

TEST REPORT

Report Number : 16041888-E1V4

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
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V2	2026-02-17	Section 6.1.5 Updated	Henry Lau
V3	2026-02-24	Section 1 & 6.1.5 updated	Henry Lau
V4	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: 2026-01-26 – 2026-02-05

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:



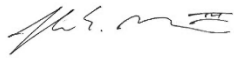
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2. TEST METHODOLOGY

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).

DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. 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.

4.2. 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).

4.3. 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%.

5. DYNAMIC FREQUENCY SELECTION

5.1. OVERVIEW

5.1.1. 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

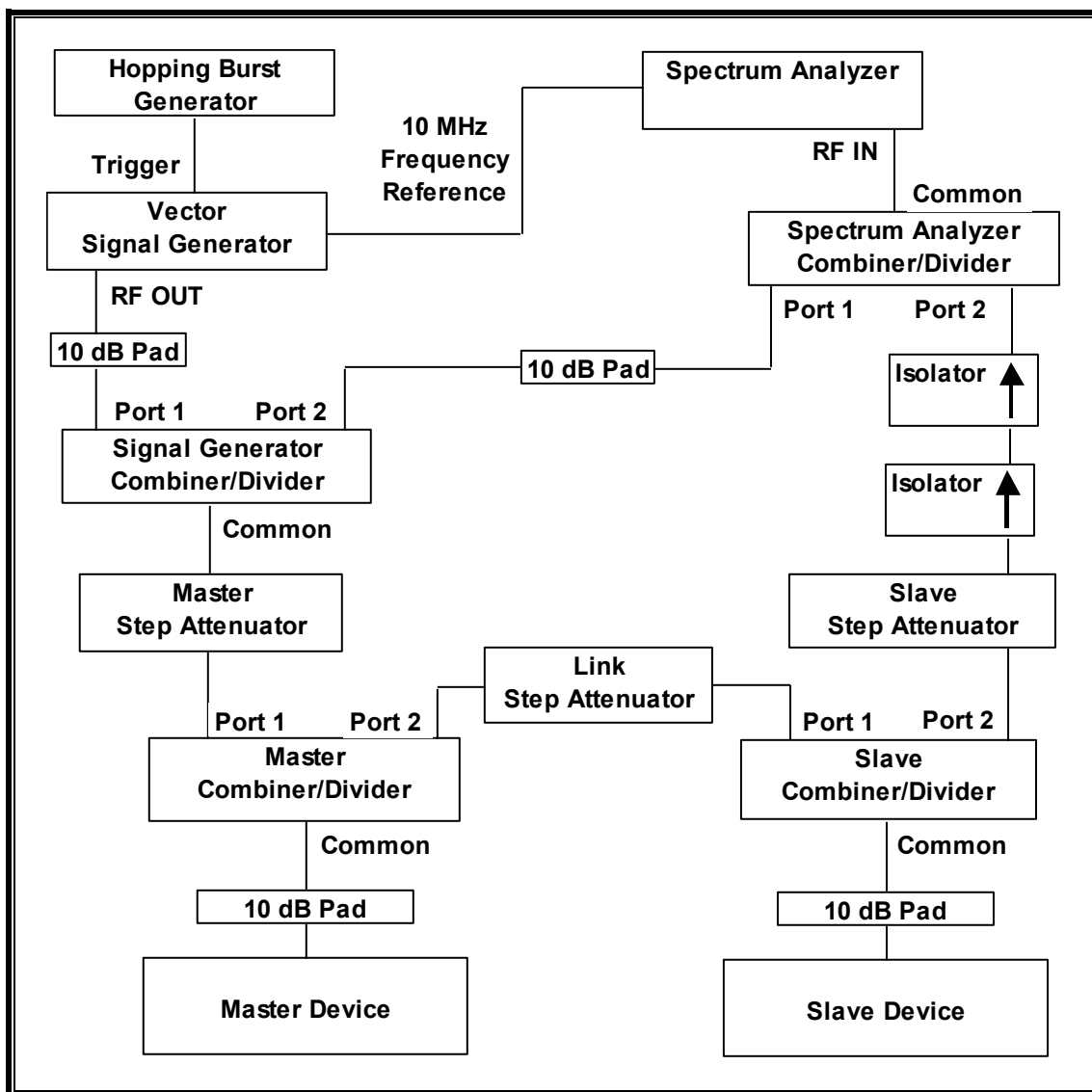
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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

5.1.2. 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.

5.1.3. 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

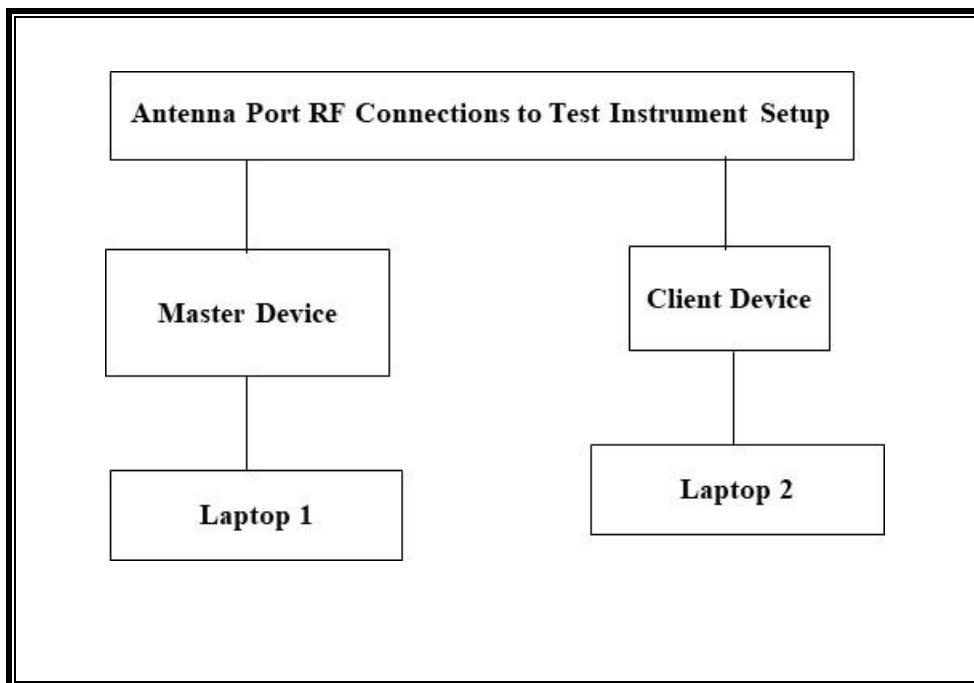
The test room temperature and humidity shall be maintained within normal temperature of 15~35 °C and normal humidity 20~75% (relative humidity).

ENVIRONMENT CONDITION

Parameter	Value
Temperature	26 °C
Humidity	48 %

5.1.4. 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

5.1.5. DESCRIPTION OF EUT

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

For ISSED 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.

Four 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 three transmitter chains and one transmitter/receive only chain, 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 was 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.

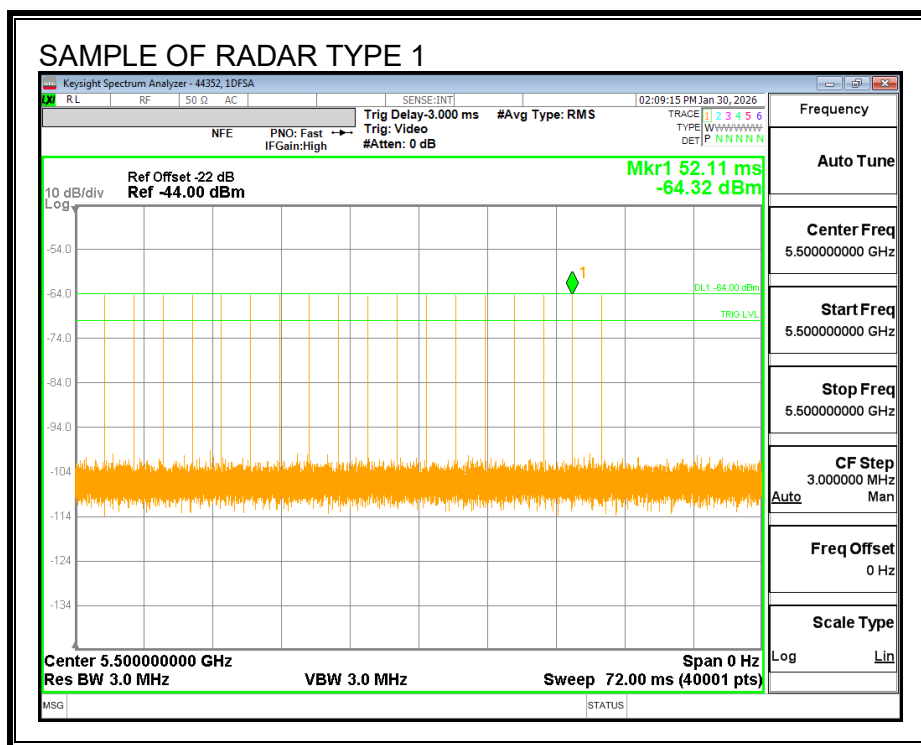
Manufacturer declares that channel bandwidth reduction is not supported by the EUT.

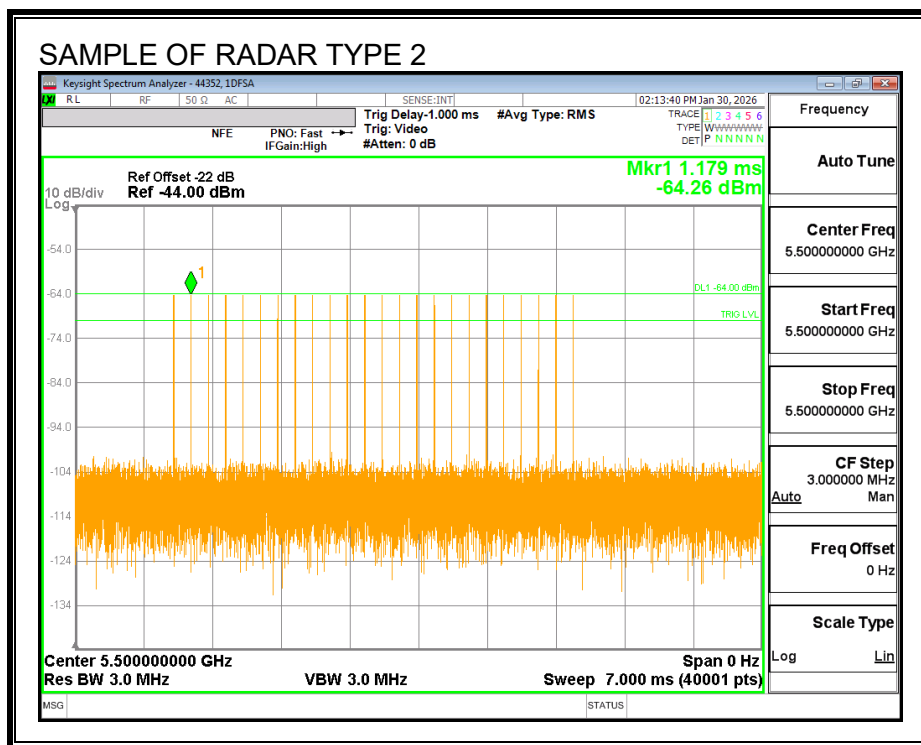
TDLS (Tunneled Direct Link Setup) mode is not supported by the EUT.

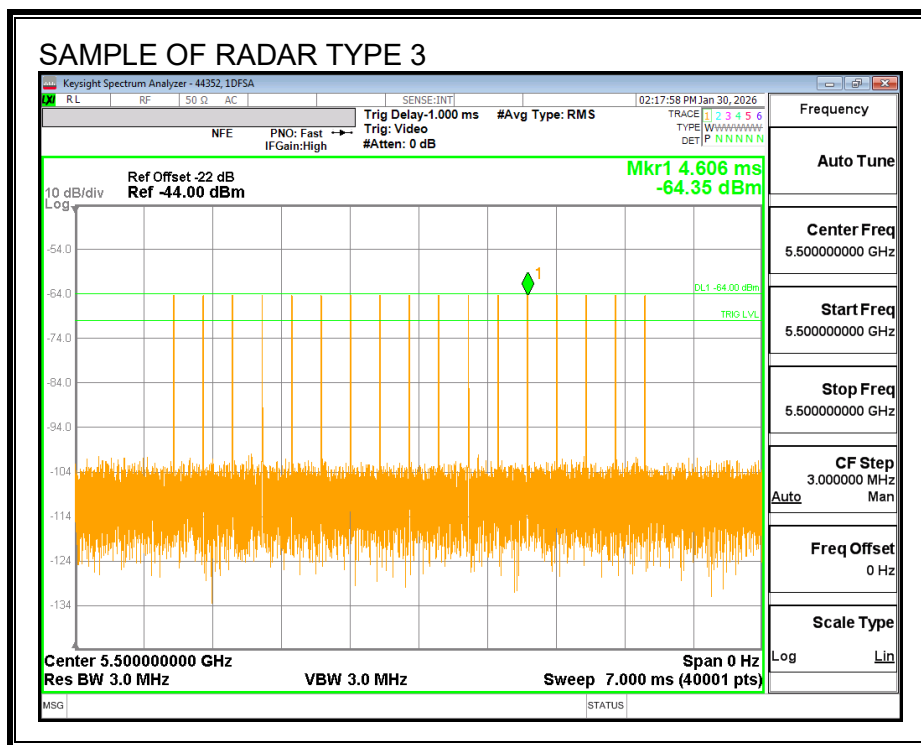
The software installed in the EUT is V7.26.40.

