

TEST REPORT
DYNAMIC FREQUENCY SELECTION REQUIREMENTS
OF

FCC Part 15 Subpart E (UNII)

Cascade Networks Incorporated
Model(s): 52xx-AP

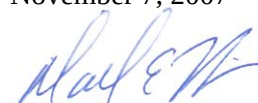
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SCOPE

The Federal Communications Commission and the European Telecommunications Standards Institute (ETSI) publish standards regarding ElectroMagnetic Compatibility and Radio spectrum Matters for radio-communications devices. Tests have been performed on the Cascade Networks, Inc. model 5250-AP in accordance with these standards.

Test data has been taken pursuant to the relevant 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 Cascade Networks, Inc. model 5250-AP and therefore apply only to the tested sample. The sample was selected and prepared by Brian Magnuson of Cascade Networks Incorporated.

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 Cascade Networks, Inc. model 5250-AP 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 Cascade Networks, Inc. model 52xx-AP is a high speed wireless communication product operating in the 5250-5350 MHz frequency band.

The sample was received on November 6, 2007 and tested on November 7, 2007. The EUT consisted of the following component(s):

Manufacturer	Model	Description	Serial Number
Cascade Networks, Inc.	5250-AP	High speed wireless communication radio	11079901

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

Operating Modes

☒ Master Device

Antenna Gains / EIRP

	5250 – 5350 MHz
Lowest Antenna Gain (dBi)	+10
Highest Antenna Gain (dBi)	+23
Output Power (dBm)	-23

☒ Power can exceed 200mW eirp

Channel Protocol

☒ Frame Based

ENCLOSURE

The EUT enclosure measures approximately 30.0 by 9.0 by 4.5 centimeters. It is primarily constructed of anodized aluminum.

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
Panasonic	PF-18	Laptop Computer	6AKYB72356	DoC
Dell	Inspiron 8600	Laptop Computer	42707742661	DoC
<i>Motorola</i>	<i>5200 5MAB</i>	<i>5.2GHz Radio</i>	-	<i>ABZ89FT3789</i>

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	Laptop computer	CAT5	Unshielded	3

EUT OPERATION

The EUT was operating with the following software 8.2. The software is secured by country code selection during professional installation to prevent the end users from disabling the DFS function.

Master Device: 8.2

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 occurred 23 seconds after power was applied.

During the in-service monitoring detection probability, channel move time and closing transmission time tests on the 5250AP, the system was configured with a "FCC" streaming video file from the AP (sourced by the PC connected to the AP device via an Ethernet interface) to a remote client viewed on the PC connected to the client. The talk/listen ratio was set to 45%/55%.

During the detection bandwidth tests, the 5250AP was configured without traffic on the channel. The talk/listen ration was set to 0%/100%.

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

Description	Radar Type	Radar Frequency	Measured Value	Requirement	Test Data	Status
Channel Availability Check (CAC) Time	Type 1	5275	69s	$\geq 60s$	Appendix D	Complies
CAC Detection Threshold	Type 1	5275	-53dBm	-53dBm (see note 2)	Appendix D	Complies
In-Service Monitoring Detection Threshold	Type 1 Type 2 Type 3 Type 4 Type 5	5275 5300 5325	-53dBm	-53dBm (see note 2)	Appendix B	Complies
	Type 6	5290				
Bandwidth Detection	Type 1	Varies	23 MHz	80% of the 99% BW	-	Pass
Channel closing transmission time	Type 1 Type 5	5300 5275	0ms 0ms	$\leq 260ms$	Appendix C	Complies
Channel move time	Type 1 Type 5	5300 5275	0ms 0ms	$\leq 10s$	Appendix C	Complies
Non-occupancy period	Type 1	5275	30 minutes	> 30 minutes	Appendix C	Complies
Uniform Spreading	N/A	N/A			Note 4	Complies

Notes:

- 1) The radar was considered to be “detected” during in-service monitoring if the master device indicated detection more than 18 times out of 30 trials for each radar type(60%). The device detected each burst of radar at least 18 times out of 30 trials. In addition, the aggregate number of detections for radar types 1-4 was at least 96 of 120 trials (80%).
- 2) Detection threshold is based on the master device having an antenna gain of 10 dBi. $(-64+10+1 = -53 \text{ dBm})$. If gains of 0 dBi or less are used then the required threshold increases to -62dBm (output EIRP drops below 23dBm).
- 3) Tests were performed using the conducted test method.
- 4) Compliance with the uniformed spreading requirement is documented in the products Theory of Operations.

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.

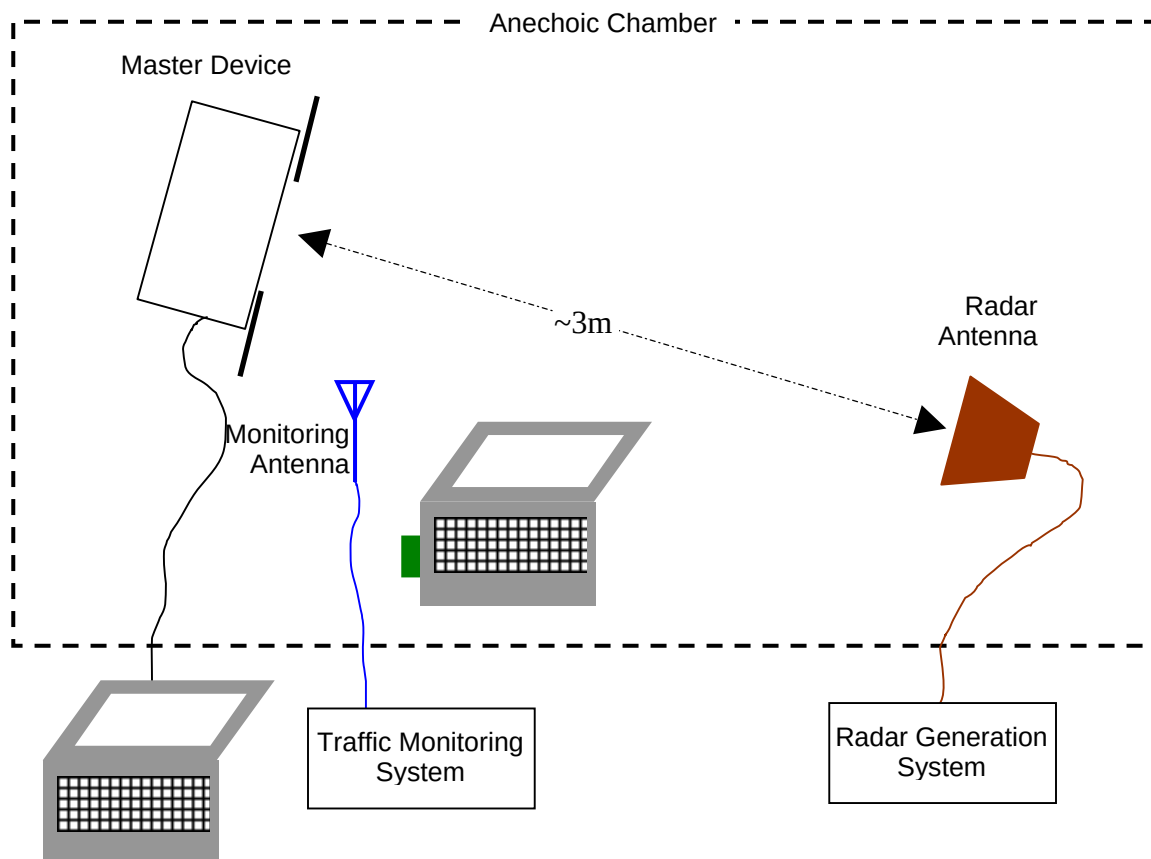


Figure 1 - Test Configuration for radiated Measurement Method

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:

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

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.

CONDUCTED TEST METHOD

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

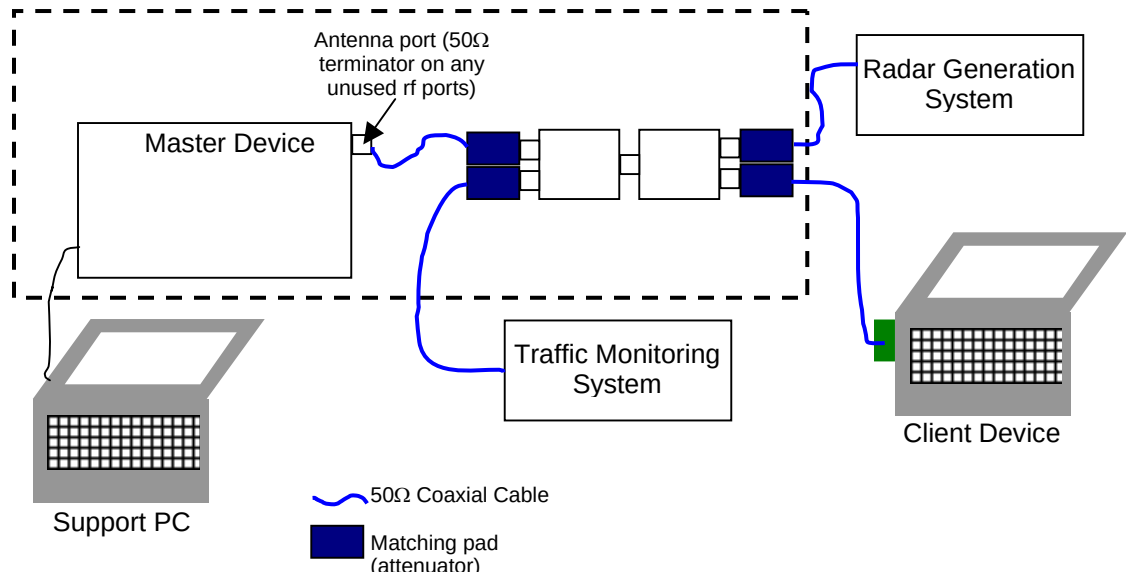


Figure 2 - Test Configuration for Conducted Measurement Method

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

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

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

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

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

DFS MEASUREMENT INSTRUMENTATION

RADAR GENERATION SYSTEM

An Agilent PSG is used as the radar-generating source. The integral arbitrary waveform generators are programmed using Agilent's "Pulse Building" software and Elliott custom software to produce the required waveforms, with the capability to produce both unmodulated 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.

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 on of the radar waveforms (in the FCC case, the selection is limited to the short duration burst waveforms) and applying radar pulses at offset 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 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.

ETSI – the total time of all individual transmissions from the EUT that are observed from the end of the last radar pulse in the waveform. This value is required to be less than 260ms.

For Client devices, the channel that was in use prior to radar detection by the master is additionally monitored for 30 minutes to ensure no transmissions by the client. This 30 minute period is repeated with the master device switched off.

DFS CHANNEL AVAILABILITY CHECK TIME

It is preferred that the EUT report when it starts the radar channel availability check. In this case a single type one burst of radar is applied within 6 seconds of observing the start of the channel availability check and it is verified that the device does not use the channel. The test is repeated by applying a burst of radar no sooner than 54 seconds and no later than 60 seconds after the start of the 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.

UNIFORM LOADING

Compliance with the channel loading requirement, where appropriate (i.e. when channel selection is not determined under control of the network), is demonstrated through the manufacturer's statement(s).

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 Analyzer	8595EM	787	21-Dec-07
Tektronix	Oscilloscope	TDS 5104	1435	26-Apr-08
Agilent	PSG Vector Signal Generator	E8267C	1877	23-Nov-07

Appendix B Test Data Tables for Radar Detection Probability**Table 1 - Summary of All Results**

Waveform Name	Success Rate	Number of Trials
FCC Short Pulse Radar (Type 1)	96.7 %	30
FCC Short Pulse Radar (Type 2)	100.0 %	30
FCC Short Pulse Radar (Type 3)	100.0 %	30
FCC Short Pulse Radar (Type 4)	90.0 %	30
FCC frequency hopping radar (Type 6)	100.0 %	48
Long Sequence (Type 5)	100.0 %	30

Table 2 - FCC Short Pulse Radar (Type 1) Test Results

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected?	Fr (MHz) and level (dBm)	Hop seq.
0	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
1	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
2	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
3	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
4	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
5	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
6	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
7	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
8	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
9	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
10	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
11	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
12	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
13	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
14	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
15	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
16	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
17	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
18	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A

19	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
20	18	1.0	1428.0	No	5325.0MHz, -52.0dBm	N/A
21	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
22	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
23	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
24	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
25	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
26	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A
27	18	1.0	1428.0	Yes	5275.0MHz, -52.0dBm	N/A
28	18	1.0	1428.0	Yes	5300.0MHz, -52.0dBm	N/A
29	18	1.0	1428.0	Yes	5325.0MHz, -52.0dBm	N/A

Table 3 - FCC Short Pulse Radar (Type 2) Test Results

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected?	Fr (MHz) and level (dBm)	Hop seq.
0	27	4.0	210.0	Yes	5275.0MHz, -52.0dBm	N/A
1	24	1.2	172.0	Yes	5300.0MHz, -52.0dBm	N/A
2	29	2.4	168.0	Yes	5325.0MHz, -52.0dBm	N/A
3	26	4.4	161.0	Yes	5275.0MHz, -52.0dBm	N/A
4	24	4.8	173.0	Yes	5300.0MHz, -52.0dBm	N/A
5	29	1.1	224.0	Yes	5325.0MHz, -52.0dBm	N/A
6	26	2.7	213.0	Yes	5275.0MHz, -52.0dBm	N/A
7	27	3.6	167.0	Yes	5300.0MHz, -52.0dBm	N/A
8	25	4.4	203.0	Yes	5325.0MHz, -52.0dBm	N/A
9	24	2.8	226.0	Yes	5275.0MHz, -52.0dBm	N/A
10	29	4.4	178.0	Yes	5300.0MHz, -52.0dBm	N/A
11	25	4.8	193.0	Yes	5325.0MHz, -52.0dBm	N/A
12	24	1.3	173.0	Yes	5275.0MHz, -52.0dBm	N/A
13	27	4.4	199.0	Yes	5300.0MHz, -52.0dBm	N/A
14	25	4.9	220.0	Yes	5325.0MHz, -52.0dBm	N/A

15	23	3.2	165.0	Yes	5275.0MHz, -52.0dBm	N/A
16	25	4.4	183.0	Yes	5300.0MHz, -52.0dBm	N/A
17	27	3.7	163.0	Yes	5325.0MHz, -52.0dBm	N/A
18	23	1.1	160.0	Yes	5275.0MHz, -52.0dBm	N/A
19	23	1.6	207.0	Yes	5300.0MHz, -52.0dBm	N/A
20	27	3.8	188.0	Yes	5325.0MHz, -52.0dBm	N/A
21	27	4.8	183.0	Yes	5275.0MHz, -52.0dBm	N/A
22	27	2.0	184.0	Yes	5300.0MHz, -52.0dBm	N/A
23	24	2.5	227.0	Yes	5325.0MHz, -52.0dBm	N/A
24	25	3.3	181.0	Yes	5275.0MHz, -52.0dBm	N/A
25	29	2.4	157.0	Yes	5300.0MHz, -52.0dBm	N/A
26	27	1.5	158.0	Yes	5325.0MHz, -52.0dBm	N/A
27	26	5.0	152.0	Yes	5275.0MHz, -52.0dBm	N/A
28	27	1.3	168.0	Yes	5300.0MHz, -52.0dBm	N/A
29	24	2.9	204.0	Yes	5325.0MHz, -52.0dBm	N/A

