

V. DFS Requirements and Radar Waveform Description & Calibration

A. DFS Requirements

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
<i>Non-Occupancy Period</i>	Yes	Not required	Yes
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Availability Check Time</i>	Yes	Not required	Not required
<i>Uniform Spreading</i>	Yes	Not required	Not required
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

Table 23. Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Closing Transmission Time</i>	Yes	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

Table 24. Applicability of DFS Requirements During Normal Operation

Maximum Transmit Power	Value
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 25. DFS Detection Thresholds for Master or Client Devices Incorporating DFS

Parameter	Value
<i>Non-occupancy period</i>	Minimum 30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds See Note 1
<i>Channel Closing Transmission Time</i>	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2
<i>U-NII Detection Bandwidth</i>	Minimum 80% of the 99% power bandwidth. See Note 3.
<p>Note 1: The instant that the <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> begins is as follows:</p> <ul style="list-style-type: none"> • For the Short pulse radar Test Signals this instant is the end of the <i>Burst</i>. • For the Frequency Hopping radar Test Signal, this instant is the end of the last radar <i>Burst</i> generated. • For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission. <p>Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required facilitating <i>Channel</i> changes (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.</p> <p>Note 3: During the <i>U-NII Detection Bandwidth</i> detection test, radar type 1 is used and for each frequency step the minimum percentage of detection is 90%. Measurements are performed with no data traffic.</p>	

Table 26. DFS Response Requirement Values

B. Radar Test Waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum 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

A minimum of 30 unique waveforms are required for each of the short pulse radar types 2 through 4. For short pulse radar type 1, the same waveform is used a minimum of 30 times. If more than 30 waveforms are used for short pulse radar types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. The aggregate is the average of the percentage of successful detections of short pulse radar types 1-4.

Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Bursts	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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

Each waveform is defined as follows:

- 1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
- 2) There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst_Count.
- 3) Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
- 4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
- 5) Each pulse has a linear FM chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a Burst will have the same chirp width. Pulses in different Bursts may have different chirp widths. The chirp is centered on the pulse. For example, with radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.
- 6) If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the time between the first and second pulses is chosen independently of the time between the second and third pulses.
- 7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst_Count. Each interval is of length $(12,000,000 / \text{Burst_Count})$ microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and $[(12,000,000 / \text{Burst_Count}) - (\text{Total Burst Length}) + (\text{One Random PRI Interval})]$ microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen independently.

A representative example of a Long Pulse radar test waveform:

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

Graphical Representation of a Long Pulse radar Test Waveform

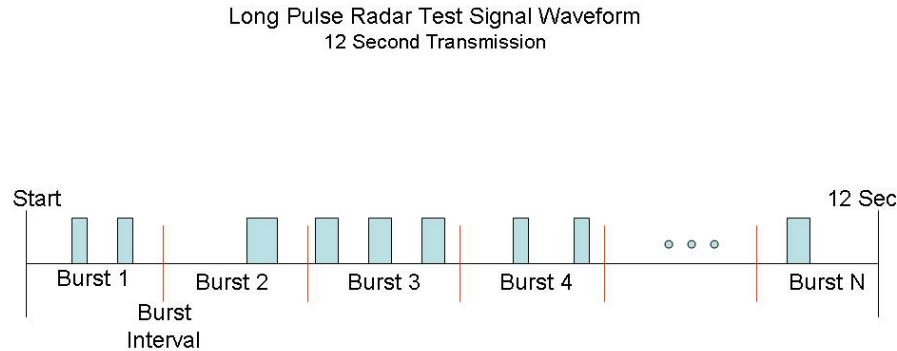


Figure 5. Long Pulse Radar Test Signal Waveform

Frequency Hopping Radar Test Waveform

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

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

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

C. Radar Waveform Calibration

The following equipment setup was used to calibrate the radiated Radar Waveform. A spectrum analyzer was used to establish the test signal level for each radar type. During this process there were no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) mode at the frequency of the Radar Waveform generator. Peak detection was utilized. The spectrum analyzer's resolution bandwidth (RBW) was set to 3 MHz and the video bandwidth (VBW) was set to 3 MHz. The calibration setup is diagrammed in Figure 6.

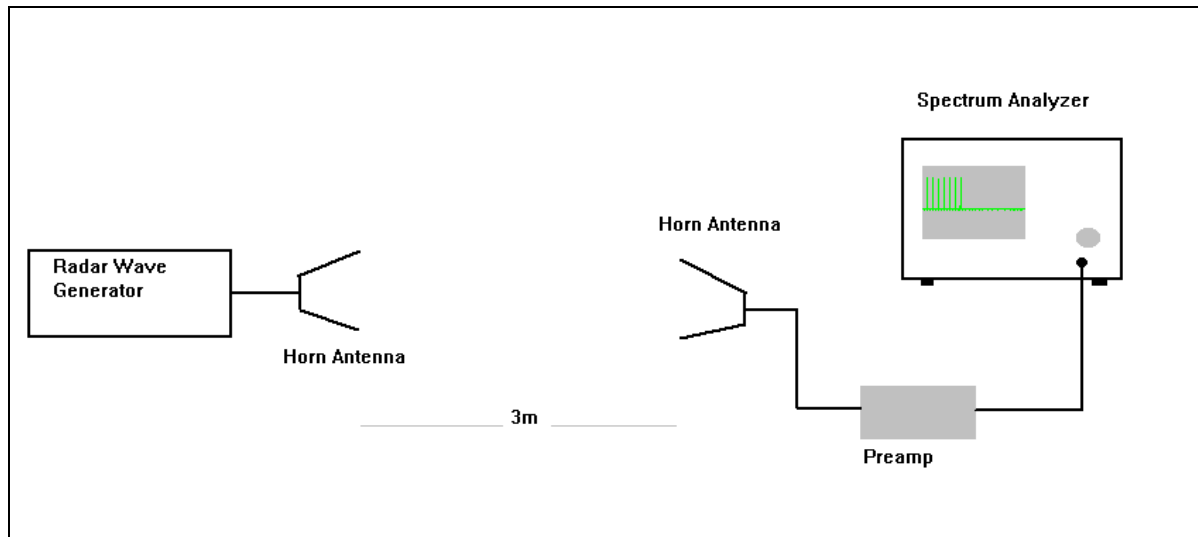
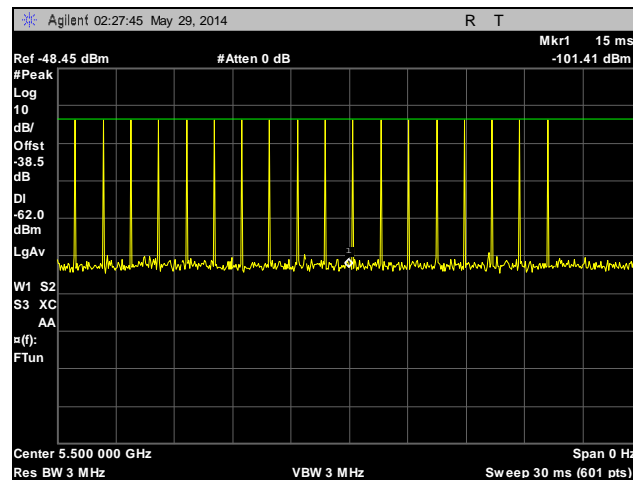
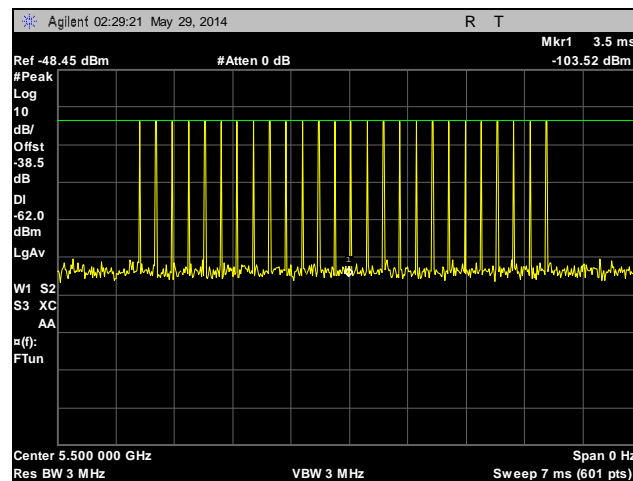


Figure 6. Calibration Test setup

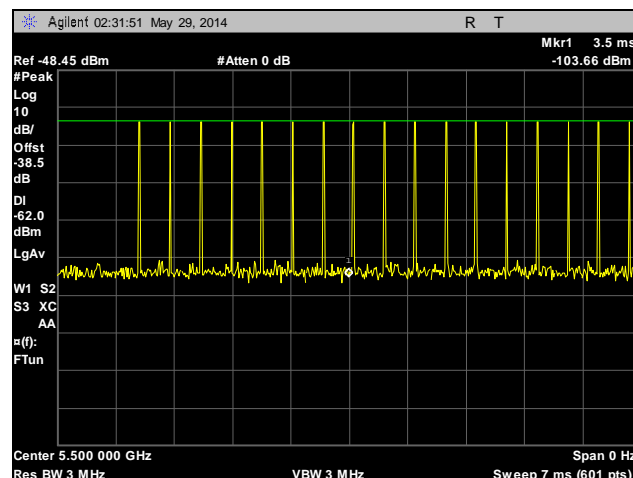
Radar Waveform Calibration, 20 MHz



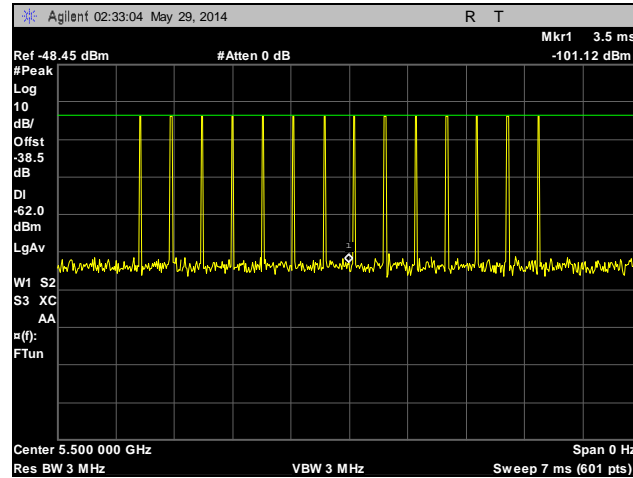
Plot 275. Radar Type 1 Calibration, 20 MHz, 5500 MHz



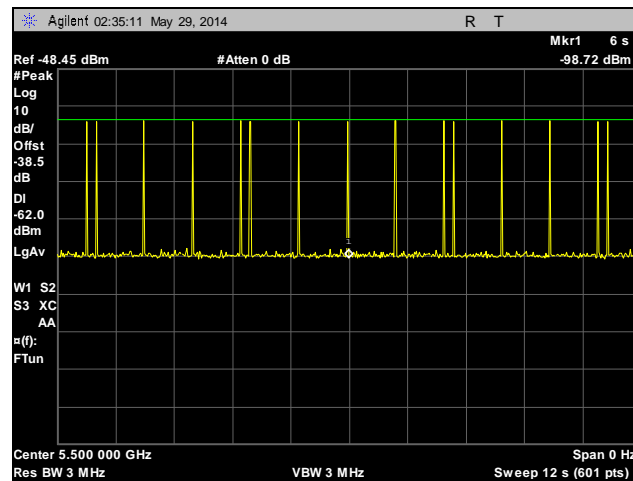
Plot 276. Radar Type 2 Calibration, 20 MHz, 5500 MHz



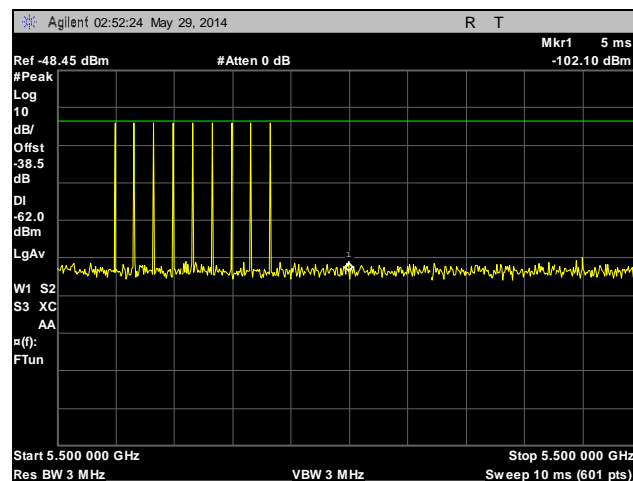
Plot 277. Radar Type 3 Calibration, 20 MHz, 5500 MHz



Plot 278. Radar Type 4 Calibration, 20 MHz, 5500 MHz

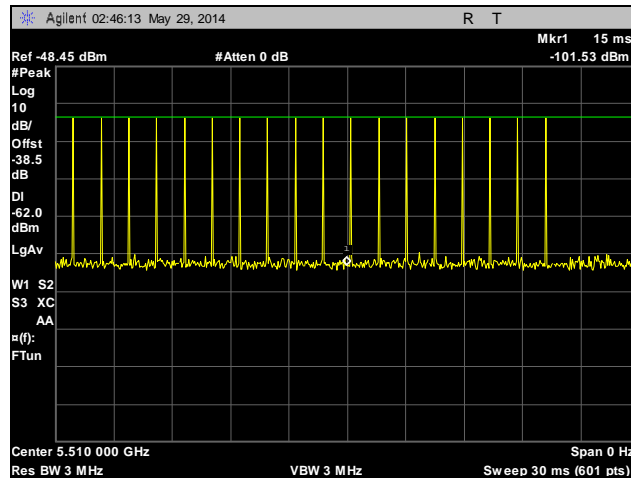


Plot 279. Radar Type 5 Calibration, 20 MHz, 5500 MHz

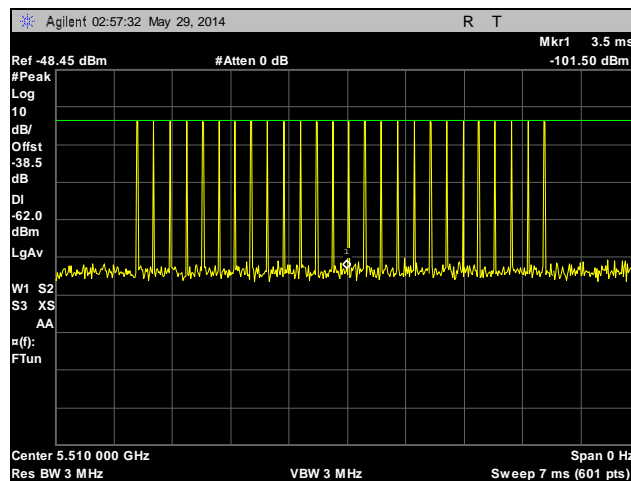


Plot 280. Radar Type 6 Calibration, 20 MHz, 5500 MHz

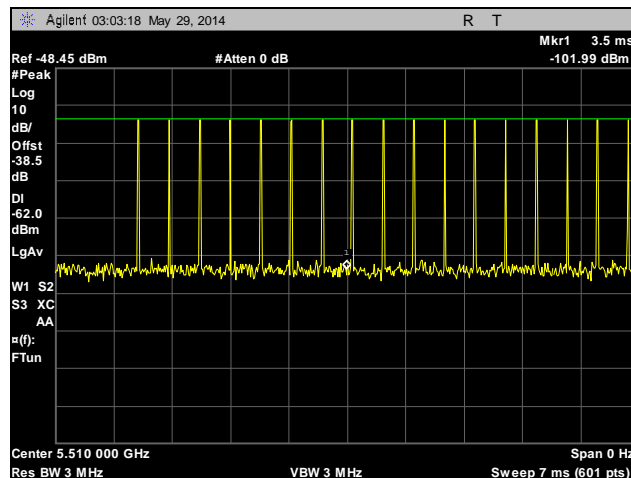
Radar Waveform Calibration, 40 MHz



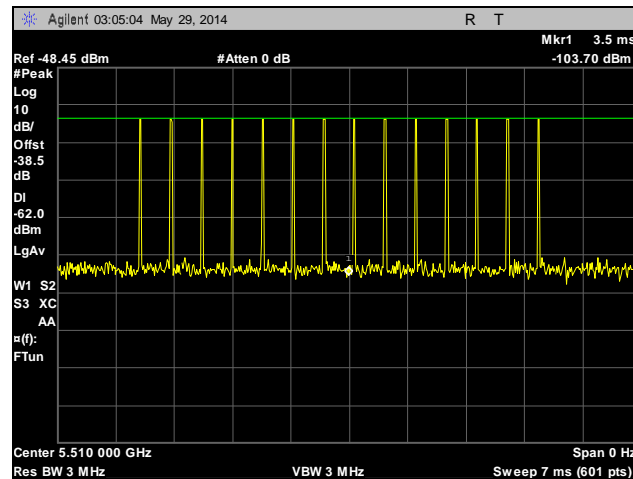
Plot 281. Radar Type 1 Calibration, 40 MHz, 5510 MHz



