

TEST REPORT

Report Number : 16041888-E3V2

Applicant : Ericsson Enterprise Wireless Solutions Inc.
1100 W. Idaho St.
Boise, ID 83702, U.S.A.

Model : S5A609A

Brand : Ericsson Enterprise Wireless Solutions Inc.

FCC ID : UXX-S5A609A

IC : 6921A-S5A609A

EUT Description : 5G Ruggedized Router

Test Standard(s) : DFS PORTION of FCC 47 CFR PART 15 SUBPART E
DFS PORTION of ISSED CANADA RSS-247 ISSUE 4

Date Of Issue:
2026-03-04

Prepared by:
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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2026-02-27	Initial Issue	--
V2	2026-03-04	Section 1 & 6 updated	F. Ibrahim

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Ericsson Enterprise Wireless Solutions Inc.
1100 W. Idaho St.
Boise, ID, 83702, US

EUT DESCRIPTION: 5G Ruggedized Router

MODEL: S5A609A

SERIAL NUMBER: WC2536TD000152, WC2536TD000180

SAMPLE RECEIPT DATE: 2026-01-16

DATE TESTED: 2026-01-30 – 2026-02-23

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
DFS Portion of 47 CFR Part 15 Subpart E	Complies
DFS Portion of ISED CANADA RSS-247 Issue 4	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document.

Approved & Released For
UL Verification Services Inc. By:



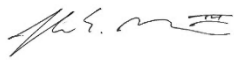
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the DFS portion of FCC 47 CFR Part 2, FCC 47 CFR Part 15, FCC KDB 789033, KDB 905462 D02 and D03 and RSS-247 Issue 4.

3. SUMMARY OF TEST RESULTS

Requirement Description	Result	Remarks
DFS Portion of FCC 47 CFR PART 15 SUBPART E	Complies	None
DFS Portion of ISED CANADA RSS-247 ISSUE 4	Complies	None

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for correctly integrating customer-provided data with measurements performed by UL Verification Services Inc.

Below is a list of the data provided by the customer:

1. Antenna gain and type (0 dBi)

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☒	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
☐	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA			
☐	Building 3: 843 Auburn Court, Fremont, CA 94538, USA			
☐	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA			
☐	Building 5: 47670 Kato Rd, Fremont, CA 94538, USA			

Note: MRA designation number (US1287).

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement).

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Radio Frequency (Spectrum Analyzer)	141.16 Hz
Occupied Bandwidth	1.22%
Power Spectral Density	2.47 dB
RF Power Measurement Direct Method Using Power Meter	1.3 dB (PK) / 0.45 dB (AV)
Unwanted Emissions, Conducted	1.94 dB
Worst Case Conducted Disturbance, 9kHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9kHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB
Time Domain Measurements	0.02 %
Temperature	0.57°C
Humidity	3.39%
DC Supply Voltages	0.57%

Uncertainty figures are valid to a confidence level of 95%.

6. DYNAMIC FREQUENCY SELECTION

6.1. OVERVIEW

6.1.1. LIMITS

INNOVATION, SCIENCE and ECONOMIC DEVELOPMENT CANADA (ISED)

ISED RSS-247 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-247 Issue 4

Note: For the band 5600–5650 MHz, only the ETSI EN 301 893 test procedure shall be used to demonstrate compliance for devices with radar detection. Devices using the FCC KDB Procedure 905462 must operate exclusively within the 5250-5350 MHz, 5470-5600 MHz, 5650-5725 MHz bands, or any combination of these bands.

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. $\geq$ 200 mill watt	-64 dBm
E.I.R.P. $<$ 200 mill watt and power spectral density $<$ 10 dBm/MHz	-62 dBm
E.I.R.P. $<$ 200 mill watt that do not meet power spectral density requirement	-64 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. Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	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 + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. (See Note 3)
Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. 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 to facilitate a <i>Channel</i> move (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. Note 3: During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 / \text{PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
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
Note 1: Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

Table 6 – Long Pulse Radar Test Signal

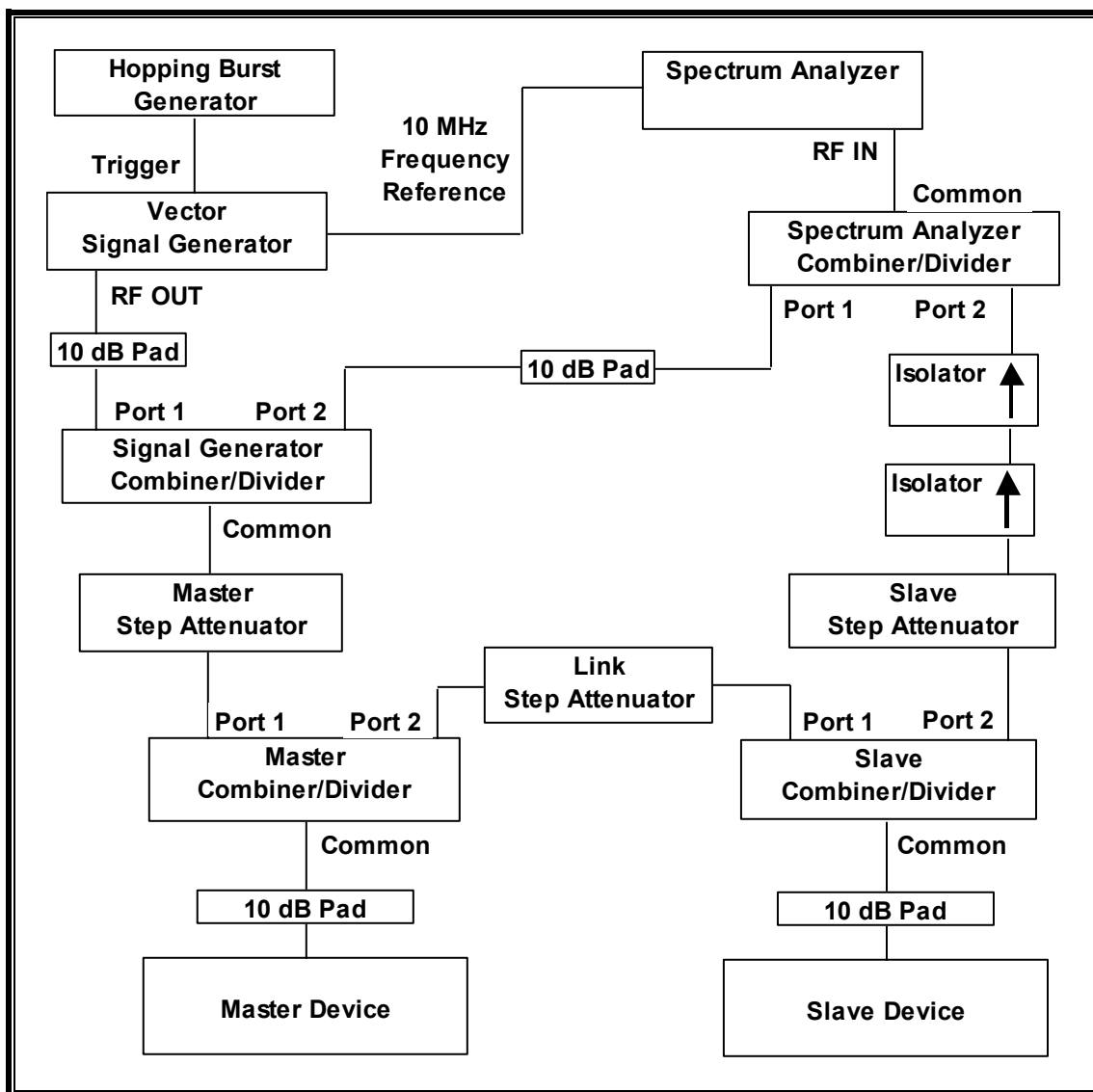
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform 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	0.333	300	70%	30

6.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

Should multiple RF ports be utilized for the Master and/or Client devices (for example, for diversity or MIMO implementations), additional combiner/dividers are inserted between the Master Combiner/Divider and the pad connected to the Master Device (and/or between the Client Combiner/Divider and the pad connected to the Client Device). Additional pads may be utilized such that there is one pad at each RF port on each EUT.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected in place of the master device. The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of -64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is -64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of -64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Client and the Link Step Attenuator between the units is adjusted as needed to provide a suitable received level at the Master and Client devices. Iperf is used to generate WLAN traffic. Traffic that meets or exceeds the minimum loading requirement is streamed from the Master device to the Client Device. The WLAN traffic level, as displayed on the spectrum analyzer, is confirmed to be at lower amplitude than the radar detection threshold and is confirmed to be the Radar Detection Device rather than the associated device. If a different setting of the Master Step Attenuator is required to meet the above conditions, a new System Calibration is performed for the new Master Step Attenuator setting.

TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Date	Cal Due
Spectrum Analyzer, PXA, 3Hz to 8.4GHz	Keysight	N9030A	150667	2026-01-12	2027-01-31
Signal Generator, MXG X-Series RF Vector	Keysight	N5182B	215999	2026-01-20	2027-01-31
Frequency Extender	Keysight	N5182BX	213906	2026-01-20	2027-01-31
Arbitrary Waveform Generator	Agilent / HP	33220A	80815	2026-01-12	2027-01-31

Note: An MXG series Signal Generator and separate external Frequency Extender module are shown in the preceding test system block diagram as a stand-alone Vector Signal Generator.

6.1.3. TEST AND MEASUREMENT SOFTWARE

The following test and measurement software was utilized for the tests documented in this report:

TEST SOFTWARE LIST		
Name	Version	Test / Function
Aggregate Time-PXA	3.1	Channel Loading and Aggregate Closing Time
PXA Read	3.1	Signal Generator Screen Capture
SGXProject.exe	1.7	Radar Waveform Generation and Download
FCC 2014 Detection Bandwidth-PXA	3.1.1	Detection Bandwidth in 5 MHz Steps
In Service Monitoring-PXA	4.1	In-Service Monitoring (Probability of Detection)

TEST ROOM ENVIRONMENT

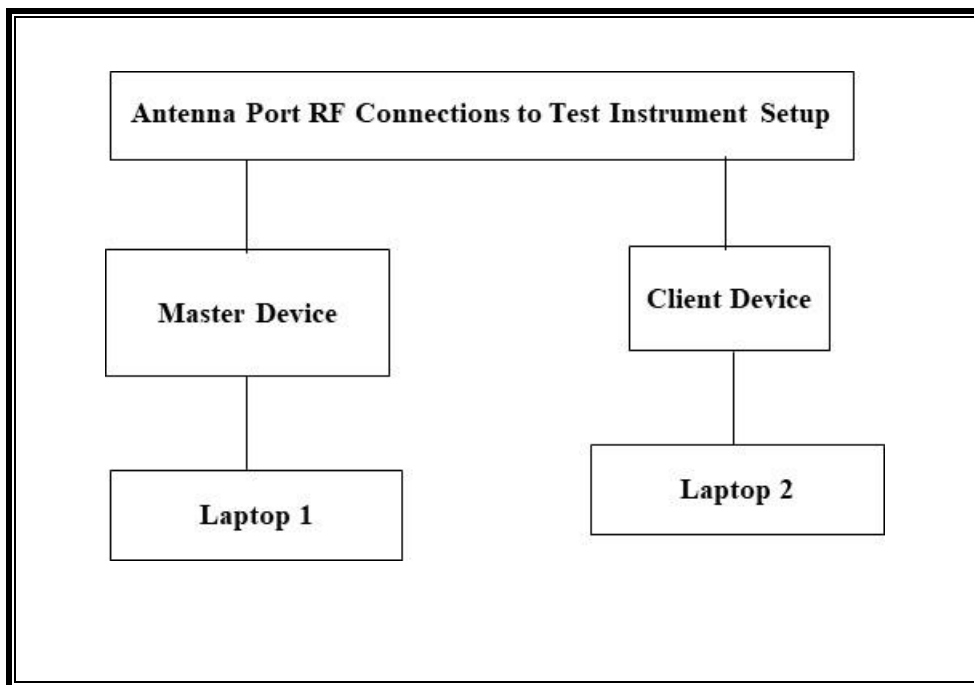
The test room temperature and humidity shall be maintained within normal temperature of 15~35 °C and normal humidity 20~75% (relative humidity).

ENVIRONMENT CONDITION

Parameter	Value
Temperature	26 °C
Humidity	48 %

6.1.4. SETUP OF EUT

CONDUCTED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Supply 1	FSP Group Inc.	FSP150-AAAN3	H253610 00012	DoC
Power Supply 2	FSP Group Inc.	FSP150-AAAN3	H253610 00016	DoC
Laptop 1	Apple	Macbook Pro	FVFXRR62HV22	DoC
Laptop 1 Adapter	Apple	A1947	No Serial	DoC
Laptop 2	Apple	Macbook Pro	FVFXRSQ4HV22	DoC
Laptop 2 Adapter	Apple	A1947	No Serial	DoC

6.1.5. DESCRIPTION OF EUT

For FCC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

For ISED the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding the 5600-5650 MHz range.

The EUT can be configured as a Master Device, Client with Radar Detection, or a Client Device without Radar Detection.

The manufacturer has declared that the highest power level within the DFS bands are > 23 dBm EIRP.

The manufacturer has declared that the only antenna assembly utilized with the EUT has a gain of 0 dBi.

Two identical antennas are utilized to meet the diversity and MIMO operational requirements.

The rated output power of the Master unit is > 23 dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is $-64 + 0 + 1 = -63$ dBm.

The EUT uses two transmitter/receive chains, each connected to a 50-ohm coaxial antenna port. All antenna ports are connected to the test system via a power divider to perform conducted tests.

Two EUTs were provided to act as the Master and Client device.

During Master testing, EUT 1 was set to Master mode and EUT 2 was set to client without radar detection.

During Client with radar detection testing, EUT 1 was set to Master mode and EUT 2 was set to Client with radar detection.

Both Master and Client were monitored at the same time during testing.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the Master Device to the Client Device using iPerf3 software package.

TPC is required since the maximum EIRP is greater than 500 mW (27 dBm).

The EUT utilizes the 802.11ax architecture. Four nominal channel bandwidths are implemented: 20 MHz, 40 MHz, 80 MHz and 160 MHz.

The manufacturer declares that static channel puncturing is supported but is not used for the purposes of avoiding DFS.

Manufacturer declares that channel bandwidth reduction is not supported by the EUT.

TDLS (Tunneled Direct Link Setup) mode is not supported by the EUT.

The software installed in the EUT is V7.26.40.

UNIFORM CHANNEL SPREADING

This function is not required per KDB 905462.

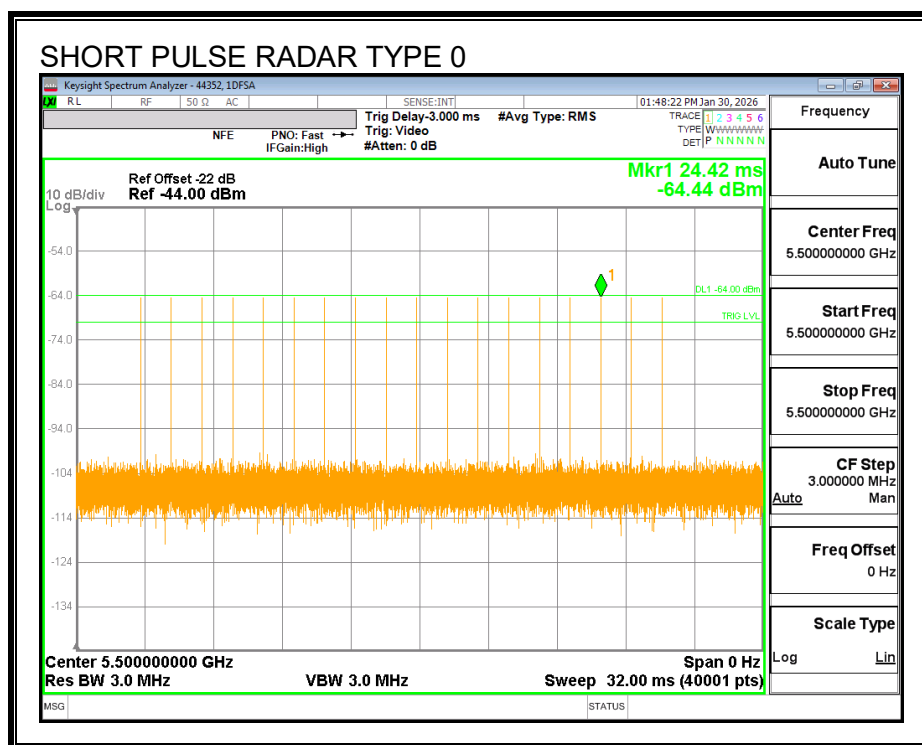
6.2. MASTER DEVICE CONFIGURATION RESULTS FOR 20 MHz BANDWIDTH

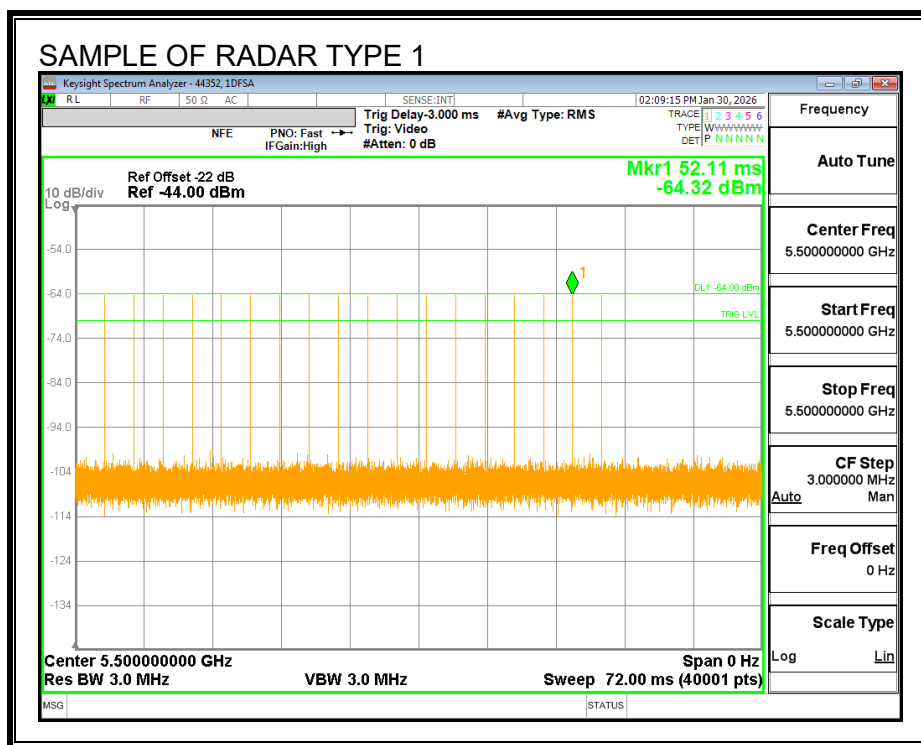
6.2.1. TEST CHANNEL

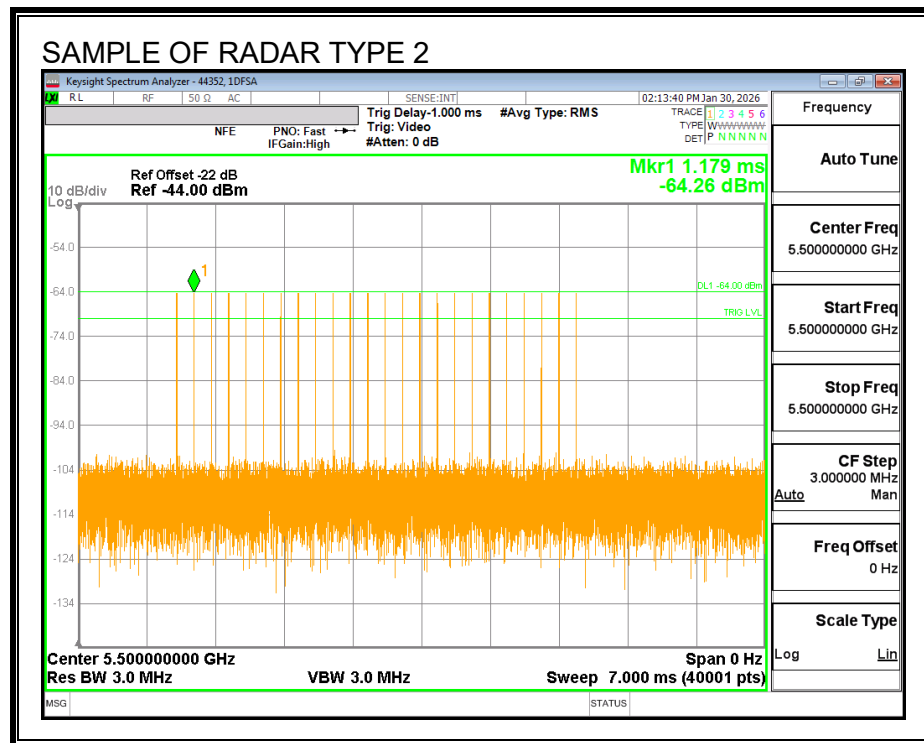
All tests were performed at a channel center frequency of 5500 MHz.