Table 4 - FCC Short Pulse Radar (Type 3) Test Results

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected?	Fr (MHz) and level (dBm)	Hop seq.
0	17	7.3	355.0	Yes	5275.0MHz, -52.0dBm	N/A
1	18	7.3	480.0	Yes	5300.0MHz, -52.0dBm	N/A
2	17	9.2	312.0	Yes	5325.0MHz, -52.0dBm	N/A
3	17	8.6	313.0	Yes	5275.0MHz, -52.0dBm	N/A
4	18	8.7	451.0	Yes	5300.0MHz, -52.0dBm	N/A
5	17	7.5	466.0	Yes	5325.0MHz, -52.0dBm	N/A
6	16	7.8	449.0	Yes	5275.0MHz, -52.0dBm	N/A
7	17	7.1	214.0	Yes	5300.0MHz, -52.0dBm	N/A
8	18	6.2	263.0	Yes	5325.0MHz, -52.0dBm	N/A
9	18	6.2	305.0	Yes	5275.0MHz, -52.0dBm	N/A
10	17	6.1	452.0	Yes	5300.0MHz, -52.0dBm	N/A

11	18	9.2	300.0	Yes	5325.0MHz, -52.0dBm	N/A
12	17	9.1	397.0	Yes	5275.0MHz, -52.0dBm	N/A
13	16	9.4	385.0	Yes	5300.0MHz, -52.0dBm	N/A
14	17	7.1	206.0	Yes	5325.0MHz, -52.0dBm	N/A
15	16	8.2	326.0	Yes	5275.0MHz, -52.0dBm	N/A
16	17	6.7	472.0	Yes	5300.0MHz, -52.0dBm	N/A
17	18	7.7	457.0	Yes	5325.0MHz, -52.0dBm	N/A
18	16	9.3	374.0	Yes	5275.0MHz, -52.0dBm	N/A
19	18	9.1	285.0	Yes	5300.0MHz, -52.0dBm	N/A
20	17	6.2	377.0	Yes	5325.0MHz, -52.0dBm	N/A
21	18	9.1	337.0	Yes	5275.0MHz, -52.0dBm	N/A
22	16	7.1	316.0	Yes	5300.0MHz, -52.0dBm	N/A
23	18	9.2	399.0	Yes	5325.0MHz, -52.0dBm	N/A
24	17	8.5	434.0	Yes	5275.0MHz, -52.0dBm	N/A
25	17	6.3	386.0	Yes	5300.0MHz, -52.0dBm	N/A
26	18	6.7	287.0	Yes	5325.0MHz, -52.0dBm	N/A
27	17	6.1	334.0	Yes	5275.0MHz, -52.0dBm	N/A
28	17	8.7	441.0	Yes	5300.0MHz, -52.0dBm	N/A
29	16	6.4	381.0	Yes	5325.0MHz, -52.0dBm	N/A

Table 5 - FCC Short Pulse Radar (Type 4) Test Results

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected?	Fr (MHz) and level (dBm)	Hop seq.
0	12	11.3	337.0	Yes	5275.0MHz, -52.0dBm	N/A
1	14	11.4	312.0	Yes	5300.0MHz, -52.0dBm	N/A
2	13	17.8	492.0	Yes	5275.0MHz, -52.0dBm	N/A
3	13	11.2	271.0	Yes	5300.0MHz, -52.0dBm	N/A
4	13	17.8	332.0	Yes	5325.0MHz, -52.0dBm	N/A
5	16	16.1	410.0	Yes	5275.0MHz, -52.0dBm	N/A
6	12	16.5	286.0	No	5300.0MHz, -52.0dBm	N/A

7	15	11.2	344.0	Yes	5300.0MHz, -52.0dBm	N/A
8	16	18.9	335.0	Yes	5325.0MHz, -52.0dBm	N/A
9	12	14.7	266.0	Yes	5275.0MHz, -52.0dBm	N/A
10	15	11.2	403.0	Yes	5300.0MHz, -52.0dBm	N/A
11	13	13.9	257.0	Yes	5325.0MHz, -52.0dBm	N/A
12	13	16.2	233.0	Yes	5275.0MHz, -52.0dBm	N/A
13	15	11.6	269.0	Yes	5300.0MHz, -52.0dBm	N/A
14	15	17.8	426.0	Yes	5325.0MHz, -52.0dBm	N/A
15	14	17.8	245.0	Yes	5275.0MHz, -52.0dBm	N/A
16	13	19.6	385.0	Yes	5300.0MHz, -52.0dBm	N/A
17	14	19.7	372.0	Yes	5325.0MHz, -52.0dBm	N/A
18	16	18.7	383.0	Yes	5275.0MHz, -52.0dBm	N/A
19	14	16.7	353.0	Yes	5300.0MHz, -52.0dBm	N/A
20	15	19.8	238.0	Yes	5325.0MHz, -52.0dBm	N/A
21	14	14.3	355.0	No	5275.0MHz, -52.0dBm	N/A
22	15	18.8	276.0	Yes	5275.0MHz, -52.0dBm	N/A
23	15	15.7	295.0	No	5300.0MHz, -52.0dBm	N/A
24	15	13.6	490.0	Yes	5300.0MHz, -52.0dBm	N/A
25	15	16.5	472.0	Yes	5325.0MHz, -52.0dBm	N/A
26	13	16.4	283.0	Yes	5275.0MHz, -52.0dBm	N/A
27	16	15.1	250.0	Yes	5300.0MHz, -52.0dBm	N/A
28	12	19.2	483.0	Yes	5325.0MHz, -52.0dBm	N/A
29	16	12.1	451.0	Yes	5275.0MHz, -52.0dBm	N/A

Table 6 - FCC frequency hopping radar (Type 6) Test Results

Trial #	Pulses/ Burst	Pulse Width (us)	PRI (us)	Detected?	Fr (MHz) and level (dBm)	Hop seq.
0	9	1.0	333.0	Yes	5278.0MHz, -52.0dBm	5539, 5308, 5562, 5318, 5423, 5279, 5417, 5315, 5573, 5534, 5575, 5476, 5677, 5330, 5390, 5647, 5462, 5332, 5639, 5571, 5570, 5692, 5565, 5369, 5405, 5429, 5526, 5504, 5661, 5561,

						5430, 5442, 5679, 5654, 5718, 5514, 5262, 5708, 5419, 5426, 5277, 5450, 5421, 5653, 5550, 5605, 5574, 5684, 5485, 5410, 5379, 5590, 5337, 5693, 5484, 5449, 5364, 5496, 5651, 5545, 5401, 5320, 5644, 5253, 5302, 5536, 5502, 5274, 5438, 5483, 5645, 5353, 5672, 5594, 5517, 5259, 5725, 5376, 5582, 5377, 5424, 5720, 5278, 5341, 5662, 5554, 5633, 5617, 5445, 5546, 5321, 5488, 5284, 5641, 5671, 5258, 5251, 5636, 5439, 5372 (3 hits)
1	9	1.0	333.0	Yes	5279.0MHz, -52.0dBm	5347, 5540, 5483, 5467, 5409, 5427, 5470, 5446, 5647, 5520, 5375, 5473, 5556, 5367, 5567, 5330, 5576, 5442, 5629, 5585, 5477, 5523, 5365, 5579, 5337, 5312, 5667, 5342, 5657, 5462, 5397, 5298, 5486, 5455, 5628, 5683, 5297, 5317, 5697, 5506, 5617, 5436, 5380, 5719, 5615, 5584, 5558, 5689, 5319, 5639, 5290, 5293, 5396, 5371, 5685, 5343, 5609, 5268, 5314, 5674, 5693, 5510, 5466, 5660, 5493, 5313, 5580, 5368, 5686, 5539, 5449, 5620, 5518, 5273, 5254, 5291, 5541, 5276, 5295, 5633, 5572, 5292, 5563, 5602, 5306, 5715, 5310, 5432, 5545, 5288, 5698, 5599, 5532, 5536, 5696, 5287, 5430, 5528, 5325, 5529 (9 hits)
2	9	1.0	333.0	Yes	5280.0MHz, -52.0dBm	5578, 5331, 5540, 5252, 5311, 5627, 5548, 5574, 5646, 5718, 5547, 5565, 5434, 5558, 5260, 5589, 5360, 5288, 5413, 5324, 5533, 5492, 5677, 5286, 5568, 5284, 5496, 5552, 5720, 5591, 5305, 5328, 5563, 5445, 5519, 5491, 5696, 5612, 5680, 5266, 5395, 5510, 5412, 5640, 5530, 5584, 5452, 5535, 5659, 5528, 5265, 5345, 5479, 5467, 5681, 5320, 5475, 5550, 5291, 5387, 5314, 5335, 5358, 5655, 5526, 5342, 5652, 5418, 5671, 5556, 5294, 5503, 5509, 5561, 5438, 5629, 5397, 5417, 5557, 5701, 5545, 5601, 5330, 5562, 5569, 5289, 5616, 5278, 5686, 5608, 5385, 5665, 5293, 5484, 5365, 5470, 5645, 5699, 5380, 5296 (9 hits)
3	9	1.0	333.0	Yes	5281.0MHz, -52.0dBm	5705, 5535, 5278, 5491, 5725, 5423, 5592, 5526, 5325, 5643,

						5406, 5453, 5377, 5496, 5522, 5572, 5352, 5304, 5480, 5542, 5602, 5661, 5301, 5634, 5581, 5322, 5619, 5685, 5671, 5293, 5484, 5521, 5664, 5286, 5551, 5475, 5552, 5447, 5569, 5707, 5284, 5553, 5272, 5253, 5550, 5720, 5392, 5351, 5546, 5518, 5437, 5300, 5474, 5640, 5567, 5350, 5259, 5355, 5469, 5514, 5493, 5626, 5531, 5507, 5529, 5397, 5683, 5702, 5407, 5613, 5647, 5463, 5464, 5544, 5710, 5617, 5273, 5486, 5534, 5598, 5477, 5519, 5336, 5668, 5442, 5263, 5308, 5338, 5721, 5532, 5460, 5422, 5588, 5339, 5583, 5461, 5716, 5368, 5256, 5541 (6 hits)
4	9	1.0	333.0	Yes	5282.0MHz, -52.0dBm	5431, 5372, 5479, 5641, 5500, 5459, 5296, 5267, 5325, 5566, 5343, 5510, 5396, 5570, 5307, 5713, 5659, 5605, 5683, 5669, 5328, 5719, 5625, 5295, 5399, 5502, 5660, 5255, 5478, 5595, 5517, 5608, 5698, 5666, 5575, 5668, 5326, 5558, 5441, 5430, 5323, 5627, 5632, 5383, 5525, 5339, 5689, 5411, 5342, 5457, 5557, 5543, 5398, 5533, 5527, 5623, 5385, 5522, 5365, 5472, 5513, 5366, 5495, 5599, 5406, 5427, 5474, 5280, 5272, 5580, 5338, 5420, 5503, 5602, 5350, 5560, 5607, 5622, 5359, 5675, 5388, 5386, 5371, 5309, 5701, 5600, 5708, 5528, 5617, 5577, 5300, 5463, 5437, 5410, 5412, 5485, 5678, 5465, 5316, 5435 (4 hits)
5	9	1.0	333.0	Yes	5283.0MHz, -52.0dBm	5433, 5352, 5523, 5290, 5295, 5277, 5329, 5560, 5358, 5616, 5419, 5439, 5353, 5324, 5487, 5301, 5555, 5517, 5687, 5536, 5371, 5401, 5648, 5349, 5624, 5529, 5386, 5383, 5683, 5699, 5299, 5364, 5385, 5340, 5279, 5387, 5540, 5466, 5337, 5331, 5601, 5556, 5483, 5721, 5440, 5578, 5253, 5508, 5460, 5285, 5590, 5565, 5312, 5445, 5459, 5437, 5666, 5336, 5660, 5690, 5715, 5636, 5682, 5411, 5426, 5677, 5410, 5674, 5534, 5399, 5318, 5420, 5504, 5461, 5309, 5617, 5518, 5645, 5293, 5359, 5347, 5303, 5705, 5422, 5255, 5656, 5502, 5435, 5711, 5570, 5612, 5381, 5452, 5472, 5500,

						5393, 5272, 5704, 5321, 5573 (7 hits)
6	9	1.0	333.0	Yes	5284.0MHz, -52.0dBm	5256, 5471, 5656, 5283, 5692, 5530, 5441, 5532, 5653, 5387, 5365, 5682, 5690, 5253, 5720, 5694, 5493, 5272, 5713, 5652, 5502, 5287, 5687, 5369, 5260, 5563, 5626, 5592, 5459, 5590, 5294, 5264, 5701, 5524, 5670, 5582, 5321, 5562, 5425, 5668, 5507, 5599, 5618, 5614, 5473, 5257, 5551, 5561, 5267, 5285, 5445, 5429, 5703, 5598, 5455, 5514, 5529, 5609, 5496, 5705, 5424, 5638, 5712, 5681, 5487, 5622, 5555, 5710, 5337, 5333, 5660, 5519, 5345, 5432, 5313, 5364, 5556, 5399, 5360, 5408, 5494, 5601, 5312, 5610, 5661, 5531, 5310, 5452, 5419, 5254, 5654, 5572, 5518, 5466, 5723, 5585, 5548, 5724, 5480, 5649 (4 hits)
7	9	1.0	333.0	Yes	5285.0MHz, -52.0dBm	5391, 5439, 5649, 5598, 5376, 5632, 5568, 5450, 5694, 5595, 5296, 5282, 5534, 5537, 5478, 5436, 5719, 5651, 5426, 5396, 5677, 5440, 5691, 5706, 5515, 5398, 5405, 5263, 5342, 5634, 5591, 5385, 5324, 5562, 5707, 5387, 5620, 5603, 5430, 5640, 5326, 5469, 5360, 5541, 5582, 5544, 5705, 5674, 5580, 5623, 5500, 5444, 5412, 5610, 5711, 5459, 5309, 5372, 5496, 5298, 5502, 5670, 5503, 5435, 5477, 5507, 5485, 5330, 5723, 5597, 5367, 5261, 5538, 5525, 5293, 5720, 5679, 5260, 5645, 5381, 5294, 5277, 5370, 5410, 5344, 5546, 5639, 5437, 5427, 5380, 5572, 5432, 5458, 5629, 5681, 5713, 5599, 5363, 5279, 5517 (6 hits)
8	9	1.0	333.0	Yes	5286.0MHz, -52.0dBm	5315, 5290, 5581, 5294, 5415, 5323, 5650, 5585, 5680, 5526, 5640, 5462, 5429, 5495, 5694, 5389, 5637, 5312, 5591, 5382, 5589, 5293, 5644, 5284, 5371, 5594, 5467, 5430, 5707, 5701, 5381, 5703, 5649, 5620, 5260, 5601, 5285, 5412, 5361, 5664, 5350, 5363, 5465, 5325, 5598, 5442, 5410, 5590, 5498, 5531, 5516, 5275, 5259, 5641, 5577, 5716, 5501, 5255, 5706, 5265, 5359, 5562, 5447, 5407, 5300, 5691, 5578, 5339, 5554, 5455, 5345, 5262, 5566, 5307, 5485,

