

TEST REPORT

Covering the DYNAMIC FREQUENCY SELECTION (DFS) REQUIREMENTS OF

FCC Part 15 Subpart E (UNII)

Vivint Wireless Model: SR1430

FCC ID: 2AAAS-AP02

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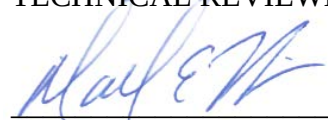
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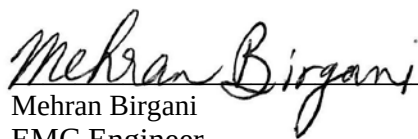
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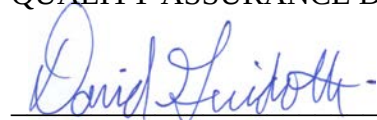
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1.0	November 14, 2014	Updated note in table 1 for clarity	MEH
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SCOPE

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

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

Tests were performed in accordance with these standards together with the current published versions of the basic standards referenced therein including FCC KDB 848637 and the appendix to FCC 06-96 MO&O as outlined in NTS Silicon Valley test procedures. The test results recorded herein are based on a single type test of the Vivint Wireless model 1430 and therefore apply only to the tested sample. The sample was selected and prepared by Venkat Kalkunte of Vivint Wireless.

OBJECTIVE

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

STATEMENT OF COMPLIANCE

The tested sample of the Vivint Wireless model 1430 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.

TEST RESULTS**TEST RESULTS SUMMARY – FCC Part 15, MASTER DEVICE**

Table 1 - FCC Part 15 Subpart E Master Device Test Result Summary						
Description	Radar Type	EUT Frequency	Measured Value	Requirement	Test Data	Status
Channel Availability Check (CAC) Time	Type 1	5550 MHz 5670 MHz	70.1s	$\geq 60s$	Appendix D	Pass
CAC Detection Threshold	Type 1	5550 MHz 5670 MHz	-63dBm	-64dBm (See note 2)	Appendix D	Pass
In-Service Monitoring Detection Threshold	Type 1 through Type 6	5550 MHz	-63dBm (note 2)	-64dBm (note 2)	Appendix B	Pass
Bandwidth Detection	Type 1	Varies	36MHz	80% of the 99% BW	-	Pass
Channel closing transmission time	Type 1 Type 5	5550 MHz	0 ms 0 ms	$\leq 260ms$	Appendix C	Pass
Channel move time	Type 1 Type 5	5550 MHz	0.13 ms 0.16 ms	$\leq 10s$	Appendix C	Pass
Non-occupancy period	-	5670 MHz	> 30min	> 30min	Appendix C	Pass
Uniform Loading		-	-	Uniform Loading	Refer to operational description	Pass
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 1 dBi. The limit is based on an eirp of more than 23 dBm. Per Note 2 of Table 3 of FCC 06-96, the threshold was adjusted by 1dB. 3) The in-service monitoring detection threshold and detection probability measurements were made with the device operating in the 5500-5700 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 $\pm 0.24\%$
Timing (non occupancy period)	seconds	5 seconds
DFS Threshold (radiated)	dBm	1.6
DFS Threshold (conducted)	dBm	1.2

EQUIPMENT UNDER TEST (EUT) DETAILS**GENERAL**

The Vivint Wireless model SR1430 is an outdoor access point using a 5GHz 4x4 802.11 radio.

The sample was received on October 10, 2014 and tested on October 10 and 13, 2014. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number
Vivint Wireless	SR1430	Outdoor AP	None - 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 5250-5350 MHz
- ☒ Master Device 5470-5725 MHz (excluding 5600-5650 MHz)

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

	5250 – 5350 MHz	5470 – 5725 MHz
Lowest Antenna Gain (dBi)	4.5 dBi	5 dBi
Highest Antenna Gain (dBi)	4.5 dBi	5 dBi
EIRP Output Power (dBm)	26.8dBm	29.96dBm

Note, during testing 5dB of attenuation was placed between the antenna port and the RF output of the radio, making the antenna gain ~5dBi per element. Refer to antenna specification in the appendix for more information.

- ☒ Power can exceed 200mW eirp

Channel Protocol

- ☒ IP Based

ENCLOSURE

The EUT enclosure measures approximately 32 by 32 by 9.5 centimeters. It is primarily constructed of uncoated coated plastic.

MODIFICATIONS

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

SUPPORT EQUIPMENT

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

Manufacturer	Model	Description	Serial Number	FCC ID
acer	Aspire 5735	Laptop	DTVKCAA0024120696C9600	-
<i>Vivint Wireless</i>	<i>SR1410</i>	<i>Access Point</i>	<i>200398</i>	<i>2AAAS-SR1410</i>
HP	6910p	Laptop	CND8280MD5	-

The italicized device was the master 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/PoE (EUT)	PoE	STP cat. 6	Shielded	10.0
PoE	Desktop	UTP cat. 5	Unshielded	1.0
Ethernet/PoE (Master)	PoE	STP cat. 6	Shielded	1.0
PoE	Laptop	STP cat. 6	Shielded	10.0

EUT OPERATION

The EUT was operating with the following software. The software is secured by encryption to prevent the user from disabling the DFS function.

Master Device: 36.1.0.41

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

The start of the Channel Availability Check was 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.

RADAR WAVEFORMS

Table 2 - 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 3 - 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 4 - FCC Frequency Hopping Radar Test Waveforms							
Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses / hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Detection Percentage	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

DFS TEST METHODS

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 which is oriented in vertical polarization.

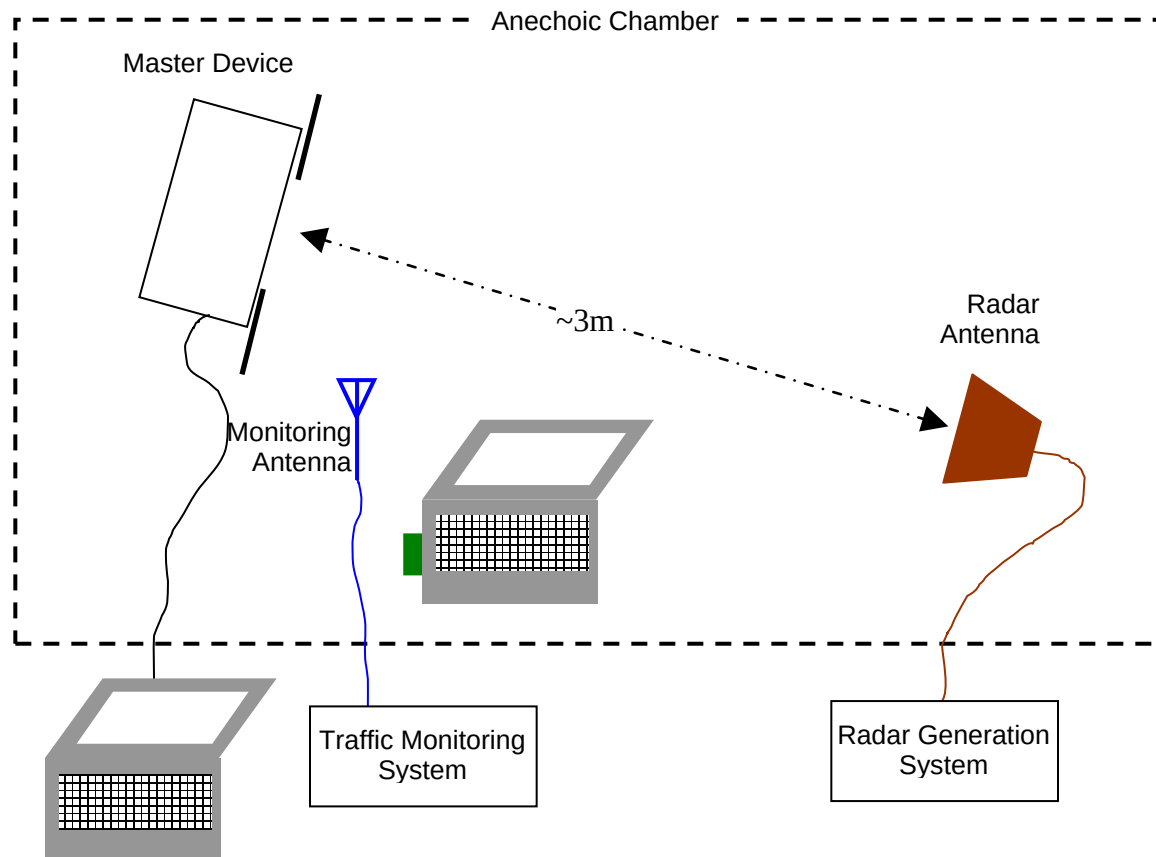


Figure 1 Test Configuration for radiated Measurement Method

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_{REF} (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:

$$\text{Applied level (dBm)} = R - G_{REF} + L$$

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 NTS Silicon Valley custom software to produce the required waveforms, with the capability to produce both un-modulated and modulated (FM Chirp) pulses. Where there are multiple values for a specific radar parameter then the software selects a value at random and, for FCC tests, the software verifies that the resulting waveform is truly unique.

With the exception of the hopping waveforms required by the FCC's rules (see below), the radar generator is set to a single frequency within the radar detection bandwidth of the EUT. The frequency is varied from trial to trial by stepping in 5MHz steps. For radar types with variable parameters, each detection probability trial is performed using a unique set of parameters obtained by a random selection with uniform distribution for each of the variable parameters.

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. The radar generating antenna (when used) is oriented for vertical polarization.

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.

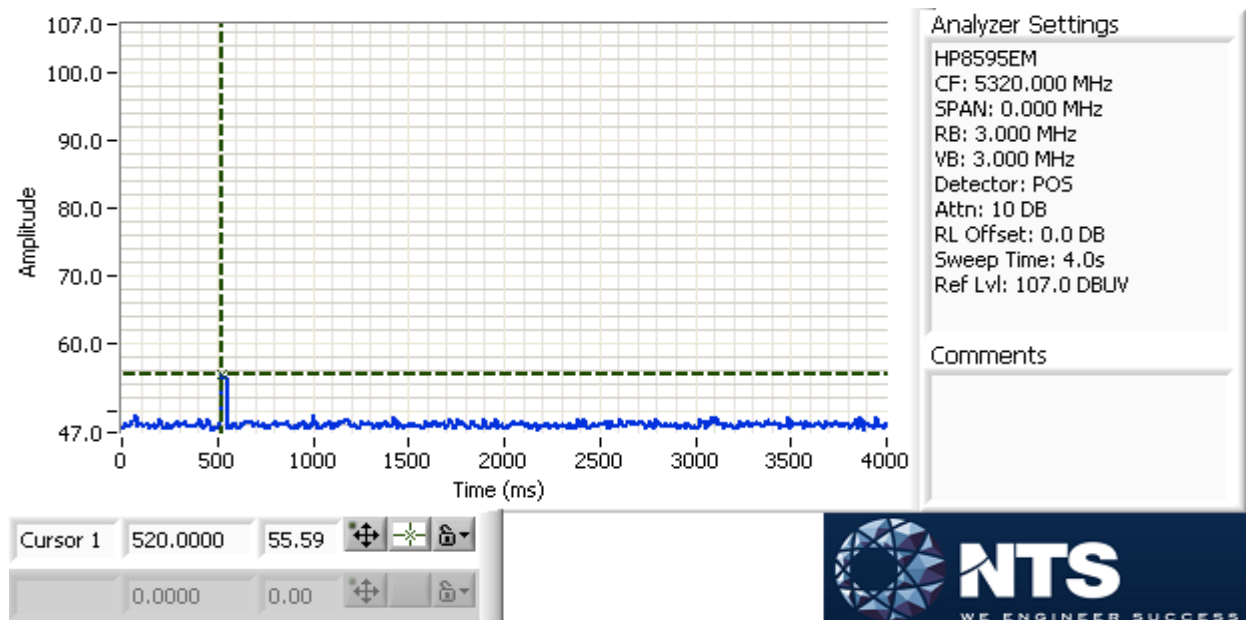


Figure 2 SA Noise Floor During Testing (radar shown at 520 ms)

RADAR GENERATOR PLOTS

The radar generator was connected to Spectrum Analyzer (SA) input, with the SA set to zero span, 3 MHz RBW, 3 MHz VBW. The SA IF output was connected to an oscilloscope to provide timing plots.

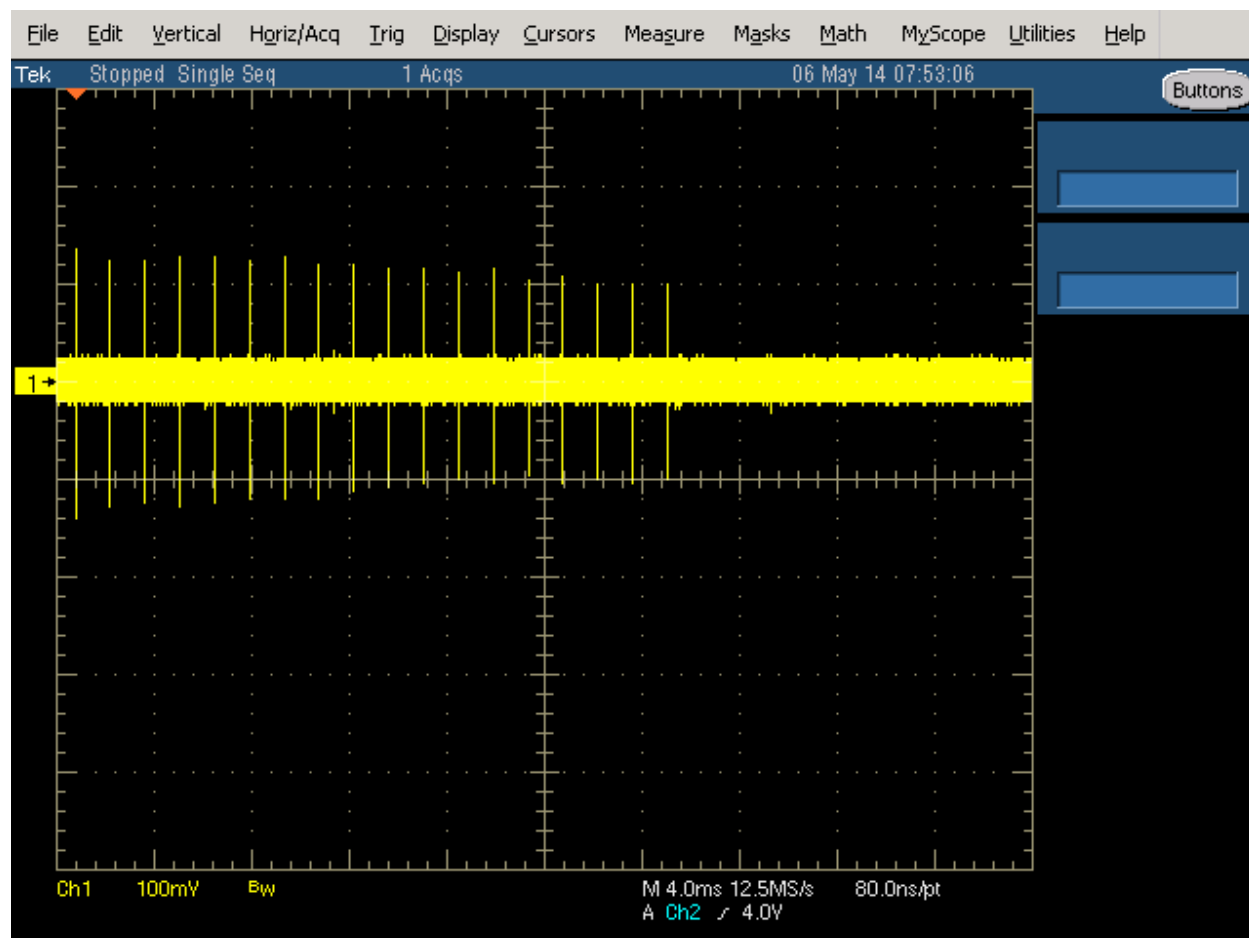


Figure 3 FCC Type 1 Radar (18 pulses)

