

6.3 CHANNEL AVAILABILITY CHECK (7.8.2)

6.3.1 Limit of Channel Availability Check

The Initial Channel Availability Check Time tests that the EUT 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 checks for radar waveforms for one minute on the test Channel.

6.3.2 Test Procedures

6.3.2.1 Initial Channel Availability Check Time

This test does not use any radar waveforms and only needs to be performed one time.

- (1) The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII Channel that must incorporate DFS functions. At the same time the EUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the Channel occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.
- (2) The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.

6.3.2.2 Radar Burst at the Beginning of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the test 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 occurs at the beginning of the Channel Availability Check Time. This is illustrated in Figure 15.

- (1) The Radar Waveform generator and EUT are connected using the applicable test setup and the power of the EUT is switched off.
- (2) The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence (T_{power_up}). The Channel Availability Check Time commences on Chr at instant T1 and will end no sooner than T1 + T_{ch_avail_check}.
- (3) A single Burst of one of the Short Pulse Radar Types 1-4 will commence within a 6 second window starting at T1. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- (4) Visual indication or measured results on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of Chr for EUT emissions will continue for 2.5 minutes after the radar Burst has been generated.
- (5) Verify that during the 2.5 minute measurement window no EUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.

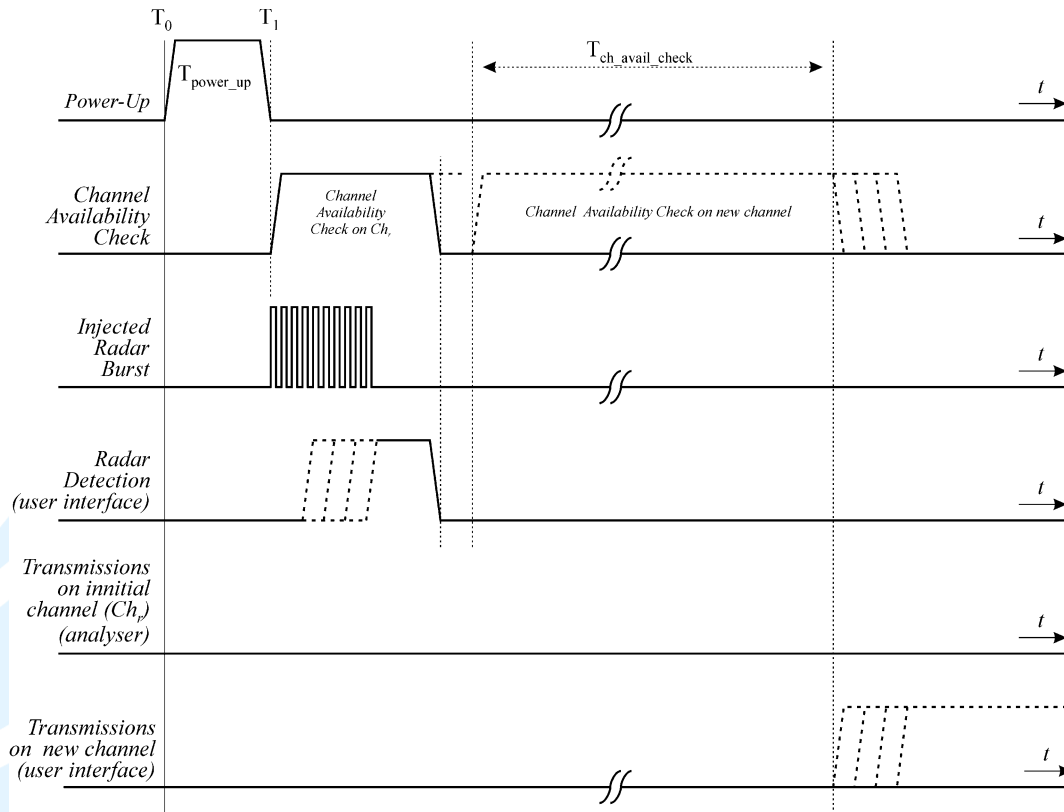


Figure 15: Example of timing for radar testing at the beginning of the Channel Availability Check Time

6.3.2.3 Radar Burst at the End of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the test 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 + 1dB occurs at the end of the Channel Availability Check Time. This is illustrated in Figure 16.

- (1) The Radar Waveform generator and EUT are connected using the applicable test setup and the power of the EUT is switched off.
- (2) The EUT is powered on at T_0 . T_1 denotes the instant when the EUT has completed its power-up sequence ($T_{\text{power_up}}$). The Channel Availability Check Time commences on Chr at instant T_1 and will end no sooner than $T_1 + T_{\text{ch_avail_check}}$.
- (3) A single Burst of one of the Short Pulse Radar Types 1-4 will commence within a 6 second window starting at $T_1 + 54$ seconds. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- (4) Visual indication or measured results on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of Chr for EUT emissions will continue for 2.5 minutes after the radar Burst has been generated.
- (5) Verify that during the 2.5 minute measurement window no EUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.

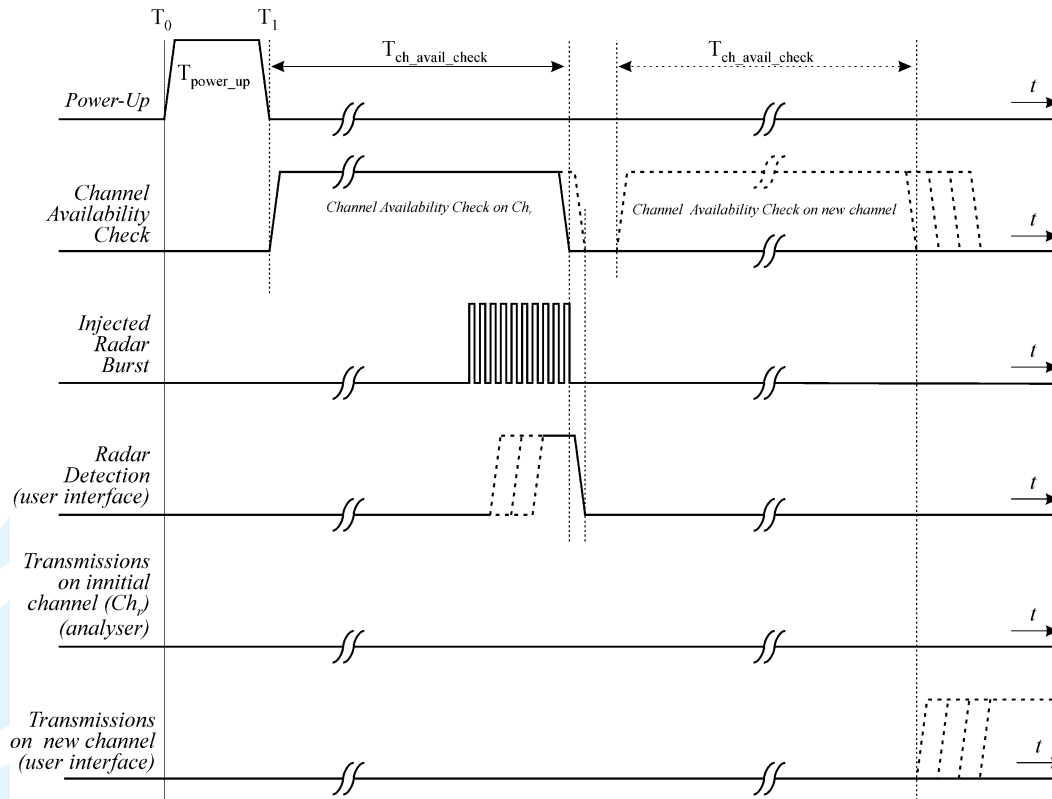
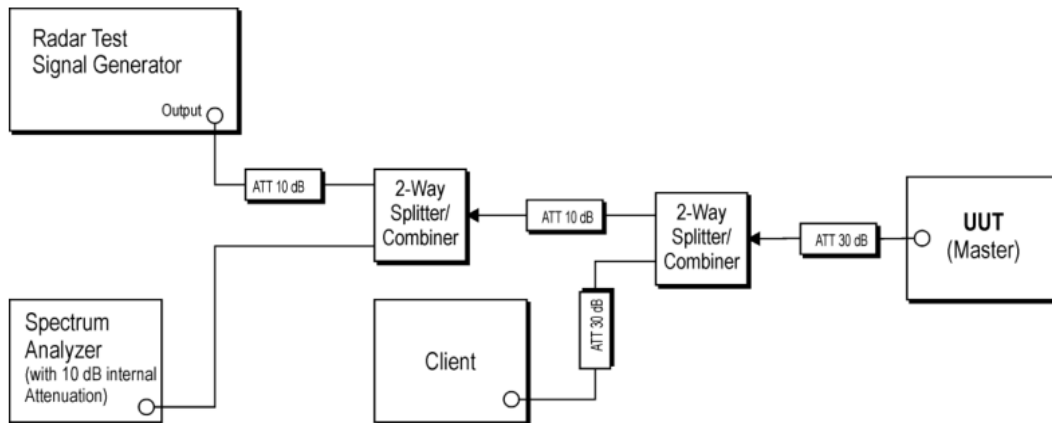