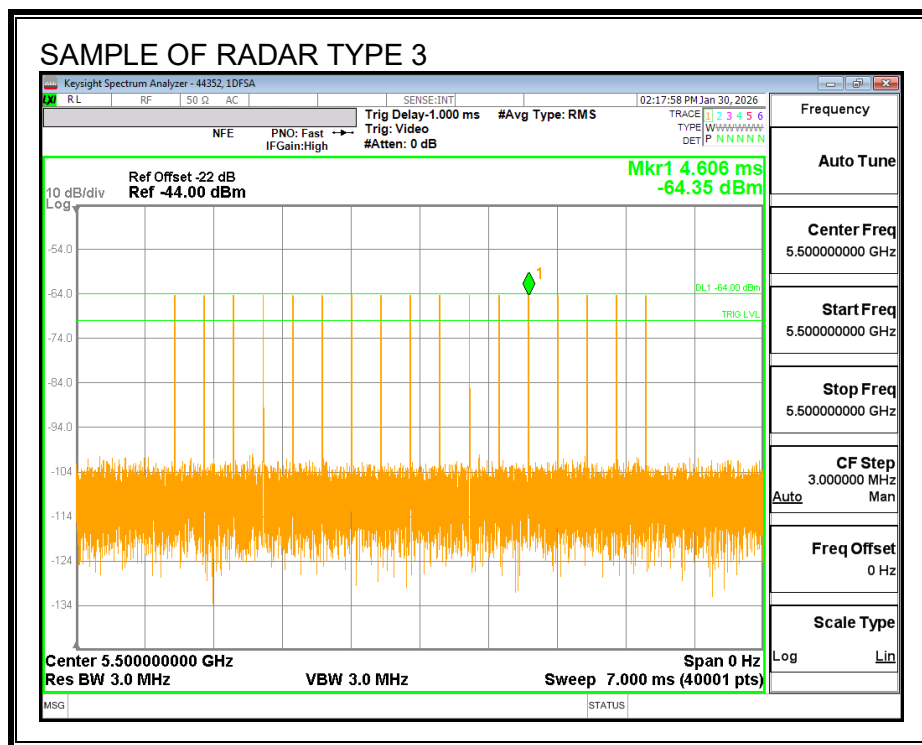
6.2.2. RADAR WAVEFORMS AND TRAFFIC

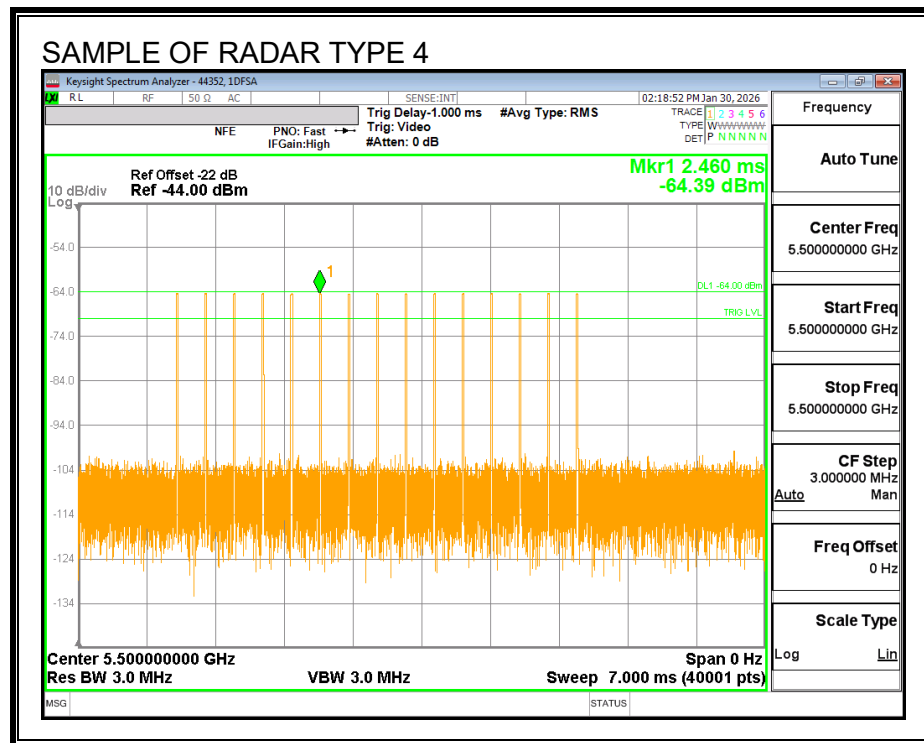
RADAR WAVEFORMS

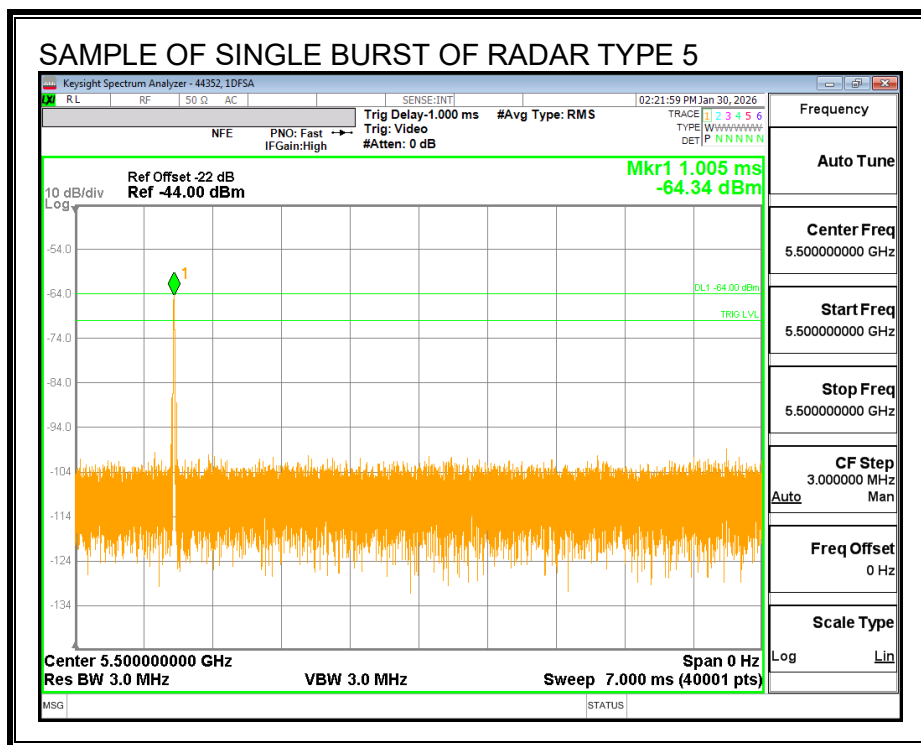


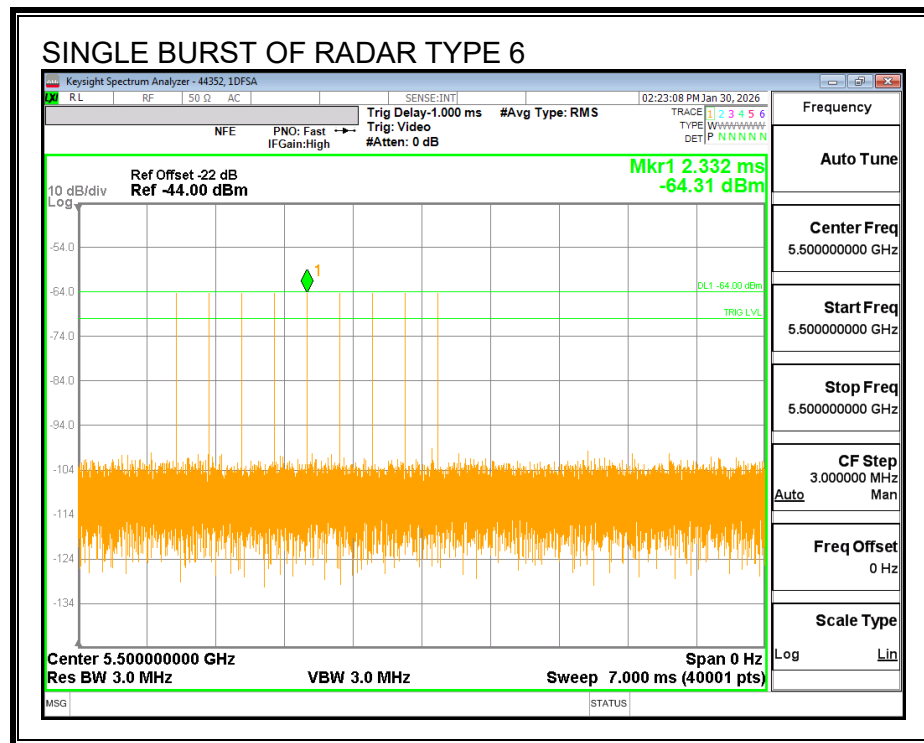




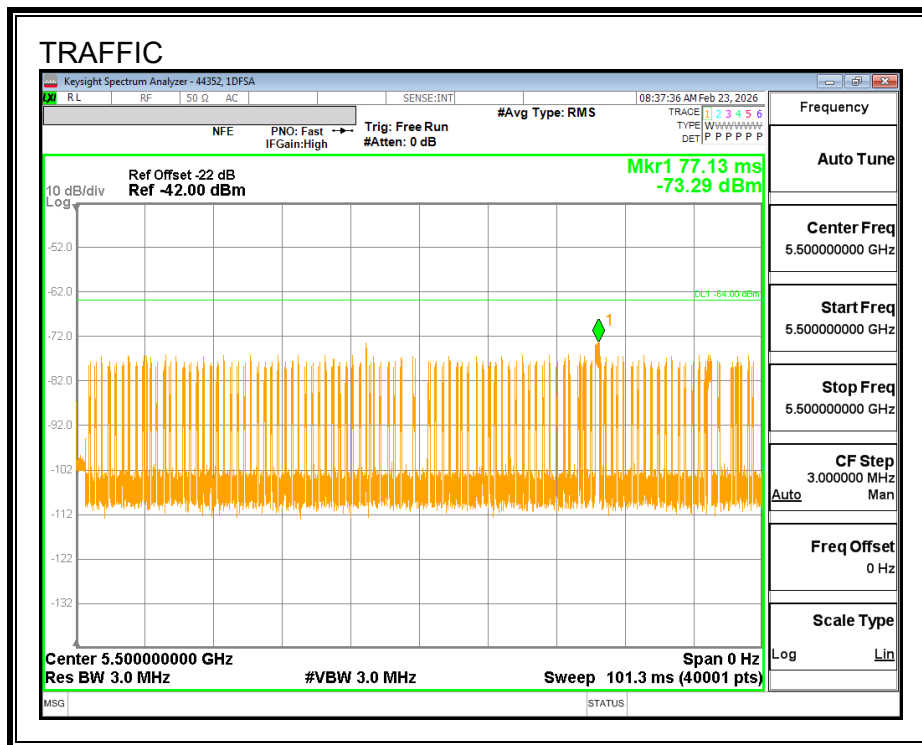




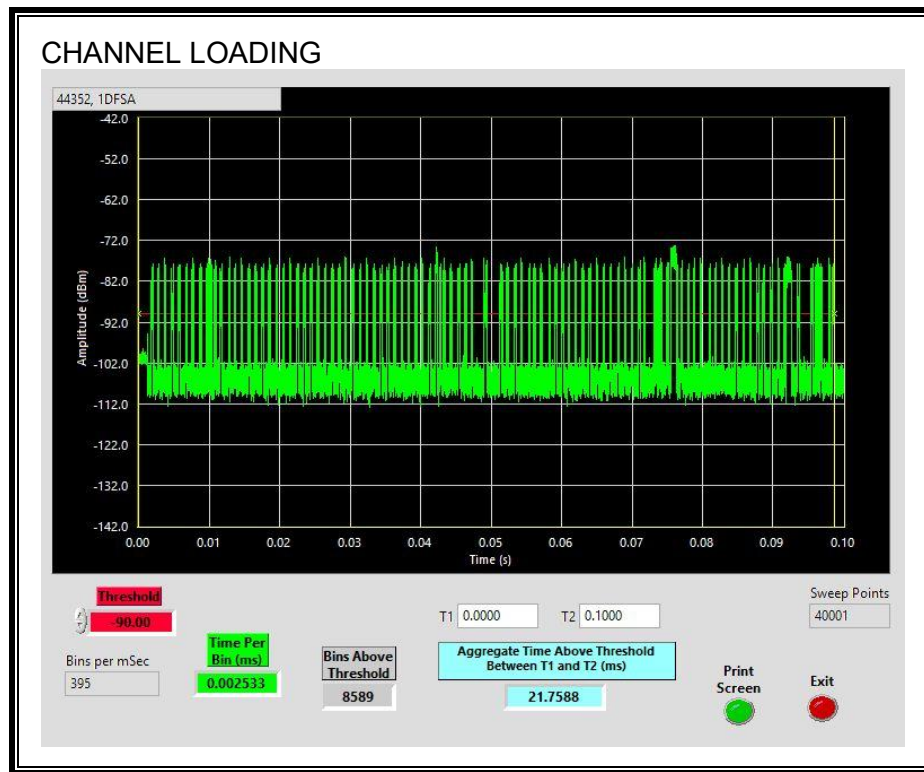




TRAFFIC



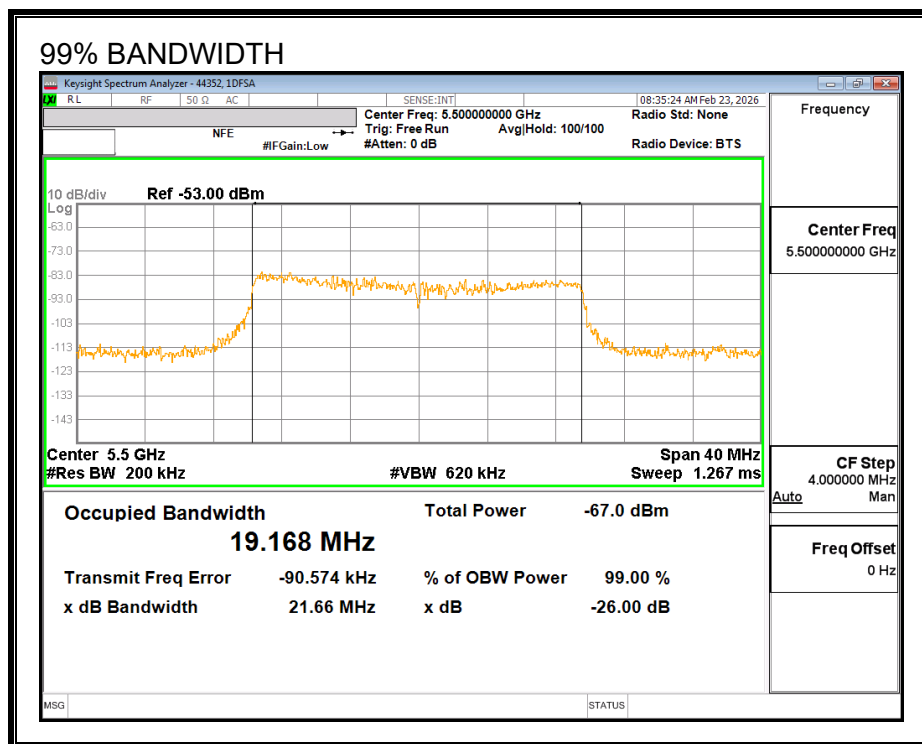
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 21.7588%

6.2.3. DETECTION BANDWIDTH

REFERENCE PLOT OF 99% POWER BANDWIDTH



RESULTS

F_L (MHz)	F_H (MHz)	Detection Bandwidth (MHz)	99% Power Bandwidth (MHz)	Ratio of Detection BW to 99% Power BW (%)	Minimum Limit (%)
5490	5510	20	19.168	104.3	100

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS

Detection Bandwidth Test Results				
FCC Type 0 Waveform: 1 us Pulse Width, 1428 us PRI, 18 Pulses per Burst				
Frequency (MHz)	Number of Trials	Number Detected	Detection (%)	Mark
5489	1	0	0	
5490	10	10	100	FL
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5510	10	10	100	FH
5511	1	0	0	

6.2.4. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary										
Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail	Detection Bandwidth		OBW	Test Location	Employee Number	In-Service Monitoring Version
					FL	FH				
FCC Short Pulse Type 1	30	100.00	60	Pass	5490	5510	19.17	1DFS A	44352	v2023.11.3
FCC Short Pulse Type 2	30	100.00	60	Pass	5490	5510	19.17	1DFS A	44352	v2023.11.3
FCC Short Pulse Type 3	30	96.67	60	Pass	5490	5510	19.17	1DFS A	44352	v2023.11.3
FCC Short Pulse Type 4	30	100.00	60	Pass	5490	5510	19.17	1DFS A	44352	v2023.11.3
Aggregate		99.17	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5490	5510	19.17	1DFS A	44352	v2023.11.3
FCC Hopping Type 6	42	100.00	70	Pass	5490	5510		1DFS A	44352	v2023.11.3