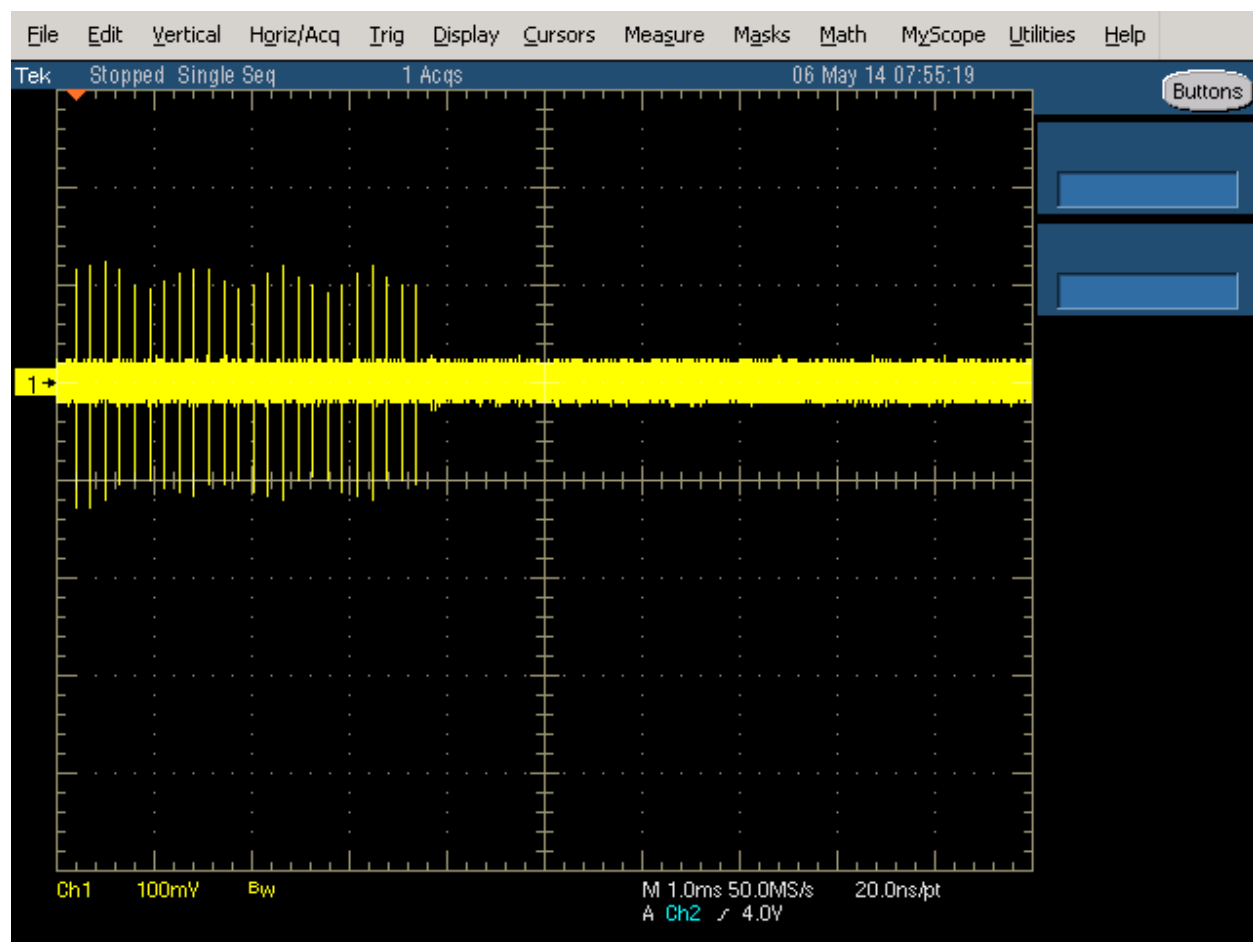


Figure 4 FCC Type 2 Radar (24 pulses)

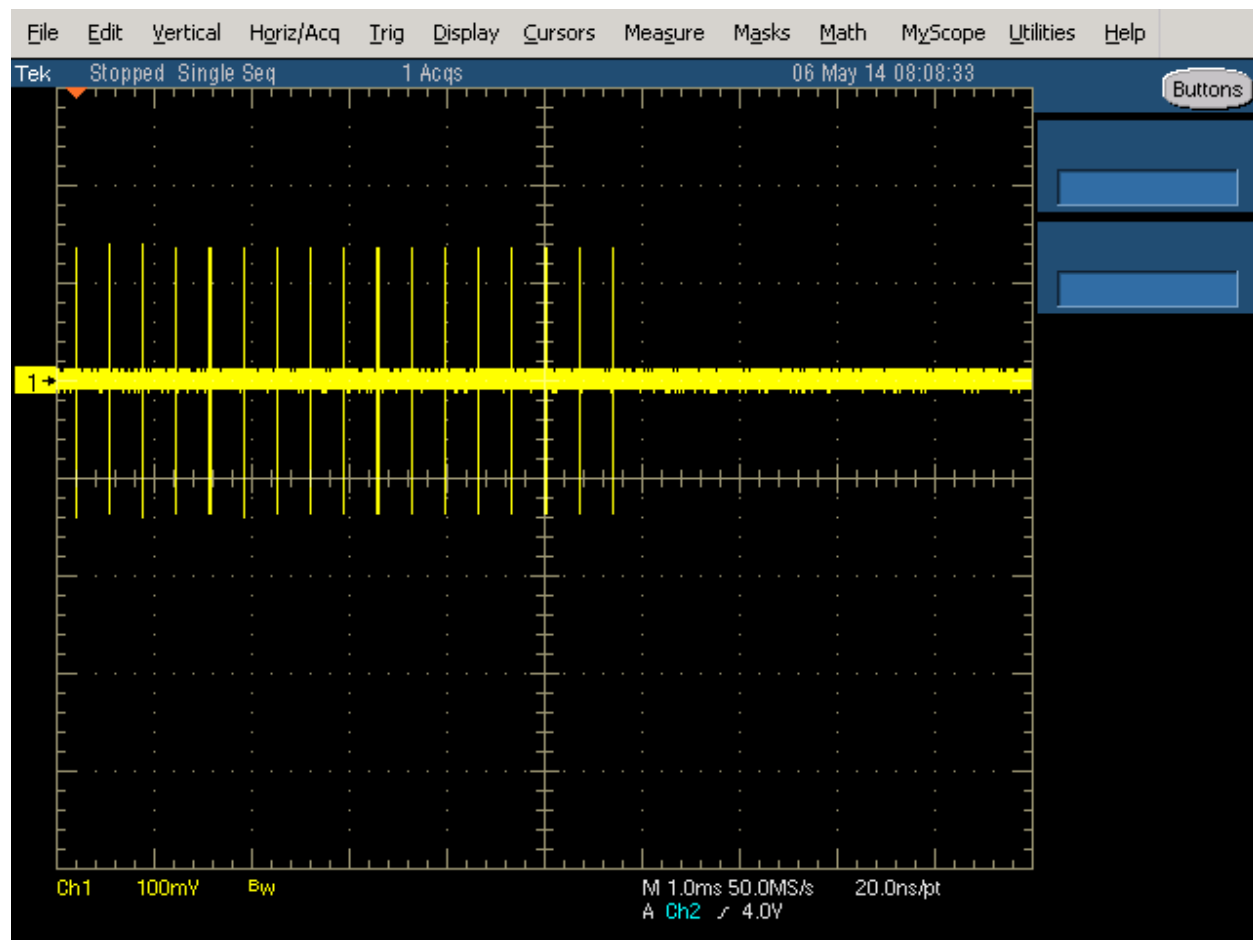


Figure 5 FCC Type 3 Radar (17 pulses)

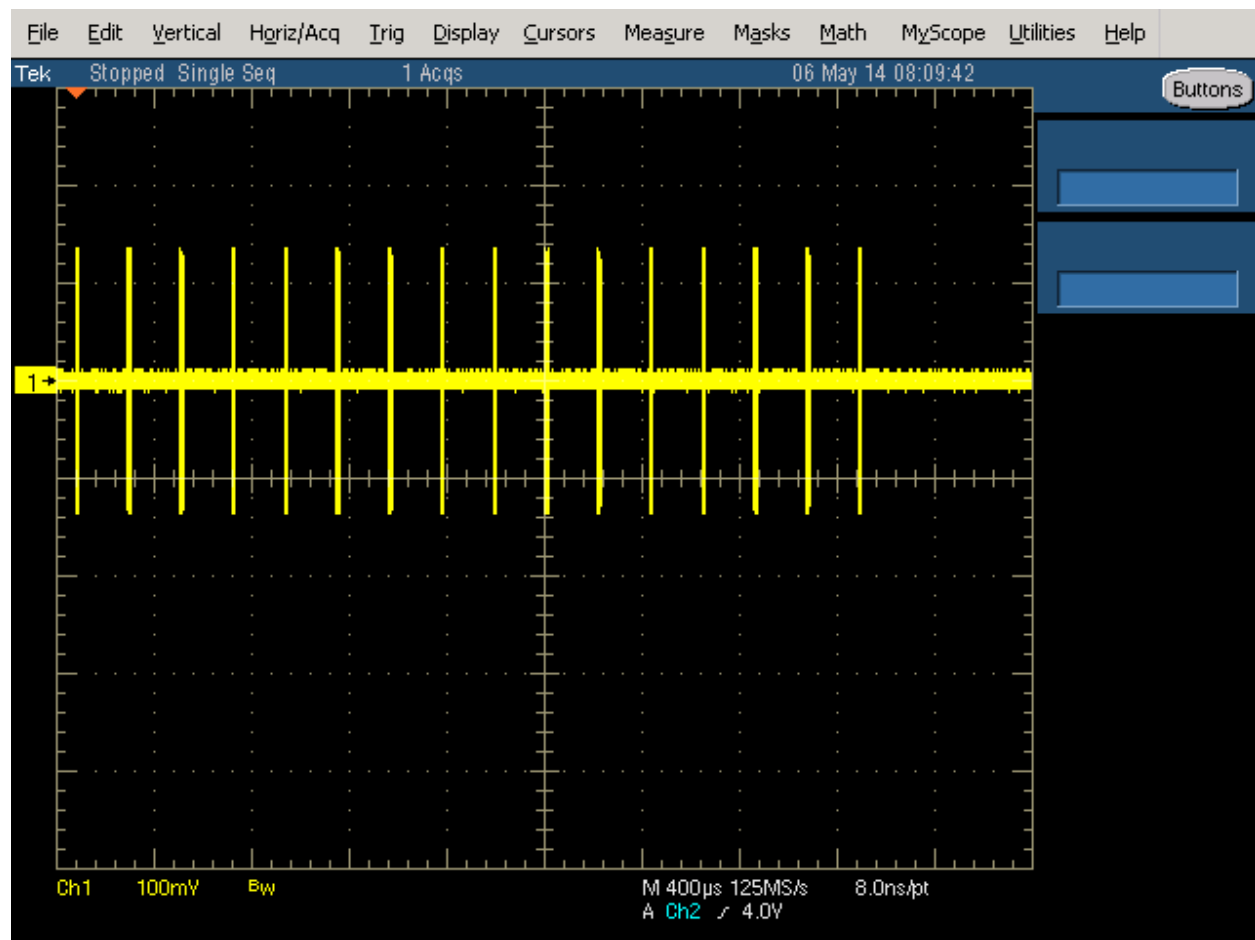


Figure 6 FCC Type 4 Radar (16 pulses)



Figure 7 FCC Type 5 Radar (burst with three pulses, 1650 μ s first period)

The shape is round due to chirped frequency during pulse as the SA is in zero span with 3 MHz BW.

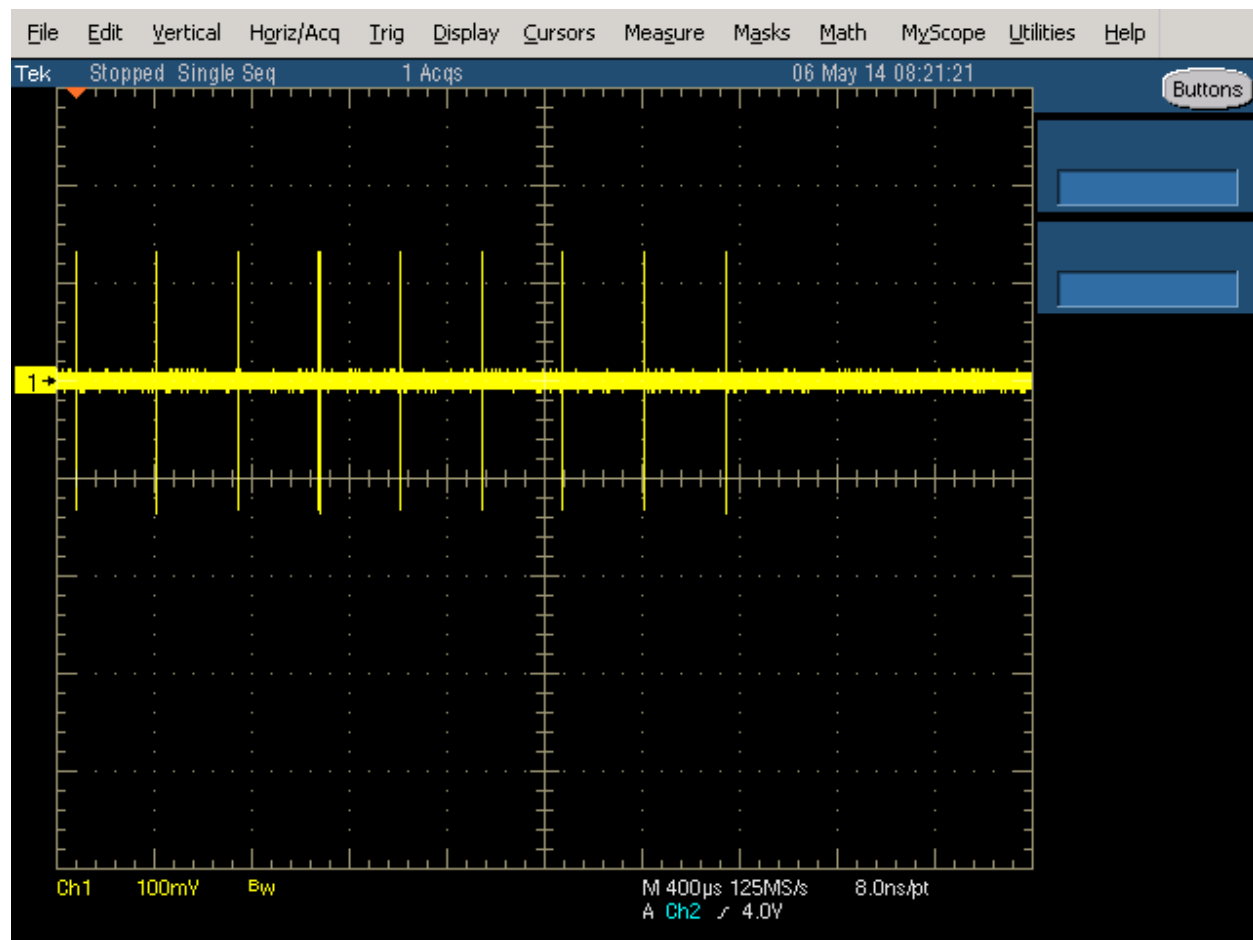


Figure 8 FCC Type 6 Radar (9 pulses in each burst)

DFS MEASUREMENT METHODS

DFS RADAR DETECTION BANDWIDTH

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

DFS – CHANNEL CLOSING TRANSMISSION TIME AND CHANNEL MOVE TIME

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

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

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

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.

DFS CHANNEL AVAILABILITY CHECK TIME

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

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

UNIFORM LOADING

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

TRANSMIT POWER CONTROL (TPC)

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

SAMPLE CALCULATIONS

DETECTION PROBABILITY / SUCCESS RATE

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

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

THRESHOLD LEVEL

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

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

Appendix A Test Equipment Calibration Data

<u>Manufacturer</u>	<u>Description</u>	<u>Model #</u>	<u>Asset #</u>	<u>Cal Due</u>
Hewlett Packard	EMC Spectrum Analyzer, 9 KHz - 22 GHz	8593EM	1319	12-Dec-14
ETS Lindgren	Antenna, Horn, 1-18 GHz	3117	1662	04-Jun-16
Agilent	PSG Vector Signal Generator (250kHz - 20GHz)	E8267C	1877	19-Jun-15
Tektronix	500MHz, 2CH, 5GS/s Scope	TDS5052B	2118	23-Oct-14

Appendix B Test Data Tables for Radar Detection Probability

Measured 99% bandwidth (from RF test report): 36.4MHz

Table 5 - Detection Bandwidth Measurements (Bandwidth: ± 18MHz) 802.11n 40MHz					
EUT Frequency	Radar Type	Radar Frequency	# Detected	# Not Detected	Success (%)
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5531.00 MHz	2	3	40
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5532.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5533.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5534.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5535.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5536.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5537.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5538.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5539.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5540.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5541.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5542.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5543.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5544.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5545.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5546.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5547.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5548.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5549.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5550.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5551.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5552.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5553.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5554.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5555.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5556.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5557.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5558.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5559.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5560.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5561.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5562.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5563.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5564.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5565.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5566.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5567.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5568.00 MHz	10	0	100
5550.00 MHz	FCC Short Pulse Radar (Type 1)	5569.00 MHz	1	3	25

Table 6 - Summary of All Results 802.11n 40MHz

Waveform Name	Pd (%)	Pd Required (%)	Number of Trials	Status
FCC Short Pulse Radar (Type 1)	100.0 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 2)	96.7 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 3)	96.7 %	60.0 %	30	PASSED
FCC Short Pulse Radar (Type 4)	86.7 %	60.0 %	30	PASSED
Aggregate of above results	95.0 %	80.0 %	120	PASSED
FCC frequency hopping radar (Type 6)	94.6 %	70.0 %	37	PASSED
Long Sequence	96.7 %	80.0 %	30	PASSED

Table 7 - FCC Short Pulse Radar (Type 1) Results 802.11n 40MHz

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst
2	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst
3	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst
4	18	1.0	1428.0	Yes	5535.0MHz, -63.0dBm	Single burst
5	18	1.0	1428.0	Yes	5565.0MHz, -63.0dBm	Single burst
6	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst
7	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst
8	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst
9	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst
10	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst
11	18	1.0	1428.0	Yes	5555.0MHz, -63.0dBm	Single burst
12	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst
13	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst
14	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst
15	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst
16	18	1.0	1428.0	Yes	5555.0MHz, -63.0dBm	Single burst
17	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst
18	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst
19	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst
20	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst
21	18	1.0	1428.0	Yes	5555.0MHz, -63.0dBm	Single burst
22	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst
23	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst
24	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst
25	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst
26	18	1.0	1428.0	Yes	5555.0MHz, -63.0dBm	Single burst
27	18	1.0	1428.0	Yes	5550.0MHz, -63.0dBm	Single burst
28	18	1.0	1428.0	Yes	5545.0MHz, -63.0dBm	Single burst
29	18	1.0	1428.0	Yes	5540.0MHz, -63.0dBm	Single burst
30	18	1.0	1428.0	Yes	5560.0MHz, -63.0dBm	Single burst

