, 5339, 5450, 5428, 5313, 5255, 5396, 5287, 5265, 5326, 5309, 5433, 5464, 5312, 5462, 5310, 5264, 5392, 5422, 5320, 5447, 5407, 5370, 5389, 5298, 5322, 5286, 5369, 5452, 5254, 5435, 5405, 5295, 5426, 5375, 5459, 5352, 5305, 5414, 5317, 5429, 5351, 5323, 5330, 5272, 5461, 5390, 5285, 5268 (6 hits)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
20	9	1.0	333.0	Yes	5292.0MHz, -64.0dBm	Hop sequence: 5301, 5303, 5312, 5422, 5314, 5458, 5272, 5288, 5332, 5430, 5397, 5367, 5370, 5319, 5371, 5432, 5385, 5447, 5467, 5290, 5311, 5462, 5318, 5339, 5451, 5327, 5266, 5265, 5412, 5250, 5355, 5376, 5287, 5285, 5450, 5261, 5470, 5365, 5379, 5264, 5387, 5252, 5444, 5396, 5269, 5417, 5388, 5273, 5295, 5463, 5293, 5282, 5300, 5297, 5368, 5364, 5352, 5257, 5464, 5373, 5363, 5338, 5442, 5321, 5399, 5260, 5337, 5375, 5254, 5406, 5431, 5351, 5345, 5403, 5401, 5330, 5449, 5347, 5255, 5392, 5262, 5409, 5402, 5460, 5331, 5253, 5306, 5281, 5415, 5427, 5305, 5348, 5291, 5383, 5329, 5341, 5395, 5309, 5466, 5434 (8 hits)
21	9	1.0	333.0	Yes	5293.0MHz, -64.0dBm	Hop sequence: 5454, 5403, 5342, 5393, 5370, 5339, 5463, 5361, 5448, 5338, 5385, 5390, 5350, 5366, 5277, 5451, 5449, 5465, 5257, 5315, 5381, 5357, 5334, 5343, 5415, 5300, 5258, 5425, 5413, 5278, 5284, 5411, 5275, 5299, 5328, 5297, 5355, 5365, 5391, 5321, 5421, 5303, 5330, 5254, 5319, 5401, 5389, 5452, 5362, 5371, 5307, 5335, 5262, 5349, 5324, 5379, 5404, 5405, 5251, 5261, 5417, 5276, 5395, 5336, 5304, 5317, 5435, 5418, 5461, 5252, 5323, 5387, 5378, 5392, 5311, 5400, 5414, 5268, 5374, 5285, 5450, 5466, 5363, 5406, 5325, 5360, 5291, 5352, 5283, 5439, 5458, 5377, 5265, 5288, 5467, 5394, 5455, 5263, 5282, 5346 (6 hits)
22	9	1.0	333.0	Yes	5294.0MHz, -64.0dBm	Hop sequence: 5361, 5410, 5458, 5305, 5326, 5349, 5397, 5341, 5407, 5403, 5251, 5431, 5346, 5408, 5463, 5304, 5449, 5415, 5406, 5342, 5281, 5418, 5333, 5347, 5460, 5382, 5298, 5287, 5434, 5307, 5395, 5323, 5404, 5402, 5432, 5374, 5411, 5358, 5390, 5466, 5420, 5421, 5359, 5383, 5413, 5443, 5412, 5447, 5405, 5302, 5280, 5450, 5373, 5451, 5288, 5385, 5265, 5340, 5273, 5372, 5381, 5259, 5380, 5285, 5311, 5448, 5263, 5332, 5315, 5278, 5456, 5375, 5366, 5469, 5371, 5286, 5296, 5388, 5453, 5343, 5258, 5386, 5438, 5316, 5362, 5256, 5320, 5329, 5367, 5301, 5417, 5400, 5357, 5430, 5353, 5393, 5299, 5446, 5452, 5279 (8 hits)
23	9	1.0	333.0	Yes	5295.0MHz, -64.0dBm	Hop sequence: 5347, 5334, 5348, 5351, 5301, 5461, 5265, 5321, 5393, 5286, 5444, 5320, 5257, 5253, 5456, 5417, 5450, 5264, 5439, 5313, 5373, 5441, 5438, 5384, 5268, 5442, 5451, 5325, 5453, 5271, 5282, 5400, 5434, 5309, 5341, 5397, 5305, 5415, 5362, 5310, 5414, 5296, 5367, 5381, 5333, 5409, 5312, 5352, 5326, 5327, 5401, 5262, 5261, 5361, 5448, 5449, 5340, 5435, 5291, 5280, 5467, 5273, 5354, 5360, 5463, 5281, 5395, 5314, 5421, 5411, 5403, 5391, 5335, 5345, 5297, 5343, 5372, 5465, 5464, 5426, 5366, 5369, 5454, 5332, 5402, 5412, 5457, 5252, 5255, 5298, 5270, 5277, 5356, 5406, 5425, 5374, 5365, 5385, 5318, 5424 (5 hits)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
24	9	1.0	333.0	Yes	5296.0MHz, -64.0dBm	Hop sequence: 5397, 5379, 5438, 5282, 5265, 5337, 5285, 5389, 5258, 5467, 5458, 5419, 5256, 5270, 5266, 5354, 5386, 5383, 5263, 5281, 5327, 5319, 5392, 5344, 5292, 5361, 5400, 5394, 5356, 5384, 5410, 5365, 5268, 5463, 5440, 5436, 5289, 5451, 5407, 5294, 5305, 5275, 5461, 5300, 5415, 5402, 5405, 5420, 5454, 5459, 5460, 5399, 5250, 5269, 5468, 5433, 5348, 5443, 5271, 5376, 5453, 5395, 5255, 5428, 5388, 5449, 5447, 5302, 5464, 5307, 5380, 5432, 5455, 5437, 5298, 5398, 5368, 5411, 5442, 5441, 5363, 5314, 5396, 5296, 5324, 5466, 5253, 5404, 5456, 5332, 5310, 5287, 5254, 5309, 5295, 5425, 5381, 5279, 5387, 5325 (9 hits)
25	9	1.0	333.0	Yes	5297.0MHz, -64.0dBm	Hop sequence: 5297, 5259, 5278, 5452, 5312, 5420, 5258, 5399, 5381, 5459, 5308, 5374, 5332, 5386, 5282, 5251, 5456, 5336, 5429, 5382, 5406, 5432, 5320, 5430, 5457, 5288, 5262, 5371, 5265, 5260, 5393, 5423, 5358, 5319, 5326, 5405, 5310, 5356, 5257, 5373, 5315, 5412, 5468, 5294, 5343, 5296, 5327, 5287, 5470, 5436, 5304, 5410, 5309, 5292, 5367, 5425, 5307, 5448, 5355, 5313, 5360, 5365, 5306, 5314, 5311, 5352, 5270, 5291, 5427, 5416, 5274, 5363, 5364, 5462, 5253, 5451, 5442, 5394, 5469, 5268, 5369, 5339, 5276, 5295, 5261, 5289, 5346, 5254, 5354, 5439, 5269, 5388, 5464, 5444, 5321, 5340, 5413, 5422, 5400, 5330 (9 hits)
26	9	1.0	333.0	Yes	5298.0MHz, -64.0dBm	Hop sequence: 5390, 5404, 5293, 5453, 5332, 5455, 5466, 5316, 5375, 5427, 5284, 5334, 5252, 5372, 5259, 5469, 5441, 5421, 5368, 5273, 5307, 5294, 5327, 5407, 5367, 5324, 5432, 5397, 5415, 5435, 5467, 5426, 5278, 5349, 5377, 5376, 5366, 5431, 5406, 5430, 5356, 5363, 5414, 5297, 5270, 5291, 5409, 5392, 5343, 5396, 5417, 5394, 5312, 5274, 5439, 5263, 5408, 5420, 5360, 5271, 5437, 5261, 5340, 5320, 5298, 5369, 5250, 5280, 5403, 5388, 5381, 5389, 5370, 5382, 5337, 5330, 5346, 5310, 5301, 5384, 5419, 5269, 5371, 5287, 5450, 5348, 5446, 5434, 5364, 5283, 5295, 5286, 5462, 5385, 5309, 5386, 5272, 5445, 5410, 5254 (7 hits) (02/20/2009 07:59:06 PM)

Table 14 - FCC frequency hopping radar (Type 6) Results External Antenna 20MHz BW						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
27	9	1.0	333.0	Yes	5299.0MHz, -64.0dBm	Hop sequence: 5330, 5400, 5281, 5339, 5360, 5350, 5365, 5282, 5276, 5257, 5388, 5370, 5447, 5398, 5371, 5383, 5329, 5470, 5353, 5412, 5397, 5302, 5452, 5396, 5283, 5260, 5334, 5361, 5457, 5252, 5254, 5318, 5448, 5291, 5271, 5372, 5454, 5332, 5403, 5351, 5415, 5410, 5422, 5250, 5402, 5451, 5288, 5455, 5268, 5461, 5309, 5338, 5391, 5406, 5424, 5420, 5328, 5273, 5471, 5456, 5404, 5425, 5444, 5387, 5428, 5458, 5299, 5417, 5253, 5460, 5325, 5437, 5265, 5258, 5308, 5449, 5443, 5355, 5324, 5315, 5296, 5279, 5374, 5337, 5394, 5306, 5331, 5266, 5416, 5293, 5262, 5430, 5468, 5300, 5435, 5467, 5336, 5341, 5267, 5310 (7 hits)
28	9	1.0	333.0	Yes	5300.0MHz, -64.0dBm	Hop sequence: 5345, 5368, 5411, 5425, 5362, 5451, 5322, 5316, 5281, 5375, 5365, 5304, 5420, 5309, 5419, 5332, 5286, 5433, 5290, 5429, 5327, 5406, 5360, 5454, 5371, 5428, 5464, 5422, 5285, 5271, 5468, 5336, 5300, 5394, 5346, 5439, 5308, 5395, 5306, 5450, 5462, 5363, 5266, 5357, 5427, 5430, 5408, 5277, 5432, 5297, 5373, 5299, 5355, 5341, 5396, 5292, 5382, 5388, 5270, 5319, 5265, 5412, 5416, 5282, 5328, 5313, 5384, 5344, 5287, 5461, 5403, 5401, 5317, 5405, 5273, 5389, 5448, 5329, 5348, 5261, 5340, 5372, 5280, 5295, 5358, 5311, 5453, 5374, 5339, 5353, 5356, 5431, 5444, 5385, 5343, 5436, 5326, 5418, 5465, 5399 (8 hits)
29	9	1.0	333.0	Yes	5301.0MHz, -64.0dBm	Hop sequence: 5302, 5465, 5309, 5304, 5434, 5464, 5380, 5329, 5393, 5251, 5293, 5272, 5311, 5314, 5313, 5437, 5419, 5424, 5268, 5330, 5359, 5444, 5349, 5458, 5284, 5316, 5439, 5357, 5375, 5412, 5299, 5258, 5415, 5360, 5345, 5443, 5371, 5262, 5381, 5440, 5414, 5422, 5252, 5452, 5352, 5411, 5425, 5455, 5363, 5420, 5259, 5447, 5301, 5303, 5386, 5385, 5389, 5286, 5428, 5296, 5264, 5282, 5333, 5263, 5391, 5361, 5318, 5446, 5404, 5429, 5331, 5335, 5467, 5338, 5312, 5468, 5271, 5342, 5343, 5400, 5306, 5383, 5442, 5323, 5328, 5290, 5300, 5450, 5295, 5369, 5346, 5384, 5254, 5362, 5277, 5387, 5390, 5365, 5327, 5398 (10 hits)
30	9	1.0	333.0	Yes	5302.0MHz, -64.0dBm	Hop sequence: 5305, 5384, 5292, 5284, 5376, 5432, 5278, 5420, 5431, 5320, 5442, 5462, 5261, 5277, 5287, 5417, 5273, 5364, 5367, 5356, 5381, 5346, 5276, 5457, 5446, 5328, 5268, 5423, 5451, 5399, 5340, 5323, 5263, 5339, 5373, 5427, 5329, 5312, 5325, 5463, 5272, 5433, 5293, 5455, 5374, 5279, 5409, 5315, 5377, 5347, 5407, 5349, 5280, 5285, 5286, 5358, 5281, 5288, 5360, 5464, 5441, 5353, 5335, 5366, 5459, 5454, 5283, 5458, 5275, 5461, 5297, 5388, 5440, 5413, 5419, 5294, 5342, 5302, 5380, 5306, 5400, 5355, 5336, 5410, 5359, 5387, 5434, 5338, 5447, 5258, 5426, 5393, 5430, 5418, 5408, 5372, 5445, 5468, 5370, 5357 (7 hits)

Table 15 - Long Sequence Waveform Summary External Antenna 20MHz BW		
Long Sequence Trial	Result	Radar Frequency, Amplitude
Trial #1	NOT Detected	5500.0MHz, -64.0dBm
Trial #2	NOT Detected	5495.0MHz, -64.0dBm
Trial #3	NOT Detected	5505.0MHz, -64.0dBm
Trial #4	Detected	5500.0MHz, -64.0dBm
Trial #5	Detected	5495.0MHz, -64.0dBm
Trial #6	Detected	5505.0MHz, -64.0dBm
Trial #7	Detected	5500.0MHz, -64.0dBm
Trial #8	Detected	5495.0MHz, -64.0dBm
Trial #9	Detected	5505.0MHz, -64.0dBm
Trial #10	Detected	5500.0MHz, -64.0dBm
Trial #11	NOT Detected	5495.0MHz, -64.0dBm
Trial #12	Detected	5505.0MHz, -64.0dBm
Trial #13	Detected	5500.0MHz, -64.0dBm
Trial #14	Detected	5495.0MHz, -64.0dBm
Trial #15	Detected	5505.0MHz, -64.0dBm
Trial #16	Detected	5500.0MHz, -64.0dBm
Trial #17	NOT Detected	5495.0MHz, -64.0dBm
Trial #18	Detected	5505.0MHz, -64.0dBm
Trial #19	Detected	5500.0MHz, -64.0dBm
Trial #20	Detected	5495.0MHz, -64.0dBm
Trial #21	Detected	5505.0MHz, -64.0dBm
Trial #22	Detected	5500.0MHz, -64.0dBm
Trial #23	Detected	5495.0MHz, -64.0dBm
Trial #24	Detected	5505.0MHz, -64.0dBm
Trial #25	Detected	5500.0MHz, -64.0dBm
Trial #26	Detected	5495.0MHz, -64.0dBm
Trial #27	Detected	5505.0MHz, -64.0dBm
Trial #28	Detected	5500.0MHz, -64.0dBm
Trial #29	Detected	5495.0MHz, -64.0dBm
Trial #30	Detected	5505.0MHz, -64.0dBm

Table 16 - External Antenna 20MHz BW Long Sequence Waveform Trial#1 (NOT Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
1	1	76.4	6	-	-	0.112663
2	1	90.6	20	-	-	1.564456
3	2	85.5	15	1511.0	-	2.714584
4	3	92.6	15	1065.0	1299.0	3.292869
5	1	68.8	17	-	-	3.783430
6	3	87.5	9	1448.0	1338.0	4.628888
7	1	56.7	13	-	-	6.376994
8	2	86.7	12	1149.0	-	6.881095
9	3	85.3	17	1316.0	1445.0	7.893995
10	2	73.7	6	1940.0	-	9.186974
11	1	78.8	18	-	-	9.449349
12	2	74.4	14	1980.0	-	10.773616
13	3	89.1	9	1151.0	1509.0	11.347973

Table 17 - External Antenna 20MHz BW Long Sequence Waveform Trial#2 (NOT Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
1	2	77.1	12	1558.0	-	1.180546
2	3	98.0	10	1092.0	1181.0	2.821545
3	3	50.4	11	1435.0	1258.0	4.019834
4	3	79.9	11	1687.0	1101.0	5.908680
5	1	63.8	16	-	-	7.302160
6	1	54.8	12	-	-	8.963276
7	3	97.0	18	1231.0	1308.0	10.288028
8	3	72.8	11	1179.0	1979.0	11.139637

Table 18 - External Antenna 20MHz BW Long Sequence Waveform Trial#3 (NOT Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
1	1	65.1	14	-	-	0.792587
2	2	73.8	19	1516.0	-	1.633953
3	2	64.1	11	1490.0	-	3.019500
4	1	52.0	17	-	-	5.617931
5	3	75.3	18	1616.0	1551.0	7.240553
6	1	69.0	16	-	-	7.806101
7	1	60.3	12	-	-	9.914842
8	2	89.3	19	1661.0	-	11.211141

Table 19 - External Antenna 20MHz BW 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 (us)
1	2	60.8	7	1132.0	-	0.572037
2	1	86.7	15	-	-	1.134022
3	2	93.1	11	1570.0	-	1.697701
4	2	63.0	6	1105.0	-	2.439900
5	2	94.9	11	1295.0	-	3.842554
6	2	60.7	15	1741.0	-	4.784659
7	2	80.6	11	1725.0	-	5.251410
8	2	50.1	18	1151.0	-	5.876985
9	1	68.8	12	-	-	7.078648
10	1	95.4	12	-	-	7.668561
11	3	81.3	19	1964.0	1782.0	8.200660
12	3	78.9	11	1886.0	1234.0	9.128172
13	2	61.1	20	1536.0	-	9.881373
14	3	51.3	19	1296.0	1201.0	10.786783
15	2	69.2	16	1474.0	-	11.388243

Table 20 - External Antenna 20MHz BW 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 (us)
1	3	56.9	6	1878.0	1069.0	0.885574
2	2	70.4	15	1569.0	-	1.125705
3	1	68.8	6	-	-	2.449010
4	1	69.1	13	-	-	3.331727
5	2	60.4	16	1054.0	-	4.920176
6	2	62.3	7	1036.0	-	5.881367
7	3	93.3	6	1395.0	1012.0	7.394356
8	3	99.3	19	1057.0	1306.0	8.073122
9	1	60.2	11	-	-	9.556058
10	1	77.3	17	-	-	10.634784
11	1	91.9	19	-	-	11.112111

Table 21 - External Antenna 20MHz BW 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 (us)
1	2	65.9	6	1245.0	-	0.590607
2	1	94.8	13	-	-	1.395029
3	2	68.5	17	1075.0	-	2.862516
4	1	83.0	8	-	-	3.879814
5	3	93.0	10	1362.0	1668.0	4.263874
6	2	86.3	14	1913.0	-	5.772185
7	1	70.7	17	-	-	6.166704
8	2	90.9	15	1850.0	-	7.725972
9	2	56.8	13	1659.0	-	8.814241
10	2	95.9	20	1833.0	-	9.300580
11	3	78.9	11	1527.0	1533.0	10.863905
12	2	73.5	19	1942.0	-	11.344442

Table 22 - External Antenna 20MHz BW 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 (us)
1	1	79.0	20	-	-	0.797161
2	1	63.5	14	-	-	1.436337
3	2	86.6	15	1529.0	-	2.750771
4	1	97.4	18	-	-	3.280766
5	2	87.9	13	1162.0	-	4.250331
6	2	50.6	17	1330.0	-	5.474274
7	2	98.4	11	1308.0	-	5.782993
8	3	87.8	10	1567.0	1680.0	7.199062
9	1	88.4	18	-	-	7.908470
10	1	84.7	20	-	-	8.517021
11	2	50.7	5	1585.0	-	10.041131
12	3	99.8	11	1822.0	1394.0	10.486944
13	2	78.2	10	1110.0	-	11.271909