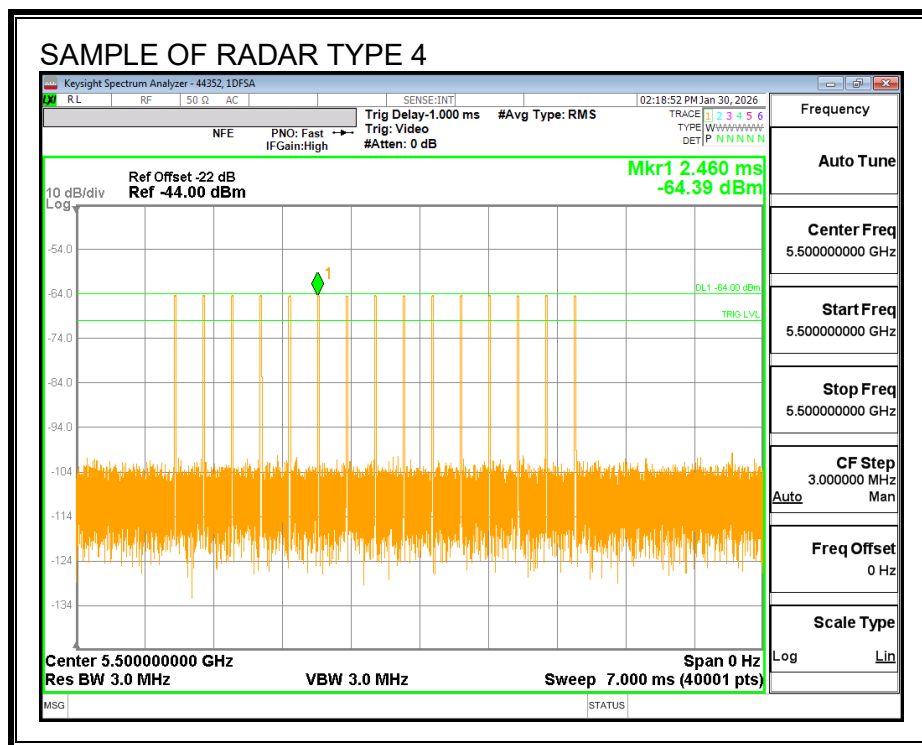
UNIFORM CHANNEL SPREADING

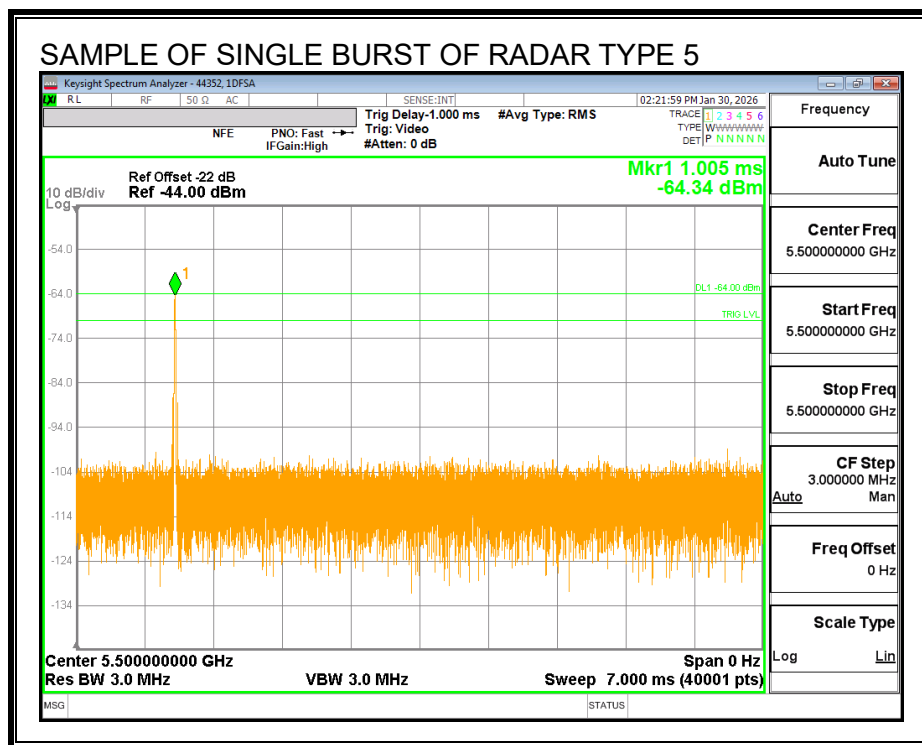
This function is not required per KDB 905462.

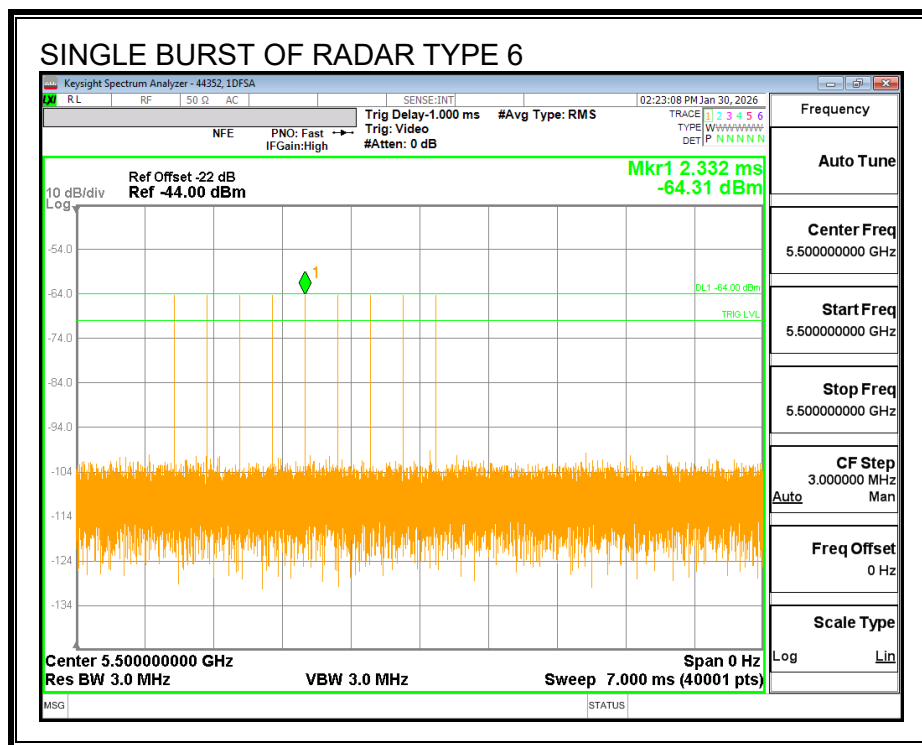




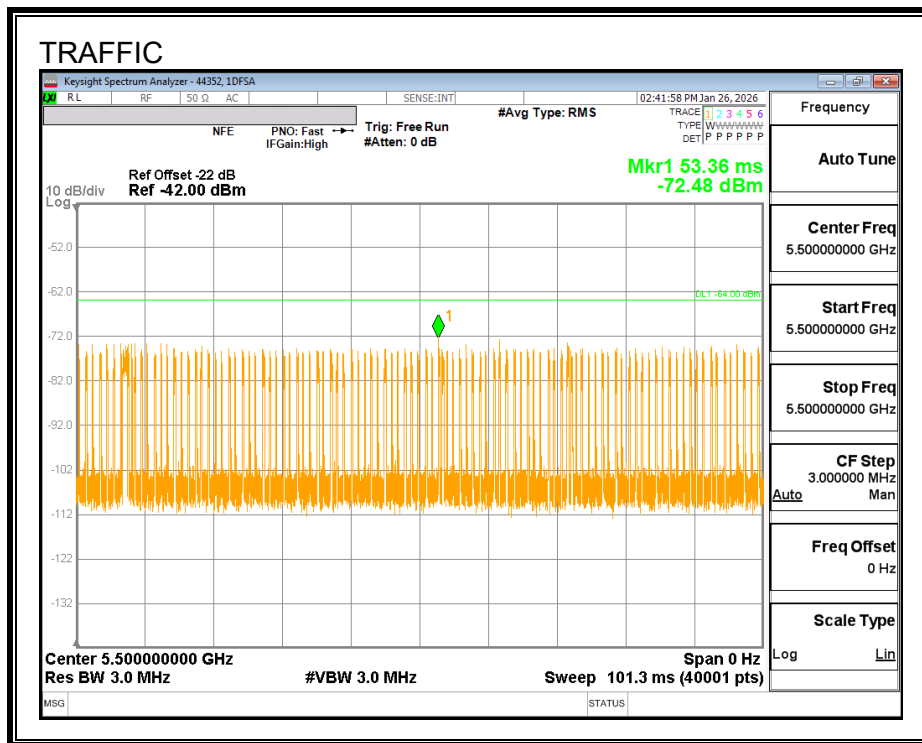




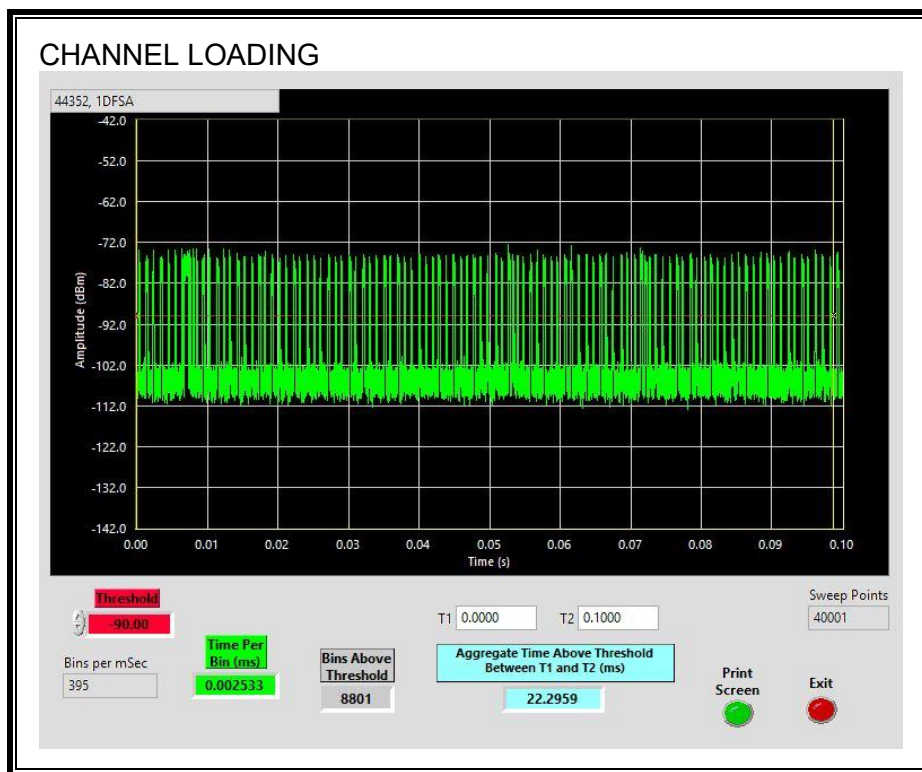




TRAFFIC



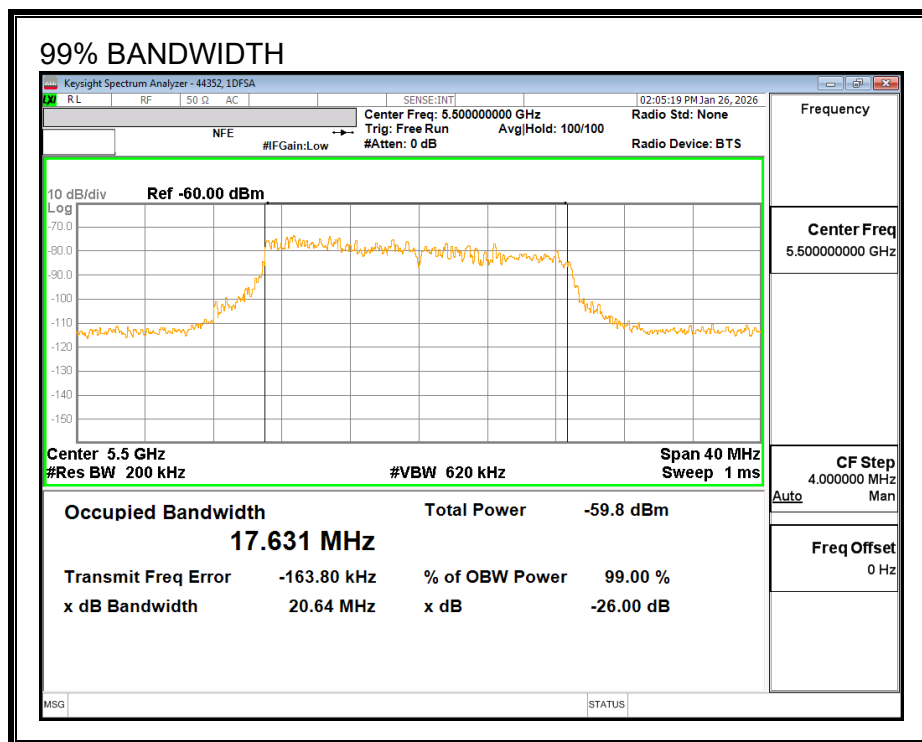
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 22.2959%