TYPE 1 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 1						
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Test (A/B)	Frequency (MHz)	Successful Detection (Yes/No)
1001	1	3066	18	A	5502	Yes
1002	1	938	57	A	5501	Yes
1003	1	638	83	A	5494	Yes
1004	1	878	61	A	5504	Yes
1005	1	558	95	A	5496	Yes
1006	1	738	72	A	5493	Yes
1007	1	678	78	A	5508	Yes
1008	1	618	86	A	5493	Yes
1009	1	898	59	A	5497	Yes
1010	1	538	99	A	5497	Yes
1011	1	578	92	A	5505	Yes
1012	1	518	102	A	5492	Yes
1013	1	658	81	A	5498	Yes
1014	1	758	70	A	5508	Yes
1015	1	918	58	A	5500	Yes
1016	1	984	54	B	5498	Yes
1017	1	810	66	B	5500	Yes
1018	1	1637	33	B	5508	Yes
1019	1	1593	34	B	5490	Yes
1020	1	1355	39	B	5510	Yes
1021	1	1440	37	B	5498	Yes
1022	1	1331	40	B	5508	Yes
1023	1	2899	19	B	5509	Yes
1024	1	1725	31	B	5510	Yes
1025	1	875	61	B	5491	Yes
1026	1	2379	23	B	5492	Yes
1027	1	1658	32	B	5499	Yes
1028	1	2096	26	B	5495	Yes
1029	1	2858	19	B	5497	Yes
1030	1	2073	26	B	5510	Yes

TYPE 2 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 2					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
2001	3.4	177	24	5505	Yes
2002	3.4	158	26	5503	Yes
2003	1.1	150	27	5506	Yes
2004	3.5	173	29	5509	Yes
2005	1.5	212	23	5495	Yes
2006	4.1	202	29	5507	Yes
2007	4.4	164	24	5495	Yes
2008	1.2	158	23	5490	Yes
2009	3.7	205	29	5508	Yes
2010	2.9	164	28	5499	Yes
2011	1.5	178	27	5509	Yes
2012	4.9	223	24	5508	Yes
2013	1.8	159	27	5502	Yes
2014	3.6	208	24	5505	Yes
2015	4.8	191	28	5497	Yes
2016	2.6	207	25	5505	Yes
2017	2.1	194	29	5498	Yes
2018	4.3	214	24	5505	Yes
2019	4	205	25	5500	Yes
2020	2.2	191	26	5492	Yes
2021	4.3	187	28	5506	Yes
2022	5	176	27	5504	Yes
2023	3.1	219	28	5501	Yes
2024	4	213	28	5499	Yes
2025	2.4	222	26	5498	Yes
2026	1.6	220	26	5491	Yes
2027	4.3	152	25	5499	Yes
2028	3.6	197	29	5507	Yes
2029	2.7	214	25	5492	Yes
2030	2.3	225	29	5498	Yes

TYPE 3 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 3					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
3001	8.1	300	17	5491	Yes
3002	5.4	347	16	5506	Yes
3003	9.9	309	17	5499	Yes
3004	7.5	369	17	5504	Yes
3005	7.1	343	18	5501	Yes
3006	10	298	16	5501	Yes
3007	7.5	285	17	5497	Yes
3008	8.3	253	16	5502	Yes
3009	6.1	386	17	5499	Yes
3010	7.2	367	17	5507	Yes
3011	5.1	395	16	5508	No
3012	9.2	388	18	5506	Yes
3013	5.1	429	17	5506	Yes
3014	6.7	317	17	5500	Yes
3015	5.5	371	16	5502	Yes
3016	5	405	17	5497	Yes
3017	6.5	472	16	5491	Yes
3018	8.9	268	18	5506	Yes
3019	8.2	480	18	5495	Yes
3020	5.9	289	16	5503	Yes
3021	5.5	264	18	5497	Yes
3022	8.4	470	17	5505	Yes
3023	5.9	457	16	5500	Yes
3024	6.7	425	18	5502	Yes
3025	9.6	307	16	5491	Yes
3026	5.5	420	17	5492	Yes
3027	8.6	315	18	5501	Yes
3028	7.6	442	17	5504	Yes
3029	8.6	349	16	5505	Yes
3030	7.8	489	18	5495	Yes

TYPE 4 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 4					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
4001	17.9	291	15	5499	Yes
4002	16.9	326	13	5499	Yes
4003	15.1	392	16	5492	Yes
4004	14.6	440	16	5501	Yes
4005	13.3	401	14	5493	Yes
4006	18.6	461	15	5495	Yes
4007	17.9	435	13	5508	Yes
4008	19	390	12	5501	Yes
4009	18.7	377	16	5501	Yes
4010	10.3	345	15	5504	Yes
4011	15.9	478	14	5507	Yes
4012	18	341	13	5500	Yes
4013	19.4	487	15	5501	Yes
4014	12	363	12	5510	Yes
4015	13.9	270	16	5494	Yes
4016	12.3	409	14	5495	Yes
4017	14.8	345	14	5504	Yes
4018	13.7	498	16	5509	Yes
4019	11.9	313	14	5500	Yes
4020	11.4	360	15	5492	Yes
4021	10.1	322	13	5491	Yes
4022	15.4	382	14	5508	Yes
4023	14.7	356	12	5503	Yes
4024	15.8	311	16	5498	Yes
4025	15.5	431	12	5506	Yes
4026	17.2	399	13	5500	Yes
4027	12.7	399	12	5508	Yes
4028	14.8	262	12	5503	Yes
4029	16.2	407	13	5505	Yes
4030	18.9	283	15	5507	Yes

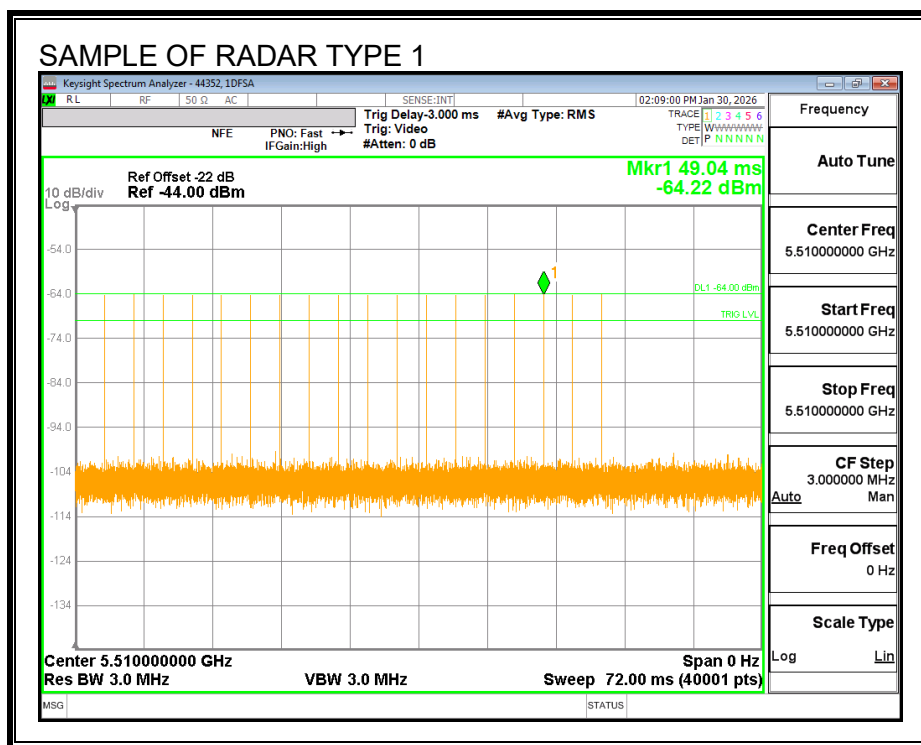
TYPE 5 DETECTION PROBABILITY

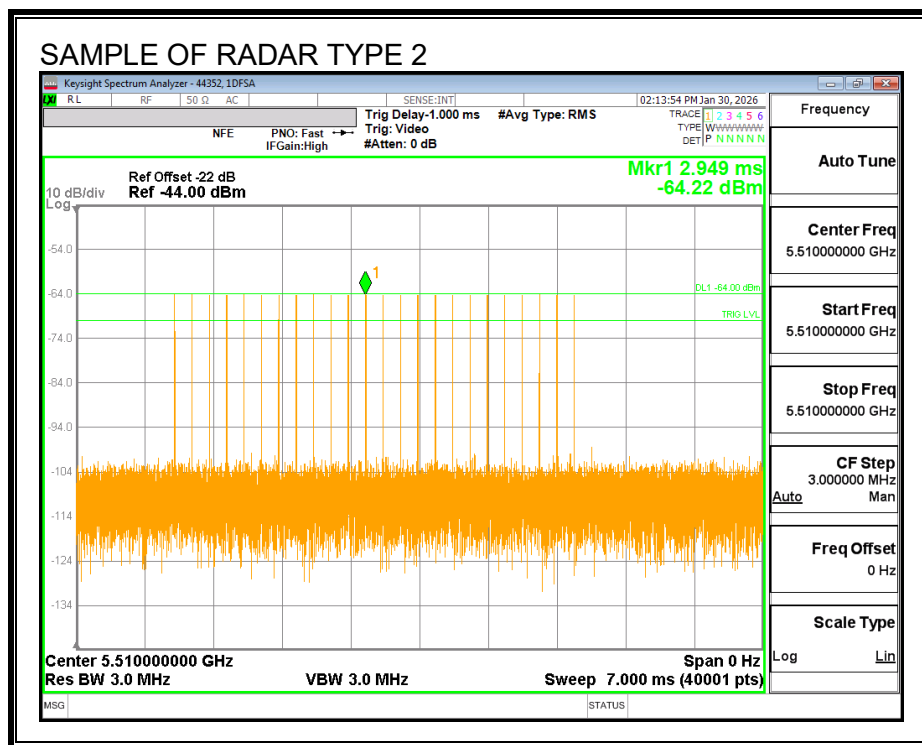
Data Sheet for FCC Long Pulse Radar Type 5		
Trial	Frequency (MHz)	Successful Detection (Yes/No)
1	5500	Yes
2	5500	Yes
3	5500	Yes
4	5500	Yes
5	5500	Yes
6	5500	Yes
7	5500	Yes
8	5500	Yes
9	5500	Yes
10	5500	Yes
11	5497	Yes
12	5493	Yes
13	5495	Yes
14	5499	Yes
15	5498	Yes
16	5496	Yes
17	5495	Yes
18	5493	Yes
19	5495	Yes
20	5493	Yes
21	5507	Yes
22	5506	Yes
23	5504	Yes
24	5507	Yes
25	5501	Yes
26	5505	Yes
27	5504	Yes
28	5507	Yes
29	5505	Yes
30	5507	Yes

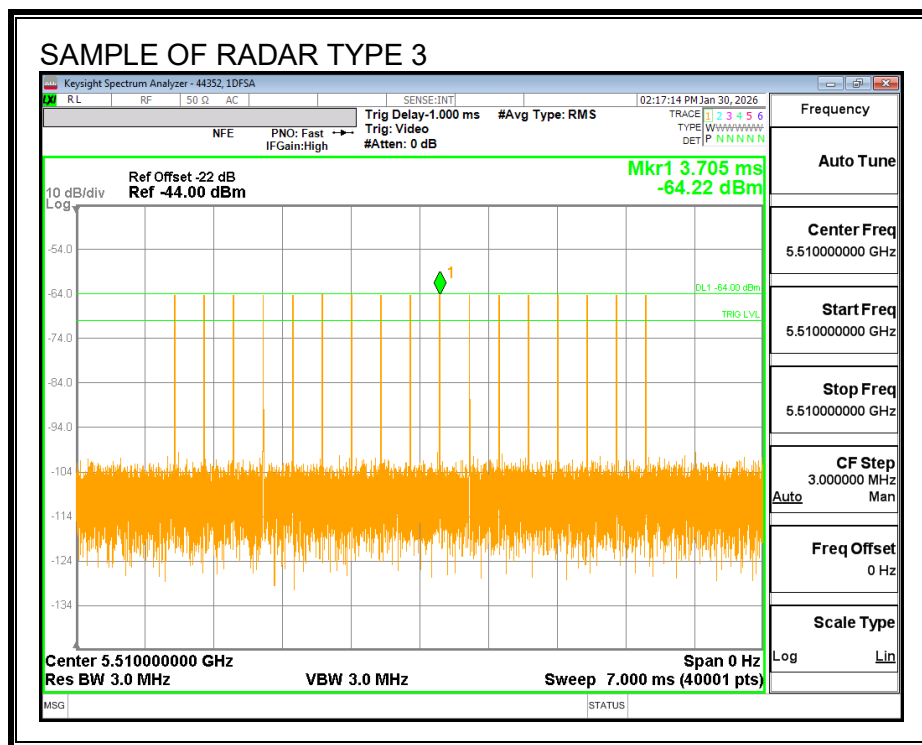
Note: The Type 5 randomized parameters tested are located in Appendix A.

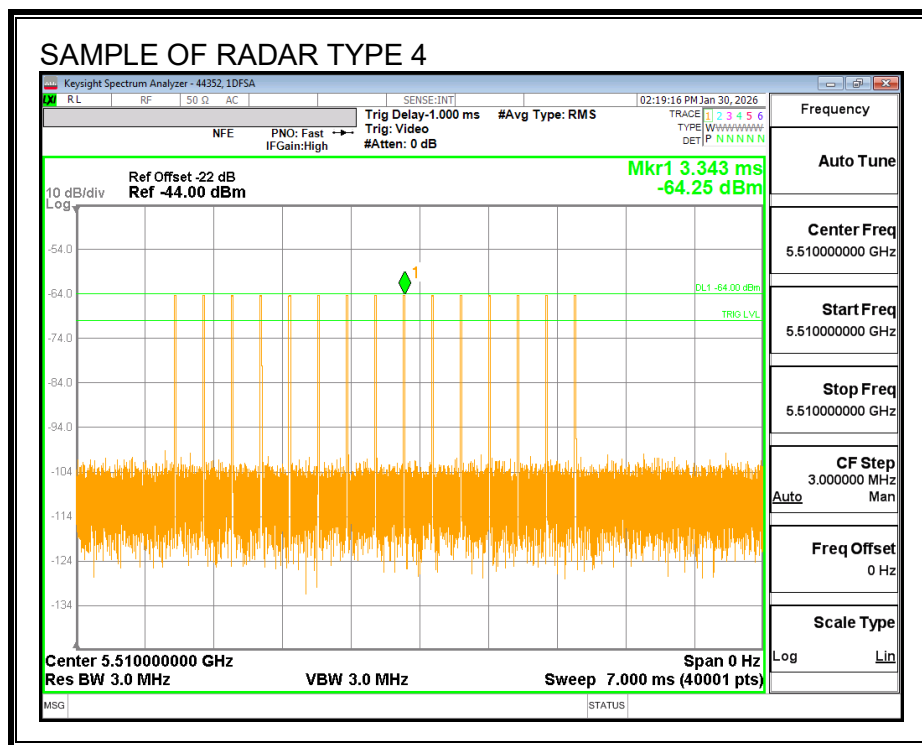
TYPE 6 DETECTION PROBABILITY

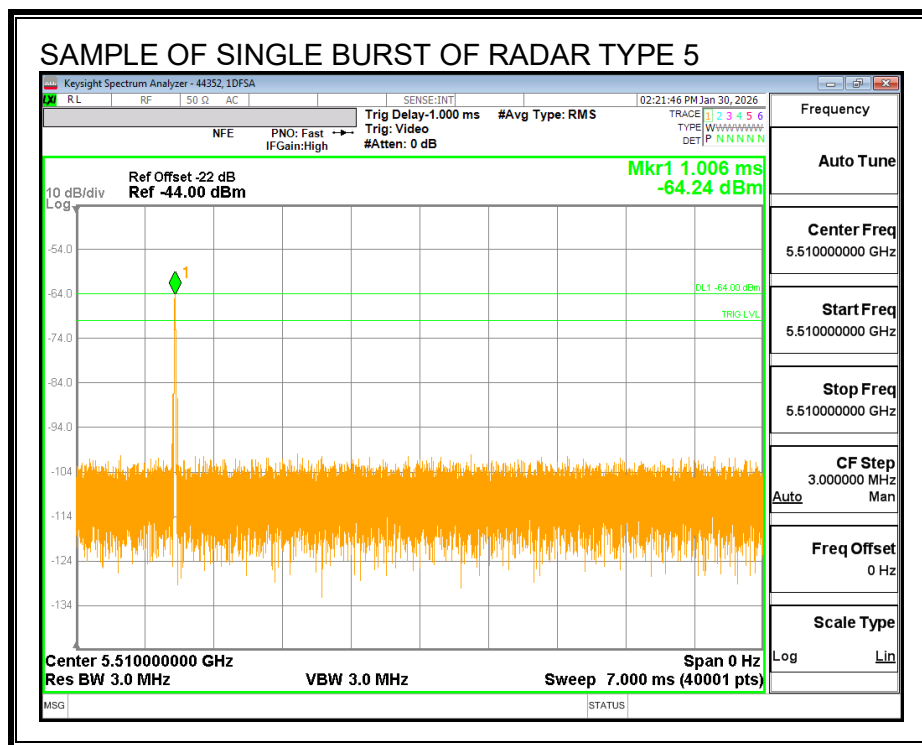
Data Sheet for FCC Hopping Radar Type 6				
1 us Pulse Width, 333 us PRI, 9 Pulses per Burst, 1 Burst per Hop				
NTIA August 2005 Hopping Sequence				
Trial	Starting Index Within Sequence	Signal Generator Frequency (MHz)	Hops within Detection BW	Successful Detection (Yes/No)
1	735	5490	6	Yes
2	1210	5491	4	Yes
3	1685	5492	2	Yes
4	2160	5493	2	Yes
5	2635	5494	1	Yes
6	3110	5495	7	Yes
7	3585	5496	5	Yes
8	4060	5497	5	Yes
9	4535	5498	2	Yes
10	5010	5499	4	Yes
11	5485	5500	3	Yes
12	5960	5501	6	Yes
13	6435	5502	2	Yes
14	6910	5503	4	Yes
15	7385	5504	5	Yes
16	7860	5505	3	Yes
17	8335	5506	3	Yes
18	8810	5507	2	Yes
19	9285	5508	3	Yes
20	9760	5509	3	Yes
21	10235	5510	2	Yes
22	10710	5490	3	Yes
23	11185	5491	6	Yes
24	11660	5492	2	Yes
25	12135	5493	3	Yes
26	12610	5494	4	Yes
27	13085	5495	2	Yes
28	13560	5496	5	Yes
29	14035	5497	3	Yes
30	14510	5498	5	Yes
31	14985	5499	5	Yes
32	15460	5500	2	Yes
33	15935	5501	4	Yes
34	16410	5502	5	Yes
35	16885	5503	4	Yes
36	17360	5504	3	Yes
37	17835	5505	4	Yes
38	18310	5506	3	Yes
39	18785	5507	4	Yes
40	19260	5508	2	Yes
41	19735	5509	3	Yes
42	20210	5510	3	Yes