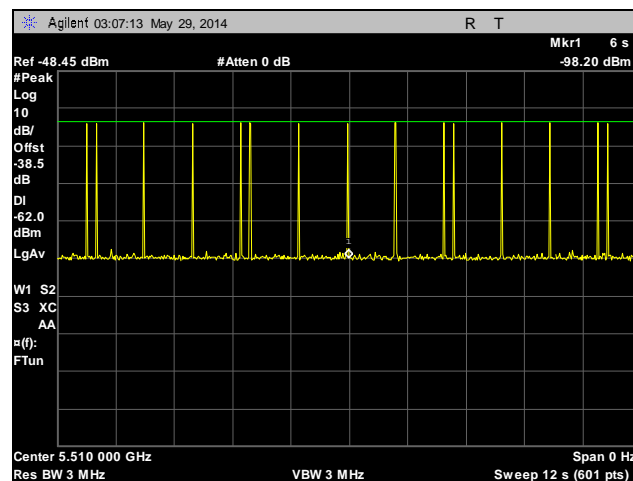
Plot 282. Radar Type 2 Calibration, 40 MHz, 5510 MHz



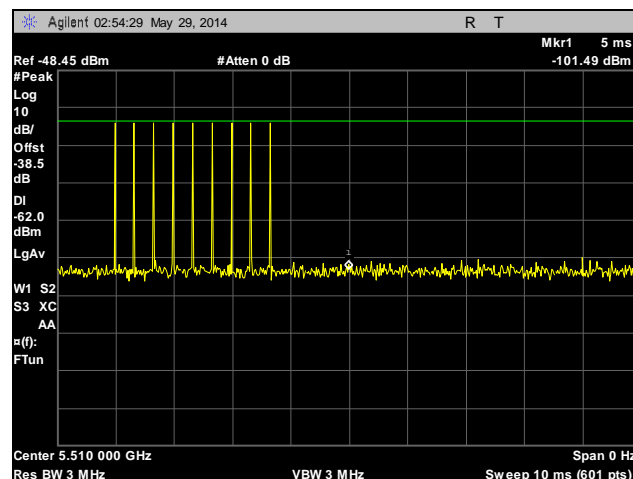
Plot 283. Radar Type 3 Calibration, 40 MHz, 5510 MHz



Plot 284. Radar Type 4 Calibration, 40 MHz, 5510 MHz



Plot 285. Radar Type 5 Calibration, 40 MHz, 5510 MHz



Plot 286. Radar Type 6 Calibration, 40 MHz, 5510 MHz

VI. DFS Test Procedure and Test Results

A. DFS Test Setup

1. A spectrum analyzer is used as a monitor to verify that the Unit Under Test (UUT) has vacated the Channel within the Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and subsequent Channel move. It is also used to monitor UUT transmissions during the Channel Availability Check Time.
2. The test setup, which consists of test equipment and equipment under test (EUT), is diagrammed in Figure 7.

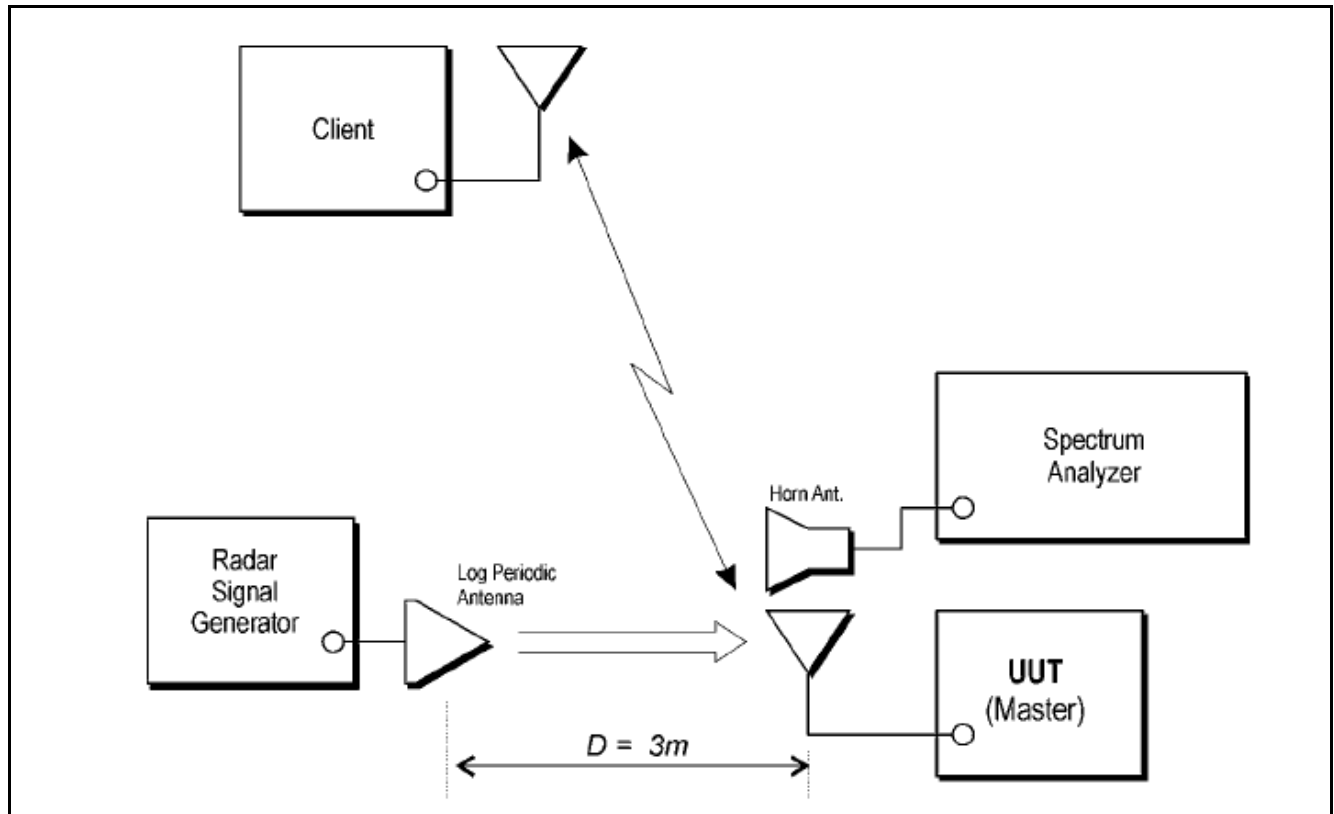


Figure 7. Test Setup Diagram

Note: A horn antenna was used to transmit the Radar Signals instead of a Log Periodic antenna.

B. EUT Information

1. Operating frequency range is 5250-5700 MHz
2. The EUT is a Master device
3. Highest EIRP = 28.93 dBm; Lowest EIRP = 13.67dBm
4. EUT has 2, 5 and 13.5 dBi antennas
5. For loading the channel in 96% of the time we transmit 1080p60 video resolution pattern. This video pattern is played from video source device that is connected to Falcon TX module through HDMI cable.
6. System block diagram is included in user manual Data rate - 63Mbps per channel Channel BW - 20MHz or 40MHz Frame based.
7. 60 seconds to complete power-on cycle.
8. Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms is not available to the end user is submitted as a separate declaration in the filing.

C. UNII Detection Bandwidth

Test Requirement(s): § 15.407 A Minimum 100% of the UNI II 99% transmission power bandwidth

Test Procedure: All UNII channels for this device have identical channel bandwidths.

A single burst of the short pulse radar type 1 is produced at 5500 MHz, at the -63dBm test level. The UUT is set up as a standalone device (no associated client, and no data traffic).

A single radar burst is generated for a minimum of 10 trials, and the response of the UUT is recorded. The UUT must detect the radar waveform 90% or more of the time.

The radar frequency is increased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The highest frequency at which detection is greater than or equal to 90% is denoted F_H .

The radar frequency is decreased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The lowest frequency at which detection is greater than or equal to 90% is denoted F_L .

The U-NII Detection Bandwidth is calculated as follows:

$$\text{U-NII Detection Bandwidth} = F_H - F_L$$

Test Results: EUT is compliant with the detection bandwidth requirement. $F_H - F_L > 99\%$ transmission power bandwidth.

Test Engineer: Djed Mouada

Test Date: 05/30/14 – 06/06/14

UNII Detection Bandwidth – Test Results

EUT Frequency- 5500MHz											
DFS Detection Trials (1=Detection, 0= No Detection)											
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5490	0	0	0	0	0	0	0	0	0	0	-
5491	1	1	1	1	1	1	1	1	1	1	100
5492	1	1	1	1	1	1	1	1	1	1	100
5493	1	1	1	1	1	1	1	1	1	1	100
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	1	1	1	1	1	1	1	1	1	100
5496	1	1	1	1	1	1	1	1	1	1	100
5497	1	1	1	1	1	1	1	1	1	1	100
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	1	1	1	1	1	1	1	1	100
5508	1	1	1	1	1	1	1	1	1	1	100
5509	1	1	1	1	1	1	1	1	1	1	100
5510	0	0	0	0	0	0	0	0	0	0	-
											100%
Detection Bandwidth = $f_h - f_l = 5509 \text{ MHz} - 5491 \text{ MHz} = 18 \text{ MHz}$											
EUT 99f% Bandwidth = 15.453MHz											

Table 27. UNII Detection Bandwidth, Test Results, 5500 MHz

EUT Frequency- 5510MHz											
DFS Detection Trials (1=Detection, 0= No Detection)											
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5489	1	1	1	1	1	1	1	1	1	1	100
5490	1	1	1	1	1	1	1	1	1	1	100
5491	1	1	1	1	1	1	1	1	1	1	100
5492	1	1	1	1	1	1	1	1	1	1	100
5493	1	1	1	1	1	1	1	1	1	1	100
5494	1	1	1	1	1	1	1	1	1	1	100
5495	1	1	1	1	1	1	1	1	1	1	100
5496	1	1	1	1	1	1	1	1	1	1	100
5497	1	1	1	1	1	1	1	1	1	1	100
5498	1	1	1	1	1	1	1	1	1	1	100
5499	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	1	1	1	1	1	1	1	100
5501	1	1	1	1	1	1	1	1	1	1	100
5502	1	1	1	1	1	1	1	1	1	1	100
5503	1	1	1	1	1	1	1	1	1	1	100
5504	1	1	1	1	1	1	1	1	1	1	100
5505	1	1	1	1	1	1	1	1	1	1	100
5506	1	1	1	1	1	1	1	1	1	1	100
5507	1	1	1	1	1	1	1	1	1	1	100
5508	1	1	1	1	1	1	1	1	1	1	100
5509	1	1	1	1	1	1	1	1	1	1	100
5510	1	1	1	1	1	1	1	1	1	1	100
5511	1	1	1	1	1	1	1	1	1	1	100
5512	1	1	1	1	1	1	1	1	1	1	100
5513	1	1	1	1	1	1	1	1	1	1	100
5514	1	1	1	1	1	1	1	1	1	1	100
5515	1	1	1	1	1	1	1	1	1	1	100
5516	1	1	1	1	1	1	1	1	1	1	100
5517	1	1	1	1	1	1	1	1	1	1	100
5518	1	1	1	1	1	1	1	1	1	1	100
5519	1	1	1	1	1	1	1	1	1	1	100
5520	1	1	1	1	1	1	1	1	1	1	100
5521	1	1	1	1	1	1	1	1	1	1	100
											100%
Detection Bandwidth = $f_h - f_l = 5521\text{MHz} - 5489\text{MHz} = 32\text{MHz}$											
EUT 99% Bandwidth = 31.1281MHz											

Table 28. UNII Detection Bandwidth, Test Results, 5510 MHz

D. Initial Channel Availability Check Time

Test Requirements: § 15.407 The Initial Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test channel until the power-up sequence has been completed and the U-NII device has checked for radar waveforms, for one minute, on the test channel. This test does not use any of the radar waveforms and only needs to be performed once.

The UUT should not make any transmissions over the test channel, for at least 1 minute after completion of its power-on cycle.

Test Procedure: The U-NII device is powered on and instructed to operate at 5500 MHz. At the same time the UUT is powered on, the spectrum analyzer is set to 5500MHz with a zero span and a 2.5 minute sweep time. The analyzer is triggered at the same time power is applied to the U-NII device.