Figure 16: Example of timing for radar testing towards the end of the Channel Availability Check Time

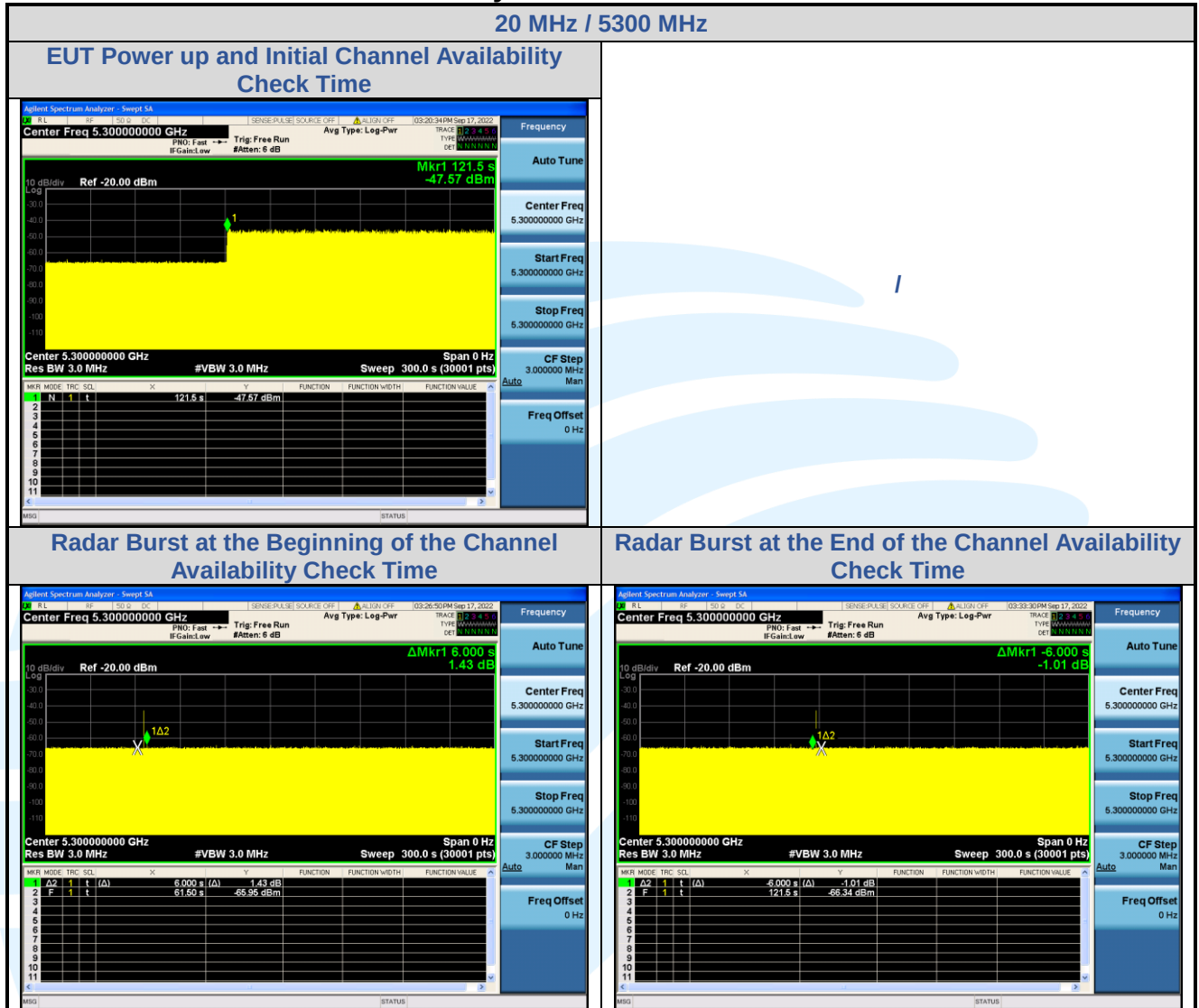
6.3.3 Test Setup