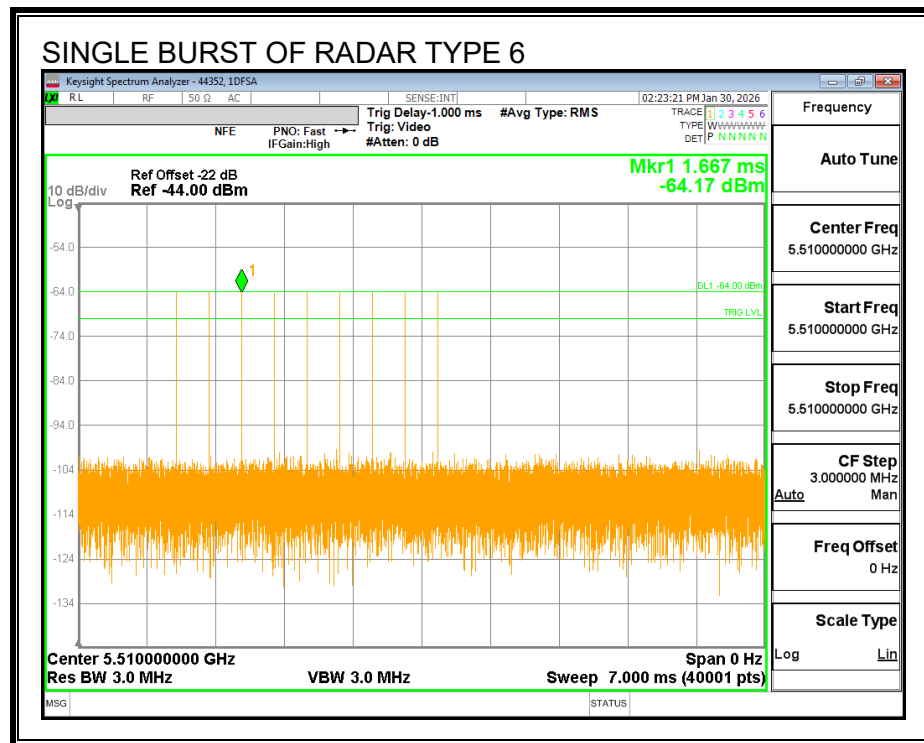




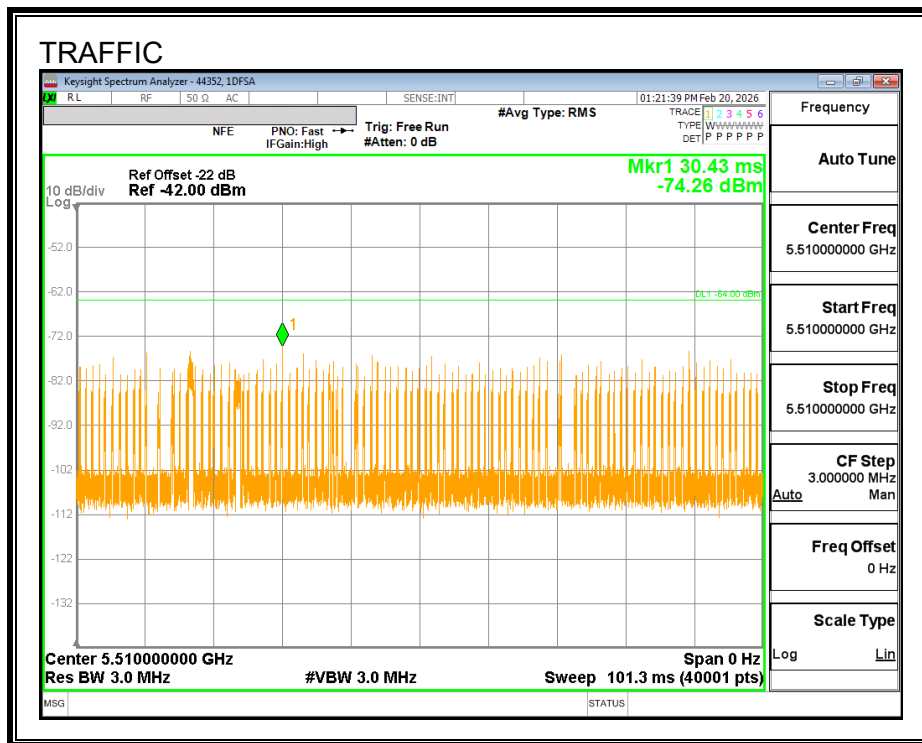




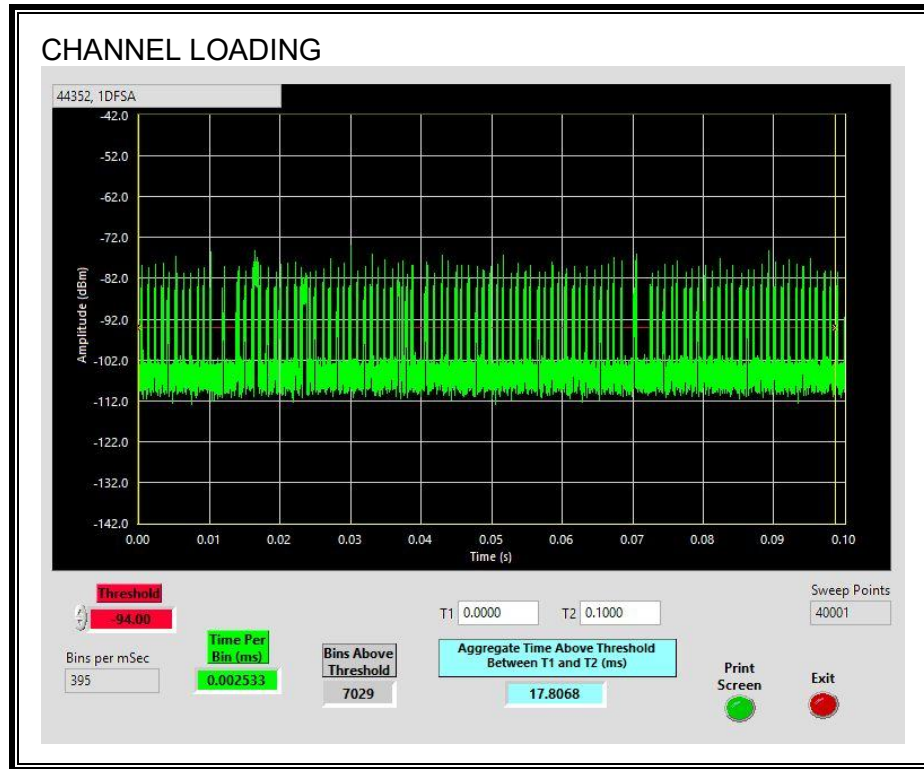




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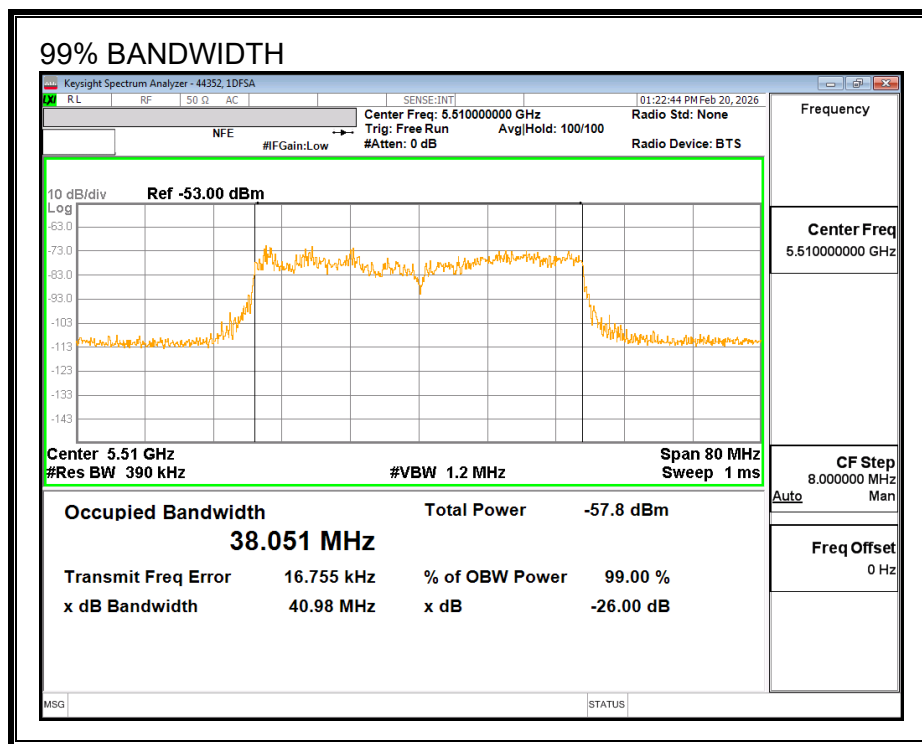
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.8068%.

6.3.3. DETECTION BANDWIDTH

REFERENCE PLOT OF 99% POWER BANDWIDTH



RESULTS

F_L (MHz)	F_H (MHz)	Detection Bandwidth (MHz)	99% Power Bandwidth (MHz)	Ratio of Detection BW to 99% Power BW (%)	Minimum Limit (%)
5490	5530	40	38.051	105.1	100

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS				
Detection Bandwidth Test Results				
FCC Type 0 Waveform: 1 us Pulse Width, 1428 us PRI, 18 Pulses per Burst				
Frequency (MHz)	Number of Trials	Number Detected	Detection (%)	Mark
5489	1	0	0	
5490	10	10	100	FL
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5510	10	10	100	
5515	10	10	100	
5520	10	10	100	
5525	10	10	100	
5530	10	9	90	FH
5531	1	0	0	

6.3.4. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary										
Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail	Detection Bandwidth		OBW	Test Location	Employee Number	In-Service Monitoring Version
					FL	FH				
FCC Short Pulse Type 1	30	100.00	60	Pass	5490	5530	38.05	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 2	30	100.00	60	Pass	5490	5530	38.05	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 3	30	90.00	60	Pass	5490	5530	38.05	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 4	30	96.67	60	Pass	5490	5530	38.05	1DFS1	44352	v2023.11.3
Aggregate		96.67	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5490	5530	38.05	1DFS A	44352	v2023.11.3
FCC Hopping Type 6	41	100.00	70	Pass	5490	5530		1DFS A	44352	v2023.11.3

TYPE 1 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 1						
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Test (A/B)	Frequency (MHz)	Successful Detection (Yes/No)
1001	1	3066	18	A	5509	Yes
1002	1	938	57	A	5521	Yes
1003	1	638	83	A	5502	Yes
1004	1	878	61	A	5491	Yes
1005	1	558	95	A	5529	Yes
1006	1	738	72	A	5507	Yes
1007	1	678	78	A	5518	Yes
1008	1	618	86	A	5499	Yes
1009	1	898	59	A	5514	Yes
1010	1	538	99	A	5497	Yes
1011	1	578	92	A	5528	Yes
1012	1	518	102	A	5505	Yes
1013	1	658	81	A	5496	Yes
1014	1	758	70	A	5496	Yes
1015	1	918	58	A	5500	Yes
1016	1	984	54	B	5523	Yes
1017	1	810	66	B	5506	Yes
1018	1	1637	33	B	5491	Yes
1019	1	1593	34	B	5523	Yes
1020	1	1355	39	B	5518	Yes
1021	1	1440	37	B	5514	Yes
1022	1	1331	40	B	5503	Yes
1023	1	2899	19	B	5512	Yes
1024	1	1725	31	B	5499	Yes
1025	1	875	61	B	5523	Yes
1026	1	2379	23	B	5497	Yes
1027	1	1658	32	B	5504	Yes
1028	1	2096	26	B	5497	Yes
1029	1	2858	19	B	5517	Yes
1030	1	2073	26	B	5526	Yes

TYPE 2 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 2					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
2001	3.4	177	24	5524	Yes
2002	3.4	158	26	5500	Yes
2003	1.1	150	27	5495	Yes
2004	3.5	173	29	5519	Yes
2005	1.5	212	23	5502	Yes
2006	4.1	202	29	5494	Yes
2007	4.4	164	24	5490	Yes
2008	1.2	158	23	5501	Yes
2009	3.7	205	29	5495	Yes
2010	2.9	164	28	5527	Yes
2011	1.5	178	27	5496	Yes
2012	4.9	223	24	5517	Yes
2013	1.8	159	27	5493	Yes
2014	3.6	208	24	5504	Yes
2015	4.8	191	28	5508	Yes
2016	2.6	207	25	5490	Yes
2017	2.1	194	29	5500	Yes
2018	4.3	214	24	5490	Yes
2019	4	205	25	5520	Yes
2020	2.2	191	26	5515	Yes
2021	4.3	187	28	5509	Yes
2022	5	176	27	5525	Yes
2023	3.1	219	28	5524	Yes
2024	4	213	28	5512	Yes
2025	2.4	222	26	5500	Yes
2026	1.6	220	26	5498	Yes
2027	4.3	152	25	5525	Yes
2028	3.6	197	29	5517	Yes
2029	2.7	214	25	5493	Yes
2030	2.3	225	29	5523	Yes

TYPE 3 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 3					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
3001	8.1	300	17	5509	Yes
3002	5.4	347	16	5517	Yes
3003	9.9	309	17	5513	Yes
3004	7.5	369	17	5514	Yes
3005	7.1	343	18	5516	Yes
3006	10	298	16	5525	Yes
3007	7.5	285	17	5515	Yes
3008	8.3	253	16	5526	Yes
3009	6.1	386	17	5518	Yes
3010	7.2	367	17	5497	Yes
3011	5.1	395	16	5515	No
3012	9.2	388	18	5514	Yes
3013	5.1	429	17	5493	No
3014	6.7	317	17	5496	Yes
3015	5.5	371	16	5525	Yes
3016	5	405	17	5518	No
3017	6.5	472	16	5505	Yes
3018	8.9	268	18	5511	Yes
3019	8.2	480	18	5520	Yes
3020	5.9	289	16	5515	Yes
3021	5.5	264	18	5492	Yes
3022	8.4	470	17	5505	Yes
3023	5.9	457	16	5508	Yes
3024	6.7	425	18	5513	Yes
3025	9.6	307	16	5527	Yes
3026	5.5	420	17	5512	Yes
3027	8.6	315	18	5504	Yes
3028	7.6	442	17	5512	Yes
3029	8.6	349	16	5512	Yes
3030	7.8	489	18	5530	Yes

TYPE 4 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 4					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
4001	17.9	291	15	5510	Yes
4002	16.9	326	13	5525	Yes
4003	15.1	392	16	5502	Yes
4004	14.6	440	16	5510	Yes
4005	13.3	401	14	5496	Yes
4006	18.6	461	15	5498	Yes
4007	17.9	435	13	5516	Yes
4008	19	390	12	5512	Yes
4009	18.7	377	16	5507	Yes
4010	10.3	345	15	5510	Yes
4011	15.9	478	14	5529	Yes
4012	18	341	13	5503	Yes
4013	19.4	487	15	5529	Yes
4014	12	363	12	5509	Yes
4015	13.9	270	16	5509	Yes
4016	12.3	409	14	5530	Yes
4017	14.8	345	14	5527	Yes
4018	13.7	498	16	5500	Yes
4019	11.9	313	14	5500	Yes
4020	11.4	360	15	5513	Yes
4021	10.1	322	13	5519	Yes
4022	15.4	382	14	5501	Yes
4023	14.7	356	12	5514	Yes
4024	15.8	311	16	5491	Yes
4025	15.5	431	12	5504	Yes
4026	17.2	399	13	5511	Yes
4027	12.7	399	12	5523	Yes
4028	14.8	262	12	5493	No
4029	16.2	407	13	5513	Yes
4030	18.9	283	15	5522	Yes

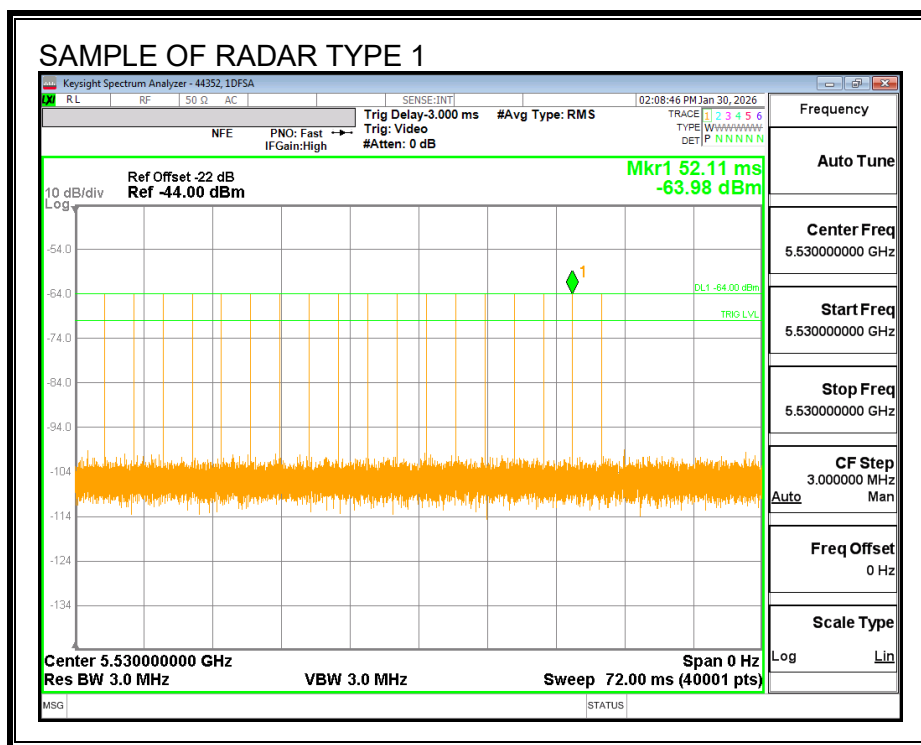
TYPE 5 DETECTION PROBABILITY

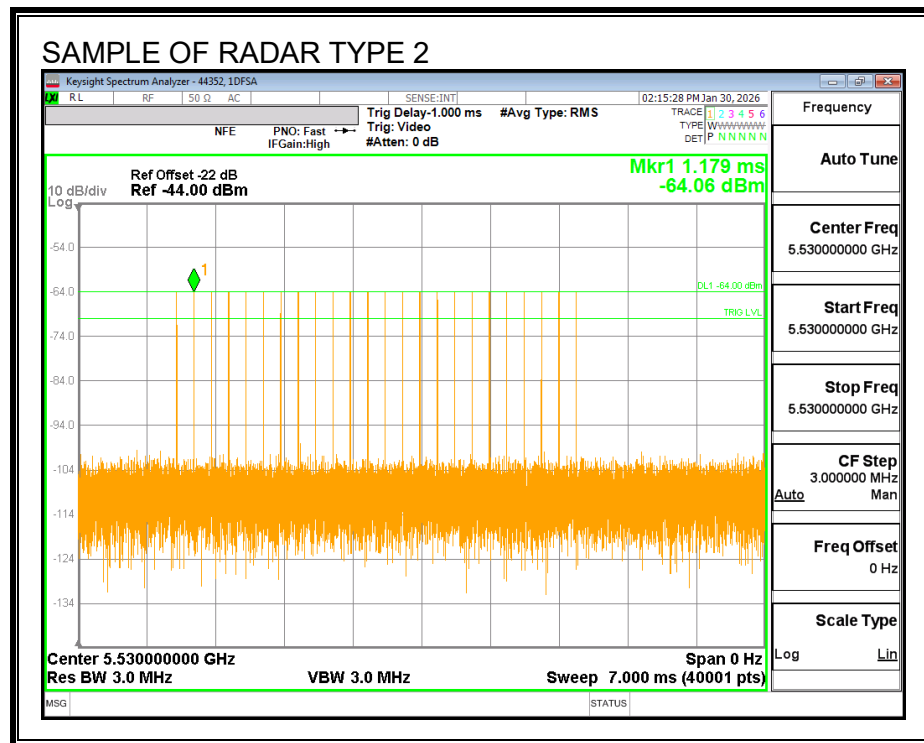
Data Sheet for FCC Long Pulse Radar Type 5		
Trial	Frequency (MHz)	Successful Detection (Yes/No)
1	5510	Yes
2	5510	Yes
3	5510	Yes
4	5510	Yes
5	5510	Yes
6	5510	Yes
7	5510	Yes
8	5510	Yes
9	5510	Yes
10	5510	Yes
11	5498	Yes
12	5494	Yes
13	5496	Yes
14	5499	Yes
15	5499	Yes
16	5497	Yes
17	5495	Yes
18	5494	Yes
19	5496	Yes
20	5494	Yes
21	5527	Yes
22	5525	Yes
23	5524	Yes
24	5526	Yes
25	5521	Yes
26	5525	Yes
27	5524	Yes
28	5527	Yes
29	5525	Yes
30	5526	Yes