5.2.3. 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 (%)
5491	5509	18	17.631	102.1	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
5490	3	0	0	
5491	10	10	100	FL
5492	10	10	100	
5493	10	10	100	
5494	10	10	100	
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5506	10	10	100	
5507	10	10	100	
5508	10	10	100	
5509	10	9	90	FH
5510	4	1	25	

5.2.4. 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	5491	5509	17.63	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 2	30	96.67	60	Pass	5491	5509	17.63	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 3	30	90.00	60	Pass	5491	5509	17.63	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 4	30	96.67	60	Pass	5491	5509	17.63	1DFS1	44352	v2023.11.3
Aggregate		95.83	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5491	5509	17.63	1DFS1	44352	v2023.11.3
FCC Hopping Type 6	38	100.00	70	Pass	5491	5509		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	5507	Yes
1002	1	938	57	A	5503	Yes
1003	1	638	83	A	5497	Yes
1004	1	878	61	A	5498	Yes
1005	1	558	95	A	5492	Yes
1006	1	738	72	A	5492	Yes
1007	1	678	78	A	5503	Yes
1008	1	618	86	A	5502	Yes
1009	1	898	59	A	5496	Yes
1010	1	538	99	A	5497	Yes
1011	1	578	92	A	5509	Yes
1012	1	518	102	A	5505	Yes
1013	1	658	81	A	5495	Yes
1014	1	758	70	A	5508	Yes
1015	1	918	58	A	5507	Yes
1016	1	984	54	B	5493	Yes
1017	1	810	66	B	5504	Yes
1018	1	1637	33	B	5497	Yes
1019	1	1593	34	B	5494	Yes
1020	1	1355	39	B	5509	Yes
1021	1	1440	37	B	5501	Yes
1022	1	1331	40	B	5494	Yes
1023	1	2899	19	B	5493	Yes
1024	1	1725	31	B	5502	Yes
1025	1	875	61	B	5500	Yes
1026	1	2379	23	B	5492	Yes
1027	1	1658	32	B	5499	Yes
1028	1	2096	26	B	5509	Yes
1029	1	2858	19	B	5494	Yes
1030	1	2073	26	B	5500	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	5499	Yes
2002	3.4	158	26	5493	Yes
2003	1.1	150	27	5502	Yes
2004	3.5	173	29	5495	Yes
2005	1.5	212	23	5507	Yes
2006	4.1	202	29	5500	Yes
2007	4.4	164	24	5505	Yes
2008	1.2	158	23	5499	Yes
2009	3.7	205	29	5500	Yes
2010	2.9	164	28	5503	Yes
2011	1.5	178	27	5502	Yes
2012	4.9	223	24	5501	Yes
2013	1.8	159	27	5494	Yes
2014	3.6	208	24	5503	Yes
2015	4.8	191	28	5501	Yes
2016	2.6	207	25	5507	Yes
2017	2.1	194	29	5501	Yes
2018	4.3	214	24	5503	No
2019	4	205	25	5506	Yes
2020	2.2	191	26	5500	Yes
2021	4.3	187	28	5507	Yes
2022	5	176	27	5500	Yes
2023	3.1	219	28	5498	Yes
2024	4	213	28	5506	Yes
2025	2.4	222	26	5496	Yes
2026	1.6	220	26	5492	Yes
2027	4.3	152	25	5491	Yes
2028	3.6	197	29	5495	Yes
2029	2.7	214	25	5497	Yes
2030	2.3	225	29	5508	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	5494	Yes
3002	5.4	347	16	5506	Yes
3003	9.9	309	17	5502	Yes
3004	7.5	369	17	5503	Yes
3005	7.1	343	18	5509	Yes
3006	10	298	16	5499	Yes
3007	7.5	285	17	5507	Yes
3008	8.3	253	16	5509	Yes
3009	6.1	386	17	5499	Yes
3010	7.2	367	17	5505	Yes
3011	5.1	395	16	5501	No
3012	9.2	388	18	5499	Yes
3013	5.1	429	17	5494	Yes
3014	6.7	317	17	5509	Yes
3015	5.5	371	16	5501	Yes
3016	5	405	17	5503	No
3017	6.5	472	16	5508	Yes
3018	8.9	268	18	5500	Yes
3019	8.2	480	18	5503	Yes
3020	5.9	289	16	5508	Yes
3021	5.5	264	18	5505	Yes
3022	8.4	470	17	5496	Yes
3023	5.9	457	16	5496	No
3024	6.7	425	18	5499	Yes
3025	9.6	307	16	5506	Yes
3026	5.5	420	17	5496	Yes
3027	8.6	315	18	5499	Yes
3028	7.6	442	17	5507	Yes
3029	8.6	349	16	5509	Yes
3030	7.8	489	18	5501	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	5492	Yes
4002	16.9	326	13	5501	Yes
4003	15.1	392	16	5499	Yes
4004	14.6	440	16	5491	Yes
4005	13.3	401	14	5500	Yes
4006	18.6	461	15	5508	Yes
4007	17.9	435	13	5501	Yes
4008	19	390	12	5506	Yes
4009	18.7	377	16	5505	Yes
4010	10.3	345	15	5501	Yes
4011	15.9	478	14	5492	Yes
4012	18	341	13	5499	Yes
4013	19.4	487	15	5500	Yes
4014	12	363	12	5498	Yes
4015	13.9	270	16	5496	Yes
4016	12.3	409	14	5496	Yes
4017	14.8	345	14	5496	Yes
4018	13.7	498	16	5501	Yes
4019	11.9	313	14	5499	Yes
4020	11.4	360	15	5494	Yes
4021	10.1	322	13	5499	Yes
4022	15.4	382	14	5494	Yes
4023	14.7	356	12	5509	Yes
4024	15.8	311	16	5491	Yes
4025	15.5	431	12	5495	Yes
4026	17.2	399	13	5502	Yes
4027	12.7	399	12	5507	Yes
4028	14.8	262	12	5501	Yes
4029	16.2	407	13	5492	No
4030	18.9	283	15	5495	Yes

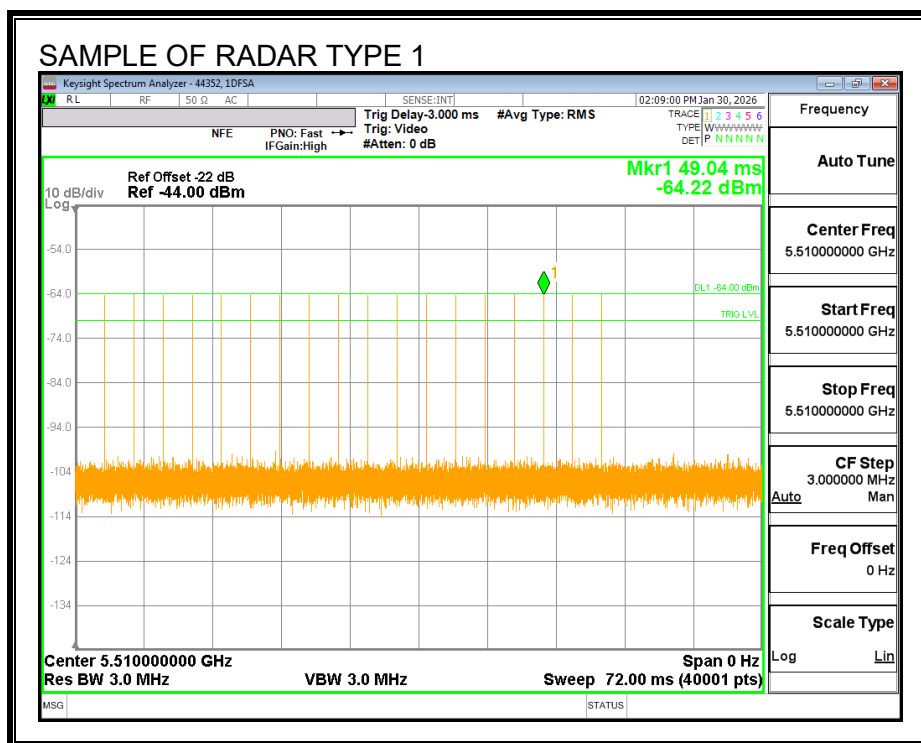
TYPE 5 DETECTION PROBABILITY

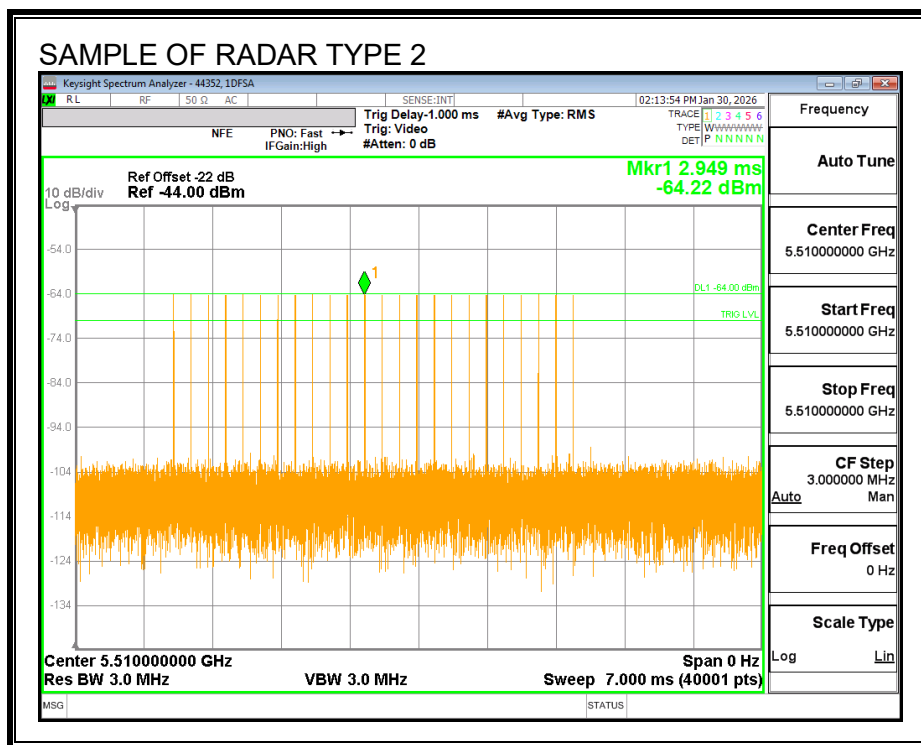
Data Sheet for FCC Long Pulse Radar Type 5		
Trial	Frequency (MHz)	Successful Detection (Yes/No)
1	5500	Yes
2	5500	Yes
3	5500	Yes
4	5500	Yes
5	5500	Yes
6	5500	Yes
7	5500	Yes
8	5500	Yes
9	5500	Yes
10	5500	Yes
11	5498	Yes
12	5494	Yes
13	5496	Yes
14	5499	Yes
15	5499	Yes
16	5497	Yes
17	5495	Yes
18	5494	Yes
19	5496	Yes
20	5494	Yes
21	5506	Yes
22	5505	Yes
23	5504	Yes
24	5506	Yes
25	5500	Yes
26	5504	Yes
27	5504	Yes
28	5506	Yes
29	5504	Yes
30	5506	Yes

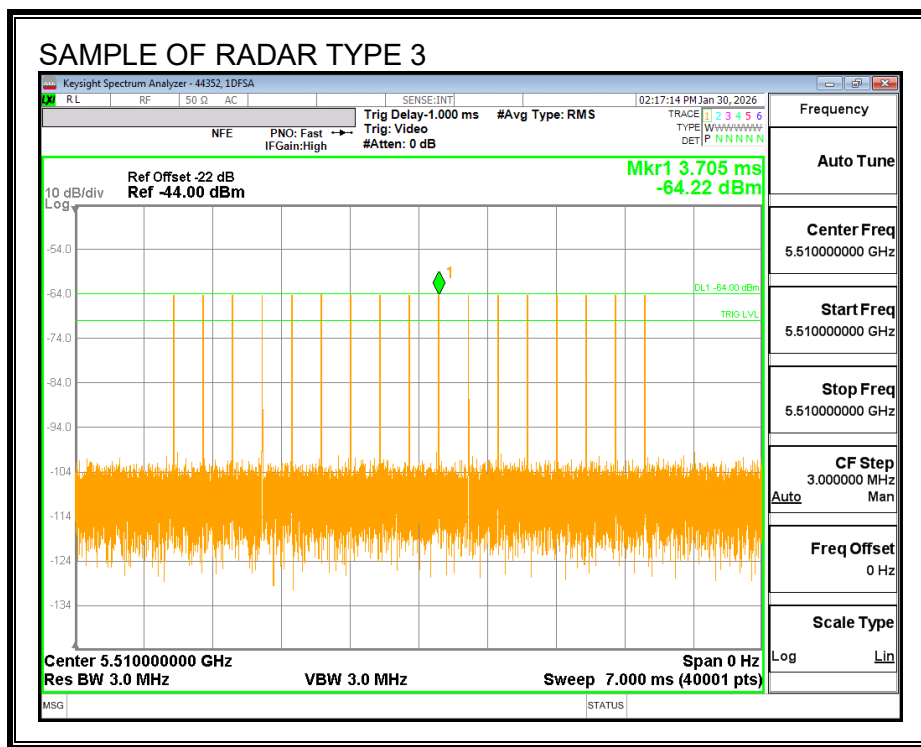
Note: The Type 5 randomized parameters tested are located in Appendix A.