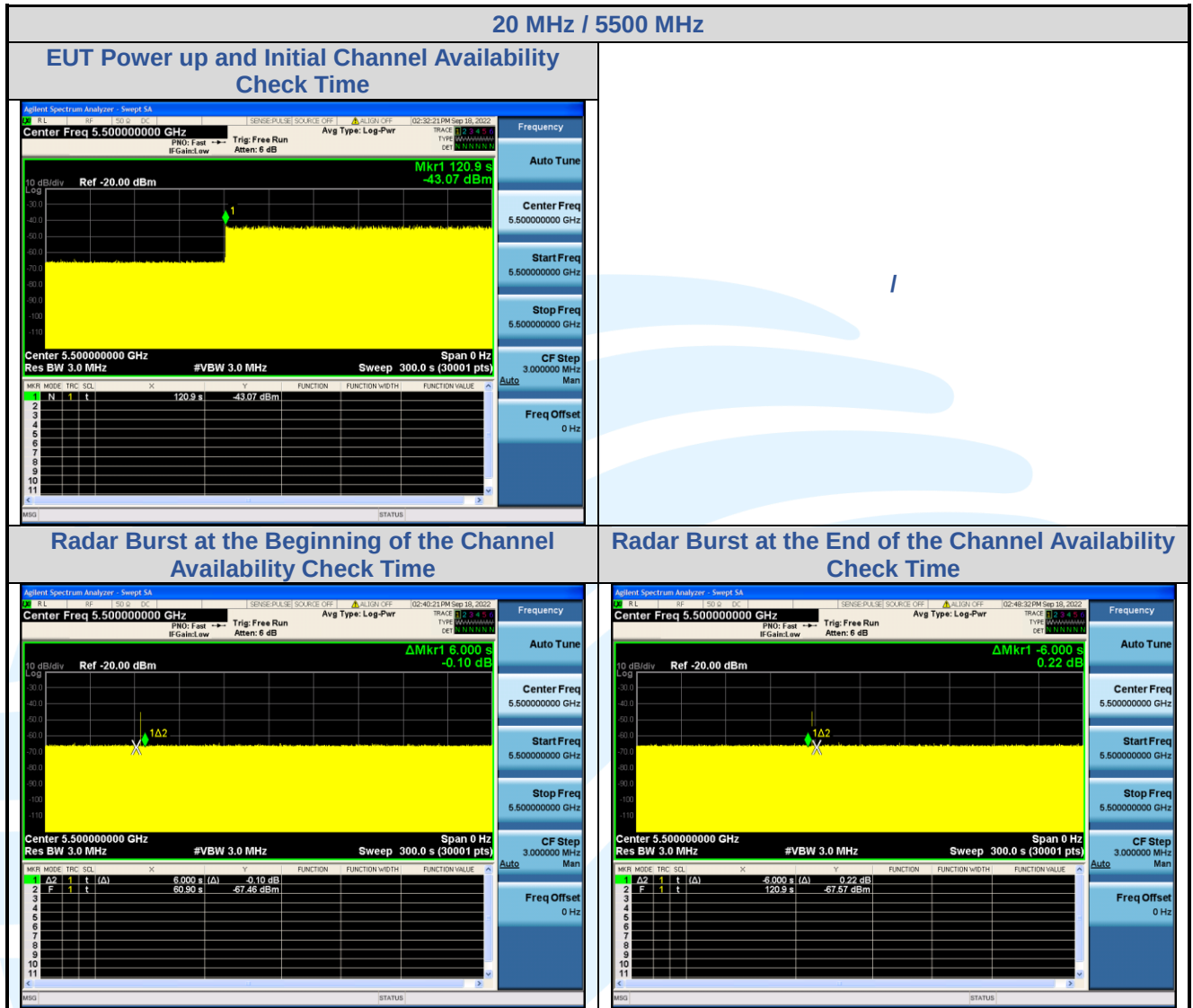


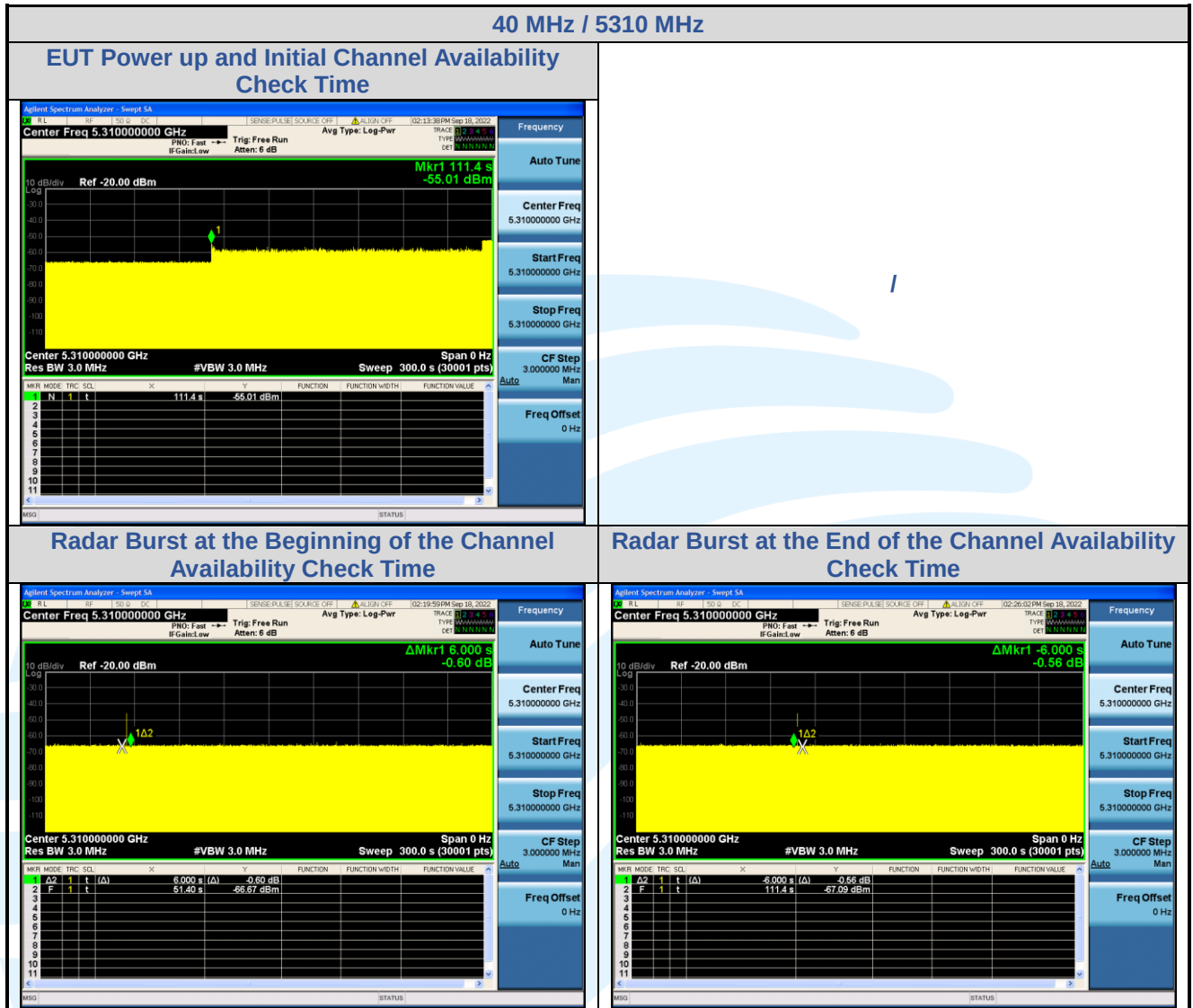
6.3.4 Test Deviation

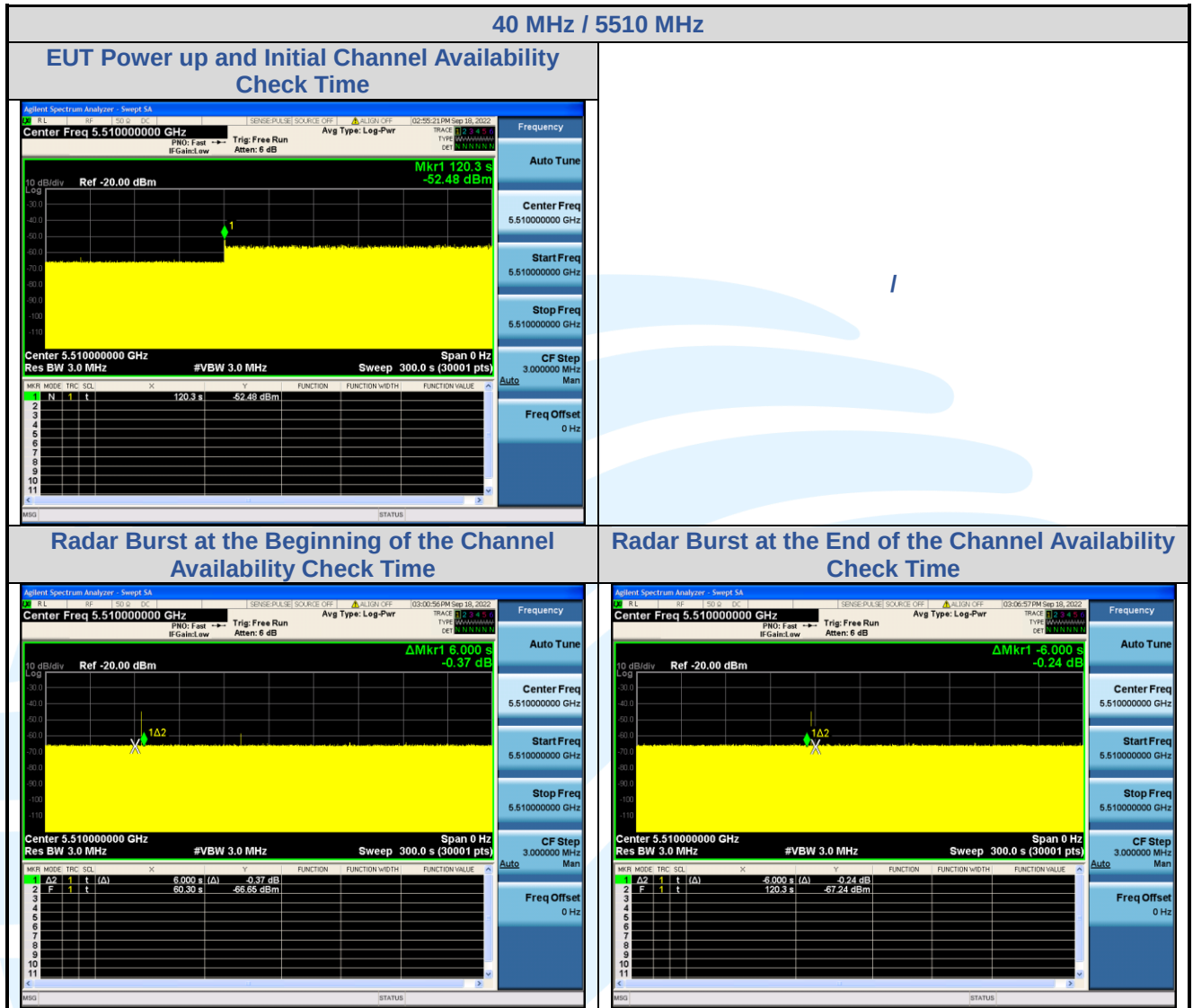
There is no deviation with the original standard.