						5592, 5322, 5681, 5527, 5463, 5295, 5301, 5437, 5308, 5668, 5607, 5433, 5535, 5309, 5477, 5469, 5497, 5610, 5505, 5593, 5352, 5274, 5387, 5257, 5712 (8 hits)
9	9	1.0	333.0	Yes	5287.0MHz, -52.0dBm	5514, 5342, 5320, 5309, 5293, 5500, 5682, 5268, 5547, 5295, 5287, 5271, 5285, 5707, 5430, 5653, 5724, 5678, 5332, 5611, 5429, 5463, 5300, 5512, 5558, 5400, 5570, 5640, 5406, 5592, 5274, 5690, 5391, 5711, 5515, 5397, 5282, 5358, 5604, 5472, 5368, 5504, 5307, 5467, 5688, 5524, 5465, 5613, 5507, 5533, 5266, 5482, 5639, 5413, 5326, 5330, 5523, 5314, 5499, 5412, 5646, 5333, 5658, 5589, 5632, 5350, 5580, 5599, 5505, 5385, 5322, 5371, 5461, 5554, 5662, 5475, 5390, 5652, 5598, 5338, 5296, 5264, 5260, 5516, 5573, 5586, 5713, 5276, 5304, 5411, 5637, 5301, 5569, 5389, 5513, 5352, 5520, 5663, 5619, 5392 (8 hits)
10	9	1.0	333.0	Yes	5288.0MHz, -52.0dBm	5296, 5707, 5576, 5462, 5586, 5339, 5250, 5429, 5677, 5676, 5715, 5282, 5630, 5561, 5646, 5483, 5687, 5653, 5714, 5309, 5560, 5311, 5688, 5470, 5721, 5387, 5681, 5300, 5578, 5556, 5536, 5379, 5408, 5535, 5496, 5303, 5472, 5390, 5469, 5307, 5377, 5720, 5665, 5627, 5588, 5417, 5523, 5716, 5278, 5251, 5276, 5642, 5682, 5310, 5376, 5337, 5718, 5498, 5547, 5299, 5362, 5666, 5530, 5541, 5308, 5680, 5371, 5664, 5628, 5649, 5551, 5503, 5582, 5661, 5450, 5640, 5256, 5565, 5399, 5652, 5436, 5428, 5544, 5603, 5320, 5570, 5475, 5425, 5262, 5350, 5286, 5585, 5346, 5486, 5542, 5302, 5613, 5645, 5316, 5454 (6 hits)
11	9	1.0	333.0	Yes	5289.0MHz, -52.0dBm	5325, 5457, 5639, 5496, 5674, 5658, 5584, 5254, 5319, 5391, 5615, 5640, 5618, 5471, 5580, 5553, 5432, 5352, 5551, 5340, 5447, 5290, 5482, 5554, 5600, 5323, 5688, 5663, 5687, 5375, 5546, 5515, 5483, 5359, 5293, 5338, 5579, 5365, 5622, 5366, 5449, 5426, 5573, 5576, 5488, 5508, 5502, 5707, 5321, 5572, 5673, 5569, 5269, 5530, 5544,

						5667, 5453, 5494, 5412, 5606, 5506, 5378, 5422, 5712, 5521, 5295, 5362, 5317, 5416, 5327, 5607, 5384, 5410, 5532, 5504, 5316, 5545, 5396, 5417, 5335, 5264, 5679, 5318, 5255, 5589, 5329, 5645, 5270, 5534, 5250, 5706, 5715, 5406, 5405, 5629, 5586, 5597, 5446, 5514, 5294 (4 hits)
12	9	1.0	333.0	Yes	5290.0MHz, -52.0dBm	5483, 5472, 5333, 5436, 5414, 5498, 5672, 5280, 5317, 5716, 5464, 5593, 5549, 5620, 5302, 5392, 5647, 5698, 5256, 5608, 5616, 5641, 5352, 5329, 5537, 5609, 5631, 5582, 5669, 5394, 5610, 5475, 5561, 5550, 5713, 5499, 5313, 5649, 5432, 5301, 5264, 5686, 5689, 5310, 5470, 5592, 5307, 5382, 5427, 5578, 5417, 5474, 5450, 5705, 5466, 5309, 5279, 5377, 5487, 5419, 5393, 5455, 5378, 5622, 5530, 5478, 5366, 5685, 5411, 5633, 5326, 5602, 5297, 5504, 5296, 5328, 5574, 5379, 5315, 5694, 5706, 5563, 5502, 5497, 5364, 5375, 5595, 5640, 5534, 5385, 5613, 5351, 5597, 5526, 5424, 5506, 5531, 5271, 5465, 5562 (5 hits)
13	9	1.0	333.0	Yes	5291.0MHz, -52.0dBm	5494, 5498, 5649, 5571, 5541, 5253, 5437, 5321, 5375, 5675, 5288, 5493, 5278, 5515, 5382, 5602, 5459, 5406, 5390, 5634, 5352, 5414, 5709, 5444, 5601, 5285, 5497, 5721, 5283, 5477, 5347, 5570, 5639, 5376, 5368, 5589, 5594, 5715, 5361, 5435, 5640, 5363, 5505, 5365, 5291, 5303, 5714, 5522, 5432, 5614, 5394, 5550, 5384, 5723, 5665, 5579, 5331, 5413, 5424, 5306, 5666, 5511, 5593, 5637, 5607, 5318, 5266, 5399, 5312, 5457, 5582, 5495, 5439, 5329, 5588, 5659, 5429, 5578, 5599, 5268, 5521, 5289, 5396, 5526, 5543, 5509, 5442, 5304, 5613, 5325, 5616, 5624, 5461, 5642, 5641, 5261, 5452, 5273, 5592, 5277 (6 hits)
14	9	1.0	333.0	Yes	5292.0MHz, -52.0dBm	5458, 5655, 5316, 5422, 5621, 5278, 5376, 5300, 5273, 5512, 5724, 5587, 5426, 5463, 5429, 5329, 5453, 5644, 5325, 5360, 5267, 5704, 5508, 5638, 5308, 5287, 5303, 5504, 5430, 5522, 5706, 5306, 5274, 5419, 5276,

						5362, 5425, 5506, 5351, 5630, 5313, 5521, 5645, 5411, 5560, 5615, 5492, 5646, 5545, 5603, 5676, 5692, 5520, 5379, 5577, 5497, 5588, 5607, 5421, 5349, 5596, 5447, 5297, 5589, 5677, 5546, 5320, 5591, 5408, 5592, 5275, 5572, 5537, 5510, 5595, 5342, 5343, 5382, 5533, 5666, 5573, 5413, 5457, 5387, 5336, 5542, 5466, 5386, 5324, 5251, 5553, 5685, 5668, 5579, 5669, 5654, 5280, 5450, 5511, 5461 (5 hits)
15	9	1.0	333.0	Yes	5293.0MHz, -52.0dBm	5572, 5475, 5596, 5583, 5691, 5606, 5679, 5505, 5355, 5321, 5322, 5265, 5480, 5324, 5641, 5254, 5307, 5625, 5678, 5296, 5626, 5348, 5650, 5514, 5567, 5577, 5541, 5371, 5516, 5295, 5283, 5287, 5646, 5437, 5451, 5501, 5270, 5591, 5356, 5367, 5434, 5677, 5644, 5444, 5427, 5383, 5309, 5305, 5273, 5513, 5590, 5487, 5425, 5595, 5717, 5491, 5609, 5676, 5256, 5259, 5311, 5593, 5360, 5357, 5502, 5251, 5518, 5449, 5402, 5665, 5333, 5401, 5463, 5544, 5615, 5399, 5481, 5668, 5327, 5436, 5318, 5647, 5320, 5685, 5580, 5340, 5277, 5319, 5586, 5351, 5569, 5258, 5314, 5613, 5346, 5587, 5537, 5565, 5601, 5681 (4 hits)
16	9	1.0	333.0	Yes	5294.0MHz, -52.0dBm	5417, 5687, 5267, 5581, 5632, 5539, 5334, 5555, 5548, 5363, 5387, 5524, 5348, 5517, 5440, 5722, 5715, 5353, 5506, 5394, 5671, 5652, 5378, 5297, 5559, 5257, 5714, 5599, 5304, 5430, 5289, 5272, 5511, 5616, 5640, 5269, 5429, 5638, 5367, 5492, 5338, 5723, 5614, 5646, 5414, 5655, 5720, 5643, 5361, 5541, 5282, 5639, 5495, 5372, 5609, 5627, 5509, 5484, 5658, 5337, 5292, 5291, 5335, 5467, 5675, 5522, 5589, 5342, 5358, 5487, 5507, 5399, 5551, 5466, 5523, 5285, 5653, 5637, 5529, 5664, 5472, 5626, 5439, 5665, 5301, 5299, 5528, 5568, 5510, 5480, 5464, 5712, 5719, 5355, 5657, 5393, 5644, 5329, 5470, 5518 (8 hits)
17	9	1.0	333.0	Yes	5295.0MHz, -52.0dBm	5625, 5697, 5650, 5486, 5567, 5305, 5388, 5665, 5655, 5690, 5309, 5545, 5576, 5546, 5614,

						5703, 5587, 5611, 5443, 5342, 5590, 5357, 5621, 5601, 5449, 5487, 5497, 5524, 5266, 5631, 5626, 5527, 5376, 5643, 5560, 5259, 5500, 5472, 5257, 5629, 5355, 5640, 5452, 5265, 5634, 5530, 5275, 5518, 5615, 5588, 5461, 5370, 5333, 5352, 5460, 5439, 5344, 5495, 5306, 5366, 5563, 5349, 5274, 5419, 5571, 5269, 5531, 5328, 5647, 5385, 5254, 5261, 5456, 5445, 5394, 5606, 5260, 5722, 5337, 5492, 5406, 5689, 5517, 5657, 5684, 5289, 5351, 5308, 5705, 5475, 5320, 5353, 5430, 5489, 5490, 5538, 5420, 5515, 5535, 5522 (1 hits)
18	9	1.0	333.0	Yes	5296.0MHz, -52.0dBm	5660, 5676, 5436, 5328, 5311, 5611, 5427, 5444, 5288, 5563, 5571, 5573, 5485, 5473, 5409, 5496, 5363, 5408, 5693, 5300, 5383, 5520, 5575, 5283, 5553, 5387, 5366, 5402, 5332, 5644, 5351, 5476, 5334, 5388, 5475, 5472, 5682, 5657, 5518, 5597, 5316, 5508, 5447, 5632, 5445, 5503, 5418, 5540, 5359, 5296, 5589, 5341, 5471, 5446, 5458, 5548, 5373, 5449, 5636, 5477, 5536, 5320, 5259, 5425, 5257, 5451, 5610, 5560, 5452, 5463, 5533, 5580, 5466, 5612, 5299, 5505, 5325, 5654, 5371, 5319, 5525, 5690, 5378, 5433, 5516, 5623, 5564, 5574, 5697, 5284, 5531, 5700, 5327, 5550, 5705, 5266, 5295, 5256, 5437, 5339 (7 hits)
19	9	1.0	333.0	Yes	5297.0MHz, -52.0dBm	5411, 5627, 5464, 5382, 5468, 5477, 5385, 5436, 5603, 5272, 5506, 5561, 5260, 5545, 5270, 5440, 5460, 5596, 5686, 5415, 5296, 5461, 5428, 5667, 5293, 5643, 5578, 5363, 5444, 5452, 5435, 5710, 5373, 5525, 5692, 5473, 5541, 5379, 5404, 5254, 5633, 5334, 5524, 5523, 5378, 5355, 5505, 5624, 5344, 5412, 5281, 5715, 5703, 5383, 5590, 5370, 5562, 5620, 5657, 5484, 5353, 5396, 5518, 5278, 5722, 5437, 5708, 5263, 5259, 5600, 5496, 5252, 5470, 5681, 5488, 5652, 5619, 5516, 5520, 5566, 5318, 5418, 5414, 5688, 5492, 5487, 5531, 5287, 5253, 5485, 5649, 5375, 5512, 5530, 5276, 5533, 5280, 5723, 5314, 5689 (6 hits)

						hits)
20	9	1.0	333.0	Yes	5298.0MHz, -52.0dBm	5688, 5288, 5651, 5375, 5350, 5266, 5483, 5312, 5359, 5557, 5540, 5616, 5571, 5611, 5664, 5582, 5413, 5535, 5566, 5675, 5380, 5691, 5424, 5275, 5498, 5329, 5659, 5542, 5472, 5501, 5670, 5505, 5488, 5395, 5655, 5323, 5550, 5704, 5333, 5560, 5512, 5603, 5511, 5608, 5347, 5563, 5547, 5259, 5366, 5517, 5536, 5585, 5445, 5409, 5507, 5265, 5372, 5589, 5351, 5684, 5717, 5305, 5656, 5606, 5358, 5534, 5344, 5290, 5479, 5553, 5681, 5404, 5580, 5476, 5627, 5500, 5389, 5724, 5287, 5595, 5712, 5558, 5303, 5509, 5382, 5541, 5317, 5277, 5524, 5292, 5598, 5495, 5649, 5268, 5698, 5602, 5355, 5609, 5334, 5710 (4 hits)
21	9	1.0	333.0	Yes	5299.0MHz, -52.0dBm	5422, 5363, 5711, 5660, 5692, 5336, 5676, 5289, 5629, 5705, 5490, 5439, 5260, 5487, 5575, 5333, 5723, 5283, 5332, 5267, 5666, 5263, 5449, 5362, 5276, 5402, 5383, 5401, 5484, 5682, 5655, 5622, 5542, 5278, 5349, 5350, 5594, 5617, 5433, 5399, 5589, 5429, 5534, 5442, 5524, 5605, 5686, 5316, 5635, 5360, 5361, 5297, 5252, 5254, 5460, 5434, 5472, 5614, 5409, 5529, 5552, 5258, 5259, 5386, 5470, 5300, 5253, 5627, 5495, 5424, 5694, 5454, 5407, 5412, 5714, 5251, 5299, 5525, 5410, 5523, 5512, 5508, 5568, 5514, 5555, 5648, 5491, 5677, 5665, 5326, 5290, 5669, 5661, 5368, 5570, 5540, 5355, 5286, 5296, 5371 (9 hits)
22	9	1.0	333.0	Yes	5300.0MHz, -52.0dBm	5322, 5702, 5467, 5596, 5269, 5412, 5589, 5565, 5529, 5309, 5691, 5665, 5633, 5518, 5352, 5494, 5671, 5405, 5267, 5312, 5686, 5381, 5464, 5632, 5311, 5620, 5662, 5362, 5350, 5386, 5288, 5635, 5600, 5335, 5390, 5330, 5449, 5468, 5358, 5599, 5308, 5426, 5548, 5592, 5325, 5375, 5480, 5408, 5438, 5323, 5588, 5652, 5581, 5417, 5466, 5663, 5321, 5683, 5710, 5648, 5607, 5533, 5561, 5305, 5643, 5455, 5302, 5514, 5612, 5399, 5609, 5528, 5539, 5624, 5496, 5490, 5394, 5526, 5713, 5636,

						5435, 5625, 5436, 5545, 5472, 5430, 5443, 5618, 5318, 5327, 5555, 5563, 5414, 5367, 5484, 5273, 5440, 5411, 5409, 5689 (1 hits)
23	9	1.0	333.0	Yes	5301.0MHz, -52.0dBm	5545, 5367, 5676, 5501, 5612, 5648, 5625, 5569, 5580, 5473, 5381, 5578, 5504, 5261, 5597, 5560, 5458, 5268, 5594, 5314, 5651, 5358, 5509, 5624, 5384, 5332, 5551, 5317, 5682, 5703, 5464, 5718, 5333, 5685, 5387, 5356, 5461, 5428, 5529, 5380, 5596, 5546, 5587, 5688, 5316, 5541, 5660, 5585, 5584, 5326, 5336, 5633, 5713, 5523, 5425, 5687, 5388, 5400, 5706, 5323, 5498, 5426, 5571, 5684, 5631, 5602, 5692, 5441, 5296, 5639, 5482, 5277, 5646, 5487, 5258, 5570, 5272, 5511, 5320, 5440, 5311, 5623, 5418, 5667, 5395, 5670, 5251, 5309, 5420, 5508, 5334, 5413, 5322, 5649, 5352, 5422, 5722, 5698, 5339, 5292 (2 hits)
24	9	1.0	333.0	Yes	5278.0MHz, -52.0dBm	5501, 5474, 5505, 5607, 5541, 5377, 5465, 5540, 5556, 5263, 5289, 5500, 5532, 5530, 5705, 5508, 5657, 5427, 5690, 5552, 5655, 5452, 5426, 5704, 5663, 5255, 5341, 5489, 5306, 5613, 5650, 5582, 5598, 5395, 5586, 5716, 5459, 5351, 5640, 5636, 5431, 5630, 5526, 5519, 5390, 5548, 5651, 5503, 5546, 5468, 5287, 5547, 5600, 5370, 5644, 5261, 5670, 5628, 5332, 5712, 5631, 5303, 5294, 5416, 5282, 5648, 5252, 5275, 5462, 5258, 5460, 5400, 5436, 5379, 5260, 5659, 5611, 5366, 5447, 5588, 5695, 5388, 5487, 5437, 5315, 5266, 5554, 5285, 5454, 5429, 5353, 5439, 5279, 5310, 5713, 5273, 5590, 5343, 5550, 5584 (6 hits)
25	9	1.0	333.0	Yes	5279.0MHz, -52.0dBm	5458, 5276, 5625, 5516, 5388, 5285, 5267, 5709, 5368, 5258, 5353, 5704, 5598, 5322, 5286, 5363, 5603, 5414, 5448, 5393, 5690, 5652, 5541, 5566, 5364, 5482, 5370, 5489, 5327, 5691, 5297, 5581, 5656, 5376, 5341, 5444, 5402, 5693, 5371, 5510, 5387, 5361, 5467, 5310, 5333, 5644, 5268, 5724, 5535, 5509, 5365, 5718, 5526, 5676, 5543, 5316, 5331, 5630, 5673, 5433,