Table 23 - External Antenna 20MHz BW 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 (us)
1	2	85.8	7	1269.0	-	0.734957
2	2	96.5	20	1545.0	-	1.659464
3	2	64.3	18	1380.0	-	2.902473
4	2	93.7	16	1068.0	-	3.514230
5	2	81.2	14	1593.0	-	4.624308
6	2	96.1	16	1979.0	-	5.920398
7	3	62.1	15	1508.0	1089.0	6.084880
8	2	99.0	15	1770.0	-	7.310803
9	2	86.3	12	1734.0	-	8.595106
10	2	78.1	18	1414.0	-	9.588597
11	1	93.0	16	-	-	10.859687
12	1	82.6	15	-	-	11.894266

Table 24 - External Antenna 20MHz BW 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 (us)
1	3	64.9	10	1059.0	1780.0	0.353786
2	2	64.4	15	1328.0	-	1.464079
3	2	64.6	15	1245.0	-	3.466065
4	2	78.3	7	1157.0	-	4.645510
5	2	85.0	18	1827.0	-	5.830929
6	2	69.5	19	1355.0	-	6.783363
7	2	51.3	12	1635.0	-	7.738499
8	2	61.5	6	1145.0	-	8.928364
9	2	71.1	14	1384.0	-	9.966497
10	1	87.7	11	-	-	11.541744

Table 25 - External Antenna 20MHz BW 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 (us)
1	1	70.9	11	-	-	0.586196
2	2	79.6	11	1508.0	-	1.912979
3	2	78.8	17	1914.0	-	2.648946
4	3	77.6	14	1290.0	1750.0	3.606028
5	1	75.0	12	-	-	4.814088
6	3	69.7	19	1064.0	1534.0	6.264668
7	2	53.5	10	1658.0	-	6.574603
8	1	97.6	7	-	-	8.682561
9	1	53.2	15	-	-	8.867126
10	2	60.6	16	1006.0	-	10.205778
11	3	82.4	12	1378.0	1452.0	11.054367

Table 26 - External Antenna 20MHz BW Long Sequence Waveform Trial#11 (NOT Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
1	2	82.6	11	1545.0	-	0.141175
2	3	67.4	5	1238.0	1987.0	1.229103
3	2	67.8	15	1561.0	-	1.683592
4	2	58.8	9	1188.0	-	2.713542
5	2	59.0	11	1712.0	-	3.409154
6	2	61.7	18	1520.0	-	4.694432
7	1	54.5	17	-	-	5.455230
8	1	64.5	14	-	-	6.129316
9	3	86.3	11	1795.0	1008.0	6.852478
10	2	55.6	9	1799.0	-	7.582045
11	3	81.0	10	1228.0	1584.0	8.167945
12	2	72.7	11	1570.0	-	9.362154
13	1	80.8	15	-	-	9.928262
14	1	99.2	16	-	-	10.594797
15	3	77.8	11	1036.0	1739.0	11.648879

Table 27 - External Antenna 20MHz BW 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 (us)
1	1	80.0	10	-	-	1.246338
2	2	50.0	8	1292.0	-	2.071303
3	2	55.4	9	1772.0	-	3.159061
4	2	84.2	10	1032.0	-	5.296716
5	1	79.2	13	-	-	5.765093
6	3	59.7	12	1076.0	1804.0	6.996413
7	2	59.5	7	1126.0	-	9.331828
8	2	84.8	9	1889.0	-	9.845930
9	2	91.9	18	1932.0	-	10.707107

Table 28 - External Antenna 20MHz BW 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 (us)
1	1	50.6	17	-	-	0.628510
2	2	55.1	17	1926.0	-	2.276524
3	3	75.8	9	1368.0	1860.0	2.620494
4	3	95.9	8	1799.0	1288.0	3.750295
5	3	58.4	18	1209.0	1789.0	4.971766
6	3	61.0	8	1140.0	1786.0	6.336002
7	3	53.7	13	1315.0	1663.0	8.026766
8	3	78.5	13	1441.0	1893.0	9.116388
9	2	66.4	13	1119.0	-	9.880279
10	2	75.2	19	1664.0	-	11.291365

Table 29 - External Antenna 20MHz BW 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 (us)
1	1	94.5	7	-	-	0.233379
2	1	57.2	9	-	-	1.161859
3	3	56.8	10	1935.0	1704.0	1.359365
4	1	61.7	7	-	-	2.188812
5	1	59.3	9	-	-	3.058132
6	2	75.8	9	1752.0	-	3.860922
7	3	59.2	8	1522.0	1427.0	4.032187
8	1	67.4	12	-	-	5.120086
9	2	65.1	14	1224.0	-	5.817371
10	3	78.8	15	1693.0	1065.0	6.288585
11	2	87.4	17	1605.0	-	6.862047
12	2	80.4	11	1040.0	-	7.717183
13	2	80.4	12	1461.0	-	8.473366
14	3	69.8	16	1747.0	1811.0	9.039802
15	2	96.3	15	1280.0	-	9.693951
16	3	73.2	10	1215.0	1612.0	10.181858
17	3	76.8	15	1443.0	1838.0	10.674000
18	3	89.4	6	1112.0	1378.0	11.938702

Table 30 - External Antenna 20MHz BW 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 (us)
1	2	79.5	13	1766.0	-	0.665864
2	1	90.2	18	-	-	1.470770
3	2	67.9	19	1707.0	-	2.778250
4	3	93.3	18	1450.0	1344.0	3.594808
5	2	51.8	7	1281.0	-	5.044625
6	3	61.3	19	1827.0	1812.0	6.177782
7	2	73.5	6	1427.0	-	6.972949
8	1	92.0	8	-	-	7.958549
9	2	79.0	5	1977.0	-	9.323076
10	2	80.7	14	1701.0	-	10.051439
11	1	54.6	7	-	-	11.691135

Table 31 - External Antenna 20MHz BW 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 (us)
1	2	97.5	13	1243.0	-	0.902395
2	2	88.2	13	1258.0	-	1.663750
3	3	83.6	10	1435.0	1815.0	2.097254
4	2	56.3	12	1519.0	-	3.421841
5	3	64.0	19	1632.0	1059.0	4.187852
6	2	93.7	7	1381.0	-	4.882713
7	2	56.9	9	1917.0	-	5.955128
8	1	92.3	13	-	-	6.474900
9	3	59.3	7	1581.0	1147.0	7.710433
10	3	74.8	16	1822.0	1668.0	8.472744
11	2	90.9	12	1201.0	-	9.429126
12	2	68.1	12	1493.0	-	10.254240
13	3	81.5	10	1709.0	1480.0	11.864555

Table 32 - External Antenna 20MHz BW Long Sequence Waveform Trial#17 (NOT Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
1	1	73.9	9	-	-	0.559342
2	2	53.2	10	1416.0	-	0.755511
3	1	91.9	19	-	-	1.578099
4	1	77.7	8	-	-	1.933827
5	2	58.6	13	1264.0	-	2.804290
6	3	69.3	8	1801.0	1540.0	3.360642
7	1	54.2	13	-	-	4.265161
8	3	97.6	16	1166.0	1812.0	4.657410
9	2	78.0	18	1616.0	-	5.384693
10	1	53.0	16	-	-	6.201051
11	2	82.5	18	1048.0	-	6.734080
12	2	91.5	18	1115.0	-	7.137968
13	1	54.8	11	-	-	8.016401
14	2	95.1	16	1321.0	-	8.225171
15	2	79.0	7	1776.0	-	9.389738
16	2	55.1	12	1109.0	-	9.513454
17	2	93.4	14	1280.0	-	10.659028
18	1	84.9	17	-	-	11.109889
19	2	82.4	10	1103.0	-	11.921689

Table 33 - External Antenna 20MHz BW 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 (us)
1	2	98.6	19	1462.0	-	0.034894
2	3	73.2	16	1848.0	1405.0	1.539925
3	2	97.0	12	1209.0	-	1.998572
4	1	88.9	18	-	-	3.356920
5	2	69.8	19	1858.0	-	4.090814
6	2	65.4	16	1531.0	-	4.854123
7	1	66.6	16	-	-	5.723170
8	2	70.7	11	1032.0	-	6.443300
9	2	67.6	15	1719.0	-	7.608250
10	3	99.1	16	1154.0	1739.0	7.788601
11	3	50.2	16	1188.0	1267.0	9.210910
12	3	53.8	18	1071.0	1743.0	9.951311
13	3	82.1	13	1857.0	1797.0	10.314774
14	2	52.3	13	1104.0	-	11.673767

Table 34 - External Antenna 20MHz BW 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 (us)
1	1	52.8	6	-	-	0.785778
2	2	71.4	9	1878.0	-	1.874602
3	3	87.6	7	1592.0	1762.0	2.843594
4	2	70.0	10	1901.0	-	3.355894
5	2	85.4	9	1495.0	-	4.465671
6	2	90.3	10	1068.0	-	5.357211
7	3	91.0	7	1866.0	1550.0	6.538429
8	2	73.4	16	1328.0	-	7.969864
9	2	95.5	12	1371.0	-	8.433927
10	3	90.5	7	1499.0	1857.0	9.042515
11	2	81.9	5	1130.0	-	10.289020
12	2	68.8	20	1968.0	-	11.461445

Table 35 - External Antenna 20MHz BW 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 (us)
1	2	54.4	19	1229.0	-	0.482344
2	3	65.1	16	1781.0	1378.0	1.309303
3	1	54.9	6	-	-	2.902341
4	2	78.9	7	1264.0	-	3.656489
5	2	63.1	8	1633.0	-	4.798320
6	2	88.7	12	1599.0	-	6.539203
7	3	56.4	15	1857.0	1663.0	6.855742
8	3	56.3	19	1896.0	1677.0	7.715764
9	3	70.7	9	1210.0	1024.0	9.035015
10	1	72.3	14	-	-	10.094548
11	2	90.8	14	1914.0	-	10.951160

Table 36 - External Antenna 20MHz BW 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 (us)
1	2	69.6	6	1128.0	-	0.174480
2	3	51.9	17	1827.0	1671.0	1.251003
3	1	85.3	8	-	-	2.765982
4	2	92.2	10	1596.0	-	2.872112
5	3	97.1	17	1661.0	1145.0	4.574370
6	2	96.3	16	1964.0	-	4.644891
7	3	52.4	10	1877.0	1107.0	5.949084
8	2	99.9	12	1277.0	-	7.311349
9	2	60.5	8	1409.0	-	7.819334
10	3	69.0	9	1644.0	1735.0	8.483543
11	3	99.0	10	1207.0	1855.0	9.514674
12	3	62.4	11	1531.0	1764.0	10.521955
13	1	64.1	13	-	-	11.396581

Table 37 - External Antenna 20MHz BW 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 (us)
1	2	81.0	13	1768.0	-	0.590550
2	2	58.3	11	1362.0	-	1.126846
3	2	54.5	13	1667.0	-	1.958736
4	2	59.0	16	1845.0	-	2.694567
5	2	83.6	13	1646.0	-	3.352250
6	3	92.8	18	1212.0	1299.0	4.247133
7	1	53.2	19	-	-	4.771393
8	2	78.3	15	1581.0	-	5.858292
9	2	64.3	10	1036.0	-	6.301648
10	1	87.2	17	-	-	7.207091
11	2	83.7	8	1725.0	-	7.630439
12	2	91.3	15	1111.0	-	8.847828
13	1	77.4	8	-	-	9.664979
14	2	61.6	16	1593.0	-	10.345772
15	2	75.4	10	1101.0	-	10.954866
16	2	61.0	14	1742.0	-	11.489112

Table 38 - External Antenna 20MHz BW 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 (us)
1	3	56.2	8	1861.0	1109.0	0.295591
2	2	50.8	14	1539.0	-	1.384709
3	1	64.8	18	-	-	2.516149
4	2	57.8	19	1739.0	-	2.582313
5	2	51.7	9	1638.0	-	3.873526
6	2	91.1	12	1808.0	-	4.467193
7	1	65.1	16	-	-	5.927124
8	2	79.2	19	1331.0	-	6.762875
9	1	89.6	14	-	-	7.418143
10	2	62.1	8	1798.0	-	7.985352
11	1	57.3	18	-	-	8.882951
12	1	53.3	12	-	-	10.270245
13	1	52.4	19	-	-	10.986184
14	2	86.2	7	1598.0	-	11.335505

Table 39 - External Antenna 20MHz BW 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 (us)
1	2	64.3	5	1771.0	-	0.510577
2	2	83.3	11	1112.0	-	2.646827
3	3	56.8	18	1652.0	1582.0	3.852635
4	2	51.9	12	1548.0	-	4.800549
5	3	54.4	13	1274.0	1310.0	6.082421
6	3	97.8	8	1853.0	1654.0	7.228067
7	2	55.0	14	1145.0	-	9.204158
8	1	90.0	13	-	-	10.122626
9	2	74.1	18	1008.0	-	10.723401

Table 40 - External Antenna 20MHz BW 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 (us)
1	2	60.4	19	1936.0	-	0.192233
2	2	85.1	11	1793.0	-	1.119089
3	2	56.7	5	1135.0	-	2.028943
4	3	93.2	18	1532.0	1683.0	2.668653
5	1	92.4	6	-	-	3.579509
6	1	51.8	15	-	-	4.006878
7	3	59.3	10	1512.0	1155.0	5.301846
8	2	99.1	13	1116.0	-	6.025063
9	1	72.5	6	-	-	7.038029
10	2	72.4	5	1611.0	-	7.655215
11	1	88.2	16	-	-	8.316477
12	2	68.7	16	1198.0	-	8.901565
13	2	72.7	10	1844.0	-	10.212690
14	2	59.0	19	1278.0	-	10.543737
15	2	76.3	6	1136.0	-	11.805517

Table 41 - External Antenna 20MHz BW 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 (us)
1	3	74.5	9	1617.0	1485.0	0.746911
2	3	76.0	19	1759.0	1363.0	1.243009
3	3	76.9	20	1933.0	1397.0	2.486709
4	3	87.6	14	1493.0	1573.0	3.817644
5	2	81.4	7	1472.0	-	5.593448
6	2	90.1	13	1849.0	-	6.067645
7	1	87.9	7	-	-	7.467961
8	1	67.7	14	-	-	9.449700
9	2	86.3	15	1368.0	-	10.511935
10	1	56.5	10	-	-	11.756386

Table 42 - External Antenna 20MHz BW 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 (us)
1	2	98.3	19	1298.0	-	0.596544
2	1	90.3	14	-	-	2.422054
3	2	82.4	9	1130.0	-	4.147225
4	2	66.3	20	1119.0	-	5.566049
5	2	68.6	16	1505.0	-	6.448319
6	2	60.2	6	1001.0	-	7.958858
7	2	51.9	13	1096.0	-	9.567173
8	2	95.5	8	1393.0	-	11.464708

Table 43 - External Antenna 20MHz BW 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 (us)
1	2	97.2	14	1704.0	-	0.182371
2	3	61.4	13	1016.0	1390.0	2.264153
3	2	70.5	13	1331.0	-	3.461502
4	3	60.8	6	1353.0	1510.0	4.747913
5	1	65.8	15	-	-	5.663754
6	1	93.2	8	-	-	6.755686
7	3	83.6	15	1447.0	1062.0	8.044936
8	2	51.7	8	1763.0	-	8.979797
9	2	86.5	13	1181.0	-	9.896206
10	1	56.6	14	-	-	11.263204

Table 44 - External Antenna 20MHz BW 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 (us)
1	3	97.0	9	1405.0	1836.0	0.666404
2	2	95.8	19	1839.0	-	1.321122
3	3	92.4	12	1086.0	1822.0	2.009695
4	2	91.2	9	1414.0	-	3.052232
5	3	74.4	17	1478.0	1507.0	3.644776
6	1	77.6	19	-	-	4.669054
7	2	92.7	7	1433.0	-	5.471559
8	2	61.4	17	1130.0	-	6.789496
9	3	64.4	12	1359.0	1999.0	7.692359
10	3	94.0	7	1934.0	1762.0	7.837952
11	3	74.0	13	1018.0	1718.0	8.813368
12	2	59.9	12	1613.0	-	9.721203
13	2	80.2	6	1142.0	-	10.776748
14	1	80.4	11	-	-	11.465018

Table 45 - External Antenna 20MHz BW 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 (us)
1	2	87.9	17	1288.0	-	0.607810
2	2	51.4	10	1341.0	-	1.069126
3	2	74.4	8	1684.0	-	1.413057
4	2	52.2	8	1161.0	-	2.459611
5	2	54.9	6	1252.0	-	3.510033
6	2	64.8	11	1391.0	-	3.932201
7	2	54.6	8	1887.0	-	4.533915
8	2	99.1	16	1458.0	-	5.514846
9	2	64.1	16	1210.0	-	5.754845
10	2	64.2	13	1943.0	-	6.543681
11	3	84.3	9	1089.0	1403.0	7.162485
12	2	63.7	11	1619.0	-	8.343478
13	2	65.3	14	1182.0	-	8.677780
14	1	89.5	10	-	-	9.257261
15	1	80.5	15	-	-	9.969426
16	3	72.3	10	1669.0	1003.0	10.729106
17	2	66.5	15	1643.0	-	11.936045

Table 46 - FCC Short Pulse Radar (Type 1) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	18	1.0	1428.0	No	5320.0MHz, -64.0dBm	Single burst
2	18	1.0	1428.0	Yes	5315.0MHz, -64.0dBm	Single burst
3	18	1.0	1428.0	Yes	5310.0MHz, -64.0dBm	Single burst
4	18	1.0	1428.0	Yes	5305.0MHz, -64.0dBm	Single burst
5	18	1.0	1428.0	Yes	5300.0MHz, -64.0dBm	Single burst
6	18	1.0	1428.0	Yes	5320.0MHz, -64.0dBm	Single burst
7	18	1.0	1428.0	Yes	5315.0MHz, -64.0dBm	Single burst
8	18	1.0	1428.0	Yes	5310.0MHz, -64.0dBm	Single burst
9	18	1.0	1428.0	Yes	5305.0MHz, -64.0dBm	Single burst
10	18	1.0	1428.0	Yes	5300.0MHz, -64.0dBm	Single burst
11	18	1.0	1428.0	Yes	5320.0MHz, -64.0dBm	Single burst
12	18	1.0	1428.0	Yes	5315.0MHz, -64.0dBm	Single burst
13	18	1.0	1428.0	Yes	5310.0MHz, -64.0dBm	Single burst
14	18	1.0	1428.0	Yes	5305.0MHz, -64.0dBm	Single burst
15	18	1.0	1428.0	Yes	5300.0MHz, -64.0dBm	Single burst
16	18	1.0	1428.0	Yes	5320.0MHz, -64.0dBm	Single burst
17	18	1.0	1428.0	Yes	5315.0MHz, -64.0dBm	Single burst
18	18	1.0	1428.0	Yes	5310.0MHz, -64.0dBm	Single burst
19	18	1.0	1428.0	Yes	5305.0MHz, -64.0dBm	Single burst
20	18	1.0	1428.0	Yes	5300.0MHz, -64.0dBm	Single burst
21	18	1.0	1428.0	Yes	5320.0MHz, -64.0dBm	Single burst
22	18	1.0	1428.0	Yes	5315.0MHz, -64.0dBm	Single burst
23	18	1.0	1428.0	Yes	5310.0MHz, -64.0dBm	Single burst
24	18	1.0	1428.0	Yes	5305.0MHz, -64.0dBm	Single burst
25	18	1.0	1428.0	Yes	5300.0MHz, -64.0dBm	Single burst
26	18	1.0	1428.0	Yes	5320.0MHz, -64.0dBm	Single burst
27	18	1.0	1428.0	Yes	5315.0MHz, -64.0dBm	Single burst
28	18	1.0	1428.0	Yes	5310.0MHz, -64.0dBm	Single burst
29	18	1.0	1428.0	Yes	5305.0MHz, -64.0dBm	Single burst
30	18	1.0	1428.0	Yes	5300.0MHz, -64.0dBm	Single burst