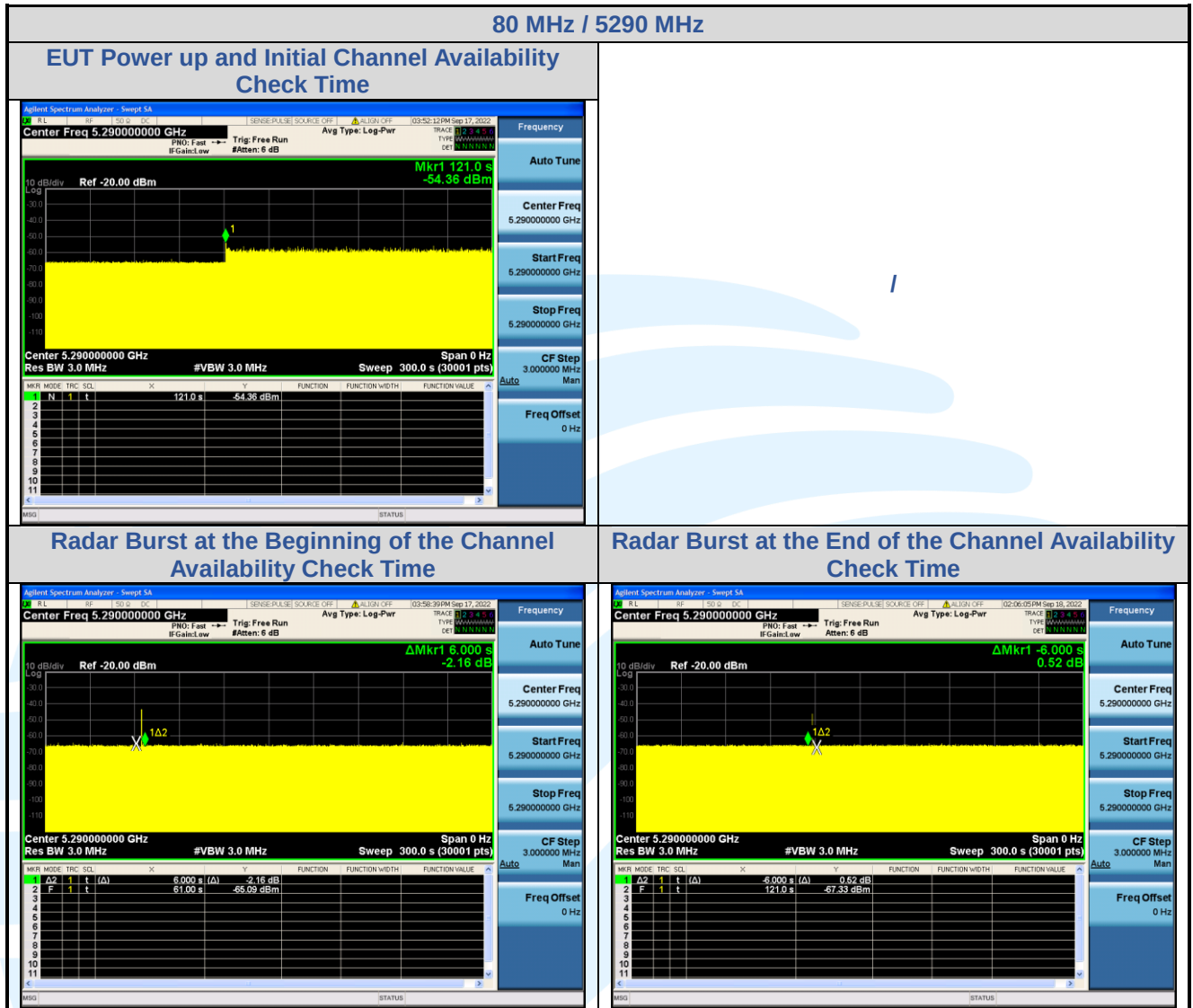
6.3.5 Result of Channel Availability Check Time