						5328, 5446, 5602, 5499, 5418, 5262, 5442, 5701, 5708, 5419, 5335, 5585, 5479, 5720, 5717, 5544, 5432, 5685, 5380, 5525, 5599, 5699, 5615, 5682, 5588, 5480, 5450, 5303, 5447, 5540, 5672, 5651, 5468, 5587, 5662, 5491, 5539, 5392, 5560, 5638 (3 hits)
26	9	1.0	333.0	Yes	5280.0MHz, -52.0dBm	5358, 5524, 5662, 5558, 5482, 5254, 5320, 5399, 5575, 5572, 5719, 5260, 5430, 5708, 5500, 5536, 5339, 5711, 5340, 5710, 5538, 5681, 5378, 5372, 5335, 5368, 5578, 5722, 5390, 5391, 5343, 5492, 5647, 5539, 5384, 5691, 5510, 5515, 5537, 5290, 5284, 5318, 5557, 5573, 5297, 5671, 5279, 5468, 5613, 5518, 5319, 5428, 5346, 5560, 5587, 5629, 5316, 5648, 5658, 5463, 5697, 5350, 5559, 5668, 5506, 5456, 5717, 5571, 5422, 5264, 5636, 5436, 5417, 5672, 5667, 5563, 5718, 5713, 5490, 5624, 5437, 5720, 5324, 5306, 5465, 5601, 5705, 5529, 5312, 5595, 5393, 5528, 5576, 5501, 5577, 5351, 5366, 5424, 5570, 5532 (4 hits)
27	9	1.0	333.0	Yes	5281.0MHz, -52.0dBm	5662, 5459, 5594, 5274, 5560, 5647, 5263, 5706, 5360, 5559, 5451, 5478, 5697, 5437, 5257, 5388, 5438, 5278, 5628, 5285, 5493, 5705, 5564, 5510, 5422, 5681, 5503, 5370, 5375, 5371, 5490, 5379, 5724, 5377, 5376, 5462, 5271, 5443, 5673, 5431, 5486, 5695, 5519, 5307, 5646, 5604, 5554, 5672, 5310, 5365, 5530, 5723, 5721, 5322, 5630, 5419, 5301, 5421, 5627, 5327, 5548, 5351, 5390, 5620, 5614, 5708, 5356, 5319, 5453, 5579, 5273, 5269, 5427, 5711, 5341, 5393, 5716, 5654, 5521, 5522, 5707, 5306, 5709, 5520, 5475, 5538, 5372, 5460, 5652, 5563, 5518, 5349, 5590, 5580, 5417, 5536, 5471, 5649, 5512, 5398 (3 hits)
28	9	1.0	333.0	Yes	5282.0MHz, -52.0dBm	5278, 5461, 5323, 5562, 5372, 5680, 5467, 5264, 5520, 5664, 5561, 5522, 5635, 5690, 5560, 5672, 5601, 5531, 5447, 5402, 5424, 5599, 5721, 5497, 5370, 5415, 5587, 5650, 5578, 5312, 5469, 5472, 5417, 5625, 5556, 5626, 5554, 5675, 5280, 5694,

						5357, 5386, 5636, 5564, 5616, 5610, 5555, 5359, 5598, 5319, 5358, 5498, 5253, 5612, 5595, 5576, 5333, 5302, 5315, 5569, 5494, 5261, 5291, 5306, 5573, 5277, 5459, 5406, 5339, 5547, 5544, 5577, 5532, 5328, 5581, 5376, 5641, 5515, 5463, 5624, 5480, 5488, 5455, 5614, 5656, 5330, 5351, 5381, 5422, 5521, 5340, 5549, 5565, 5696, 5682, 5508, 5334, 5654, 5717, 5458 (3 hits)
29	9	1.0	333.0	Yes	5283.0MHz, -52.0dBm	5307, 5537, 5704, 5683, 5297, 5635, 5405, 5667, 5432, 5636, 5395, 5424, 5329, 5447, 5420, 5468, 5527, 5264, 5702, 5719, 5366, 5473, 5348, 5648, 5378, 5411, 5514, 5605, 5503, 5410, 5645, 5360, 5350, 5552, 5587, 5599, 5596, 5481, 5285, 5496, 5262, 5429, 5697, 5628, 5698, 5529, 5515, 5409, 5700, 5251, 5335, 5694, 5642, 5622, 5568, 5658, 5377, 5286, 5530, 5333, 5323, 5296, 5497, 5408, 5558, 5524, 5551, 5293, 5343, 5528, 5277, 5649, 5319, 5623, 5695, 5618, 5518, 5510, 5278, 5483, 5639, 5583, 5662, 5444, 5490, 5606, 5358, 5657, 5637, 5684, 5467, 5678, 5544, 5265, 5485, 5383, 5677, 5509, 5458, 5588 (6 hits)
30	9	1.0	333.0	Yes	5284.0MHz, -52.0dBm	5514, 5357, 5323, 5367, 5343, 5381, 5687, 5289, 5686, 5272, 5497, 5694, 5525, 5293, 5521, 5428, 5338, 5547, 5431, 5255, 5470, 5546, 5385, 5426, 5668, 5380, 5455, 5624, 5453, 5407, 5461, 5370, 5650, 5607, 5518, 5587, 5540, 5275, 5315, 5422, 5604, 5630, 5510, 5512, 5330, 5662, 5684, 5566, 5552, 5371, 5599, 5560, 5713, 5649, 5504, 5527, 5433, 5656, 5390, 5724, 5722, 5321, 5476, 5679, 5581, 5533, 5653, 5379, 5462, 5585, 5395, 5398, 5420, 5440, 5300, 5276, 5634, 5502, 5718, 5474, 5383, 5327, 5260, 5710, 5297, 5644, 5549, 5335, 5715, 5308, 5555, 5254, 5501, 5671, 5292, 5592, 5507, 5448, 5614, 5554 (5 hits)
31	9	1.0	333.0	Yes	5285.0MHz, -52.0dBm	5723, 5366, 5707, 5677, 5718, 5519, 5560, 5447, 5283, 5670, 5473, 5541, 5528, 5694, 5377, 5379, 5658, 5680, 5468, 5341,

						5669, 5251, 5328, 5314, 5618, 5682, 5493, 5564, 5590, 5702, 5578, 5529, 5710, 5512, 5485, 5335, 5407, 5656, 5287, 5332, 5273, 5557, 5599, 5372, 5301, 5316, 5464, 5322, 5396, 5724, 5579, 5609, 5395, 5607, 5666, 5611, 5384, 5532, 5576, 5709, 5290, 5507, 5299, 5667, 5643, 5674, 5306, 5388, 5349, 5472, 5546, 5345, 5392, 5558, 5522, 5497, 5418, 5466, 5711, 5266, 5438, 5359, 5692, 5423, 5562, 5421, 5638, 5371, 5603, 5325, 5567, 5671, 5540, 5630, 5595, 5429, 5261, 5330, 5539, 5402 (5 hits)
32	9	1.0	333.0	Yes	5286.0MHz, -52.0dBm	5628, 5641, 5465, 5316, 5388, 5496, 5439, 5579, 5464, 5502, 5554, 5514, 5515, 5353, 5511, 5306, 5462, 5558, 5603, 5619, 5472, 5264, 5385, 5718, 5555, 5697, 5724, 5286, 5518, 5343, 5575, 5352, 5323, 5597, 5508, 5355, 5324, 5582, 5477, 5494, 5614, 5301, 5481, 5541, 5591, 5448, 5493, 5593, 5358, 5576, 5415, 5543, 5418, 5698, 5451, 5532, 5275, 5277, 5443, 5536, 5550, 5712, 5705, 5378, 5374, 5364, 5430, 5307, 5460, 5284, 5557, 5489, 5535, 5359, 5283, 5361, 5519, 5585, 5716, 5250, 5269, 5340, 5671, 5534, 5525, 5701, 5308, 5380, 5510, 5255, 5571, 5666, 5709, 5672, 5480, 5467, 5482, 5722, 5497, 5253 (4 hits)
33	9	1.0	333.0	Yes	5287.0MHz, -52.0dBm	5516, 5401, 5351, 5509, 5305, 5606, 5487, 5378, 5683, 5536, 5560, 5328, 5377, 5543, 5359, 5570, 5714, 5572, 5614, 5540, 5340, 5258, 5573, 5297, 5639, 5471, 5275, 5385, 5549, 5642, 5583, 5422, 5347, 5672, 5636, 5507, 5314, 5666, 5267, 5430, 5588, 5300, 5647, 5527, 5615, 5609, 5592, 5339, 5353, 5460, 5544, 5562, 5335, 5259, 5548, 5437, 5604, 5480, 5590, 5538, 5371, 5420, 5553, 5421, 5295, 5571, 5306, 5462, 5290, 5355, 5529, 5686, 5635, 5331, 5542, 5262, 5537, 5376, 5313, 5409, 5499, 5319, 5541, 5387, 5368, 5698, 5682, 5703, 5372, 5447, 5667, 5329, 5652, 5546, 5563, 5410, 5648, 5344, 5724, 5399 (4 hits)

34	9	1.0	333.0	Yes	5288.0MHz, -52.0dBm	5619, 5589, 5691, 5548, 5674, 5684, 5631, 5346, 5322, 5690, 5471, 5516, 5665, 5518, 5291, 5313, 5427, 5413, 5593, 5258, 5710, 5448, 5404, 5505, 5533, 5372, 5481, 5319, 5399, 5355, 5701, 5489, 5678, 5287, 5280, 5478, 5633, 5468, 5336, 5723, 5465, 5377, 5428, 5321, 5646, 5470, 5276, 5262, 5693, 5510, 5358, 5681, 5585, 5582, 5394, 5598, 5584, 5670, 5289, 5554, 5269, 5543, 5565, 5660, 5574, 5522, 5345, 5705, 5695, 5415, 5571, 5431, 5659, 5523, 5370, 5664, 5290, 5417, 5657, 5493, 5434, 5406, 5511, 5373, 5268, 5323, 5286, 5718, 5423, 5388, 5253, 5550, 5632, 5566, 5620, 5528, 5673, 5541, 5637, 5284 (7 hits)
35	9	1.0	333.0	Yes	5289.0MHz, -52.0dBm	5533, 5660, 5662, 5398, 5643, 5531, 5553, 5385, 5686, 5253, 5700, 5499, 5304, 5529, 5283, 5644, 5537, 5445, 5279, 5650, 5252, 5471, 5470, 5610, 5365, 5631, 5556, 5484, 5676, 5491, 5498, 5402, 5542, 5635, 5558, 5376, 5480, 5692, 5463, 5400, 5488, 5550, 5510, 5577, 5512, 5351, 5653, 5509, 5672, 5595, 5419, 5564, 5371, 5337, 5428, 5285, 5546, 5652, 5424, 5600, 5320, 5485, 5384, 5452, 5453, 5581, 5679, 5625, 5626, 5426, 5520, 5368, 5389, 5656, 5632, 5418, 5532, 5649, 5721, 5403, 5494, 5571, 5544, 5683, 5497, 5541, 5260, 5655, 5464, 5504, 5502, 5451, 5573, 5430, 5710, 5442, 5300, 5699, 5399, 5725 (4 hits)
36	9	1.0	333.0	Yes	5290.0MHz, -52.0dBm	5290, 5308, 5373, 5521, 5283, 5551, 5302, 5620, 5698, 5339, 5650, 5517, 5535, 5597, 5377, 5393, 5316, 5462, 5476, 5602, 5389, 5630, 5352, 5300, 5703, 5423, 5459, 5607, 5552, 5294, 5605, 5254, 5343, 5325, 5269, 5483, 5468, 5622, 5478, 5368, 5493, 5720, 5681, 5407, 5473, 5719, 5527, 5532, 5576, 5384, 5251, 5538, 5610, 5479, 5723, 5405, 5403, 5653, 5480, 5318, 5333, 5528, 5395, 5595, 5489, 5523, 5632, 5642, 5256, 5365, 5691, 5330, 5514, 5360, 5491, 5577, 5259, 5655, 5409, 5673, 5460, 5334, 5428, 5304, 5627,

						5291, 5534, 5556, 5457, 5346, 5421, 5379, 5353, 5411, 5313, 5553, 5444, 5446, 5430, 5355 (5 hits)
37	9	1.0	333.0	Yes	5291.0MHz, -52.0dBm	5407, 5298, 5304, 5571, 5551, 5649, 5572, 5461, 5651, 5262, 5681, 5409, 5658, 5438, 5299, 5296, 5544, 5501, 5315, 5598, 5712, 5594, 5625, 5282, 5537, 5258, 5428, 5308, 5545, 5434, 5708, 5595, 5623, 5410, 5661, 5424, 5494, 5339, 5522, 5256, 5711, 5479, 5455, 5604, 5685, 5300, 5540, 5435, 5387, 5451, 5581, 5421, 5365, 5389, 5558, 5303, 5281, 5333, 5265, 5515, 5266, 5508, 5682, 5643, 5295, 5635, 5474, 5499, 5393, 5689, 5368, 5398, 5686, 5317, 5462, 5454, 5514, 5657, 5310, 5321, 5271, 5496, 5488, 5721, 5513, 5674, 5392, 5512, 5263, 5511, 5718, 5331, 5660, 5552, 5384, 5528, 5378, 5275, 5369, 5609 (7 hits)
38	9	1.0	333.0	Yes	5292.0MHz, -52.0dBm	5546, 5638, 5383, 5530, 5354, 5525, 5453, 5697, 5650, 5404, 5445, 5625, 5670, 5519, 5561, 5316, 5346, 5289, 5309, 5652, 5551, 5534, 5448, 5540, 5251, 5414, 5672, 5287, 5545, 5488, 5515, 5563, 5441, 5610, 5568, 5337, 5454, 5491, 5721, 5648, 5380, 5662, 5631, 5724, 5282, 5544, 5668, 5482, 5427, 5418, 5461, 5576, 5634, 5537, 5382, 5596, 5586, 5415, 5710, 5712, 5459, 5565, 5640, 5535, 5636, 5365, 5723, 5499, 5621, 5455, 5651, 5301, 5562, 5671, 5507, 5693, 5639, 5371, 5344, 5411, 5476, 5597, 5410, 5608, 5357, 5553, 5450, 5605, 5313, 5343, 5582, 5677, 5363, 5255, 5345, 5429, 5481, 5271, 5622, 5432 (4 hits)
39	9	1.0	333.0	Yes	5293.0MHz, -52.0dBm	5438, 5641, 5364, 5268, 5355, 5665, 5708, 5638, 5372, 5261, 5539, 5522, 5488, 5335, 5557, 5367, 5718, 5329, 5319, 5339, 5412, 5304, 5290, 5434, 5621, 5628, 5576, 5699, 5592, 5499, 5672, 5607, 5574, 5561, 5487, 5659, 5279, 5501, 5470, 5457, 5681, 5266, 5477, 5684, 5519, 5692, 5508, 5366, 5676, 5656, 5537, 5490, 5564, 5296, 5622, 5458, 5540, 5376, 5559, 5360, 5344, 5637, 5267, 5399, 5515,