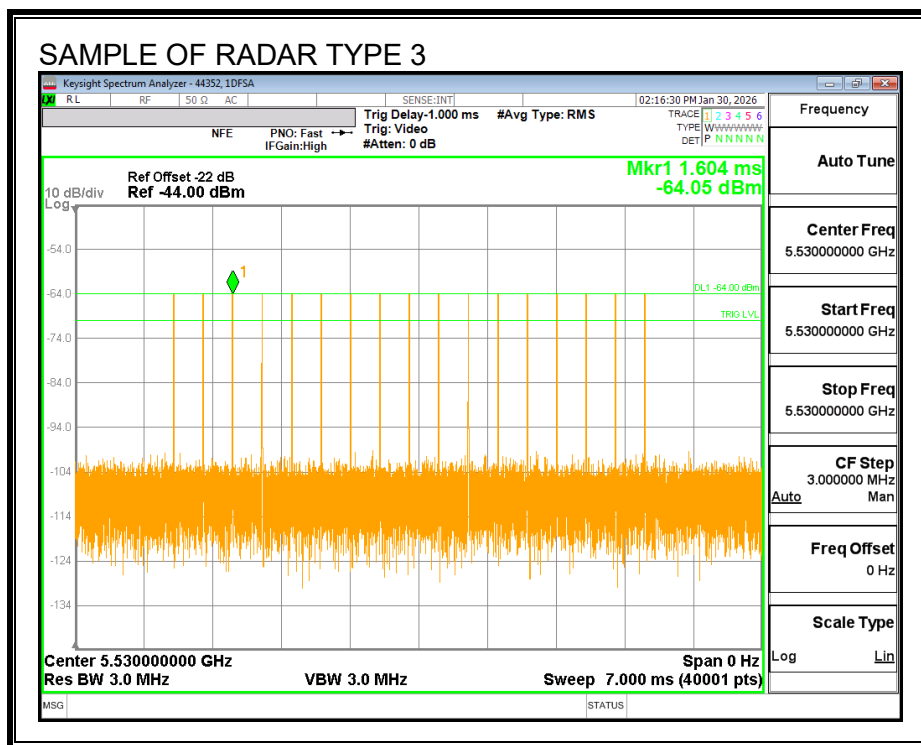
Note: The Type 5 randomized parameters tested are located in Appendix A.

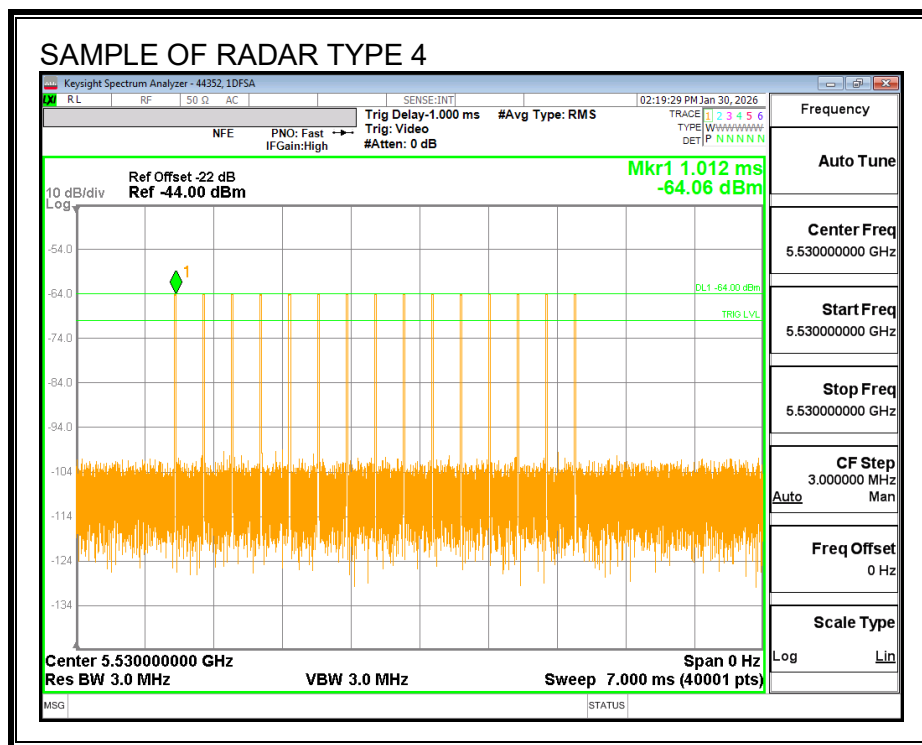
TYPE 6 DETECTION PROBABILITY

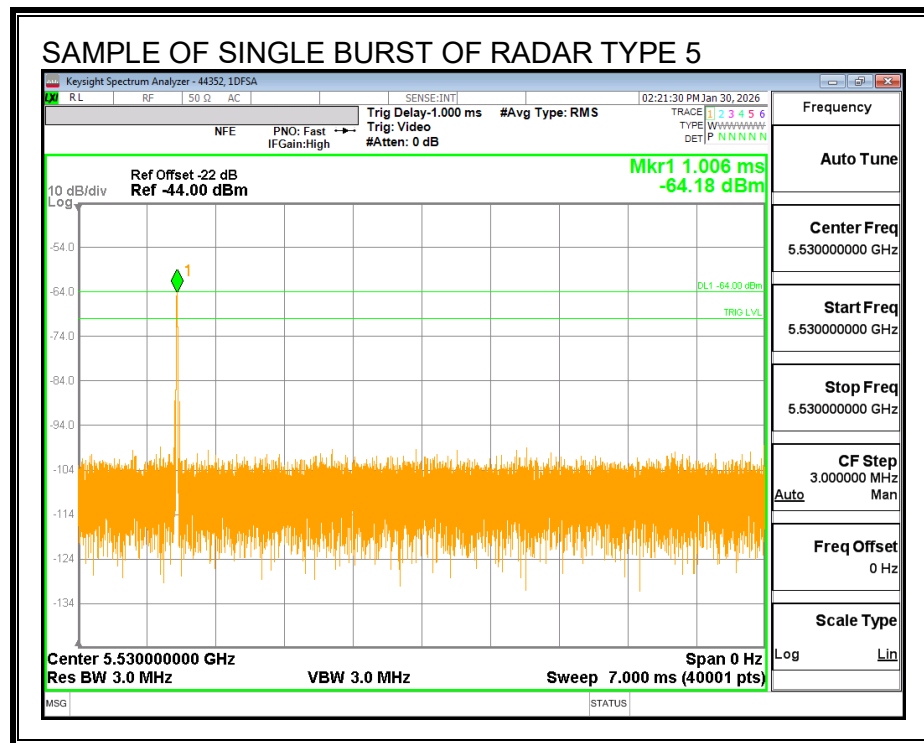
Data Sheet for FCC Hopping Radar Type 6				
1 us Pulse Width, 333 us PRI, 9 Pulses per Burst, 1 Burst per Hop				
NTIA August 2005 Hopping Sequence				
Trial	Starting Index Within Sequence	Signal Generator Frequency (MHz)	Hops within Detection BW	Successful Detection (Yes/No)
1	845	5490	5	Yes
2	1320	5491	4	Yes
3	1795	5492	10	Yes
4	2270	5493	9	Yes
5	2745	5494	7	Yes
6	3220	5495	5	Yes
7	3695	5496	7	Yes
8	4170	5497	8	Yes
9	4645	5498	8	Yes
10	5120	5499	7	Yes
11	5595	5500	7	Yes
12	6070	5501	7	Yes
13	6545	5502	8	Yes
14	7020	5503	6	Yes
15	7495	5504	9	Yes
16	7970	5505	7	Yes
17	8445	5506	3	Yes
18	8920	5507	10	Yes
19	9395	5508	9	Yes
20	9870	5509	9	Yes
21	10345	5510	5	Yes
22	10820	5511	5	Yes
23	11295	5512	13	Yes
24	11770	5513	10	Yes
25	12245	5514	6	Yes
26	12720	5515	8	Yes
27	13195	5516	13	Yes
28	13670	5517	7	Yes
29	14145	5518	5	Yes
30	14620	5519	12	Yes
31	15095	5520	10	Yes
32	15570	5521	7	Yes
33	16045	5522	7	Yes
34	16520	5523	9	Yes
35	16995	5524	12	Yes
36	17470	5525	11	Yes
37	17945	5526	10	Yes
38	18420	5527	3	Yes
39	18895	5528	8	Yes
40	19370	5529	9	Yes
41	19845	5530	10	Yes

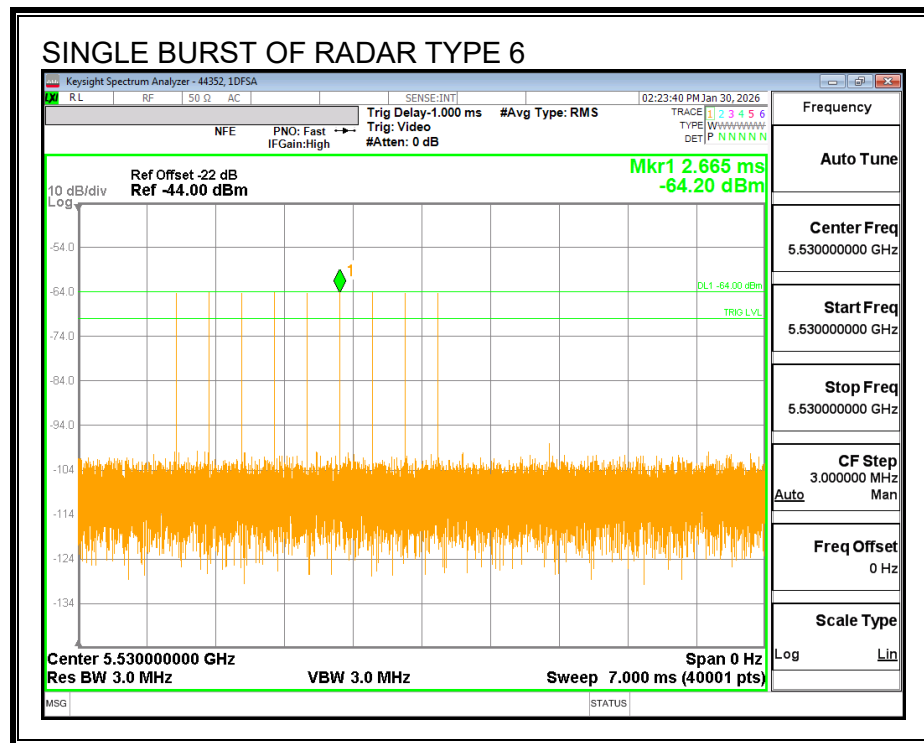




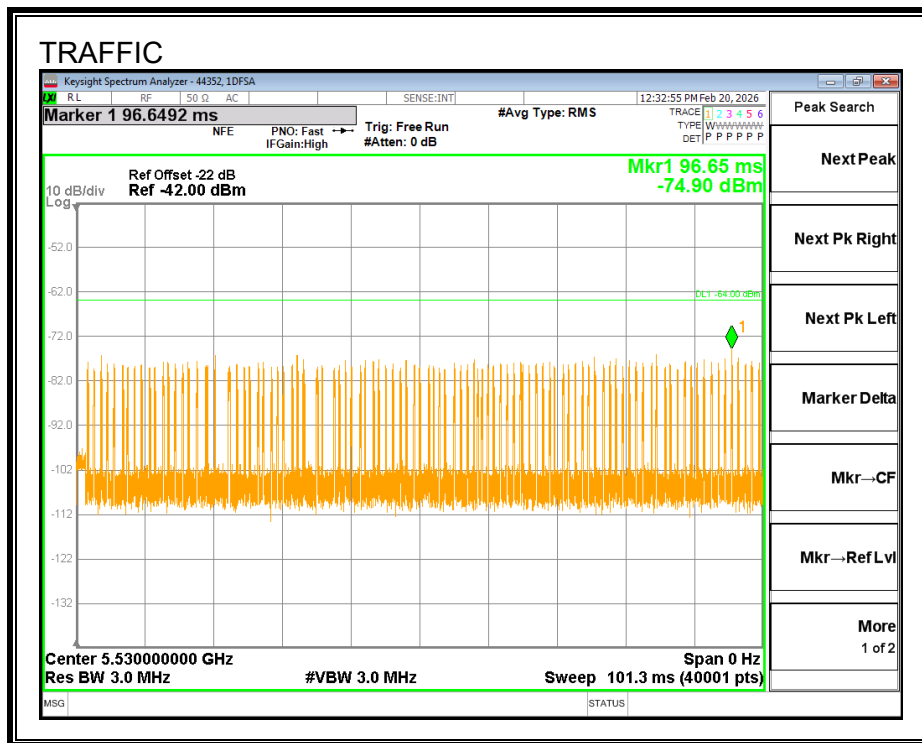




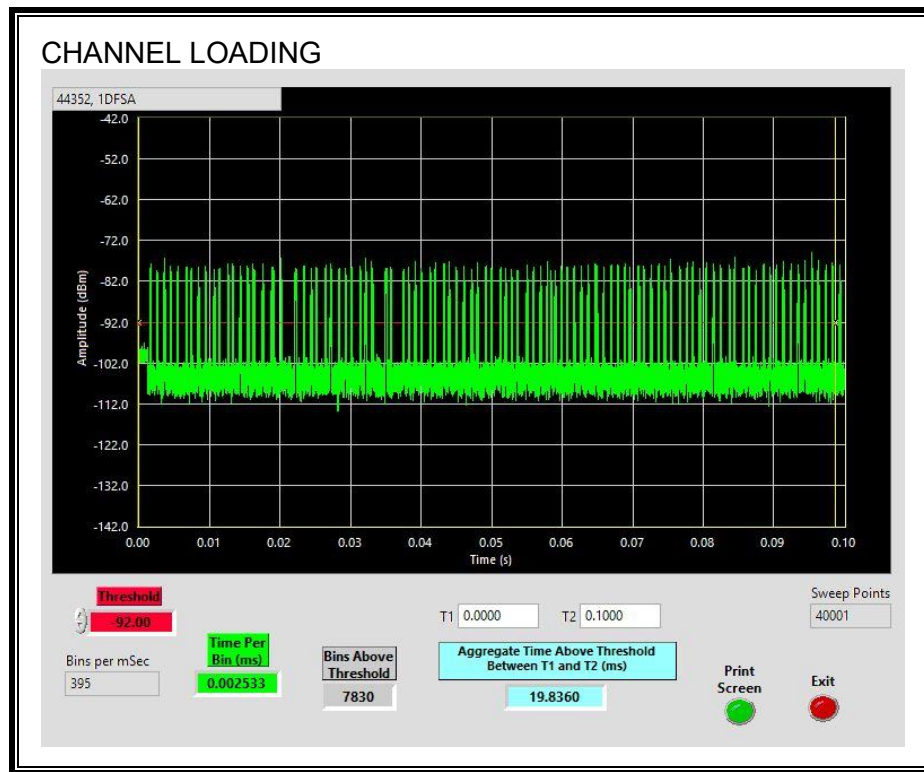




TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 19.836%.

6.4.3. CHANNEL AVAILABILITY CHECK TIME

PROCEDURE TO DETERMINE INITIAL POWER-UP CYCLE TIME

A link was established on channel then a software command was issued to the EUT to restart radio. The time from the cessation of traffic to the re-initialization of traffic was measured as the time required for the EUT to complete the total power-up cycle. The time to complete the initial power-up period is 60 seconds less than this total power-up time.

PROCEDURE FOR TIMING OF RADAR BURST

A link was established on channel then a software command was issued to the EUT to restart radio. A radar signal was triggered within 0 to 6 seconds after the initial power-up period, and transmissions on the channel were monitored on the spectrum analyzer.

The Non-Occupancy list was cleared. A link was established on channel then a software command was issued to the EUT to restart radio. A radar signal was triggered within 54 to 60 seconds after the initial power-up period, and transmissions on the channel were monitored on the spectrum analyzer.