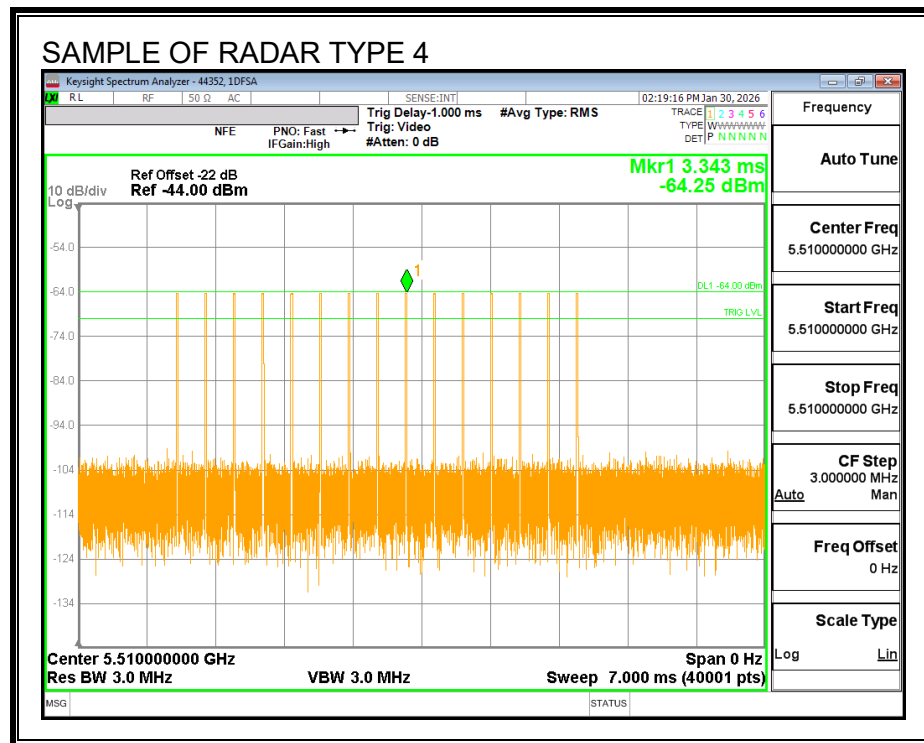
TYPE 6 DETECTION PROBABILITY

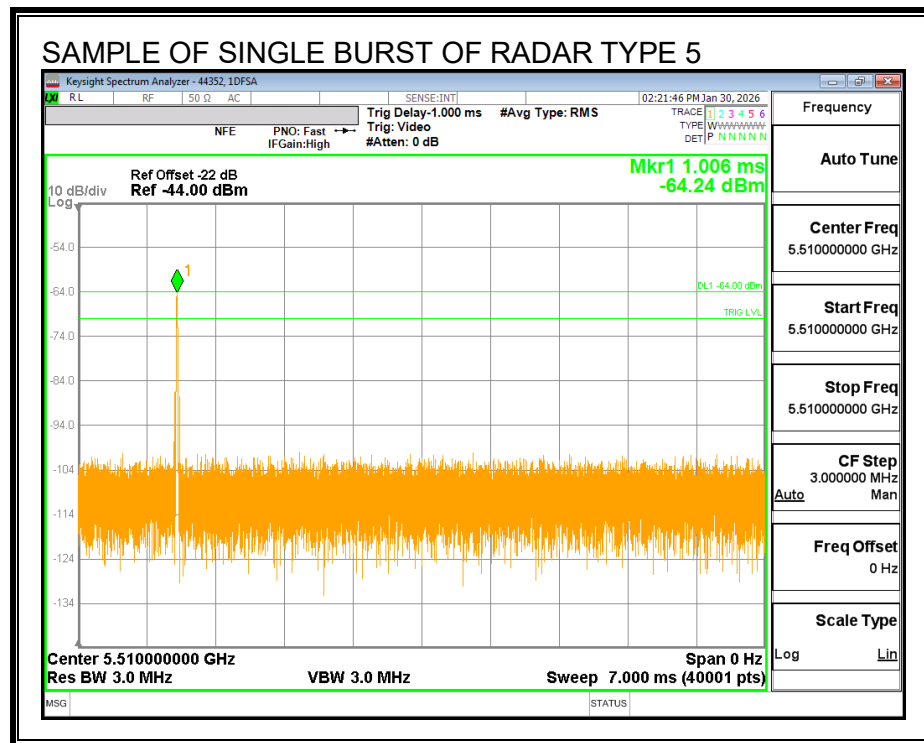
Data Sheet for FCC Hopping Radar Type 6				
1 us Pulse Width, 333 us PRI, 9 Pulses per Burst, 1 Burst per Hop				
NTIA August 2005 Hopping Sequence				
Trial	Starting Index Within Sequence	Signal Generator Frequency (MHz)	Hops within Detection BW	Successful Detection (Yes/No)
1	667	5491	4	Yes
2	1142	5492	5	Yes
3	2092	5493	1	Yes
4	2567	5494	2	Yes
5	3042	5495	2	Yes
6	3517	5496	3	Yes
7	3992	5497	3	Yes
8	4467	5498	4	Yes
9	4942	5499	4	Yes
10	5417	5500	5	Yes
11	5892	5501	4	Yes
12	6367	5502	5	Yes
13	6842	5503	4	Yes
14	7317	5504	4	Yes
15	7792	5505	5	Yes
16	8267	5506	6	Yes
17	8742	5507	5	Yes
18	9217	5508	4	Yes
19	9692	5509	5	Yes
20	10167	5491	2	Yes
21	10642	5492	2	Yes
22	11117	5493	5	Yes
23	11592	5494	3	Yes
24	12067	5495	5	Yes
25	12542	5496	1	Yes
26	13017	5497	5	Yes
27	13492	5498	3	Yes
28	13967	5499	3	Yes
29	14442	5500	4	Yes
30	14917	5501	1	Yes
31	15392	5502	2	Yes
32	15867	5503	3	Yes
33	16342	5504	4	Yes
34	16817	5505	3	Yes
35	17292	5506	4	Yes
36	17767	5507	2	Yes
37	18242	5508	4	Yes
38	18717	5509	5	Yes

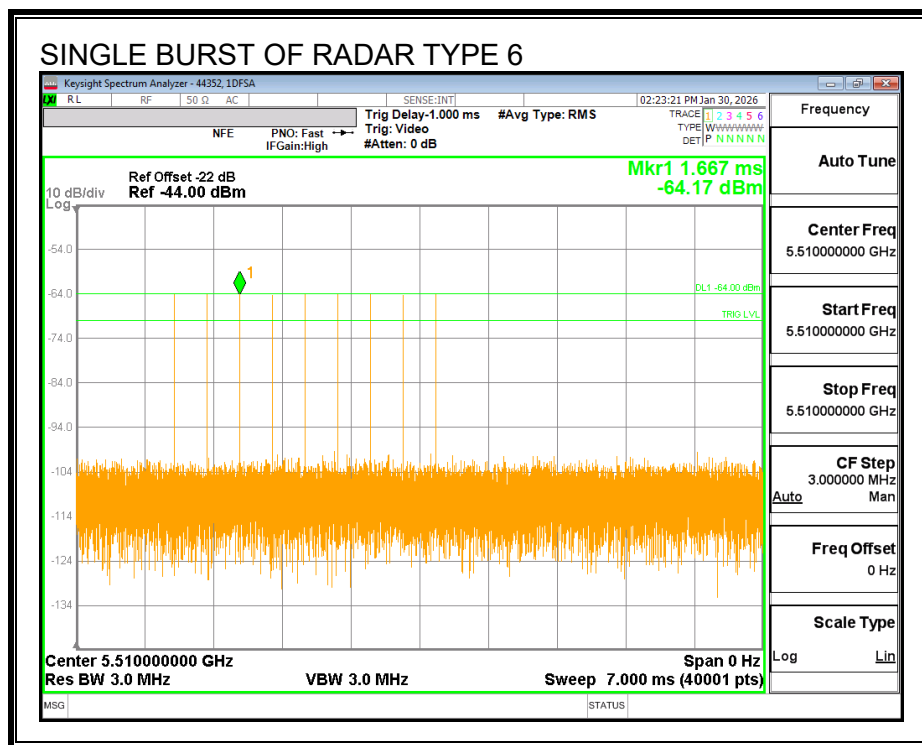




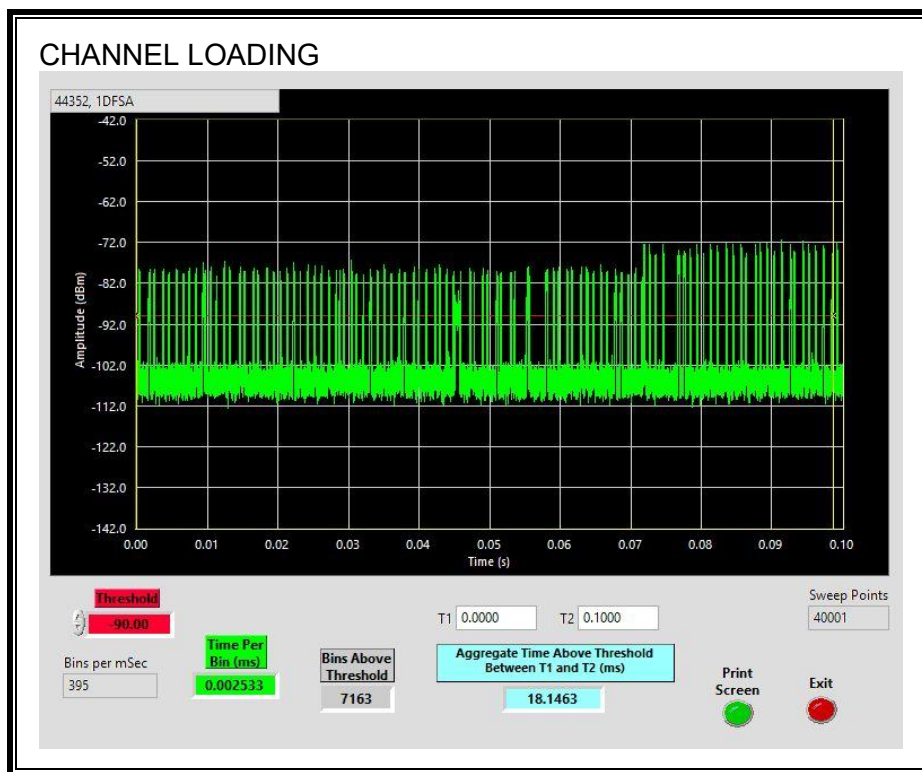








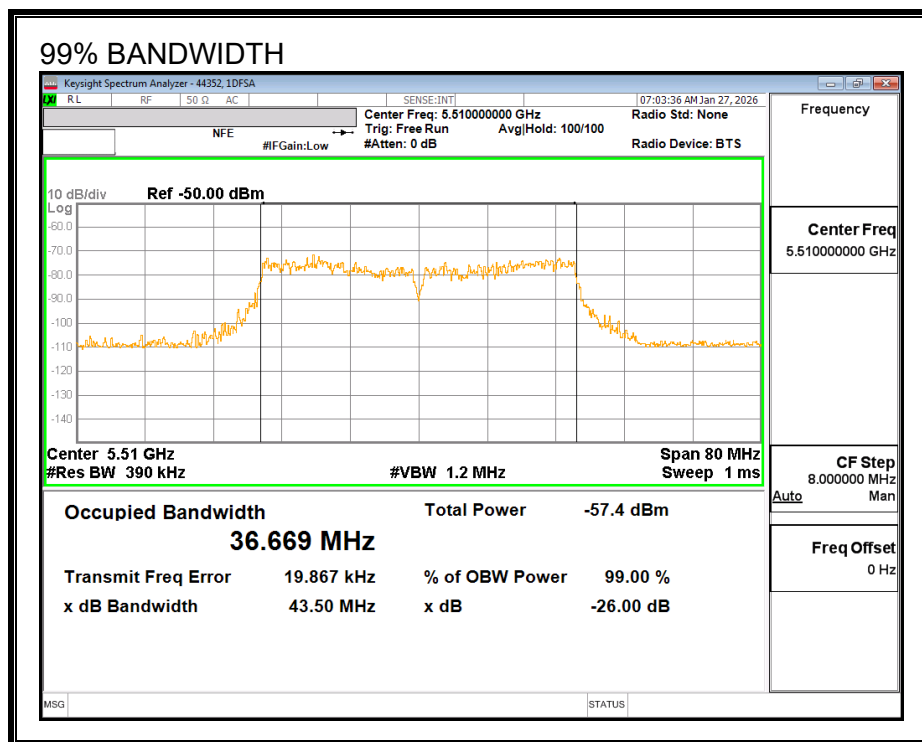
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 18.1463%.