Table 47 - FCC Short Pulse Radar (Type 2) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	28	2.5	187.0	Yes	5310.0MHz, -64.0dBm	Single burst
2	27	4.9	184.0	Yes	5305.0MHz, -64.0dBm	Single burst
3	26	5.0	182.0	Yes	5300.0MHz, -64.0dBm	Single burst
4	23	3.8	163.0	Yes	5320.0MHz, -64.0dBm	Single burst
5	29	2.5	210.0	Yes	5315.0MHz, -64.0dBm	Single burst
6	27	2.6	202.0	Yes	5310.0MHz, -64.0dBm	Single burst
7	29	1.4	173.0	Yes	5305.0MHz, -64.0dBm	Single burst
8	26	3.9	170.0	Yes	5300.0MHz, -64.0dBm	Single burst
9	24	1.5	220.0	Yes	5320.0MHz, -64.0dBm	Single burst
10	25	3.6	214.0	Yes	5315.0MHz, -64.0dBm	Single burst
11	25	1.1	158.0	Yes	5310.0MHz, -64.0dBm	Single burst
12	29	2.4	215.0	Yes	5305.0MHz, -64.0dBm	Single burst
13	26	1.4	224.0	Yes	5300.0MHz, -64.0dBm	Single burst
14	24	2.6	225.0	Yes	5320.0MHz, -64.0dBm	Single burst
15	28	3.0	180.0	Yes	5315.0MHz, -64.0dBm	Single burst
16	24	1.8	196.0	Yes	5310.0MHz, -64.0dBm	Single burst
17	26	2.4	204.0	Yes	5305.0MHz, -64.0dBm	Single burst
18	23	4.9	164.0	Yes	5300.0MHz, -64.0dBm	Single burst
19	25	1.2	189.0	Yes	5320.0MHz, -64.0dBm	Single burst
20	27	2.8	214.0	Yes	5315.0MHz, -64.0dBm	Single burst
21	28	2.5	154.0	Yes	5310.0MHz, -64.0dBm	Single burst
22	24	4.6	152.0	Yes	5305.0MHz, -64.0dBm	Single burst
23	26	1.1	198.0	Yes	5300.0MHz, -64.0dBm	Single burst
24	23	3.7	210.0	Yes	5320.0MHz, -64.0dBm	Single burst
25	25	4.3	211.0	Yes	5315.0MHz, -64.0dBm	Single burst
26	26	2.0	175.0	Yes	5310.0MHz, -64.0dBm	Single burst
27	23	4.5	159.0	Yes	5305.0MHz, -64.0dBm	Single burst
28	28	1.5	203.0	Yes	5300.0MHz, -64.0dBm	Single burst
29	24	3.9	173.0	No	5320.0MHz, -64.0dBm	Single burst
30	26	2.0	228.0	Yes	5315.0MHz, -64.0dBm	Single burst

Table 48 - FCC Short Pulse Radar (Type 3) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	17	7.8	207.0	Yes	5310.0MHz, -64.0dBm	Single burst
2	16	9.5	230.0	Yes	5305.0MHz, -64.0dBm	Single burst
3	17	6.8	303.0	Yes	5300.0MHz, -64.0dBm	Single burst
4	18	7.6	455.0	Yes	5320.0MHz, -64.0dBm	Single burst
5	18	6.7	279.0	Yes	5315.0MHz, -64.0dBm	Single burst
6	17	7.2	303.0	Yes	5310.0MHz, -64.0dBm	Single burst
7	17	9.8	263.0	Yes	5305.0MHz, -64.0dBm	Single burst
8	17	6.5	386.0	Yes	5300.0MHz, -64.0dBm	Single burst
9	16	9.1	320.0	Yes	5320.0MHz, -64.0dBm	Single burst
10	18	8.3	233.0	Yes	5315.0MHz, -64.0dBm	Single burst
11	16	6.3	350.0	Yes	5310.0MHz, -64.0dBm	Single burst
12	17	9.7	233.0	Yes	5305.0MHz, -64.0dBm	Single burst
13	18	6.3	392.0	Yes	5300.0MHz, -64.0dBm	Single burst
14	18	7.4	444.0	Yes	5320.0MHz, -64.0dBm	Single burst
15	17	6.9	388.0	Yes	5315.0MHz, -64.0dBm	Single burst
16	17	8.6	383.0	Yes	5310.0MHz, -64.0dBm	Single burst
17	17	8.1	397.0	Yes	5305.0MHz, -64.0dBm	Single burst
18	17	7.3	445.0	Yes	5300.0MHz, -64.0dBm	Single burst
19	16	6.1	388.0	Yes	5320.0MHz, -64.0dBm	Single burst
20	16	8.8	289.0	Yes	5315.0MHz, -64.0dBm	Single burst
21	18	8.8	263.0	Yes	5310.0MHz, -64.0dBm	Single burst
22	17	6.3	447.0	Yes	5305.0MHz, -64.0dBm	Single burst
23	18	8.7	334.0	Yes	5300.0MHz, -64.0dBm	Single burst
24	17	6.1	430.0	Yes	5320.0MHz, -64.0dBm	Single burst
25	17	8.9	209.0	Yes	5315.0MHz, -64.0dBm	Single burst
26	16	9.2	434.0	Yes	5310.0MHz, -64.0dBm	Single burst
27	16	7.5	471.0	Yes	5305.0MHz, -64.0dBm	Single burst
28	18	8.8	319.0	Yes	5300.0MHz, -64.0dBm	Single burst
29	17	9.2	498.0	Yes	5320.0MHz, -64.0dBm	Single burst
30	18	7.5	207.0	Yes	5315.0MHz, -64.0dBm	Single burst

Table 49 - FCC Short Pulse Radar (Type 4) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	13	17.7	261.0	Yes	5310.0MHz, -64.0dBm	Single burst
2	14	12.1	289.0	Yes	5305.0MHz, -64.0dBm	Single burst
3	15	14.9	409.0	Yes	5300.0MHz, -64.0dBm	Single burst
4	13	12.6	201.0	No	5320.0MHz, -64.0dBm	Single burst
5	16	18.6	281.0	Yes	5315.0MHz, -64.0dBm	Single burst
6	12	13.9	424.0	Yes	5310.0MHz, -64.0dBm	Single burst
7	13	11.9	214.0	Yes	5305.0MHz, -64.0dBm	Single burst
8	13	13.3	449.0	Yes	5300.0MHz, -64.0dBm	Single burst
9	13	13.9	405.0	Yes	5320.0MHz, -64.0dBm	Single burst
10	13	18.2	473.0	No	5315.0MHz, -64.0dBm	Single burst
11	12	11.6	418.0	Yes	5310.0MHz, -64.0dBm	Single burst
12	15	18.7	408.0	Yes	5305.0MHz, -64.0dBm	Single burst
13	14	19.6	249.0	Yes	5300.0MHz, -64.0dBm	Single burst
14	16	19.2	294.0	Yes	5320.0MHz, -64.0dBm	Single burst
15	13	13.2	282.0	Yes	5315.0MHz, -64.0dBm	Single burst
16	14	18.7	311.0	Yes	5310.0MHz, -64.0dBm	Single burst
17	14	18.4	236.0	Yes	5305.0MHz, -64.0dBm	Single burst
18	12	13.9	419.0	Yes	5300.0MHz, -64.0dBm	Single burst
19	15	15.4	206.0	Yes	5320.0MHz, -64.0dBm	Single burst
20	13	17.8	275.0	Yes	5315.0MHz, -64.0dBm	Single burst
21	13	14.8	366.0	Yes	5310.0MHz, -64.0dBm	Single burst
22	14	17.5	449.0	Yes	5305.0MHz, -64.0dBm	Single burst
23	13	14.8	318.0	Yes	5300.0MHz, -64.0dBm	Single burst
24	13	12.4	300.0	Yes	5320.0MHz, -64.0dBm	Single burst
25	12	13.3	421.0	Yes	5315.0MHz, -64.0dBm	Single burst
26	14	13.0	456.0	Yes	5310.0MHz, -64.0dBm	Single burst
27	15	15.8	327.0	Yes	5305.0MHz, -64.0dBm	Single burst
28	12	14.0	374.0	Yes	5300.0MHz, -64.0dBm	Single burst
29	15	14.5	496.0	Yes	5320.0MHz, -64.0dBm	Single burst
30	15	12.7	474.0	Yes	5315.0MHz, -64.0dBm	Single burst