						5437, 5680, 5619, 5407, 5590, 5598, 5579, 5447, 5642, 5542, 5664, 5673, 5648, 5326, 5604, 5497, 5459, 5430, 5309, 5666, 5591, 5299, 5356, 5633, 5549, 5250, 5265, 5311, 5594, 5313, 5634, 5668, 5691, 5600, 5689 (4 hits)
40	9	1.0	333.0	Yes	5294.0MHz, -52.0dBm	5556, 5338, 5599, 5640, 5346, 5549, 5520, 5681, 5270, 5296, 5356, 5281, 5289, 5605, 5660, 5583, 5648, 5292, 5471, 5282, 5266, 5472, 5562, 5481, 5355, 5259, 5490, 5421, 5612, 5499, 5492, 5347, 5337, 5582, 5482, 5391, 5251, 5517, 5320, 5424, 5373, 5654, 5670, 5458, 5455, 5531, 5635, 5428, 5305, 5713, 5286, 5288, 5414, 5574, 5327, 5263, 5267, 5675, 5353, 5591, 5395, 5303, 5273, 5661, 5260, 5377, 5460, 5459, 5646, 5343, 5638, 5291, 5577, 5639, 5438, 5271, 5328, 5407, 5399, 5357, 5257, 5475, 5579, 5665, 5290, 5294, 5358, 5325, 5721, 5535, 5559, 5452, 5277, 5575, 5464, 5301, 5392, 5508, 5625, 5601 (11 hits)
41	9	1.0	333.0	Yes	5295.0MHz, -52.0dBm	5681, 5413, 5264, 5630, 5551, 5461, 5644, 5702, 5500, 5470, 5314, 5283, 5557, 5640, 5367, 5499, 5395, 5541, 5463, 5722, 5714, 5686, 5328, 5368, 5427, 5284, 5389, 5635, 5618, 5625, 5429, 5545, 5565, 5600, 5512, 5654, 5581, 5403, 5369, 5563, 5502, 5455, 5372, 5680, 5298, 5510, 5290, 5266, 5692, 5576, 5626, 5664, 5596, 5564, 5281, 5445, 5678, 5265, 5406, 5378, 5498, 5458, 5339, 5675, 5594, 5582, 5647, 5709, 5422, 5628, 5592, 5481, 5302, 5533, 5371, 5611, 5478, 5496, 5707, 5653, 5400, 5410, 5324, 5627, 5332, 5295, 5275, 5407, 5719, 5287, 5491, 5423, 5667, 5304, 5467, 5414, 5464, 5399, 5670, 5668 (7 hits)
42	9	1.0	333.0	Yes	5296.0MHz, -52.0dBm	5514, 5437, 5390, 5491, 5430, 5496, 5424, 5533, 5656, 5315, 5604, 5525, 5442, 5280, 5421, 5419, 5372, 5287, 5272, 5681, 5260, 5395, 5538, 5391, 5565, 5353, 5484, 5714, 5267, 5254, 5643, 5404, 5476, 5269, 5257, 5346, 5505, 5385, 5493, 5502, 5588, 5522, 5398, 5710, 5334,

						5394, 5520, 5265, 5276, 5457, 5423, 5524, 5266, 5692, 5663, 5510, 5718, 5622, 5621, 5441, 5535, 5413, 5252, 5612, 5405, 5361, 5381, 5324, 5347, 5513, 5655, 5345, 5590, 5321, 5342, 5331, 5682, 5299, 5613, 5531, 5348, 5263, 5511, 5541, 5302, 5313, 5312, 5716, 5448, 5572, 5614, 5295, 5350, 5545, 5487, 5673, 5377, 5693, 5577, 5557 (4 hits)
43	9	1.0	333.0	Yes	5297.0MHz, -52.0dBm	5311, 5684, 5568, 5420, 5685, 5656, 5253, 5724, 5721, 5258, 5292, 5320, 5291, 5326, 5505, 5356, 5464, 5539, 5540, 5260, 5409, 5343, 5605, 5506, 5643, 5331, 5557, 5617, 5642, 5526, 5330, 5277, 5257, 5435, 5459, 5323, 5556, 5641, 5669, 5421, 5720, 5278, 5476, 5337, 5486, 5333, 5345, 5473, 5462, 5509, 5381, 5602, 5281, 5500, 5413, 5697, 5313, 5375, 5469, 5332, 5341, 5266, 5364, 5529, 5434, 5477, 5702, 5299, 5544, 5706, 5674, 5561, 5705, 5270, 5609, 5386, 5410, 5592, 5276, 5484, 5565, 5599, 5672, 5560, 5551, 5411, 5629, 5447, 5433, 5283, 5612, 5439, 5383, 5704, 5498, 5549, 5531, 5584, 5402, 5491 (6 hits)
44	9	1.0	333.0	Yes	5298.0MHz, -52.0dBm	5603, 5706, 5483, 5381, 5556, 5566, 5695, 5444, 5426, 5505, 5573, 5693, 5432, 5407, 5540, 5447, 5431, 5612, 5716, 5357, 5711, 5707, 5285, 5596, 5365, 5456, 5534, 5594, 5358, 5484, 5622, 5575, 5422, 5678, 5570, 5491, 5549, 5418, 5633, 5602, 5559, 5718, 5675, 5294, 5283, 5455, 5679, 5498, 5567, 5617, 5419, 5377, 5412, 5486, 5265, 5546, 5557, 5529, 5278, 5637, 5618, 5354, 5674, 5489, 5390, 5514, 5330, 5608, 5697, 5457, 5458, 5322, 5652, 5530, 5337, 5342, 5605, 5691, 5410, 5600, 5649, 5429, 5406, 5631, 5281, 5280, 5643, 5593, 5362, 5555, 5453, 5666, 5511, 5635, 5310, 5478, 5345, 5313, 5630, 5714 (6 hits)
45	9	1.0	333.0	Yes	5299.0MHz, -52.0dBm	5543, 5399, 5474, 5565, 5600, 5493, 5521, 5466, 5707, 5289, 5375, 5461, 5708, 5476, 5634, 5344, 5706, 5683, 5557, 5420, 5667, 5281, 5362, 5383, 5715,

						5439, 5506, 5542, 5618, 5724, 5673, 5523, 5422, 5263, 5561, 5585, 5570, 5559, 5611, 5660, 5536, 5381, 5696, 5406, 5371, 5251, 5373, 5591, 5566, 5448, 5380, 5664, 5567, 5297, 5661, 5626, 5612, 5434, 5709, 5348, 5360, 5396, 5693, 5483, 5345, 5487, 5337, 5321, 5369, 5659, 5702, 5295, 5451, 5458, 5320, 5460, 5602, 5429, 5296, 5627, 5454, 5438, 5455, 5265, 5537, 5546, 5341, 5327, 5417, 5662, 5498, 5457, 5544, 5500, 5641, 5272, 5276, 5609, 5328, 5452 (5 hits)
46	9	1.0	333.0	Yes	5300.0MHz, -52.0dBm	5529, 5477, 5656, 5264, 5711, 5424, 5468, 5322, 5295, 5655, 5572, 5416, 5590, 5712, 5695, 5431, 5591, 5615, 5395, 5412, 5687, 5259, 5569, 5331, 5596, 5452, 5573, 5269, 5647, 5334, 5558, 5494, 5478, 5406, 5308, 5498, 5471, 5297, 5387, 5609, 5487, 5640, 5370, 5522, 5682, 5501, 5674, 5604, 5559, 5388, 5384, 5261, 5274, 5721, 5542, 5284, 5327, 5317, 5300, 5256, 5603, 5592, 5631, 5519, 5702, 5709, 5610, 5435, 5701, 5688, 5630, 5716, 5579, 5346, 5518, 5276, 5628, 5464, 5469, 5669, 5538, 5325, 5266, 5692, 5528, 5451, 5315, 5583, 5586, 5585, 5493, 5658, 5301, 5667, 5273, 5700, 5390, 5679, 5455, 5299 (6 hits)
47	9	1.0	333.0	Yes	5301.0MHz, -52.0dBm	5684, 5338, 5472, 5697, 5509, 5457, 5588, 5465, 5557, 5576, 5713, 5511, 5482, 5324, 5575, 5537, 5667, 5309, 5578, 5695, 5391, 5281, 5493, 5380, 5527, 5645, 5452, 5591, 5661, 5387, 5431, 5325, 5439, 5369, 5406, 5706, 5715, 5651, 5510, 5673, 5517, 5343, 5421, 5467, 5336, 5529, 5261, 5545, 5612, 5342, 5386, 5553, 5329, 5361, 5252, 5585, 5594, 5492, 5513, 5274, 5494, 5652, 5606, 5412, 5653, 5597, 5259, 5720, 5640, 5348, 5385, 5485, 5260, 5268, 5626, 5451, 5674, 5608, 5296, 5346, 5580, 5254, 5497, 5582, 5481, 5592, 5483, 5347, 5458, 5717, 5503, 5350, 5476, 5565, 5256, 5646, 5339, 5429, 5304, 5664 (2 hits)

Table 7 - Long Sequence Waveform Summary

Long Sequence Trial	Result	Radar Frequency / Amplitude
Trial #1	Detected	5300.0MHz, -52.0dBm
Trial #2	Detected	5325.0MHz, -52.0dBm
Trial #3	Detected	5275.0MHz, -52.0dBm
Trial #4	Detected	5300.0MHz, -52.0dBm
Trial #5	Detected	5325.0MHz, -52.0dBm
Trial #6	Detected	5275.0MHz, -52.0dBm
Trial #7	Detected	5300.0MHz, -52.0dBm
Trial #8	Detected	5325.0MHz, -52.0dBm
Trial #9	Detected	5275.0MHz, -52.0dBm
Trial #10	Detected	5300.0MHz, -52.0dBm
Trial #11	Detected	5325.0MHz, -52.0dBm
Trial #12	Detected	5275.0MHz, -52.0dBm
Trial #13	Detected	5300.0MHz, -52.0dBm
Trial #14	Detected	5325.0MHz, -52.0dBm
Trial #15	Detected	5275.0MHz, -52.0dBm
Trial #16	Detected	5300.0MHz, -52.0dBm
Trial #17	Detected	5325.0MHz, -52.0dBm
Trial #18	Detected	5275.0MHz, -52.0dBm
Trial #19	Detected	5300.0MHz, -52.0dBm
Trial #20	Detected	5325.0MHz, -52.0dBm
Trial #21	Detected	5275.0MHz, -52.0dBm
Trial #22	Detected	5300.0MHz, -52.0dBm
Trial #23	Detected	5325.0MHz, -52.0dBm
Trial #24	Detected	5275.0MHz, -52.0dBm
Trial #25	Detected	5300.0MHz, -52.0dBm
Trial #26	Detected	5325.0MHz, -52.0dBm
Trial #27	Detected	5275.0MHz, -52.0dBm
Trial #28	Detected	5300.0MHz,

		-52.0dBm
Trial #29	Detected	5325.0MHz, -52.0dBm
Trial #30	Detected	5275.0MHz, -52.0dBm

Table 8 - 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)
0	3	97.3	19	1142.0	1815.0	0.311298
1	1	56.6	5	-	-	0.684611
2	1	81.6	6	-	-	1.551152
3	2	57.4	10	1698.0	-	2.445791
4	3	98.8	16	1515.0	1973.0	2.527484
5	2	60.3	7	1521.0	-	3.607084
6	1	70.5	6	-	-	4.310931
7	1	55.8	12	-	-	4.546670
8	1	52.5	8	-	-	5.183612
9	2	62.6	18	1914.0	-	5.998185
10	2	57.1	12	1040.0	-	6.799647
11	1	71.0	13	-	-	7.444604
12	3	95.8	7	1157.0	1014.0	7.964639
13	3	81.7	8	1375.0	1725.0	8.548323
14	3	85.4	17	1404.0	1012.0	9.069906
15	2	80.3	10	1118.0	-	9.560214
16	1	67.6	15	-	-	10.225313
17	2	58.4	6	1895.0	-	11.220690
18	2	60.3	8	1962.0	-	11.813605

Table 9 - 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)
0	2	81.1	20	1833.0	-	0.561020
1	1	79.4	7	-	-	1.543601
2	1	62.7	9	-	-	1.797586
3	2	63.7	6	1193.0	-	2.658904
4	1	50.9	15	-	-	3.442668
5	3	83.1	11	1517.0	1682.0	4.151431
6	1	90.2	6	-	-	5.399572
7	2	91.2	11	1375.0	-	5.979942
8	1	62.5	8	-	-	7.135378
9	3	99.7	16	1427.0	1691.0	7.645197
10	2	66.2	12	1969.0	-	8.573441
11	1	55.5	19	-	-	9.125390
12	3	92.2	9	1252.0	1360.0	9.944881
13	2	92.0	15	1245.0	-	10.547328
14	3	92.3	8	1759.0	1511.0	11.556387

Table 10 - 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)
0	1	81.5	15	-	-	0.467601
1	2	55.3	13	1634.0	-	1.262062

2	1	68.1	12	-	-	1.609953
3	3	56.8	20	1046.0	1817.0	2.382415
4	2	58.5	15	1485.0	-	3.061171
5	2	75.3	11	1062.0	-	4.478874
6	3	81.1	17	1064.0	1361.0	4.837828
7	1	89.5	6	-	-	5.538518
8	2	83.4	14	1486.0	-	6.685921
9	2	93.0	9	1748.0	-	7.120269
10	2	97.4	12	1446.0	-	7.573772
11	3	72.8	14	1520.0	1739.0	8.845813
12	2	65.6	13	1972.0	-	9.307959
13	2	97.1	19	1104.0	-	10.316736
14	1	63.4	15	-	-	10.535228
15	2	77.9	8	1639.0	-	11.852440

Table 11 - 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)
0	2	92.0	20	1660.0	-	0.283870
1	2	62.4	14	1675.0	-	2.225027
2	1	86.2	18	-	-	3.695859
3	3	63.3	6	1726.0	1976.0	4.292107
4	1	53.0	19	-	-	5.937215
5	1	88.6	9	-	-	7.923354
6	2	67.0	12	1945.0	-	9.036225
7	2	88.0	14	1834.0	-	9.605939
8	3	98.6	13	1408.0	1017.0	11.486819

Table 12 - 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)
0	2	94.9	7	1335.0	-	0.104540
1	1	92.0	19	-	-	0.618113
2	2	79.2	10	1726.0	-	1.445033
3	2	77.2	8	1336.0	-	2.008225
4	2	59.7	9	1650.0	-	2.764846
5	2	53.3	9	1138.0	-	3.395253
6	3	77.3	18	1779.0	1719.0	3.997838
7	2	82.9	6	1885.0	-	4.700990
8	3	87.9	8	1815.0	1619.0	5.137488
9	2	56.5	19	1008.0	-	5.816537
10	1	88.8	5	-	-	6.139322
11	2	89.2	13	1855.0	-	6.783171
12	3	93.1	7	1304.0	1086.0	7.641619
13	2	94.8	10	1829.0	-	8.198841
14	2	72.6	17	1690.0	-	8.625081
15	1	98.7	5	-	-	9.066982
16	2	69.7	12	1228.0	-	9.932117
17	2	55.5	15	1850.0	-	10.621342
18	3	63.2	12	1209.0	1351.0	11.031579
19	1	52.7	9	-	-	11.527170