QUANTITATIVE RESULTS

No Radar Triggered

Timing of Reboot (sec)	Timing of Start of Traffic (sec)	Total Power-up Cycle Time (sec)	Initial Power-up Cycle Time (sec)
15.48	90.5	75.0	15.02

Radar Near Beginning of CAC

Timing of Reboot (sec)	Timing of Radar Burst (sec)	Radar Relative to Reboot (sec)	Radar Relative to Start of CAC (sec)
15.5	31.57	16.1	1.1

Radar Near End of CAC

Timing of Reboot (sec)	Timing of Radar Burst (sec)	Radar Relative to Reboot (sec)	Radar Relative to Start of CAC (sec)
15.56	89.28	73.7	58.7

QUALITATIVE RESULTS

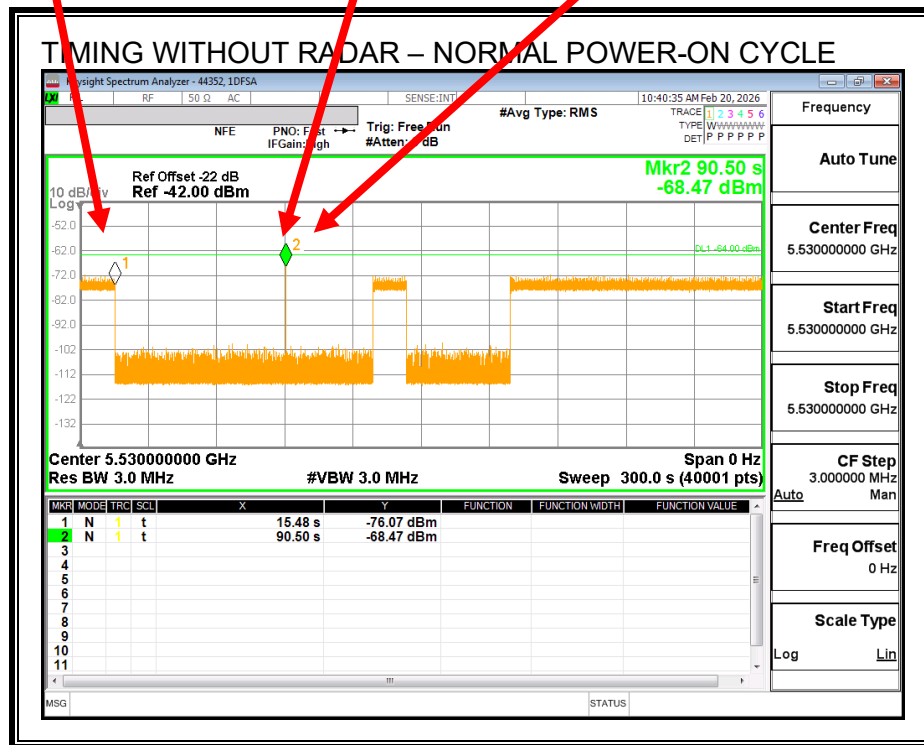
Timing of Radar Burst	Display on Control Computer	Spectrum Analyzer Display
No Radar Triggered	EUT marks Channel as active	Transmissions begin on channel after completion of the initial power-up cycle and the CAC
Within 0 to 6 second window	EUT indicates radar detected EUT does not display any radar parameter values	No transmissions on channel
Within 54 to 60 second window	EUT indicates radar detected	No transmissions on channel

TIMING WITHOUT RADAR DURING CAC

AP is rebooted
Traffic ceases
Start of Initial Power-up cycle

End of Initial Power-up cycle
Start of CAC

End of CAC
Traffic is Initiated



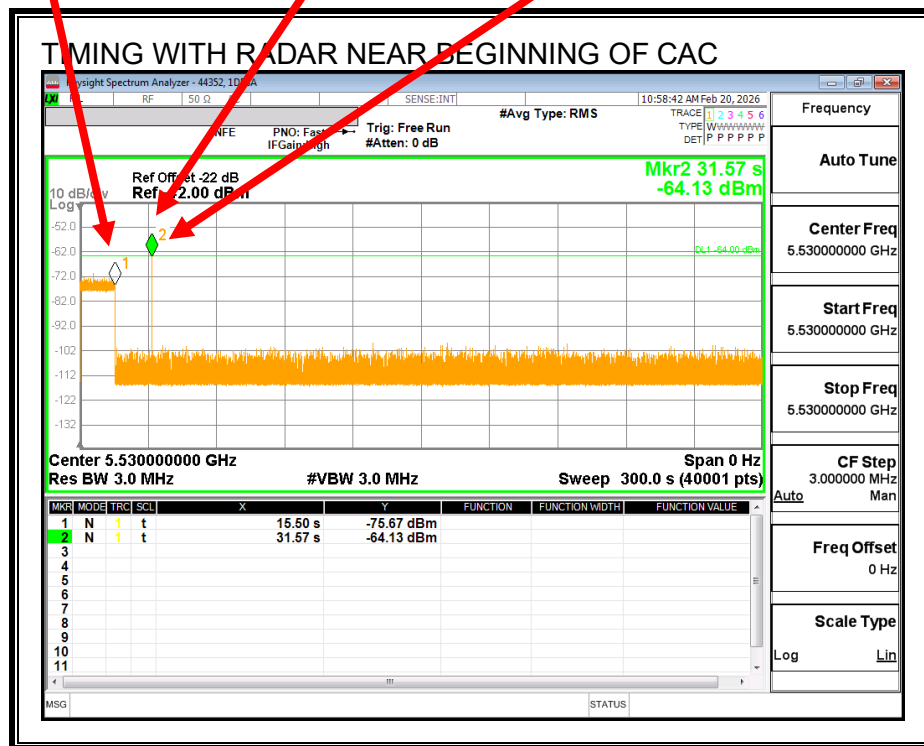
Transmissions begin on channel after completion of the initial power-up cycle and the CAC.

TIMING WITH RADAR NEAR BEGINNING OF CAC

AP is rebooted
Traffic ceases
Start of Initial Power-up cycle

End of Initial Power-up cycle
Start of CAC

Radar Signal Applied



No EUT transmissions were observed after the radar signal.

TIMING WITH RADAR NEAR END OF CAC

AP is rebooted

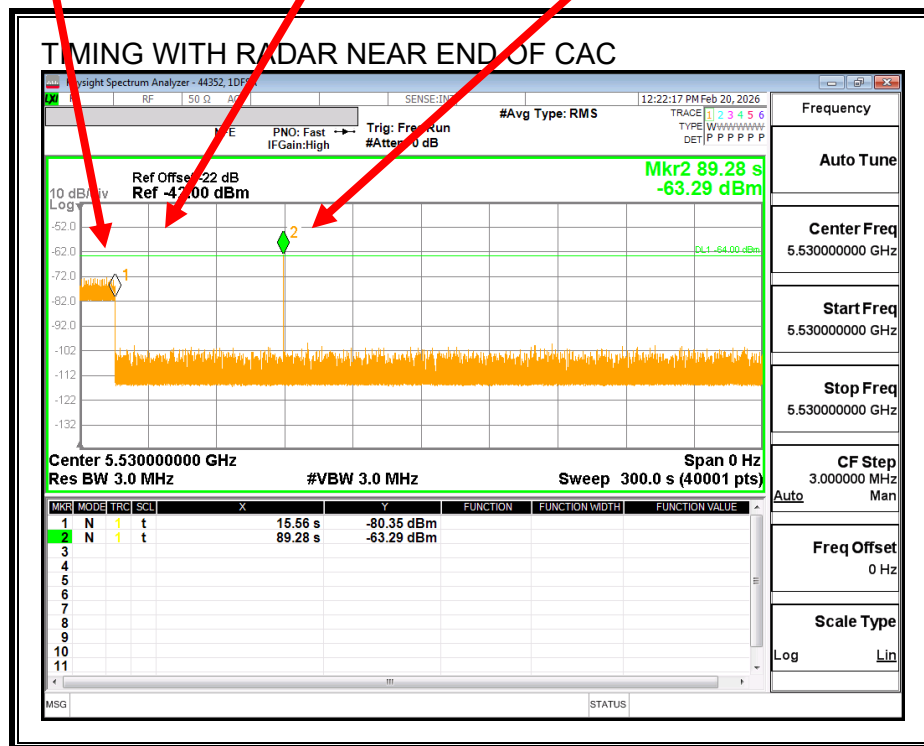
Traffic ceases

Start of Initial Power-up cycle

End of Initial Power-up cycle

Start of CAC

Radar Signal Applied



No EUT transmissions were observed after the radar signal.

6.4.4. OVERLAPPING CHANNEL TESTS

RESULTS

The channel spacing is not less than the channel bandwidth therefore the EUT does not have an overlapping channel plan.

These tests are not applicable.

6.4.5. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

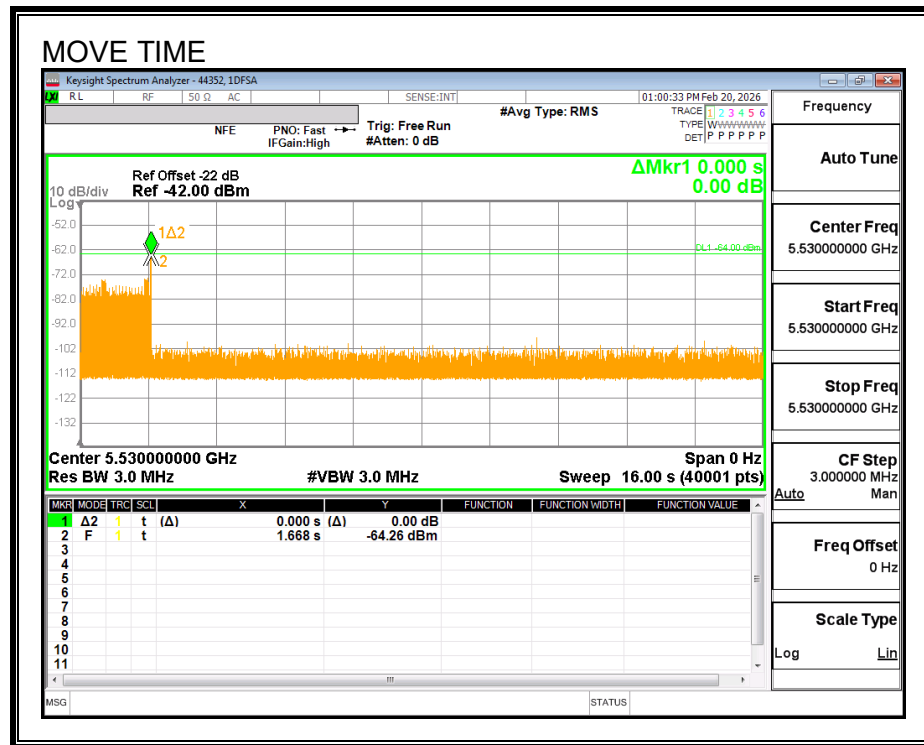
Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

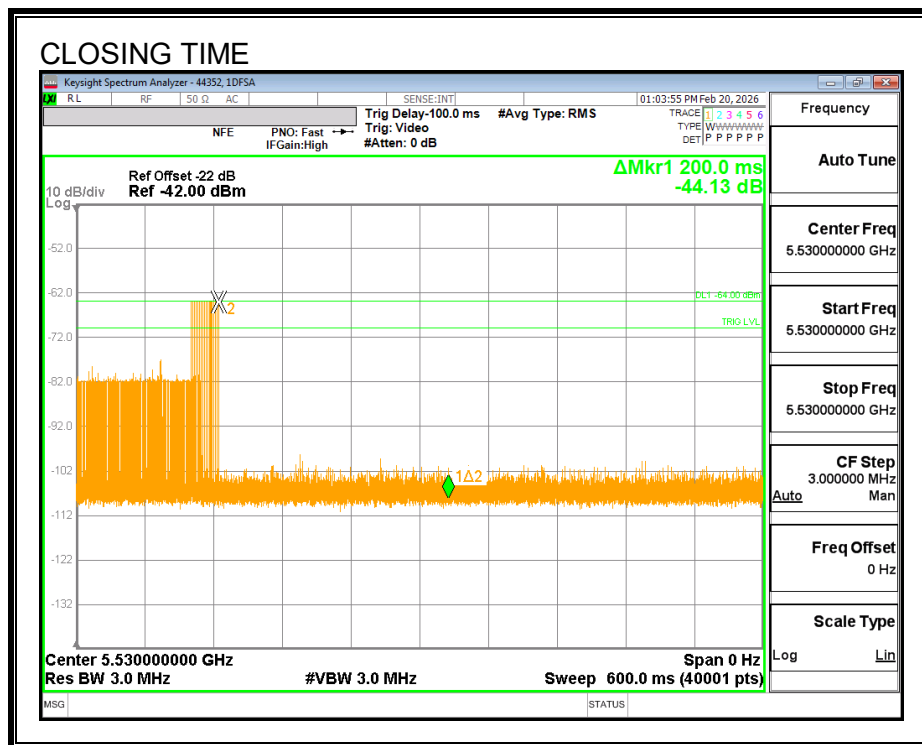
RESULTS

Channel Move Time (sec)	Limit (sec)
0	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0	60

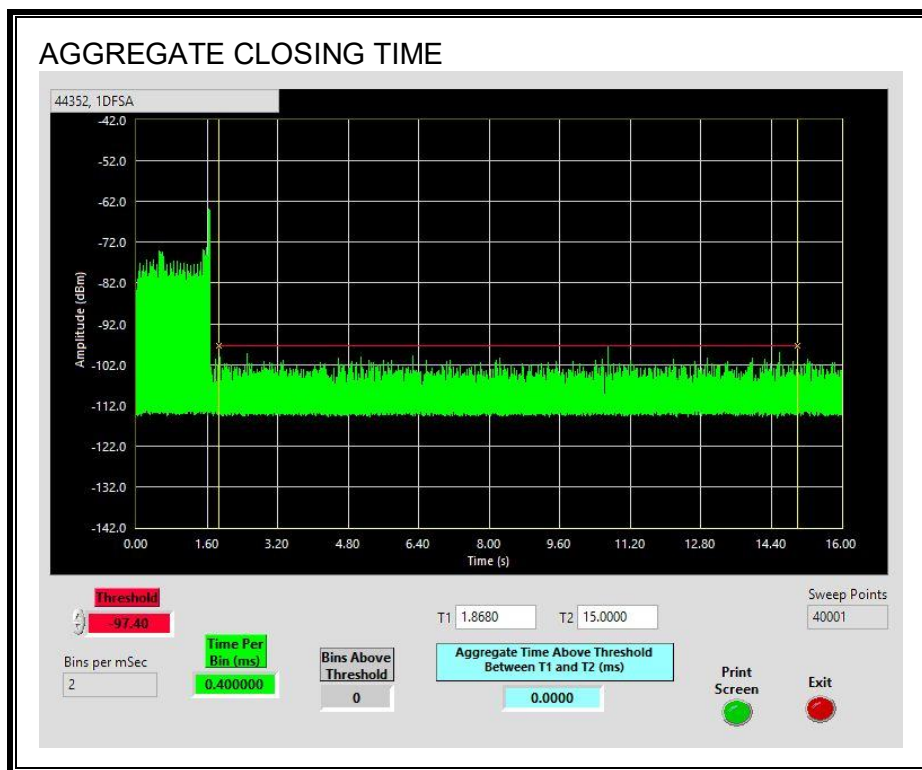


CHANNEL CLOSING TIME



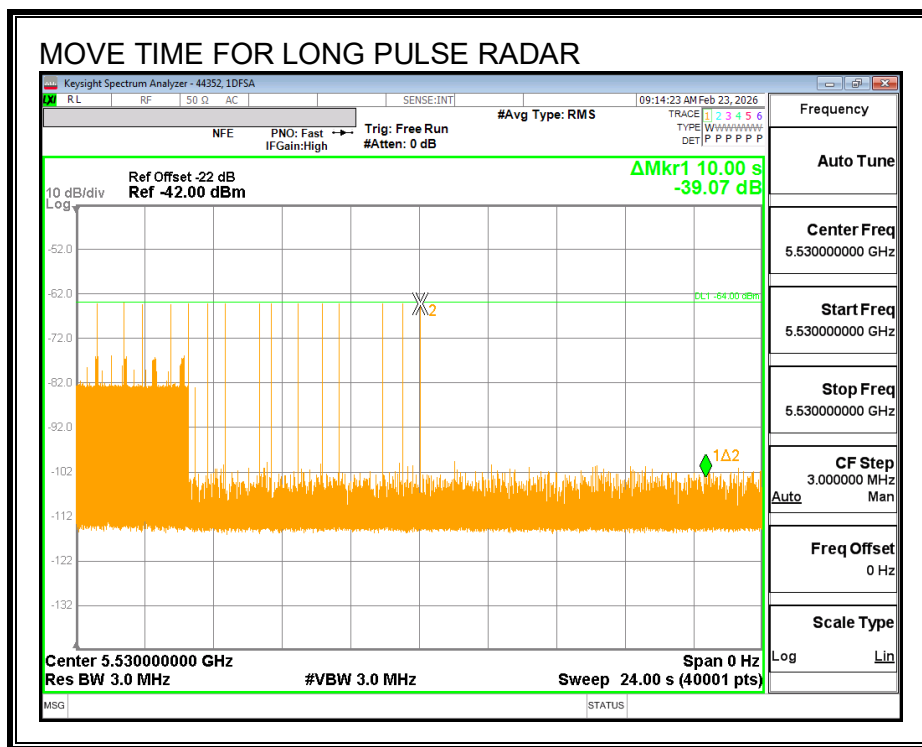
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



LONG PULSE CHANNEL MOVE TIME

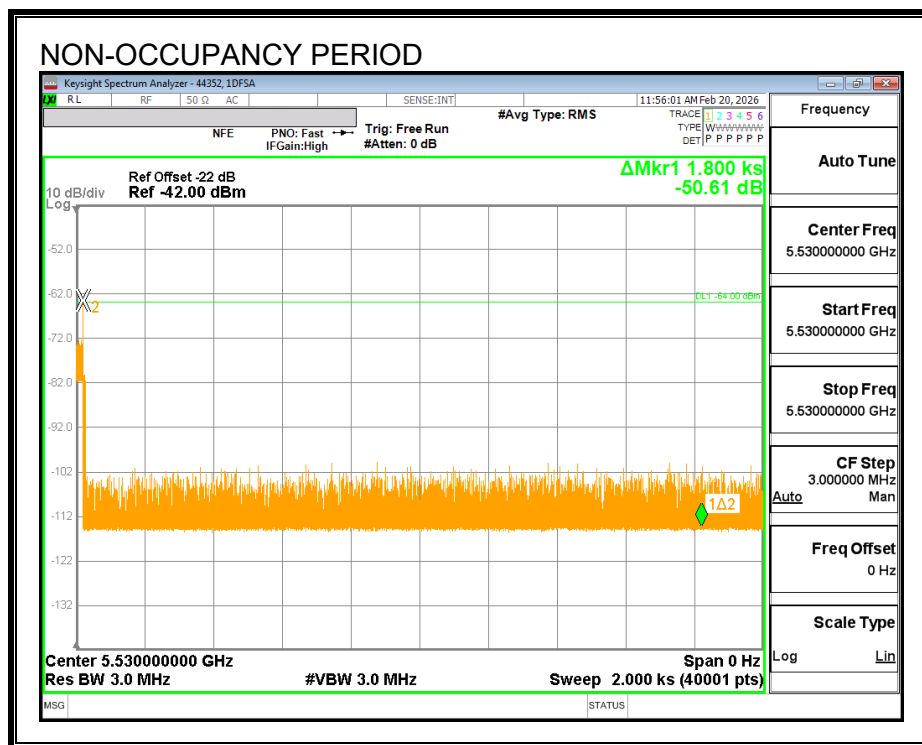
The traffic ceases prior to 10 seconds after the end of the radar waveform.



6.4.6. NON-OCCUPANCY PERIOD

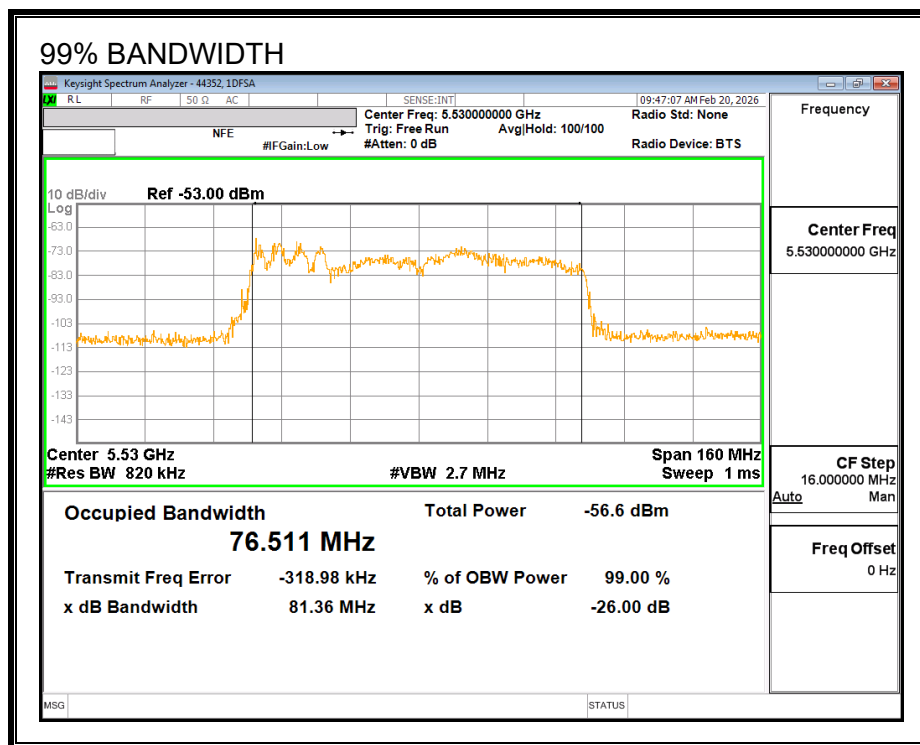
RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time.