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
1	9	1.0	333.0	No	5327.0MHz, -64.0dBm	Hop sequence: 5359, 5292, 5288, 5440, 5470, 5355, 5266, 5318, 5408, 5328, 5271, 5377, 5459, 5406, 5336, 5428, 5341, 5323, 5269, 5325, 5295, 5375, 5324, 5346, 5354, 5372, 5254, 5387, 5350, 5329, 5331, 5409, 5407, 5342, 5423, 5431, 5305, 5462, 5384, 5415, 5438, 5385, 5393, 5299, 5370, 5378, 5285, 5435, 5264, 5456, 5349, 5344, 5281, 5255, 5293, 5308, 5364, 5304, 5380, 5251, 5405, 5322, 5275, 5262, 5421, 5287, 5366, 5310, 5397, 5351, 5361, 5432, 5368, 5471, 5259, 5332, 5283, 5263, 5289, 5465, 5463, 5340, 5404, 5357, 5449, 5452, 5352, 5436, 5467, 5307, 5296, 5447, 5391, 5267, 5424, 5313, 5433, 5466, 5416, 5334 (17 hits)
2	9	1.0	333.0	Yes	5328.0MHz, -64.0dBm	Hop sequence: 5414, 5340, 5263, 5271, 5408, 5279, 5463, 5319, 5322, 5385, 5288, 5330, 5321, 5430, 5455, 5433, 5467, 5252, 5353, 5400, 5348, 5258, 5397, 5424, 5343, 5391, 5352, 5297, 5410, 5354, 5304, 5412, 5358, 5366, 5315, 5420, 5335, 5264, 5337, 5379, 5368, 5301, 5317, 5405, 5459, 5295, 5447, 5419, 5402, 5435, 5452, 5347, 5469, 5341, 5316, 5399, 5438, 5375, 5457, 5269, 5360, 5428, 5417, 5275, 5442, 5326, 5461, 5454, 5260, 5296, 5409, 5444, 5257, 5280, 5423, 5320, 5350, 5411, 5265, 5299, 5292, 5450, 5371, 5331, 5290, 5456, 5432, 5383, 5318, 5308, 5445, 5286, 5387, 5307, 5372, 5390, 5448, 5363, 5357, 5471 (18 hits)
3	9	1.0	333.0	Yes	5292.0MHz, -64.0dBm	Hop sequence: 5378, 5253, 5419, 5399, 5256, 5438, 5380, 5464, 5386, 5335, 5452, 5456, 5388, 5326, 5316, 5251, 5357, 5402, 5312, 5352, 5293, 5429, 5449, 5358, 5414, 5379, 5469, 5286, 5287, 5306, 5303, 5325, 5272, 5447, 5294, 5398, 5297, 5309, 5259, 5392, 5310, 5350, 5394, 5354, 5338, 5401, 5285, 5328, 5262, 5374, 5468, 5317, 5431, 5372, 5420, 5298, 5381, 5337, 5396, 5436, 5279, 5288, 5397, 5400, 5324, 5311, 5313, 5389, 5395, 5356, 5411, 5451, 5291, 5254, 5433, 5439, 5434, 5405, 5384, 5269, 5443, 5264, 5314, 5412, 5265, 5416, 5301, 5319, 5376, 5346, 5280, 5275, 5296, 5375, 5331, 5278, 5323, 5304, 5458, 5421 (23 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
4	9	1.0	333.0	Yes	5293.0MHz, -64.0dBm	Hop sequence: 5393, 5421, 5271, 5283, 5398, 5343, 5316, 5442, 5420, 5354, 5334, 5308, 5392, 5321, 5389, 5377, 5272, 5346, 5445, 5303, 5410, 5384, 5443, 5281, 5409, 5270, 5260, 5401, 5329, 5388, 5402, 5265, 5374, 5356, 5460, 5446, 5279, 5290, 5430, 5405, 5468, 5345, 5318, 5256, 5341, 5315, 5286, 5263, 5440, 5319, 5331, 5340, 5333, 5372, 5456, 5380, 5273, 5385, 5394, 5328, 5400, 5353, 5470, 5287, 5284, 5349, 5252, 5288, 5447, 5381, 5292, 5383, 5342, 5378, 5382, 5365, 5408, 5428, 5326, 5324, 5296, 5407, 5314, 5395, 5299, 5359, 5262, 5361, 5300, 5426, 5258, 5424, 5369, 5431, 5278, 5360, 5451, 5406, 5268, 5434 (15 hits)
5	9	1.0	333.0	Yes	5294.0MHz, -64.0dBm	Hop sequence: 5404, 5435, 5416, 5456, 5317, 5394, 5362, 5397, 5325, 5377, 5393, 5293, 5464, 5447, 5443, 5424, 5340, 5305, 5343, 5427, 5269, 5271, 5462, 5391, 5458, 5263, 5441, 5320, 5303, 5452, 5338, 5292, 5389, 5412, 5358, 5390, 5446, 5429, 5310, 5283, 5433, 5251, 5322, 5352, 5467, 5329, 5337, 5431, 5428, 5302, 5383, 5285, 5457, 5254, 5402, 5256, 5470, 5294, 5326, 5345, 5335, 5266, 5309, 5410, 5357, 5408, 5275, 5425, 5318, 5400, 5288, 5255, 5331, 5277, 5286, 5312, 5313, 5355, 5300, 5281, 5365, 5468, 5364, 5319, 5376, 5450, 5406, 5278, 5350, 5463, 5330, 5334, 5287, 5264, 5387, 5323, 5324, 5253, 5386, 5451 (20 hits)
6	9	1.0	333.0	Yes	5295.0MHz, -64.0dBm	Hop sequence: 5349, 5268, 5412, 5356, 5338, 5335, 5448, 5413, 5430, 5252, 5281, 5387, 5316, 5282, 5302, 5323, 5468, 5263, 5279, 5259, 5307, 5267, 5467, 5351, 5373, 5447, 5319, 5273, 5266, 5416, 5422, 5371, 5366, 5460, 5454, 5432, 5342, 5368, 5433, 5318, 5336, 5326, 5265, 5294, 5369, 5384, 5313, 5330, 5401, 5327, 5354, 5308, 5350, 5394, 5283, 5251, 5376, 5423, 5296, 5253, 5284, 5408, 5270, 5398, 5395, 5378, 5261, 5355, 5445, 5346, 5256, 5456, 5389, 5364, 5317, 5419, 5441, 5438, 5311, 5459, 5255, 5362, 5429, 5435, 5260, 5280, 5275, 5404, 5310, 5304, 5440, 5298, 5345, 5258, 5385, 5444, 5452, 5340, 5278, 5300 (18 hits)
7	9	1.0	333.0	Yes	5296.0MHz, -64.0dBm	Hop sequence: 5333, 5429, 5306, 5274, 5441, 5398, 5269, 5470, 5413, 5314, 5423, 5346, 5319, 5349, 5448, 5368, 5457, 5304, 5262, 5405, 5303, 5342, 5309, 5453, 5400, 5291, 5338, 5434, 5375, 5323, 5284, 5275, 5325, 5399, 5381, 5329, 5435, 5410, 5440, 5307, 5378, 5287, 5321, 5334, 5388, 5385, 5454, 5374, 5367, 5286, 5356, 5417, 5443, 5446, 5456, 5255, 5390, 5364, 5433, 5296, 5383, 5392, 5276, 5416, 5463, 5354, 5455, 5366, 5281, 5266, 5322, 5339, 5300, 5462, 5425, 5297, 5437, 5331, 5442, 5290, 5369, 5445, 5335, 5348, 5359, 5415, 5424, 5372, 5252, 5468, 5324, 5289, 5278, 5465, 5459, 5363, 5358, 5464, 5282, 5414 (15 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
8	9	1.0	333.0	Yes	5297.0MHz, -64.0dBm	Hop sequence: 5386, 5428, 5430, 5451, 5404, 5319, 5297, 5360, 5301, 5298, 5429, 5336, 5439, 5253, 5340, 5435, 5306, 5328, 5458, 5280, 5456, 5399, 5393, 5398, 5293, 5309, 5353, 5395, 5410, 5368, 5255, 5381, 5326, 5446, 5441, 5448, 5382, 5366, 5348, 5329, 5422, 5343, 5330, 5268, 5325, 5308, 5318, 5365, 5426, 5397, 5427, 5379, 5389, 5344, 5438, 5447, 5400, 5359, 5362, 5287, 5461, 5317, 5333, 5285, 5338, 5321, 5450, 5358, 5279, 5424, 5296, 5345, 5331, 5452, 5302, 5337, 5275, 5406, 5465, 5459, 5436, 5462, 5420, 5292, 5374, 5380, 5369, 5273, 5291, 5431, 5390, 5295, 5262, 5263, 5346, 5252, 5373, 5281, 5347, 5310 (19 hits)
9	9	1.0	333.0	Yes	5298.0MHz, -64.0dBm	Hop sequence: 5366, 5263, 5364, 5309, 5253, 5426, 5450, 5288, 5260, 5296, 5274, 5385, 5283, 5303, 5334, 5262, 5449, 5411, 5343, 5415, 5326, 5368, 5403, 5412, 5367, 5400, 5356, 5279, 5389, 5384, 5347, 5257, 5422, 5409, 5258, 5379, 5299, 5418, 5275, 5312, 5281, 5438, 5390, 5305, 5452, 5354, 5325, 5349, 5382, 5332, 5373, 5388, 5467, 5295, 5301, 5266, 5468, 5386, 5394, 5421, 5344, 5317, 5338, 5444, 5437, 5436, 5286, 5423, 5376, 5414, 5441, 5297, 5289, 5471, 5304, 5331, 5314, 5361, 5337, 5346, 5457, 5402, 5322, 5416, 5327, 5380, 5269, 5264, 5420, 5336, 5324, 5369, 5357, 5374, 5308, 5282, 5464, 5339, 5255, 5353 (18 hits)
10	9	1.0	333.0	Yes	5299.0MHz, -64.0dBm	Hop sequence: 5378, 5457, 5399, 5299, 5360, 5359, 5285, 5423, 5344, 5311, 5346, 5321, 5373, 5434, 5419, 5415, 5410, 5297, 5408, 5313, 5462, 5428, 5318, 5290, 5355, 5466, 5315, 5400, 5267, 5363, 5320, 5332, 5345, 5437, 5312, 5260, 5395, 5470, 5330, 5463, 5289, 5364, 5465, 5392, 5349, 5445, 5424, 5340, 5453, 5448, 5263, 5272, 5282, 5361, 5386, 5390, 5367, 5451, 5431, 5460, 5337, 5416, 5322, 5396, 5284, 5413, 5304, 5420, 5442, 5471, 5265, 5403, 5450, 5447, 5268, 5347, 5300, 5287, 5302, 5382, 5418, 5338, 5425, 5308, 5292, 5352, 5422, 5266, 5387, 5270, 5259, 5405, 5336, 5461, 5301, 5264, 5385, 5298, 5342, 5251 (17 hits)
11	9	1.0	333.0	Yes	5300.0MHz, -64.0dBm	Hop sequence: 5357, 5289, 5344, 5446, 5383, 5252, 5328, 5333, 5459, 5276, 5358, 5352, 5367, 5372, 5255, 5423, 5468, 5297, 5469, 5414, 5362, 5429, 5461, 5450, 5378, 5434, 5452, 5460, 5342, 5417, 5280, 5347, 5433, 5264, 5332, 5339, 5275, 5381, 5318, 5299, 5403, 5329, 5439, 5443, 5391, 5374, 5424, 5267, 5430, 5331, 5467, 5305, 5259, 5314, 5466, 5406, 5341, 5397, 5304, 5401, 5348, 5447, 5389, 5384, 5402, 5394, 5257, 5250, 5277, 5279, 5295, 5421, 5292, 5441, 5373, 5463, 5456, 5313, 5253, 5440, 5448, 5392, 5359, 5258, 5451, 5453, 5308, 5432, 5457, 5298, 5256, 5312, 5306, 5390, 5266, 5350, 5363, 5330, 5410, 5270 (14 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
12	9	1.0	333.0	Yes	5301.0MHz, -64.0dBm	Hop sequence: 5266, 5275, 5333, 5260, 5286, 5315, 5414, 5285, 5296, 5360, 5279, 5385, 5337, 5404, 5257, 5390, 5458, 5419, 5355, 5332, 5417, 5351, 5428, 5322, 5454, 5405, 5254, 5314, 5375, 5362, 5345, 5457, 5421, 5363, 5378, 5348, 5391, 5290, 5259, 5386, 5399, 5273, 5256, 5387, 5361, 5469, 5411, 5321, 5408, 5310, 5306, 5468, 5330, 5392, 5334, 5434, 5471, 5402, 5443, 5376, 5382, 5309, 5462, 5265, 5354, 5394, 5264, 5400, 5274, 5329, 5459, 5294, 5269, 5470, 5427, 5292, 5463, 5367, 5371, 5293, 5338, 5302, 5359, 5350, 5325, 5403, 5365, 5280, 5268, 5344, 5287, 5423, 5398, 5357, 5389, 5435, 5312, 5272, 5335, 5432 (14 hits)
13	9	1.0	333.0	Yes	5302.0MHz, -64.0dBm	Hop sequence: 5332, 5302, 5458, 5453, 5442, 5337, 5288, 5281, 5436, 5266, 5349, 5278, 5261, 5307, 5399, 5391, 5423, 5262, 5418, 5304, 5354, 5415, 5395, 5437, 5263, 5450, 5373, 5460, 5352, 5359, 5362, 5312, 5446, 5396, 5440, 5318, 5338, 5317, 5379, 5329, 5321, 5309, 5303, 5264, 5392, 5378, 5398, 5313, 5394, 5282, 5370, 5364, 5406, 5372, 5400, 5404, 5430, 5331, 5328, 5380, 5299, 5340, 5339, 5397, 5283, 5365, 5345, 5271, 5267, 5274, 5448, 5381, 5297, 5421, 5310, 5367, 5322, 5414, 5410, 5277, 5409, 5429, 5356, 5325, 5357, 5375, 5445, 5383, 5355, 5388, 5298, 5459, 5296, 5369, 5390, 5366, 5347, 5466, 5471, 5424 (18 hits)
14	9	1.0	333.0	Yes	5303.0MHz, -64.0dBm	Hop sequence: 5269, 5337, 5317, 5255, 5261, 5348, 5429, 5325, 5282, 5293, 5439, 5349, 5406, 5340, 5434, 5383, 5260, 5449, 5258, 5432, 5330, 5462, 5371, 5304, 5438, 5322, 5374, 5331, 5275, 5303, 5454, 5401, 5398, 5440, 5452, 5345, 5433, 5263, 5461, 5253, 5318, 5379, 5362, 5446, 5393, 5442, 5460, 5301, 5443, 5359, 5267, 5355, 5295, 5251, 5285, 5363, 5311, 5414, 5387, 5391, 5415, 5450, 5395, 5445, 5254, 5399, 5376, 5271, 5356, 5279, 5457, 5394, 5425, 5390, 5381, 5335, 5336, 5397, 5347, 5410, 5463, 5367, 5320, 5408, 5465, 5455, 5302, 5268, 5316, 5284, 5332, 5274, 5366, 5266, 5411, 5418, 5422, 5380, 5319, 5286 (14 hits)
15	9	1.0	333.0	Yes	5304.0MHz, -64.0dBm	Hop sequence: 5295, 5338, 5318, 5331, 5459, 5471, 5458, 5326, 5274, 5433, 5423, 5320, 5272, 5448, 5303, 5315, 5306, 5444, 5415, 5419, 5250, 5420, 5353, 5314, 5355, 5284, 5382, 5393, 5270, 5252, 5251, 5434, 5399, 5421, 5398, 5411, 5329, 5264, 5273, 5394, 5391, 5467, 5470, 5263, 5396, 5380, 5344, 5366, 5291, 5342, 5388, 5372, 5377, 5334, 5361, 5412, 5260, 5364, 5321, 5286, 5427, 5259, 5341, 5343, 5277, 5401, 5319, 5455, 5446, 5375, 5404, 5363, 5269, 5299, 5333, 5335, 5350, 5280, 5287, 5345, 5367, 5397, 5336, 5430, 5261, 5395, 5365, 5456, 5466, 5348, 5368, 5258, 5312, 5371, 5465, 5426, 5283, 5300, 5271, 5387 (13 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
16	9	1.0	333.0	Yes	5305.0MHz, -64.0dBm	Hop sequence: 5272, 5335, 5361, 5416, 5277, 5452, 5320, 5398, 5316, 5415, 5285, 5302, 5252, 5406, 5342, 5455, 5288, 5254, 5463, 5427, 5263, 5440, 5393, 5327, 5403, 5399, 5264, 5258, 5344, 5373, 5337, 5421, 5357, 5298, 5446, 5308, 5405, 5363, 5367, 5464, 5442, 5397, 5293, 5412, 5381, 5279, 5436, 5364, 5471, 5414, 5350, 5336, 5451, 5294, 5278, 5281, 5283, 5438, 5274, 5260, 5349, 5382, 5299, 5375, 5413, 5444, 5359, 5267, 5333, 5296, 5430, 5409, 5454, 5307, 5291, 5469, 5311, 5328, 5297, 5339, 5374, 5369, 5371, 5270, 5420, 5457, 5428, 5360, 5441, 5269, 5257, 5255, 5295, 5435, 5346, 5305, 5400, 5460, 5459, 5315 (17 hits)
17	9	1.0	333.0	Yes	5306.0MHz, -64.0dBm	Hop sequence: 5451, 5392, 5422, 5432, 5262, 5454, 5271, 5401, 5286, 5440, 5333, 5415, 5402, 5254, 5321, 5324, 5270, 5395, 5318, 5350, 5389, 5329, 5431, 5457, 5468, 5387, 5352, 5290, 5358, 5385, 5421, 5403, 5394, 5314, 5449, 5426, 5360, 5393, 5278, 5397, 5455, 5312, 5275, 5354, 5260, 5434, 5382, 5413, 5363, 5423, 5398, 5265, 5258, 5310, 5408, 5462, 5295, 5388, 5391, 5446, 5251, 5465, 5444, 5307, 5445, 5334, 5359, 5450, 5379, 5328, 5336, 5411, 5302, 5386, 5371, 5366, 5282, 5320, 5291, 5374, 5304, 5335, 5467, 5346, 5348, 5311, 5339, 5326, 5297, 5435, 5405, 5261, 5428, 5456, 5253, 5453, 5294, 5438, 5331, 5344 (16 hits)
18	9	1.0	333.0	Yes	5307.0MHz, -64.0dBm	Hop sequence: 5299, 5407, 5256, 5286, 5395, 5369, 5416, 5355, 5321, 5337, 5375, 5255, 5300, 5398, 5468, 5359, 5330, 5260, 5309, 5282, 5325, 5440, 5289, 5301, 5393, 5366, 5381, 5298, 5254, 5448, 5380, 5261, 5460, 5419, 5258, 5358, 5443, 5372, 5388, 5268, 5338, 5427, 5277, 5318, 5363, 5423, 5377, 5340, 5351, 5418, 5406, 5384, 5320, 5332, 5296, 5430, 5431, 5429, 5310, 5463, 5287, 5403, 5447, 5331, 5252, 5262, 5295, 5251, 5437, 5382, 5453, 5315, 5360, 5275, 5459, 5257, 5345, 5452, 5265, 5435, 5365, 5455, 5469, 5367, 5292, 5397, 5281, 5293, 5432, 5422, 5344, 5420, 5446, 5396, 5328, 5291, 5284, 5362, 5339, 5390 (16 hits)
19	9	1.0	333.0	Yes	5308.0MHz, -64.0dBm	Hop sequence: 5341, 5336, 5387, 5392, 5280, 5281, 5457, 5275, 5359, 5466, 5461, 5400, 5311, 5464, 5338, 5328, 5389, 5312, 5440, 5442, 5448, 5435, 5470, 5391, 5327, 5404, 5393, 5467, 5441, 5434, 5342, 5252, 5395, 5279, 5352, 5273, 5266, 5363, 5401, 5443, 5333, 5427, 5272, 5433, 5325, 5368, 5452, 5450, 5463, 5385, 5329, 5351, 5354, 5295, 5334, 5297, 5317, 5318, 5356, 5302, 5348, 5257, 5320, 5355, 5446, 5270, 5254, 5340, 5417, 5458, 5260, 5326, 5398, 5402, 5367, 5278, 5282, 5268, 5303, 5259, 5265, 5425, 5293, 5382, 5369, 5319, 5370, 5414, 5439, 5405, 5271, 5313, 5429, 5423, 5375, 5283, 5418, 5306, 5399, 5345 (17 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
20	9	1.0	333.0	Yes	5309.0MHz, -64.0dBm	Hop sequence: 5263, 5419, 5303, 5288, 5444, 5464, 5395, 5405, 5370, 5341, 5459, 5314, 5439, 5428, 5347, 5466, 5376, 5383, 5339, 5308, 5311, 5388, 5398, 5305, 5317, 5445, 5407, 5304, 5438, 5418, 5400, 5441, 5446, 5280, 5299, 5318, 5307, 5469, 5406, 5334, 5257, 5252, 5287, 5387, 5290, 5336, 5326, 5391, 5278, 5433, 5313, 5367, 5338, 5363, 5348, 5335, 5296, 5364, 5426, 5447, 5298, 5432, 5378, 5452, 5258, 5468, 5300, 5463, 5356, 5440, 5384, 5358, 5284, 5277, 5422, 5255, 5390, 5397, 5429, 5382, 5355, 5451, 5401, 5291, 5276, 5289, 5408, 5457, 5320, 5375, 5295, 5306, 5329, 5410, 5409, 5415, 5332, 5420, 5325, 5450 (19 hits)
21	9	1.0	333.0	Yes	5310.0MHz, -64.0dBm	Hop sequence: 5420, 5282, 5433, 5351, 5278, 5378, 5307, 5267, 5426, 5318, 5261, 5388, 5427, 5358, 5397, 5252, 5456, 5369, 5404, 5444, 5466, 5265, 5337, 5298, 5349, 5356, 5263, 5392, 5363, 5336, 5468, 5442, 5256, 5384, 5324, 5304, 5317, 5345, 5277, 5454, 5365, 5464, 5340, 5264, 5416, 5254, 5314, 5387, 5435, 5417, 5448, 5371, 5268, 5292, 5269, 5381, 5355, 5357, 5437, 5360, 5302, 5395, 5409, 5372, 5403, 5412, 5410, 5327, 5408, 5414, 5341, 5380, 5389, 5457, 5390, 5280, 5315, 5311, 5347, 5273, 5297, 5322, 5352, 5424, 5262, 5266, 5418, 5326, 5373, 5458, 5375, 5423, 5452, 5406, 5463, 5432, 5335, 5399, 5425, 5284 (15 hits)
22	9	1.0	333.0	Yes	5311.0MHz, -64.0dBm	Hop sequence: 5344, 5351, 5457, 5258, 5324, 5359, 5271, 5425, 5426, 5458, 5357, 5404, 5406, 5349, 5372, 5288, 5262, 5431, 5370, 5330, 5386, 5328, 5256, 5251, 5360, 5362, 5346, 5343, 5393, 5327, 5326, 5437, 5408, 5353, 5401, 5414, 5374, 5410, 5266, 5337, 5277, 5345, 5446, 5255, 5369, 5394, 5319, 5285, 5282, 5395, 5252, 5375, 5442, 5380, 5316, 5454, 5311, 5422, 5341, 5432, 5329, 5450, 5449, 5336, 5445, 5439, 5323, 5416, 5368, 5309, 5436, 5295, 5407, 5272, 5376, 5381, 5318, 5310, 5283, 5373, 5413, 5430, 5465, 5291, 5363, 5447, 5304, 5469, 5292, 5417, 5260, 5441, 5356, 5461, 5333, 5463, 5299, 5354, 5419, 5317 (16 hits)
23	9	1.0	333.0	Yes	5312.0MHz, -64.0dBm	Hop sequence: 5420, 5350, 5326, 5456, 5314, 5261, 5327, 5458, 5257, 5303, 5415, 5371, 5262, 5457, 5436, 5460, 5276, 5408, 5258, 5275, 5332, 5299, 5442, 5349, 5385, 5270, 5390, 5283, 5368, 5264, 5464, 5426, 5387, 5405, 5448, 5295, 5424, 5301, 5352, 5376, 5422, 5434, 5285, 5380, 5367, 5444, 5433, 5363, 5323, 5452, 5366, 5379, 5397, 5316, 5467, 5337, 5325, 5373, 5309, 5416, 5266, 5382, 5400, 5256, 5375, 5440, 5345, 5465, 5425, 5459, 5297, 5462, 5454, 5455, 5321, 5432, 5319, 5372, 5263, 5292, 5293, 5333, 5398, 5419, 5421, 5320, 5291, 5260, 5413, 5272, 5344, 5392, 5307, 5269, 5404, 5353, 5288, 5338, 5290, 5412 (18 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
24	9	1.0	333.0	Yes	5313.0MHz, -64.0dBm	Hop sequence: 5438, 5411, 5471, 5370, 5405, 5324, 5389, 5395, 5314, 5255, 5342, 5446, 5449, 5390, 5304, 5292, 5434, 5317, 5322, 5296, 5467, 5413, 5335, 5383, 5419, 5424, 5289, 5368, 5360, 5256, 5382, 5433, 5414, 5307, 5338, 5344, 5457, 5397, 5357, 5464, 5439, 5351, 5403, 5379, 5355, 5310, 5258, 5380, 5407, 5287, 5426, 5343, 5422, 5459, 5337, 5361, 5393, 5364, 5309, 5443, 5312, 5447, 5263, 5374, 5261, 5367, 5456, 5280, 5421, 5369, 5308, 5313, 5375, 5394, 5326, 5392, 5331, 5440, 5415, 5318, 5251, 5387, 5300, 5356, 5254, 5278, 5316, 5386, 5441, 5396, 5371, 5454, 5444, 5298, 5428, 5282, 5333, 5384, 5273, 5432 (18 hits)
25	9	1.0	333.0	Yes	5314.0MHz, -64.0dBm	Hop sequence: 5427, 5297, 5437, 5360, 5422, 5319, 5396, 5439, 5281, 5295, 5404, 5380, 5286, 5265, 5384, 5433, 5377, 5436, 5375, 5289, 5298, 5409, 5371, 5414, 5274, 5263, 5470, 5411, 5448, 5296, 5413, 5393, 5458, 5460, 5397, 5425, 5268, 5442, 5327, 5302, 5463, 5454, 5259, 5449, 5419, 5273, 5417, 5381, 5432, 5361, 5441, 5373, 5323, 5337, 5278, 5326, 5378, 5408, 5331, 5401, 5387, 5299, 5391, 5446, 5450, 5468, 5329, 5338, 5447, 5348, 5400, 5354, 5424, 5307, 5369, 5294, 5421, 5322, 5456, 5412, 5253, 5276, 5283, 5407, 5330, 5471, 5251, 5293, 5438, 5464, 5457, 5346, 5359, 5351, 5306, 5385, 5366, 5339, 5291, 5370 (15 hits)
26	9	1.0	333.0	Yes	5315.0MHz, -64.0dBm	Hop sequence: 5253, 5388, 5310, 5288, 5450, 5446, 5468, 5386, 5356, 5346, 5263, 5264, 5258, 5272, 5419, 5435, 5304, 5301, 5391, 5402, 5359, 5411, 5367, 5332, 5379, 5443, 5389, 5459, 5451, 5422, 5317, 5330, 5269, 5349, 5340, 5286, 5424, 5323, 5398, 5426, 5298, 5292, 5403, 5383, 5284, 5282, 5259, 5280, 5260, 5270, 5400, 5362, 5382, 5408, 5318, 5467, 5452, 5300, 5371, 5431, 5427, 5299, 5396, 5395, 5409, 5315, 5449, 5320, 5291, 5440, 5289, 5373, 5447, 5436, 5432, 5439, 5445, 5354, 5454, 5455, 5463, 5394, 5278, 5380, 5428, 5336, 5441, 5363, 5331, 5401, 5470, 5462, 5275, 5399, 5358, 5461, 5322, 5337, 5387, 5311 (14 hits)
27	9	1.0	333.0	Yes	5316.0MHz, -64.0dBm	Hop sequence: 5415, 5304, 5274, 5325, 5437, 5297, 5331, 5269, 5289, 5423, 5296, 5280, 5259, 5353, 5363, 5251, 5434, 5345, 5298, 5326, 5470, 5282, 5460, 5343, 5292, 5254, 5424, 5414, 5376, 5346, 5417, 5411, 5327, 5433, 5401, 5321, 5339, 5350, 5347, 5332, 5382, 5357, 5286, 5316, 5308, 5427, 5455, 5364, 5410, 5397, 5312, 5354, 5458, 5362, 5372, 5408, 5398, 5399, 5442, 5413, 5265, 5336, 5394, 5333, 5305, 5392, 5383, 5342, 5258, 5283, 5468, 5441, 5267, 5430, 5277, 5443, 5311, 5469, 5301, 5370, 5253, 5406, 5256, 5275, 5440, 5360, 5278, 5272, 5291, 5419, 5358, 5302, 5293, 5439, 5365, 5313, 5457, 5328, 5421, 5454 (19 hits)