5.3.3. 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	36.669	109.1	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	2	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	10	100	FH
5531	4	0	0	

5.3.4. 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	36.67	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 2	30	100.00	60	Pass	5490	5530	36.67	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 3	30	86.67	60	Pass	5490	5530	36.67	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 4	30	93.33	60	Pass	5490	5530	36.67	1DFS1	44352	v2023.11.3
Aggregate		95.00	80	Pass						
FCC Long Pulse Type 5	30	96.67	80	Pass	5490	5530	36.67	1DFS1	44352	v2023.11.3
FCC Hopping Type 6	41	100.00	70	Pass	5490	5530		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	5514	Yes
1002	1	938	57	A	5504	Yes
1003	1	638	83	A	5513	Yes
1004	1	878	61	A	5508	Yes
1005	1	558	95	A	5496	Yes
1006	1	738	72	A	5510	Yes
1007	1	678	78	A	5494	Yes
1008	1	618	86	A	5505	Yes
1009	1	898	59	A	5513	Yes
1010	1	538	99	A	5501	Yes
1011	1	578	92	A	5521	Yes
1012	1	518	102	A	5525	Yes
1013	1	658	81	A	5509	Yes
1014	1	758	70	A	5503	Yes
1015	1	918	58	A	5508	Yes
1016	1	984	54	B	5520	Yes
1017	1	810	66	B	5511	Yes
1018	1	1637	33	B	5510	Yes
1019	1	1593	34	B	5510	Yes
1020	1	1355	39	B	5498	Yes
1021	1	1440	37	B	5494	Yes
1022	1	1331	40	B	5522	Yes
1023	1	2899	19	B	5494	Yes
1024	1	1725	31	B	5511	Yes
1025	1	875	61	B	5506	Yes
1026	1	2379	23	B	5526	Yes
1027	1	1658	32	B	5510	Yes
1028	1	2096	26	B	5527	Yes
1029	1	2858	19	B	5503	Yes
1030	1	2073	26	B	5522	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	5502	Yes
2002	3.4	158	26	5530	Yes
2003	1.1	150	27	5518	Yes
2004	3.5	173	29	5499	Yes
2005	1.5	212	23	5517	Yes
2006	4.1	202	29	5527	Yes
2007	4.4	164	24	5524	Yes
2008	1.2	158	23	5491	Yes
2009	3.7	205	29	5520	Yes
2010	2.9	164	28	5505	Yes
2011	1.5	178	27	5503	Yes
2012	4.9	223	24	5495	Yes
2013	1.8	159	27	5524	Yes
2014	3.6	208	24	5493	Yes
2015	4.8	191	28	5502	Yes
2016	2.6	207	25	5508	Yes
2017	2.1	194	29	5512	Yes
2018	4.3	214	24	5506	Yes
2019	4	205	25	5506	Yes
2020	2.2	191	26	5501	Yes
2021	4.3	187	28	5506	Yes
2022	5	176	27	5516	Yes
2023	3.1	219	28	5506	Yes
2024	4	213	28	5513	Yes
2025	2.4	222	26	5494	Yes
2026	1.6	220	26	5529	Yes
2027	4.3	152	25	5521	Yes
2028	3.6	197	29	5523	Yes
2029	2.7	214	25	5512	Yes
2030	2.3	225	29	5514	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	5494	Yes
3002	5.4	347	16	5492	Yes
3003	9.9	309	17	5522	Yes
3004	7.5	369	17	5491	Yes
3005	7.1	343	18	5507	Yes
3006	10	298	16	5526	Yes
3007	7.5	285	17	5517	Yes
3008	8.3	253	16	5496	Yes
3009	6.1	386	17	5499	Yes
3010	7.2	367	17	5513	Yes
3011	5.1	395	16	5516	No
3012	9.2	388	18	5527	Yes
3013	5.1	429	17	5514	No
3014	6.7	317	17	5503	No
3015	5.5	371	16	5523	Yes
3016	5	405	17	5528	No
3017	6.5	472	16	5501	Yes
3018	8.9	268	18	5505	Yes
3019	8.2	480	18	5521	Yes
3020	5.9	289	16	5530	Yes
3021	5.5	264	18	5523	Yes
3022	8.4	470	17	5527	Yes
3023	5.9	457	16	5505	Yes
3024	6.7	425	18	5498	Yes
3025	9.6	307	16	5528	Yes
3026	5.5	420	17	5500	Yes
3027	8.6	315	18	5512	Yes
3028	7.6	442	17	5501	Yes
3029	8.6	349	16	5510	Yes
3030	7.8	489	18	5500	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	5525	Yes
4002	16.9	326	13	5493	Yes
4003	15.1	392	16	5529	Yes
4004	14.6	440	16	5515	Yes
4005	13.3	401	14	5493	Yes
4006	18.6	461	15	5495	No
4007	17.9	435	13	5514	Yes
4008	19	390	12	5497	Yes
4009	18.7	377	16	5524	Yes
4010	10.3	345	15	5500	Yes
4011	15.9	478	14	5528	Yes
4012	18	341	13	5522	Yes
4013	19.4	487	15	5496	Yes
4014	12	363	12	5508	Yes
4015	13.9	270	16	5498	Yes
4016	12.3	409	14	5507	No
4017	14.8	345	14	5493	Yes
4018	13.7	498	16	5515	Yes
4019	11.9	313	14	5523	Yes
4020	11.4	360	15	5513	Yes
4021	10.1	322	13	5524	Yes
4022	15.4	382	14	5507	Yes
4023	14.7	356	12	5510	Yes
4024	15.8	311	16	5517	Yes
4025	15.5	431	12	5529	Yes
4026	17.2	399	13	5509	Yes
4027	12.7	399	12	5499	Yes
4028	14.8	262	12	5508	Yes
4029	16.2	407	13	5523	Yes
4030	18.9	283	15	5500	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	5495	No
13	5497	Yes
14	5500	Yes
15	5499	Yes
16	5497	Yes
17	5496	Yes
18	5494	Yes
19	5496	Yes
20	5494	Yes
21	5526	Yes
22	5524	Yes
23	5523	Yes
24	5526	Yes
25	5520	Yes
26	5524	Yes
27	5523	Yes
28	5526	Yes
29	5524	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	757	5490	9	Yes
2	1232	5491	10	Yes
3	1707	5492	12	Yes
4	2182	5493	8	Yes
5	2657	5494	5	Yes
6	3132	5495	12	Yes
7	3607	5496	9	Yes
8	4082	5497	9	Yes
9	4557	5498	8	Yes
10	5032	5499	8	Yes
11	5507	5500	5	Yes
12	5982	5501	11	Yes
13	6457	5502	8	Yes
14	6932	5503	8	Yes
15	7407	5504	9	Yes
16	7882	5505	8	Yes
17	8357	5506	9	Yes
18	8832	5507	9	Yes
19	9307	5508	11	Yes
20	9782	5509	10	Yes
21	10257	5510	9	Yes
22	10732	5511	12	Yes
23	11207	5512	7	Yes
24	11682	5513	12	Yes
25	12157	5514	8	Yes
26	12632	5515	10	Yes
27	13107	5516	6	Yes
28	13582	5517	8	Yes
29	14057	5518	6	Yes
30	14532	5519	12	Yes
31	15007	5520	7	Yes
32	15482	5521	6	Yes
33	15957	5522	7	Yes
34	16432	5523	10	Yes
35	16907	5524	9	Yes
36	17382	5525	6	Yes
37	17857	5526	9	Yes
38	18332	5527	12	Yes
39	18807	5528	7	Yes
40	19282	5529	5	Yes
41	19757	5530	9	Yes

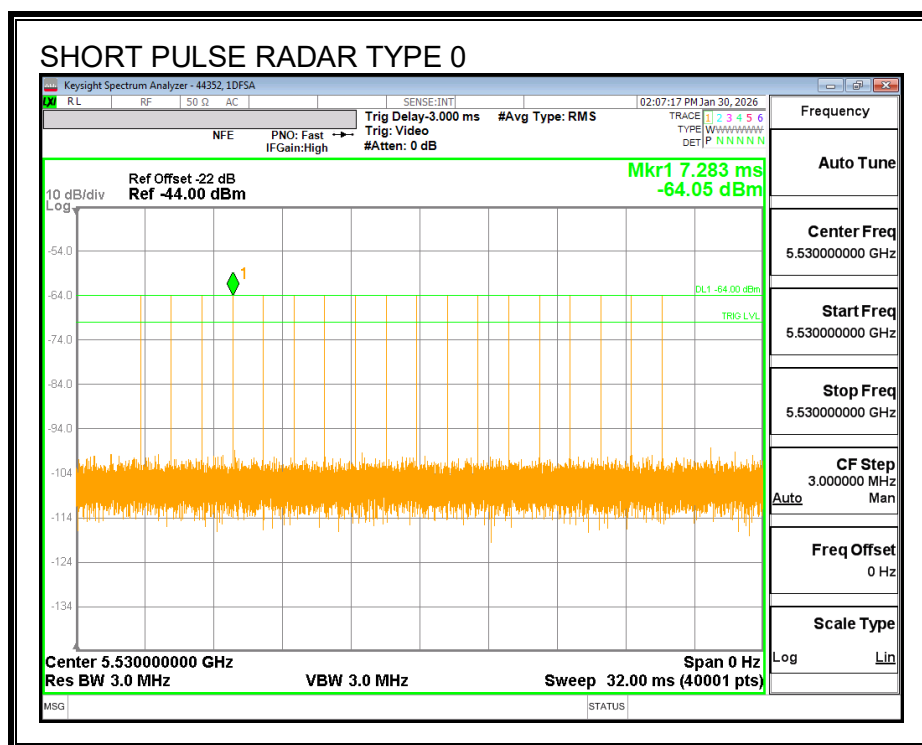
5.4. MASTER DEVICE CONFIGURATION RESULTS FOR 80 MHz BANDWIDTH