Table 8 - FCC Short Pulse Radar (Type 2) Results 802.11n 40MHz

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	29	1.7	173.0	Yes	5550.0MHz, -63.0dBm	Single burst
2	24	4.5	186.0	Yes	5545.0MHz, -63.0dBm	Single burst
3	27	1.9	201.0	Yes	5540.0MHz, -63.0dBm	Single burst
4	25	3.3	163.0	Yes	5535.0MHz, -63.0dBm	Single burst
5	29	1.4	223.0	Yes	5565.0MHz, -63.0dBm	Single burst
6	23	2.3	197.0	Yes	5550.0MHz, -63.0dBm	Single burst
7	27	5.0	213.0	Yes	5545.0MHz, -63.0dBm	Single burst
8	26	3.3	151.0	Yes	5540.0MHz, -63.0dBm	Single burst
9	27	4.5	163.0	Yes	5560.0MHz, -63.0dBm	Single burst
10	28	3.5	191.0	Yes	5555.0MHz, -63.0dBm	Single burst
11	26	4.8	211.0	Yes	5550.0MHz, -63.0dBm	Single burst
12	26	1.6	204.0	Yes	5545.0MHz, -63.0dBm	Single burst
13	24	2.7	200.0	Yes	5540.0MHz, -63.0dBm	Single burst
14	24	1.8	217.0	Yes	5560.0MHz, -63.0dBm	Single burst
15	28	2.2	155.0	Yes	5555.0MHz, -63.0dBm	Single burst
16	27	3.2	210.0	No	5550.0MHz, -63.0dBm	Single burst
17	27	4.1	204.0	Yes	5545.0MHz, -63.0dBm	Single burst
18	27	2.3	185.0	Yes	5540.0MHz, -63.0dBm	Single burst
19	28	2.6	153.0	Yes	5560.0MHz, -63.0dBm	Single burst
20	25	3.9	158.0	Yes	5555.0MHz, -63.0dBm	Single burst
21	23	3.4	220.0	Yes	5550.0MHz, -63.0dBm	Single burst
22	25	1.4	214.0	Yes	5545.0MHz, -63.0dBm	Single burst
23	26	3.6	205.0	Yes	5540.0MHz, -63.0dBm	Single burst
24	23	2.5	220.0	Yes	5560.0MHz, -63.0dBm	Single burst
25	23	1.8	165.0	Yes	5555.0MHz, -63.0dBm	Single burst
26	24	3.2	178.0	Yes	5550.0MHz, -63.0dBm	Single burst
27	28	1.2	198.0	Yes	5545.0MHz, -63.0dBm	Single burst
28	27	4.7	215.0	Yes	5540.0MHz, -63.0dBm	Single burst
29	28	3.6	197.0	Yes	5560.0MHz, -63.0dBm	Single burst
30	27	4.3	187.0	Yes	5555.0MHz, -63.0dBm	Single burst

Table 9 - FCC Short Pulse Radar (Type 3) Results 802.11n 40MHz

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	17	9.3	413.0	Yes	5550.0MHz, -63.0dBm	Single burst
2	16	8.9	411.0	Yes	5545.0MHz, -63.0dBm	Single burst
3	17	10.0	361.0	Yes	5540.0MHz, -63.0dBm	Single burst
4	17	8.0	461.0	Yes	5535.0MHz, -63.0dBm	Single burst
5	17	9.5	399.0	Yes	5565.0MHz, -63.0dBm	Single burst
6	17	8.2	212.0	Yes	5560.0MHz, -63.0dBm	Single burst
7	17	8.5	330.0	Yes	5555.0MHz, -63.0dBm	Single burst
8	16	8.1	211.0	Yes	5550.0MHz, -63.0dBm	Single burst
9	16	6.7	409.0	Yes	5545.0MHz, -63.0dBm	Single burst
10	18	6.2	465.0	Yes	5540.0MHz, -63.0dBm	Single burst
11	17	9.7	484.0	Yes	5560.0MHz, -63.0dBm	Single burst
12	16	8.6	239.0	Yes	5555.0MHz, -63.0dBm	Single burst
13	16	7.0	366.0	Yes	5550.0MHz, -63.0dBm	Single burst
14	16	8.4	439.0	Yes	5545.0MHz, -63.0dBm	Single burst
15	18	9.9	414.0	Yes	5540.0MHz, -63.0dBm	Single burst
16	17	9.8	451.0	Yes	5560.0MHz, -63.0dBm	Single burst
17	17	6.8	398.0	Yes	5555.0MHz, -63.0dBm	Single burst
18	18	8.0	453.0	Yes	5550.0MHz, -63.0dBm	Single burst
19	17	9.6	212.0	Yes	5545.0MHz, -63.0dBm	Single burst
20	17	6.6	444.0	Yes	5540.0MHz, -63.0dBm	Single burst
21	16	9.5	350.0	Yes	5560.0MHz, -63.0dBm	Single burst
22	16	7.4	331.0	No	5555.0MHz, -63.0dBm	Single burst
23	17	6.3	388.0	Yes	5550.0MHz, -63.0dBm	Single burst
24	17	6.4	429.0	Yes	5545.0MHz, -63.0dBm	Single burst
25	17	7.6	254.0	Yes	5540.0MHz, -63.0dBm	Single burst
26	17	9.1	312.0	Yes	5560.0MHz, -63.0dBm	Single burst
27	16	8.5	242.0	Yes	5555.0MHz, -63.0dBm	Single burst
28	17	6.9	384.0	Yes	5550.0MHz, -63.0dBm	Single burst
29	16	8.8	421.0	Yes	5545.0MHz, -63.0dBm	Single burst
30	16	6.9	317.0	Yes	5540.0MHz, -63.0dBm	Single burst

Table 10 - FCC Short Pulse Radar (Type 4) Results 802.11n 40MHz

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	12	18.3	264.0	Yes	5550.0MHz, -63.0dBm	Single burst
2	12	15.5	312.0	Yes	5545.0MHz, -63.0dBm	Single burst
3	13	14.9	376.0	Yes	5540.0MHz, -63.0dBm	Single burst
4	15	14.6	217.0	No	5535.0MHz, -63.0dBm	Single burst
5	12	15.8	483.0	Yes	5565.0MHz, -63.0dBm	Single burst
6	13	18.6	396.0	Yes	5550.0MHz, -63.0dBm	Single burst
7	13	14.9	471.0	No	5545.0MHz, -63.0dBm	Single burst
8	16	17.4	259.0	Yes	5540.0MHz, -63.0dBm	Single burst
9	13	16.2	405.0	Yes	5560.0MHz, -63.0dBm	Single burst
10	15	16.4	427.0	Yes	5555.0MHz, -63.0dBm	Single burst
11	14	13.4	445.0	Yes	5550.0MHz, -63.0dBm	Single burst
12	15	17.9	334.0	Yes	5545.0MHz, -63.0dBm	Single burst
13	15	14.0	474.0	No	5540.0MHz, -63.0dBm	Single burst
14	15	17.5	369.0	Yes	5560.0MHz, -63.0dBm	Single burst
15	15	18.9	299.0	Yes	5555.0MHz, -63.0dBm	Single burst
16	13	15.9	372.0	Yes	5550.0MHz, -63.0dBm	Single burst
17	15	17.0	235.0	Yes	5545.0MHz, -63.0dBm	Single burst
18	13	17.3	355.0	Yes	5540.0MHz, -63.0dBm	Single burst
19	15	13.4	498.0	Yes	5560.0MHz, -63.0dBm	Single burst
20	13	12.2	401.0	Yes	5555.0MHz, -63.0dBm	Single burst
21	14	18.7	241.0	Yes	5550.0MHz, -63.0dBm	Single burst
22	14	14.5	351.0	No	5545.0MHz, -63.0dBm	Single burst
23	13	16.0	493.0	Yes	5540.0MHz, -63.0dBm	Single burst
24	15	16.8	281.0	Yes	5560.0MHz, -63.0dBm	Single burst
25	13	19.1	255.0	Yes	5555.0MHz, -63.0dBm	Single burst
26	16	12.0	277.0	Yes	5550.0MHz, -63.0dBm	Single burst
27	12	16.8	203.0	Yes	5545.0MHz, -63.0dBm	Single burst
28	12	19.5	461.0	Yes	5540.0MHz, -63.0dBm	Single burst
29	12	17.0	309.0	Yes	5560.0MHz, -63.0dBm	Single burst
30	16	17.7	398.0	Yes	5555.0MHz, -63.0dBm	Single burst

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz

Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
1	9	1.0	333.0	Yes	5568.0MHz, -63.0dBm	Hop sequence: 5678, 5317, 5568, 5339, 5586, 5689, 5665, 5254, 5470, 5619, 5385, 5298, 5414, 5574, 5675, 5513, 5652, 5320, 5391, 5380, 5350, 5722, 5612, 5373, 5711, 5265, 5311, 5276, 5479, 5607, 5447, 5724, 5387, 5329, 5618, 5721, 5690, 5468, 5571, 5379, 5663, 5499, 5256, 5662, 5528, 5365, 5642, 5715, 5538, 5481, 5525, 5490, 5372, 5412, 5351, 5694, 5432, 5576, 5489, 5653, 5341, 5352, 5461, 5394, 5313, 5411, 5726, 5608, 5550, 5478, 5507, 5325, 5540, 5560, 5493, 5553, 5706, 5435, 5633, 5628, 5389, 5549, 5537, 5322, 5487, 5664, 5437, 5687, 5348, 5713, 5651, 5589, 5495, 5498, 5703, 5360, 5545, 5303, 5371, 5536 (10 hits)
2	9	1.0	333.0	No	5569.0MHz, -63.0dBm	Hop sequence: 5435, 5563, 5287, 5725, 5387, 5445, 5495, 5391, 5421, 5393, 5354, 5500, 5594, 5366, 5504, 5404, 5335, 5592, 5386, 5264, 5597, 5685, 5472, 5324, 5461, 5658, 5642, 5522, 5257, 5356, 5553, 5485, 5609, 5613, 5406, 5455, 5428, 5568, 5374, 5351, 5320, 5537, 5492, 5273, 5541, 5643, 5381, 5701, 5678, 5710, 5412, 5705, 5673, 5501, 5585, 5361, 5581, 5677, 5567, 5635, 5417, 5536, 5486, 5591, 5331, 5403, 5593, 5664, 5303, 5619, 5691, 5314, 5363, 5534, 5679, 5488, 5364, 5711, 5680, 5385, 5548, 5659, 5624, 5532, 5668, 5509, 5440, 5297, 5344, 5376, 5280, 5506, 5448, 5608, 5520, 5276, 5549, 5559, 5499, 5350 (12 hits)
3	9	1.0	333.0	No	5531.0MHz, -63.0dBm	Hop sequence: 5513, 5680, 5485, 5720, 5536, 5342, 5385, 5478, 5486, 5724, 5319, 5527, 5587, 5427, 5715, 5552, 5501, 5407, 5285, 5475, 5466, 5659, 5447, 5278, 5528, 5388, 5674, 5496, 5599, 5380, 5437, 5297, 5332, 5635, 5609, 5384, 5362, 5562, 5641, 5566, 5459, 5253, 5368, 5489, 5523, 5393, 5696, 5561, 5449, 5542, 5274, 5291, 5532, 5423, 5294, 5400, 5555, 5645, 5320, 5646, 5682, 5592, 5708, 5551, 5304, 5383, 5397, 5633, 5439, 5396, 5521, 5580, 5472, 5535, 5322, 5307, 5483, 5403, 5492, 5302, 5305, 5629, 5404, 5541, 5453, 5509, 5365, 5505, 5614, 5389, 5498, 5456, 5374, 5661, 5602, 5703, 5301, 5512, 5538, 5560 (13 hits)
4	9	1.0	333.0	Yes	5532.0MHz, -63.0dBm	Hop sequence: 5653, 5327, 5398, 5608, 5287, 5459, 5368, 5554, 5585, 5453, 5694, 5519, 5252, 5301, 5623, 5350, 5384, 5642, 5304, 5514, 5560, 5643, 5538, 5263, 5338, 5563, 5664, 5593, 5274, 5621, 5392, 5261, 5574, 5414, 5435, 5267, 5598, 5572, 5321, 5281, 5482, 5411, 5639, 5345, 5691, 5349, 5425, 5690, 5677, 5588, 5439, 5582, 5477, 5431, 5393, 5361, 5675, 5636, 5610, 5721, 5297, 5251, 5370, 5700, 5493, 5253, 5353, 5309, 5511, 5403, 5544, 5526, 5637, 5412, 5555, 5522, 5712, 5485, 5325, 5293, 5676, 5674, 5420, 5584, 5399, 5628, 5497, 5348, 5436, 5300, 5595, 5360, 5319, 5337, 5406, 5373,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5312, 5291, 5577, 5383 (6 hits)
5	9	1.0	333.0	Yes	5533.0MHz, -63.0dBm	Hop sequence: 5529, 5292, 5717, 5356, 5272, 5594, 5447, 5479, 5578, 5255, 5333, 5439, 5487, 5628, 5262, 5508, 5416, 5364, 5252, 5667, 5387, 5676, 5421, 5441, 5649, 5320, 5579, 5311, 5440, 5486, 5684, 5564, 5657, 5301, 5689, 5379, 5270, 5354, 5316, 5382, 5575, 5410, 5525, 5515, 5300, 5414, 5521, 5335, 5378, 5623, 5427, 5495, 5576, 5627, 5277, 5625, 5711, 5545, 5293, 5687, 5618, 5281, 5656, 5260, 5371, 5603, 5518, 5558, 5496, 5279, 5668, 5398, 5709, 5601, 5449, 5367, 5541, 5527, 5503, 5396, 5471, 5686, 5456, 5669, 5473, 5663, 5482, 5430, 5290, 5539, 5562, 5453, 5403, 5478, 5433, 5685, 5661, 5377, 5677, 5406 (6 hits)
6	9	1.0	333.0	Yes	5534.0MHz, -63.0dBm	Hop sequence: 5699, 5494, 5544, 5502, 5467, 5611, 5271, 5262, 5443, 5451, 5619, 5371, 5399, 5426, 5377, 5650, 5464, 5293, 5653, 5536, 5615, 5602, 5348, 5484, 5675, 5671, 5499, 5526, 5492, 5351, 5339, 5427, 5417, 5693, 5529, 5440, 5359, 5581, 5277, 5578, 5535, 5355, 5475, 5342, 5721, 5413, 5549, 5345, 5501, 5422, 5711, 5463, 5651, 5714, 5438, 5522, 5567, 5648, 5400, 5372, 5334, 5268, 5719, 5437, 5292, 5448, 5305, 5431, 5591, 5548, 5269, 5455, 5458, 5644, 5514, 5315, 5624, 5404, 5366, 5420, 5253, 5612, 5408, 5540, 5601, 5473, 5479, 5428, 5285, 5414, 5452, 5445, 5605, 5311, 5449, 5542, 5495, 5321, 5294, 5594 (8 hits)
7	9	1.0	333.0	Yes	5567.0MHz, -63.0dBm	Hop sequence: 5570, 5536, 5548, 5724, 5499, 5572, 5514, 5255, 5616, 5371, 5648, 5384, 5646, 5322, 5664, 5700, 5438, 5600, 5479, 5679, 5507, 5715, 5537, 5626, 5409, 5671, 5545, 5643, 5432, 5450, 5279, 5317, 5519, 5475, 5559, 5566, 5609, 5311, 5512, 5442, 5306, 5297, 5553, 5467, 5573, 5354, 5250, 5482, 5584, 5452, 5655, 5301, 5349, 5704, 5697, 5390, 5630, 5403, 5448, 5645, 5266, 5657, 5635, 5615, 5264, 5487, 5417, 5300, 5622, 5552, 5525, 5620, 5621, 5262, 5585, 5714, 5466, 5385, 5513, 5456, 5291, 5327, 5259, 5455, 5281, 5445, 5447, 5441, 5595, 5261, 5283, 5641, 5675, 5690, 5673, 5650, 5284, 5581, 5423, 5603 (8 hits)
8	9	1.0	333.0	Yes	5568.0MHz, -63.0dBm	Hop sequence: 5678, 5668, 5345, 5329, 5325, 5389, 5264, 5664, 5663, 5291, 5346, 5498, 5258, 5631, 5473, 5367, 5698, 5327, 5396, 5711, 5314, 5395, 5690, 5539, 5640, 5602, 5476, 5361, 5322, 5531, 5252, 5718, 5274, 5251, 5437, 5591, 5257, 5409, 5558, 5355, 5580, 5705, 5425, 5452, 5691, 5373, 5447, 5471, 5284, 5610, 5710, 5694, 5604, 5456, 5552, 5618, 5590, 5667, 5560, 5298, 5374, 5564, 5703, 5567, 5493, 5453, 5536, 5682, 5309, 5525, 5676, 5686, 5344, 5315, 5593, 5464, 5672, 5347, 5658, 5594, 5629, 5283, 5689, 5302, 5442, 5583, 5627, 5269, 5394, 5484, 5390, 5696, 5326, 5654, 5615, 5657, 5265, 5639, 5372, 5515 (7 hits)