Table 13 - 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)
0	2	60.7	15	1475.0	-	0.207927
1	2	59.4	18	1939.0	-	0.763616
2	3	74.2	12	1276.0	1738.0	1.282425
3	1	63.5	15	-	-	2.061107
4	2	94.1	16	1027.0	-	3.055383
5	2	61.0	10	1259.0	-	3.318091
6	2	86.6	15	1205.0	-	3.858191
7	2	75.7	6	1139.0	-	4.491655
8	2	60.6	19	1092.0	-	5.131005
9	3	98.6	19	1180.0	1813.0	5.753888
10	2	72.0	17	1509.0	-	6.623150
11	1	68.0	10	-	-	7.573486
12	2	63.1	14	1752.0	-	7.856674
13	2	92.5	9	1664.0	-	8.340175
14	3	82.3	8	1588.0	1124.0	9.442898
15	1	65.6	9	-	-	9.853279
16	1	81.1	14	-	-	10.278856
17	2	84.4	10	1639.0	-	10.917219
18	2	58.8	19	1333.0	-	11.692426

Table 14 - 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)
0	1	72.0	19	-	-	0.554967
1	3	91.0	15	1416.0	1948.0	1.291639
2	2	82.0	9	1497.0	-	1.616795
3	2	91.9	15	1035.0	-	2.865678
4	3	75.9	8	1499.0	1391.0	3.459341
5	2	76.7	10	1788.0	-	4.363134
6	3	75.8	10	1230.0	1642.0	4.582254
7	1	99.5	14	-	-	5.359911
8	1	63.5	6	-	-	6.354751
9	2	84.8	9	1304.0	-	7.017519
10	3	71.4	9	1163.0	1818.0	7.985217
11	2	92.3	15	1444.0	-	8.910804
12	2	58.1	19	1596.0	-	9.472903
13	2	70.8	14	1673.0	-	10.135505
14	3	74.4	18	1825.0	1747.0	10.687035
15	2	54.5	13	1798.0	-	11.756027

Table 15 - 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)
0	2	88.2	16	1614.0	-	0.551973
1	1	51.9	15	-	-	0.996406
2	2	90.9	12	1959.0	-	2.173424
3	1	74.9	14	-	-	2.757698
4	2	56.4	17	1152.0	-	3.568095
5	2	86.3	5	1919.0	-	4.609157
6	2	53.9	18	1468.0	-	4.856492
7	2	72.9	13	1593.0	-	6.284030

8	2	51.3	11	1176.0	-	6.512946
9	2	55.2	5	1916.0	-	7.287787
10	3	68.4	13	1345.0	1061.0	8.373805
11	3	78.0	17	1971.0	1909.0	8.801769
12	2	54.4	10	1308.0	-	9.859819
13	3	81.9	10	1696.0	1670.0	10.791468
14	3	90.2	6	1343.0	1762.0	11.581933

Table 16 - 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)
0	3	55.6	19	1248.0	1918.0	0.171214
1	3	78.2	9	1535.0	1255.0	1.117760
2	1	89.1	10	-	-	1.708045
3	2	86.3	18	1914.0	-	2.613837
4	1	75.9	9	-	-	2.924847
5	1	80.2	19	-	-	3.389764
6	2	58.9	10	1348.0	-	4.583768
7	3	93.4	7	1301.0	1602.0	5.071298
8	1	56.2	5	-	-	5.859634
9	2	94.1	11	1133.0	-	6.393899
10	2	53.7	11	1069.0	-	6.698324
11	2	50.3	8	1251.0	-	7.790785
12	2	97.4	15	1114.0	-	8.455843
13	1	84.2	15	-	-	9.114659
14	3	73.9	15	1961.0	1777.0	9.771102
15	1	63.4	19	-	-	10.492987
16	1	83.8	7	-	-	10.966043
17	2	63.8	7	1292.0	-	11.792077

Table 17 - 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)
0	3	57.5	13	1565.0	1228.0	0.400994
1	2	67.8	7	1377.0	-	1.353936
2	1	66.0	20	-	-	2.128665
3	2	60.5	11	1649.0	-	2.743575
4	1	86.5	8	-	-	3.216515
5	1	77.6	18	-	-	4.016864
6	2	85.2	17	1585.0	-	5.325283
7	2	97.4	15	1024.0	-	5.763269
8	2	66.3	14	1738.0	-	6.432305
9	3	94.4	7	1462.0	1411.0	7.814192
10	1	50.1	5	-	-	8.672915
11	2	97.2	8	1315.0	-	9.455112
12	2	93.5	5	1631.0	-	9.939196
13	1	85.7	18	-	-	10.654943
14	3	75.6	8	1047.0	1050.0	11.304415

Table 18 - 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)
0	2	66.7	16	1575.0	-	0.905979

1	2	92.0	20	1356.0	-	2.504307
2	2	81.6	19	1906.0	-	3.888629
3	2	55.8	15	1317.0	-	4.117171
4	2	94.6	9	1006.0	-	5.944745
5	3	70.5	9	1230.0	1395.0	7.903725
6	1	73.6	10	-	-	9.140193
7	2	86.1	14	1220.0	-	10.160737
8	2	82.5	7	1910.0	-	11.702700

Table 19 - 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)
0	2	56.7	16	1044.0	-	0.175328
1	3	58.9	13	1091.0	1324.0	0.865157
2	2	73.2	9	1257.0	-	2.032050
3	1	95.9	9	-	-	2.989775
4	3	52.1	5	1210.0	1928.0	3.637335
5	2	66.4	13	1946.0	-	4.218313
6	2	83.4	13	1884.0	-	4.826318
7	3	50.3	14	1448.0	1985.0	5.912899
8	2	85.5	12	1026.0	-	6.579771
9	2	78.4	15	1721.0	-	7.039497
10	2	61.9	11	1425.0	-	7.950656
11	1	51.3	19	-	-	8.270200
12	2	51.4	13	1191.0	-	9.022186
13	1	89.7	15	-	-	10.354747
14	1	75.1	19	-	-	10.979764
15	1	76.0	15	-	-	11.271365

Table 20 - 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)
0	2	95.2	5	1431.0	-	0.643692
1	2	80.3	17	1075.0	-	0.717007
2	3	59.6	8	1893.0	1272.0	1.538551
3	3	82.9	16	1621.0	1383.0	2.170263
4	2	89.8	17	1455.0	-	3.097121
5	3	61.1	6	1397.0	1047.0	3.629704
6	3	62.7	14	1622.0	1393.0	4.610821
7	2	66.2	16	1840.0	-	4.705270
8	3	81.4	17	1067.0	1096.0	5.994913
9	1	81.1	14	-	-	6.470278
10	3	95.3	6	1309.0	1041.0	7.301303
11	2	72.3	19	1453.0	-	7.972704
12	2	67.0	8	1163.0	-	8.212177
13	1	59.7	10	-	-	8.694191
14	2	73.2	17	1573.0	-	9.378943
15	2	67.3	20	1291.0	-	10.590043
16	2	51.3	16	1920.0	-	10.789869
17	2	91.5	9	1242.0	-	11.947269

Table 21 - Long Sequence Waveform Trial#14 (Detected)

Burst #	#	Pulse Width	Chirp	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
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	Pulses	(us)	(MHz)			
0	2	64.7	17	1404.0	-	0.348771
1	1	50.8	15	-	-	1.042917
2	1	93.3	10	-	-	1.604520
3	2	96.4	15	1980.0	-	2.442327
4	2	67.8	6	1691.0	-	3.095669
5	2	66.6	14	1248.0	-	3.277113
6	3	88.2	13	1293.0	1987.0	3.794522
7	2	97.9	7	1266.0	-	4.976291
8	1	85.2	16	-	-	5.263825
9	2	68.3	9	1062.0	-	6.269858
10	2	80.7	13	1491.0	-	6.894299
11	2	88.8	6	1187.0	-	7.408220
12	1	72.5	14	-	-	8.044664
13	2	99.9	17	1242.0	-	8.239386
14	2	59.5	7	1386.0	-	8.952896
15	2	58.9	18	1568.0	-	9.837340
16	2	64.1	18	1764.0	-	10.209525
17	2	60.6	5	1482.0	-	10.749559
18	1	82.1	15	-	-	11.647443

Table 22 - 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)
0	1	92.4	10	-	-	0.237787
1	2	74.0	6	1860.0	-	2.115016
2	2	51.9	14	1505.0	-	3.765297
3	1	67.5	14	-	-	5.302128
4	1	78.1	17	-	-	5.683103
5	3	66.5	13	1830.0	1696.0	7.288892
6	3	77.2	19	1867.0	1386.0	9.054020
7	3	94.4	20	1672.0	1126.0	9.480825
8	1	53.1	17	-	-	11.177135

Table 23 - 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)
0	2	70.3	5	1656.0	-	0.109305
1	1	81.2	8	-	-	1.339915
2	2	69.2	13	1521.0	-	1.782207
3	1	54.4	12	-	-	2.910932
4	2	61.4	17	1928.0	-	3.336733
5	1	69.0	16	-	-	3.982898
6	2	93.1	15	1756.0	-	4.578395
7	2	84.1	8	1795.0	-	5.492648
8	2	69.8	18	1693.0	-	6.037151
9	1	85.8	13	-	-	6.869952
10	2	90.0	19	1979.0	-	7.975307
11	2	57.1	8	1146.0	-	8.459170
12	3	98.4	15	1181.0	1378.0	9.391142
13	1	53.1	8	-	-	10.274490
14	2	50.7	7	1176.0	-	10.789576
15	2	80.5	17	1265.0	-	11.879032

Table 24 - 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)
0	1	74.7	11	-	-	0.777646
1	3	75.7	19	1737.0	1948.0	1.385718
2	2	90.7	6	1910.0	-	2.341289
3	3	92.8	7	1087.0	1795.0	2.733297
4	2	73.2	13	1512.0	-	3.727843
5	2	82.7	6	1207.0	-	4.361736
6	2	79.2	9	1861.0	-	5.008388
7	1	65.9	7	-	-	5.636355
8	2	63.3	8	1244.0	-	6.960449
9	2	64.4	8	1013.0	-	7.296257
10	1	91.2	7	-	-	8.266747
11	1	81.6	7	-	-	9.313667
12	3	96.6	16	1750.0	1241.0	9.813850
13	3	59.6	6	1100.0	1055.0	10.922896
14	1	81.8	19	-	-	11.398168

Table 25 - 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)
0	2	88.0	11	1359.0	-	0.069676
1	3	82.0	9	1038.0	1052.0	1.307728
2	1	94.6	7	-	-	1.636350
3	1	92.8	13	-	-	2.429776
4	1	93.9	13	-	-	2.991627
5	1	86.8	18	-	-	3.897507
6	1	82.6	20	-	-	4.297923
7	3	91.7	19	1251.0	1554.0	5.431821
8	2	98.4	11	1275.0	-	6.136362
9	2	63.3	15	1340.0	-	7.019761
10	2	66.2	13	1545.0	-	7.298067
11	2	93.8	9	1332.0	-	8.402826
12	3	88.8	10	1127.0	1033.0	8.562236
13	2	58.0	18	1291.0	-	9.344118
14	3	65.1	10	1537.0	1742.0	10.579620
15	2	97.2	11	1682.0	-	10.598271
16	2	99.9	17	1010.0	-	11.792264

Table 26 - 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)
0	2	94.5	9	1793.0	-	0.248209
1	2	67.6	15	1590.0	-	2.190142
2	2	92.5	19	1657.0	-	3.141251
3	1	55.3	14	-	-	5.251168
4	2	66.2	16	1753.0	-	5.413903
5	2	56.2	14	1459.0	-	7.608742
6	2	69.3	9	1271.0	-	8.171798
7	3	83.1	11	1921.0	1075.0	10.006362
8	2	80.3	19	1678.0	-	11.814933

Table 27 - 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)
0	3	87.7	12	1813.0	1488.0	0.049453
1	1	65.8	10	-	-	1.383544
2	2	86.6	19	1066.0	-	2.580305
3	2	56.6	17	1104.0	-	3.362643
4	1	97.4	15	-	-	4.800650
5	2	85.5	15	1058.0	-	5.500322
6	1	66.4	13	-	-	6.594325
7	3	62.6	18	1962.0	1901.0	7.077189
8	2	56.3	8	1221.0	-	8.122855
9	1	63.6	14	-	-	9.533554
10	1	97.9	10	-	-	10.363248
11	3	95.4	15	1358.0	1398.0	11.345596

Table 28 - 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)
0	1	97.6	13	-	-	0.281293
1	3	60.2	16	1421.0	1434.0	0.854134
2	2	78.5	9	1789.0	-	1.756585
3	2	72.8	17	1621.0	-	2.120685
4	2	89.5	8	1094.0	-	2.966187
5	2	84.3	14	1258.0	-	3.534996
6	2	87.7	17	1018.0	-	4.529169
7	2	71.5	9	1442.0	-	5.063168
8	3	50.5	16	1856.0	1547.0	5.604646
9	2	87.2	8	1799.0	-	6.235802
10	3	79.8	12	1127.0	1378.0	6.957546
11	1	55.9	14	-	-	7.730071
12	2	58.5	6	1400.0	-	8.031103
13	2	97.7	8	1300.0	-	9.321404
14	2	95.5	7	1663.0	-	9.610048
15	2	88.4	9	1538.0	-	10.092035
16	2	72.5	9	1799.0	-	10.672339
17	1	57.8	10	-	-	11.921209

Table 29 - 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)
0	2	55.6	16	1027.0	-	0.850796
1	1	71.2	20	-	-	1.705080
2	2	68.7	17	1615.0	-	3.099665
3	2	65.1	6	1612.0	-	4.179516
4	1	60.8	17	-	-	4.961021
5	3	73.0	20	1574.0	1848.0	6.959457
6	2	67.5	12	1380.0	-	7.713644
7	2	90.1	10	1011.0	-	9.123083
8	3	52.0	9	1208.0	1671.0	10.032774
9	2	63.4	10	1256.0	-	11.413801

Table 30 - 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)
0	1	71.7	11	-	-	0.407890
1	3	67.9	16	1297.0	1519.0	1.054134
2	1	69.0	9	-	-	1.551253
3	1	78.0	19	-	-	2.404938
4	3	96.5	5	1568.0	1810.0	2.755821
5	2	69.0	13	1870.0	-	3.691573
6	2	51.7	20	1613.0	-	4.207989
7	3	84.3	7	1916.0	1761.0	4.638363
8	2	74.3	7	1591.0	-	5.179187
9	1	76.1	12	-	-	6.125397
10	2	96.8	20	1942.0	-	6.456507
11	2	62.3	16	1677.0	-	7.022646
12	3	98.0	12	1100.0	1928.0	8.013707
13	2	92.4	12	1651.0	-	8.483028
14	3	92.3	11	1289.0	1113.0	8.853503
15	2	73.4	13	1170.0	-	9.828476
16	2	74.7	6	1007.0	-	10.464207
17	1	97.0	7	-	-	11.275760
18	3	86.1	18	1123.0	1593.0	11.588641

Table 31 - 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)
0	1	97.7	6	-	-	0.421886
1	2	59.0	15	1173.0	-	1.673264
2	2	87.5	12	1330.0	-	2.207791
3	2	74.3	10	1664.0	-	3.189579
4	1	75.0	9	-	-	3.854457
5	2	76.4	12	1899.0	-	4.408592
6	2	86.0	10	1301.0	-	5.579840
7	2	62.5	7	1128.0	-	6.814454
8	1	89.5	7	-	-	7.633524
9	2	81.6	6	1805.0	-	7.749421
10	1	88.5	18	-	-	9.271484
11	1	71.8	14	-	-	10.218966
12	2	92.3	11	1796.0	-	10.827026
13	3	90.8	8	1728.0	1700.0	11.421242