6.4.7. DETECTION BANDWIDTH

REFERENCE PLOT OF 99% POWER BANDWIDTH



RESULTS

F_L (MHz)	F_H (MHz)	Detection Bandwidth (MHz)	99% Power Bandwidth (MHz)	Ratio of Detection BW to 99% Power BW (%)	Minimum Limit (%)
5490	5570	80	76.511	104.6	100

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS				
Detection Bandwidth Test Results				
FCC Type 0 Waveform: 1 us Pulse Width, 1428 us PRI, 18 Pulses per Burst				
Frequency (MHz)	Number of Trials	Number Detected	Detection (%)	Mark
5489	1	0	0	FL
5490	10	10	100	
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5510	10	10	100	
5515	10	10	100	
5520	10	10	100	
5525	10	10	100	
5530	10	10	100	
5535	10	10	100	
5540	10	10	100	
5545	10	10	100	
5550	10	10	100	
5555	10	10	100	
5560	10	10	100	
5565	10	10	100	
5570	10	10	100	FH
5571	1	0	0	

6.4.8. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary										
Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail	Detection Bandwidth		OBW	Test Location	Employee Number	In-Service Monitoring Version
					FL	FH				
FCC Short Pulse Type 1	30	100.00	60	Pass	5490	5570	76.51	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 2	30	100.00	60	Pass	5490	5570	76.51	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 3	30	90.00	60	Pass	5490	5570	76.51	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 4	30	96.67	60	Pass	5490	5570	76.51	1DFS1	44352	v2023.11.3
Aggregate		96.67	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5490	5570	76.51	1DFS1	44352	v2023.11.3
FCC Hopping Type 6	81	97.53	70	Pass	5490	5570		1DFS1	44352	v2023.11.3

TYPE 1 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 1						
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Test (A/B)	Frequency (MHz)	Successful Detection (Yes/No)
1001	1	3066	18	A	5500	Yes
1002	1	938	57	A	5552	Yes
1003	1	638	83	A	5542	Yes
1004	1	878	61	A	5559	Yes
1005	1	558	95	A	5568	Yes
1006	1	738	72	A	5550	Yes
1007	1	678	78	A	5498	Yes
1008	1	618	86	A	5555	Yes
1009	1	898	59	A	5563	Yes
1010	1	538	99	A	5535	Yes
1011	1	578	92	A	5560	Yes
1012	1	518	102	A	5561	Yes
1013	1	658	81	A	5533	Yes
1014	1	758	70	A	5491	Yes
1015	1	918	58	A	5509	Yes
1016	1	984	54	B	5517	Yes
1017	1	810	66	B	5494	Yes
1018	1	1637	33	B	5519	Yes
1019	1	1593	34	B	5521	Yes
1020	1	1355	39	B	5569	Yes
1021	1	1440	37	B	5547	Yes
1022	1	1331	40	B	5509	Yes
1023	1	2899	19	B	5555	Yes
1024	1	1725	31	B	5492	Yes
1025	1	875	61	B	5538	Yes
1026	1	2379	23	B	5504	Yes
1027	1	1658	32	B	5565	Yes
1028	1	2096	26	B	5491	Yes
1029	1	2858	19	B	5553	Yes
1030	1	2073	26	B	5495	Yes

TYPE 2 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 2					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
2001	3.4	177	24	5540	Yes
2002	3.4	158	26	5546	Yes
2003	1.1	150	27	5495	Yes
2004	3.5	173	29	5492	Yes
2005	1.5	212	23	5491	Yes
2006	4.1	202	29	5543	Yes
2007	4.4	164	24	5569	Yes
2008	1.2	158	23	5520	Yes
2009	3.7	205	29	5543	Yes
2010	2.9	164	28	5535	Yes
2011	1.5	178	27	5506	Yes
2012	4.9	223	24	5552	Yes
2013	1.8	159	27	5554	Yes
2014	3.6	208	24	5500	Yes
2015	4.8	191	28	5514	Yes
2016	2.6	207	25	5550	Yes
2017	2.1	194	29	5554	Yes
2018	4.3	214	24	5497	Yes
2019	4	205	25	5521	Yes
2020	2.2	191	26	5541	Yes
2021	4.3	187	28	5539	Yes
2022	5	176	27	5568	Yes
2023	3.1	219	28	5559	Yes
2024	4	213	28	5562	Yes
2025	2.4	222	26	5547	Yes
2026	1.6	220	26	5491	Yes
2027	4.3	152	25	5496	Yes
2028	3.6	197	29	5563	Yes
2029	2.7	214	25	5536	Yes
2030	2.3	225	29	5544	Yes

TYPE 3 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 3					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
3001	8.1	300	17	5558	Yes
3002	5.4	347	16	5493	Yes
3003	9.9	309	17	5536	Yes
3004	7.5	369	17	5504	Yes
3005	7.1	343	18	5506	Yes
3006	10	298	16	5493	Yes
3007	7.5	285	17	5499	Yes
3008	8.3	253	16	5513	Yes
3009	6.1	386	17	5503	Yes
3010	7.2	367	17	5510	Yes
3011	5.1	395	16	5551	Yes
3012	9.2	388	18	5546	Yes
3013	5.1	429	17	5561	No
3014	6.7	317	17	5562	Yes
3015	5.5	371	16	5543	No
3016	5	405	17	5531	No
3017	6.5	472	16	5513	Yes
3018	8.9	268	18	5509	Yes
3019	8.2	480	18	5507	Yes
3020	5.9	289	16	5507	Yes
3021	5.5	264	18	5562	Yes
3022	8.4	470	17	5553	Yes
3023	5.9	457	16	5563	Yes
3024	6.7	425	18	5515	Yes
3025	9.6	307	16	5533	Yes
3026	5.5	420	17	5525	Yes
3027	8.6	315	18	5506	Yes
3028	7.6	442	17	5510	Yes
3029	8.6	349	16	5518	Yes
3030	7.8	489	18	5543	Yes

TYPE 4 DETECTION PROBABILITY

Data Sheet for FCC Short Pulse Radar Type 4					
Waveform	Pulse Width (us)	PRI (us)	Pulses Per Burst	Frequency (MHz)	Successful Detection (Yes/No)
4001	17.9	291	15	5491	Yes
4002	16.9	326	13	5535	Yes
4003	15.1	392	16	5512	Yes
4004	14.6	440	16	5516	Yes
4005	13.3	401	14	5519	Yes
4006	18.6	461	15	5525	No
4007	17.9	435	13	5546	Yes
4008	19	390	12	5509	Yes
4009	18.7	377	16	5537	Yes
4010	10.3	345	15	5561	Yes
4011	15.9	478	14	5560	Yes
4012	18	341	13	5534	Yes
4013	19.4	487	15	5539	Yes
4014	12	363	12	5560	Yes
4015	13.9	270	16	5499	Yes
4016	12.3	409	14	5566	Yes
4017	14.8	345	14	5517	Yes
4018	13.7	498	16	5535	Yes
4019	11.9	313	14	5525	Yes
4020	11.4	360	15	5556	Yes
4021	10.1	322	13	5498	Yes
4022	15.4	382	14	5501	Yes
4023	14.7	356	12	5535	Yes
4024	15.8	311	16	5495	Yes
4025	15.5	431	12	5563	Yes
4026	17.2	399	13	5546	Yes
4027	12.7	399	12	5519	Yes
4028	14.8	262	12	5541	Yes
4029	16.2	407	13	5531	Yes
4030	18.9	283	15	5519	Yes

TYPE 5 DETECTION PROBABILITY

Data Sheet for FCC Long Pulse Radar Type 5		
Trial	Frequency (MHz)	Successful Detection (Yes/No)
1	5530	Yes
2	5530	Yes
3	5530	Yes
4	5530	Yes
5	5530	Yes
6	5530	Yes
7	5530	Yes
8	5530	Yes
9	5530	Yes
10	5530	Yes
11	5498	Yes
12	5495	Yes
13	5497	Yes
14	5500	Yes
15	5500	Yes
16	5498	Yes
17	5496	Yes
18	5494	Yes
19	5496	Yes
20	5494	Yes
21	5566	Yes
22	5564	Yes
23	5563	Yes
24	5565	Yes
25	5560	Yes
26	5564	Yes
27	5563	Yes
28	5566	Yes
29	5564	Yes
30	5565	Yes

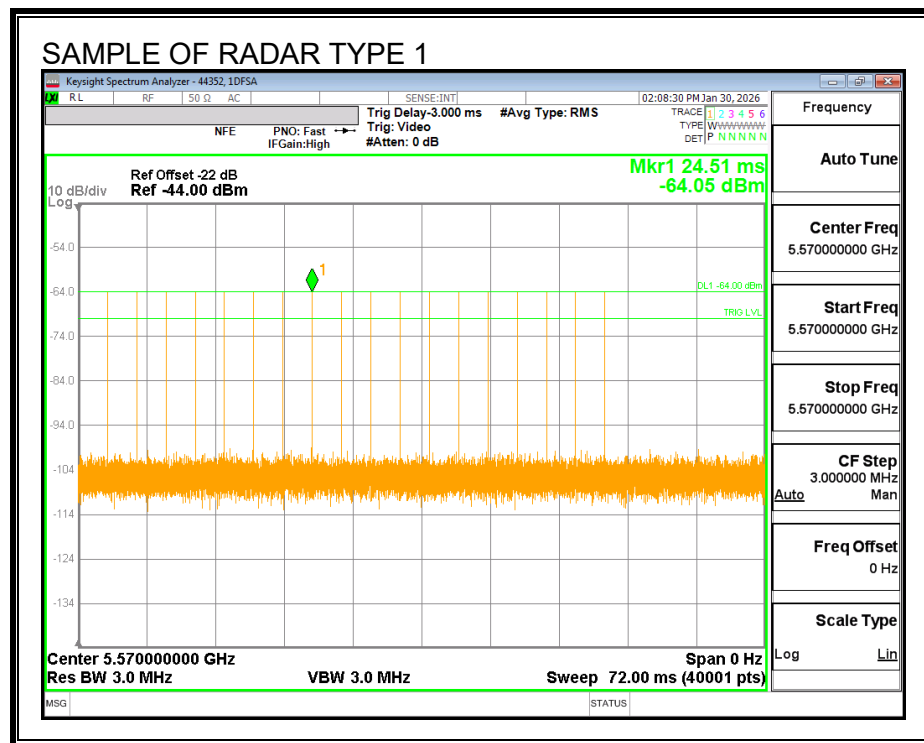
Note: The Type 5 randomized parameters tested are located in Appendix A.

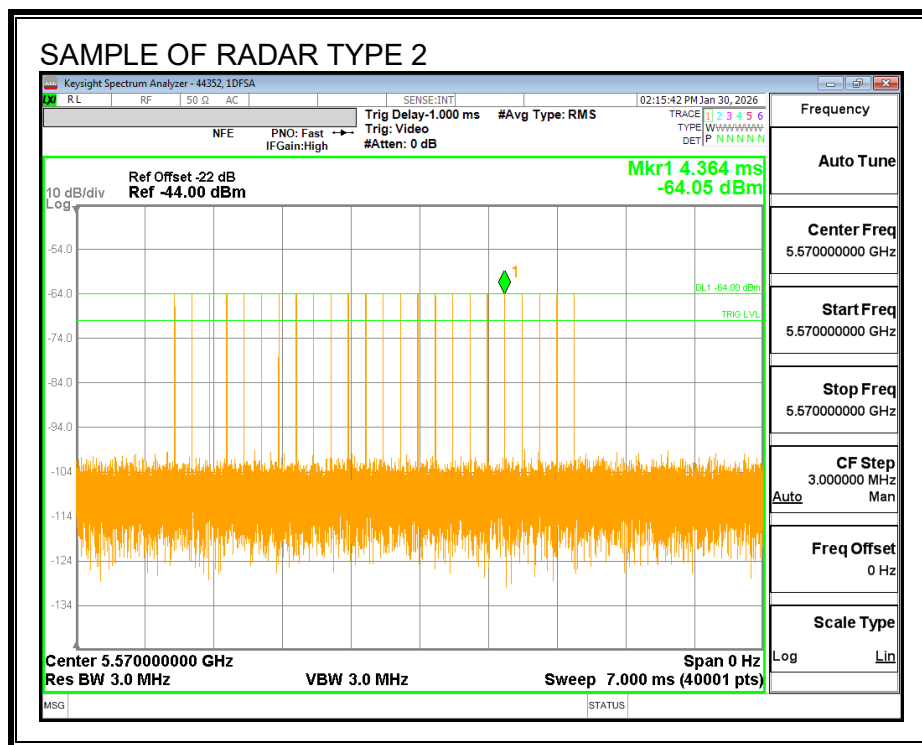
TYPE 6 DETECTION PROBABILITY

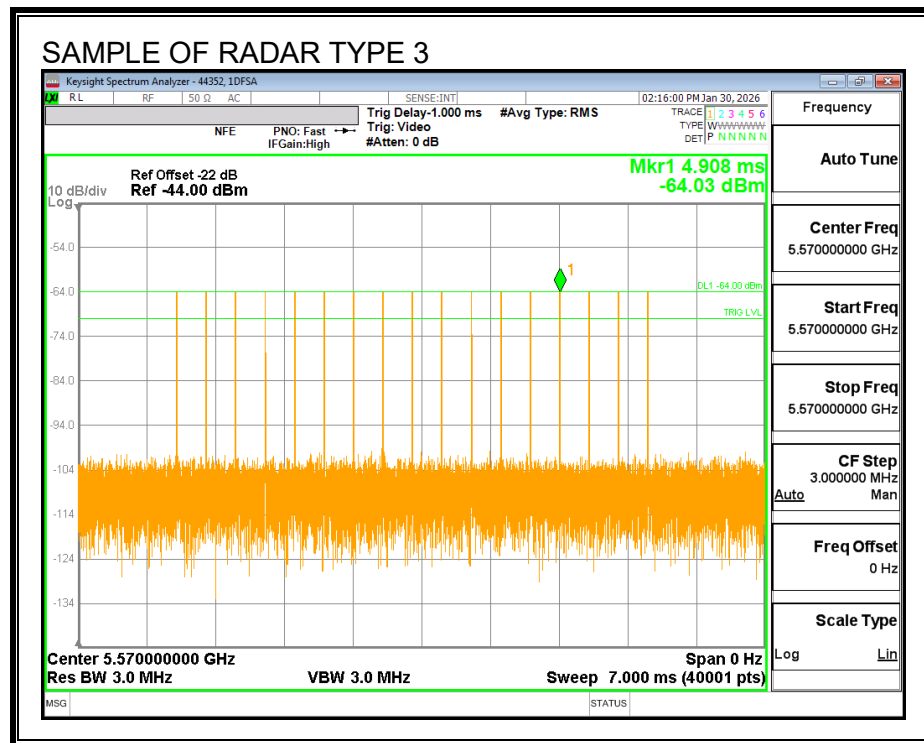
Data Sheet for FCC Hopping Radar Type 6				
1 us Pulse Width, 333 us PRI, 9 Pulses per Burst, 1 Burst per Hop				
NTIA August 2005 Hopping Sequence				
Trial	Starting Index Within Sequence	Signal Generator Frequency (MHz)	Hops within Detection BW	Successful Detection (Yes/No)
1	810	5490	9	Yes
2	1285	5491	14	Yes
3	1760	5492	21	No
4	2235	5493	20	Yes
5	2710	5494	22	Yes
6	3185	5495	12	Yes
7	3660	5496	14	Yes
8	4135	5497	12	Yes
9	4610	5498	16	Yes
10	5085	5499	13	Yes
11	5560	5500	11	Yes
12	6035	5501	14	Yes
13	6510	5502	11	Yes
14	6985	5503	16	Yes
15	7460	5504	15	Yes
16	7935	5505	13	Yes
17	8410	5506	12	Yes
18	8885	5507	17	Yes
19	9360	5508	24	Yes
20	9835	5509	13	Yes
21	10310	5510	15	Yes
22	10785	5511	18	Yes
23	11260	5512	19	Yes
24	11735	5513	18	Yes
25	12210	5514	12	Yes
26	12685	5515	15	Yes
27	13160	5516	26	Yes
28	13635	5517	16	Yes
29	14110	5518	14	Yes
30	14585	5519	20	Yes
31	15060	5520	12	Yes
32	15535	5521	16	Yes
33	16010	5522	15	Yes
34	16485	5523	18	Yes
35	16960	5524	19	Yes
36	17435	5525	13	Yes
37	17910	5526	14	Yes

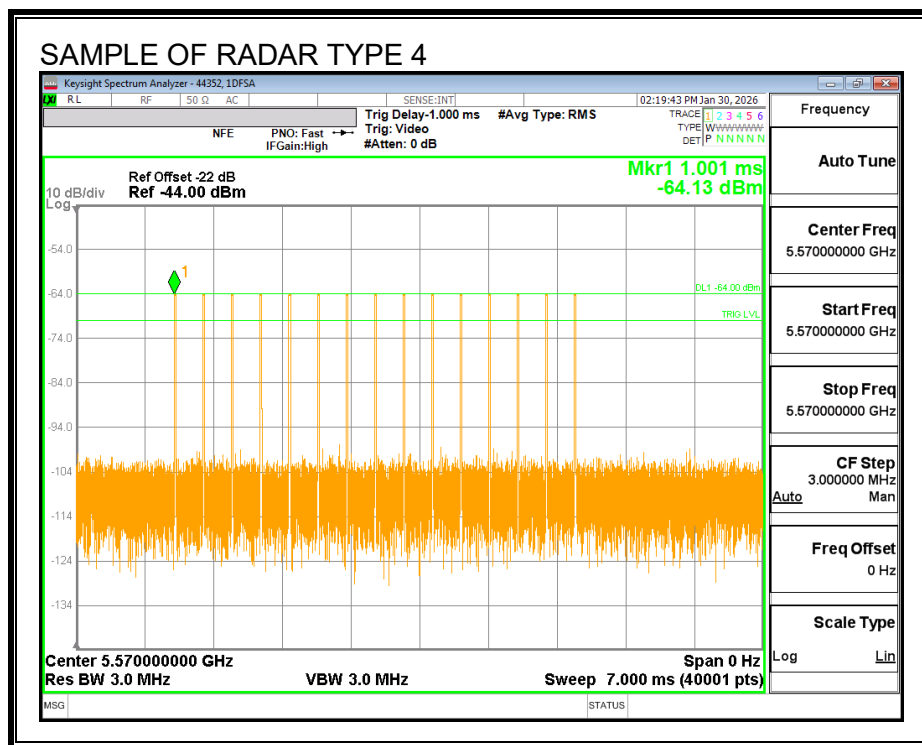
TYPE 6 DETECTION PROBABILITY (CONTINUED)