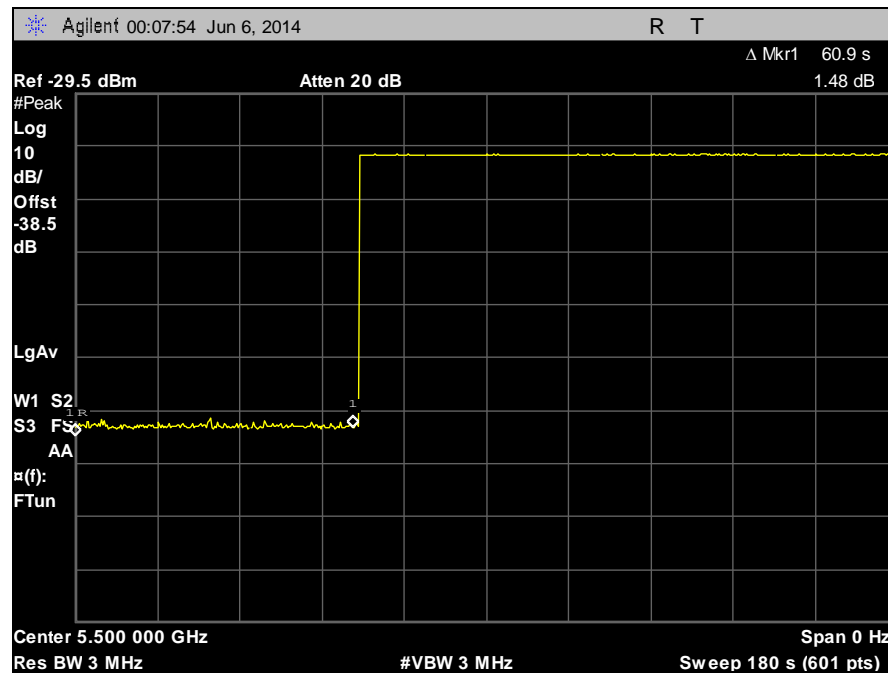
Test Results: Marker 1R on plot 221 indicates the start of the channel availability check time. Initial beacon/data transmission is indicated by marker 1.

The Equipment was compliant with § 15.407 Initial Channel Availability Check Time.

Test Engineer: Djed Mouada

Test Date: 06/05/14

Initial Channel Availability Check Time



Plot 287. Initial Channel Availability Check Time

E. Radar Burst at the Beginning of Channel Availability Check Time

Test Requirements: § 15.407 A Radar Burst at the Beginning of the Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test Channel if it has detected a radar burst during that time period until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the beginning of the Channel Availability Check Time.

Test Procedure: The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds.

A single Burst of short pulse radar type 1, at -63 dBm, will commence within a 6 second window starting at T1.

Visual indication of the UUT of successful detection of the radar Burst will be recorded and reported. Observation of transmission at 5500MHz will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window, no UUT transmissions occur at 5500MHz.

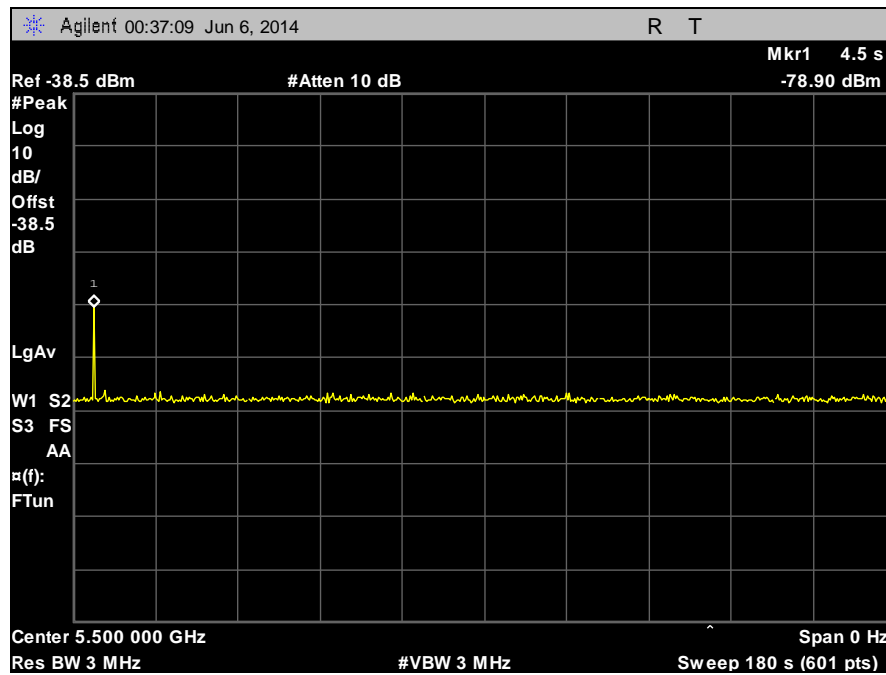
Test Results Plot 222 below indicates that there were no UUT transmissions during the 2.5 minute measurement window when a radar burst was injected 6 seconds into the CACT. Therefore, the UUT detected the presence of a radar during the CACT and moved away from that channel. The radar pulse is denoted by marker 1.

The equipment was compliant with § 15.407 Radar Burst at the Beginning of the Channel Availability Check Time.

Test Engineer: Djed Mouada

Test Date: 06/05/14

Radar Burst at the Beginning of Channel Availability Check Time



Plot 288. Radar Burst at the Beginning of CACT

F. Radar Burst at the End of Channel Availability Check Time

Test Requirements: § 15.407 A Radar Burst at the End of the Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test Channel if it has detected a radar burst during that time period until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the end of the Channel Availability Check Time.

Test Procedure: The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the end of the Channel Availability Check Time.

The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds.

A single Burst of short pulse of radar type 1 at -63 dBm will commence within a 6 second window starting at T1+ 54 seconds.

Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5500MHz will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window no UUT transmissions occurred at 5500MHz.

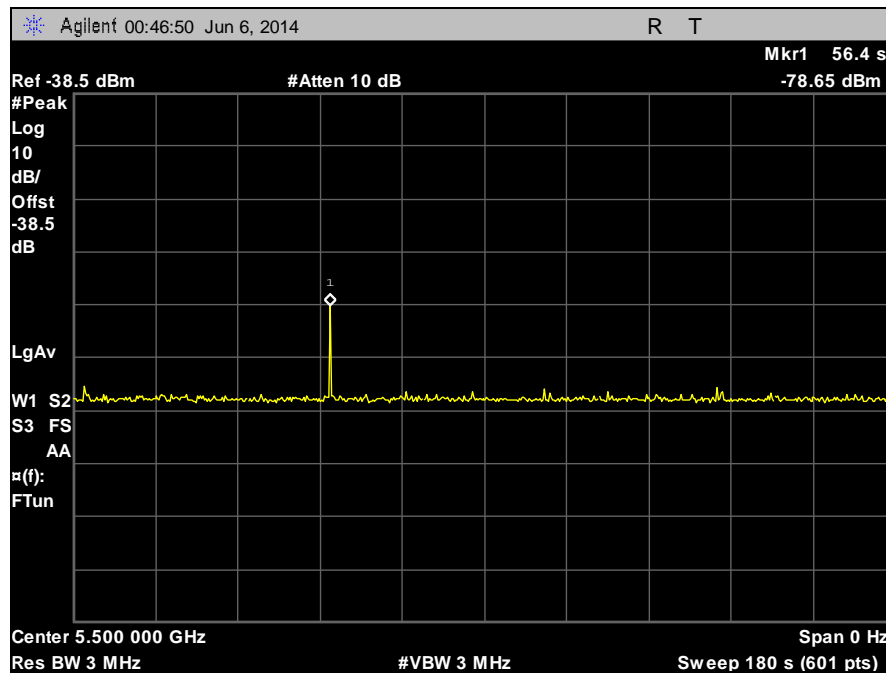
Test Results: Pots 223 indicates that no UUT transmissions occurred during the 2.5 minute measurement window when a radar burst was injected 6 seconds before the end of the CACT. Therefore, the UUT detected the presence of a radar and moved away from that channel. The radar pulse is denoted by marker 1.

The equipment was compliant with § 15.407 Radar Burst at the End of the Channel Availability Check Time.

Test Engineer: Djed Mouada

Test Date: 06/05/14

Radar Burst at the End of Channel Availability Check Time



Plot 289. Radar Burst at the End of CACT

G. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time, and Non-Occupancy Period

Test Requirements: § 15.407 (Refer to DFS Response Requirement Values table in section III-A of this report.) The UUT shall continuously monitor for radar transmissions in the operating test channel. When a radar burst occurs in the test channel, it has 10 seconds to move to another channel. This 10 second window is termed Channel Move Time (CMT).

When a radar burst occurs, the UUT has 200 milliseconds, plus an aggregate of 60 milliseconds, to cease transmission in the operating test channel. This 200 ms + 60 ms requirement is termed Channel Closing Transmission Time (CCT).

After radar burst and subsequent move to another channel, the UUT shall not resume transmission, on the channel it moved from, for a period of 30 minutes. This requirement is termed Non-Occupancy Period (NOP).

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

The steps below define the procedure to determine the above mentioned parameters when a radar Burst with a level equal to the DFS Detection Threshold + 1dB (-63dBm) is generated on the Operating Channel of the U-NII device.

A U-NII device operating as a Client Device will associate with the UUT (Master) at 5500 MHz. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test.

At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at -63dBm.

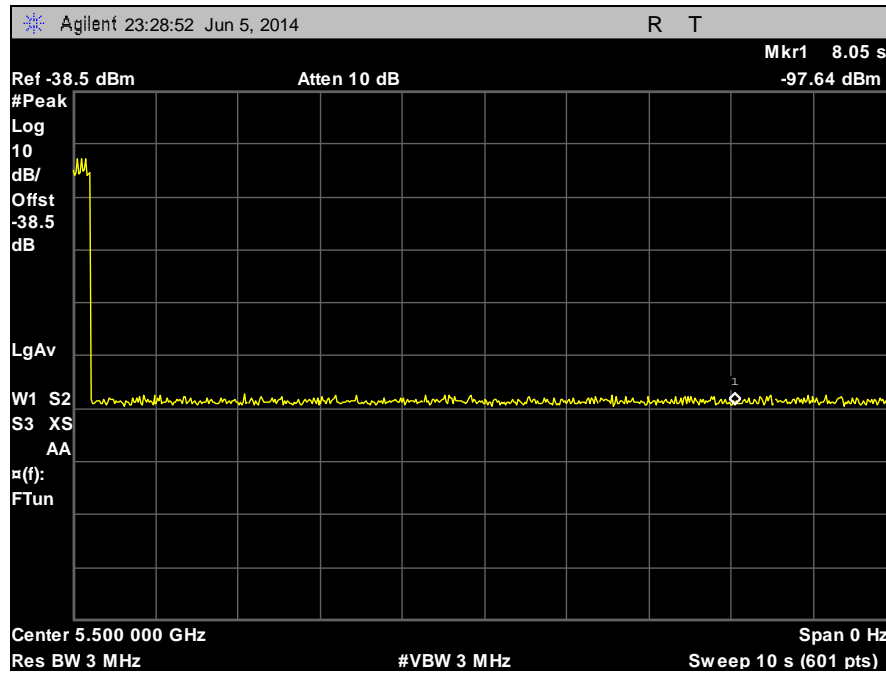
Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time results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

Test Results: The EUT was compliant with § 15.407 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time, and Non-Occupancy Period.

Test Engineer: Djed Mouada

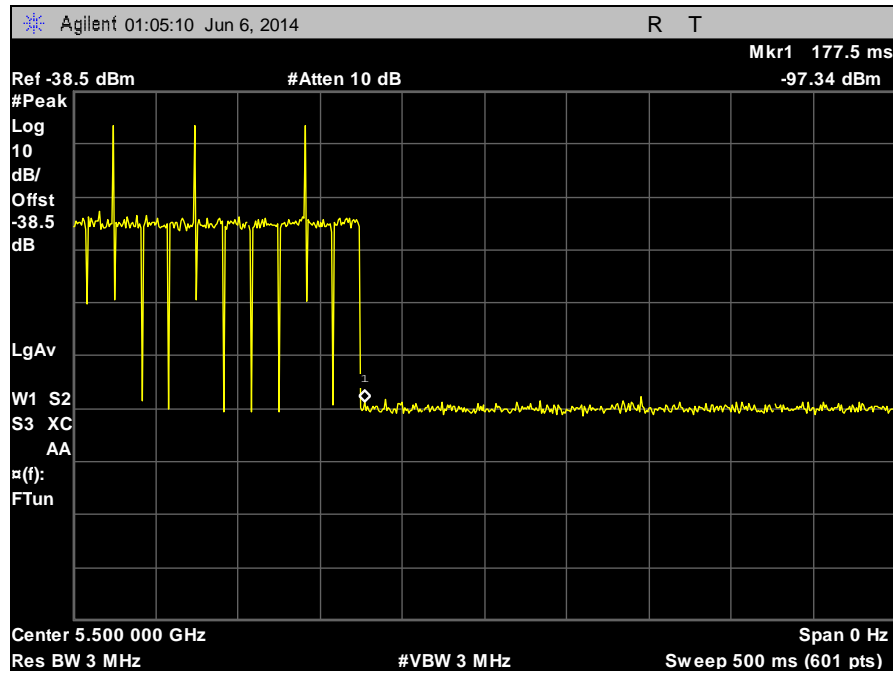
Test Date: 06/05/14

Channel Move Time



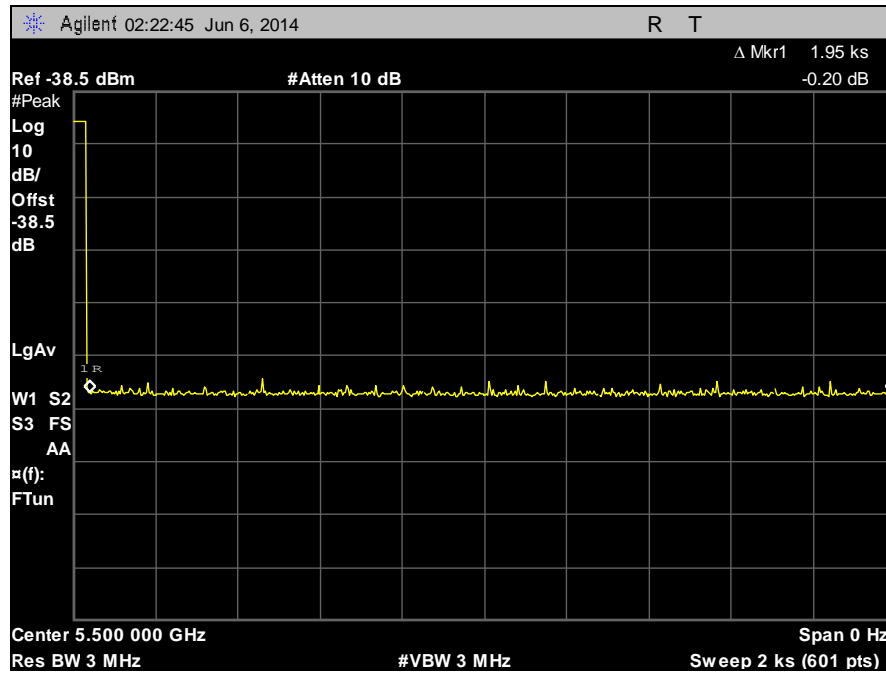
Plot 290. Channel Move Time, 5500 MHz

Channel Closing Time



Plot 291. Channel Closing Time

Non-Occupancy Period



Plot 292. Non-Occupancy Period

H. Statistical Performance Check

Test Requirements: § 15.407 During In-Service Monitoring, the EUT requires a minimum percentage of successful radar detections from all required radar waveforms at a level equal to the DFS Detection Threshold + 1dB.