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
9	9	1.0	333.0	Yes	5532.0MHz, -63.0dBm	Hop sequence: 5524, 5259, 5304, 5577, 5269, 5631, 5467, 5650, 5672, 5510, 5398, 5526, 5346, 5541, 5712, 5320, 5394, 5406, 5508, 5359, 5401, 5641, 5378, 5381, 5632, 5621, 5452, 5593, 5547, 5666, 5624, 5380, 5449, 5504, 5348, 5283, 5673, 5306, 5694, 5525, 5439, 5483, 5433, 5307, 5310, 5279, 5635, 5665, 5550, 5567, 5681, 5321, 5559, 5520, 5552, 5516, 5382, 5469, 5333, 5537, 5489, 5474, 5579, 5332, 5463, 5503, 5716, 5445, 5400, 5564, 5311, 5458, 5722, 5488, 5446, 5530, 5565, 5300, 5383, 5361, 5291, 5487, 5501, 5656, 5371, 5602, 5486, 5633, 5640, 5514, 5287, 5497, 5658, 5582, 5426, 5690, 5620, 5634, 5707, 5316 (9 hits)
10	9	1.0	333.0	Yes	5533.0MHz, -63.0dBm	Hop sequence: 5677, 5435, 5371, 5611, 5569, 5532, 5712, 5623, 5495, 5351, 5453, 5612, 5293, 5372, 5390, 5520, 5491, 5349, 5717, 5577, 5424, 5705, 5448, 5475, 5631, 5561, 5527, 5524, 5447, 5292, 5589, 5699, 5279, 5473, 5273, 5285, 5722, 5419, 5674, 5376, 5507, 5423, 5610, 5490, 5268, 5452, 5647, 5433, 5545, 5307, 5716, 5565, 5332, 5305, 5585, 5665, 5541, 5366, 5368, 5599, 5506, 5604, 5253, 5703, 5331, 5521, 5477, 5645, 5582, 5593, 5669, 5318, 5449, 5298, 5578, 5415, 5328, 5514, 5407, 5557, 5387, 5536, 5481, 5392, 5696, 5275, 5500, 5704, 5594, 5384, 5672, 5567, 5428, 5316, 5348, 5493, 5252, 5494, 5393, 5526 (8 hits)
11	9	1.0	333.0	Yes	5534.0MHz, -63.0dBm	Hop sequence: 5453, 5637, 5478, 5305, 5386, 5285, 5692, 5321, 5486, 5522, 5365, 5270, 5487, 5709, 5311, 5532, 5603, 5343, 5506, 5315, 5255, 5271, 5507, 5583, 5666, 5397, 5331, 5508, 5611, 5445, 5497, 5363, 5406, 5381, 5260, 5687, 5512, 5312, 5373, 5553, 5624, 5672, 5537, 5628, 5443, 5355, 5493, 5251, 5634, 5420, 5460, 5430, 5693, 5483, 5533, 5527, 5664, 5659, 5464, 5678, 5535, 5558, 5482, 5275, 5662, 5675, 5300, 5699, 5450, 5296, 5434, 5663, 5610, 5472, 5318, 5642, 5448, 5556, 5690, 5471, 5451, 5281, 5477, 5257, 5595, 5515, 5592, 5485, 5681, 5701, 5509, 5414, 5410, 5702, 5346, 5459, 5327, 5297, 5577, 5519 (7 hits)
12	9	1.0	333.0	Yes	5535.0MHz, -63.0dBm	Hop sequence: 5345, 5502, 5398, 5253, 5531, 5456, 5344, 5269, 5641, 5514, 5350, 5599, 5411, 5714, 5646, 5437, 5452, 5512, 5703, 5613, 5432, 5389, 5262, 5438, 5686, 5709, 5582, 5627, 5415, 5622, 5390, 5488, 5387, 5513, 5449, 5264, 5495, 5484, 5278, 5282, 5583, 5347, 5358, 5693, 5311, 5569, 5439, 5704, 5367, 5518, 5655, 5581, 5652, 5588, 5313, 5675, 5257, 5291, 5590, 5674, 5258, 5335, 5603, 5292, 5256, 5468, 5446, 5542, 5458, 5568, 5521, 5540, 5409, 5629, 5647, 5527, 5430, 5418, 5403, 5525, 5404, 5316, 5522, 5636, 5272, 5508, 5654, 5722, 5393, 5402, 5656, 5562, 5275, 5723, 5645, 5572, 5338, 5451, 5363, 5631 (4 hits)
13	9	1.0	333.0	Yes	5536.0MHz,	Hop sequence: 5678, 5356, 5552, 5314, 5652,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
					-63.0dBm	5609, 5697, 5574, 5453, 5617, 5251, 5302, 5450, 5537, 5668, 5366, 5558, 5284, 5364, 5463, 5253, 5323, 5530, 5519, 5355, 5261, 5432, 5589, 5635, 5636, 5474, 5425, 5522, 5618, 5470, 5443, 5610, 5703, 5277, 5330, 5351, 5493, 5320, 5655, 5551, 5576, 5301, 5679, 5507, 5454, 5441, 5644, 5639, 5705, 5582, 5484, 5646, 5698, 5669, 5397, 5627, 5480, 5303, 5720, 5440, 5527, 5318, 5278, 5688, 5481, 5336, 5417, 5380, 5520, 5319, 5423, 5686, 5684, 5497, 5515, 5505, 5664, 5549, 5633, 5608, 5700, 5471, 5340, 5526, 5293, 5597, 5310, 5603, 5528, 5572, 5503, 5615, 5630, 5324, 5446 (5 hits)
14	9	1.0	333.0	Yes	5537.0MHz, -63.0dBm	Hop sequence: 5702, 5466, 5644, 5305, 5646, 5398, 5485, 5323, 5358, 5529, 5295, 5496, 5368, 5275, 5404, 5504, 5469, 5535, 5387, 5701, 5497, 5306, 5266, 5468, 5582, 5547, 5267, 5314, 5486, 5648, 5426, 5375, 5718, 5316, 5562, 5428, 5351, 5505, 5498, 5549, 5563, 5339, 5525, 5270, 5436, 5353, 5395, 5536, 5256, 5602, 5615, 5329, 5530, 5647, 5599, 5300, 5709, 5298, 5622, 5449, 5402, 5487, 5561, 5348, 5452, 5546, 5475, 5560, 5429, 5350, 5392, 5517, 5603, 5423, 5519, 5590, 5377, 5463, 5362, 5609, 5269, 5726, 5264, 5397, 5282, 5254, 5401, 5638, 5281, 5352, 5515, 5706, 5627, 5656, 5632, 5309, 5581, 5523, 5677, 5461 (9 hits)
15	9	1.0	333.0	Yes	5538.0MHz, -63.0dBm	Hop sequence: 5666, 5467, 5599, 5293, 5345, 5325, 5634, 5670, 5289, 5344, 5681, 5373, 5450, 5477, 5598, 5576, 5266, 5362, 5676, 5675, 5696, 5567, 5376, 5340, 5559, 5521, 5698, 5614, 5384, 5481, 5259, 5380, 5452, 5645, 5327, 5705, 5426, 5495, 5389, 5375, 5530, 5292, 5724, 5631, 5637, 5256, 5506, 5335, 5502, 5580, 5430, 5416, 5343, 5364, 5579, 5687, 5597, 5564, 5646, 5612, 5568, 5678, 5528, 5699, 5352, 5310, 5677, 5679, 5336, 5395, 5624, 5277, 5691, 5650, 5281, 5640, 5337, 5257, 5275, 5471, 5551, 5381, 5280, 5328, 5252, 5320, 5396, 5297, 5263, 5407, 5377, 5662, 5453, 5581, 5571, 5517, 5329, 5508, 5271, 5523 (5 hits)
16	9	1.0	333.0	Yes	5539.0MHz, -63.0dBm	Hop sequence: 5319, 5579, 5671, 5538, 5280, 5406, 5586, 5328, 5341, 5616, 5535, 5576, 5471, 5415, 5321, 5534, 5427, 5622, 5289, 5512, 5255, 5299, 5526, 5497, 5410, 5429, 5487, 5404, 5278, 5648, 5372, 5416, 5442, 5468, 5562, 5439, 5488, 5544, 5332, 5399, 5691, 5639, 5478, 5549, 5302, 5264, 5630, 5339, 5600, 5365, 5334, 5412, 5459, 5495, 5712, 5366, 5601, 5375, 5394, 5614, 5419, 5312, 5615, 5528, 5436, 5272, 5520, 5559, 5262, 5668, 5477, 5378, 5337, 5674, 5631, 5496, 5543, 5667, 5532, 5257, 5317, 5331, 5400, 5440, 5391, 5279, 5690, 5643, 5323, 5513, 5613, 5313, 5673, 5560, 5593, 5595, 5612, 5469, 5345, 5465 (10 hits)
17	9	1.0	333.0	Yes	5540.0MHz,	Hop sequence: 5709, 5316, 5477, 5420, 5337, 5255, 5395, 5618, 5484, 5534, 5602, 5634,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
					-63.0dBm	5660, 5465, 5354, 5666, 5350, 5490, 5393, 5725, 5405, 5616, 5671, 5358, 5399, 5549, 5483, 5264, 5711, 5290, 5561, 5374, 5446, 5294, 5268, 5670, 5485, 5724, 5331, 5672, 5598, 5506, 5311, 5323, 5571, 5388, 5464, 5422, 5476, 5319, 5575, 5568, 5494, 5515, 5271, 5589, 5541, 5466, 5433, 5497, 5253, 5332, 5322, 5559, 5639, 5392, 5525, 5461, 5547, 5351, 5382, 5318, 5694, 5695, 5691, 5376, 5384, 5681, 5391, 5601, 5274, 5638, 5369, 5719, 5698, 5663, 5655, 5642, 5324, 5687, 5546, 5284, 5631, 5584, 5503, 5516, 5693, 5425, 5620, 5591 (8 hits)
18	9	1.0	333.0	Yes	5541.0MHz, -63.0dBm	Hop sequence: 5619, 5346, 5703, 5711, 5511, 5655, 5276, 5266, 5459, 5628, 5292, 5643, 5318, 5380, 5466, 5415, 5317, 5440, 5721, 5583, 5498, 5488, 5523, 5477, 5305, 5448, 5650, 5450, 5644, 5647, 5557, 5441, 5545, 5516, 5533, 5379, 5706, 5446, 5462, 5290, 5360, 5457, 5426, 5720, 5356, 5355, 5404, 5699, 5344, 5255, 5708, 5661, 5649, 5587, 5544, 5668, 5412, 5595, 5339, 5260, 5394, 5593, 5667, 5296, 5535, 5303, 5665, 5388, 5494, 5631, 5564, 5618, 5455, 5654, 5612, 5594, 5724, 5470, 5482, 5530, 5697, 5278, 5599, 5439, 5662, 5300, 5443, 5430, 5383, 5348, 5610, 5284, 5473, 5349, 5524, 5526, 5353, 5433, 5521, 5454 (6 hits)
19	9	1.0	333.0	Yes	5542.0MHz, -63.0dBm	Hop sequence: 5524, 5414, 5514, 5435, 5691, 5477, 5718, 5510, 5486, 5607, 5406, 5500, 5302, 5627, 5322, 5517, 5542, 5626, 5267, 5352, 5663, 5431, 5258, 5492, 5724, 5697, 5585, 5537, 5323, 5573, 5453, 5462, 5409, 5700, 5595, 5671, 5263, 5679, 5396, 5288, 5256, 5593, 5575, 5445, 5648, 5713, 5319, 5530, 5557, 5654, 5688, 5451, 5457, 5604, 5587, 5525, 5722, 5311, 5601, 5488, 5566, 5328, 5571, 5260, 5465, 5608, 5503, 5401, 5430, 5291, 5283, 5279, 5567, 5317, 5438, 5458, 5676, 5678, 5318, 5447, 5481, 5580, 5251, 5614, 5612, 5642, 5297, 5689, 5292, 5412, 5331, 5471, 5613, 5669, 5568, 5383, 5376, 5657, 5253, 5478 (6 hits)
20	9	1.0	333.0	Yes	5543.0MHz, -63.0dBm	Hop sequence: 5634, 5598, 5349, 5307, 5694, 5426, 5686, 5286, 5624, 5322, 5494, 5274, 5704, 5489, 5640, 5401, 5683, 5651, 5305, 5657, 5565, 5543, 5374, 5411, 5375, 5424, 5280, 5510, 5276, 5642, 5256, 5544, 5619, 5417, 5677, 5545, 5639, 5504, 5497, 5394, 5695, 5258, 5412, 5378, 5527, 5345, 5473, 5675, 5321, 5309, 5594, 5331, 5386, 5662, 5519, 5708, 5597, 5590, 5429, 5644, 5346, 5585, 5647, 5549, 5335, 5654, 5599, 5408, 5405, 5540, 5529, 5500, 5533, 5611, 5572, 5358, 5268, 5364, 5297, 5618, 5592, 5287, 5550, 5387, 5344, 5296, 5392, 5403, 5337, 5595, 5603, 5692, 5667, 5480, 5681, 5340, 5371, 5717, 5721, 5684 (8 hits)
21	9	1.0	333.0	Yes	5544.0MHz, -63.0dBm	Hop sequence: 5461, 5440, 5373, 5664, 5403, 5254, 5267, 5282, 5636, 5648, 5424, 5495, 5524, 5613, 5307, 5320, 5555, 5382, 5717,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5409, 5405, 5508, 5279, 5702, 5619, 5538, 5644, 5563, 5430, 5341, 5361, 5500, 5721, 5618, 5423, 5420, 5469, 5650, 5498, 5517, 5466, 5476, 5293, 5412, 5497, 5270, 5614, 5510, 5527, 5580, 5421, 5274, 5512, 5391, 5641, 5299, 5520, 5608, 5518, 5428, 5489, 5462, 5426, 5594, 5277, 5311, 5336, 5687, 5675, 5653, 5651, 5503, 5362, 5515, 5360, 5451, 5464, 5540, 5699, 5625, 5296, 5340, 5539, 5546, 5383, 5251, 5593, 5506, 5335, 5573, 5298, 5477, 5384, 5312, 5549, 5657, 5604, 5438, 5532, 5415 (8 hits)
22	9	1.0	333.0	Yes	5545.0MHz, -63.0dBm	Hop sequence: 5259, 5488, 5687, 5634, 5641, 5437, 5284, 5672, 5459, 5465, 5631, 5320, 5482, 5304, 5546, 5653, 5573, 5643, 5415, 5286, 5274, 5452, 5285, 5445, 5365, 5256, 5538, 5431, 5382, 5497, 5383, 5644, 5554, 5522, 5520, 5709, 5429, 5603, 5614, 5264, 5288, 5467, 5348, 5675, 5502, 5446, 5645, 5387, 5536, 5405, 5303, 5507, 5300, 5292, 5537, 5327, 5492, 5610, 5261, 5454, 5253, 5630, 5602, 5350, 5309, 5443, 5683, 5343, 5277, 5366, 5649, 5410, 5453, 5379, 5353, 5527, 5307, 5422, 5252, 5566, 5562, 5572, 5708, 5725, 5396, 5473, 5598, 5319, 5703, 5378, 5270, 5351, 5312, 5423, 5585, 5623, 5648, 5555, 5511, 5313 (8 hits)
23	9	1.0	333.0	Yes	5546.0MHz, -63.0dBm	Hop sequence: 5417, 5444, 5609, 5310, 5255, 5700, 5432, 5345, 5682, 5527, 5278, 5536, 5712, 5256, 5270, 5550, 5296, 5613, 5674, 5462, 5547, 5486, 5531, 5652, 5476, 5723, 5371, 5591, 5438, 5380, 5468, 5608, 5442, 5396, 5645, 5495, 5326, 5697, 5308, 5466, 5320, 5397, 5393, 5415, 5565, 5446, 5684, 5352, 5408, 5261, 5641, 5338, 5269, 5709, 5485, 5394, 5414, 5539, 5350, 5293, 5441, 5558, 5600, 5690, 5496, 5283, 5722, 5588, 5420, 5428, 5610, 5585, 5557, 5710, 5555, 5636, 5363, 5298, 5372, 5493, 5272, 5497, 5265, 5364, 5327, 5301, 5454, 5614, 5335, 5568, 5586, 5354, 5665, 5718, 5537, 5704, 5532, 5639, 5623, 5263 (11 hits)
24	9	1.0	333.0	Yes	5547.0MHz, -63.0dBm	Hop sequence: 5648, 5538, 5581, 5448, 5413, 5652, 5641, 5620, 5593, 5457, 5430, 5699, 5361, 5359, 5399, 5666, 5501, 5310, 5700, 5703, 5546, 5688, 5298, 5458, 5392, 5690, 5539, 5283, 5686, 5477, 5467, 5270, 5418, 5355, 5346, 5356, 5300, 5469, 5408, 5267, 5578, 5285, 5629, 5596, 5705, 5386, 5678, 5321, 5715, 5410, 5277, 5358, 5661, 5480, 5252, 5611, 5713, 5382, 5436, 5402, 5601, 5474, 5473, 5278, 5320, 5268, 5553, 5530, 5694, 5438, 5532, 5697, 5260, 5396, 5725, 5575, 5350, 5692, 5340, 5509, 5724, 5279, 5669, 5487, 5426, 5518, 5491, 5617, 5384, 5334, 5547, 5568, 5722, 5675, 5357, 5301, 5619, 5405, 5515, 5363 (7 hits)
25	9	1.0	333.0	Yes	5548.0MHz, -63.0dBm	Hop sequence: 5619, 5325, 5439, 5415, 5567, 5595, 5255, 5634, 5334, 5412, 5725, 5488, 5524, 5560, 5518, 5373, 5632, 5712, 5503, 5596, 5660, 5328, 5264, 5625, 5489, 5321,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5259, 5342, 5611, 5287, 5436, 5298, 5525, 5608, 5561, 5677, 5461, 5495, 5355, 5479, 5653, 5376, 5339, 5297, 5477, 5702, 5548, 5526, 5716, 5277, 5671, 5268, 5476, 5440, 5532, 5723, 5322, 5627, 5404, 5468, 5372, 5330, 5587, 5570, 5455, 5706, 5537, 5718, 5252, 5280, 5628, 5630, 5379, 5573, 5674, 5396, 5313, 5493, 5646, 5285, 5638, 5318, 5546, 5470, 5451, 5631, 5622, 5648, 5612, 5361, 5621, 5509, 5590, 5574, 5704, 5288, 5575, 5517, 5513, 5683 (7 hits)
26	9	1.0	333.0	Yes	5549.0MHz, -63.0dBm	Hop sequence: 5662, 5399, 5390, 5356, 5378, 5379, 5618, 5330, 5263, 5477, 5514, 5366, 5309, 5312, 5453, 5297, 5479, 5431, 5286, 5342, 5707, 5610, 5464, 5419, 5515, 5462, 5314, 5430, 5577, 5336, 5403, 5290, 5369, 5429, 5692, 5666, 5422, 5507, 5619, 5445, 5325, 5457, 5558, 5622, 5636, 5402, 5674, 5495, 5718, 5670, 5547, 5703, 5424, 5592, 5562, 5511, 5468, 5677, 5693, 5334, 5407, 5566, 5253, 5556, 5623, 5652, 5657, 5359, 5270, 5578, 5372, 5555, 5482, 5443, 5446, 5388, 5554, 5663, 5333, 5455, 5276, 5291, 5306, 5485, 5524, 5391, 5271, 5397, 5413, 5409, 5640, 5648, 5259, 5552, 5337, 5671, 5277, 5434, 5319, 5262 (8 hits)
27	9	1.0	333.0	Yes	5550.0MHz, -63.0dBm	Hop sequence: 5616, 5475, 5486, 5627, 5270, 5405, 5384, 5723, 5494, 5711, 5382, 5561, 5460, 5665, 5251, 5358, 5550, 5684, 5526, 5290, 5452, 5357, 5297, 5522, 5515, 5499, 5520, 5255, 5496, 5304, 5581, 5664, 5282, 5361, 5640, 5437, 5365, 5257, 5619, 5538, 5344, 5280, 5267, 5317, 5686, 5673, 5451, 5335, 5674, 5371, 5347, 5726, 5678, 5679, 5472, 5539, 5667, 5403, 5441, 5576, 5269, 5394, 5433, 5610, 5712, 5291, 5696, 5552, 5483, 5540, 5476, 5284, 5465, 5431, 5281, 5606, 5260, 5681, 5338, 5660, 5445, 5556, 5278, 5416, 5517, 5578, 5620, 5671, 5554, 5571, 5529, 5700, 5448, 5262, 5536, 5557, 5391, 5543, 5274, 5287 (11 hits)
28	9	1.0	333.0	Yes	5551.0MHz, -63.0dBm	Hop sequence: 5682, 5252, 5255, 5435, 5434, 5637, 5334, 5712, 5596, 5636, 5363, 5694, 5263, 5644, 5582, 5658, 5511, 5707, 5723, 5341, 5512, 5328, 5699, 5514, 5505, 5489, 5433, 5640, 5274, 5370, 5398, 5350, 5481, 5482, 5495, 5647, 5715, 5500, 5294, 5632, 5429, 5277, 5581, 5324, 5424, 5468, 5652, 5673, 5557, 5359, 5542, 5443, 5376, 5704, 5358, 5534, 5460, 5664, 5565, 5529, 5360, 5412, 5506, 5348, 5671, 5703, 5346, 5509, 5628, 5648, 5368, 5553, 5269, 5611, 5717, 5551, 5270, 5549, 5559, 5701, 5287, 5340, 5576, 5615, 5705, 5689, 5362, 5286, 5299, 5409, 5483, 5381, 5469, 5279, 5289, 5555, 5275, 5601, 5265, 5710 (9 hits)
29	9	1.0	333.0	Yes	5552.0MHz, -63.0dBm	Hop sequence: 5425, 5549, 5656, 5495, 5498, 5615, 5713, 5283, 5399, 5462, 5435, 5433, 5378, 5571, 5259, 5608, 5373, 5508, 5455, 5603, 5605, 5396, 5610, 5314, 5491, 5309, 5277, 5566, 5652, 5376, 5642, 5657, 5512,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5397, 5490, 5678, 5526, 5598, 5488, 5426, 5613, 5522, 5621, 5480, 5291, 5411, 5318, 5664, 5308, 5587, 5321, 5540, 5310, 5677, 5447, 5365, 5563, 5465, 5592, 5319, 5619, 5430, 5333, 5286, 5557, 5513, 5450, 5630, 5524, 5703, 5392, 5624, 5641, 5323, 5546, 5607, 5279, 5297, 5647, 5299, 5685, 5261, 5558, 5428, 5640, 5689, 5633, 5452, 5253, 5516, 5552, 5382, 5602, 5628, 5471, 5507, 5341, 5353, 5575, 5697 (8 hits)
30	9	1.0	333.0	Yes	5553.0MHz, -63.0dBm	Hop sequence: 5360, 5670, 5518, 5490, 5353, 5644, 5685, 5361, 5439, 5569, 5523, 5455, 5587, 5300, 5549, 5307, 5344, 5652, 5284, 5604, 5501, 5578, 5378, 5606, 5704, 5274, 5408, 5645, 5701, 5679, 5328, 5369, 5411, 5553, 5640, 5623, 5447, 5717, 5635, 5668, 5622, 5349, 5613, 5597, 5380, 5268, 5260, 5515, 5486, 5483, 5664, 5297, 5541, 5626, 5423, 5465, 5681, 5379, 5392, 5627, 5532, 5639, 5473, 5334, 5261, 5663, 5474, 5537, 5420, 5342, 5499, 5677, 5602, 5435, 5496, 5292, 5263, 5472, 5592, 5323, 5534, 5404, 5631, 5427, 5466, 5674, 5629, 5425, 5546, 5449, 5454, 5366, 5502, 5265, 5547, 5540, 5536, 5643, 5661, 5294 (10 hits)
31	9	1.0	333.0	Yes	5554.0MHz, -63.0dBm	Hop sequence: 5251, 5482, 5675, 5531, 5399, 5717, 5458, 5672, 5551, 5509, 5288, 5541, 5576, 5713, 5544, 5481, 5456, 5540, 5296, 5661, 5366, 5680, 5478, 5289, 5292, 5649, 5262, 5603, 5465, 5545, 5693, 5491, 5547, 5506, 5422, 5263, 5616, 5514, 5429, 5567, 5493, 5619, 5651, 5502, 5508, 5479, 5670, 5519, 5302, 5554, 5379, 5484, 5368, 5454, 5335, 5529, 5387, 5690, 5427, 5420, 5391, 5593, 5400, 5666, 5655, 5646, 5497, 5280, 5516, 5662, 5585, 5659, 5315, 5634, 5633, 5469, 5637, 5629, 5413, 5707, 5557, 5330, 5307, 5347, 5355, 5539, 5638, 5691, 5468, 5594, 5606, 5496, 5301, 5600, 5378, 5483, 5584, 5592, 5486, 5625 (10 hits)
32	9	1.0	333.0	Yes	5555.0MHz, -63.0dBm	Hop sequence: 5590, 5659, 5557, 5401, 5430, 5689, 5295, 5381, 5643, 5336, 5566, 5632, 5434, 5417, 5636, 5513, 5522, 5591, 5410, 5484, 5646, 5562, 5429, 5411, 5440, 5432, 5468, 5701, 5301, 5718, 5604, 5397, 5622, 5610, 5318, 5721, 5303, 5506, 5366, 5276, 5425, 5537, 5569, 5674, 5407, 5390, 5311, 5593, 5605, 5279, 5589, 5393, 5477, 5491, 5518, 5655, 5662, 5321, 5531, 5367, 5459, 5543, 5571, 5658, 5564, 5481, 5324, 5626, 5344, 5250, 5502, 5588, 5450, 5720, 5606, 5501, 5688, 5290, 5627, 5654, 5573, 5624, 5405, 5563, 5724, 5352, 5603, 5265, 5342, 5641, 5458, 5697, 5706, 5680, 5673, 5714, 5581, 5476, 5362, 5373 (7 hits)
33	9	1.0	333.0	Yes	5556.0MHz, -63.0dBm	Hop sequence: 5396, 5500, 5300, 5516, 5264, 5565, 5619, 5705, 5368, 5620, 5601, 5647, 5267, 5304, 5657, 5552, 5346, 5664, 5694, 5265, 5709, 5330, 5310, 5447, 5349, 5347, 5441, 5281, 5507, 5501, 5540, 5400, 5631, 5339, 5723, 5263, 5599, 5706, 5627, 5579,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz						
Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5375, 5480, 5712, 5573, 5289, 5660, 5564, 5549, 5590, 5671, 5279, 5506, 5409, 5554, 5567, 5436, 5312, 5331, 5397, 5323, 5255, 5256, 5462, 5276, 5483, 5630, 5288, 5699, 5392, 5562, 5722, 5661, 5504, 5613, 5591, 5608, 5593, 5450, 5328, 5322, 5363, 5466, 5517, 5588, 5401, 5448, 5636, 5460, 5578, 5582, 5283, 5534, 5522, 5583, 5551, 5472, 5254, 5292, 5702, 5672 (10 hits)
34	9	1.0	333.0	Yes	5557.0MHz, -63.0dBm	Hop sequence: 5664, 5509, 5316, 5647, 5487, 5404, 5399, 5354, 5668, 5623, 5378, 5430, 5486, 5373, 5395, 5383, 5481, 5356, 5281, 5455, 5343, 5575, 5706, 5484, 5677, 5620, 5273, 5289, 5435, 5617, 5505, 5465, 5427, 5256, 5655, 5625, 5590, 5489, 5387, 5554, 5694, 5326, 5631, 5319, 5681, 5420, 5369, 5549, 5537, 5263, 5665, 5304, 5352, 5611, 5501, 5514, 5556, 5407, 5633, 5456, 5582, 5458, 5676, 5306, 5262, 5669, 5320, 5673, 5257, 5579, 5564, 5641, 5305, 5412, 5253, 5255, 5492, 5388, 5660, 5493, 5715, 5595, 5571, 5626, 5562, 5517, 5294, 5424, 5559, 5659, 5366, 5550, 5657, 5689, 5644, 5490, 5491, 5274, 5527, 5288 (8 hits)
35	9	1.0	333.0	Yes	5558.0MHz, -63.0dBm	Hop sequence: 5541, 5381, 5490, 5438, 5377, 5523, 5606, 5574, 5352, 5504, 5268, 5356, 5451, 5359, 5655, 5674, 5715, 5256, 5292, 5454, 5536, 5458, 5318, 5468, 5716, 5702, 5603, 5373, 5496, 5514, 5669, 5320, 5530, 5663, 5434, 5529, 5581, 5372, 5672, 5561, 5656, 5450, 5384, 5334, 5624, 5315, 5472, 5538, 5371, 5430, 5310, 5595, 5470, 5637, 5682, 5313, 5341, 5362, 5417, 5531, 5526, 5259, 5627, 5348, 5314, 5267, 5683, 5413, 5324, 5684, 5333, 5489, 5720, 5578, 5424, 5554, 5646, 5592, 5696, 5280, 5657, 5459, 5400, 5497, 5311, 5442, 5474, 5266, 5297, 5254, 5548, 5577, 5396, 5726, 5527, 5353, 5301, 5641, 5281, 5486 (6 hits)
36	9	1.0	333.0	Yes	5559.0MHz, -63.0dBm	Hop sequence: 5662, 5391, 5430, 5690, 5452, 5570, 5657, 5396, 5702, 5507, 5697, 5282, 5630, 5401, 5302, 5361, 5658, 5603, 5592, 5543, 5529, 5272, 5646, 5696, 5524, 5378, 5456, 5382, 5271, 5530, 5505, 5587, 5311, 5353, 5673, 5600, 5444, 5692, 5298, 5645, 5407, 5486, 5277, 5635, 5414, 5329, 5670, 5328, 5560, 5610, 5509, 5276, 5499, 5579, 5283, 5638, 5356, 5309, 5393, 5365, 5447, 5521, 5594, 5533, 5260, 5659, 5255, 5335, 5358, 5513, 5313, 5536, 5257, 5717, 5278, 5566, 5572, 5433, 5497, 5721, 5586, 5442, 5674, 5703, 5618, 5484, 5415, 5319, 5307, 5321, 5676, 5325, 5534, 5470, 5682, 5548, 5448, 5700, 5324, 5522 (7 hits)
37	9	1.0	333.0	Yes	5560.0MHz, -63.0dBm	Hop sequence: 5402, 5417, 5592, 5551, 5689, 5587, 5316, 5302, 5255, 5614, 5491, 5648, 5252, 5602, 5573, 5706, 5513, 5347, 5425, 5667, 5720, 5594, 5529, 5291, 5475, 5716, 5596, 5709, 5436, 5279, 5264, 5687, 5619, 5440, 5393, 5289, 5301, 5388, 5681, 5452, 5450, 5258, 5253, 5503, 5636, 5290, 5488,