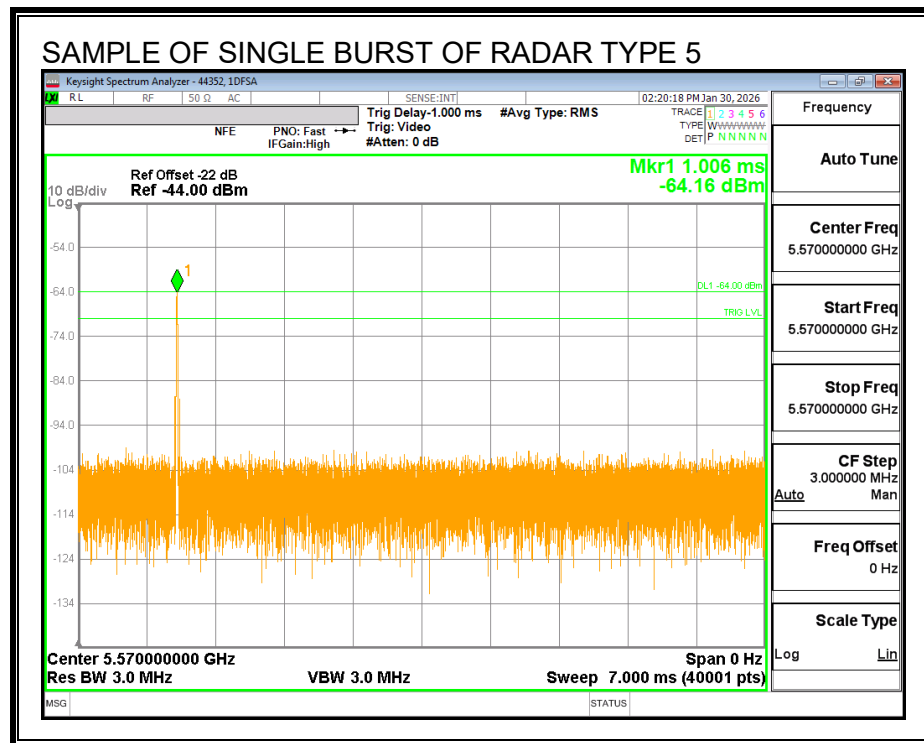
38	18385	5527	13	Yes
39	18860	5528	15	Yes
40	19335	5529	19	Yes
41	19810	5530	23	Yes
42	20285	5531	17	Yes
43	20760	5532	15	Yes
44	21235	5533	13	Yes
45	21710	5534	22	Yes
46	22185	5535	18	Yes
47	22660	5536	11	Yes
48	23135	5537	15	Yes
49	23610	5538	13	Yes
50	24085	5539	15	Yes
51	24560	5540	14	Yes
52	25035	5541	12	Yes
53	25510	5542	18	Yes
54	25985	5543	17	Yes
55	26460	5544	15	Yes
56	26935	5545	16	Yes
57	27410	5546	17	Yes
58	27885	5547	23	Yes
59	28360	5548	18	Yes
60	28835	5549	20	Yes
61	29310	5550	19	Yes
62	29785	5551	19	Yes
63	30260	5552	13	Yes
64	30735	5553	15	No
65	31210	5554	13	Yes
66	31685	5555	19	Yes
67	32160	5556	12	Yes
68	32635	5557	20	Yes
69	33110	5558	19	Yes
70	33585	5559	20	Yes
71	34060	5560	22	Yes
72	34535	5561	22	Yes
73	35010	5562	15	Yes
74	35485	5563	25	Yes
75	35960	5564	19	Yes
76	36435	5565	23	Yes
77	36910	5566	17	Yes
78	37385	5567	18	Yes
79	37860	5568	18	Yes
80	38335	5569	18	Yes
81	38810	5570	17	Yes

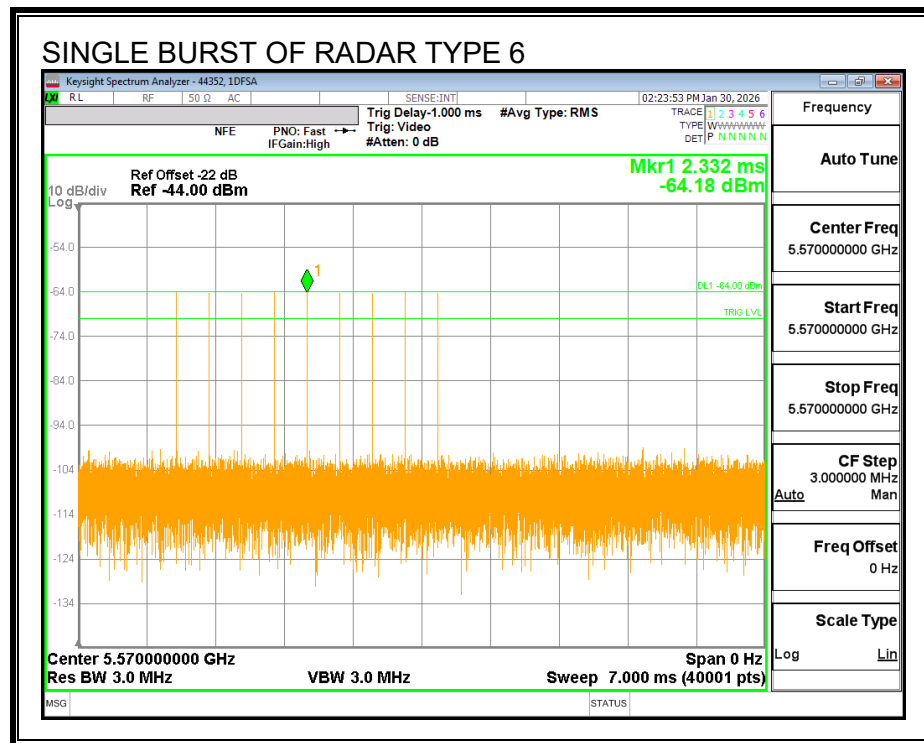




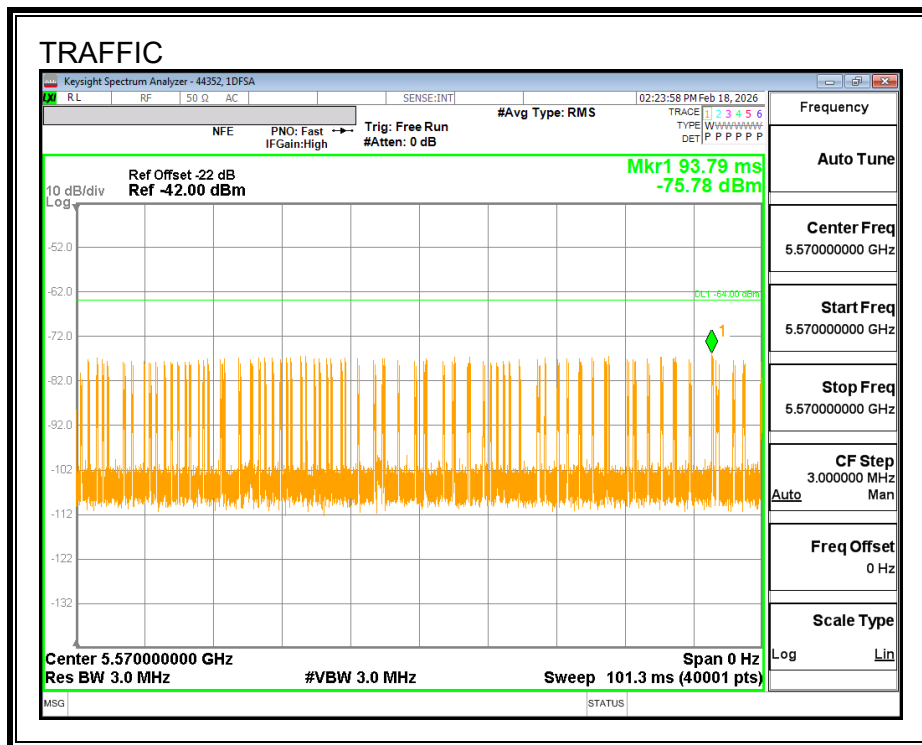




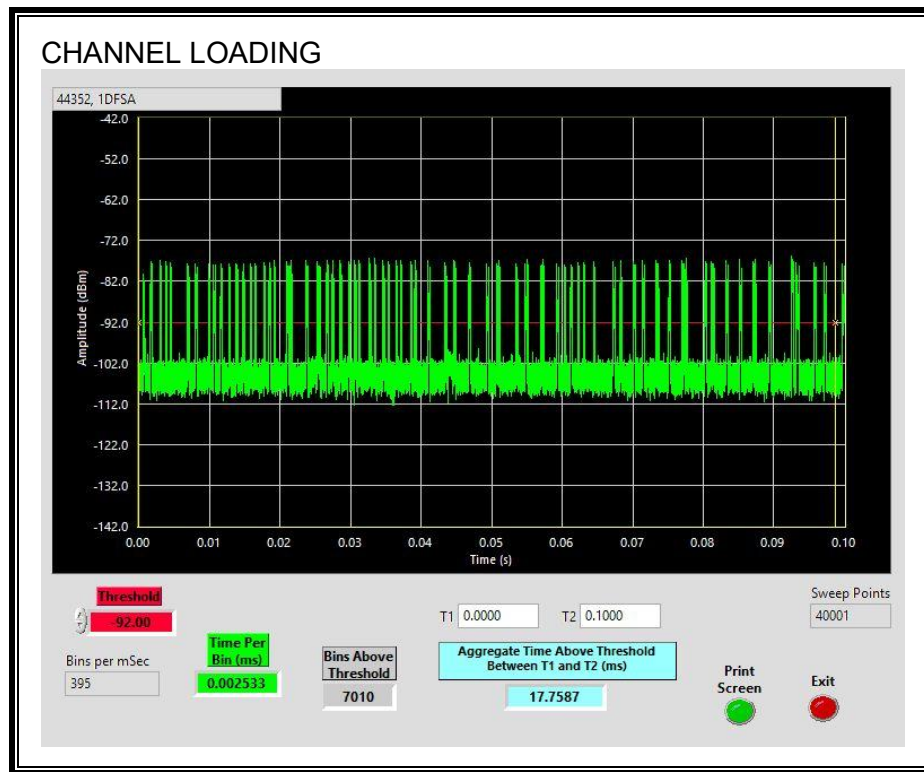




TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.7587%.

6.5.3. CHANNEL AVAILABILITY CHECK TIME

PROCEDURE TO DETERMINE INITIAL POWER-UP CYCLE TIME

A link was established on channel then a software command was issued to the EUT to restart radio. The time from the cessation of traffic to the re-initialization of traffic was measured as the time required for the EUT to complete the total power-up cycle. The time to complete the initial power-up period is 60 seconds less than this total power-up time.

PROCEDURE FOR TIMING OF RADAR BURST

A link was established on channel then a software command was issued to the EUT to restart radio. A radar signal was triggered within 0 to 6 seconds after the initial power-up period, and transmissions on the channel were monitored on the spectrum analyzer.

The Non-Occupancy list was cleared. A link was established on channel then a software command was issued to the EUT to restart radio. A radar signal was triggered within 54 to 60 seconds after the initial power-up period, and transmissions on the channel were monitored on the spectrum analyzer.

QUANTITATIVE RESULTS

No Radar Triggered

Timing of Reboot (sec)	Timing of Start of Traffic (sec)	Total Power-up Cycle Time (sec)	Initial Power-up Cycle Time (sec)
16.37	91.7	75.3	15.3

Radar Near Beginning of CAC

Timing of Reboot (sec)	Timing of Radar Burst (sec)	Radar Relative to Reboot (sec)	Radar Relative to Start of CAC (sec)
15.51	31.57	16.1	0.7

Radar Near End of CAC

Timing of Reboot (sec)	Timing of Radar Burst (sec)	Radar Relative to Reboot (sec)	Radar Relative to Start of CAC (sec)
15.49	90.08	74.6	59.3

QUALITATIVE RESULTS

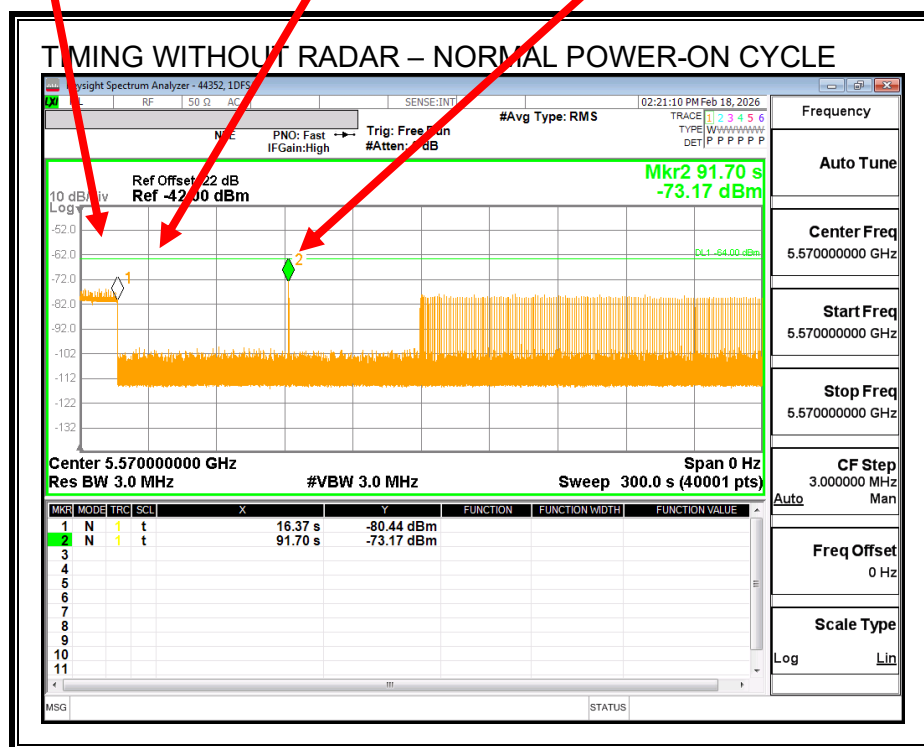
Timing of Radar Burst	Display on Control Computer	Spectrum Analyzer Display
No Radar Triggered	EUT marks Channel as active	Transmissions begin on channel after completion of the initial power-up cycle and the CAC
Within 0 to 6 second window	EUT indicates radar detected	No transmissions on channel
Within 54 to 60 second window	EUT indicates radar detected	No transmissions on channel

TIMING WITHOUT RADAR DURING CAC

AP is rebooted
Traffic ceases
Start of Initial Power-up cycle

End of Initial Power-up cycle
Start of CAC

End of CAC
Traffic is Initiated



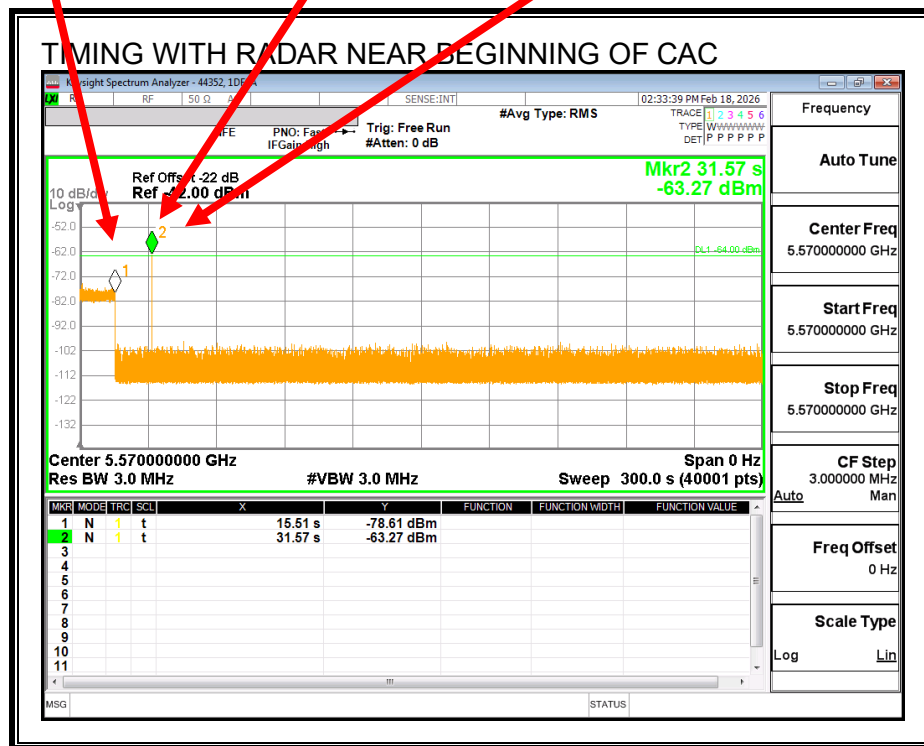
Transmissions begin on channel after completion of the initial power-up cycle and the CAC.

TIMING WITH RADAR NEAR BEGINNING OF CAC

AP is rebooted
Traffic ceases
Start of Initial Power-up cycle

End of Initial Power-up cycle
Start of CAC

Radar Signal Applied



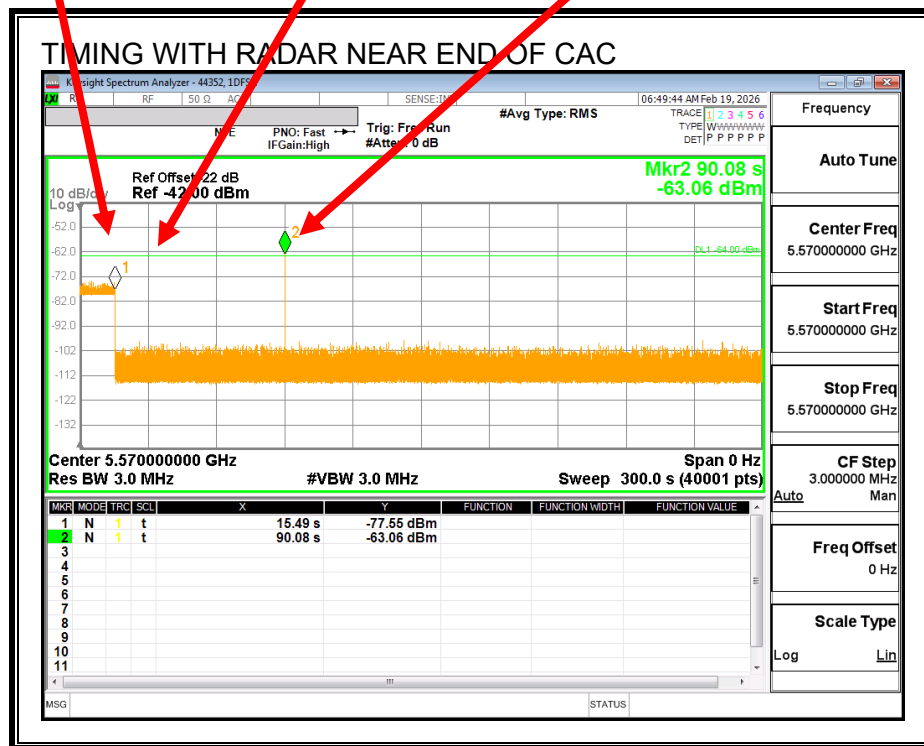
No EUT transmissions were observed after the radar signal.

TIMING WITH RADAR NEAR END OF CAC

AP is rebooted
Traffic ceases
Start of Initial Power-up cycle

End of Initial Power-up cycle
Start of CAC

Radar Signal Applied



No EUT transmissions were observed after the radar signal.

6.5.4. OVERLAPPING CHANNEL TESTS

RESULTS

The channel spacing is not less than the channel bandwidth therefore the EUT does not have an overlapping channel plan.

These tests are not applicable.

6.5.5. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Channel Move Time (sec)	Limit (sec)
0	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0	60