Test Procedure: Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. The Radar Waveform generator sends the individual waveform for each of the radar types 1-6 at -63dbm. Statistical data is gathered to determine the ability of the device to detect the radar test waveforms. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs. The percentage of successful detection is calculated by:

$$\frac{TotalWaveformDetections}{TotalWaveformTrials} \times 100$$

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

Test Results: The equipment was compliant with § 15.407 Statistical Performance Check.

Test Engineer: Djed Mouada

Test Date: 06/06/14

Statistical Performance Check – Radar Type 1, 5500 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (μsec)	PRI (μsec)	Detection
					1 = Yes, 0 = No
1	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	30	18	1	1428	1
Detection Percentage					100% (> 60%)

Table 29. Statistical Performance Check – Radar Type 1, 5500 MHz

Statistical Performance Check – Radar Type 2, 5500 MHz

Radar Type	Trial #	Pulse Width 1 to 5 μ sec	PRI 150 to 230 μ sec	Pulses per Burst 23 to 29	Detection
					1 = Yes, 0 = No
2	1	3.2	195.0	26	1
	2	1.1	153.0	23	1
	3	2.1	172.0	24	1
	4	4.8	225.0	29	1
	5	3.9	208.0	28	1
	6	2.9	188.0	26	1
	7	3.2	194.0	26	1
	8	2.5	179.0	25	1
	9	3.1	193.0	26	1
	10	1.2	155.0	23	1
	11	3.9	207.0	27	1
	12	4.6	221.0	29	1
	13	3.2	194.0	26	1
	14	2.2	175.0	25	1
	15	4.5	220.0	29	1
	16	3.0	190.0	26	1
	17	5.0	229.0	29	1
	18	2.4	178.0	25	1
	19	2.9	188.0	26	1
	20	2.3	175.0	25	1
	21	3.7	204.0	27	1
	22	2.2	175.0	25	1
	23	4.9	228.0	29	1
	24	2.9	188.0	26	1
	25	2.5	181.0	25	1
	26	1.1	153.0	23	1
	27	3.8	206.0	27	1
	28	4.7	223.0	29	1
	29	2.4	179.0	25	1
	30	4.2	214.0	28	1
Detection Percentage					100% (>60%)

Table 30. Statistical Performance Check – Radar Type 2, 5500 MHz

Statistical Performance Check – Radar Type 3, 5500 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 6 to 10 μ sec	PRI (μ sec) PRI 200 to 500 μ sec	Detection
					1 = Yes, 0 = No
3	1	17	8.2	367.0	1
	2	16	6.1	211.0	1
	3	16	7.1	283.0	1
	4	18	9.8	480.0	1
	5	18	8.9	416.0	1
	6	17	7.9	343.0	1
	7	17	8.2	364.0	1
	8	17	7.5	310.0	1
	9	17	8.1	361.0	1
	10	16	6.2	219.0	1
	11	18	8.9	415.0	1
	12	18	9.6	467.0	1
	13	17	8.2	366.0	1
	14	16	7.2	294.0	1
	15	18	9.5	462.0	1
	16	17	8.0	350.0	1
	17	18	10.0	497.0	1
	18	17	7.4	305.0	1
	19	17	7.9	342.0	1
	20	16	7.3	296.0	1
	21	18	8.7	403.0	1
	22	16	7.2	293.0	1
	23	18	9.9	493.0	1
	24	17	7.9	343.0	1
	25	17	7.5	317.0	1
	26	16	6.1	211.0	1
	27	18	8.8	409.0	1
	28	18	9.7	473.0	1
	29	17	7.4	308.0	1
	30	18	9.2	439.0	1
Detection Percentage					100% (> 60%)

Table 31. Statistical Performance Check – Radar Type 3, 5500 MHz

Statistical Performance Check – Radar Type 4, 5500 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 11 to 20 μ sec	PRI (μ sec) PRI 200 to 500 μ sec	Detection
					1 = Yes, 0 = No
4	1	14	16.0	367.0	1
	2	12	11.3	211.0	1
	3	13	13.5	283.0	1
	4	16	19.4	480.0	1
	5	15	17.5	416.0	1
	6	14	15.3	343.0	1
	7	14	15.9	364.0	1
	8	13	14.3	310.0	1
	9	14	15.8	361.0	1
	10	12	11.5	219.0	1
	11	15	17.4	415.0	1
	12	16	19.0	467.0	1
	13	14	16.0	366.0	1
	14	13	13.8	294.0	1
	15	16	18.9	462.0	1
	16	14	15.5	350.0	1
	17	16	19.9	497.0	1
	18	13	14.1	305.0	1
	19	14	15.2	342.0	1
	20	13	13.8	296.0	1
	21	15	17.1	403.0	1
	22	13	13.8	293.0	1
	23	16	19.8	493.0	1
	24	14	15.3	343.0	1
	25	13	14.5	317.0	1
	26	12	11.3	211.0	1
	27	15	17.3	409.0	1
	28	16	19.2	473.0	1
	29	13	14.2	308.0	1
	30	15	18.2	439.0	1
Detection Percentage					100% (> 60%)

Table 32. Statistical Performance Check – Radar Type 4, 5500 MHz

Statistical Performance Check – Radar Type 5, 5500 MHz

Radar Type	Trial #	Pulses per Burst 8 to 20	Pulse Width 50 to 100 μ sec	PRI (μ sec) PRI 1000 to 2000 μ sec	Detection
					1 = Yes, 0 = No
5	1	15	*See table 1	*See table 1	1
	2	8	*See table 2	*See table 2	1
	3	11	*See table 3	*See table 3	1
	4	20	*See table 4	*See table 4	1
	5	17	*See table 5	*See table 5	1
	6	14	*See table 6	*See table 6	1
	7	15	*See table 7	*See table 7	1
	8	12	*See table 8	*See table 8	1
	9	14	*See table 9	*See table 9	1
	10	8	*See table 10	*See table 10	1
	11	17	*See table 11	*See table 11	1
	12	19	*See table 12	*See table 12	1
	13	15	*See table 13	*See table 13	1
	14	12	*See table 14	*See table 14	1
	15	19	*See table 15	*See table 15	1
	16	14	*See table 16	*See table 16	1
	17	20	*See table 17	*See table 17	1
	18	12	*See table 18	*See table 18	1
	19	14	*See table 19	*See table 19	1
	20	12	*See table 20	*See table 20	1
	21	16	*See table 21	*See table 21	1
	22	12	*See table 22	*See table 22	1
	23	20	*See table 23	*See table 23	1
	24	14	*See table 24	*See table 24	1
	25	13	*See table 25	*See table 25	1
	26	8	*See table 26	*See table 26	1
	27	17	*See table 27	*See table 27	1
	28	19	*See table 28	*See table 28	1
	29	12	*See table 29	*See table 29	1
	30	18	*See table 30	*See table 30	1
Detection Percentage					100% (> 60%)

Table 33. Statistical Performance Check – Radar Type 5, 5500 MHz

Note: See Appendix for Bin 5 test data –Table 42 - Table 71.

Statistical Performance Check – Radar Type 6, 5500 MHz

Radar Type	Trial #	Frequency (MHz)	Pulses/Hop	Pulse Width (μsec)	PRI (μsec)	Detection
						1 = Yes, 0 = No
6	1	5500	9	1	333	1
	2	5500	9	1	333	1
	3	5500	9	1	333	1
	4	5500	9	1	333	1
	5	5500	9	1	333	1
	6	5500	9	1	333	1
	7	5500	9	1	333	1
	8	5500	9	1	333	1
	9	5500	9	1	333	1
	10	5500	9	1	333	1
	11	5500	9	1	333	1
	12	5500	9	1	333	1
	13	5500	9	1	333	1
	14	5500	9	1	333	1
	15	5500	9	1	333	1
	16	5500	9	1	333	1
	17	5500	9	1	333	1
	18	5500	9	1	333	1
	19	5500	9	1	333	1
	20	5500	9	1	333	1
	21	5500	9	1	333	1
	22	5500	9	1	333	1
	23	5500	9	1	333	1
	24	5500	9	1	333	1
	25	5500	9	1	333	1
	26	5500	9	1	333	1
	27	5500	9	1	333	1
	28	5500	9	1	333	1
	29	5500	9	1	333	1
	30	5500	9	1	333	1
Detection Percentage						100% (> 70%)

Table 34. Statistical Performance Check – Radar Type 6, 5500 MHz

Statistical Performance Check – Radar Type 1, 5510 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width (μsec)	PRI (μsec)	Detection
					1 = Yes, 0 = No
1	1	18	1	1428	1
	2	18	1	1428	1
	3	18	1	1428	1
	4	18	1	1428	1
	5	18	1	1428	1
	6	18	1	1428	1
	7	18	1	1428	1
	8	18	1	1428	1
	9	18	1	1428	1
	10	18	1	1428	1
	11	18	1	1428	1
	12	18	1	1428	1
	13	18	1	1428	1
	14	18	1	1428	1
	15	18	1	1428	1
	16	18	1	1428	1
	17	18	1	1428	1
	18	18	1	1428	1
	19	18	1	1428	1
	20	18	1	1428	1
	21	18	1	1428	1
	22	18	1	1428	1
	23	18	1	1428	1
	24	18	1	1428	1
	25	18	1	1428	1
	26	18	1	1428	1
	27	18	1	1428	1
	28	18	1	1428	1
	29	18	1	1428	1
	30	18	1	1428	1
Detection Percentage					100% (> 60%)

Table 35. Statistical Performance Check – Radar Type 1, 5510 MHz

Statistical Performance Check – Radar Type 2, 5510 MHz

Radar Type	Trial #	Pulse Width 1 to 5 μ sec	PRI 150 to 230 μ sec	Pulses per Burst 23 to 29	Detection
					1 = Yes, 0 = No
2	1	3.2	195.0	26	1
	2	1.1	153.0	23	1
	3	2.1	172.0	24	1
	4	4.8	225.0	29	1
	5	3.9	208.0	28	1
	6	2.9	188.0	26	1
	7	3.2	194.0	26	1
	8	2.5	179.0	25	1
	9	3.1	193.0	26	1
	10	1.2	155.0	23	1
	11	3.9	207.0	27	1
	12	4.6	221.0	29	1
	13	3.2	194.0	26	1
	14	2.2	175.0	25	1
	15	4.5	220.0	29	1
	16	3.0	190.0	26	1
	17	5.0	229.0	29	1
	18	2.4	178.0	25	1
	19	2.9	188.0	26	1
	20	2.3	175.0	25	1
	21	3.7	204.0	27	1
	22	2.2	175.0	25	1
	23	4.9	228.0	29	1
	24	2.9	188.0	26	1
	25	2.5	181.0	25	1
	26	1.1	153.0	23	1
	27	3.8	206.0	27	1
	28	4.7	223.0	29	1
	29	2.4	179.0	25	1
	30	4.2	214.0	28	1
Detection Percentage					100% (>60%)

Table 36. Statistical Performance Check – Radar Type 2, 5510 MHz

Statistical Performance Check – Radar Type 3, 5510 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 6 to 10 μ sec	PRI (μ sec) PRI 200 to 500 μ sec	Detection
					1 = Yes, 0 = No
3	1	17	8.2	367.0	1
	2	16	6.1	211.0	1
	3	16	7.1	283.0	1
	4	18	9.8	480.0	1
	5	18	8.9	416.0	1
	6	17	7.9	343.0	1
	7	17	8.2	364.0	1
	8	17	7.5	310.0	1
	9	17	8.1	361.0	1
	10	16	6.2	219.0	1
	11	18	8.9	415.0	1
	12	18	9.6	467.0	1
	13	17	8.2	366.0	1
	14	16	7.2	294.0	1
	15	18	9.5	462.0	1
	16	17	8.0	350.0	1
	17	18	10.0	497.0	1
	18	17	7.4	305.0	1
	19	17	7.9	342.0	1
	20	16	7.3	296.0	1
	21	18	8.7	403.0	1
	22	16	7.2	293.0	1
	23	18	9.9	493.0	1
	24	17	7.9	343.0	1
	25	17	7.5	317.0	1
	26	16	6.1	211.0	1
	27	18	8.8	409.0	1
	28	18	9.7	473.0	1
	29	17	7.4	308.0	1
	30	18	9.2	439.0	1
Detection Percentage					100% (> 60%)

Table 37. Statistical Performance Check – Radar Type 3, 5510 MHz

Statistical Performance Check – Radar Type 4, 5510 MHz

Radar Type	Trial #	Pulses per Burst	Pulse Width 11 to 20 µsec	PRI (µsec) PRI 200 to 500 µsec	Detection
					1 = Yes, 0 = No
4	1	14	16.0	367.0	1
	2	12	11.3	211.0	1
	3	13	13.5	283.0	1
	4	16	19.4	480.0	1
	5	15	17.5	416.0	1
	6	14	15.3	343.0	1
	7	14	15.9	364.0	1
	8	13	14.3	310.0	1
	9	14	15.8	361.0	1
	10	12	11.5	219.0	1
	11	15	17.4	415.0	1
	12	16	19.0	467.0	1
	13	14	16.0	366.0	1
	14	13	13.8	294.0	1
	15	16	18.9	462.0	1
	16	14	15.5	350.0	1
	17	16	19.9	497.0	1
	18	13	14.1	305.0	1
	19	14	15.2	342.0	1
	20	13	13.8	296.0	1
	21	15	17.1	403.0	1
	22	13	13.8	293.0	1
	23	16	19.8	493.0	1
	24	14	15.3	343.0	1
	25	13	14.5	317.0	1
	26	12	11.3	211.0	1
	27	15	17.3	409.0	1
	28	16	19.2	473.0	1
	29	13	14.2	308.0	1
	30	15	18.2	439.0	1
Detection Percentage					100% (> 60%)

Table 38. Statistical Performance Check – Radar Type 4, 5510 MHz

Statistical Performance Check – Radar Type 5, 5510 MHz

Radar Type	Trial #	Pulses per Burst 8 to20	Pulse Width 50 to 100 µsec	PRI (µsec) PRI 1000 to 2000 µsec	Detection
					1 = Yes, 0 = No
5	1	15	*See table 1	*See table 1	1
	2	8	*See table 2	*See table 2	1
	3	11	*See table 3	*See table 3	1
	4	20	*See table 4	*See table 4	1
	5	17	*See table 5	*See table 5	1
	6	14	*See table 6	*See table 6	1
	7	15	*See table 7	*See table 7	1
	8	12	*See table 8	*See table 8	1
	9	14	*See table 9	*See table 9	1
	10	8	*See table 10	*See table 10	1
	11	17	*See table 11	*See table 11	1
	12	19	*See table 12	*See table 12	1
	13	15	*See table 13	*See table 13	1
	14	12	*See table 14	*See table 14	1
	15	19	*See table 15	*See table 15	1
	16	14	*See table 16	*See table 16	1
	17	20	*See table 17	*See table 17	1
	18	12	*See table 18	*See table 18	1
	19	14	*See table 19	*See table 19	1
	20	12	*See table 20	*See table 20	1
	21	16	*See table 21	*See table 21	1
	22	12	*See table 22	*See table 22	1
	23	20	*See table 23	*See table 23	1
	24	14	*See table 24	*See table 24	1
	25	13	*See table 25	*See table 25	1
	26	8	*See table 26	*See table 26	1
	27	17	*See table 27	*See table 27	1
	28	19	*See table 28	*See table 28	1
	29	12	*See table 29	*See table 29	1
	30	18	*See table 30	*See table 30	1
Detection Percentage					100% (> 60%)

Table 39. Statistical Performance Check – Radar Type 5, 5510 MHz

Note: See Appendix for Bin 5 test data – Table 72 - Table 101.