Table 50 - FCC frequency hopping radar (Type 6) Results Internal Antenna, 40MHz						
Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Hop seq.
28	9	1.0	333.0	Yes	5317.0MHz, -64.0dBm	Hop sequence: 5400, 5324, 5353, 5411, 5374, 5309, 5407, 5352, 5444, 5316, 5420, 5442, 5404, 5458, 5446, 5463, 5364, 5344, 5397, 5455, 5451, 5359, 5273, 5439, 5406, 5367, 5437, 5335, 5418, 5453, 5417, 5362, 5425, 5388, 5306, 5433, 5282, 5461, 5468, 5337, 5267, 5393, 5277, 5434, 5383, 5456, 5415, 5276, 5405, 5462, 5330, 5375, 5441, 5290, 5408, 5318, 5325, 5354, 5314, 5349, 5438, 5269, 5427, 5321, 5343, 5377, 5390, 5380, 5379, 5450, 5307, 5302, 5356, 5358, 5409, 5386, 5428, 5297, 5365, 5320, 5303, 5288, 5289, 5329, 5259, 5334, 5333, 5275, 5292, 5262, 5440, 5357, 5346, 5445, 5369, 5286, 5341, 5422, 5413, 5394 (14 hits)
29	9	1.0	333.0	Yes	5318.0MHz, -64.0dBm	Hop sequence: 5463, 5458, 5451, 5285, 5296, 5426, 5396, 5333, 5430, 5371, 5311, 5262, 5413, 5298, 5440, 5407, 5268, 5354, 5392, 5261, 5455, 5286, 5274, 5390, 5329, 5331, 5409, 5448, 5258, 5302, 5343, 5360, 5408, 5403, 5381, 5437, 5284, 5338, 5278, 5378, 5320, 5372, 5316, 5382, 5369, 5250, 5361, 5291, 5277, 5308, 5304, 5339, 5346, 5443, 5367, 5391, 5271, 5299, 5263, 5266, 5383, 5422, 5415, 5374, 5267, 5352, 5414, 5356, 5253, 5328, 5351, 5325, 5375, 5251, 5288, 5260, 5303, 5394, 5468, 5324, 5400, 5449, 5348, 5380, 5379, 5397, 5438, 5301, 5269, 5344, 5254, 5376, 5289, 5425, 5297, 5444, 5350, 5323, 5282, 5252 (16 hits)
30	9	1.0	333.0	Yes	5319.0MHz, -64.0dBm	Hop sequence: 5275, 5454, 5470, 5444, 5415, 5399, 5379, 5425, 5377, 5458, 5365, 5323, 5352, 5412, 5392, 5445, 5457, 5297, 5307, 5402, 5452, 5361, 5467, 5436, 5381, 5287, 5354, 5359, 5268, 5391, 5427, 5449, 5257, 5385, 5292, 5409, 5274, 5356, 5387, 5434, 5411, 5254, 5251, 5262, 5334, 5378, 5413, 5420, 5277, 5362, 5357, 5252, 5433, 5363, 5282, 5306, 5460, 5364, 5309, 5389, 5299, 5344, 5462, 5421, 5469, 5448, 5351, 5414, 5408, 5318, 5315, 5386, 5253, 5294, 5263, 5429, 5398, 5293, 5468, 5321, 5428, 5313, 5331, 5372, 5267, 5265, 5380, 5289, 5330, 5326, 5347, 5266, 5342, 5406, 5393, 5439, 5312, 5355, 5298, 5343 (16 hits)

Table 51 - Long Sequence Waveform Summary Internal Antenna, 40MHz		
Long Sequence Trial	Result	Radar Frequency, Amplitude
Trial #1	Detected	5310.0MHz, -64.0dBm
Trial #2	Detected	5305.0MHz, -64.0dBm
Trial #3	Detected	5300.0MHz, -64.0dBm
Trial #4	Detected	5320.0MHz, -64.0dBm
Trial #5	Detected	5315.0MHz, -64.0dBm
Trial #6	Detected	5310.0MHz, -64.0dBm
Trial #7	Detected	5305.0MHz, -64.0dBm
Trial #8	Detected	5300.0MHz, -64.0dBm
Trial #9	Detected	5320.0MHz, -64.0dBm
Trial #10	Detected	5315.0MHz, -64.0dBm
Trial #11	Detected	5310.0MHz, -64.0dBm
Trial #12	Detected	5305.0MHz, -64.0dBm
Trial #13	Detected	5300.0MHz, -64.0dBm
Trial #14	Detected	5320.0MHz, -64.0dBm
Trial #15	Detected	5315.0MHz, -64.0dBm
Trial #16	Detected	5310.0MHz, -64.0dBm
Trial #17	Detected	5305.0MHz, -64.0dBm
Trial #18	NOT Detected	5300.0MHz, -64.0dBm
Trial #19	Detected	5320.0MHz, -64.0dBm
Trial #20	Detected	5315.0MHz, -64.0dBm
Trial #21	Detected	5310.0MHz, -64.0dBm
Trial #22	Detected	5305.0MHz, -64.0dBm
Trial #23	Detected	5300.0MHz, -64.0dBm
Trial #24	Detected	5320.0MHz, -64.0dBm
Trial #25	Detected	5315.0MHz, -64.0dBm
Trial #26	Detected	5310.0MHz, -64.0dBm
Trial #27	Detected	5305.0MHz, -64.0dBm
Trial #28	Detected	5300.0MHz, -64.0dBm
Trial #29	Detected	5320.0MHz, -64.0dBm
Trial #30	Detected	5315.0MHz, -64.0dBm

Table 52 - Internal Antenna, 40MHz 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 (us)
1	1	58.5	17	-	-	0.100852
2	1	95.3	19	-	-	2.491728
3	1	59.8	9	-	-	3.033431
4	2	79.8	18	1722.0	-	4.371277
5	2	58.4	9	1419.0	-	5.775644
6	1	58.6	18	-	-	7.053960
7	2	95.0	14	1490.0	-	8.423881
8	2	64.0	9	1288.0	-	9.491882
9	2	68.9	18	1970.0	-	10.844881

Table 53 - Internal Antenna, 40MHz 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 (us)
1	2	58.7	10	1134.0	-	0.678351
2	1	85.4	12	-	-	2.125277
3	3	85.8	13	1626.0	1414.0	2.952373
4	2	96.7	7	1485.0	-	3.449130
5	2	99.8	11	1236.0	-	4.680824
6	3	95.2	18	1383.0	1639.0	6.505982
7	1	66.1	16	-	-	7.402444
8	2	73.2	13	1470.0	-	8.214920
9	3	85.0	20	1701.0	1375.0	9.026660
10	2	68.3	9	1655.0	-	10.270224
11	1	71.0	18	-	-	11.401663

Table 54 - Internal Antenna, 40MHz 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 (us)
1	3	88.7	20	1023.0	1032.0	1.148126
2	2	65.2	9	1857.0	-	2.421865
3	2	82.6	13	1397.0	-	4.417564
4	3	97.7	12	1619.0	1905.0	5.463587
5	3	79.1	12	1037.0	1351.0	7.379362
6	1	77.1	17	-	-	7.696574
7	1	52.7	15	-	-	9.066417
8	2	71.2	9	1453.0	-	11.402022

Table 55 - Internal Antenna, 40MHz 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 (us)
1	1	70.9	8	-	-	0.200242
2	2	50.3	14	1867.0	-	0.894898
3	2	63.5	8	1694.0	-	1.631827
4	2	75.6	13	1981.0	-	2.618210
5	2	86.9	14	1388.0	-	3.242906
6	1	63.0	7	-	-	4.280843
7	2	73.7	8	1330.0	-	5.068429
8	2	79.1	10	1937.0	-	5.858509
9	2	52.5	8	1721.0	-	6.955882
10	2	65.1	15	1430.0	-	7.398592
11	2	90.1	6	1005.0	-	8.401748
12	2	67.7	15	1276.0	-	8.986212
13	1	87.6	20	-	-	9.865602
14	2	63.1	18	1569.0	-	10.525931
15	1	54.6	9	-	-	11.976916

Table 56 - Internal Antenna, 40MHz 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 (us)
1	2	82.3	18	1982.0	-	1.215623
2	2	64.6	19	1533.0	-	2.301566
3	1	56.7	16	-	-	3.732167
4	2	66.5	16	1377.0	-	4.828004
5	1	50.7	17	-	-	5.609610
6	2	61.6	14	1151.0	-	6.771099
7	2	96.8	18	1396.0	-	8.047303
8	1	63.2	10	-	-	9.389698
9	2	52.9	19	1326.0	-	11.820846

Table 57 - Internal Antenna, 40MHz 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 (us)
1	2	76.4	17	1752.0	-	0.094229
2	2	91.9	19	1533.0	-	1.217622
3	2	67.1	7	1165.0	-	2.267006
4	3	53.1	9	1263.0	1247.0	3.004900
5	1	56.4	11	-	-	3.515187
6	2	69.2	12	1302.0	-	4.779191
7	3	68.2	18	1442.0	1313.0	5.856271
8	1	88.8	6	-	-	6.276908
9	2	88.3	9	1741.0	-	7.665659
10	1	98.3	20	-	-	8.187122
11	2	65.2	9	1820.0	-	9.232862
12	1	54.8	8	-	-	9.949715
13	1	90.0	18	-	-	10.858347
14	2	81.6	14	1730.0	-	11.282423

Table 58 - Internal Antenna, 40MHz 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 (us)
1	2	63.8	15	1103.0	-	0.663662
2	1	97.2	13	-	-	1.218308
3	2	92.2	16	1703.0	-	1.818945
4	2	98.6	17	1637.0	-	2.422199
5	3	74.8	10	1983.0	1570.0	3.719299
6	3	67.0	10	1389.0	1896.0	4.307490
7	3	60.6	6	1706.0	1988.0	5.025489
8	3	56.6	6	1649.0	1199.0	5.864667
9	2	53.5	17	1236.0	-	6.767509
10	3	98.0	6	1726.0	1971.0	7.206534
11	1	77.1	5	-	-	8.051730
12	2	72.0	6	1688.0	-	9.068416
13	2	96.6	6	1494.0	-	10.033339
14	2	71.5	6	1810.0	-	10.523648
15	3	79.6	13	1901.0	1745.0	11.623956

Table 59 - Internal Antenna, 40MHz 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 (us)
1	2	66.5	7	1869.0	-	0.879561
2	1	68.7	18	-	-	1.759731
3	3	60.4	14	1160.0	1311.0	3.491716
4	2	75.5	15	1523.0	-	4.721093
5	3	51.7	15	1822.0	1994.0	5.364502
6	3	51.7	18	1619.0	1909.0	6.453412
7	3	55.8	17	1564.0	1499.0	7.829306
8	2	74.8	18	1961.0	-	9.211673
9	1	97.7	14	-	-	9.754084
10	1	72.0	8	-	-	11.705962

Table 60 - Internal Antenna, 40MHz 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 (us)
1	2	59.5	5	1705.0	-	0.794310
2	2	93.1	12	1004.0	-	2.006404
3	3	76.0	17	1056.0	1183.0	3.318272
4	2	60.9	20	1258.0	-	5.053549
5	2	81.3	18	1069.0	-	5.387508
6	1	82.8	10	-	-	6.808312
7	2	95.6	10	1321.0	-	8.738181
8	1	98.0	13	-	-	10.083695
9	2	57.3	12	1746.0	-	11.175314

Table 61 - Internal Antenna, 40MHz 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 (us)
1	2	92.9	6	1303.0	-	0.583554
2	2	75.8	17	1061.0	-	1.408457
3	2	72.3	19	1854.0	-	1.875692
4	2	95.0	13	1099.0	-	2.362823
5	1	72.7	9	-	-	2.989525
6	2	76.5	10	1707.0	-	3.630890
7	2	97.7	15	1962.0	-	4.882736
8	2	70.4	18	1745.0	-	5.143319
9	3	94.6	12	1009.0	1326.0	5.896469
10	2	70.1	17	1169.0	-	6.883092
11	2	80.5	13	1755.0	-	7.653770
12	3	70.1	19	1250.0	1436.0	8.397460
13	2	85.2	10	1181.0	-	8.756995
14	2	59.7	14	1916.0	-	9.343460
15	1	50.1	16	-	-	10.537728
16	3	54.5	8	1086.0	1142.0	10.680316
17	2	66.8	8	1674.0	-	11.549675

Table 62 - Internal Antenna, 40MHz 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 (us)
1	2	70.0	19	1852.0	-	0.409755
2	1	64.7	10	-	-	1.435015
3	1	77.1	13	-	-	2.010035
4	1	95.9	10	-	-	3.443279
5	3	86.8	19	1816.0	1978.0	4.583634
6	1	60.2	11	-	-	5.147579
7	1	77.1	16	-	-	6.412691
8	1	68.0	10	-	-	6.854427
9	2	60.1	15	1507.0	-	8.031394
10	3	87.2	5	1462.0	1547.0	8.356920
11	2	94.4	11	1397.0	-	9.660977
12	2	70.9	20	1165.0	-	10.902325
13	1	91.9	14	-	-	11.288420

Table 63 - Internal Antenna, 40MHz 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 (us)
1	2	55.5	9	1796.0	-	0.302214
2	2	77.8	20	1410.0	-	1.022909
3	3	70.0	6	1201.0	1233.0	1.348979
4	2	78.8	10	1129.0	-	2.081819
5	1	80.2	19	-	-	3.108968
6	2	75.9	15	1172.0	-	3.252326
7	1	54.5	16	-	-	3.915732
8	2	67.8	16	1758.0	-	4.701687
9	2	67.0	15	1200.0	-	5.162381
10	1	51.2	6	-	-	6.164802
11	2	87.4	15	1738.0	-	6.429282
12	3	77.5	10	1295.0	1523.0	7.225146
13	2	51.6	17	1046.0	-	7.708972
14	2	59.1	7	1934.0	-	8.299322
15	3	50.3	14	1922.0	1944.0	9.082040
16	3	65.3	5	1110.0	1276.0	9.676492
17	2	65.4	11	1372.0	-	10.220262
18	3	84.0	10	1439.0	1612.0	11.265257
19	2	92.9	13	1370.0	-	11.690576

Table 64 - Internal Antenna, 40MHz 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 (us)
1	1	60.3	17	-	-	0.464036
2	2	69.8	15	1225.0	-	1.108246
3	2	93.0	10	1148.0	-	1.476164
4	1	55.9	19	-	-	2.251346
5	3	55.0	15	1550.0	1518.0	3.136347
6	1	77.9	10	-	-	3.780674
7	2	56.1	14	1828.0	-	4.618718
8	2	83.0	8	1351.0	-	5.086528
9	2	50.5	10	1970.0	-	5.435853
10	1	94.3	14	-	-	6.468936
11	1	97.2	14	-	-	6.876479
12	1	86.1	10	-	-	7.841384
13	1	99.7	20	-	-	8.229185
14	2	88.6	12	1889.0	-	8.811192
15	2	59.3	5	1636.0	-	9.520472
16	3	83.4	15	1515.0	1810.0	10.267141
17	1	75.1	18	-	-	10.961371
18	3	88.7	10	1391.0	1362.0	11.786112

Table 65 - Internal Antenna, 40MHz 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 (us)
1	1	75.5	11	-	-	0.253121
2	1	75.0	10	-	-	0.641073
3	2	79.6	8	1759.0	-	1.596828
4	1	95.2	5	-	-	2.489256
5	2	83.8	20	1457.0	-	2.805136
6	2	84.6	17	1920.0	-	3.770793
7	2	84.1	18	1502.0	-	4.224021
8	1	58.7	6	-	-	4.719888
9	2	84.2	18	1744.0	-	5.512266
10	1	79.4	18	-	-	5.907204
11	1	73.2	18	-	-	6.883979
12	3	91.9	7	1115.0	1384.0	7.070141
13	2	70.4	20	1205.0	-	7.658254
14	2	55.0	13	1130.0	-	8.545601
15	1	72.4	9	-	-	9.394882
16	2	77.3	12	1608.0	-	10.098848
17	2	62.3	20	1268.0	-	10.447284
18	2	52.9	18	1101.0	-	11.238865
19	3	82.2	12	1835.0	1435.0	11.401048

Table 66 - Internal Antenna, 40MHz 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 (us)
1	2	77.8	17	1537.0	-	0.895854
2	2	55.1	16	1906.0	-	1.688952
3	2	58.8	18	1698.0	-	2.673646
4	2	89.0	17	1268.0	-	3.282631
5	3	65.4	15	1692.0	1420.0	4.615580
6	2	62.3	17	1309.0	-	5.011546
7	2	89.7	12	1390.0	-	6.044181
8	3	78.1	16	1415.0	1963.0	7.048475
9	2	86.0	19	1478.0	-	8.614780
10	2	73.4	13	1036.0	-	9.490907
11	3	93.0	19	1617.0	1497.0	10.144526
12	2	95.4	13	1922.0	-	11.665726

Table 67 - Internal Antenna, 40MHz 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 (us)
1	3	89.3	12	1586.0	1534.0	0.553900
2	2	92.6	17	1180.0	-	2.529737
3	3	61.6	19	1729.0	1775.0	3.397641
4	3	89.4	5	1184.0	1721.0	4.682335
5	2	82.9	17	1435.0	-	6.677805
6	3	97.4	15	1585.0	1270.0	8.592249
7	3	62.3	13	1317.0	1098.0	9.693377
8	1	87.8	20	-	-	11.640182

Table 68 - Internal Antenna, 40MHz 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 (us)
1	2	93.2	20	1486.0	-	0.342923
2	2	72.2	19	1487.0	-	0.786954
3	1	72.3	14	-	-	1.960800
4	3	51.6	9	1091.0	1991.0	2.305872
5	2	99.3	18	1447.0	-	3.089355
6	3	93.6	9	1863.0	1326.0	3.790519
7	1	80.5	19	-	-	4.388828
8	1	60.2	9	-	-	4.874893
9	3	92.4	8	1740.0	1802.0	5.516684
10	2	68.3	10	1988.0	-	6.006900
11	3	63.3	12	1794.0	1448.0	7.024716
12	3	79.7	14	1166.0	1197.0	7.858149
13	1	65.7	18	-	-	8.320220
14	3	57.0	6	1384.0	1222.0	9.169045
15	1	58.2	7	-	-	9.673059
16	1	53.1	7	-	-	10.616128
17	1	54.4	11	-	-	10.989592
18	2	60.7	17	1661.0	-	11.667285

Table 69 - Internal Antenna, 40MHz Long Sequence Waveform Trial#18 (NOT Detected)						
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
1	1	94.6	8	-	-	0.192501
2	1	59.9	10	-	-	1.321728
3	3	76.6	20	1258.0	1409.0	2.254990
4	2	76.7	14	1681.0	-	3.558029
5	1	78.3	11	-	-	4.011960
6	1	87.1	11	-	-	5.649222
7	2	83.5	17	1340.0	-	6.340565
8	2	79.4	10	1181.0	-	7.292026
9	2	71.7	6	1960.0	-	8.449162
10	2	80.8	19	1551.0	-	9.320320
11	1	87.7	16	-	-	10.762874
12	2	77.9	7	1125.0	-	11.170740

Table 70 - Internal Antenna, 40MHz 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 (us)
1	1	50.7	6	-	-	0.110678
2	1	96.2	10	-	-	1.422842
3	1	87.9	20	-	-	1.740406
4	1	60.4	11	-	-	3.376530
5	2	70.8	7	1594.0	-	3.821806
6	2	97.3	7	1357.0	-	5.100073
7	3	59.3	8	1180.0	1604.0	5.821956
8	1	70.2	17	-	-	6.597467
9	2	57.5	7	1574.0	-	6.909524
10	1	65.4	12	-	-	7.770035
11	2	57.6	6	1474.0	-	9.114930
12	1	99.5	18	-	-	9.492855
13	3	55.6	20	1786.0	1507.0	10.368261
14	2	95.4	6	1515.0	-	11.203903

Table 71 - Internal Antenna, 40MHz 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 (us)
1	3	87.7	19	1980.0	1601.0	0.277276
2	3	94.9	13	1031.0	1487.0	1.169626
3	2	71.7	11	1722.0	-	1.740398
4	2	78.9	14	1847.0	-	1.981210
5	2	65.4	14	1968.0	-	2.650649
6	3	98.9	9	1616.0	1738.0	3.240218
7	2	96.8	13	1570.0	-	4.148715
8	2	71.7	11	1547.0	-	4.543146
9	1	65.1	10	-	-	5.234183
10	3	84.8	9	1154.0	1376.0	5.767365
11	2	54.9	19	1231.0	-	6.381969
12	2	95.4	14	1060.0	-	6.735129
13	3	69.7	12	1024.0	1320.0	7.613833
14	2	92.4	12	1899.0	-	8.177349
15	2	50.8	13	1310.0	-	8.733825
16	2	63.8	11	1253.0	-	9.256262
17	2	92.7	15	1095.0	-	9.960404
18	2	53.2	15	1135.0	-	10.639232
19	3	69.2	10	1637.0	1958.0	11.072258
20	2	70.4	19	1496.0	-	11.829437