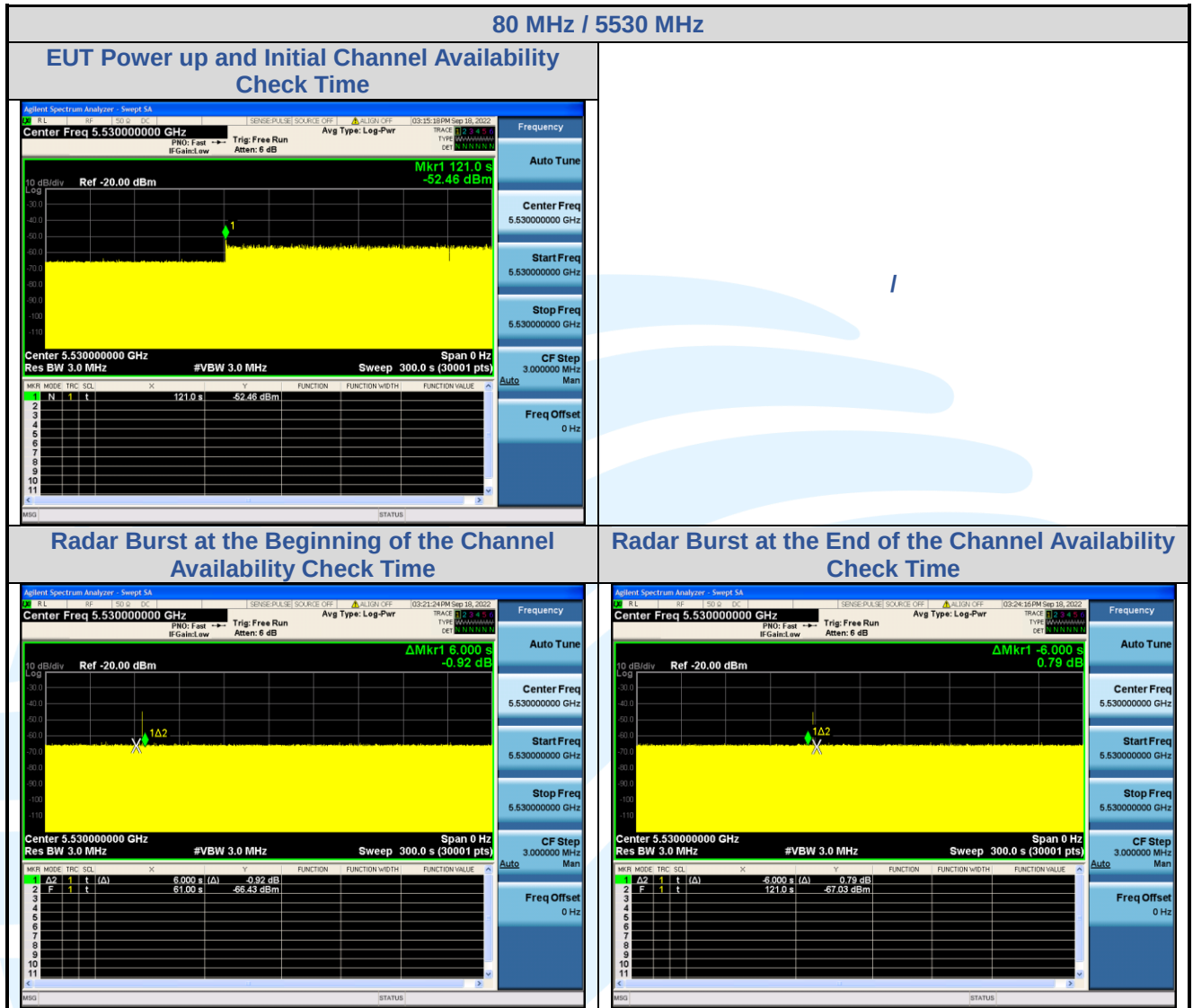












6.4 IN-SERVICE MONITORING: CHANNEL MOVE TIME, CHANNEL CLOSING TRANSMISSION TIME AND NON-OCCUPANCY PERIOD (7.8.3)

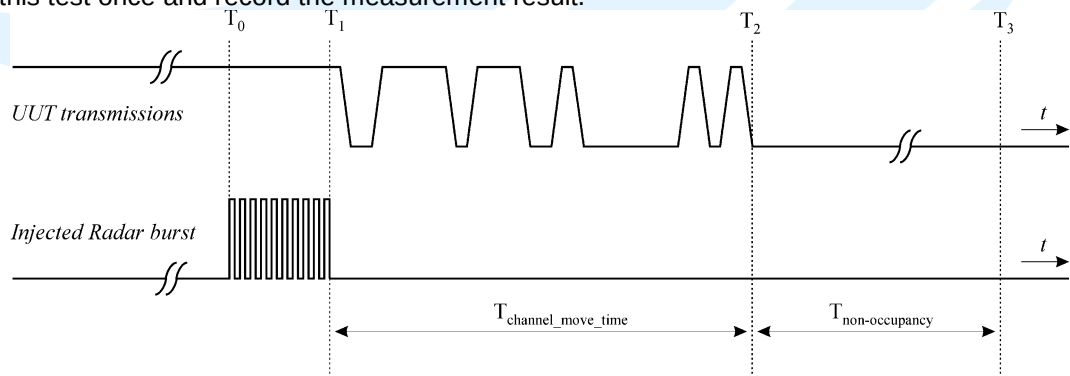
6.4.1 Limit of In-Service Monitoring

The EUT has In-Service Monitoring function to continuously monitor the radar signals, If radar is detected, it must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current Channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec. The total duration of Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate Channel 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.

Non-Occupancy Period time is 30 minute during which a Channel will not be utilized after a Radar Waveform is detected on that Channel.

6.4.2 Test Procedures

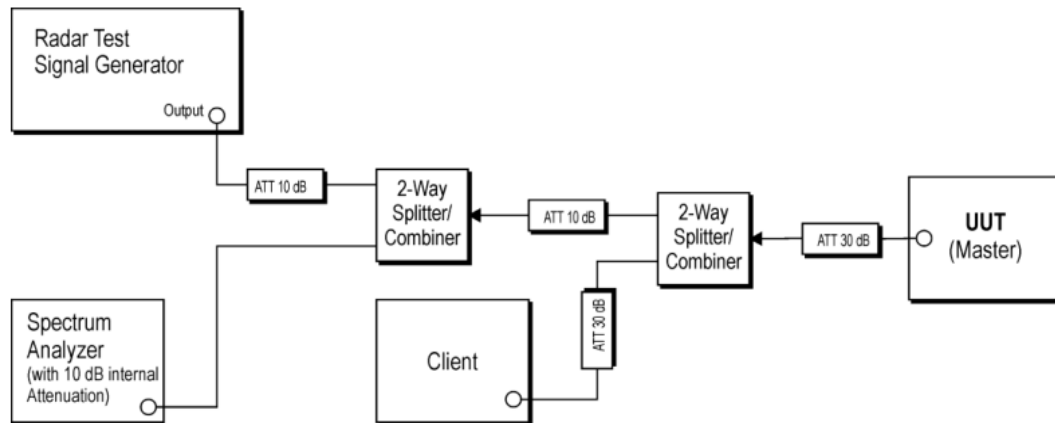
- (1) One frequency will be chosen from the Operating Channels of the EUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.
- (2) In case the EUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will associate with the EUT (Master). For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.
- (3) The TCP protocol unicast data stream was generated by the iperf software command line with at least 17% activity ratio over any 100ms period.
- (4) Timing plots are reported with calculations demonstrating a minimum channel loading of approximately 17% or greater. For example, channel loading can be estimated by setting the spectrum analyzer for zero span and approximate the Time On/ (Time On + Off Time).
- (5) At time T₀ the Radar Waveform generator sends a Burst of pulses for one of the Short Pulse Radar Types 1-4 at DFS Detection Threshold levels on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- (6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the EUT during the observation time (Channel Move Time). Measure and record the Channel Move Time and Channel Closing Transmission Time if radar detection occurs.
- (7) (7) When operating as a Master Device, monitor the EUT for more than 30 minutes following instant T₂ to verify that the EUT does not resume any transmissions on this Channel. Perform this test once and record the measurement result.



- (8) One 12 seconds plot is reported for the Short Pulse Radar Type 0
- (9) Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $D_{well} (0.3ms) = S (12000ms) / B (40000)$; where D_{well} is the dwell time per spectrum

analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3 ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.

6.4.3 Test Setup



6.4.4 Test Deviation

There is no deviation with the original standard.

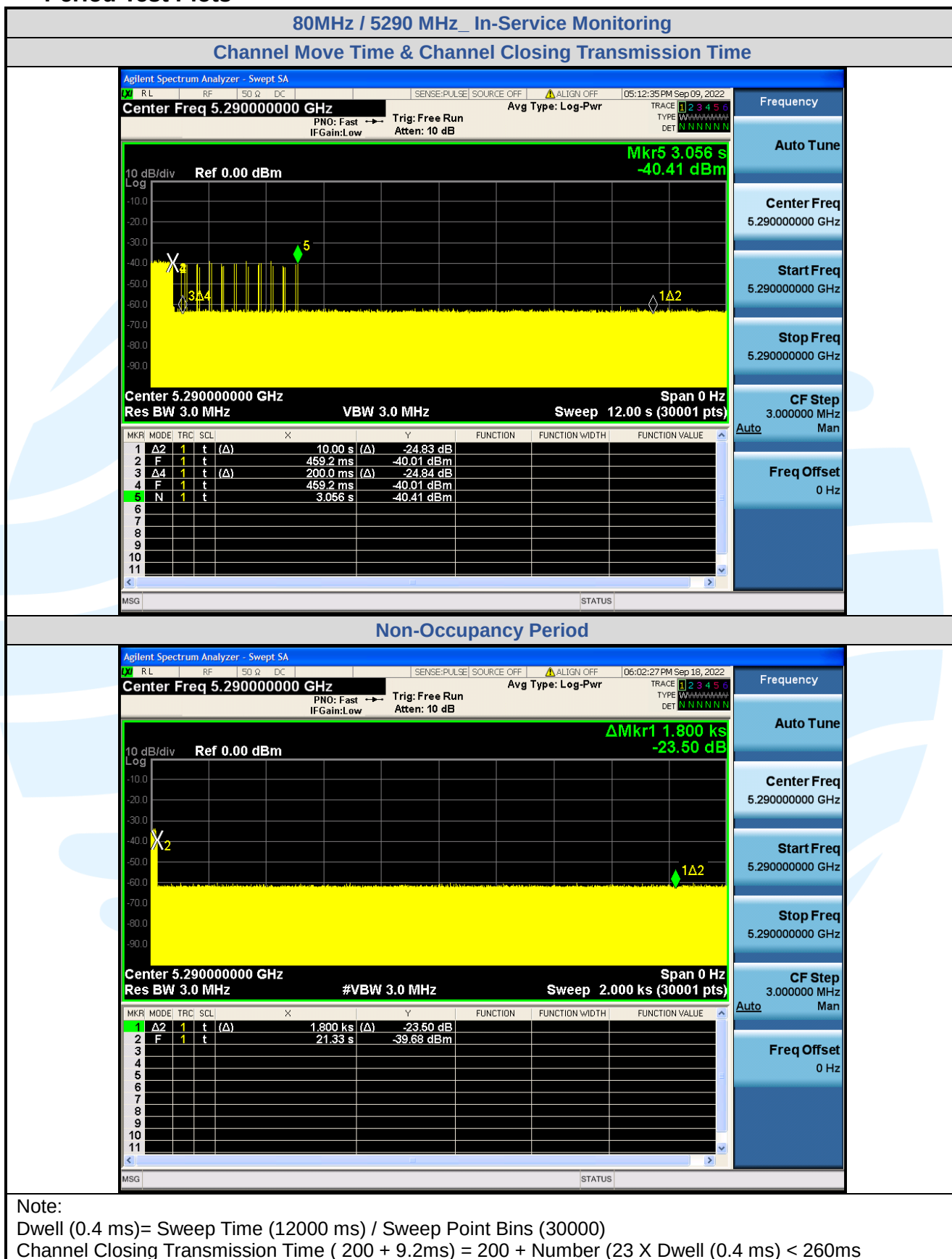
6.4.5 Result of Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period for Client Beacon Test