Statistical Performance Check – Radar Type 6, 5510 MHz

Radar Type	Trial #	Frequency (MHz)	Pulses/Hop	Pulse Width (μsec)	PRI (μsec)	Detection
						1 = Yes, 0 = No
6	1	5500	9	1	333	1
	2	5500	9	1	333	1
	3	5500	9	1	333	1
	4	5500	9	1	333	1
	5	5500	9	1	333	1
	6	5500	9	1	333	1
	7	5500	9	1	333	1
	8	5500	9	1	333	1
	9	5500	9	1	333	1
	10	5500	9	1	333	1
	11	5500	9	1	333	1
	12	5500	9	1	333	1
	13	5500	9	1	333	1
	14	5500	9	1	333	1
	15	5500	9	1	333	1
	16	5500	9	1	333	1
	17	5500	9	1	333	1
	18	5500	9	1	333	1
	19	5500	9	1	333	1
	20	5500	9	1	333	1
	21	5500	9	1	333	1
	22	5500	9	1	333	1
	23	5500	9	1	333	1
	24	5500	9	1	333	1
	25	5500	9	1	333	1
	26	5500	9	1	333	1
	27	5500	9	1	333	1
	28	5500	9	1	333	1
	29	5500	9	1	333	1
	30	5500	9	1	333	1
Detection Percentage						100% (> 70%)

Table 40. Statistical Performance Check – Radar Type 6, 5510 MHz

VII. Test Equipment

Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2005.

MET ASSET #	EQUIPMENT	MANUFACTURER	MODEL	LAST CAL DATE	CAL DUE DATE
1T4771	PSA SPECTRUM ANALYZER	AGILENT TECHNOLOGIES	E4446A	02/15/2013	08/15/2014
1T4409	EMI RECEIVER	ROHDE & SCHWARZ	ESIB7	7/16/2012	7/16/2014
1T4751	ANTENNA - BILOG	SUNOL SCIENCES	JB6	1/8/2013	7/8/2014
1T4483	ANTENNA; HORN	ETS-LINDGREN	3117	2/28/2014	8/28/2015
1T4745	ANTENNA, HORN	ETS-LINDGREN	3116	11/14/2013	11/14/2014
1T4300A	SEMI-ANECHOIC CHAMBER # 1 (FCC)	EMC TEST SYSTEMS	NONE	07/24/2012	07/24/2015
1T4442	PRE-AMPLIFIER, MICROWAVE	MITEQ	AFS42-01001800-30-10P	SEE NOTE	
1T4742	PRE-AMPLIFIER, HIGH-FREQUENCY	MITEQ	AFS42-01001800-30-10P-42	SEE NOTE	
1T4149	HIGH-FREQUENCY ANECHOIC CHAMBER	RAY-PROOF	81	SEE NOTE	
1T4871	DFS-BOX VECTOR SIGNAL GENERATOR	AGILENT	N5172B	SEE NOTE	

Table 41. Test Equipment List

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.



VIII. Certification & User's Manual Information



Certification & User's Manual Information

A. Certification Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart I — Marketing of Radio frequency devices:

§ 2.801 Radio-frequency device defined.

As used in this part, a radio-frequency device is any device which in its operation is capable of Emitting radio-frequency energy by radiation, conduction, or other means. Radio- frequency devices include, but are not limited to:

- (a) The various types of radio communication transmitting devices described throughout this chapter.
- (b) *The incidental, unintentional and intentional radiators defined in Part 15 of this chapter.*
- (c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.
- (d) Any part or component thereof which in use emits radio-frequency energy by radiation, conduction, or other means.

§ 2.803 Marketing of radio frequency devices prior to equipment authorization.

- (a) Except as provided elsewhere in this chapter, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless:
 - (1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by §2.925 and other relevant sections in this chapter; or
 - (2) In the case of a device that is not required to have a grant of equipment authorization issued by the Commission, but which must comply with the specified technical standards prior to use, such device also complies with all applicable administrative (including verification of the equipment or authorization under a Declaration of Conformity, where required), technical, labeling and identification requirements specified in this chapter.
- (d) Notwithstanding the provisions of paragraph (a) of this section, the offer for sale solely to business, commercial, industrial, scientific or medical users (but not an offer for sale to other parties or to end users located in a residential environment) of a radio frequency device that is in the conceptual, developmental, design or pre-production stage is permitted prior to equipment authorization or, for devices not subject to the equipment authorization requirements, prior to a determination of compliance with the applicable technical requirements *provided* that the prospective buyer is advised in writing at the time of the offer for sale that the equipment is subject to the FCC rules and that the equipment will comply with the appropriate rules before delivery to the buyer or to centers of distribution.



- (e)(1) Notwithstanding the provisions of paragraph (a) of this section, prior to equipment authorization or determination of compliance with the applicable technical requirements any radio frequency device may be operated, but not marketed, for the following purposes and under the following conditions:
- (i) *Compliance testing;*
 - (ii) Demonstrations at a trade show provided the notice contained in paragraph (c) of this section is displayed in a conspicuous location on, or immediately adjacent to, the device;
 - (iii) Demonstrations at an exhibition conducted at a business, commercial, industrial, scientific or medical location, but excluding locations in a residential environment, provided the notice contained in paragraphs (c) or (d) of this section, as appropriate, is displayed in a conspicuous location on, or immediately adjacent to, the device;
 - (iv) Evaluation of product performance and determination of customer acceptability, provided such operation takes place at the manufacturer's facilities during developmental, design or pre-production states; or
 - (v) Evaluation of product performance and determination of customer acceptability where customer acceptability of a radio frequency device cannot be determined at the manufacturer's facilities because of size or unique capability of the device, provided the device is operated at a business, commercial, industrial, scientific or medical user's site, but not at a residential site, during the development, design or pre-production stages.
- (e)(2) For the purpose of paragraphs (e)(1)(iv) and (e)(1)(v) of this section, the term *manufacturer's facilities* includes the facilities of the party responsible for compliance with the regulations and the manufacturer's premises, as well as the facilities of other entities working under the authorization of the responsible party in connection with the development and manufacture, but not the marketing, of the equipment.
- (f) For radio frequency devices subject to verification and sold solely to business, commercial, industrial, scientific and medical users (excluding products sold to other parties or for operation in a residential environment), parties responsible for verification of the devices shall have the option of ensuring compliance with the applicable technical specifications of this chapter at each end user's location after installation, provided that the purchase or lease agreement includes a proviso that such a determination of compliance be made and is the responsibility of the party responsible for verification of the equipment.



Certification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart J — Equipment Authorization Procedures:

§ 2.901 Basis and Purpose

- (a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated.¹ *In addition to the technical standards provided, the rules governing the service may require that such equipment be verified by the manufacturer or importer, be authorized under a Declaration of Conformity, or receive an equipment authorization from the Commission by one of the following procedures: certification or registration.*
- (b) The following sections describe the verification procedure, the procedure for a Declaration of Conformity, and the procedures to be followed in obtaining certification from the Commission and the conditions attendant to such a grant.

§ 2.907 Certification.

- (a) Certification is an equipment authorization issued by the Commission, based on representation and test data submitted by the applicant.
- (b) Certification attaches to all units subsequently marketed by the grantee which are identical (see Section 2.908) to the sample tested except for permissive changes or other variations authorized by the Commission pursuant to Section 2.1043.

¹ In this case, the equipment is subject to the rules of Part 15. More specifically, the equipment falls under Subpart B (of Part 15), which deals with unintentional radiators.



Certification & User's Manual Information

§ 2.948 Description of measurement facilities.

- (a) Each party making measurements of equipment that is subject to an equipment authorization under Part 15 or Part 18 of this chapter, regardless of whether the measurements are filed with the Commission or kept on file by the party responsible for compliance of equipment marketed within the U.S. or its possessions, shall compile a description of the measurement facilities employed.
 - (1) If the measured equipment is subject to the verification procedure, the description of the measurement facilities shall be retained by the party responsible for verification of the equipment.
 - (i) *If the equipment is verified through measurements performed by an independent laboratory, it is acceptable for the party responsible for verification of the equipment to rely upon the description of the measurement facilities retained by or placed on file with the Commission by that laboratory. In this situation, the party responsible for the verification of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.*
 - (ii) If the equipment is verified based on measurements performed at the installation site of the equipment, no specific site calibration data is required. It is acceptable to retain the description of the measurement facilities at the site at which the measurements were performed.
 - (2) If the equipment is to be authorized by the Commission under the certification procedure, the description of the measurement facilities shall be filed with the Commission's Laboratory in Columbia, Maryland. The data describing the measurement facilities need only be filed once but must be updated as changes are made to the measurement facilities or as otherwise described in this section. At least every three years, the organization responsible for filing the data with the Commission shall certify that the data on file is current.



Certification & User's Manual Information

Label and User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart A — General:

§ 15.19 Labeling requirements.

(a) *In addition to the requirements in Part 2 of this chapter, a device subject to certification or verification shall be labeled as follows:*

- (1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under Part 73 of this chapter, land mobile operation under Part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

- (2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with Part 15 of the FCC Rules for use with cable television service.

- (3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- (4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.

- (5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

§ 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Verification & User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart B — Unintentional Radiators:

§ 15.105 Information to the user.

- (a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

- (b) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IX. Appendix

Bin 5 Table Data, 5500 MHz

Table 1							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	636623	77.8	13	2	1556	1038	-
1	32666	51.9	5	1	1276	-	-
2	226196	63.8	9	1	1932	-	-
3	418278	96.6	19	3	1718	1475	1544
4	611745	85.9	16	3	1368	1535	1064
5	8779	73.7	12	2	1715	1887	-
6	202117	77.2	13	2	1552	1314	-
7	395198	68.4	10	2	1870	1500	-
8	588430	76.7	13	2	1988	1348	-
9	783475	53.2	6	1	1473	-	-
10	177982	85.7	16	3	1318	1676	1310
11	370714	94.3	19	3	1973	1477	1390
12	565059	77.6	13	2	1038	1693	-
13	759205	65.7	10	1	1908	-	-
14	154116	93.5	18	3	1361	1793	1639

Table 42. In-Service Monitoring, Bin 5, 5500 MHz, Table 1

Table 2							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	653267	75	12	2	1766	1074	-
1	1015342	99.4	20	3	1826	1363	1174
2	1379673	67.4	10	2	1506	1129	-
3	245381	73.6	12	2	1994	1155	-
4	609211	65.9	10	1	1190	-	-
5	970315	83.8	15	3	1600	1640	1656
6	1335720	65.5	9	1	1761	-	-
7	200392	98.6	20	3	1864	1409	1907

Table 43. In-Service Monitoring, Bin 5, 5500 MHz, Table 2

Table 3							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	409465	73.8	12	2	1639	1970	-
1	673541	69.5	11	2	1301	1709	-
2	938405	51.9	5	1	1833	-	-
3	113243	84.6	16	3	1346	1359	1246
4	376706	95.4	19	3	1066	1801	1542
5	640774	68	10	2	1679	1783	-
6	903746	89.6	17	3	1637	1006	1743
7	80813	81.9	15	2	1426	1951	-
8	343904	88.3	17	3	1812	1727	1953
9	609276	53.7	6	1	1695	-	-
10	870628	91.3	18	3	1995	1858	1355

Table 44. In-Service Monitoring, Bin 5, 5500 MHz, Table 3

Table 4							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	26552	68.1	10	2	1317	1127	-
1	171871	58.7	7	1	1075	-	-
2	316116	75.3	13	2	1671	1317	-
3	461891	56.4	7	1	1718	-	-
4	8664	99.7	20	3	1527	1631	1788
5	153929	57.7	7	1	1269	-	-
6	299079	59.5	8	1	1392	-	-
7	442752	80	14	2	1491	1932	-
8	587204	82	15	2	1934	1730	-
9	135744	82.8	15	2	1467	1116	-
10	279781	88	17	3	1108	1707	1589
11	424346	93.2	18	3	1315	1373	1555
12	569553	70.4	11	2	1593	1899	-
13	117598	95.3	19	3	1229	1812	1052
14	262325	81.9	15	2	1683	1955	-
15	405781	98.5	20	3	1946	1977	1445
16	553711	65	9	1	1353	-	-
17	99809	85.4	16	3	1515	1218	1284
18	244192	91.6	18	3	1576	1751	1083
19	390174	67.3	10	2	1014	1047	-

Table 45. In-Service Monitoring, Bin 5, 5500 MHz, Table 4

Table 5							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	628798	67.9	10	2	1997	1368	-
1	96903	62.3	8	1	1616	-	-
2	267849	53.3	6	1	1251	-	-
3	437286	90	17	3	1496	1016	1081
4	608043	77.1	13	2	1260	1836	-
5	75592	83.9	15	3	1587	1287	1269
6	245640	89.1	17	3	1040	1945	1574
7	416504	81.8	15	2	1484	1774	-
8	588726	50.3	5	1	1087	-	-
9	54535	87.1	16	3	1908	1475	1949
10	225137	71.3	11	2	1834	1325	-
11	395073	97.5	20	3	1416	1046	1579
12	565234	90.6	17	3	1419	1512	1182
13	33645	86.3	16	3	1541	1359	1624
14	203835	97.6	20	3	1575	1267	1378
15	373694	84.7	16	3	1187	1979	1647
16	543192	99.7	20	3	1735	1795	1972

Table 46. In-Service Monitoring, Bin 5, 5500 MHz, Table 5

Table 6							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	15441	92.9	18	3	1423	1118	1358
1	222649	67.7	10	2	1689	1176	-
2	430620	65.8	10	1	1312	-	-
3	637993	56.3	7	1	1571	-	-
4	845422	53.7	6	1	1646	-	-
5	196574	83.5	15	3	1802	1804	1663
6	405116	65.8	10	1	1177	-	-
7	610836	85.9	16	3	1540	1100	1162
8	819293	76.3	13	2	1043	1199	-
9	171555	81.5	15	2	1205	1918	-
10	378184	89.4	17	3	1599	1571	1077
11	587063	63.4	9	1	1295	-	-
12	793149	69.6	11	2	1228	1665	-
13	145983	74.5	12	2	1695	1775	-