Table 72 - Internal Antenna, 40MHz 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 (us)
1	2	80.6	7	1566.0	-	0.071835
2	2	85.2	14	1815.0	-	1.698497
3	2	88.1	18	1172.0	-	3.103384
4	2	70.1	7	1120.0	-	3.514443
5	3	94.4	13	1983.0	1488.0	5.261765
6	3	51.9	12	1026.0	1251.0	6.308537
7	1	56.3	15	-	-	7.164631
8	2	66.9	16	1551.0	-	8.367871
9	1	86.2	15	-	-	9.457374
10	2	66.2	16	1834.0	-	10.671888
11	3	62.5	13	1345.0	1686.0	11.163775

Table 73 - Internal Antenna, 40MHz 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 (us)
1	2	88.3	8	1043.0	-	0.586736
2	1	59.7	13	-	-	2.066256
3	2	69.5	19	1403.0	-	3.533462
4	2	80.7	14	1428.0	-	4.400594
5	2	58.1	15	1840.0	-	5.389308
6	2	77.9	12	1703.0	-	6.721590
7	2	60.9	20	1629.0	-	9.153522
8	2	78.0	14	1643.0	-	10.075828
9	2	72.3	6	1183.0	-	10.957185

Table 74 - Internal Antenna, 40MHz 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 (us)
1	1	79.7	19	-	-	0.563076
2	1	63.4	5	-	-	2.161942
3	1	75.4	13	-	-	3.225252
4	2	65.6	18	1498.0	-	4.520253
5	1	86.9	12	-	-	5.863336
6	1	52.5	15	-	-	6.521385
7	2	69.7	12	1715.0	-	7.552415
8	3	84.1	14	1369.0	1802.0	9.325520
9	2	70.1	9	1617.0	-	10.117572
10	2	53.3	7	1266.0	-	11.729981

Table 75 - Internal Antenna, 40MHz 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 (us)
1	2	92.9	13	1931.0	-	0.456261
2	2	78.5	10	1952.0	-	1.272473
3	2	50.9	13	1802.0	-	2.474749
4	3	62.9	13	1753.0	1090.0	4.535910
5	1	72.0	7	-	-	4.839533
6	3	96.8	7	1990.0	1481.0	6.055031
7	2	95.9	13	1910.0	-	8.377408
8	2	70.0	14	1454.0	-	8.596496
9	1	60.6	19	-	-	9.690300
10	2	76.2	14	1606.0	-	10.900109

Table 76 - Internal Antenna, 40MHz 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 (us)
1	3	70.9	11	1945.0	1745.0	0.565297
2	2	92.8	14	1793.0	-	1.434109
3	2	68.2	12	1093.0	-	2.074773
4	2	61.2	15	1231.0	-	2.663043
5	2	70.2	19	1665.0	-	3.495249
6	3	81.1	12	1481.0	1309.0	4.234575
7	2	51.3	12	1317.0	-	5.107484
8	2	96.9	19	1444.0	-	5.993316
9	2	59.9	14	1893.0	-	6.215836
10	2	51.4	11	1387.0	-	6.909942
11	1	77.6	15	-	-	7.575648
12	1	59.9	15	-	-	8.666453
13	1	74.7	6	-	-	9.555265
14	3	89.2	8	1757.0	1015.0	10.231803
15	2	55.1	18	1285.0	-	11.021492
16	2	60.0	20	1467.0	-	11.638704

Table 77 - Internal Antenna, 40MHz 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 (us)
1	3	61.7	12	1182.0	1887.0	0.002813
2	3	85.8	18	1571.0	1457.0	1.162754
3	2	92.3	6	1880.0	-	2.016188
4	2	57.6	7	1551.0	-	2.254854
5	2	99.9	11	1288.0	-	3.167023
6	1	60.6	19	-	-	4.115347
7	1	70.1	8	-	-	4.831925
8	1	73.3	7	-	-	5.613378
9	2	66.8	20	1460.0	-	6.673821
10	1	59.3	19	-	-	6.855627
11	3	54.3	17	1474.0	1795.0	7.688168
12	1	79.0	13	-	-	8.303805
13	3	95.9	19	1341.0	1831.0	9.035678
14	2	55.1	10	1164.0	-	9.945671
15	2	78.4	16	1059.0	-	10.650868
16	2	86.2	19	1599.0	-	11.562133

Table 78 - Internal Antenna, 40MHz 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 (us)
1	2	96.4	8	1387.0	-	0.641144
2	3	65.1	10	1922.0	1126.0	1.218692
3	2	65.1	11	1582.0	-	1.953434
4	2	73.8	8	1910.0	-	2.444645
5	3	53.2	12	1190.0	1671.0	3.210628
6	2	84.6	7	1077.0	-	3.810691
7	2	75.7	13	1283.0	-	4.532550
8	2	60.9	20	1142.0	-	4.962700
9	2	73.8	20	1536.0	-	5.422445
10	3	95.4	11	1041.0	1786.0	6.159142
11	1	98.9	10	-	-	7.202696
12	2	77.8	15	1516.0	-	7.721695
13	2	87.9	11	1783.0	-	8.241126
14	1	62.2	12	-	-	8.846619
15	1	51.5	6	-	-	9.627682
16	2	80.6	13	1482.0	-	10.333274
17	3	72.9	19	1140.0	1288.0	10.771146
18	3	55.5	9	1388.0	1453.0	11.867570

Table 79 - Internal Antenna, 40MHz 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 (us)
1	1	87.0	18	-	-	0.869156
2	1	66.6	11	-	-	1.757513
3	2	58.5	13	1555.0	-	2.559563
4	2	54.1	10	1849.0	-	3.462839
5	2	59.0	11	1596.0	-	4.990754
6	2	71.1	18	1975.0	-	5.623414
7	3	76.1	13	1359.0	1105.0	6.731876
8	3	52.7	6	1596.0	1472.0	7.564103
9	1	73.5	12	-	-	8.289440
10	3	62.0	10	1731.0	1427.0	9.953045
11	2	65.4	10	1413.0	-	10.964429
12	3	64.7	8	1855.0	1985.0	11.068335

Table 80 - Internal Antenna, 40MHz 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 (us)
1	2	54.5	14	1992.0	-	0.603837
2	2	74.8	6	1370.0	-	1.470724
3	2	65.5	16	1018.0	-	2.394019
4	2	74.6	9	1676.0	-	3.361433
5	3	92.4	14	1629.0	1308.0	4.675284
6	2	64.4	11	1286.0	-	5.511689
7	1	81.8	11	-	-	7.044865
8	2	83.1	19	1555.0	-	8.563402
9	1	64.9	16	-	-	8.884747
10	1	74.3	9	-	-	10.267297
11	3	96.7	10	1601.0	1816.0	11.657486

Table 81 - Internal Antenna, 40MHz 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 (us)
1	3	63.6	10	1329.0	1103.0	0.971185
2	2	53.9	13	1536.0	-	1.686297
3	2	87.9	8	1802.0	-	2.390779
4	2	85.6	9	1080.0	-	3.780900
5	3	88.0	11	1984.0	1078.0	4.729240
6	1	50.2	13	-	-	5.287467
7	3	56.4	19	1781.0	1043.0	6.364903
8	2	98.4	15	1217.0	-	7.273147
9	1	85.1	19	-	-	8.933079
10	2	86.5	15	1345.0	-	9.408139
11	2	67.0	14	1910.0	-	10.784669
12	3	52.8	14	1346.0	1505.0	11.729258

Appendix D Test Data Tables and Plots for Channel Closing

FCC PART 15 SUBPART E Channel Closing Measurements

Table 82 - 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 (20MHz Bandwidth)	1.08 ms	60 ms	0.278 s	10 s	PASSED
Radar Type 1 (40MHz Bandwidth)	0.16 ms	60 ms	0.381 s	10 s	PASSED
Radar Type 5 (40MHz Bandwidth)	0.0 ms	60 ms	0.0 s	10 s	PASSED

1) After the final channel closing test the channel was monitored for a further 30 minutes. No transmissions occurred on the channel.

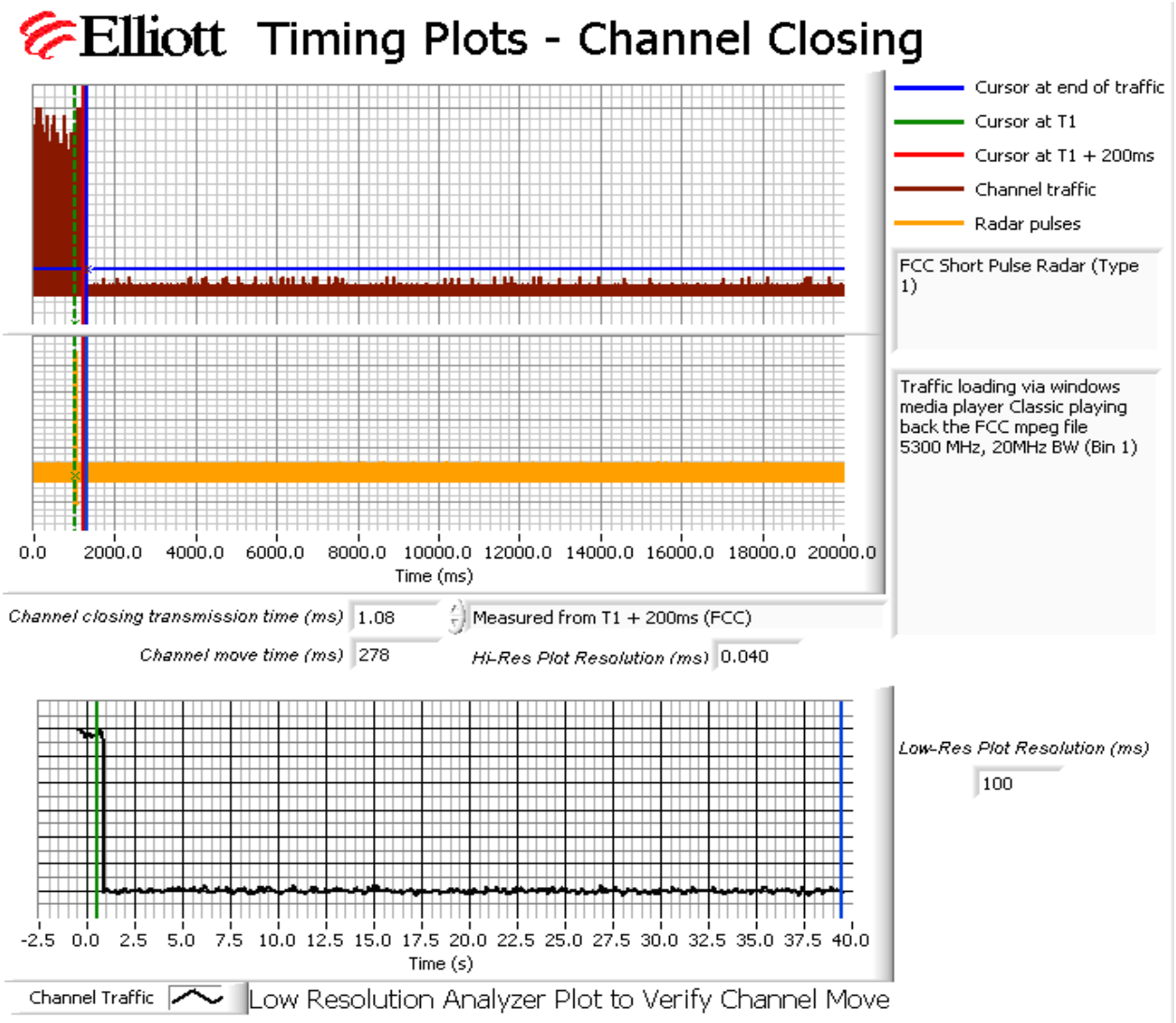

Figure 2: Channel Closing and Move Time, 20MHz Bin 1- 40 second plot

[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.