Table 11 - FCC frequency hopping radar (Type 6) Results 802.11n 40MHz

Trial #	Pulses/Burst	Pulse Width (us)	PRI (us)	Detected	Fr (MHz) and level (dBm)	Burst Information
						5683, 5412, 5284, 5368, 5653, 5482, 5626, 5719, 5362, 5501, 5372, 5505, 5625, 5713, 5724, 5615, 5318, 5571, 5613, 5548, 5693, 5310, 5696, 5309, 5263, 5694, 5663, 5628, 5265, 5600, 5447, 5677, 5624, 5359, 5642, 5691, 5647, 5456, 5502, 5634, 5659, 5649, 5268, 5690, 5686, 5631, 5585, 5547, 5274, 5419, 5330, 5422, 5324 (3 hits)

Table 12 - Long Sequence Waveform Summary 802.11n 40MHz

Long Sequence Trial	Result	Radar Frequency / Amplitude
Trial #1	Detected	5550.0MHz, -63.0dBm
Trial #2	Detected	5545.0MHz, -63.0dBm
Trial #3	Detected	5540.0MHz, -63.0dBm
Trial #4	Detected	5535.0MHz, -63.0dBm
Trial #5	Detected	5565.0MHz, -63.0dBm
Trial #6	Detected	5550.0MHz, -63.0dBm
Trial #7	Detected	5545.0MHz, -63.0dBm
Trial #8	Detected	5540.0MHz, -63.0dBm
Trial #9	Detected	5560.0MHz, -63.0dBm
Trial #10	Detected	5555.0MHz, -63.0dBm
Trial #11	Detected	5550.0MHz, -63.0dBm
Trial #12	Detected	5545.0MHz, -63.0dBm
Trial #13	NOT Detected	5540.0MHz, -63.0dBm
Trial #14	Detected	5560.0MHz, -63.0dBm
Trial #15	Detected	5555.0MHz, -63.0dBm
Trial #16	Detected	5550.0MHz, -63.0dBm
Trial #17	Detected	5545.0MHz, -63.0dBm
Trial #18	Detected	5540.0MHz, -63.0dBm
Trial #19	Detected	5560.0MHz, -63.0dBm
Trial #20	Detected	5555.0MHz, -63.0dBm
Trial #21	Detected	5550.0MHz, -63.0dBm
Trial #22	Detected	5545.0MHz, -63.0dBm
Trial #23	Detected	5540.0MHz, -63.0dBm
Trial #24	Detected	5560.0MHz, -63.0dBm
Trial #25	Detected	5555.0MHz, -63.0dBm
Trial #26	Detected	5550.0MHz, -63.0dBm
Trial #27	Detected	5545.0MHz, -63.0dBm
Trial #28	Detected	5540.0MHz, -63.0dBm
Trial #29	Detected	5560.0MHz, -63.0dBm
Trial #30	Detected	5555.0MHz, -63.0dBm

Table 13 - Long Sequence Waveform Trial#1 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	80.4	13	1026.0	1077.0	0.639611
2	1	73.2	12	-	-	0.918713
3	2	92.9	12	1242.0	-	1.978895
4	2	61.4	14	1686.0	-	2.069848
5	1	85.6	16	-	-	3.306669
6	3	68.0	20	1872.0	1680.0	3.675916
7	1	97.3	6	-	-	4.431480
8	2	67.1	13	1227.0	-	5.075934
9	2	53.8	10	1359.0	-	5.373929
10	2	68.0	9	1466.0	-	6.119421
11	1	92.0	10	-	-	7.222858
12	1	68.0	10	-	-	7.859957
13	2	51.9	17	1678.0	-	8.431375
14	2	51.6	17	1955.0	-	8.944443
15	1	72.8	7	-	-	9.819527
16	3	99.1	14	1859.0	1753.0	10.352560
17	2	85.6	20	1373.0	-	10.793578
18	2	77.5	8	1139.0	-	11.417590

Table 14 - Long Sequence Waveform Trial#2 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	77.5	19	1533.0	-	0.463206
2	3	84.9	15	1748.0	1500.0	0.835378
3	3	51.2	19	1297.0	1278.0	1.701969
4	3	54.8	20	1680.0	1785.0	2.428960
5	2	87.5	5	1423.0	-	2.764996
6	3	89.3	18	1735.0	1882.0	3.613165
7	2	99.5	10	1359.0	-	3.921278
8	2	62.3	11	1610.0	-	4.924456
9	2	94.5	5	1141.0	-	5.426599
10	2	83.7	19	1813.0	-	6.055264
11	2	68.4	20	1931.0	-	6.903562
12	2	73.1	12	1019.0	-	7.509440
13	2	72.8	13	1411.0	-	7.668595
14	3	99.3	18	1050.0	1320.0	8.411516
15	2	86.9	12	1218.0	-	9.421128
16	1	72.8	17	-	-	9.730733
17	2	61.8	7	1942.0	-	10.241115
18	1	94.1	11	-	-	10.850416
19	3	80.9	15	1229.0	1373.0	11.854600