Table 47. In-Service Monitoring, Bin 5, 5500 MHz, Table 6

Table 7							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	328985	96.6	19	3	1567	1387	1506
1	522498	96.7	19	3	1127	1354	1112
2	714615	86.5	16	3	1505	1526	1715
3	112383	73.3	12	2	1968	1729	-
4	306212	55.8	6	1	1872	-	-
5	500163	55.4	6	1	1266	-	-
6	690552	85.3	16	3	1849	1867	1382
7	88623	79.4	14	2	1739	1698	-
8	282519	65.7	10	1	1447	-	-
9	475743	68.6	10	2	1034	1167	-
10	669102	77.7	13	2	1216	1143	-
11	64844	79.6	14	2	1779	1441	-
12	257701	94.9	19	3	1818	1196	1400
13	452394	61.4	8	1	1345	-	-
14	643963	90.6	17	3	1825	1130	1024

Table 48. In-Service Monitoring, Bin 5, 5500 MHz, Table 7

Table 8							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	51432	52.6	5	1	1482	-	-
1	292922	84.1	15	3	1539	1004	1258
2	534275	97.7	20	3	1295	1677	1308
3	776241	97.3	20	3	1064	1035	1575
4	21547	98.8	20	3	1449	1076	1472
5	263377	72.2	12	2	1334	1651	-
6	504945	67.6	10	2	1752	1705	-
7	746790	75.7	13	2	1696	1558	-
8	990242	60.9	8	1	1531	-	-
9	234006	64.2	9	1	1218	-	-
10	475264	78.8	14	2	1661	1608	-
11	716245	87.5	16	3	1351	1243	1728

Table 49. In-Service Monitoring, Bin 5, 5500 MHz, Table 8

Table 9							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	822851	54.1	6	1	1687	-	-
1	174900	50.7	5	1	1538	-	-
2	382242	52.3	5	1	1917	-	-
3	588103	99.8	20	3	1104	1181	1891
4	795565	68.4	10	2	1838	1705	-
5	149063	80.8	14	2	1390	1729	-
6	356723	62.5	9	1	1844	-	-
7	563598	74.8	12	2	1609	1087	-
8	772302	50.8	5	1	1062	-	-
9	123800	54	6	1	1389	-	-
10	331350	63	9	1	1382	-	-
11	536393	91.8	18	3	2000	1593	1768
12	745583	79.3	14	2	1067	1307	-
13	98268	64.3	9	1	1107	-	-

Table 50. In-Service Monitoring, Bin 5, 5500 MHz, Table 9

Table 10							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	535571	63.4	9	1	1166	-	-
1	898917	52	5	1	1446	-	-
2	1259697	97.2	20	3	1696	1650	1267
3	127089	78.7	14	2	1600	1807	-
4	489947	74.2	12	2	1822	1933	-
5	852558	88.7	17	3	1655	1015	1568
6	1217152	54.3	6	1	1991	-	-
7	82300	95.4	19	3	1772	1149	1932

Table 51. In-Service Monitoring, Bin 5, 5500 MHz, Table 10

Table 11							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	209176	73.7	12	2	1394	1559	-
1	378577	97.4	20	3	1240	1768	1946
2	548594	91.7	18	3	1924	1909	1096
3	17727	66.2	10	1	1609	-	-
4	188261	70.8	11	2	1495	1142	-
5	359227	52.3	5	1	1838	-	-
6	529350	78.9	14	2	1662	1014	-
7	699817	70.9	11	2	1584	1175	-
8	167165	75.6	13	2	1421	1580	-
9	338419	59.1	7	1	1371	-	-
10	508194	77	13	2	1471	1410	-
11	678428	67.9	10	2	1532	1624	-
12	146139	81.2	14	2	1237	1899	-
13	316473	78.7	14	2	1570	1797	-
14	488365	63.3	9	1	1188	-	-
15	657474	68.9	11	2	1593	1521	-
16	125512	59.3	7	1	1072	-	-

Table 52. In-Service Monitoring, Bin 5, 5500 MHz, Table 11

Table 12							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	264001	98.9	20	3	1619	1232	1068
1	417231	82.3	15	2	1198	1209	-
2	567901	86.7	16	3	1828	1541	1162
3	92954	89.7	17	3	1243	1538	1600
4	245112	98.6	20	3	1040	1773	1458
5	397977	71.1	11	2	1971	1159	-
6	551457	55.9	6	1	1918	-	-
7	74391	67.9	10	2	1071	1841	-
8	226484	84.4	16	3	1147	1411	1401
9	380077	58.8	7	1	1680	-	-
10	532981	65.6	9	1	1522	-	-
11	55531	78.5	14	2	1864	1937	-
12	208094	82.3	15	2	1003	1870	-
13	359800	90.1	17	3	1376	1127	1721
14	512124	90.2	17	3	1504	1088	1423
15	36816	83.1	15	2	1524	1605	-
16	189697	58.8	7	1	1594	-	-
17	341619	77	13	2	1818	1374	-
18	495472	55	6	1	1349	-	-

Table 53. In-Service Monitoring, Bin 5, 5500 MHz, Table 12

Table 13							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	22912	58.1	7	1	1881	-	-
1	216607	52.1	5	1	1417	-	-
2	410438	59.9	8	1	1127	-	-
3	603580	60.2	8	1	1934	-	-
4	793918	95.9	19	3	1812	1491	1852
5	192196	79.9	14	2	1781	1930	-
6	385525	78.5	14	2	1410	1880	-
7	580331	53.8	6	1	1116	-	-
8	773468	64.7	9	1	1754	-	-
9	168902	61.4	8	1	1373	-	-
10	361910	83.2	15	2	1662	1218	-
11	554151	84.7	16	3	1554	1548	1336
12	746788	88.7	17	3	1274	1825	1672
13	144765	78.3	14	2	1788	1116	-
14	338082	69.3	11	2	1819	1095	-

Table 54. In-Service Monitoring, Bin 5, 5500 MHz, Table 13

Table 14							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	664476	75.3	13	2	1954	1350	-
1	907451	56.3	7	1	1935	-	-
2	151297	67.7	10	2	1366	1567	-
3	393839	55.6	6	1	1100	-	-
4	634772	75.2	13	2	1699	1492	-
5	876467	76.3	13	2	1267	1996	-
6	121291	85.7	16	3	1273	1747	1712
7	363058	98.4	20	3	1372	1084	1224
8	603800	86.4	16	3	1942	1967	1248
9	845154	93.6	18	3	1604	1751	1716
10	91831	63.3	9	1	1762	-	-
11	333386	92.4	18	3	1306	1050	1046

Table 55. In-Service Monitoring, Bin 5, 5500 MHz, Table 14

Table 15							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	362087	93.3	18	3	1482	1099	1525
1	515307	69.1	11	2	1209	1630	-
2	38994	86.9	16	3	1010	1114	1716
3	190922	84.9	16	3	1539	1502	1847
4	343724	72.3	12	2	1563	1845	-
5	497361	51.7	5	1	1780	-	-
6	20319	58.3	7	1	1419	-	-
7	173196	60.8	8	1	1262	-	-
8	326148	57.1	7	1	1106	-	-
9	475778	88.9	17	3	1668	1946	1808
10	1488	72	12	2	1837	1965	-
11	153567	90.9	18	3	1190	1601	1731
12	306964	59.8	8	1	1822	-	-
13	458779	70	11	2	1870	1214	-
14	611697	67.2	10	2	1345	1237	-
15	134832	91.2	18	3	1589	1629	1315
16	288289	56.5	7	1	1520	-	-
17	441028	51.2	5	1	1620	-	-
18	591978	74.1	12	2	1599	1968	-

Table 56. In-Service Monitoring, Bin 5, 5500 MHz, Table 15

Table 16							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	158254	76.9	13	2	1058	1366	-
1	366047	50.2	5	1	1262	-	-
2	573377	62.9	9	1	1632	-	-
3	780532	64.7	9	1	1997	-	-
4	132351	83.8	15	3	1835	1584	1378
5	340432	65.4	9	1	1378	-	-
6	548146	53.2	6	1	1122	-	-
7	755450	51.7	5	1	1470	-	-
8	107154	78.7	14	2	1184	1489	-
9	314379	72.4	12	2	1610	1094	-
10	522427	53.8	6	1	1361	-	-
11	729049	73.6	12	2	1243	1210	-
12	81555	66.7	10	2	1518	1911	-
13	288616	82.5	15	2	1925	1479	-

Table 57. In-Service Monitoring, Bin 5, 5500 MHz, Table 16

Table 17							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	345538	87.6	17	3	1809	1142	1902
1	490101	85.2	16	3	1370	1301	1914
2	39145	84.8	16	3	1217	1247	1324
3	183993	77.9	13	2	1160	1822	-
4	329141	76.5	13	2	1295	1048	-
5	474918	60.9	8	1	1301	-	-
6	21367	83	15	2	1684	1175	-
7	166161	80.4	14	2	1841	1130	-
8	311033	67.5	10	2	1607	1223	-
9	456993	62.1	8	1	1352	-	-
10	3520	86.4	16	3	1700	1399	1030
11	147826	84.3	15	3	1858	1628	1494
12	293433	76.9	13	2	1268	1072	-
13	437093	95.8	19	3	1310	1101	1689
14	584602	55.2	6	1	1043	-	-
15	130793	59	7	1	1580	-	-
16	274624	94.5	19	3	1558	1119	1732
17	418777	91.9	18	3	1627	1533	1671
18	563823	85.2	16	3	1161	1131	1800
19	112710	69.5	11	2	1309	1364	-

Table 58. In-Service Monitoring, Bin 5, 5500 MHz, Table 17

Table 18							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	429259	86.4	16	3	1194	1562	1794
1	670979	92.2	18	3	1679	1068	1370
2	913818	80.4	14	2	1387	1304	-
3	158545	54.3	6	1	1702	-	-
4	400895	53.1	5	1	1126	-	-
5	642041	69.4	11	2	1109	1744	-
6	883409	69.1	11	2	1871	1514	-
7	128290	100	20	3	1674	1420	1951
8	370659	79.6	14	2	1175	1014	-
9	611891	88.4	17	3	1058	1132	1252
10	855277	53.3	6	1	1469	-	-
11	98894	65.3	9	1	1745	-	-

Table 59. In-Service Monitoring, Bin 5, 5500 MHz, Table 18

Table 19							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	292264	55.3	6	1	1564	-	-
1	499839	58.3	7	1	1444	-	-
2	706241	72.3	12	2	1214	1599	-
3	59016	84.8	16	3	1938	1061	1221
4	266259	82.5	15	2	1902	1090	-
5	474152	63.3	9	1	1667	-	-
6	680785	80	14	2	1664	1066	-
7	33532	90.3	17	3	1701	1591	1004
8	240164	91.1	18	3	1941	1715	1385
9	447244	96.6	19	3	1343	1453	1448
10	654869	82.7	15	2	1376	1863	-
11	8084	50.7	5	1	1112	-	-
12	215195	78.4	14	2	1860	1251	-
13	421414	99.5	20	3	1211	1957	1785

Table 60. In-Service Monitoring, Bin 5, 5500 MHz, Table 19

Table 20							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	733776	88.6	17	3	1250	1232	1944
1	978500	57.4	7	1	1092	-	-
2	221259	96.6	19	3	1049	1114	1625
3	463263	69.7	11	2	1156	1790	-
4	705037	77.9	13	2	1367	1640	-
5	947884	62	8	1	1907	-	-
6	191445	88.4	17	3	1209	1654	1204
7	432506	97.3	20	3	1852	1608	1720
8	674848	96.2	19	3	1360	1171	1074
9	915221	95.4	19	3	1344	1748	1910
10	162187	54.8	6	1	1015	-	-
11	403878	80.4	14	2	1296	1188	-

Table 61. In-Service Monitoring, Bin 5, 5500 MHz, Table 20

Table 21							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	483824	74.7	12	2	1583	1101	-
1	665910	57.1	7	1	1741	-	-
2	98722	91.9	18	3	1686	1852	1265
3	280148	83.1	15	2	1116	1841	-
4	462269	50.7	5	1	1435	-	-
5	641874	79.2	14	2	1722	1975	-
6	76783	58.7	7	1	1652	-	-
7	257866	71	11	2	1476	1380	-
8	438568	79	14	2	1785	1927	-
9	620389	68.5	10	2	1017	1704	-
10	54344	73.5	12	2	1548	1239	-
11	235380	70.5	11	2	1723	1658	-
12	416942	76.6	13	2	1262	1252	-
13	597534	81.2	14	2	1532	1852	-
14	32065	61.8	8	1	1786	-	-
15	212584	94.9	19	3	1710	1907	1485

Table 62. In-Service Monitoring, Bin 5, 5500 MHz, Table 21

Table 22							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	526804	78.5	14	2	1033	1077	-
1	766810	89.8	17	3	1754	1928	1041
2	12967	59.4	8	1	1054	-	-
3	254814	79.6	14	2	1048	1683	-
4	496335	76	13	2	1789	1641	-
5	739766	53.6	6	1	1092	-	-
6	979583	80.9	14	2	1815	1770	-
7	225383	61.6	8	1	1130	-	-
8	467404	53.4	6	1	1634	-	-
9	709942	59.9	8	1	1068	-	-
10	951435	60.4	8	1	1885	-	-
11	194882	91.4	18	3	1792	1291	1419

Table 63. In-Service Monitoring, Bin 5, 5500 MHz, Table 22

Table 23							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	261690	77	13	2	1730	1206	-
1	407496	58.1	7	1	1468	-	-
2	553039	62.1	8	1	1057	-	-
3	98971	76.9	13	2	1466	1926	-
4	243693	80	14	2	1841	1488	-
5	389821	52	5	1	1153	-	-
6	531723	88.6	17	3	2000	1481	1407
7	81080	72.9	12	2	1935	1952	-
8	225051	98.5	20	3	1689	1898	1899
9	371684	57.9	7	1	1550	-	-
10	513892	95.9	19	3	1339	1731	1878
11	63543	53.5	6	1	1336	-	-
12	207470	92	18	3	1916	1909	1146
13	353593	57.3	7	1	1910	-	-
14	497722	70.5	11	2	1889	1132	-
15	45525	70	11	2	1619	1464	-
16	189563	84	15	3	1968	1995	1419
17	334977	76.1	13	2	1488	1756	-
18	478188	93.2	18	3	1828	1610	1697
19	27659	96.8	19	3	1462	1116	1215

Table 64. In-Service Monitoring, Bin 5, 5500 MHz, Table 23

Table 24							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	247197	50.1	5	1	1562	-	-
1	453153	93.5	18	3	1529	1790	1159
2	660655	68.8	11	2	1687	1881	-
3	14128	56.3	7	1	1820	-	-
4	220915	86	16	3	1442	1738	1170
5	428528	75.2	13	2	1335	1453	-
6	636648	54.4	6	1	1562	-	-
7	842797	71.1	11	2	1542	1394	-
8	195782	76.2	13	2	1291	1561	-
9	402683	80.2	14	2	1912	1557	-
10	610243	79.7	14	2	1037	1708	-
11	815692	90.9	18	3	1871	1691	1032
12	170136	68.7	10	2	1488	1990	-
13	377546	67.4	10	2	1446	1195	-