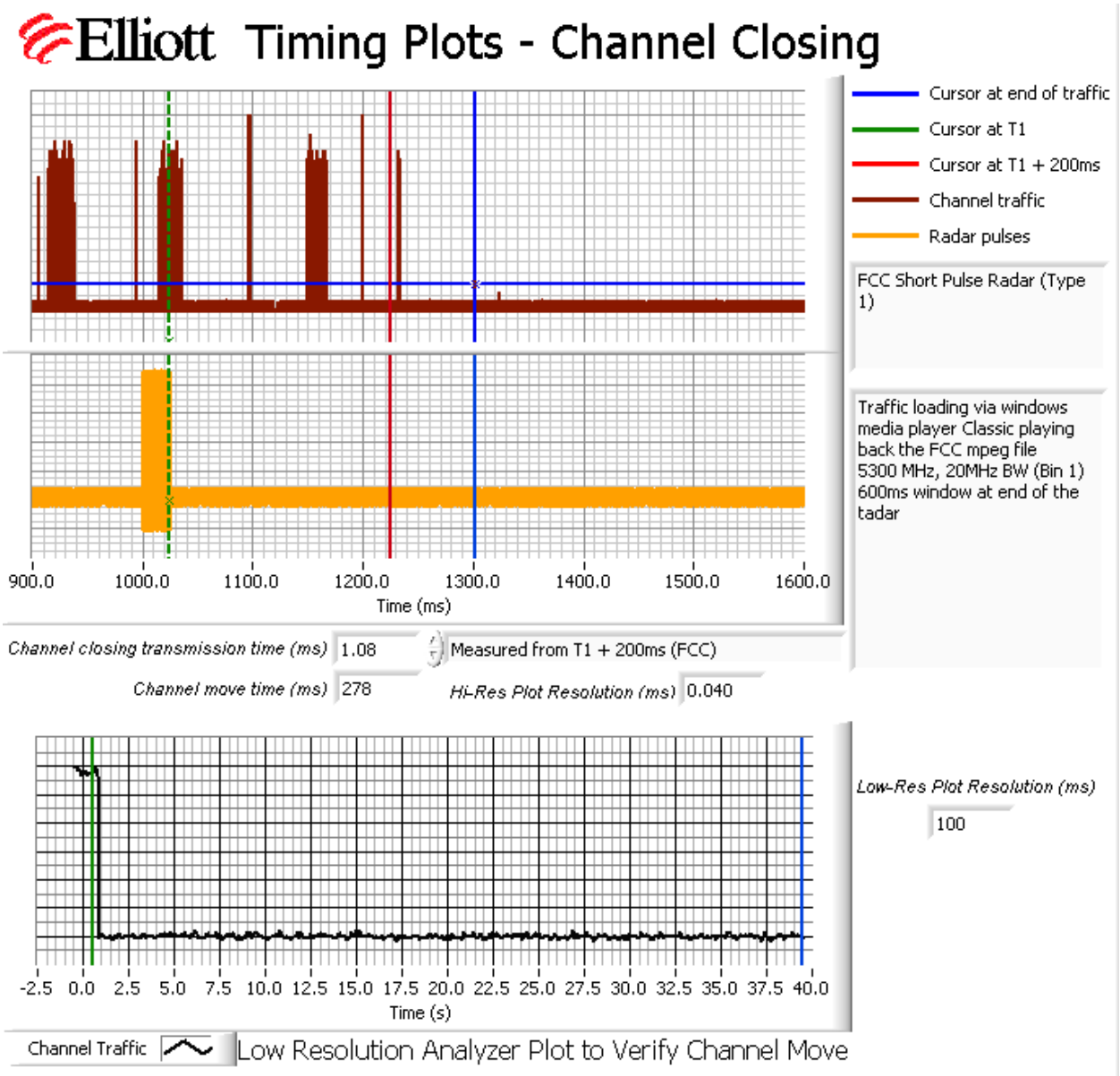

Figure 3: Channel Closing and Move Time, 20MHz Bin 1- 600ms at the end of radar

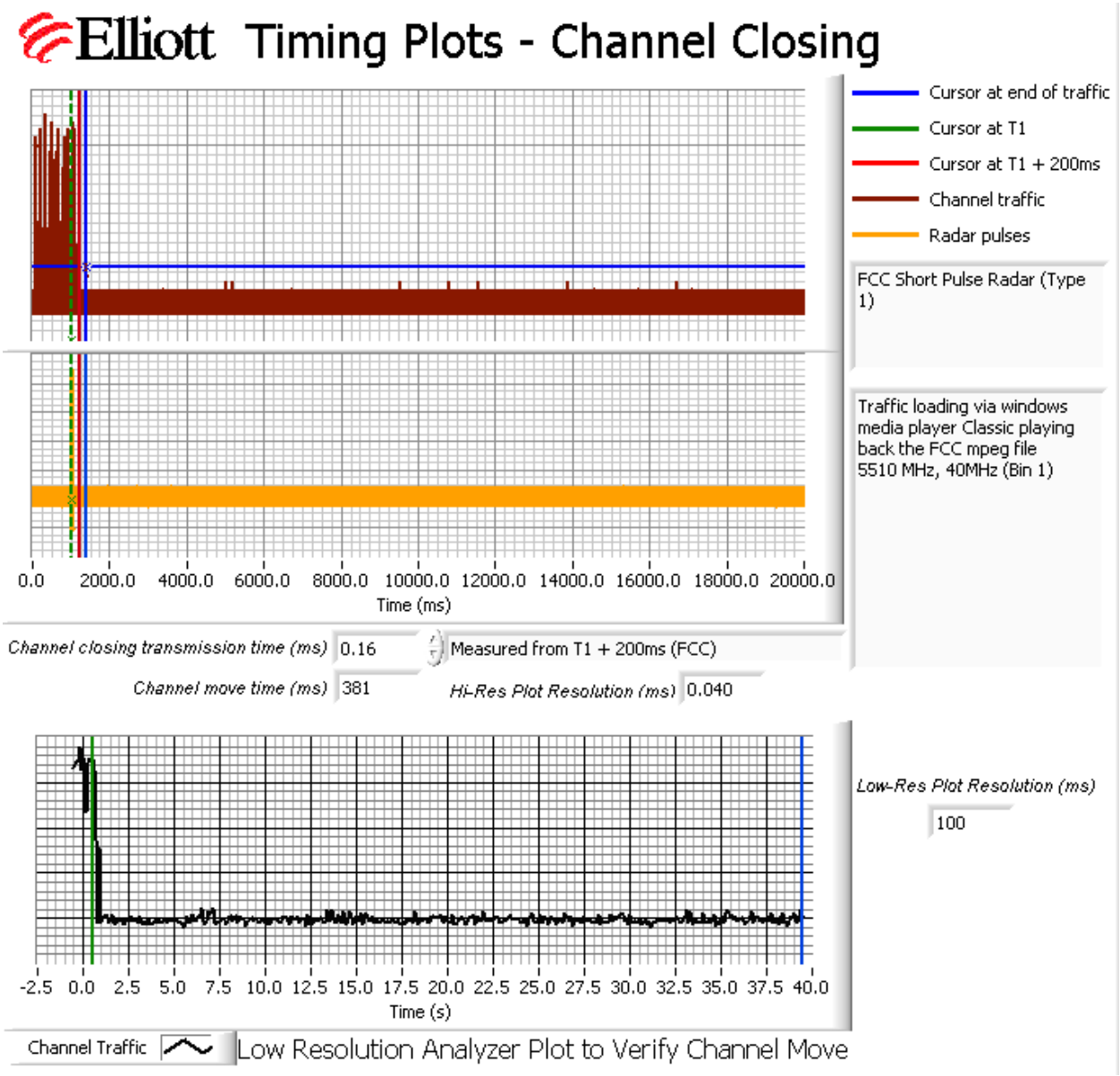

Figure 4: Channel Closing and Move Time, 40MHz Bin 1- 40 second plot

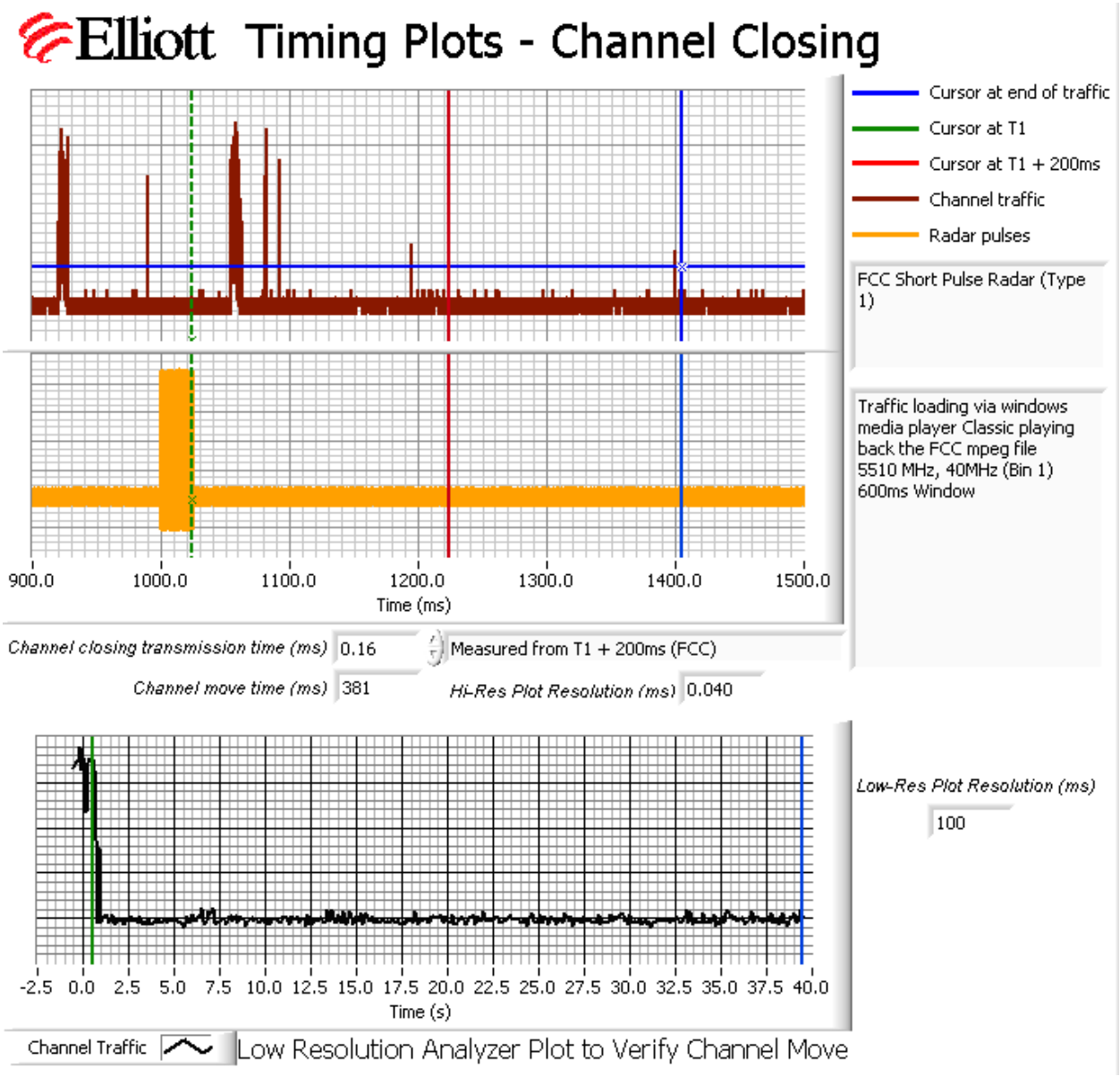

Figure 5: Close-Up of transmissions occurring more than 200ms after the radar, 40MHz Bin 1

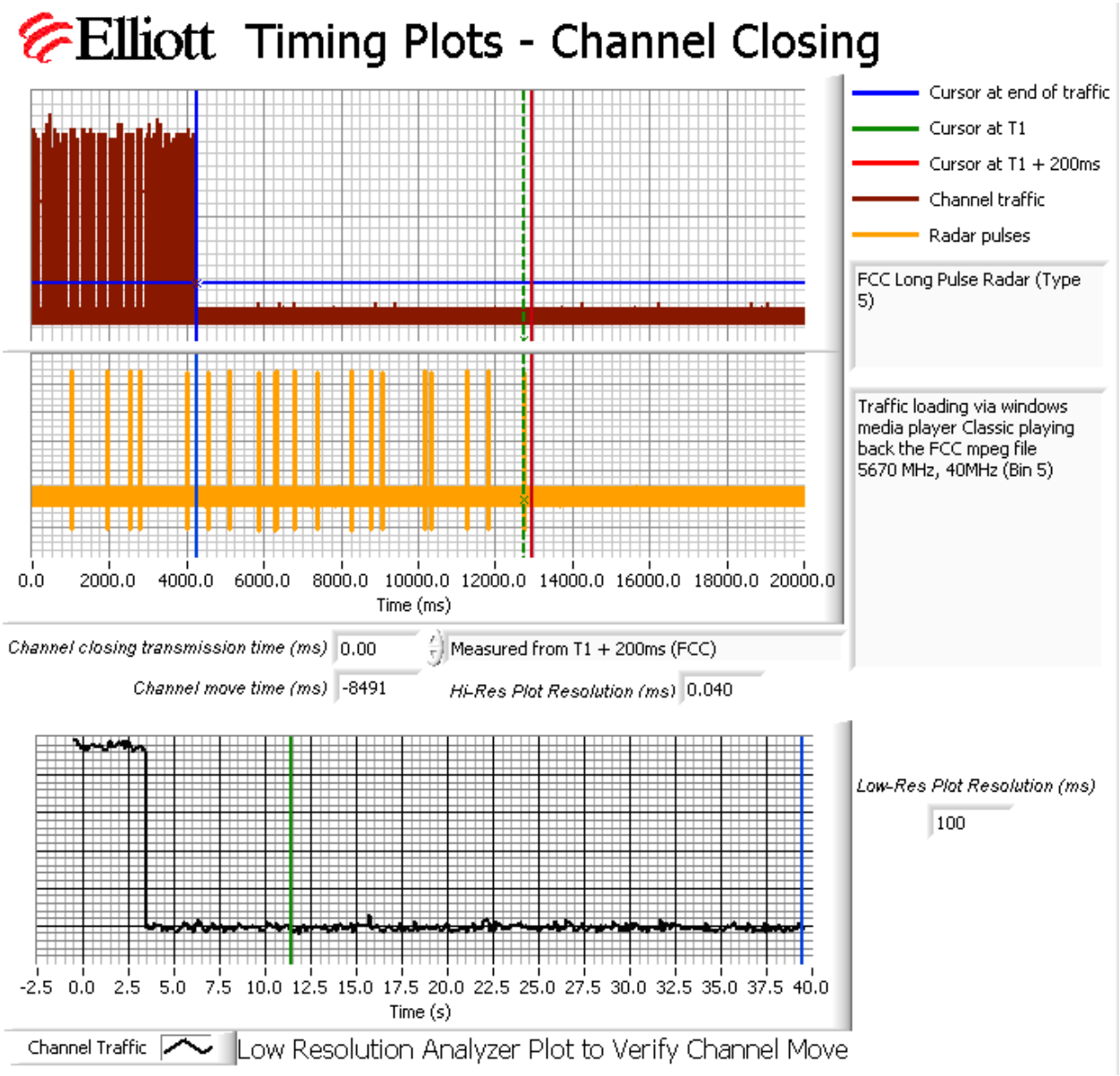

Figure 6: Channel Closing and Move Time, 40MHz Bin 5- 40 second plot

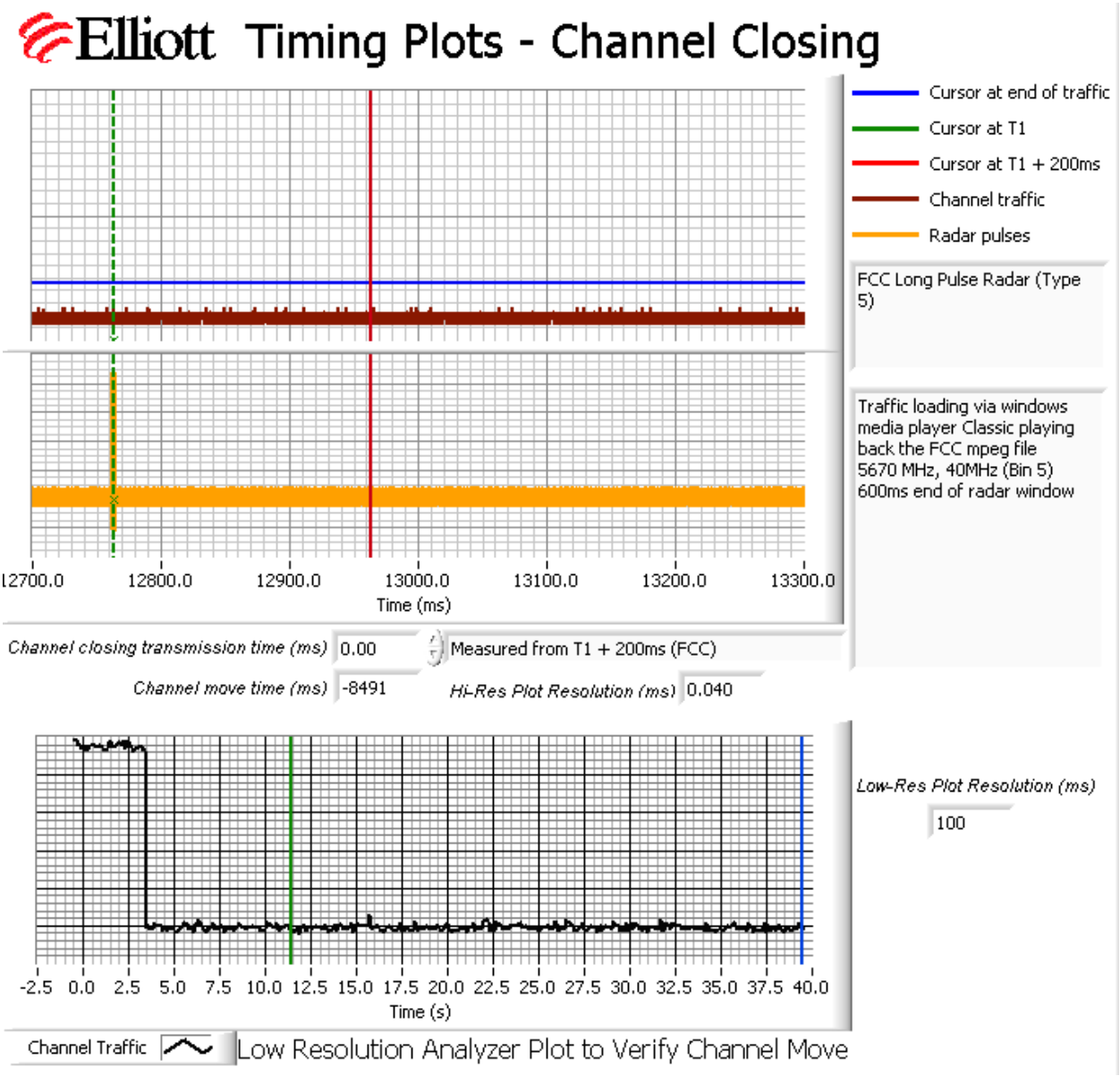

Figure 7: Close-Up of transmissions occurring more than 200ms after the radar, 40MHz Bin 5

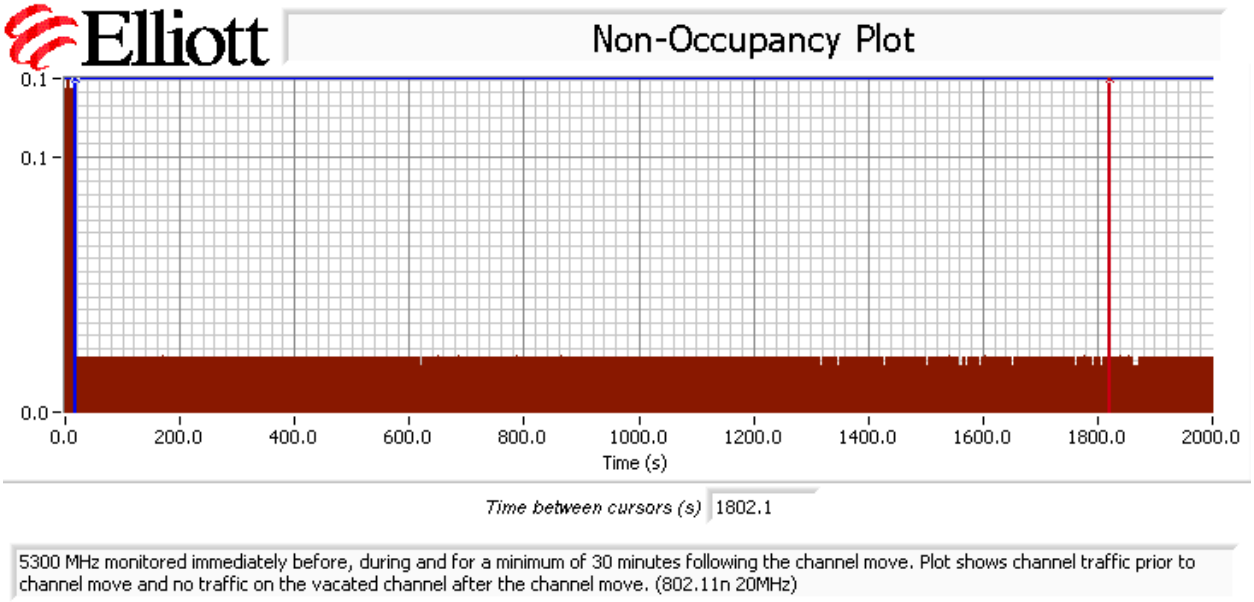

Figure 8: Radar Channel Non-Occupancy Plot for 20MHz Bandwidth

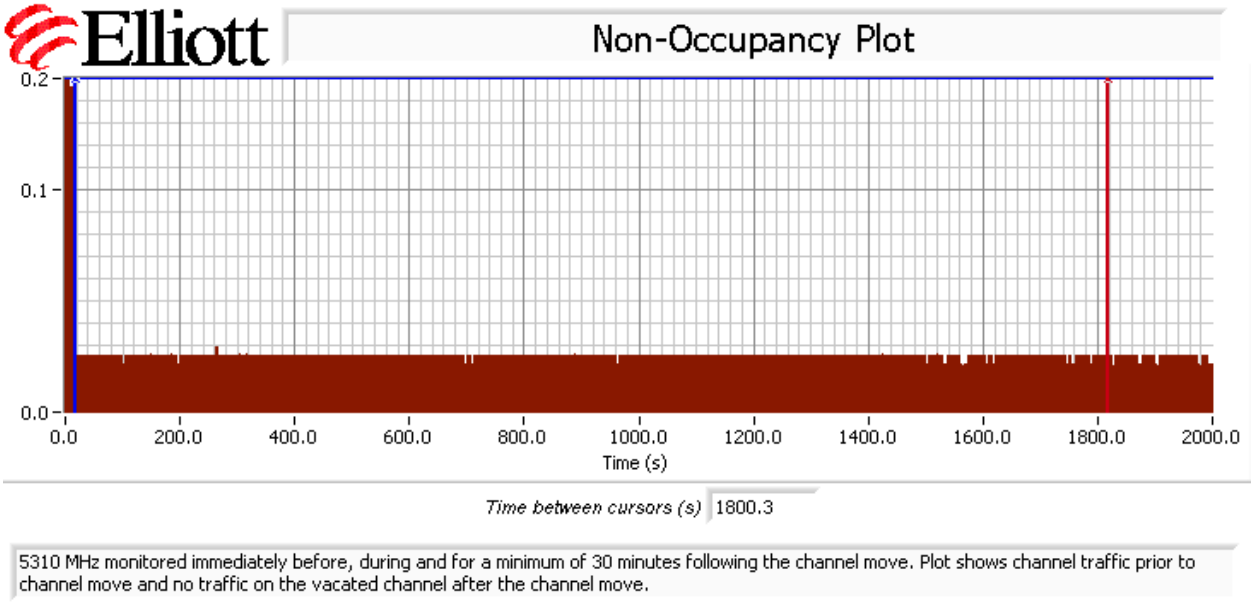

Figure 9: Radar Channel Non-Occupancy Plot for 40MHz Bandwidth

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 after the channel move had been completed.

Appendix E 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 60 seconds before the first transmission as indicated by the green cursor line.