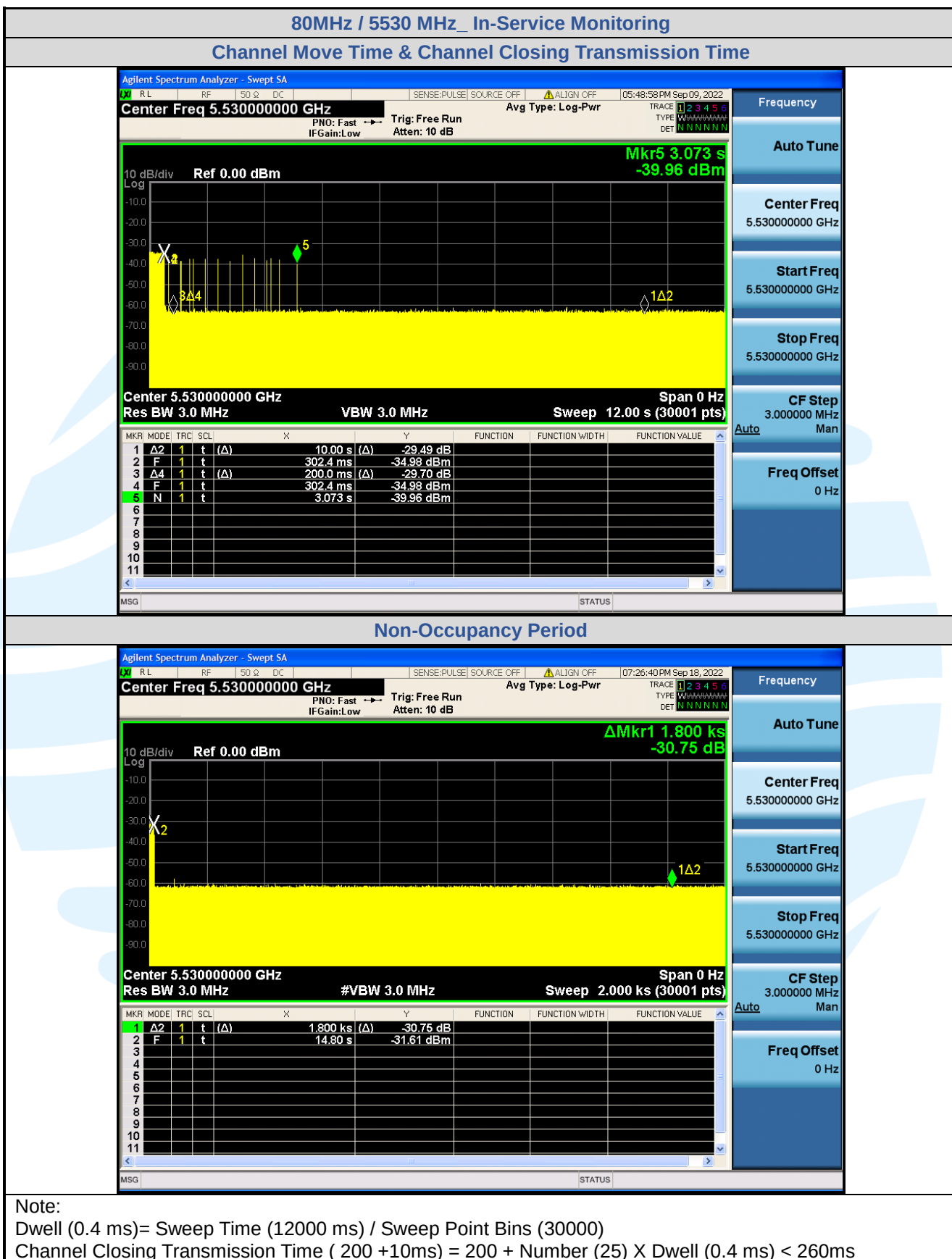
Test Mode :	Master	Temperature :	23.2°C
Test Engineer :	Rain Wang	Relative Humidity :	49%

Test Item	Test Result		Limit	PASS/FAIL
	80 MHz 5290 MHz	80 MHz 5530 MHz		
Channel Move Time	3.056 s	3.073 s	< 10s	PASS
Channel Closing Transmission Time	200ms + 9.2 ms	200ms + 10 ms	< 260ms	PASS
Non-Occupancy Period	≥ 30 min	≥ 30 min	≥ 30 min	PASS

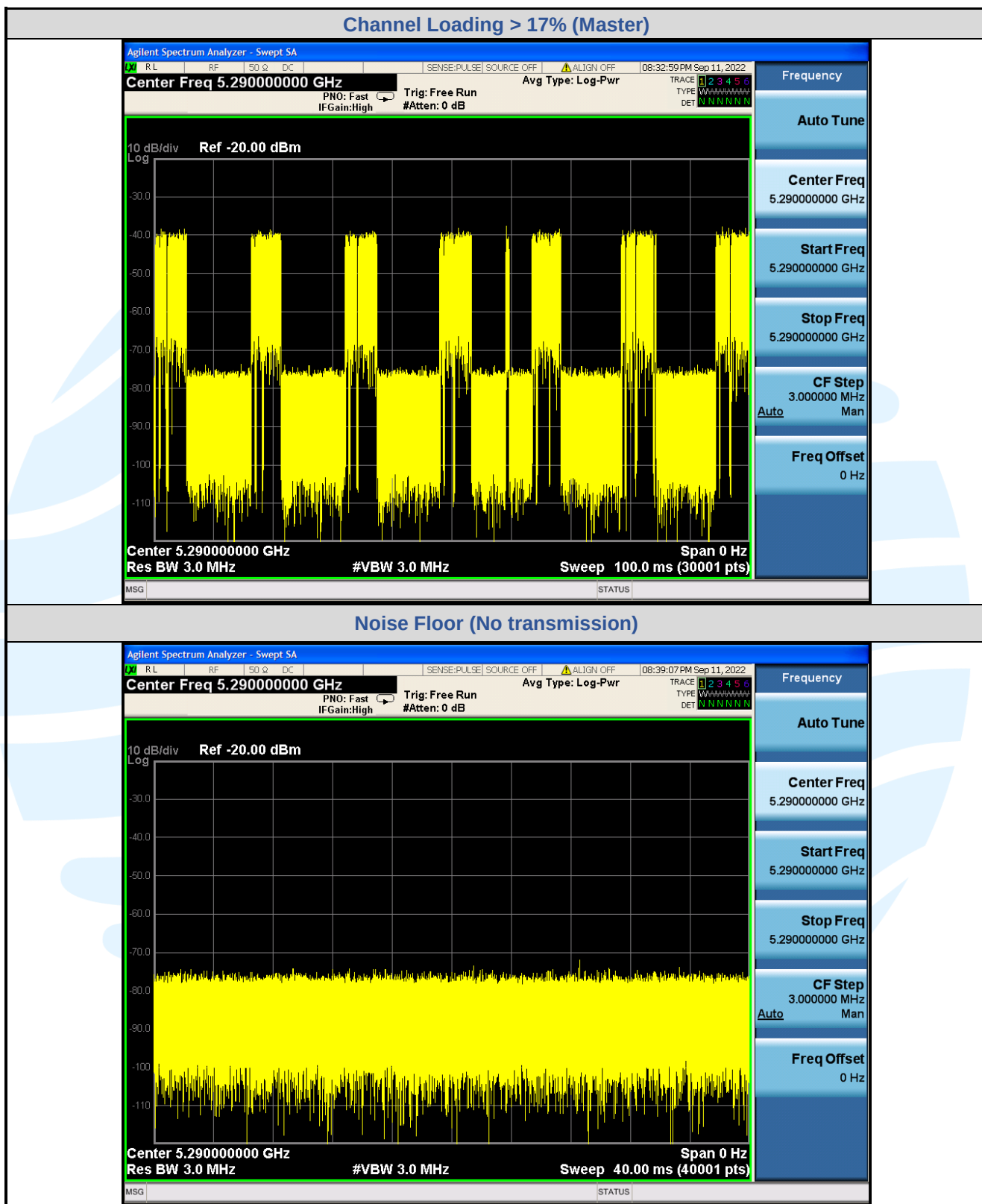
Note: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.