Table 65. In-Service Monitoring, Bin 5, 5500 MHz, Table 24

Table 25							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	628743	94	19	3	1862	1287	1201
1	853454	70.8	11	2	1088	1222	-
2	156136	56.3	7	1	1516	-	-
3	378517	96.7	19	3	1316	1809	1126
4	601369	90.6	17	3	1749	1461	1029
5	825544	74.5	12	2	1068	1691	-
6	128146	92.6	18	3	1882	1293	1633
7	350649	89	17	3	1541	1858	1948
8	574102	96.5	19	3	1361	1536	1049
9	797240	70.5	11	2	1787	1906	-
10	100771	94	19	3	1079	1508	1692
11	324468	55.8	6	1	1840	-	-
12	545941	87.7	17	3	1757	1673	1698

Table 66. In-Service Monitoring, Bin 5, 5500 MHz, Table 25

Table 26							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	1253346	68.6	10	2	1434	1625	-
1	119462	83.1	15	2	1582	1450	-
2	482866	60.9	8	1	1970	-	-
3	845899	77.7	13	2	1246	1231	-
4	1209262	77.4	13	2	1046	1225	-
5	74755	66.8	10	2	1587	1165	-
6	438159	63.7	9	1	1813	-	-
7	799839	91.2	18	3	1451	1528	1970

Table 67. In-Service Monitoring, Bin 5, 5500 MHz, Table 26

Table 27							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	545416	83.6	15	3	1017	1990	1397
1	14066	89.4	17	3	1401	1948	1131
2	184961	55.8	6	1	1500	-	-
3	354333	90.9	18	3	1835	1325	1237
4	526694	54.7	6	1	1416	-	-
5	695652	97.7	20	3	1183	1142	1007
6	163430	67.5	10	2	1626	1970	-
7	333465	96.7	19	3	1371	1076	1764
8	504482	68.3	10	2	1596	1445	-
9	675424	78.3	14	2	1109	1431	-
10	142911	55	6	1	1324	-	-
11	312370	84.9	16	3	1386	1310	1812
12	483170	74.6	12	2	1723	1776	-
13	655500	63.3	9	1	1371	-	-
14	121408	99.8	20	3	1238	1335	1378
15	292829	63.6	9	1	1111	-	-
16	461438	87.3	16	3	1491	1704	1442

Table 68. In-Service Monitoring, Bin 5, 5500 MHz, Table 27

Table 28							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	564587	85.6	16	3	1355	1726	1567
1	89838	68.6	10	2	1936	1791	-
2	243065	54.2	6	1	1256	-	-
3	395965	61.2	8	1	1213	-	-
4	546679	97.1	20	3	1554	1063	1088
5	71022	98.3	20	3	1038	1601	1618
6	224043	62.4	8	1	1796	-	-
7	375811	80.2	14	2	1736	1688	-
8	526524	87.5	17	3	1933	1524	1910
9	52332	85.8	16	3	1558	1072	1014
10	204270	88.1	17	3	1638	1320	1778
11	358389	65.3	9	1	1059	-	-
12	510583	52.5	5	1	1956	-	-
13	33661	52.3	5	1	2000	-	-
14	186091	74.1	12	2	1080	1807	-
15	339568	54.9	6	1	1031	-	-
16	490613	76.2	13	2	1518	1924	-
17	14864	60.4	8	1	1527	-	-
18	167448	81.5	15	2	1015	1351	-

Table 69. In-Service Monitoring, Bin 5, 5500 MHz, Table 28

Table 29							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	508045	50.5	5	1	1196	-	-
1	749937	55.7	6	1	1661	-	-
2	989019	85.8	16	3	1656	1854	1218
3	235517	76.9	13	2	1772	1323	-
4	477346	75.1	13	2	1221	1773	-
5	718529	92.3	18	3	1122	1158	1577
6	960804	78.1	14	2	1503	1649	-
7	205421	92.2	18	3	1446	1589	1583
8	447174	89	17	3	1145	1370	1341
9	689823	70.9	11	2	1088	1246	-
10	932887	63.1	9	1	1157	-	-
11	176194	55.3	6	1	1731	-	-

Table 70. In-Service Monitoring, Bin 5, 5500 MHz, Table 29

Table 30							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	277683	83.4	15	3	1301	1213	1473
1	438503	97.3	20	3	1258	1057	1522
2	598617	90.4	17	3	1679	1090	1780
3	97142	91.8	18	3	1385	1491	1272
4	257779	98.2	20	3	1869	1055	1339
5	420304	59.5	8	1	1301	-	-
6	580095	80	14	2	1693	1417	-
7	77238	86.5	16	3	1548	1656	1903
8	237974	91.1	18	3	1379	1497	1433
9	398356	93.5	18	3	1360	1444	1937
10	561396	60.7	8	1	1778	-	-
11	57672	67.2	10	2	1157	1676	-
12	219189	61.8	8	1	1263	-	-
13	379317	79.4	14	2	1952	1503	-
14	540148	81.4	15	2	1926	1552	-
15	37944	65.7	10	1	1005	-	-
16	198981	76	13	2	1299	1065	-
17	360068	81	14	2	1163	1251	-

Table 71. In-Service Monitoring, Bin 5, 5500 MHz, Table 30

Bin 5 Table Data, 5510 MHz

Table 1							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	636623	77.8	13	2	1556	1038	-
1	32666	51.9	5	1	1276	-	-
2	226196	63.8	9	1	1932	-	-
3	418278	96.6	19	3	1718	1475	1544
4	611745	85.9	16	3	1368	1535	1064
5	8779	73.7	12	2	1715	1887	-
6	202117	77.2	13	2	1552	1314	-
7	395198	68.4	10	2	1870	1500	-
8	588430	76.7	13	2	1988	1348	-
9	783475	53.2	6	1	1473	-	-
10	177982	85.7	16	3	1318	1676	1310
11	370714	94.3	19	3	1973	1477	1390
12	565059	77.6	13	2	1038	1693	-
13	759205	65.7	10	1	1908	-	-
14	154116	93.5	18	3	1361	1793	1639

Table 72. In-Service Monitoring, Bin 5, 5510 MHz, Table 1

Table 2							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	653267	75	12	2	1766	1074	-
1	1015342	99.4	20	3	1826	1363	1174
2	1379673	67.4	10	2	1506	1129	-
3	245381	73.6	12	2	1994	1155	-
4	609211	65.9	10	1	1190	-	-
5	970315	83.8	15	3	1600	1640	1656
6	1335720	65.5	9	1	1761	-	-
7	200392	98.6	20	3	1864	1409	1907

Table 73. In-Service Monitoring, Bin 5, 5510 MHz, Table 2

Table 3							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	409465	73.8	12	2	1639	1970	-
1	673541	69.5	11	2	1301	1709	-
2	938405	51.9	5	1	1833	-	-
3	113243	84.6	16	3	1346	1359	1246
4	376706	95.4	19	3	1066	1801	1542
5	640774	68	10	2	1679	1783	-
6	903746	89.6	17	3	1637	1006	1743
7	80813	81.9	15	2	1426	1951	-
8	343904	88.3	17	3	1812	1727	1953
9	609276	53.7	6	1	1695	-	-
10	870628	91.3	18	3	1995	1858	1355

Table 74. In-Service Monitoring, Bin 5, 5510 MHz, Table 3

Table 4							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	26552	68.1	10	2	1317	1127	-
1	171871	58.7	7	1	1075	-	-
2	316116	75.3	13	2	1671	1317	-
3	461891	56.4	7	1	1718	-	-
4	8664	99.7	20	3	1527	1631	1788
5	153929	57.7	7	1	1269	-	-
6	299079	59.5	8	1	1392	-	-
7	442752	80	14	2	1491	1932	-
8	587204	82	15	2	1934	1730	-
9	135744	82.8	15	2	1467	1116	-
10	279781	88	17	3	1108	1707	1589
11	424346	93.2	18	3	1315	1373	1555
12	569553	70.4	11	2	1593	1899	-
13	117598	95.3	19	3	1229	1812	1052
14	262325	81.9	15	2	1683	1955	-
15	405781	98.5	20	3	1946	1977	1445
16	553711	65	9	1	1353	-	-
17	99809	85.4	16	3	1515	1218	1284
18	244192	91.6	18	3	1576	1751	1083
19	390174	67.3	10	2	1014	1047	-

Table 75. In-Service Monitoring, Bin 5, 5510 MHz, Table 4

Table 5							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	628798	67.9	10	2	1997	1368	-
1	96903	62.3	8	1	1616	-	-
2	267849	53.3	6	1	1251	-	-
3	437286	90	17	3	1496	1016	1081
4	608043	77.1	13	2	1260	1836	-
5	75592	83.9	15	3	1587	1287	1269
6	245640	89.1	17	3	1040	1945	1574
7	416504	81.8	15	2	1484	1774	-
8	588726	50.3	5	1	1087	-	-
9	54535	87.1	16	3	1908	1475	1949
10	225137	71.3	11	2	1834	1325	-
11	395073	97.5	20	3	1416	1046	1579
12	565234	90.6	17	3	1419	1512	1182
13	33645	86.3	16	3	1541	1359	1624
14	203835	97.6	20	3	1575	1267	1378
15	373694	84.7	16	3	1187	1979	1647
16	543192	99.7	20	3	1735	1795	1972

Table 76. In-Service Monitoring, Bin 5, 5510 MHz, Table 5

Table 6							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	15441	92.9	18	3	1423	1118	1358
1	222649	67.7	10	2	1689	1176	-
2	430620	65.8	10	1	1312	-	-
3	637993	56.3	7	1	1571	-	-
4	845422	53.7	6	1	1646	-	-
5	196574	83.5	15	3	1802	1804	1663
6	405116	65.8	10	1	1177	-	-
7	610836	85.9	16	3	1540	1100	1162
8	819293	76.3	13	2	1043	1199	-
9	171555	81.5	15	2	1205	1918	-
10	378184	89.4	17	3	1599	1571	1077
11	587063	63.4	9	1	1295	-	-
12	793149	69.6	11	2	1228	1665	-
13	145983	74.5	12	2	1695	1775	-

Table 77. In-Service Monitoring, Bin 5, 5510 MHz, Table 6

Table 7							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	328985	96.6	19	3	1567	1387	1506
1	522498	96.7	19	3	1127	1354	1112
2	714615	86.5	16	3	1505	1526	1715
3	112383	73.3	12	2	1968	1729	-
4	306212	55.8	6	1	1872	-	-
5	500163	55.4	6	1	1266	-	-
6	690552	85.3	16	3	1849	1867	1382
7	88623	79.4	14	2	1739	1698	-
8	282519	65.7	10	1	1447	-	-
9	475743	68.6	10	2	1034	1167	-
10	669102	77.7	13	2	1216	1143	-
11	64844	79.6	14	2	1779	1441	-
12	257701	94.9	19	3	1818	1196	1400
13	452394	61.4	8	1	1345	-	-
14	643963	90.6	17	3	1825	1130	1024

Table 78. In-Service Monitoring, Bin 5, 5510 MHz, Table 7

Table 8							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	51432	52.6	5	1	1482	-	-
1	292922	84.1	15	3	1539	1004	1258
2	534275	97.7	20	3	1295	1677	1308
3	776241	97.3	20	3	1064	1035	1575
4	21547	98.8	20	3	1449	1076	1472
5	263377	72.2	12	2	1334	1651	-
6	504945	67.6	10	2	1752	1705	-
7	746790	75.7	13	2	1696	1558	-
8	990242	60.9	8	1	1531	-	-
9	234006	64.2	9	1	1218	-	-
10	475264	78.8	14	2	1661	1608	-
11	716245	87.5	16	3	1351	1243	1728

Table 79. In-Service Monitoring, Bin 5, 5510 MHz, Table 8

Table 9							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	822851	54.1	6	1	1687	-	-
1	174900	50.7	5	1	1538	-	-
2	382242	52.3	5	1	1917	-	-
3	588103	99.8	20	3	1104	1181	1891
4	795565	68.4	10	2	1838	1705	-
5	149063	80.8	14	2	1390	1729	-
6	356723	62.5	9	1	1844	-	-
7	563598	74.8	12	2	1609	1087	-
8	772302	50.8	5	1	1062	-	-
9	123800	54	6	1	1389	-	-
10	331350	63	9	1	1382	-	-
11	536393	91.8	18	3	2000	1593	1768
12	745583	79.3	14	2	1067	1307	-
13	98268	64.3	9	1	1107	-	-

Table 80. In-Service Monitoring, Bin 5, 5510 MHz, Table 9

Table 10							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	535571	63.4	9	1	1166	-	-
1	898917	52	5	1	1446	-	-
2	1259697	97.2	20	3	1696	1650	1267
3	127089	78.7	14	2	1600	1807	-
4	489947	74.2	12	2	1822	1933	-
5	852558	88.7	17	3	1655	1015	1568
6	1217152	54.3	6	1	1991	-	-
7	82300	95.4	19	3	1772	1149	1932

Table 81. In-Service Monitoring, Bin 5, 5510 MHz, Table 10

Table 11							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	209176	73.7	12	2	1394	1559	-
1	378577	97.4	20	3	1240	1768	1946
2	548594	91.7	18	3	1924	1909	1096
3	17727	66.2	10	1	1609	-	-
4	188261	70.8	11	2	1495	1142	-
5	359227	52.3	5	1	1838	-	-
6	529350	78.9	14	2	1662	1014	-
7	699817	70.9	11	2	1584	1175	-
8	167165	75.6	13	2	1421	1580	-
9	338419	59.1	7	1	1371	-	-
10	508194	77	13	2	1471	1410	-
11	678428	67.9	10	2	1532	1624	-
12	146139	81.2	14	2	1237	1899	-
13	316473	78.7	14	2	1570	1797	-
14	488365	63.3	9	1	1188	-	-
15	657474	68.9	11	2	1593	1521	-
16	125512	59.3	7	1	1072	-	-

Table 82. In-Service Monitoring, Bin 5, 5510 MHz, Table 11

Table 12							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	264001	98.9	20	3	1619	1232	1068
1	417231	82.3	15	2	1198	1209	-
2	567901	86.7	16	3	1828	1541	1162
3	92954	89.7	17	3	1243	1538	1600
4	245112	98.6	20	3	1040	1773	1458
5	397977	71.1	11	2	1971	1159	-
6	551457	55.9	6	1	1918	-	-
7	74391	67.9	10	2	1071	1841	-
8	226484	84.4	16	3	1147	1411	1401
9	380077	58.8	7	1	1680	-	-
10	532981	65.6	9	1	1522	-	-
11	55531	78.5	14	2	1864	1937	-
12	208094	82.3	15	2	1003	1870	-
13	359800	90.1	17	3	1376	1127	1721
14	512124	90.2	17	3	1504	1088	1423
15	36816	83.1	15	2	1524	1605	-
16	189697	58.8	7	1	1594	-	-
17	341619	77	13	2	1818	1374	-
18	495472	55	6	1	1349	-	-