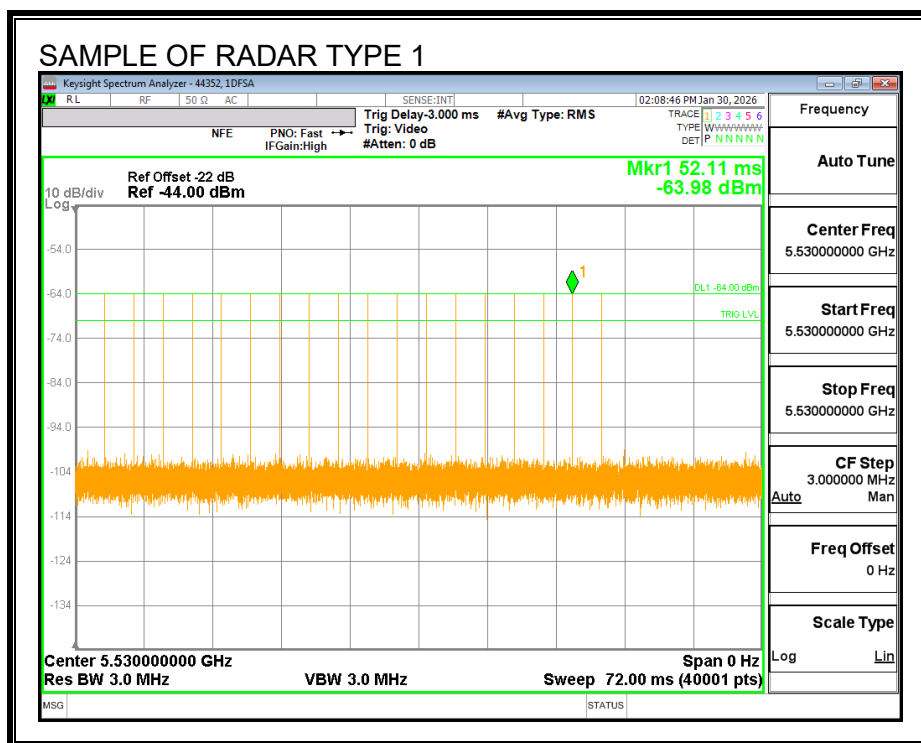
5.4.1. TEST CHANNEL

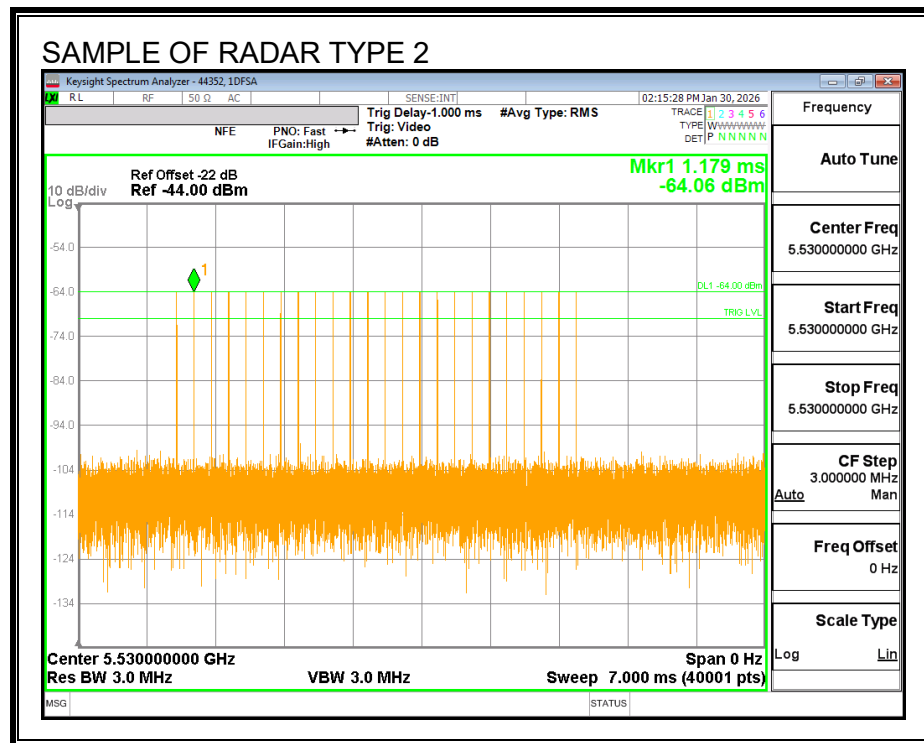
All tests were performed at a channel center frequency of 5530 MHz.

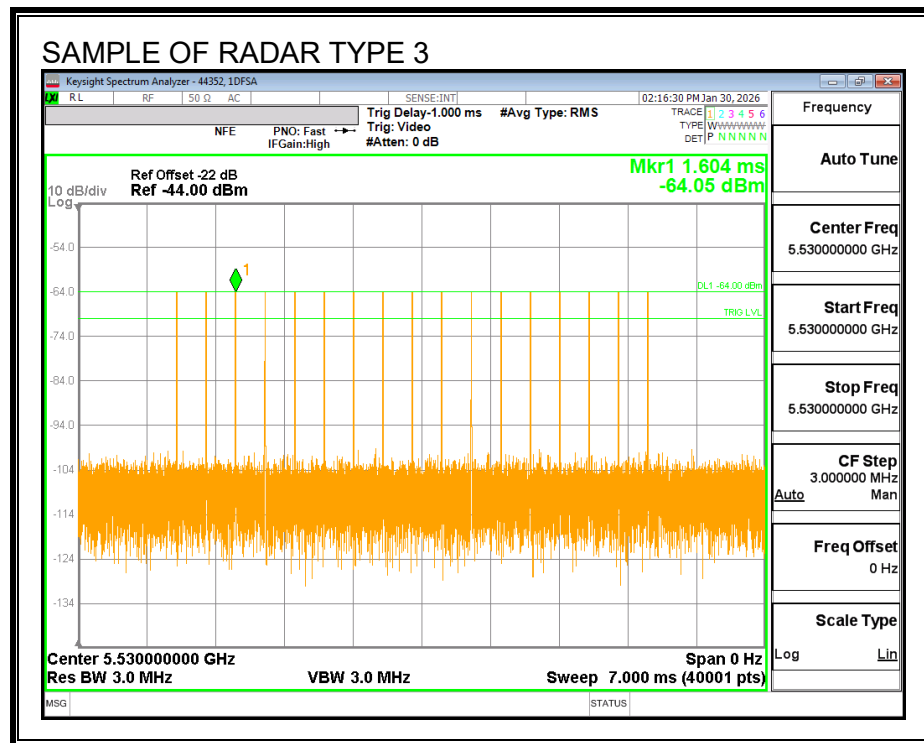
5.4.2. RADAR WAVEFORMS AND TRAFFIC

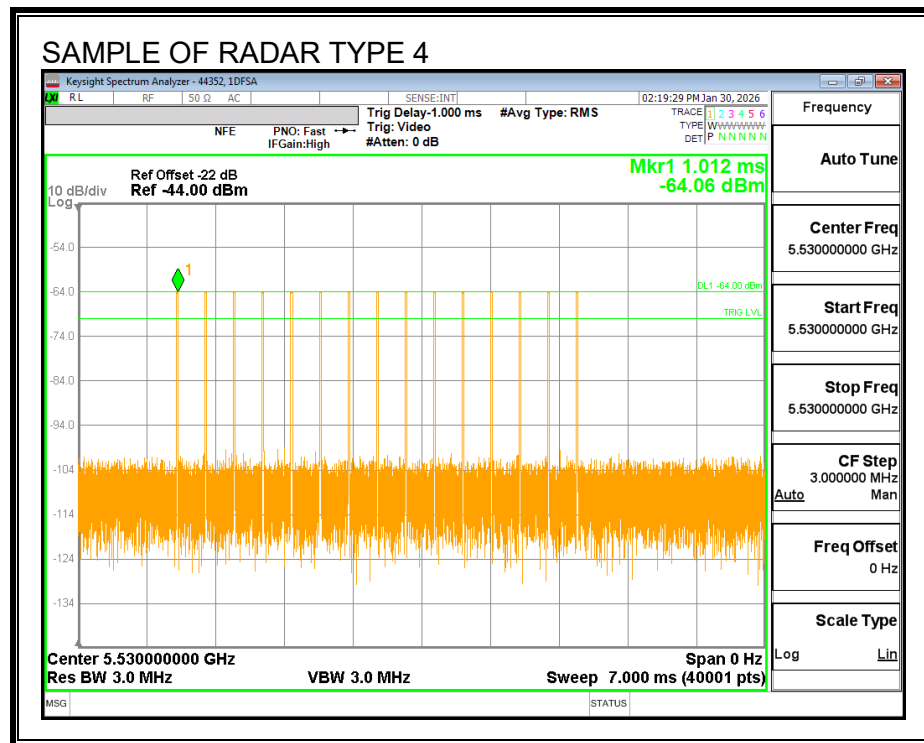
RADAR WAVEFORMS

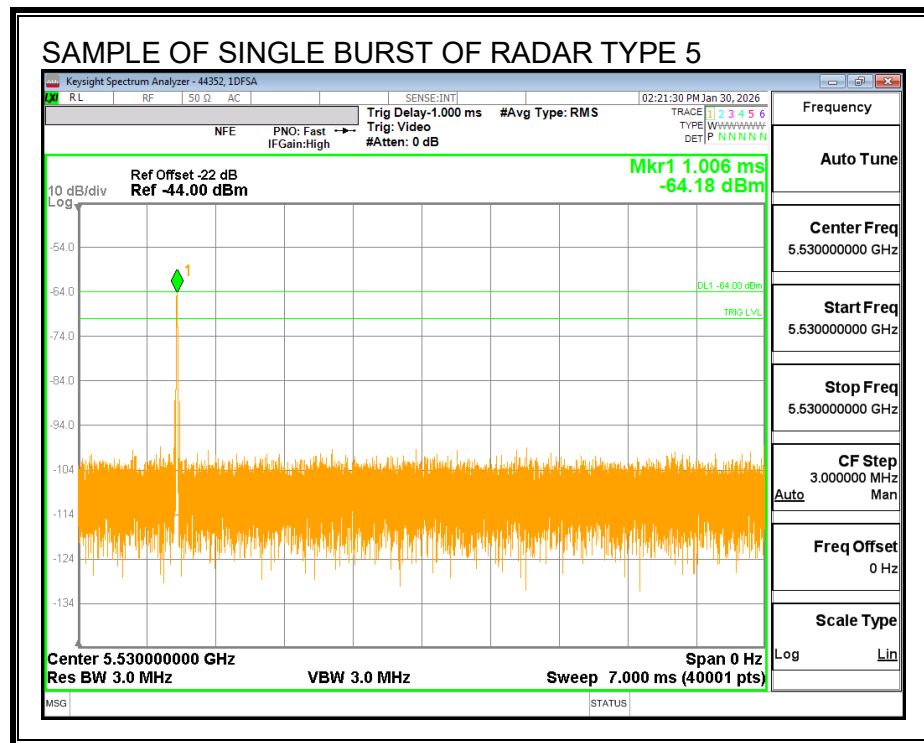


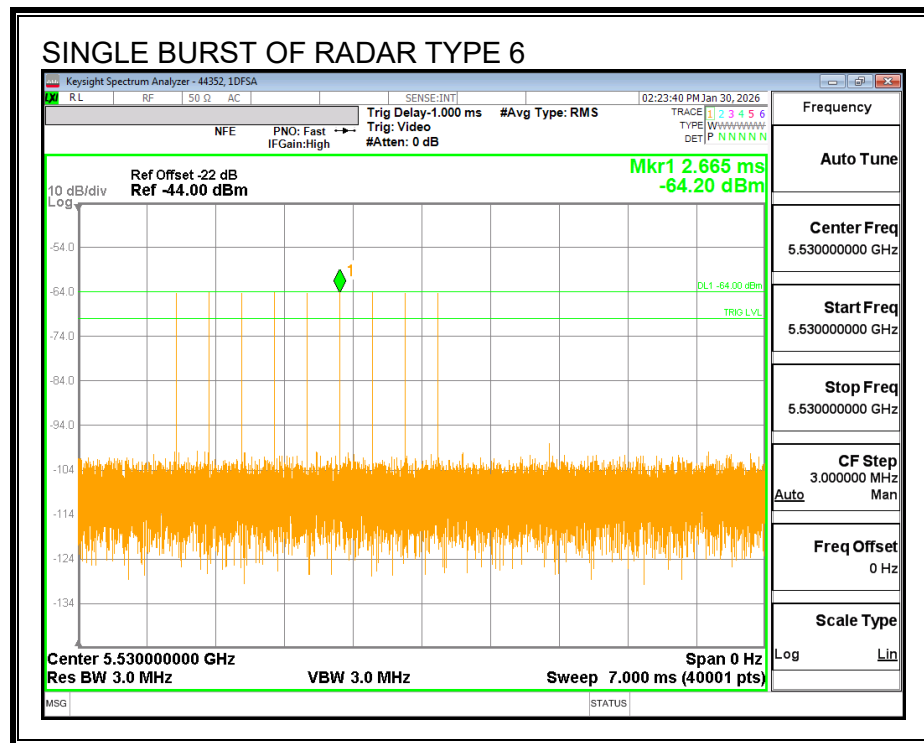




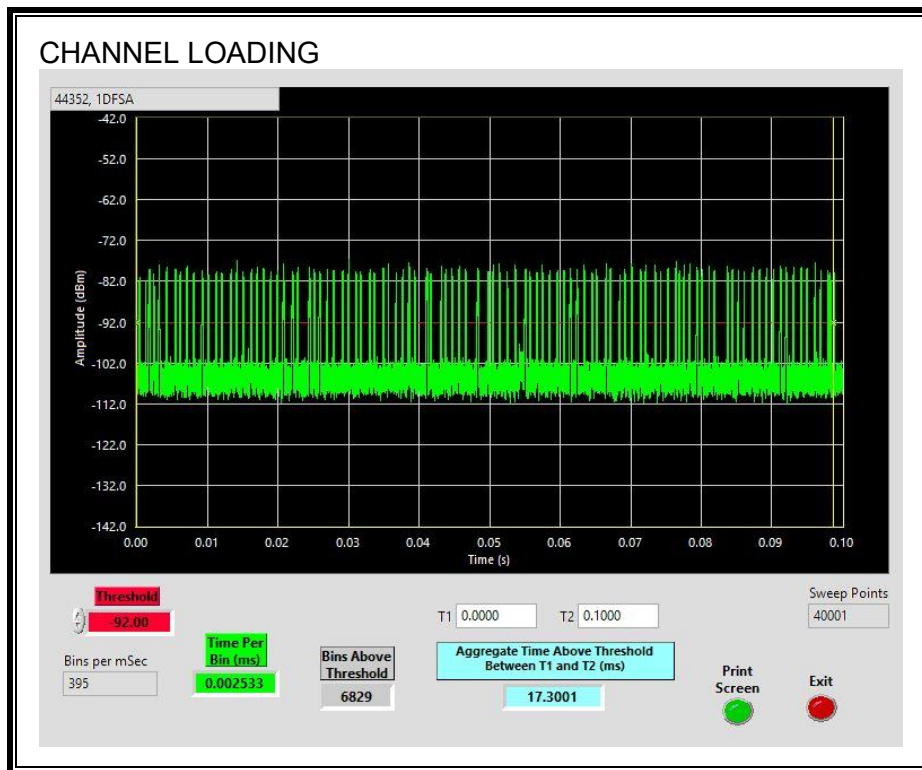








CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.3001%.