Table 32 - 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)
0	1	96.9	18	-	-	0.537478
1	3	98.7	6	1845.0	1153.0	1.247415
2	1	99.2	20	-	-	2.371711
3	1	83.5	7	-	-	2.934208
4	1	54.3	16	-	-	3.714740
5	3	53.0	15	1066.0	1256.0	4.019949
6	2	96.1	17	1091.0	-	5.033465
7	1	65.9	7	-	-	5.959199
8	1	75.1	6	-	-	6.842599
9	2	89.4	8	1605.0	-	7.512561

10	2	52.7	11	1322.0	-	8.320710
11	3	91.6	19	1454.0	1485.0	8.884389
12	1	96.1	14	-	-	9.906795
13	3	60.1	20	1477.0	1734.0	11.120955
14	1	65.8	13	-	-	11.699635

Table 33 - 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)
0	3	53.0	10	1857.0	1712.0	1.049444
1	3	75.5	18	1649.0	1849.0	1.507877
2	3	76.6	5	1299.0	1672.0	2.540239
3	2	90.7	18	1970.0	-	3.926094
4	2	75.2	14	1479.0	-	5.223935
5	2	97.0	8	1946.0	-	5.820232
6	2	63.5	16	1595.0	-	6.889237
7	2	75.0	15	1342.0	-	8.307812
8	2	60.6	9	1371.0	-	9.364498
9	1	56.4	19	-	-	10.604118
10	2	51.4	14	1610.0	-	11.651542

Table 34 - 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)
0	3	79.2	15	1846.0	1987.0	0.045338
1	1	92.2	13	-	-	1.127728
2	2	84.9	12	1072.0	-	2.120163
3	1	99.9	13	-	-	3.737033
4	2	72.5	19	1878.0	-	4.752003
5	3	92.8	7	1096.0	1348.0	5.711160
6	1	79.8	6	-	-	6.061504
7	2	67.2	17	1326.0	-	7.565057
8	2	54.6	18	1120.0	-	8.922249
9	2	54.0	8	1470.0	-	9.004479
10	2	83.4	15	1353.0	-	10.481484
11	3	71.4	15	1330.0	1546.0	11.622817

Table 35 - 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)
0	2	54.6	13	1737.0	-	0.498578
1	2	56.1	10	1299.0	-	0.694256
2	2	77.9	14	1777.0	-	1.549858
3	1	77.5	18	-	-	2.273599
4	2	93.6	14	1959.0	-	2.528288
5	2	53.9	11	1779.0	-	3.756451
6	2	62.3	11	1360.0	-	4.055928
7	3	81.6	16	1291.0	1078.0	4.862263
8	1	64.7	13	-	-	5.466453
9	3	62.5	16	1988.0	1404.0	6.168394
10	2	84.0	8	1112.0	-	6.765754
11	2	74.3	11	1472.0	-	7.561197
12	3	74.4	9	1840.0	1244.0	7.729362

13	2	71.2	17	1065.0	-	8.336903
14	2	58.1	6	1238.0	-	9.005898
15	2	63.4	13	1778.0	-	9.833323
16	2	74.7	14	1911.0	-	10.171437
17	3	82.6	14	1903.0	1605.0	11.226593
18	2	59.3	17	1080.0	-	11.756283

Table 36 - 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)
0	2	59.0	18	1337.0	-	0.049973
1	2	80.7	20	1606.0	-	1.205819
2	2	92.0	19	1590.0	-	1.996359
3	1	72.2	14	-	-	2.328732
4	2	70.6	20	1132.0	-	3.454246
5	1	87.9	17	-	-	3.658049
6	2	91.8	7	1460.0	-	4.913573
7	2	52.2	16	1033.0	-	5.528185
8	2	85.5	5	1012.0	-	5.787081
9	2	83.6	19	1235.0	-	6.774097
10	2	99.1	8	1681.0	-	7.648061
11	2	93.3	11	1325.0	-	7.788913
12	1	98.9	12	-	-	8.864489
13	3	74.1	15	1576.0	1250.0	9.373652
14	3	71.9	13	1920.0	1439.0	10.545966
15	1	74.1	9	-	-	10.832346
16	1	53.6	8	-	-	11.703044

Table 37 - Long Sequence Waveform Trial#30 (Detected)

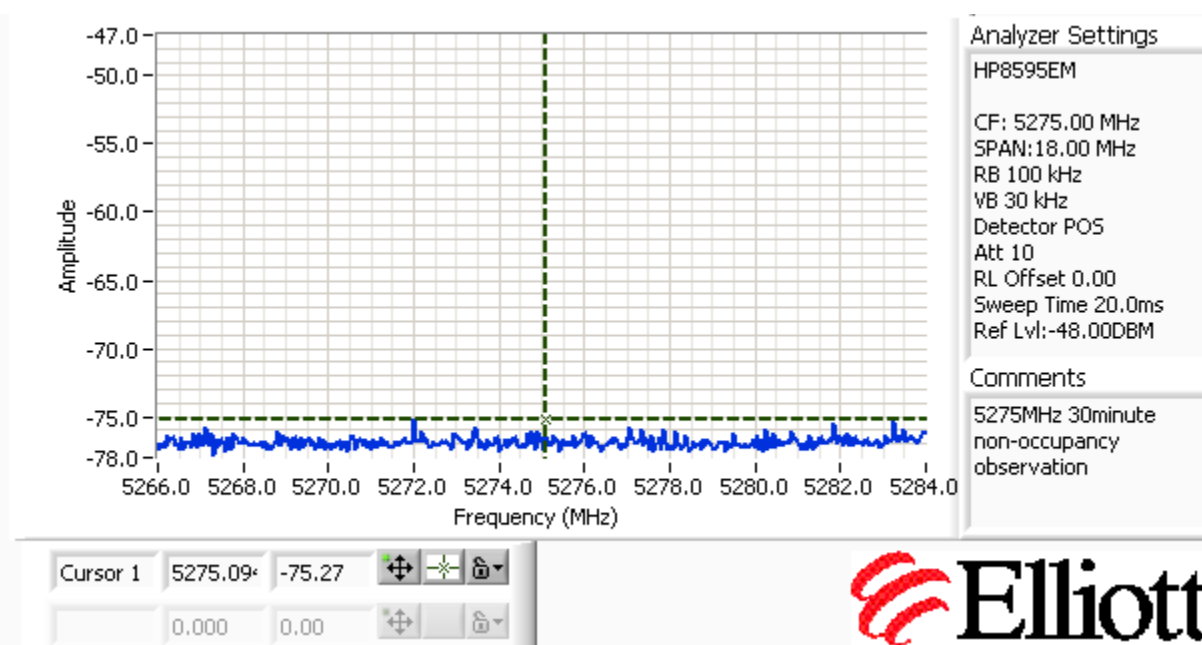
Burst #	# Pulses	Pulse Width (us)	Chirp (MHz)	Interval 1 to 2 (us)	Interval 2 to 3 (us)	Start time (us)
0	2	82.4	17	1435.0	-	0.142229
1	3	72.6	10	1948.0	1749.0	1.288438
2	2	82.8	9	1141.0	-	2.696516
3	1	96.9	13	-	-	3.381355
4	1	94.8	16	-	-	4.548229
5	1	92.2	12	-	-	5.403383
6	2	93.8	11	1909.0	-	6.324972
7	2	56.4	17	1659.0	-	6.780769
8	2	78.2	12	1031.0	-	7.507657
9	2	98.4	7	1312.0	-	8.485030
10	1	69.7	7	-	-	9.437808
11	2	71.9	5	1179.0	-	10.986970
12	1	68.0	20	-	-	11.194753

Appendix C Test Data Tables and Plots for Channel Closing**FCC PART 15 SUBPART E DATA**

Waveform Type	Channel Closing Transmission Time ¹		Channel Move Time		Result
	Measured	Limit	Measured	Limit	
Radar Type 1	0	60 ms	0	10 s	Complies
Radar Type 5	0	60 ms	0	10 s	Complies