6.4.6 Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Test Plots





6.4.7 Data Traffic Channel Loading and Noise Floor Plots



6.5 STATISTICAL PERFORMANCE CHECK (7.8.4)

6.5.1 Limit of Statistical Performance Check

Short Pulse Radar Test

Once the performance requirements check is complete, statistical data will be gathered, to determine the ability of the device to detect the radar test waveforms (Short Pulse Radar Types 1-4) found in Table 5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trials. The percentage of successful detection is calculated by:

$$\frac{\text{Total Wave form Detections}}{\text{Total Wave form Trials}} \times 100 = \text{Percentage of Successful Detection Radar Waveform } N = P_d N$$

In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows:

$$\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4}$$

The minimum number of trails, minimum percentage of successful detection and the aggregate minimum percentage of successful detection are found in Table 5.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 1 through 4. For Short Pulse Radar Type 0, the same waveform is used a minimum of 30 times. If more than 30 waveforms are used for Short Pulse Radar Types 1 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

Radar Type	Number of Trials	Number of Successful Detections	Minimum Percentage of Successful Detection
1	35	29	82.9%
2	30	18	60%
3	30	27	90%
4	50	44	88%
Aggregate (82.9% + 60% + 90% + 88%)/4 = 80.2%			

Long Pulse Radar Test

Statistical data will be gathered to determine the ability of the device to detect the Long Pulse Radar Type 5 found in Table 6. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trials. The percentage of successful detection is calculated by:

$$\frac{\text{Total Wave form Detections}}{\text{Total Wave form Trials}} \times 100$$

Table 6 –Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of 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 Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Frequency Hopping Radar Test

Statistical data will be gathered to determine the ability of the device to detect the Frequency Hopping radar test signal (radar type 6) found in Table 7. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs. The probability of successful detection is calculated by:

$$\frac{\text{Total Wave form Detections}}{\text{Total Wave form Trials}} \times 100$$

Table 7 –Frequency Hopping Radar Test Waveform

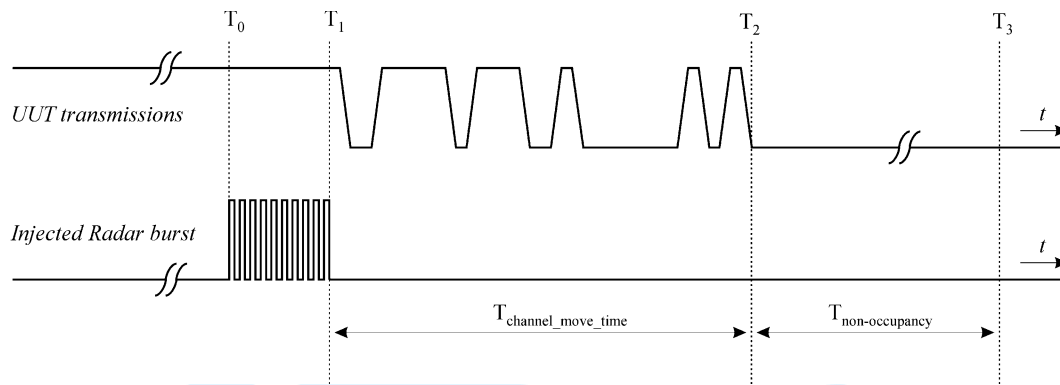
Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

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:

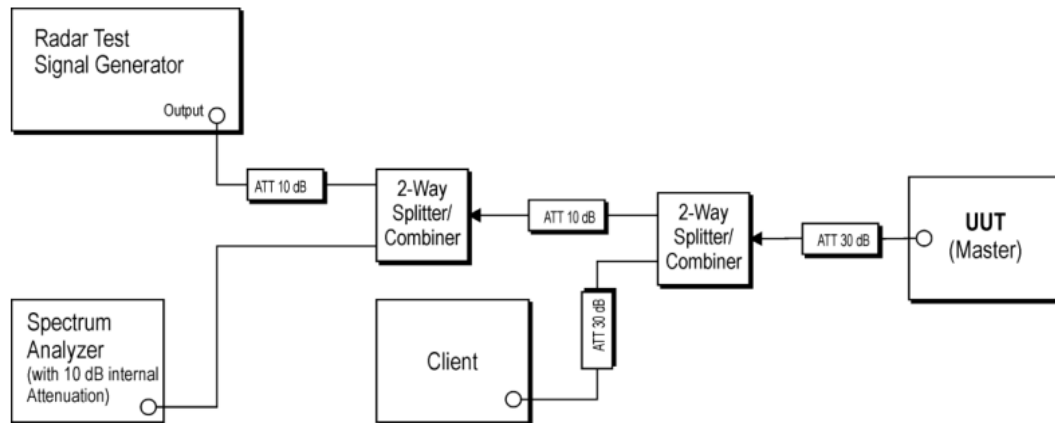
The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues 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.

6.5.2 Test Procedures

- (1) One frequency will be chosen from the Operating Channels of the EUT within the 5250-5350 MHz or 5470-5725 MHz bands.
- (2) (In case the EUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will associate with the EUT (Master). If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.
- (3) The TCP protocol unicast data stream was generated by the iperf software command line with at least 17% activity ratio over any 100ms period.
- (4) At time T0 the Radar Waveform generator sends a Burst of pulses for each of the Radar Types 1-6 at DFS Detection Threshold levels on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- (5) Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 1-4 and 6 to ensure detection occurs.
- (6) Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs



6.5.3 Test Setup



6.5.4 Test Deviation

There is no deviation with the original standard.

6.5.5 Result of Statistical Performance Check

20MHz / 5300MHz						
(Detection = Y, No Detection = N)						
Trial Number	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
1	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	N	Y
3	Y	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y	N
5	Y	N	Y	N	Y	Y
6	Y	Y	N	Y	Y	Y
7	Y	Y	Y	Y	Y	Y
8	Y	Y	Y	Y	Y	Y
9	Y	N	Y	Y	N	Y
10	Y	Y	N	Y	Y	Y
11	Y	N	Y	Y	Y	Y
12	Y	Y	Y	Y	Y	Y
13	Y	Y	Y	Y	Y	N
14	Y	Y	Y	N	Y	Y
15	N	Y	Y	Y	Y	Y
16	Y	Y	Y	Y	N	Y
17	Y	N	Y	Y	Y	N
18	Y	Y	Y	Y	Y	Y
19	Y	Y	N	Y	Y	Y
20	Y	Y	Y	N	Y	Y
21	N	Y	Y	Y	N	Y
22	Y	N	Y	Y	Y	Y
23	Y	Y	N	Y	Y	N
24	Y	Y	Y	Y	Y	Y
25	N	Y	Y	Y	N	Y
26	Y	Y	Y	Y	Y	Y
27	Y	Y	Y	Y	Y	Y
28	Y	Y	Y	Y	N	N
29	Y	N	Y	N	Y	Y
30	Y	Y	Y	N	Y	Y
Trial of Detection	27/30	24/30	26/30	25/30	24/30	25/30
Probability (%)	90%	80%	86.7%	83.3%	80%	83.3%
Limit (%)	>= 60%	>= 60%	>= 60%	>= 60%	>= 80%	>= 70%
Average Probability of Radar Type 1~4 (%)				85.0% (>=80%)		