5.4.3. 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)
15.8	89.56	73.8	13.76

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)
15.45	29.41	14.0	0.2

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)
15.47	87.9	72.4	58.7

QUALITATIVE RESULTS

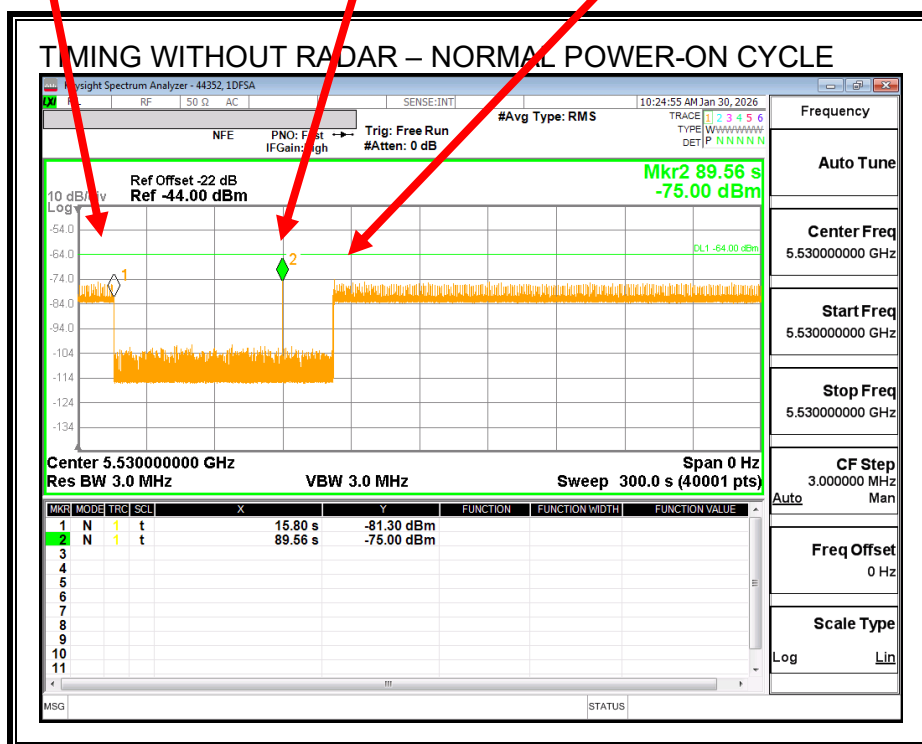
Timing of Radar Burst	Display on Control Computer	Spectrum Analyzer Display
No Radar Triggered	EUT marks Channel as active	Transmissions begin on channel after completion of the initial power-up cycle and the CAC
Within 0 to 6 second window	EUT indicates radar detected EUT does not display any radar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



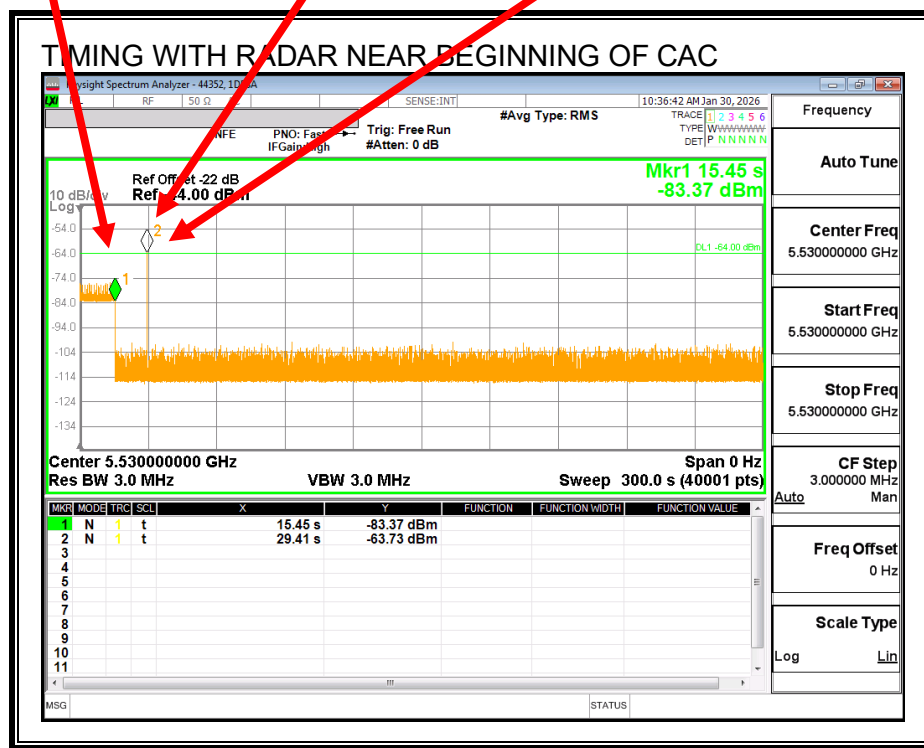
Transmissions begin on channel after completion of the initial power-up cycle and the CAC.

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



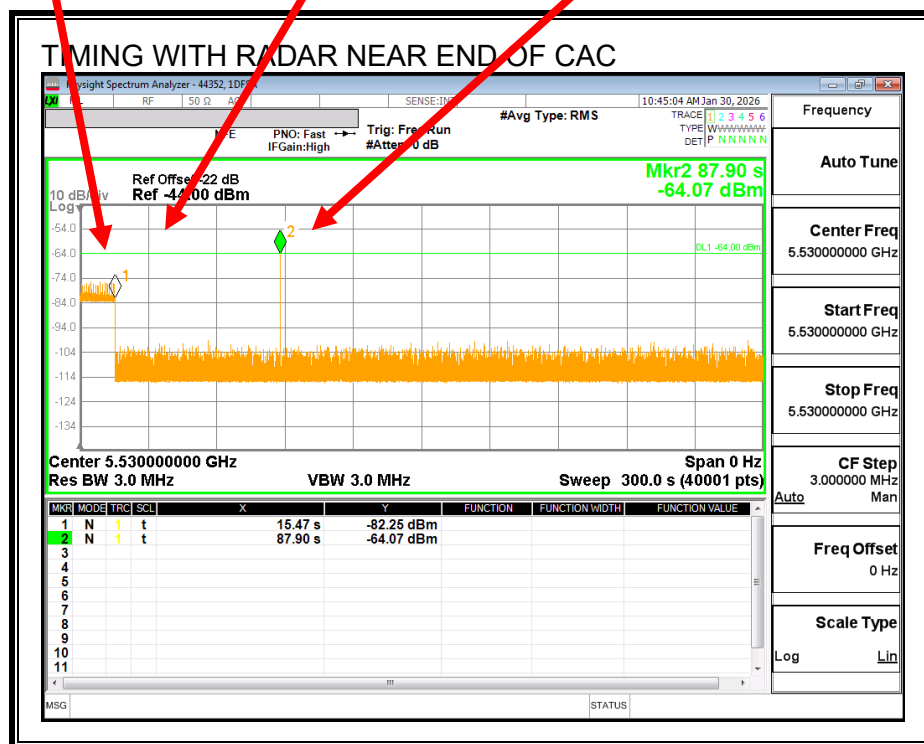
No EUT transmissions were observed after the radar signal.

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.

5.4.4. 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.

5.4.5. 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)

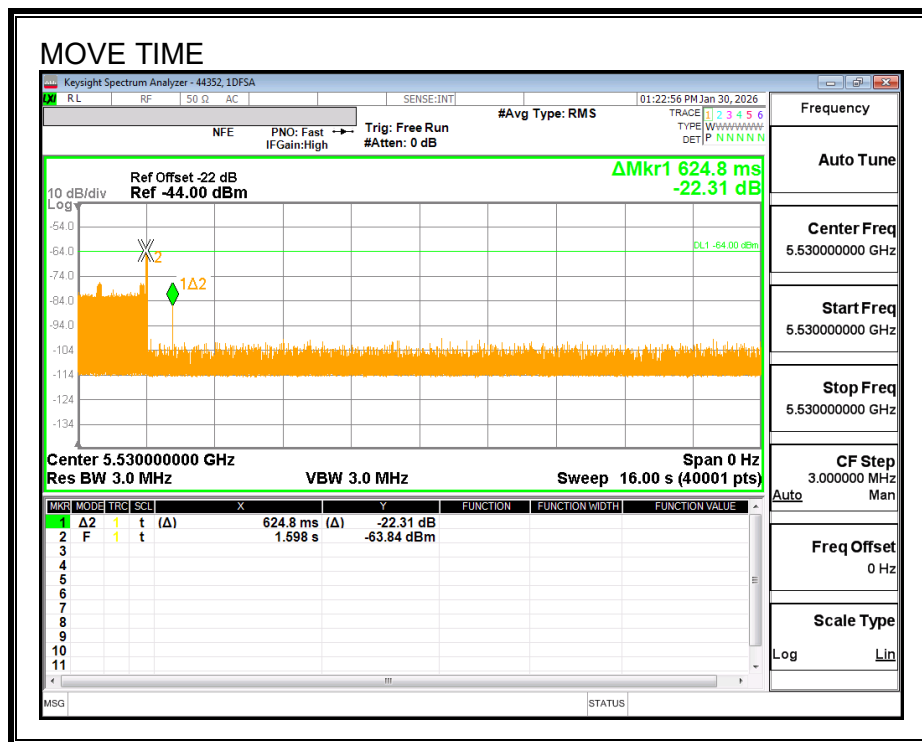
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

Channel Move Time (sec)	Limit (sec)
0.6248	10

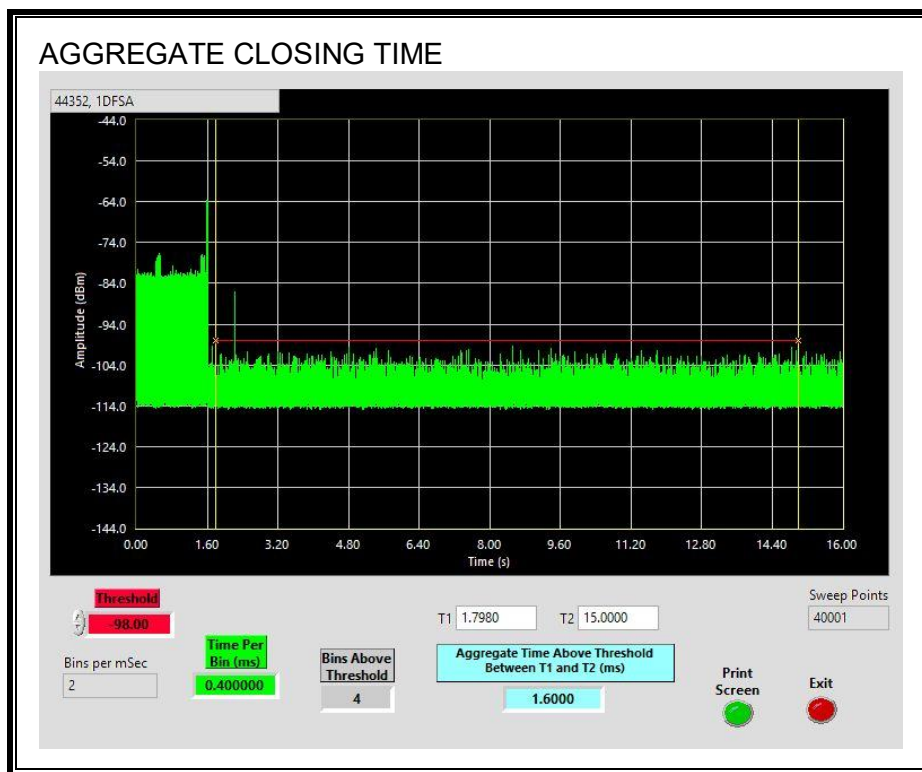
Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
1.6	60