Table 384 - FCC Part 15 Subpart E Channel Closing Test Results

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

**Figure 3 - 30 minute non occupancy observation 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.

Elliott Timing Plots - Channel Closing



Figure 4 - Close and Move, Short Pulse, 600ms window

Elliott Timing Plots - Channel Closing

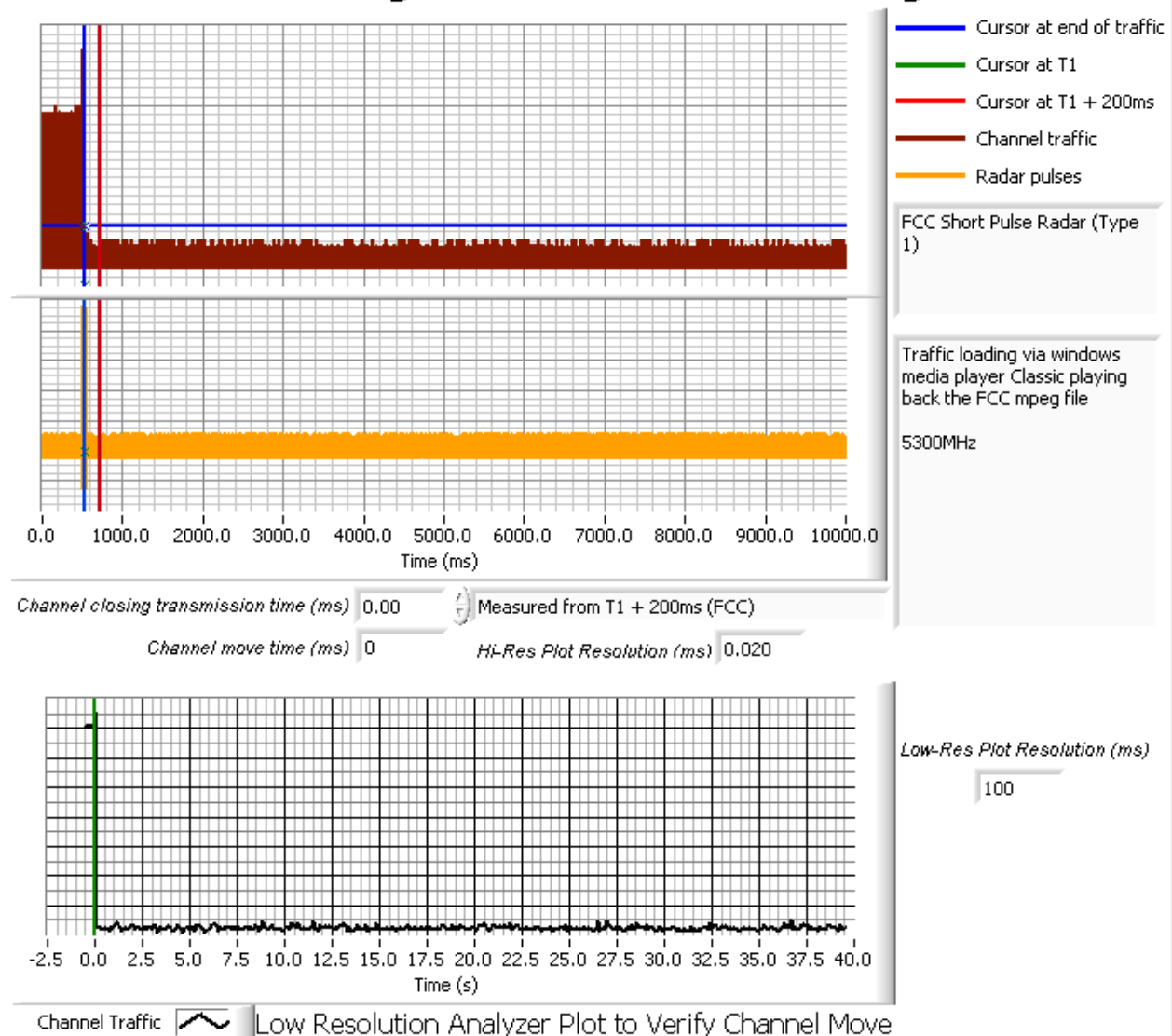


Figure 5 - Close and Move, Short Pulse

Elliott Timing Plots - Channel Closing

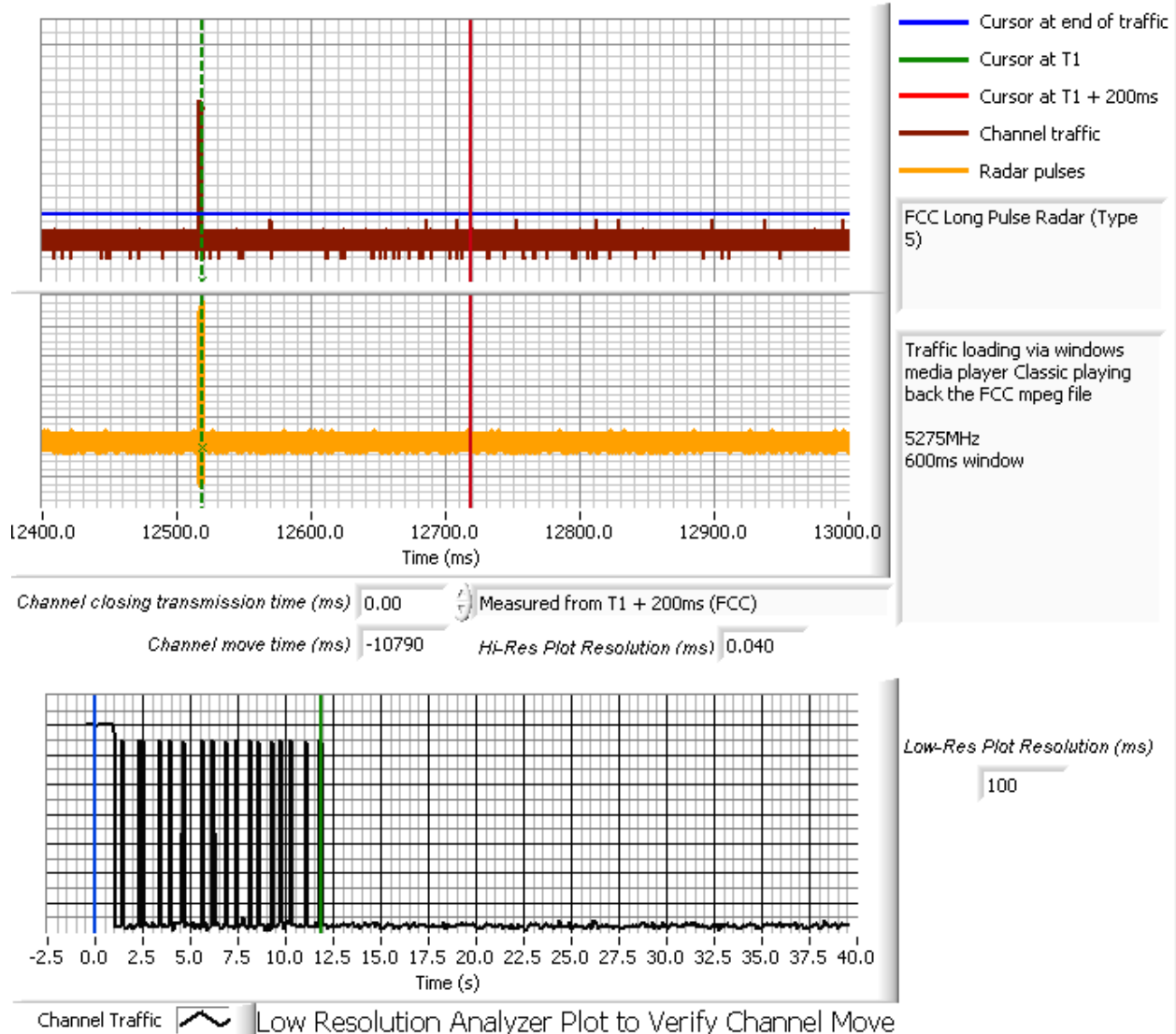


Figure 6 - Close and Move, Long Pulse, 600ms window

Elliott Timing Plots - Channel Closing

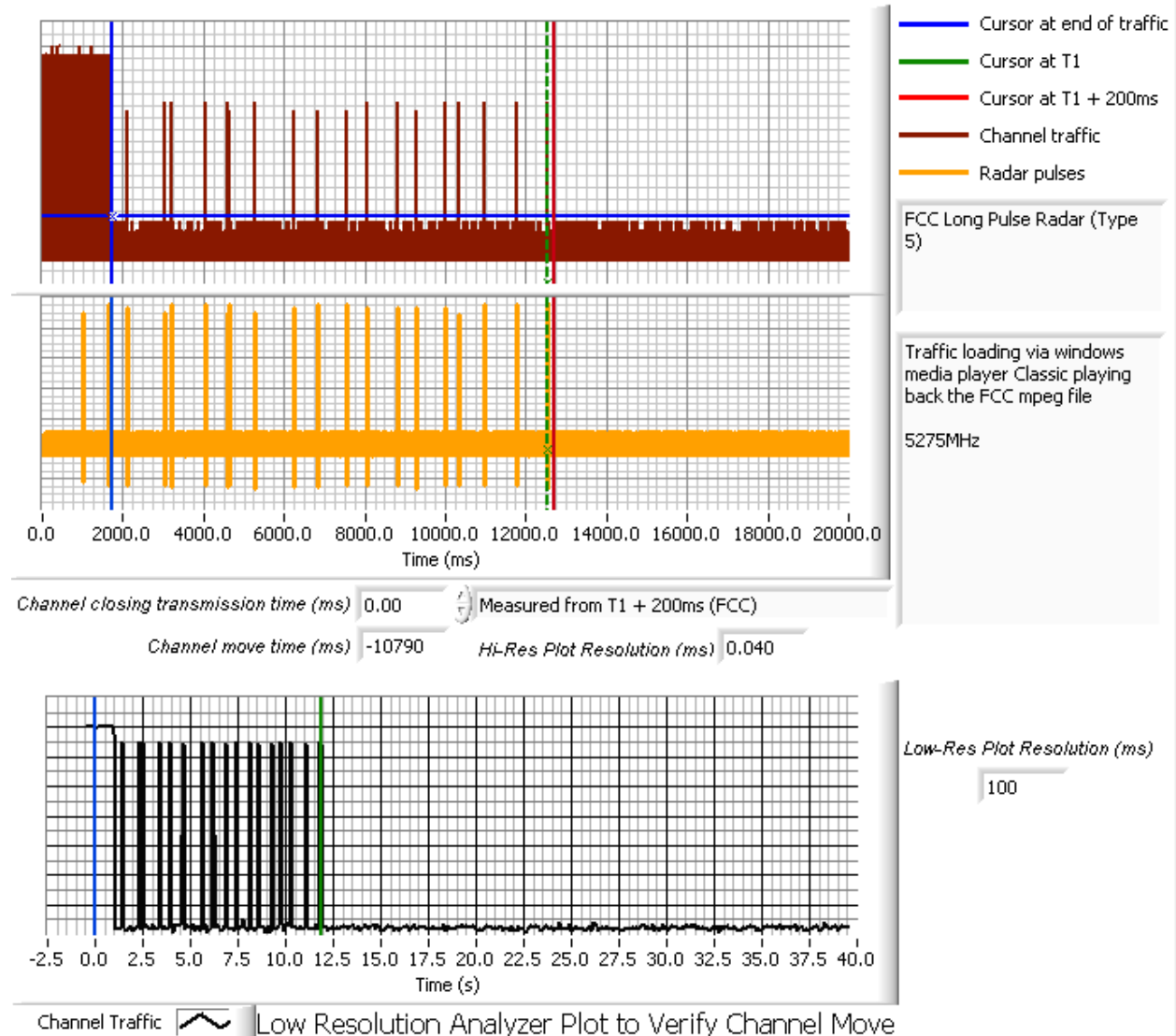


Figure 7 - Close and Move, Long Pulse

Appendix D Test Data – Channel Availability Check

The first plot shows the start of transmissions approximately 69s after the start of the CAC (no radar applied during the CAC).



Timing Plots - Channel Availability Check

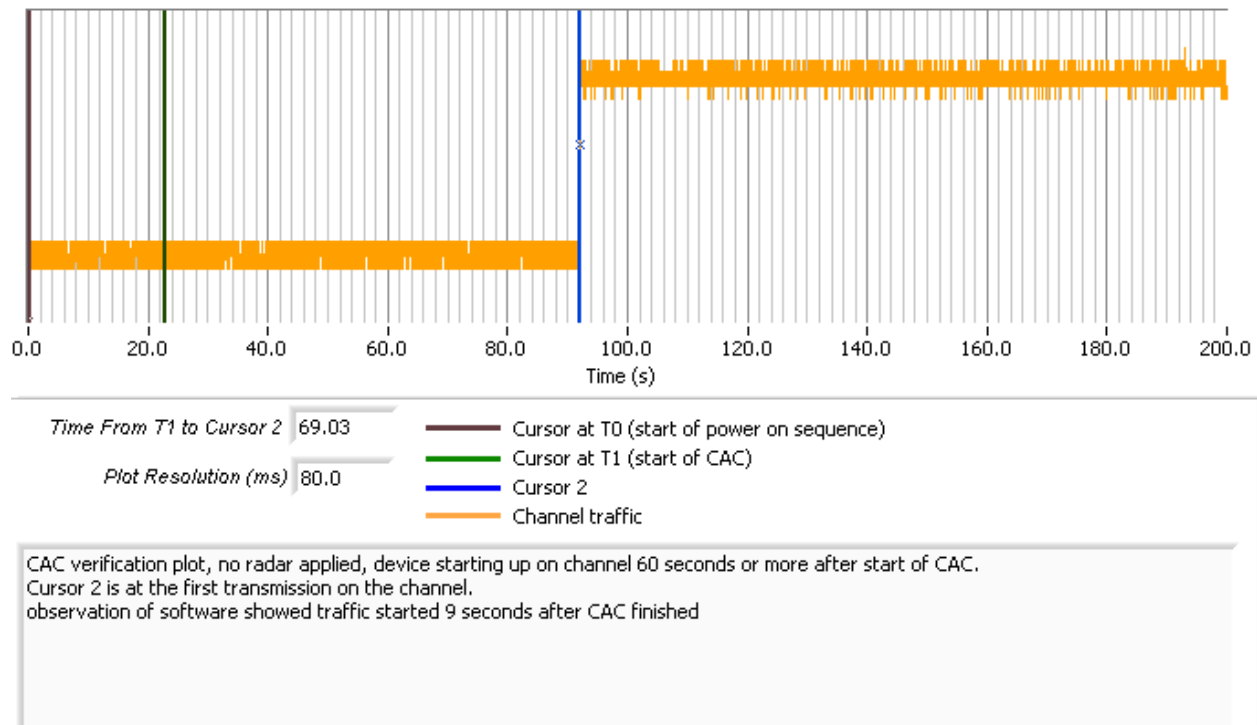


Figure 8 - Plot of EUT Start-Up After CAC

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

The level of the radar signal applied was -64dBm. Measurements were made on channel 55 (5275 MHz).

The start of each plot is the same for each of the plots and is set to coincide with the start of the Channel Availability Check period.

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

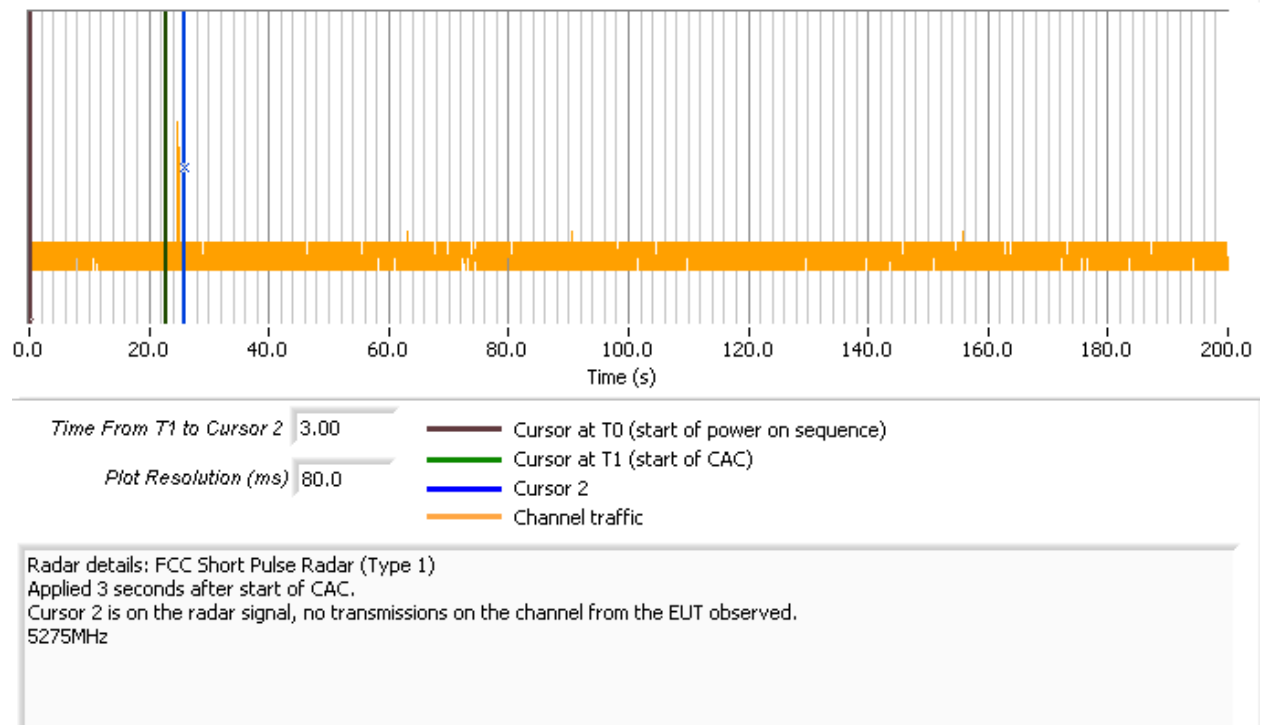


Figure 9 - Channel Availability Check, radar at beginning of check



Timing Plots - Channel Availability Check

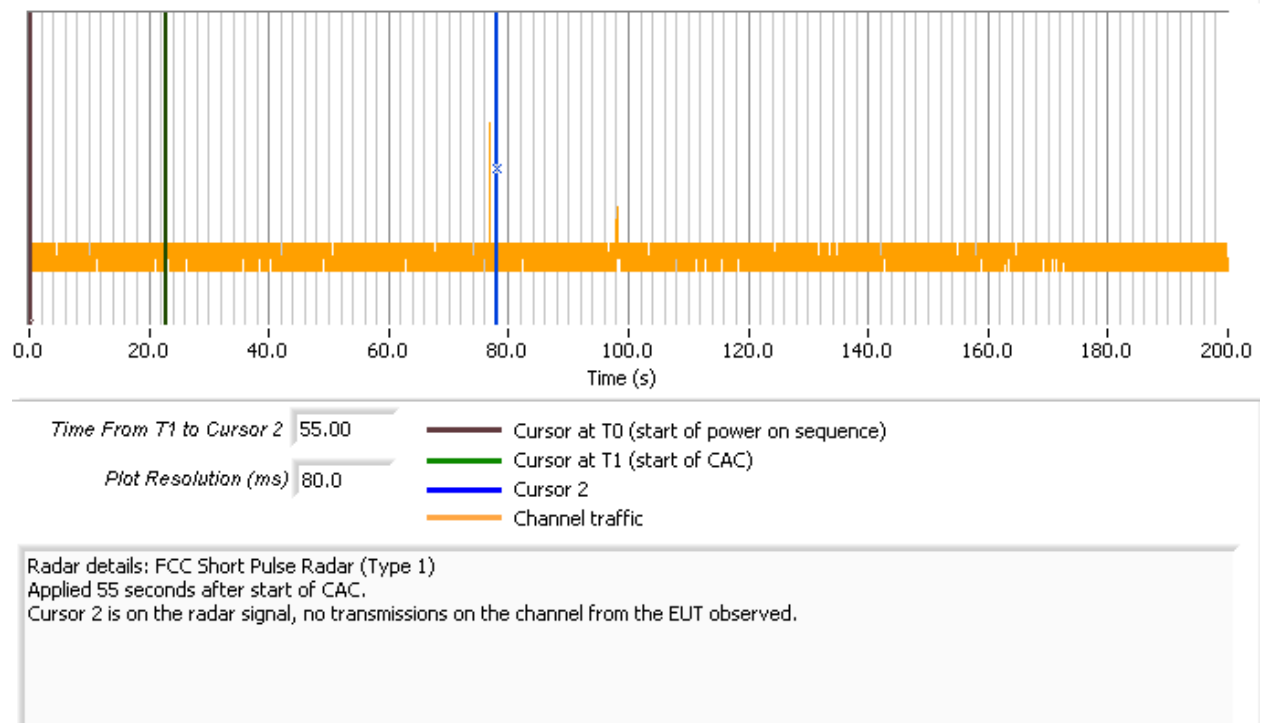


Figure 10 - Channel Availability Check, radar at end of check

Appendix E Antenna Specification Sheet

Antenna Specifications	Polarization	Vertical
	Gain, dBi (nominal) Beamwidth -3dB	16.5 ±0.5 dBi
	Horizontal Plane Beamwidth	60°
	Vertical Beamwidth -3 db	7°
	X-Polarization Rejection	15 dB Min.
	Front to Back	25 dB min.
	VSWR	1.5:1 Maximum
	Model #	CY-5204-8-60

Antenna Specifications	Polarization	Vertical
	Gain, dBi (nominal) Beamwidth -3dB	15.5 ±0.5 dBi
	Horizontal Plane Beamwidth	90°
	Vertical Beamwidth -3 db	7°
	X-Polarization Rejection	15 dB Min.
	Front to Back	25 dB min.
	VSWR	1.5:1 Maximum
	Model #	CY-5204-8-90

Antenna Specifications	Polarization	Vertical
	Gain, dBi (nominal) Beamwidth -3dB	14.5 ±0.5 dBi
	Horizontal Plane Beamwidth	120°
	Vertical Beamwidth -3 db	7°
	X-Polarization Rejection	15 dB Min.
	Front to Back	25 dB
	VSWR	1.5 Maximum
	Model #	CY-5204-8-120

Antenna Specifications	Polarization	Vertical
	Gain, dBi (nominal) Beamwidth -3dB	13.0 ±0.5 dBi
	Horizontal Plane Beamwidth	180°
	Vertical Beamwidth -3 db	7°
	X-Polarization Rejection	15 dB Min.
	Front to Back	20 dB min.
	VSWR	1.5:1 Maximum
	Model #	CY-5204-8-180

Antenna Specifications	Polarization	Vertical
	Gain, dBi (nominal) Beamwidth -3dB	10.0 dBi
	Horizontal Plane Beamwidth	360°
	Vertical Beamwidth -3 db	8.5°
	X-Polarization Rejection	23 dB Min.
	Electrical Downtilt	0°
	VSWR	1.5 Maximum
	Model #	CY-R380.600.200

Appendix F Test Configuration Photographs



Figure 11 - DFS Test Setup