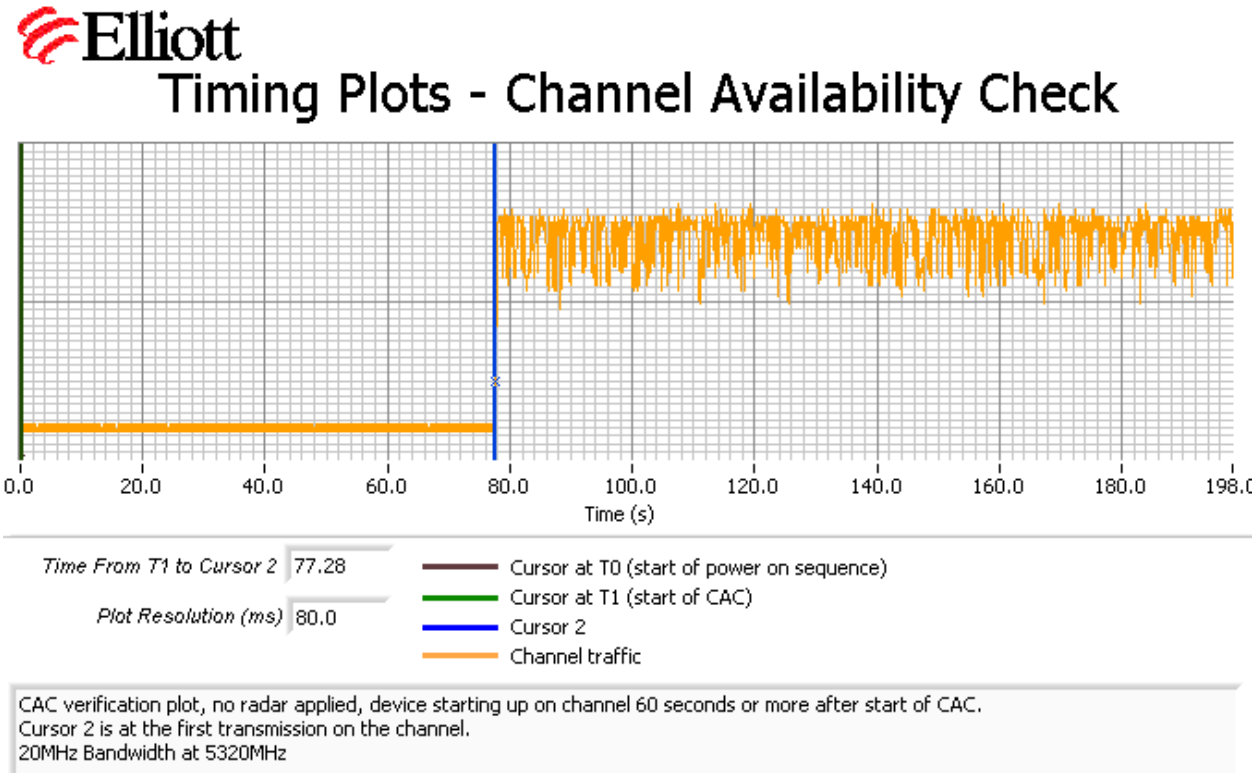

Figure 10: Plot of EUT Start-Up After CAC (20MHz Bandwidth)

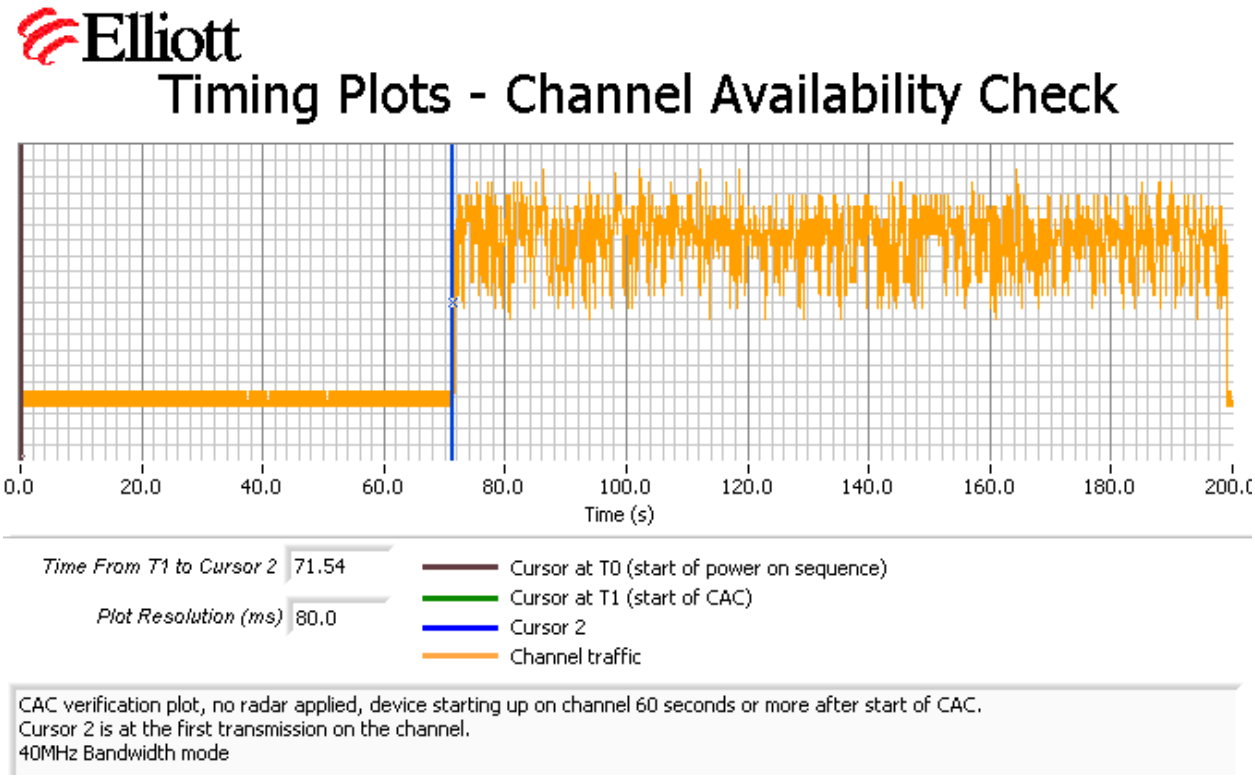

Figure 11: Plot of EUT Start-Up After CAC (40MHz Bandwidth)

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 100 (5500MHz) for 20MHz Bandwidth and also on channel 62 (5310 MHz) and channel 102 (5510MHz) for 40MHz Bandwidth.

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.

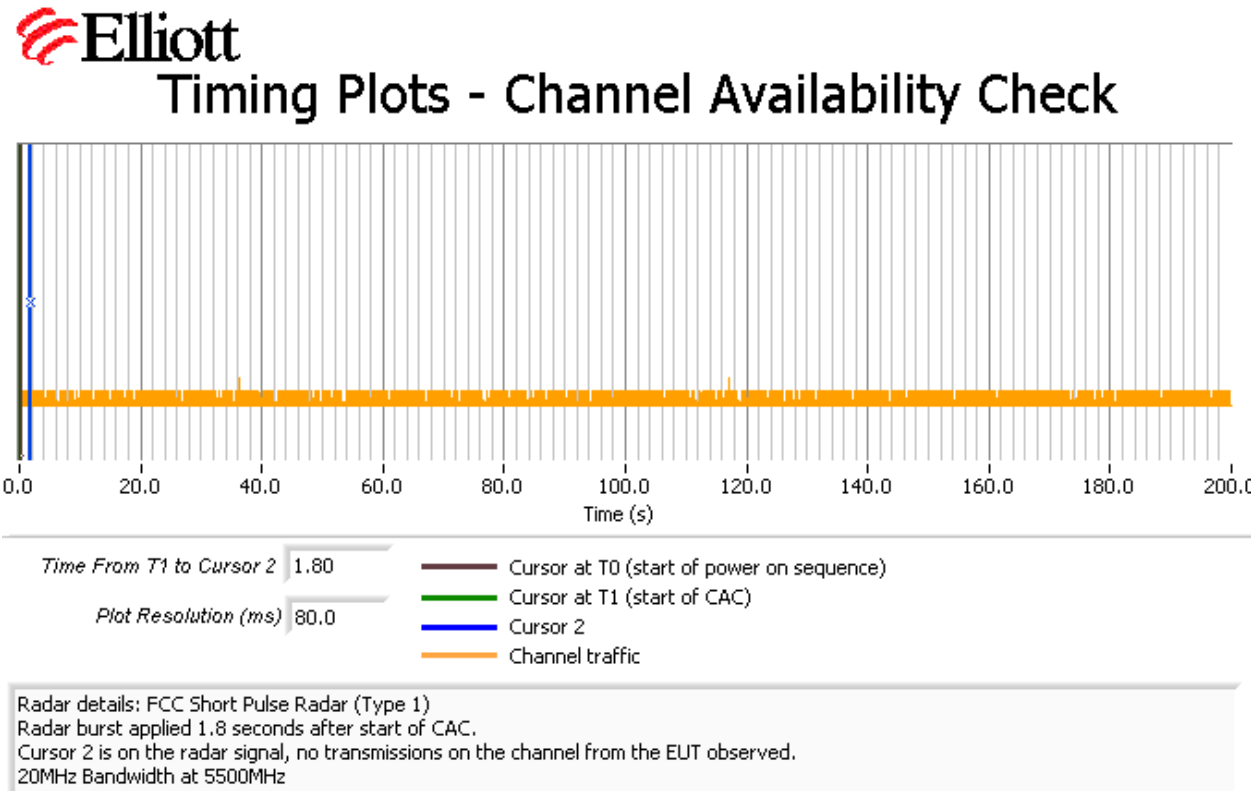

Figure 12: Radar Applied At Start of CAC (20MHz Bandwidth)

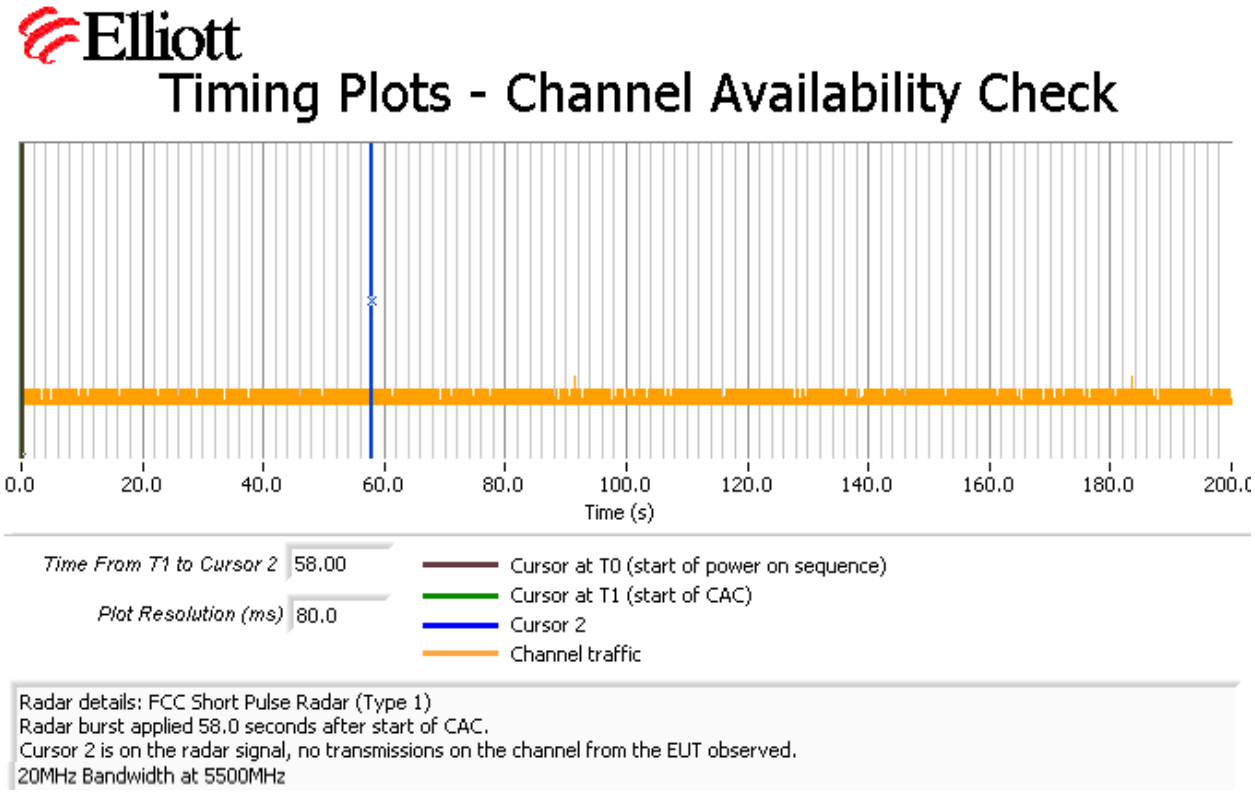

Figure 13: Radar Applied At End of CAC (20MHz Bandwidth)

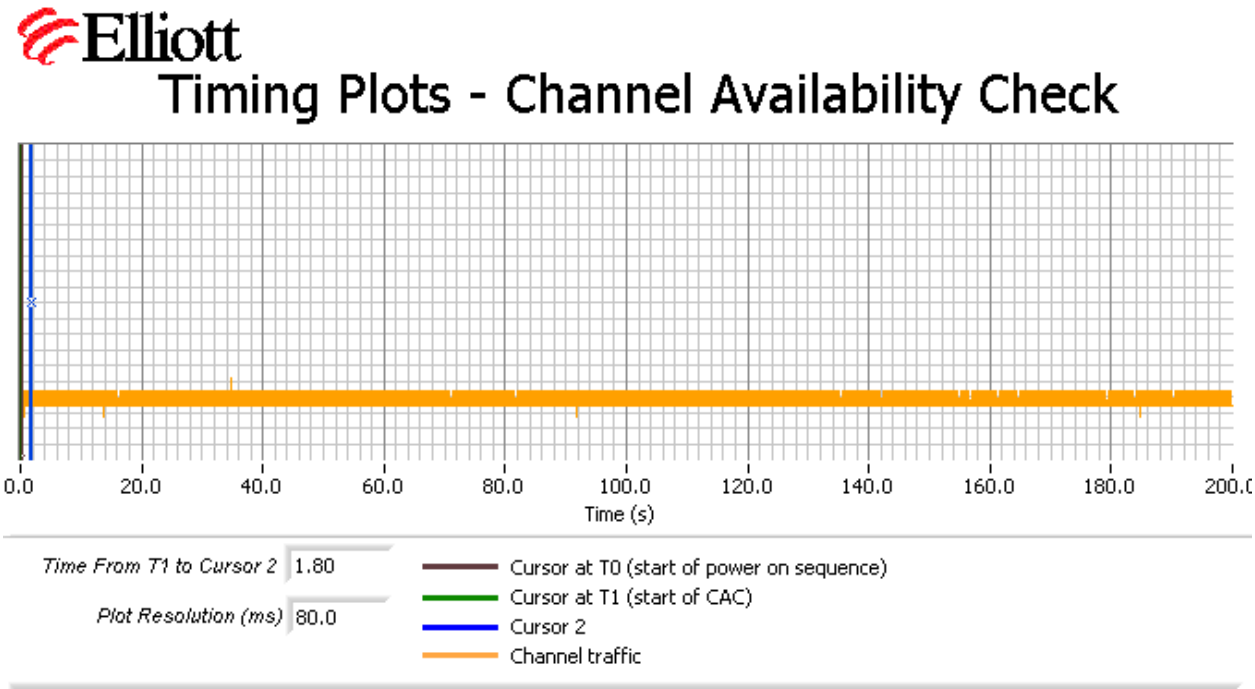

Figure 14: Radar Applied At Start of CAC (40MHz Bandwidth)

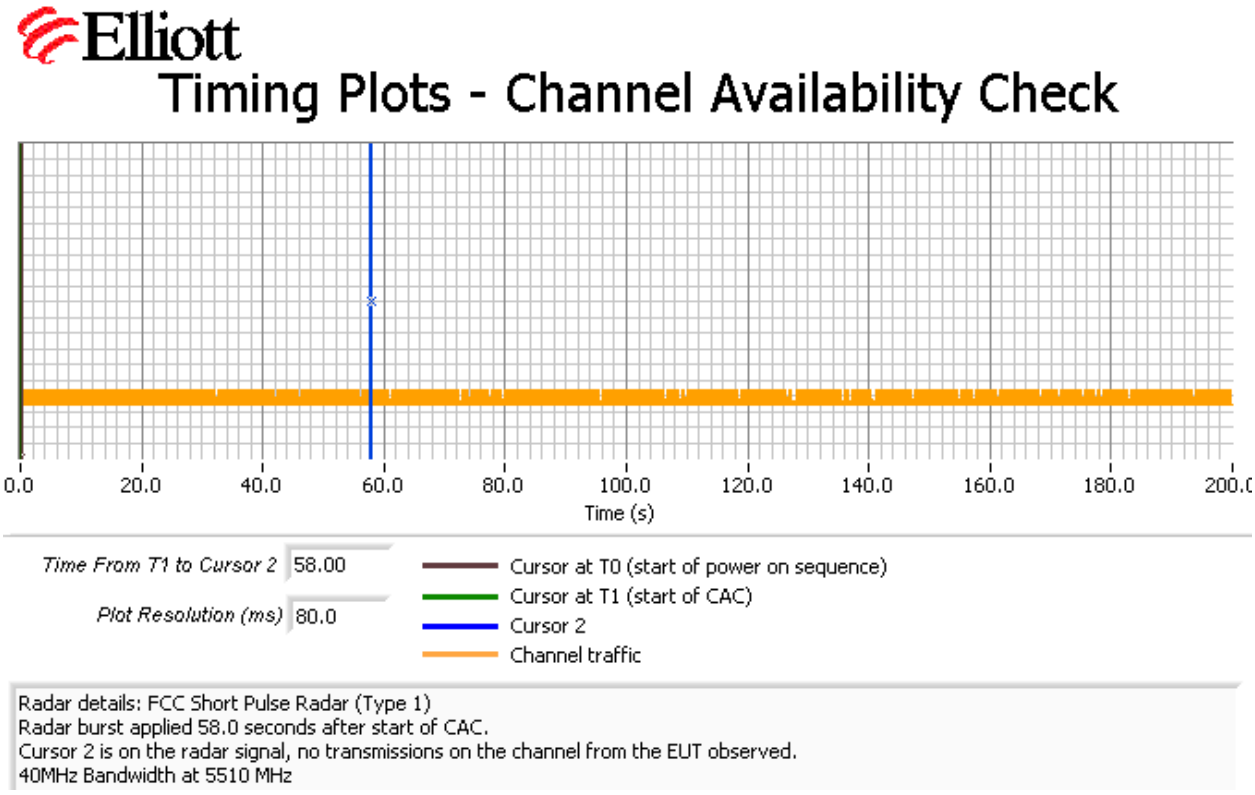

Figure 15: Radar Applied At End of CAC (40MHz Bandwidth)

Appendix F Antenna Specification Sheet

Product Specifications

MOBILE MARK®
COMMUNICATIONS ANTENNAS

CM Series mounted on ceiling

New - Ceiling Tile Frame Mount Option!

Ceiling Mount Omni Antenna (Pat.Pnd.)

For 2.4 - 6 GHz

- Antennas provide uniform omni coverage for indoor use
- Models available for WiFi, U-NII, Bluetooth and 802.11 applications
- Mounting kit includes all hardware needed
- Unique design provides high performance at an economical price

Mobile Mark's line of Ceiling Mount omnidirectional antennas are perfect for next generation wireless inbuilding applications including WLAN, Telemetry, and Hotspot. They have features that make them invaluable, solving many of the problems normally associated with these higher frequencies.

These antennas use a design that incorporates a quarter-wave on a groundplane which enhances the peak lobes of these antennas. This unique design provides significant improvements in efficiency while being very economical. These antennas maintain an omni pattern in the horizontal plane while VSWR performance is maintained across the operating bandwidth. A dual band (2.4 & 5.5 GHz) model provides operation on the two popular bands simultaneously (1 coax feed for both bands).

The CM Series antennas have a very low profile that add to their attractive appearance; only 3.5 inches diameter (89 mm), and less that 1 1/2" high (38 mm).

The antennas mount to any ceiling that allows the cable to be routed above; dropped ceilings are perfect for this type of install. The antennas come complete with all the necessary hardware required for installation; including a hole template and 3 each of mounting screws and wall anchors.

The antenna is provided with a white ABS radome and 6 inches (152 mm) of RF-195 cable and SMA-male connector. For ISM, Part 15 compliant connectors are available (reverse polarized), please consult factory.

Model Numbers

Model	Freq.(MHz)	Applications
CM2-2400	2400-2485	802.11b/g, WLAN, ISM
CM2-5500	5000-6000	802.11a, U-NII, ISM
CM2-2400/5500	Both Bands	For dual band radios

For special frequencies or configuration, please consult factory for latest information.

Specifications

Frequency:	See above	**Dimensions:**	3.5"D x 1.5"H (89 mm x 38 mm)
Gain:			
CM2-2400	2.5 dBi	**Weight:**	1.0 lbs (0.5 kg)
CM2-5500	2.5 dBi	**Mounting:**	Ceiling Mount; hardware included
CM2-2400/5500	2.5 dBi		
Bandwidth @2:1 SWR:	See freq range	**Termination:**	6" RF-195 (152 mm), male SMA
Nominal Impedance:	50 ohms		
Max. Power (continuous):	5 watts	**Options:**	Part 15 Reverse Connectors
Beamwidth (-3 dB point):	70 degrees	For special configurations, please consult factory	
Radome Material:	ABS		

US Office & Headquarters: 3900-B River Road, Schiller Park, IL 60176 Tel: 800-648-2800 or 847-671-6690 Fax: 847-671-6715
UK Office: 106 Anglesey Business Park, Hednesford, Staffs. WS12 1NR UK Tel: (+44) 1543-878343 Fax: (+44) 1543-871714
52 Visit our web page at www.mobilemark.com. Specifications subject to change without notice (12/2005).

Appendix G Test Configuration Photographs