Table 83. In-Service Monitoring, Bin 5, 5510 MHz, Table 12

Table 13							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	22912	58.1	7	1	1881	-	-
1	216607	52.1	5	1	1417	-	-
2	410438	59.9	8	1	1127	-	-
3	603580	60.2	8	1	1934	-	-
4	793918	95.9	19	3	1812	1491	1852
5	192196	79.9	14	2	1781	1930	-
6	385525	78.5	14	2	1410	1880	-
7	580331	53.8	6	1	1116	-	-
8	773468	64.7	9	1	1754	-	-
9	168902	61.4	8	1	1373	-	-
10	361910	83.2	15	2	1662	1218	-
11	554151	84.7	16	3	1554	1548	1336
12	746788	88.7	17	3	1274	1825	1672
13	144765	78.3	14	2	1788	1116	-
14	338082	69.3	11	2	1819	1095	-

Table 84. In-Service Monitoring, Bin 5, 5510 MHz, Table 13

Table 14							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	664476	75.3	13	2	1954	1350	-
1	907451	56.3	7	1	1935	-	-
2	151297	67.7	10	2	1366	1567	-
3	393839	55.6	6	1	1100	-	-
4	634772	75.2	13	2	1699	1492	-
5	876467	76.3	13	2	1267	1996	-
6	121291	85.7	16	3	1273	1747	1712
7	363058	98.4	20	3	1372	1084	1224
8	603800	86.4	16	3	1942	1967	1248
9	845154	93.6	18	3	1604	1751	1716
10	91831	63.3	9	1	1762	-	-
11	333386	92.4	18	3	1306	1050	1046

Table 85. In-Service Monitoring, Bin 5, 5510 MHz, Table 14

Table 15							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	362087	93.3	18	3	1482	1099	1525
1	515307	69.1	11	2	1209	1630	-
2	38994	86.9	16	3	1010	1114	1716
3	190922	84.9	16	3	1539	1502	1847
4	343724	72.3	12	2	1563	1845	-
5	497361	51.7	5	1	1780	-	-
6	20319	58.3	7	1	1419	-	-
7	173196	60.8	8	1	1262	-	-
8	326148	57.1	7	1	1106	-	-
9	475778	88.9	17	3	1668	1946	1808
10	1488	72	12	2	1837	1965	-
11	153567	90.9	18	3	1190	1601	1731
12	306964	59.8	8	1	1822	-	-
13	458779	70	11	2	1870	1214	-
14	611697	67.2	10	2	1345	1237	-
15	134832	91.2	18	3	1589	1629	1315
16	288289	56.5	7	1	1520	-	-
17	441028	51.2	5	1	1620	-	-
18	591978	74.1	12	2	1599	1968	-

Table 86. In-Service Monitoring, Bin 5, 5510 MHz, Table 15

Table 16							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	158254	76.9	13	2	1058	1366	-
1	366047	50.2	5	1	1262	-	-
2	573377	62.9	9	1	1632	-	-
3	780532	64.7	9	1	1997	-	-
4	132351	83.8	15	3	1835	1584	1378
5	340432	65.4	9	1	1378	-	-
6	548146	53.2	6	1	1122	-	-
7	755450	51.7	5	1	1470	-	-
8	107154	78.7	14	2	1184	1489	-
9	314379	72.4	12	2	1610	1094	-
10	522427	53.8	6	1	1361	-	-
11	729049	73.6	12	2	1243	1210	-
12	81555	66.7	10	2	1518	1911	-
13	288616	82.5	15	2	1925	1479	-

Table 87. In-Service Monitoring, Bin 5, 5510 MHz, Table 16

Table 17							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	345538	87.6	17	3	1809	1142	1902
1	490101	85.2	16	3	1370	1301	1914
2	39145	84.8	16	3	1217	1247	1324
3	183993	77.9	13	2	1160	1822	-
4	329141	76.5	13	2	1295	1048	-
5	474918	60.9	8	1	1301	-	-
6	21367	83	15	2	1684	1175	-
7	166161	80.4	14	2	1841	1130	-
8	311033	67.5	10	2	1607	1223	-
9	456993	62.1	8	1	1352	-	-
10	3520	86.4	16	3	1700	1399	1030
11	147826	84.3	15	3	1858	1628	1494
12	293433	76.9	13	2	1268	1072	-
13	437093	95.8	19	3	1310	1101	1689
14	584602	55.2	6	1	1043	-	-
15	130793	59	7	1	1580	-	-
16	274624	94.5	19	3	1558	1119	1732
17	418777	91.9	18	3	1627	1533	1671
18	563823	85.2	16	3	1161	1131	1800
19	112710	69.5	11	2	1309	1364	-

Table 88. In-Service Monitoring, Bin 5, 5510 MHz, Table 17

Table 18							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	429259	86.4	16	3	1194	1562	1794
1	670979	92.2	18	3	1679	1068	1370
2	913818	80.4	14	2	1387	1304	-
3	158545	54.3	6	1	1702	-	-
4	400895	53.1	5	1	1126	-	-
5	642041	69.4	11	2	1109	1744	-
6	883409	69.1	11	2	1871	1514	-
7	128290	100	20	3	1674	1420	1951
8	370659	79.6	14	2	1175	1014	-
9	611891	88.4	17	3	1058	1132	1252
10	855277	53.3	6	1	1469	-	-
11	98894	65.3	9	1	1745	-	-

Table 89. In-Service Monitoring, Bin 5, 5510 MHz, Table 18

Table 19							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	292264	55.3	6	1	1564	-	-
1	499839	58.3	7	1	1444	-	-
2	706241	72.3	12	2	1214	1599	-
3	59016	84.8	16	3	1938	1061	1221
4	266259	82.5	15	2	1902	1090	-
5	474152	63.3	9	1	1667	-	-
6	680785	80	14	2	1664	1066	-
7	33532	90.3	17	3	1701	1591	1004
8	240164	91.1	18	3	1941	1715	1385
9	447244	96.6	19	3	1343	1453	1448
10	654869	82.7	15	2	1376	1863	-
11	8084	50.7	5	1	1112	-	-
12	215195	78.4	14	2	1860	1251	-
13	421414	99.5	20	3	1211	1957	1785

Table 90. In-Service Monitoring, Bin 5, 5510 MHz, Table 19

Table 20							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	733776	88.6	17	3	1250	1232	1944
1	978500	57.4	7	1	1092	-	-
2	221259	96.6	19	3	1049	1114	1625
3	463263	69.7	11	2	1156	1790	-
4	705037	77.9	13	2	1367	1640	-
5	947884	62	8	1	1907	-	-
6	191445	88.4	17	3	1209	1654	1204
7	432506	97.3	20	3	1852	1608	1720
8	674848	96.2	19	3	1360	1171	1074
9	915221	95.4	19	3	1344	1748	1910
10	162187	54.8	6	1	1015	-	-
11	403878	80.4	14	2	1296	1188	-

Table 91. In-Service Monitoring, Bin 5, 5510 MHz, Table 20

Table 21							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	483824	74.7	12	2	1583	1101	-
1	665910	57.1	7	1	1741	-	-
2	98722	91.9	18	3	1686	1852	1265
3	280148	83.1	15	2	1116	1841	-
4	462269	50.7	5	1	1435	-	-
5	641874	79.2	14	2	1722	1975	-
6	76783	58.7	7	1	1652	-	-
7	257866	71	11	2	1476	1380	-
8	438568	79	14	2	1785	1927	-
9	620389	68.5	10	2	1017	1704	-
10	54344	73.5	12	2	1548	1239	-
11	235380	70.5	11	2	1723	1658	-
12	416942	76.6	13	2	1262	1252	-
13	597534	81.2	14	2	1532	1852	-
14	32065	61.8	8	1	1786	-	-
15	212584	94.9	19	3	1710	1907	1485

Table 92. In-Service Monitoring, Bin 5, 5510 MHz, Table 21

Table 22							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	526804	78.5	14	2	1033	1077	-
1	766810	89.8	17	3	1754	1928	1041
2	12967	59.4	8	1	1054	-	-
3	254814	79.6	14	2	1048	1683	-
4	496335	76	13	2	1789	1641	-
5	739766	53.6	6	1	1092	-	-
6	979583	80.9	14	2	1815	1770	-
7	225383	61.6	8	1	1130	-	-
8	467404	53.4	6	1	1634	-	-
9	709942	59.9	8	1	1068	-	-
10	951435	60.4	8	1	1885	-	-
11	194882	91.4	18	3	1792	1291	1419

Table 93. In-Service Monitoring, Bin 5, 5510 MHz, Table 22

Table 23							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	261690	77	13	2	1730	1206	-
1	407496	58.1	7	1	1468	-	-
2	553039	62.1	8	1	1057	-	-
3	98971	76.9	13	2	1466	1926	-
4	243693	80	14	2	1841	1488	-
5	389821	52	5	1	1153	-	-
6	531723	88.6	17	3	2000	1481	1407
7	81080	72.9	12	2	1935	1952	-
8	225051	98.5	20	3	1689	1898	1899
9	371684	57.9	7	1	1550	-	-
10	513892	95.9	19	3	1339	1731	1878
11	63543	53.5	6	1	1336	-	-
12	207470	92	18	3	1916	1909	1146
13	353593	57.3	7	1	1910	-	-
14	497722	70.5	11	2	1889	1132	-
15	45525	70	11	2	1619	1464	-
16	189563	84	15	3	1968	1995	1419
17	334977	76.1	13	2	1488	1756	-
18	478188	93.2	18	3	1828	1610	1697
19	27659	96.8	19	3	1462	1116	1215

Table 94. In-Service Monitoring, Bin 5, 5510 MHz, Table 23

Table 24							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	247197	50.1	5	1	1562	-	-
1	453153	93.5	18	3	1529	1790	1159
2	660655	68.8	11	2	1687	1881	-
3	14128	56.3	7	1	1820	-	-
4	220915	86	16	3	1442	1738	1170
5	428528	75.2	13	2	1335	1453	-
6	636648	54.4	6	1	1562	-	-
7	842797	71.1	11	2	1542	1394	-
8	195782	76.2	13	2	1291	1561	-
9	402683	80.2	14	2	1912	1557	-
10	610243	79.7	14	2	1037	1708	-
11	815692	90.9	18	3	1871	1691	1032
12	170136	68.7	10	2	1488	1990	-
13	377546	67.4	10	2	1446	1195	-

Table 95. In-Service Monitoring, Bin 5, 5510 MHz, Table 24

Table 25							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	628743	94	19	3	1862	1287	1201
1	853454	70.8	11	2	1088	1222	-
2	156136	56.3	7	1	1516	-	-
3	378517	96.7	19	3	1316	1809	1126
4	601369	90.6	17	3	1749	1461	1029
5	825544	74.5	12	2	1068	1691	-
6	128146	92.6	18	3	1882	1293	1633
7	350649	89	17	3	1541	1858	1948
8	574102	96.5	19	3	1361	1536	1049
9	797240	70.5	11	2	1787	1906	-
10	100771	94	19	3	1079	1508	1692
11	324468	55.8	6	1	1840	-	-
12	545941	87.7	17	3	1757	1673	1698

Table 96. In-Service Monitoring, Bin 5, 5510 MHz, Table 25

Table 26							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	1253346	68.6	10	2	1434	1625	-
1	119462	83.1	15	2	1582	1450	-
2	482866	60.9	8	1	1970	-	-
3	845899	77.7	13	2	1246	1231	-
4	1209262	77.4	13	2	1046	1225	-
5	74755	66.8	10	2	1587	1165	-
6	438159	63.7	9	1	1813	-	-
7	799839	91.2	18	3	1451	1528	1970

Table 97. In-Service Monitoring, Bin 5, 5510 MHz, Table 26

Table 27							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	545416	83.6	15	3	1017	1990	1397
1	14066	89.4	17	3	1401	1948	1131
2	184961	55.8	6	1	1500	-	-
3	354333	90.9	18	3	1835	1325	1237
4	526694	54.7	6	1	1416	-	-
5	695652	97.7	20	3	1183	1142	1007
6	163430	67.5	10	2	1626	1970	-
7	333465	96.7	19	3	1371	1076	1764
8	504482	68.3	10	2	1596	1445	-
9	675424	78.3	14	2	1109	1431	-
10	142911	55	6	1	1324	-	-
11	312370	84.9	16	3	1386	1310	1812
12	483170	74.6	12	2	1723	1776	-
13	655500	63.3	9	1	1371	-	-
14	121408	99.8	20	3	1238	1335	1378
15	292829	63.6	9	1	1111	-	-
16	461438	87.3	16	3	1491	1704	1442

Table 98. In-Service Monitoring, Bin 5, 5510 MHz, Table 27

Table 28							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	564587	85.6	16	3	1355	1726	1567
1	89838	68.6	10	2	1936	1791	-
2	243065	54.2	6	1	1256	-	-
3	395965	61.2	8	1	1213	-	-
4	546679	97.1	20	3	1554	1063	1088
5	71022	98.3	20	3	1038	1601	1618
6	224043	62.4	8	1	1796	-	-
7	375811	80.2	14	2	1736	1688	-
8	526524	87.5	17	3	1933	1524	1910
9	52332	85.8	16	3	1558	1072	1014
10	204270	88.1	17	3	1638	1320	1778
11	358389	65.3	9	1	1059	-	-
12	510583	52.5	5	1	1956	-	-
13	33661	52.3	5	1	2000	-	-
14	186091	74.1	12	2	1080	1807	-
15	339568	54.9	6	1	1031	-	-
16	490613	76.2	13	2	1518	1924	-
17	14864	60.4	8	1	1527	-	-
18	167448	81.5	15	2	1015	1351	-

Table 99. In-Service Monitoring, Bin 5, 5510 MHz, Table 28

Table 29							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	508045	50.5	5	1	1196	-	-
1	749937	55.7	6	1	1661	-	-
2	989019	85.8	16	3	1656	1854	1218
3	235517	76.9	13	2	1772	1323	-
4	477346	75.1	13	2	1221	1773	-
5	718529	92.3	18	3	1122	1158	1577
6	960804	78.1	14	2	1503	1649	-
7	205421	92.2	18	3	1446	1589	1583
8	447174	89	17	3	1145	1370	1341
9	689823	70.9	11	2	1088	1246	-
10	932887	63.1	9	1	1157	-	-
11	176194	55.3	6	1	1731	-	-

Table 100. In-Service Monitoring, Bin 5, 5510 MHz, Table 29

Table 30							
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	277683	83.4	15	3	1301	1213	1473
1	438503	97.3	20	3	1258	1057	1522
2	598617	90.4	17	3	1679	1090	1780
3	97142	91.8	18	3	1385	1491	1272
4	257779	98.2	20	3	1869	1055	1339
5	420304	59.5	8	1	1301	-	-
6	580095	80	14	2	1693	1417	-
7	77238	86.5	16	3	1548	1656	1903
8	237974	91.1	18	3	1379	1497	1433
9	398356	93.5	18	3	1360	1444	1937
10	561396	60.7	8	1	1778	-	-
11	57672	67.2	10	2	1157	1676	-
12	219189	61.8	8	1	1263	-	-
13	379317	79.4	14	2	1952	1503	-
14	540148	81.4	15	2	1926	1552	-
15	37944	65.7	10	1	1005	-	-
16	198981	76	13	2	1299	1065	-
17	360068	81	14	2	1163	1251	-

Table 101. In-Service Monitoring, Bin 5, 5510 MHz, Table 30