Table 15 - Long Sequence Waveform Trial#3 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	63.5	15	1112.0	-	0.649417
2	2	74.2	18	1674.0	-	1.094621
3	3	62.9	18	1534.0	1588.0	1.386768
4	1	78.6	7	-	-	2.241035
5	1	68.0	9	-	-	3.018991
6	1	72.2	13	-	-	3.888536
7	2	56.3	16	1683.0	-	4.419898
8	1	96.7	9	-	-	4.989940
9	1	59.9	12	-	-	5.926216
10	2	99.4	17	1364.0	-	6.109301
11	1	70.7	7	-	-	6.701306
12	3	61.3	9	1538.0	1407.0	7.724967
13	2	65.3	5	1967.0	-	8.284328
14	3	55.4	12	1322.0	1325.0	9.153158
15	3	63.1	13	1485.0	1724.0	9.388682
16	2	90.0	13	1862.0	-	10.058085
17	2	81.2	17	1555.0	-	10.792727
18	2	74.7	12	1449.0	-	11.378549

Table 16 - Long Sequence Waveform Trial#4 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	59.7	19	1867.0	-	0.213968
2	2	65.0	16	1985.0	-	1.203574
3	2	80.9	17	1764.0	-	1.613653
4	2	68.2	16	1062.0	-	2.247139
5	2	90.4	11	1939.0	-	2.877645
6	3	64.1	20	1724.0	1901.0	3.324773
7	1	74.5	19	-	-	4.167573
8	1	61.1	12	-	-	4.897601
9	3	64.5	5	1461.0	1749.0	5.379081
10	2	77.6	6	1281.0	-	6.228557
11	3	81.6	9	1464.0	1691.0	6.448678
12	3	76.1	16	1834.0	1888.0	7.110244
13	3	64.3	14	1532.0	1246.0	8.052955
14	2	84.3	15	1001.0	-	8.406683
15	3	56.2	6	1455.0	1600.0	9.201481
16	3	98.4	20	1649.0	1928.0	9.714264
17	2	85.5	7	1467.0	-	10.466759
18	1	66.3	16	-	-	11.022517
19	1	74.7	15	-	-	11.947944

Table 17 - Long Sequence Waveform Trial#5 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	96.7	18	-	-	0.095958
2	2	79.9	11	1764.0	-	1.378275
3	3	50.3	17	1197.0	1240.0	2.330457
4	2	69.2	15	1881.0	-	2.560405
5	2	50.3	5	1369.0	-	3.353646
6	2	61.7	11	1690.0	-	4.107007
7	1	65.9	16	-	-	5.313369
8	1	93.3	10	-	-	5.968156
9	3	73.8	9	1268.0	1671.0	6.592041
10	2	63.1	11	1641.0	-	7.561356
11	2	75.2	8	1978.0	-	8.311463
12	3	70.8	18	1040.0	1267.0	8.866596
13	2	96.0	12	1684.0	-	10.136002
14	2	60.3	15	1155.0	-	10.450491
15	2	78.6	11	1108.0	-	11.498516

Table 18 - Long Sequence Waveform Trial#6 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	56.4	8	1985.0	1664.0	0.365870
2	2	78.3	8	1952.0	-	1.703833
3	1	57.1	20	-	-	1.872409
4	2	98.9	17	1979.0	-	2.943109
5	2	84.8	14	1914.0	-	4.063458
6	2	86.3	12	1270.0	-	5.139724
7	2	74.4	12	1820.0	-	5.213055
8	2	54.9	17	1092.0	-	6.768207
9	1	90.6	15	-	-	7.688089
10	3	93.9	7	1363.0	1815.0	8.289876
11	3	99.8	12	1901.0	1230.0	9.294269
12	2	91.3	8	1267.0	-	9.552075
13	3	81.4	17	1648.0	1251.0	10.858233
14	2	51.2	18	1676.0	-	11.155313

Table 19 - Long Sequence Waveform Trial#7 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	67.0	13	1959.0	-	0.502346
2	2	98.8	18	1140.0	-	1.508248
3	1	96.1	18	-	-	2.766293
4	2	80.7	7	1938.0	-	3.965228
5	3	90.1	12	1722.0	1047.0	5.309454
6	3	57.9	6	1783.0	1672.0	5.778977
7	2	58.5	18	1325.0	-	6.966272
8	1	75.8	12	-	-	8.457902
9	1	59.0	15	-	-	9.273631
10	1	71.2	7	-	-	10.419089
11	3	69.7	5	1231.0	1184.0	11.263241

Table 20 - Long Sequence Waveform Trial#8 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	89.4	18	1127.0	-	0.653086
2	2	74.1	6	1545.0	-	1.428054
3	2	57.9	18	1969.0	-	1.996556
4	2	54.1	12	1619.0	-	2.913272
5	2	98.6	16	1619.0	-	3.154460
6	3	98.0	11	1476.0	1971.0	4.296317
7	2	96.5	15	1167.0	-	5.121128
8	2	85.1	16	1818.0	-	5.378369
9	1	64.0	15	-	-	6.070346
10	2	55.1	9	1926.0	-	6.823109
11	2	96.4	10	1879.0	-	7.920381
12	3	65.2	6	1377.0	1877.0	8.784180
13	1	81.8	13	-	-	9.530233
14	3	93.9	9	1298.0	1823.0	10.024521
15	1	94.8	10	-	-	11.008033
16	1	57.2	6	-	-	11.401764

Table 21 - Long Sequence Waveform Trial#9 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	95.5	6	1611.0	-	0.403865
2	2	59.0	17	1227.0	-	0.945943
3	1	53.8	7	-	-	2.331603
4	3	87.9	11	1163.0	1217.0	2.675887
5	1	97.6	20	-	-	3.200688
6	1	77.9	18	-	-	4.741366
7	1	57.6	11	-	-	4.800559
8	1	62.8	16	-	-	6.132806
9	1	67.9	10	-	-	6.922255
10	2	83.1	7	1032.0	-	7.345859
11	3	74.5	11	1701.0	1557.0	8.133655
12	2	89.6	17	1727.0	-	8.962828
13	2	63.8	13	1064.0	-	9.735709
14	3	67.2	6	1926.0	1332.0	10.739666
15	2	85.0	15	1587.0	-	11.636308

Table 22 - Long Sequence Waveform Trial#10 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	81.3	16	-	-	0.125685
2	1	72.6	16	-	-	1.032476
3	2	65.5	20	1757.0	-	2.240553
4	3	72.6	11	1232.0	1979.0	2.872888
5	2	67.3	16	1376.0	-	3.753800
6	1	57.1	9	-	-	4.723730
7	2	99.2	17	1995.0	-	5.248180
8	1	89.3	6	-	-	6.213321
9	2	59.0	20	1307.0	-	7.414658
10	3	56.9	10	1076.0	1630.0	8.059443
11	2	59.6	17	1599.0	-	8.971811
12	2	84.1	11	1569.0	-	9.905150
13	2	78.9	6	1673.0	-	10.537293
14	2	96.6	9	1922.0	-	11.778731

Table 23 - Long Sequence Waveform Trial#11 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	51.1	5	1146.0	-	0.138410
2	1	99.8	12	-	-	0.659470
3	3	92.7	15	1596.0	1781.0	1.305294
4	2	85.5	16	1419.0	-	2.313626
5	2	64.4	16	1490.0	-	2.834629
6	2	85.2	6	1151.0	-	3.667156
7	2	97.8	17	1660.0	-	4.039830
8	2	69.4	8	1350.0	-	4.845769
9	3	76.8	11	1500.0	1354.0	5.542596
10	1	51.4	17	-	-	6.206396
11	2	97.0	12	1142.0	-	6.316124
12	2	72.5	12	1141.0	-	7.510086
13	3	82.8	16	1110.0	1721.0	7.889268
14	2	74.2	8	1870.0	-	8.697056
15	2	82.6	14	1479.0	-	9.294163
16	3	73.2	10	1359.0	1036.0	9.514725
17	3	63.4	18	1556.0	1258.0	10.200438
18	1	54.3	19	-	-	11.330438
19	3	94.2	12	1402.0	1093.0	11.648522

Table 24 - Long Sequence Waveform Trial#12 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	79.3	9	1182.0	-	0.497974
2	2	78.5	9	1119.0	-	1.352306
3	2	55.6	15	1655.0	-	2.158339
4	2	62.2	19	1797.0	-	2.759009
5	2	62.3	12	1720.0	-	4.066359
6	1	93.0	7	-	-	4.517021
7	1	98.3	15	-	-	5.479870
8	2	68.5	9	1439.0	-	6.806295
9	2	61.9	7	1865.0	-	6.904276
10	1	76.6	8	-	-	8.218079
11	1	59.4	6	-	-	8.932187
12	2	86.8	18	1510.0	-	9.842648
13	2	89.2	14	1421.0	-	10.310916
14	1	62.6	14	-	-	11.729217

Table 25 - Long Sequence Waveform Trial#13 (NOT Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	58.5	19	1215.0	-	0.324688
2	2	99.2	8	1459.0	-	1.601623
3	3	66.5	16	1055.0	1317.0	2.402984
4	2	94.0	9	1452.0	-	3.623964
5	1	95.7	11	-	-	4.053505
6	3	96.3	18	1904.0	1447.0	5.959875
7	2	56.3	17	1100.0	-	6.205808
8	2	57.3	19	1563.0	-	7.101769
9	2	98.1	9	1904.0	-	8.699003
10	3	82.8	14	1784.0	1678.0	9.092265
11	2	62.8	18	1558.0	-	10.457818
12	2	81.0	10	1312.0	-	11.074431

Table 26 - Long Sequence Waveform Trial#14 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	54.9	17	1207.0	-	0.753324
2	3	55.1	18	1518.0	1493.0	1.351324
3	2	60.7	16	1990.0	-	3.064511
4	1	99.2	8	-	-	3.393413
5	2	64.3	12	1116.0	-	4.867289
6	2	86.9	14	1494.0	-	5.689194
7	2	66.4	9	1846.0	-	7.240131
8	3	85.2	6	1021.0	1304.0	8.595898
9	3	91.1	6	1628.0	1018.0	9.185649
10	2	65.5	5	1584.0	-	10.048037
11	3	99.2	18	1115.0	1281.0	11.035281

Table 27 - Long Sequence Waveform Trial#15 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	78.3	10	1398.0	-	1.301018
2	3	87.0	5	1096.0	1457.0	1.632577
3	2	75.0	6	1567.0	-	3.251722
4	3	53.0	14	1425.0	1476.0	4.627268
5	2	75.3	19	1203.0	-	6.382508
6	2	62.3	12	1360.0	-	7.783788
7	3	94.2	7	1292.0	1011.0	9.525188
8	2	91.9	10	1341.0	-	11.881897

Table 28 - Long Sequence Waveform Trial#16 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	58.7	16	1255.0	1723.0	0.405566
2	3	52.7	17	1341.0	1664.0	1.357479
3	1	79.7	14	-	-	1.508840
4	2	52.4	14	1040.0	-	2.306461
5	1	94.1	8	-	-	2.924250
6	3	94.4	19	1633.0	1910.0	4.158379
7	1	66.3	6	-	-	4.673665
8	3	92.0	19	1557.0	1659.0	5.117222
9	2	82.5	6	1854.0	-	6.270550
10	2	52.4	17	1519.0	-	6.622199
11	1	82.6	11	-	-	7.311967
12	3	51.9	15	1224.0	1126.0	8.194719
13	2	63.0	15	1695.0	-	8.610694
14	2	67.3	17	1807.0	-	9.627844
15	1	74.6	14	-	-	9.910518
16	2	93.0	19	1485.0	-	11.084080
17	3	51.6	11	1759.0	1487.0	11.413073

Table 29 - Long Sequence Waveform Trial#17 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	65.4	5	1354.0	1538.0	0.028776
2	1	69.6	11	-	-	1.687586
3	3	59.2	11	1596.0	1024.0	3.191400
4	3	55.0	17	1407.0	1874.0	4.048596
5	2	51.4	17	1263.0	-	4.457791
6	2	82.4	7	1687.0	-	5.956470
7	2	53.4	12	1070.0	-	7.485324
8	2	51.1	13	1490.0	-	7.964391
9	3	84.1	14	1133.0	1307.0	9.619231
10	2	84.5	13	1748.0	-	10.068056
11	2	66.4	13	1459.0	-	10.951656

Table 30 - Long Sequence Waveform Trial#18 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	92.5	9	1766.0	-	0.476732
2	2	80.1	11	1768.0	-	1.203532
3	2	78.8	5	1888.0	-	2.471077
4	2	86.1	12	1068.0	-	3.305377
5	1	58.0	17	-	-	3.849072
6	3	62.2	10	1614.0	1081.0	5.255903
7	2	52.3	9	1390.0	-	5.699570
8	2	95.8	18	1285.0	-	6.590981
9	2	79.8	11	1249.0	-	7.968738
10	3	81.9	16	1818.0	1928.0	8.380806
11	2	70.6	9	1793.0	-	10.096717
12	2	85.6	13	1887.0	-	10.275933
13	3	62.8	8	1919.0	1886.0	11.099050

Table 31 - Long Sequence Waveform Trial#19 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	85.1	13	1009.0	-	0.945916
2	1	85.2	9	-	-	1.133023
3	1	62.4	15	-	-	2.414417
4	2	86.8	18	1639.0	-	4.003636
5	2	74.2	9	1044.0	-	4.767173
6	2	78.7	11	1046.0	-	5.467153
7	2	83.9	18	1547.0	-	7.063631
8	1	88.5	18	-	-	8.599534
9	2	59.6	20	1829.0	-	9.565924
10	2	92.0	19	1925.0	-	10.480614
11	3	76.4	15	1784.0	1957.0	11.981031

Table 32 - Long Sequence Waveform Trial#20 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	70.8	10	1107.0	-	0.383500
2	2	96.6	14	1866.0	-	1.345447
3	3	97.4	10	1304.0	1932.0	1.878849
4	1	84.6	19	-	-	2.725113
5	2	50.9	7	1497.0	-	3.766039
6	2	87.3	9	1764.0	-	4.224120
7	3	57.9	14	1139.0	1650.0	5.507783
8	2	92.1	14	1076.0	-	5.623274
9	2	93.8	8	1081.0	-	6.590360
10	1	55.6	12	-	-	7.535635
11	2	74.7	14	1241.0	-	8.548462
12	2	89.7	9	1957.0	-	9.545414
13	2	83.1	8	1543.0	-	10.387497
14	1	56.9	13	-	-	11.198122
15	3	50.5	11	1588.0	1031.0	11.216942

Table 33 - Long Sequence Waveform Trial#21 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	62.3	15	1179.0	-	0.215736
2	2	77.7	16	1987.0	-	1.387631
3	2	95.4	12	1559.0	-	2.762194
4	3	61.7	14	1396.0	1057.0	2.925176
5	3	67.1	19	1275.0	1095.0	4.063100
6	1	92.7	20	-	-	4.889091
7	2	87.4	11	1922.0	-	6.250596
8	3	62.0	16	1483.0	1726.0	7.136962
9	2	57.1	7	1106.0	-	7.695492
10	2	76.3	6	1840.0	-	8.997175
11	3	75.4	13	1423.0	1742.0	9.792030
12	2	93.7	11	1140.0	-	10.690680
13	1	65.5	11	-	-	11.544885

Table 34 - Long Sequence Waveform Trial#22 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	81.3	12	1267.0	-	0.480318
2	1	80.5	15	-	-	1.160148
3	1	72.0	10	-	-	2.590738
4	1	98.4	11	-	-	3.663328
5	2	66.6	14	1936.0	-	4.118717
6	3	71.4	8	1181.0	1365.0	4.921634
7	1	50.3	9	-	-	5.821040
8	2	78.4	13	1785.0	-	6.478211
9	2	61.5	11	1923.0	-	7.530811
10	2	62.3	6	1709.0	-	8.904259
11	1	96.7	13	-	-	9.546345
12	1	59.7	12	-	-	11.048037
13	2	78.0	9	1872.0	-	11.279034

Table 35 - Long Sequence Waveform Trial#23 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	90.0	10	1252.0	1095.0	0.861687
2	2	61.5	10	1587.0	-	0.997779
3	2	63.4	15	1608.0	-	2.167125
4	1	79.3	9	-	-	2.787307
5	3	67.3	13	1630.0	1599.0	3.859758
6	2	75.3	13	1831.0	-	5.496169
7	2	67.1	10	1057.0	-	6.273519
8	2	65.1	14	1576.0	-	7.142521
9	2	62.2	17	1693.0	-	8.153540
10	3	54.2	8	1975.0	1954.0	8.370154
11	3	78.2	9	1411.0	1788.0	9.704459
12	2	63.2	8	1801.0	-	10.774326
13	2	86.3	14	1363.0	-	11.679500

Table 36 - Long Sequence Waveform Trial#24 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	71.6	13	1698.0	-	0.543348
2	1	69.9	12	-	-	1.041669
3	2	64.4	13	1918.0	-	1.853181
4	2	66.5	14	1695.0	-	2.335589
5	1	55.9	17	-	-	3.084621
6	1	56.1	6	-	-	3.542477
7	2	99.5	8	1174.0	-	4.231679
8	3	95.5	16	1756.0	1392.0	4.829737
9	3	83.6	9	1998.0	1633.0	5.545017
10	1	73.8	19	-	-	5.855044
11	2	85.1	13	1506.0	-	6.838497
12	2	77.8	10	1609.0	-	7.167733
13	2	84.3	16	1061.0	-	7.986079
14	1	79.9	14	-	-	8.306268
15	2	88.0	14	1468.0	-	9.467774
16	1	66.1	7	-	-	9.720268
17	2	95.8	10	1984.0	-	10.587843
18	3	63.8	15	1240.0	1188.0	11.173263
19	2	88.3	7	1116.0	-	11.969752