40MHz / 5310MHz						
(Detection = Y, No Detection = N)						
Trial Number	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
1	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y	Y
3	N	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y	N
6	Y	Y	Y	Y	N	Y
7	Y	N	Y	N	Y	Y
8	Y	Y	Y	Y	Y	Y
9	Y	Y	Y	Y	Y	Y
10	Y	Y	Y	Y	Y	N
11	N	Y	Y	Y	Y	Y
12	N	Y	Y	N	Y	Y
13	Y	Y	Y	N	Y	Y
14	Y	Y	Y	Y	Y	N
15	Y	Y	N	Y	N	Y
16	N	Y	Y	Y	Y	Y
17	Y	N	Y	Y	Y	Y
18	Y	Y	Y	Y	N	Y
19	Y	Y	N	Y	Y	N
20	Y	Y	Y	Y	Y	Y
21	Y	Y	Y	N	Y	Y
22	Y	Y	Y	Y	Y	N
23	Y	Y	N	Y	Y	Y
24	N	Y	Y	N	Y	Y
25	Y	N	Y	Y	Y	Y
26	Y	Y	N	Y	Y	N
27	N	Y	Y	Y	N	Y
28	Y	Y	Y	N	Y	Y
29	Y	Y	Y	Y	Y	N
30	Y	Y	N	Y	N	Y
Trial of Detection	24/30	27/30	25/30	24/30	25/30	23/30
Probability (%)	80%	90%	83.3%	80%	83.3%	76.7%
Limit (%)	>= 60%	>= 60%	>= 60%	>= 60%	>= 80%	>= 70%
Average Probability of Radar Type 1~4 (%)			83.3% (>=80%)			

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80MHz / 5290MHz						
(Detection = Y, No Detection = N)						
Trial Number	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
1	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y	Y
3	Y	Y	Y	Y	Y	Y
4	N	N	Y	N	Y	Y
5	Y	Y	N	Y	N	Y
6	Y	Y	Y	Y	Y	Y
7	Y	Y	Y	Y	Y	N
8	N	Y	Y	N	Y	Y
9	Y	Y	N	Y	N	Y
10	Y	N	Y	Y	Y	Y
11	Y	Y	Y	N	Y	Y
12	N	Y	N	Y	Y	Y
13	Y	Y	Y	Y	N	Y
14	Y	Y	Y	N	Y	Y
15	Y	Y	N	Y	Y	N
16	Y	Y	Y	Y	Y	Y
17	N	Y	Y	Y	Y	Y
18	Y	Y	Y	Y	Y	N
19	Y	N	Y	Y	N	Y
20	Y	Y	Y	Y	Y	Y
21	Y	Y	Y	Y	Y	Y
22	N	N	Y	Y	Y	N
23	Y	Y	Y	N	N	Y
24	Y	Y	Y	Y	Y	Y
25	Y	Y	Y	Y	Y	Y
26	N	Y	Y	N	Y	N
27	Y	N	Y	Y	Y	Y
28	Y	Y	N	Y	Y	Y
29	N	Y	Y	Y	N	N
30	Y	Y	Y	Y	Y	Y
Trial of Detection	23/30	25/30	25/30	24/30	24/30	24/30
Probability (%)	76.7%	83.3%	83.3%	80%	80%	80%
Limit (%)	>= 60%	>= 60%	>= 60%	>= 60%	>= 80%	>= 70%
Average Probability of Radar Type 1~4 (%)				80.8% (>=80%)		

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20MHz / 5500MHz						
(Detection = Y, No Detection = N)						
Trial Number	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
1	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	N	Y	Y
3	Y	N	Y	Y	Y	Y
4	Y	Y	N	Y	Y	N
5	Y	Y	Y	Y	N	Y
6	N	Y	Y	N	Y	Y
7	Y	Y	Y	Y	Y	N
8	Y	N	N	Y	Y	Y
9	Y	Y	Y	Y	Y	Y
10	N	Y	Y	Y	Y	Y
11	Y	Y	N	Y	N	N
12	Y	Y	Y	Y	Y	Y
13	Y	N	Y	N	Y	Y
14	Y	Y	Y	Y	Y	Y
15	N	Y	Y	Y	Y	Y
16	Y	Y	Y	Y	Y	N
17	Y	Y	Y	Y	Y	Y
18	Y	Y	N	Y	Y	Y
19	N	Y	Y	N	N	N
20	Y	Y	Y	Y	Y	Y
21	Y	N	Y	Y	Y	Y
22	Y	Y	N	Y	Y	Y
23	Y	Y	Y	Y	Y	Y
24	Y	Y	Y	N	Y	Y
25	Y	Y	Y	Y	N	Y
26	N	N	N	Y	Y	N
27	Y	Y	N	Y	Y	Y
28	Y	Y	Y	N	Y	Y
29	N	Y	Y	Y	Y	Y
30	Y	Y	Y	Y	Y	Y
Trial of Detection	24/30	25/30	23/30	24/30	26/30	24/30
Probability (%)	80%	83.3%	76.7%	80%	86.7%	80%
Limit (%)	>= 60%	>= 60%	>= 60%	>= 60%	>= 80%	>= 70%
Average Probability of Radar Type 1~4 (%)				80.0% (>=80%)		

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40MHz / 5510MHz						
(Detection = Y, No Detection = N)						
Trial Number	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
1	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y	Y
3	Y	Y	Y	Y	Y	Y
4	Y	Y	N	N	Y	N
5	Y	Y	Y	Y	Y	Y
6	N	N	Y	Y	N	Y
7	Y	Y	N	Y	Y	Y
8	Y	N	Y	N	Y	Y
9	Y	Y	Y	Y	Y	N
10	Y	Y	Y	Y	N	Y
11	Y	Y	Y	N	Y	Y
12	Y	Y	Y	Y	Y	Y
13	N	N	Y	Y	Y	N
14	Y	Y	Y	Y	Y	Y
15	Y	Y	Y	Y	N	N
16	Y	Y	N	N	Y	Y
17	N	Y	Y	Y	Y	Y
18	Y	Y	Y	Y	Y	N
19	Y	N	Y	Y	Y	Y
20	N	Y	Y	N	N	Y
21	Y	Y	Y	Y	Y	Y
22	Y	Y	Y	Y	Y	N
23	Y	N	N	Y	Y	Y
24	Y	Y	Y	N	Y	Y
25	Y	Y	N	Y	N	Y
26	N	N	Y	Y	Y	Y
27	Y	Y	Y	Y	Y	Y
28	Y	Y	Y	N	Y	Y
29	Y	Y	Y	Y	N	N
30	Y	Y	Y	Y	Y	Y
Trial of Detection	25/30	24/30	25/30	23/30	24/30	23/30
Probability (%)	83.3%	80%	83.3%	76.7%	80%	76.7%
Limit (%)	>= 60%	>= 60%	>= 60%	>= 60%	>= 80%	>= 70%
Average Probability of Radar Type 1~4 (%)				80.8 % (>=80%)		

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80MHz / 5530MHz						
(Detection = Y, No Detection = N)						
Trial Number	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
1	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y	Y
3	Y	Y	Y	Y	Y	Y
4	Y	N	Y	Y	Y	N
5	N	Y	Y	Y	Y	Y
6	Y	Y	N	N	N	Y
7	Y	Y	Y	Y	Y	Y
8	Y	N	Y	Y	Y	Y
9	N	Y	Y	Y	Y	N
10	Y	Y	N	Y	N	N
11	Y	Y	Y	N	Y	Y
12	N	N	Y	Y	Y	Y
13	Y	Y	Y	Y	Y	Y
14	Y	Y	N	Y	Y	N
15	N	N	Y	Y	Y	Y
16	Y	Y	N	N	N	Y
17	Y	Y	Y	Y	Y	Y
18	Y	Y	Y	Y	Y	Y
19	N	Y	Y	N	Y	N
20	Y	Y	Y	Y	Y	N
21	Y	Y	Y	Y	Y	Y
22	Y	Y	Y	Y	Y	Y
23	Y	Y	Y	N	Y	Y
24	Y	Y	Y	Y	N	N
25	Y	Y	N	Y	Y	Y
26	Y	Y	Y	Y	Y	Y
27	Y	Y	Y	N	Y	N
28	Y	Y	Y	Y	N	Y
29	Y	Y	Y	Y	Y	Y
30	N	Y	Y	Y	Y	Y
Trial of Detection	24/30	26/30	25/30	24/30	25/30	22/30
Probability (%)	80%	86.7%	83.3%	80%	83.3%	73.3%
Limit (%)	>= 60%	>= 60%	>= 60%	>= 60%	>= 80%	>= 70%
Average Probability of Radar Type 1~4 (%)				82.5% (>=80%)		

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7. RADAR PARAMETERS

Refer to Appendix A-F for RADAR PARAMETERS.

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of UnionTrust, this report can't be reproduced except in full.