Table 37 - Long Sequence Waveform Trial#25 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	85.5	16	1364.0	-	0.013222
2	2	83.5	8	1290.0	-	1.384977
3	2	70.9	7	1223.0	-	2.676827
4	2	64.9	7	1201.0	-	3.409433
5	1	64.0	10	-	-	4.317244
6	1	98.9	6	-	-	5.803136
7	2	79.4	10	1164.0	-	6.783404
8	1	93.0	20	-	-	7.310501
9	3	68.2	18	1157.0	1014.0	8.772545
10	2	74.1	6	1182.0	-	9.806603
11	1	56.9	9	-	-	10.764891
12	2	59.3	13	1492.0	-	11.497138

Table 38 - Long Sequence Waveform Trial#26 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	96.3	12	1692.0	-	0.772476
2	3	61.9	13	1355.0	1867.0	1.252664
3	2	52.1	9	1553.0	-	2.093709
4	3	59.3	19	1518.0	1843.0	3.098707
5	2	77.1	17	1703.0	-	4.186454
6	2	85.7	17	1413.0	-	4.765751
7	1	90.9	13	-	-	5.664742
8	2	96.7	15	1073.0	-	6.811532
9	3	91.3	10	1738.0	1927.0	8.195561
10	2	93.7	16	1187.0	-	8.321659
11	3	90.9	19	1585.0	1484.0	10.077309
12	2	50.7	9	1660.0	-	10.599325
13	2	90.6	16	1805.0	-	11.154730

Table 39 - Long Sequence Waveform Trial#27 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	70.6	17	-	-	0.136476
2	2	97.7	18	1626.0	-	1.229758
3	3	66.4	9	1227.0	1220.0	1.638587
4	2	91.4	12	1763.0	-	2.716610
5	2	55.5	13	1416.0	-	3.028023
6	1	57.8	14	-	-	3.972754
7	1	77.2	16	-	-	4.687635
8	1	71.7	8	-	-	5.621532
9	2	54.6	8	1225.0	-	6.204442
10	3	63.0	14	1849.0	1421.0	7.236200
11	2	89.5	17	1943.0	-	7.748669
12	3	96.0	11	1451.0	1382.0	8.577912
13	2	60.2	17	1811.0	-	9.671479
14	2	82.8	12	1000.0	-	9.947525
15	2	99.6	7	1889.0	-	10.572420
16	2	93.8	14	1624.0	-	11.749115

Table 40 - Long Sequence Waveform Trial#28 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	2	54.0	15	1466.0	-	0.324133
2	1	94.6	15	-	-	1.384884
3	1	89.0	19	-	-	1.712148
4	1	98.2	19	-	-	2.702583
5	3	86.5	7	1671.0	1465.0	3.269774
6	3	97.1	9	1832.0	1935.0	4.762478
7	2	71.4	15	1767.0	-	5.315782
8	1	85.4	17	-	-	5.809301
9	2	89.9	8	1434.0	-	6.849009
10	2	62.8	15	1966.0	-	7.277767
11	3	77.2	19	1137.0	1425.0	8.081321
12	1	84.0	14	-	-	9.061313
13	1	90.8	15	-	-	9.772194
14	3	96.9	9	1915.0	1037.0	10.671822
15	2	65.1	17	1441.0	-	11.207165

Table 41 - Long Sequence Waveform Trial#29 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	1	76.0	18	-	-	0.152440
2	2	84.8	14	1148.0	-	1.052303
3	2	83.6	17	1899.0	-	1.550520
4	2	79.9	9	1597.0	-	2.422953
5	3	81.7	13	1079.0	1848.0	3.431879
6	3	88.4	12	1668.0	1562.0	4.401278
7	3	67.0	17	1332.0	1839.0	4.796766
8	2	80.7	19	1206.0	-	5.548386
9	2	61.7	12	1336.0	-	6.040166
10	2	94.1	10	1108.0	-	7.010042
11	2	94.2	13	1160.0	-	7.926671
12	2	76.7	12	1101.0	-	8.297913
13	1	62.8	18	-	-	9.570916
14	2	63.2	18	1236.0	-	10.110062
15	1	67.2	9	-	-	10.906431
16	1	87.2	10	-	-	11.328356

Table 42 - Long Sequence Waveform Trial#30 (Detected) 802.11n 40MHz

Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (s)
1	3	73.6	11	1895.0	1796.0	0.489126
2	2	54.7	13	1662.0	-	1.102610
3	2	75.4	12	1999.0	-	1.529945
4	3	78.2	13	1413.0	1601.0	2.511921
5	1	54.1	20	-	-	2.911087
6	1	70.0	10	-	-	3.397351
7	2	92.0	9	1387.0	-	4.320963
8	2	66.0	14	1487.0	-	4.639582
9	1	76.6	16	-	-	5.504927
10	1	66.5	12	-	-	6.033791
11	3	57.1	13	1761.0	1017.0	6.657143
12	1	61.9	10	-	-	7.112155
13	1	58.0	17	-	-	8.030048
14	2	82.6	10	1712.0	-	8.314884
15	2	61.0	17	1243.0	-	9.292918
16	2	78.0	10	1884.0	-	10.034079
17	2	68.0	9	1574.0	-	10.222433
18	2	80.0	6	1224.0	-	10.882992
19	2	64.3	11	1919.0	-	11.505914

Appendix C Test Data Tables and Plots for Channel Closing

FCC PART 15 SUBPART E Channel Closing Measurements

Table 43 - 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	0 ms	60 ms	0.13 ms	10 s	Pass
Radar Type 5	0 ms	60 ms	0.16 ms	10 s	Pass

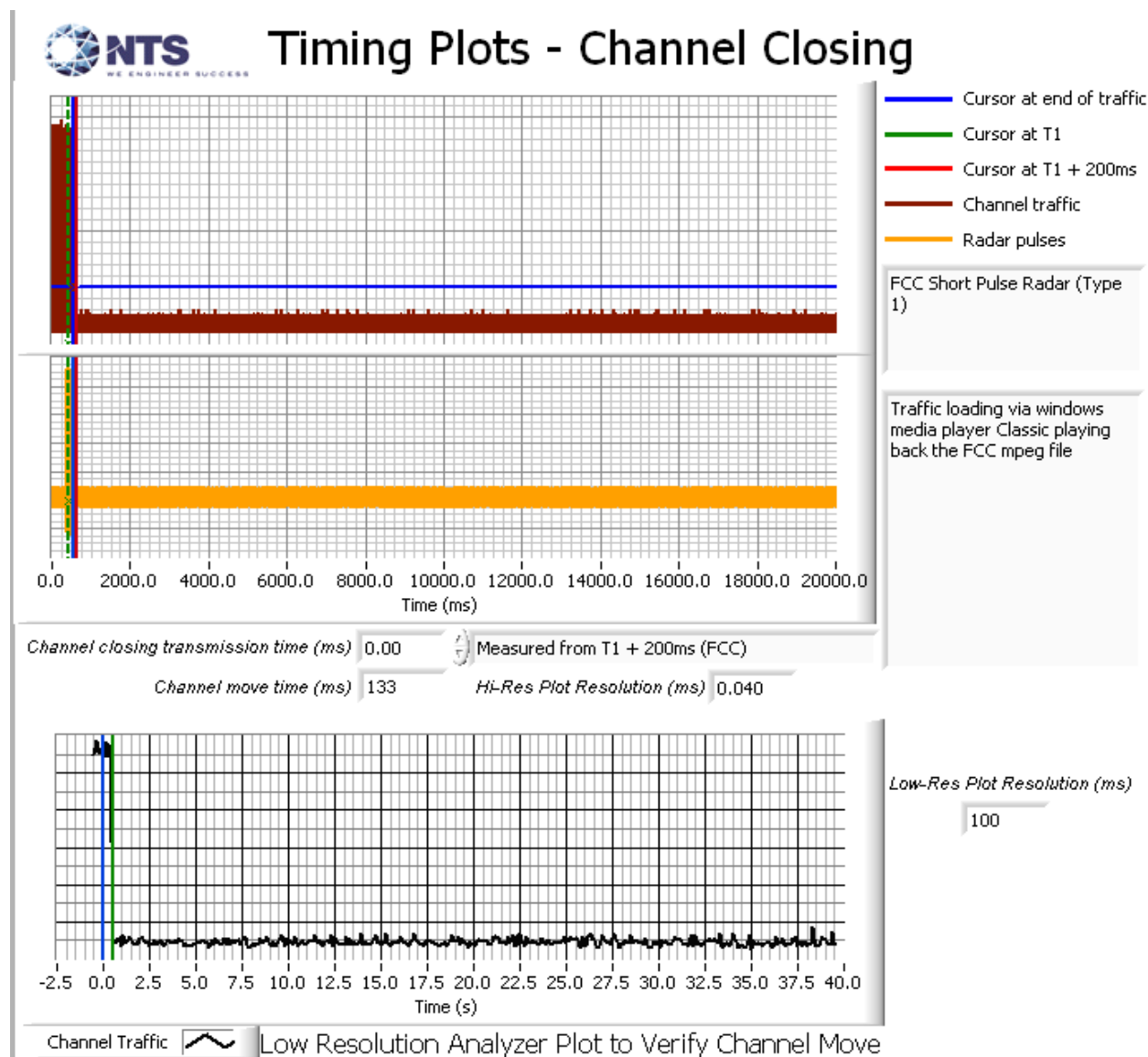


Figure 9 Channel Closing Time and Channel Move Time (40MHz) – 40 second plot

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.

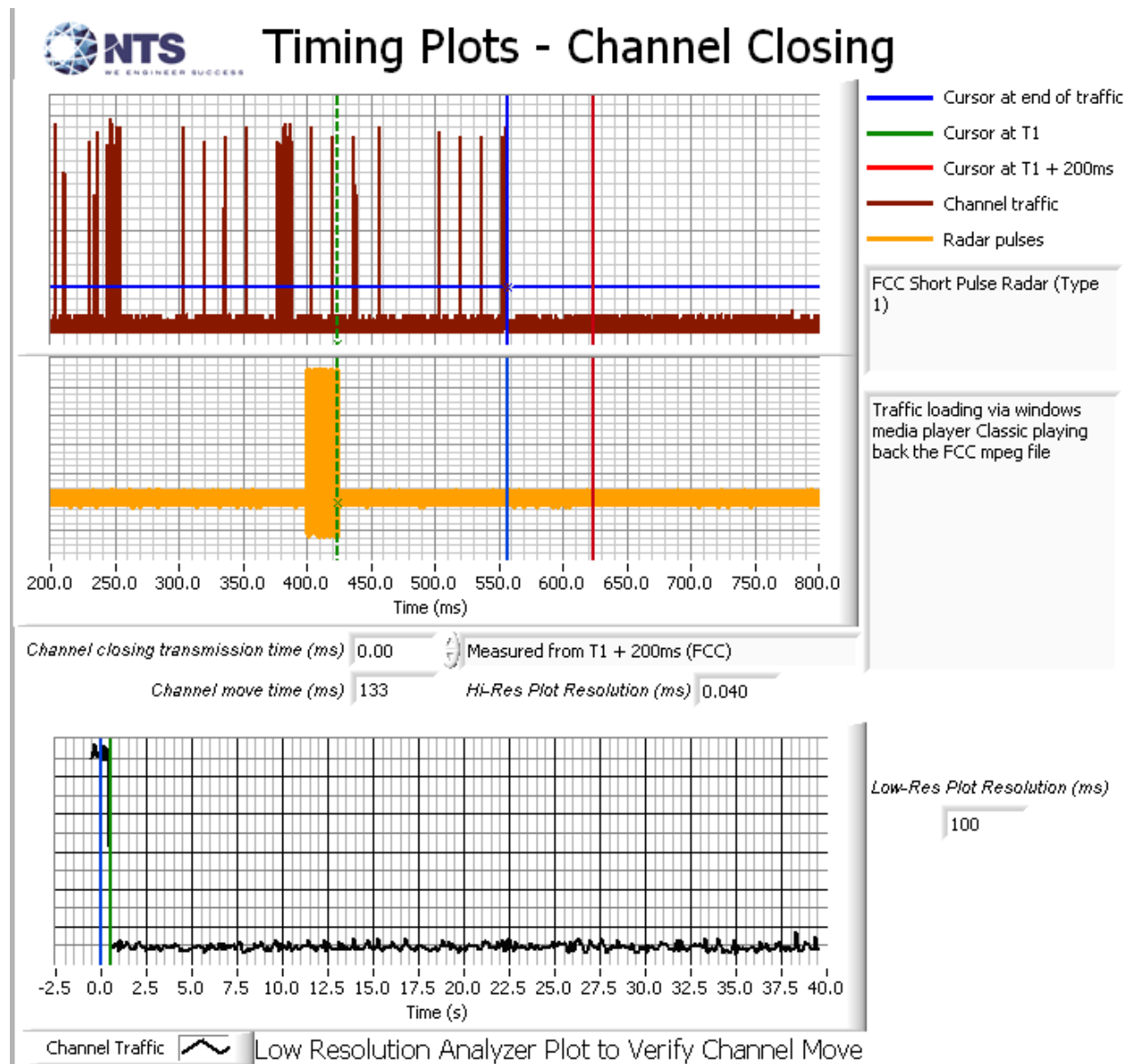


Figure 10 Close-Up of Transmissions Occurring More Than 200ms After The End of Radar

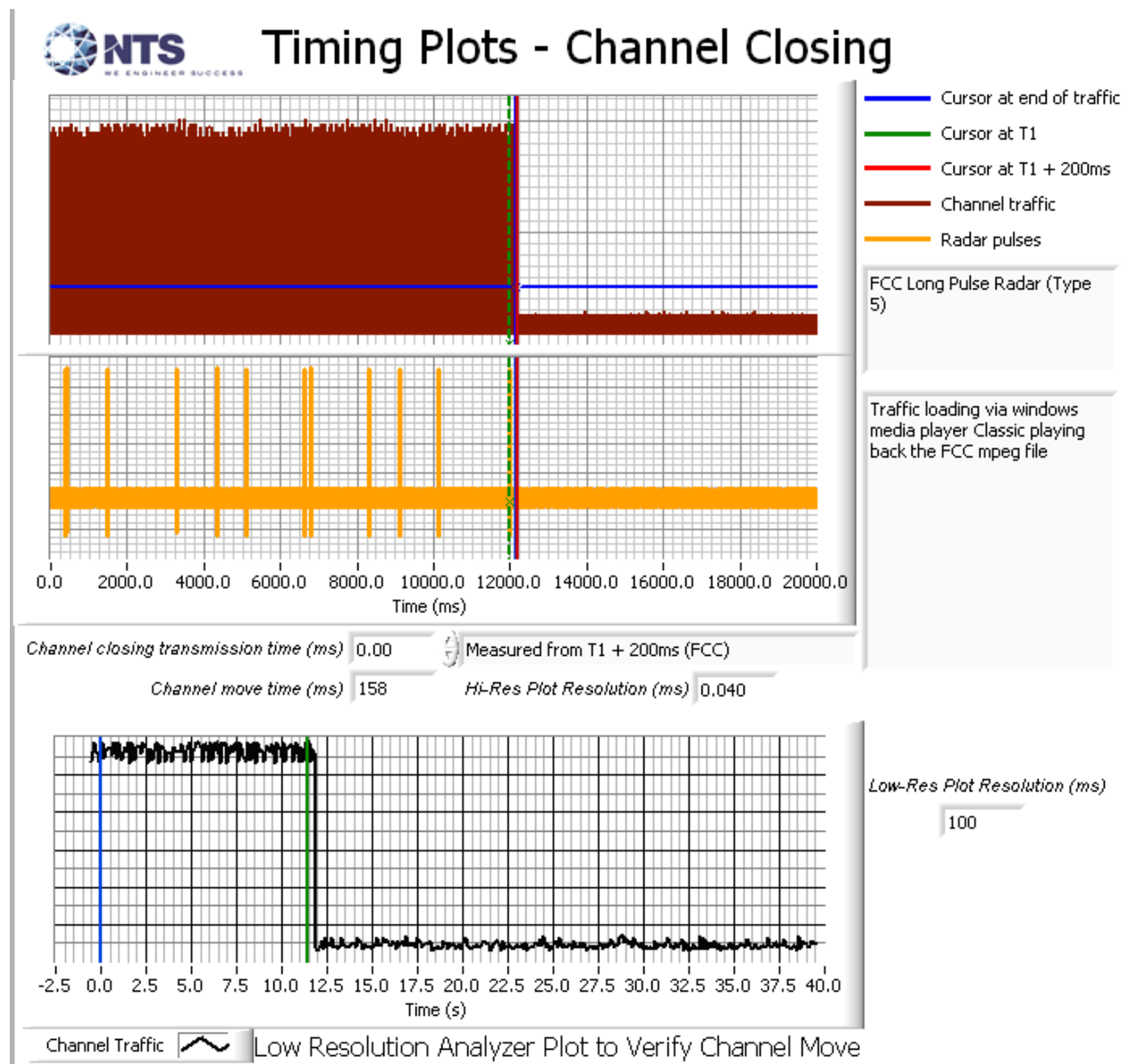


Figure 11 Channel Closing Time and Channel Move Time (40MHz) – 40 second plot

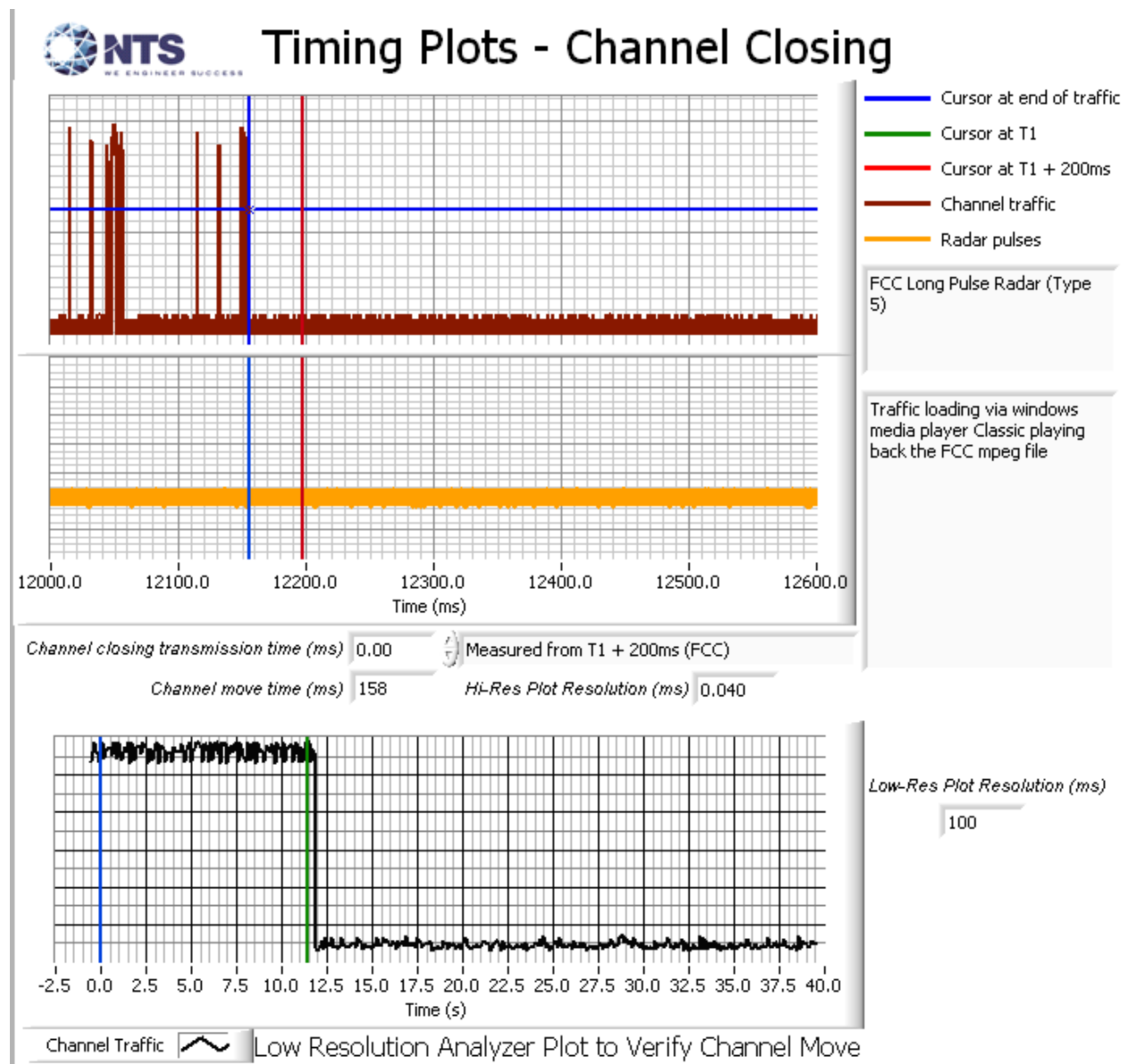


Figure 12 Close-Up of Transmissions Occurring More Than 200ms After The End of Radar

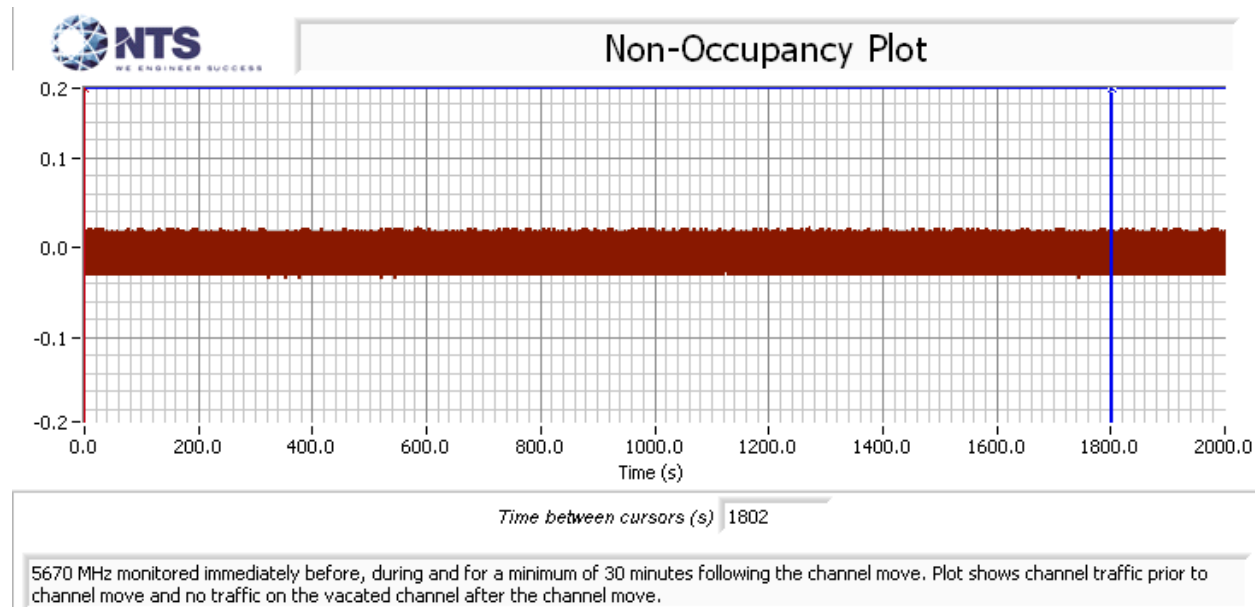


Figure 13 Radar Channel Non-Occupancy Plot (40 MHz)

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

Appendix D Test Data – Channel Availability Check

5250- 5350 MHz, 5470 – 5725 MHz

The first plot shows the first transmissions on a channel after a channel move command was issued to the master device, with no radar applied during the CAC.

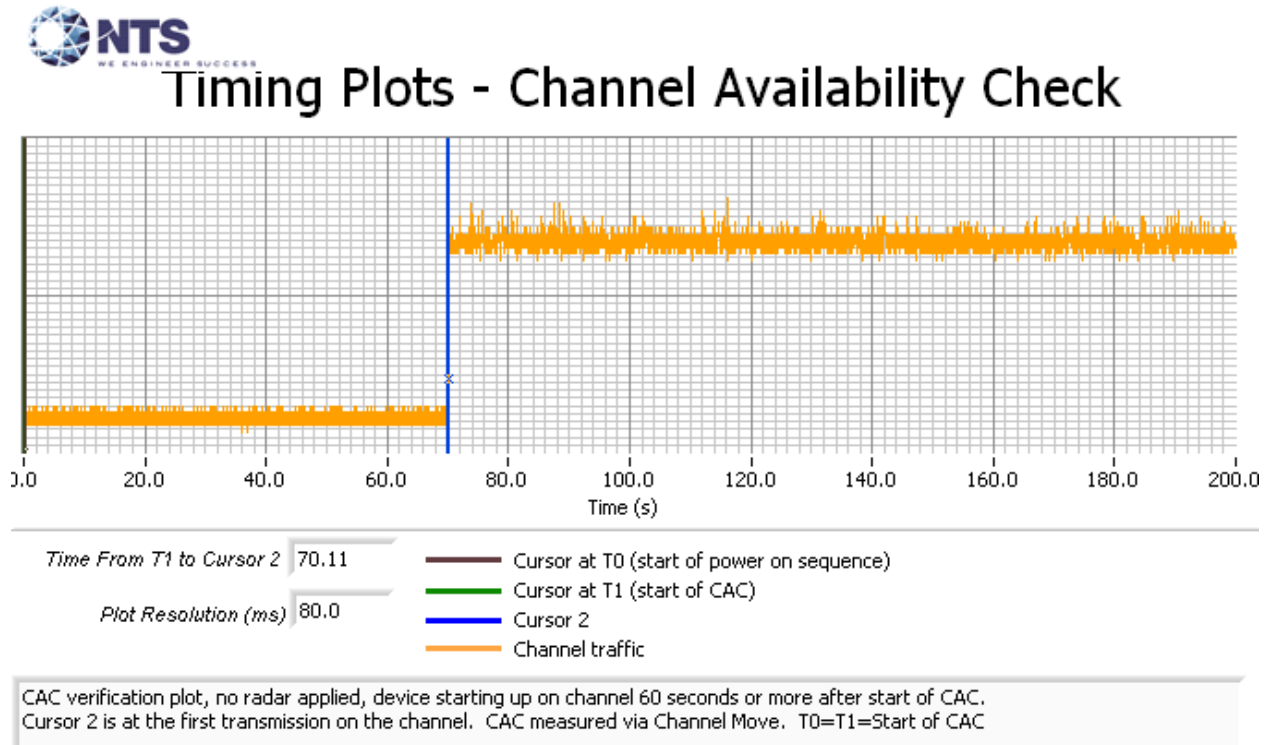


Figure 14 Plot of EUT Start-Up After CAC

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

The level of the radar signal applied was -63dBm. Measurements were made on channel 110 (5550MHz) and also on channel 134 (5670 MHz).

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

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



Timing Plots - Channel Availability Check

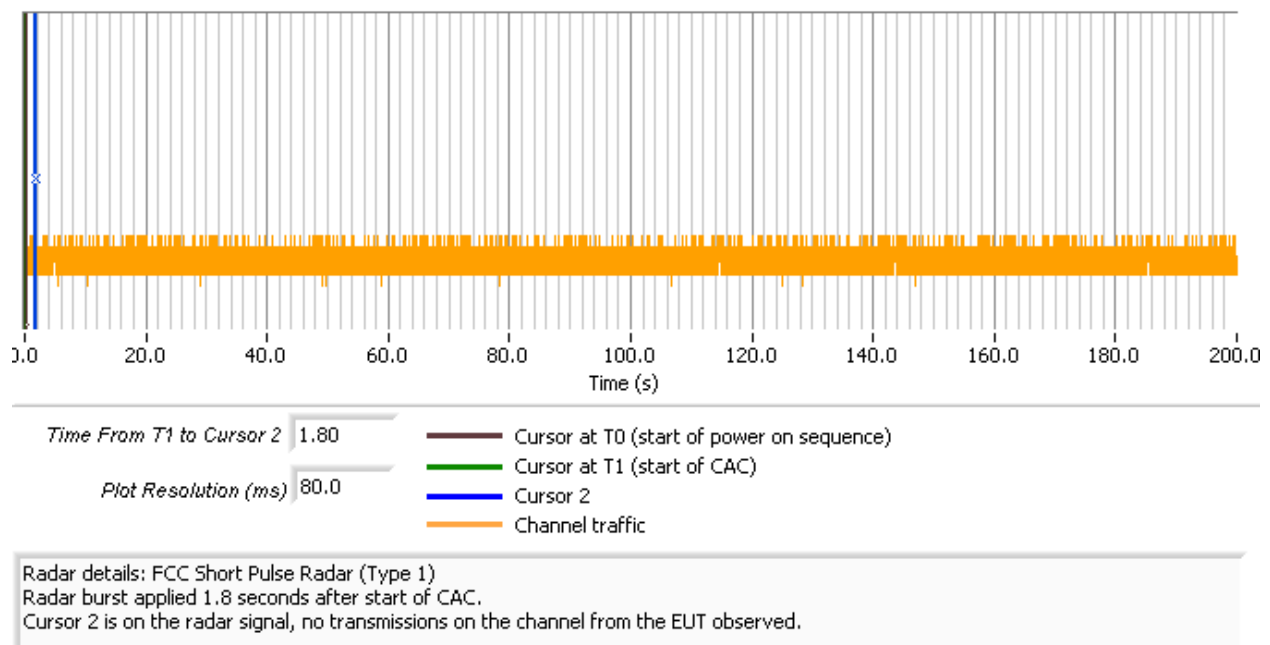


Figure 15 Radar Applied At Start of CAC



Timing Plots - Channel Availability Check

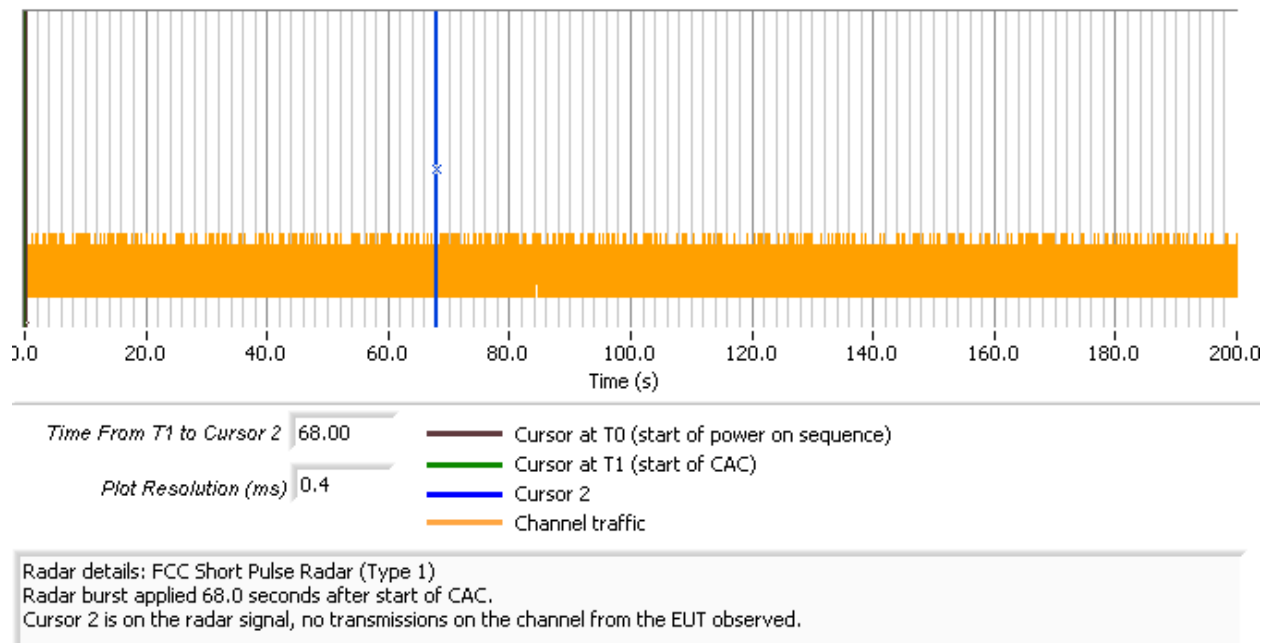


Figure 16 Radar Applied At End of CAC

Appendix E Antenna Specification



KENBOTONG COMMUNICATION LTD.

5GHz Quad Polarization Sector Antenna

Electrical specifications	TDJ-VHX5158BKR6			
Frequency range (MHz)	5150-5250	5250-5350	5400-5725	5725-5850
Polarization	Vertical & Horizontal & Dual Slant $\pm 45^\circ$			
Gain (dBi)	9	9.5	10	10.5
Beam width ($^\circ$)	Horizontal:90 $\pm$ 5		Vertical:50 $\pm$ 5	
Front-to-back ratio (dB)	≥ 25			
Cross-polar discrimination (dB)	$\geq 15(\pm 60^\circ \geq 10)$			
Isolation (dB)	≥ 20			
Impedance (Ω)	50			
VSWR	≤ 2.0			
Maximum power (W)	50			
Lighting protection	DC Grounded			

Mechanical specifications	
Antenna Connector	4 x SMA
Antenna Connector position	Back of Antenna
Outer Dimension (mm)	260×260×35
Weight (kg)	1.1
Radome material	UV Resistant ABS
Radome color	White
Mechanical tilt ($^\circ$)	0~30
Operating temperature ($^\circ\text{C}$)	-40~60
Rated wind velocity (m/s)	60
Vibration	IEC 60721-3-4
Salt Spray	IEC 68-2-11
Suitable pole diameter (mm)	30~50
Mounting kit	JM-TA or Optional JM-R3



5.39.5.4095

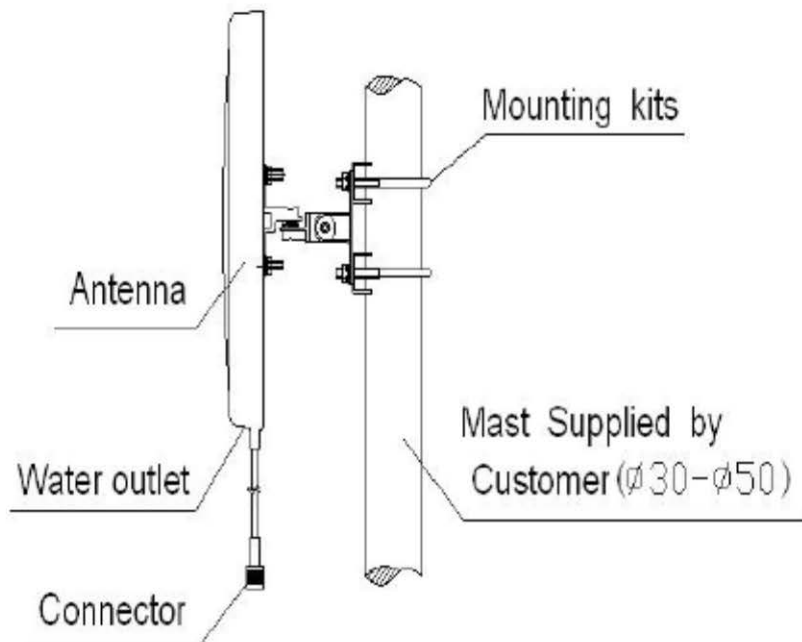
Kenbotong reserves the right to change specifications without prior notice.

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KENBOTONG COMMUNICATION LTD.

Mounting Bracket Information for TDJ-VHX5158BKR6 (JM-R3)



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End of Report

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