MOVE TIME



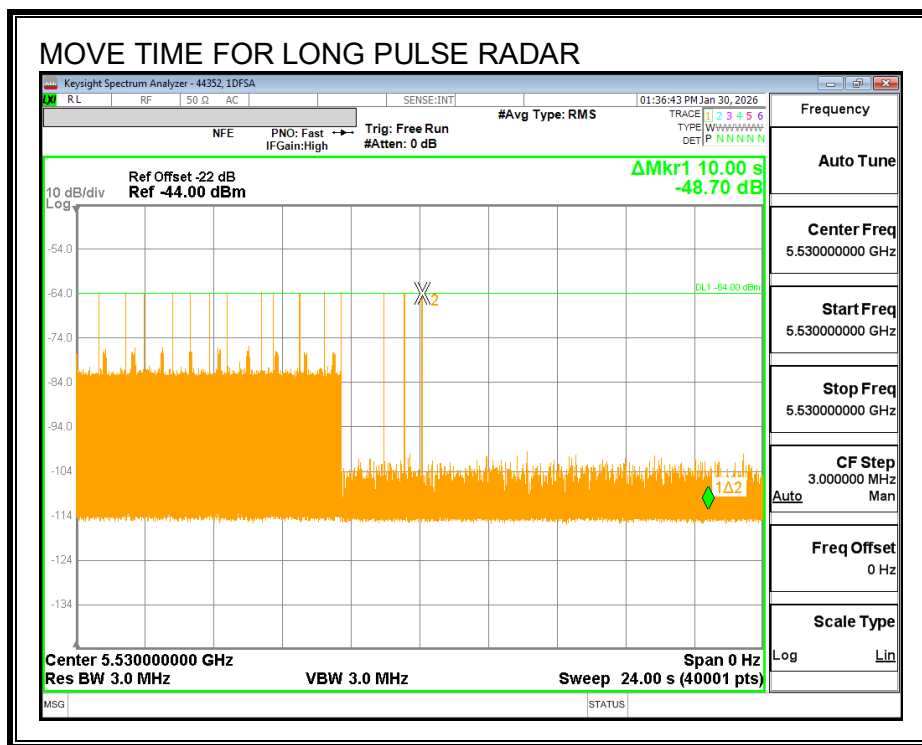
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



LONG PULSE CHANNEL MOVE TIME

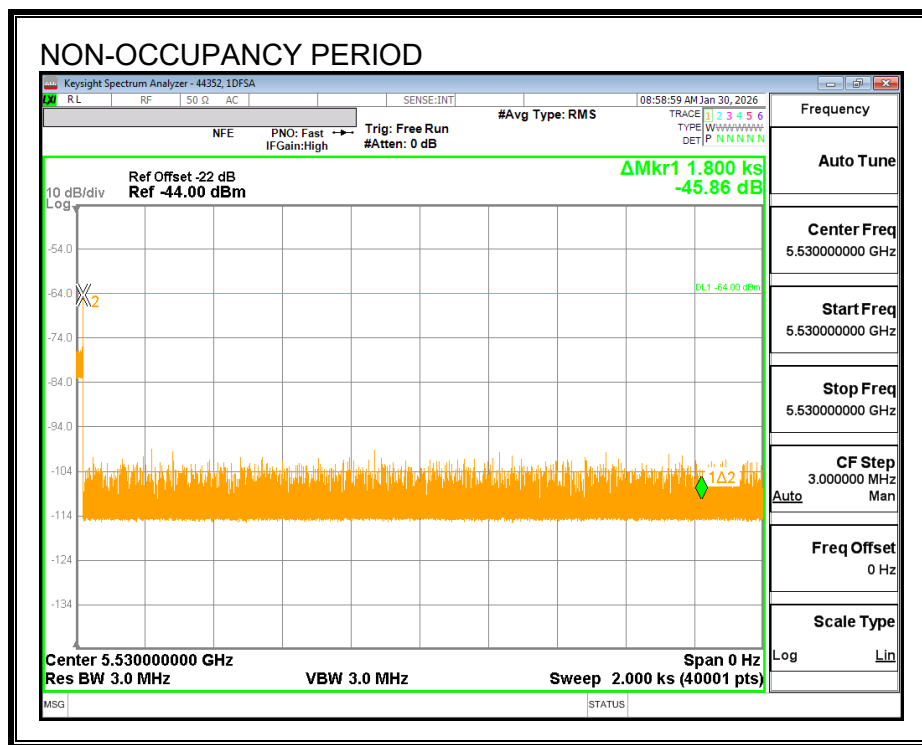
The traffic ceases prior to 10 seconds after the end of the radar waveform.



5.4.6. NON-OCCUPANCY PERIOD

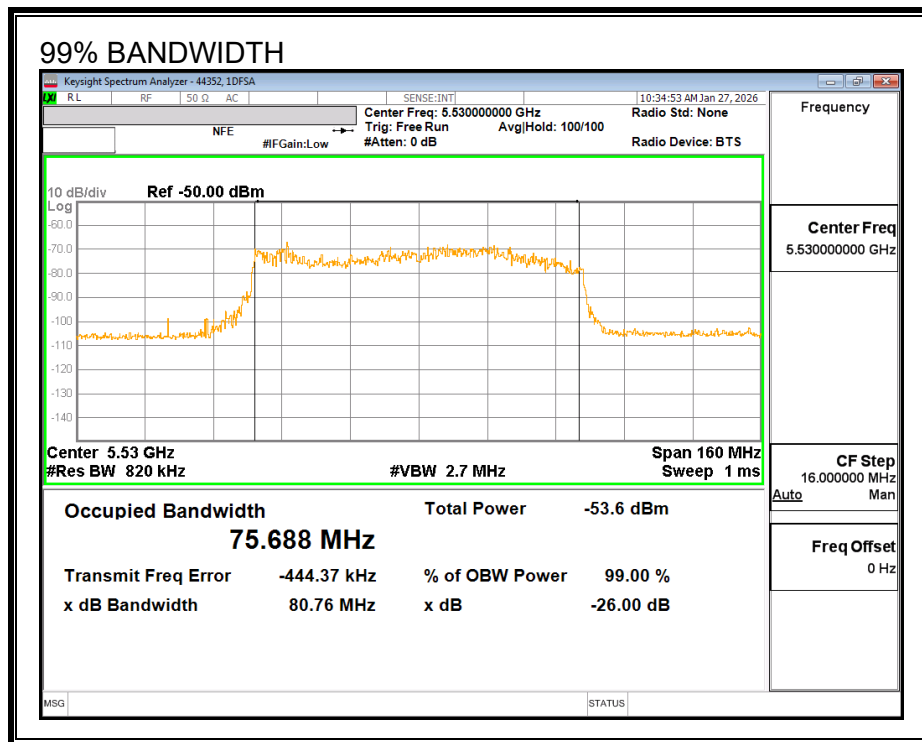
RESULTS

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



5.4.7. 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	75.688	105.7	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	FH
5565	10	10	100	
5570	10	10	100	
5571	1	0	0	

5.4.8. 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	75.69	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 2	30	100.00	60	Pass	5490	5570	75.69	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 3	30	76.67	60	Pass	5490	5570	75.69	1DFS1	44352	v2023.11.3
FCC Short Pulse Type 4	30	60.00	60	Pass	5490	5570	75.69	1DFS1	44352	v2023.11.3
Aggregate		84.17	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5490	5570	75.69	1DFS1	44352	v2023.11.3
FCC Hopping Type 6	81	100.00	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	5560	Yes
1002	1	938	57	A	5559	Yes
1003	1	638	83	A	5496	Yes
1004	1	878	61	A	5508	Yes
1005	1	558	95	A	5560	Yes
1006	1	738	72	A	5499	Yes
1007	1	678	78	A	5557	Yes
1008	1	618	86	A	5497	Yes
1009	1	898	59	A	5524	Yes
1010	1	538	99	A	5554	Yes
1011	1	578	92	A	5528	Yes
1012	1	518	102	A	5522	Yes
1013	1	658	81	A	5517	Yes
1014	1	758	70	A	5491	Yes
1015	1	918	58	A	5535	Yes
1016	1	984	54	B	5522	Yes
1017	1	810	66	B	5564	Yes
1018	1	1637	33	B	5493	Yes
1019	1	1593	34	B	5512	Yes
1020	1	1355	39	B	5513	Yes
1021	1	1440	37	B	5564	Yes
1022	1	1331	40	B	5556	Yes
1023	1	2899	19	B	5498	Yes
1024	1	1725	31	B	5507	Yes
1025	1	875	61	B	5491	Yes
1026	1	2379	23	B	5559	Yes
1027	1	1658	32	B	5499	Yes
1028	1	2096	26	B	5534	Yes
1029	1	2858	19	B	5544	Yes
1030	1	2073	26	B	5548	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	5543	Yes
2002	3.4	158	26	5496	Yes
2003	1.1	150	27	5530	Yes
2004	3.5	173	29	5546	Yes
2005	1.5	212	23	5527	Yes
2006	4.1	202	29	5522	Yes
2007	4.4	164	24	5502	Yes
2008	1.2	158	23	5566	Yes
2009	3.7	205	29	5528	Yes
2010	2.9	164	28	5540	Yes
2011	1.5	178	27	5565	Yes
2012	4.9	223	24	5508	Yes
2013	1.8	159	27	5538	Yes
2014	3.6	208	24	5525	Yes
2015	4.8	191	28	5559	Yes
2016	2.6	207	25	5522	Yes
2017	2.1	194	29	5535	Yes
2018	4.3	214	24	5524	Yes
2019	4	205	25	5560	Yes
2020	2.2	191	26	5520	Yes
2021	4.3	187	28	5528	Yes
2022	5	176	27	5519	Yes
2023	3.1	219	28	5545	Yes
2024	4	213	28	5568	Yes
2025	2.4	222	26	5557	Yes
2026	1.6	220	26	5494	Yes
2027	4.3	152	25	5565	Yes
2028	3.6	197	29	5563	Yes
2029	2.7	214	25	5563	Yes
2030	2.3	225	29	5510	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	5531	Yes
3002	5.4	347	16	5510	No
3003	9.9	309	17	5558	No
3004	7.5	369	17	5547	Yes
3005	7.1	343	18	5529	Yes
3006	10	298	16	5515	Yes
3007	7.5	285	17	5548	Yes
3008	8.3	253	16	5496	Yes
3009	6.1	386	17	5542	Yes
3010	7.2	367	17	5514	Yes
3011	5.1	395	16	5497	No
3012	9.2	388	18	5567	No
3013	5.1	429	17	5513	No
3014	6.7	317	17	5497	Yes
3015	5.5	371	16	5509	Yes
3016	5	405	17	5517	No
3017	6.5	472	16	5530	Yes
3018	8.9	268	18	5513	Yes
3019	8.2	480	18	5494	Yes
3020	5.9	289	16	5553	Yes
3021	5.5	264	18	5494	Yes
3022	8.4	470	17	5535	Yes
3023	5.9	457	16	5528	Yes
3024	6.7	425	18	5499	Yes
3025	9.6	307	16	5503	No
3026	5.5	420	17	5528	Yes
3027	8.6	315	18	5534	Yes
3028	7.6	442	17	5548	Yes
3029	8.6	349	16	5559	Yes
3030	7.8	489	18	5546	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	5521	Yes
4002	16.9	326	13	5490	No
4003	15.1	392	16	5544	Yes
4004	14.6	440	16	5543	Yes
4005	13.3	401	14	5538	Yes
4006	18.6	461	15	5542	Yes
4007	17.9	435	13	5497	No
4008	19	390	12	5562	No
4009	18.7	377	16	5528	Yes
4010	10.3	345	15	5556	No
4011	15.9	478	14	5509	Yes
4012	18	341	13	5527	Yes
4013	19.4	487	15	5492	No
4014	12	363	12	5521	Yes
4015	13.9	270	16	5533	Yes
4016	12.3	409	14	5569	No
4017	14.8	345	14	5498	No
4018	13.7	498	16	5493	No
4019	11.9	313	14	5510	Yes
4020	11.4	360	15	5567	No
4021	10.1	322	13	5551	Yes
4022	15.4	382	14	5517	Yes
4023	14.7	356	12	5551	No
4024	15.8	311	16	5500	No
4025	15.5	431	12	5531	Yes
4026	17.2	399	13	5545	Yes
4027	12.7	399	12	5538	Yes
4028	14.8	262	12	5515	Yes
4029	16.2	407	13	5547	Yes
4030	18.9	283	15	5494	No

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	5499	Yes
12	5495	Yes
13	5497	Yes
14	5500	Yes
15	5500	Yes
16	5498	Yes
17	5496	Yes
18	5495	Yes
19	5497	Yes
20	5495	Yes
21	5565	Yes
22	5564	Yes
23	5563	Yes
24	5565	Yes
25	5559	Yes
26	5563	Yes
27	5563	Yes
28	5565	Yes
29	5563	Yes
30	5565	Yes

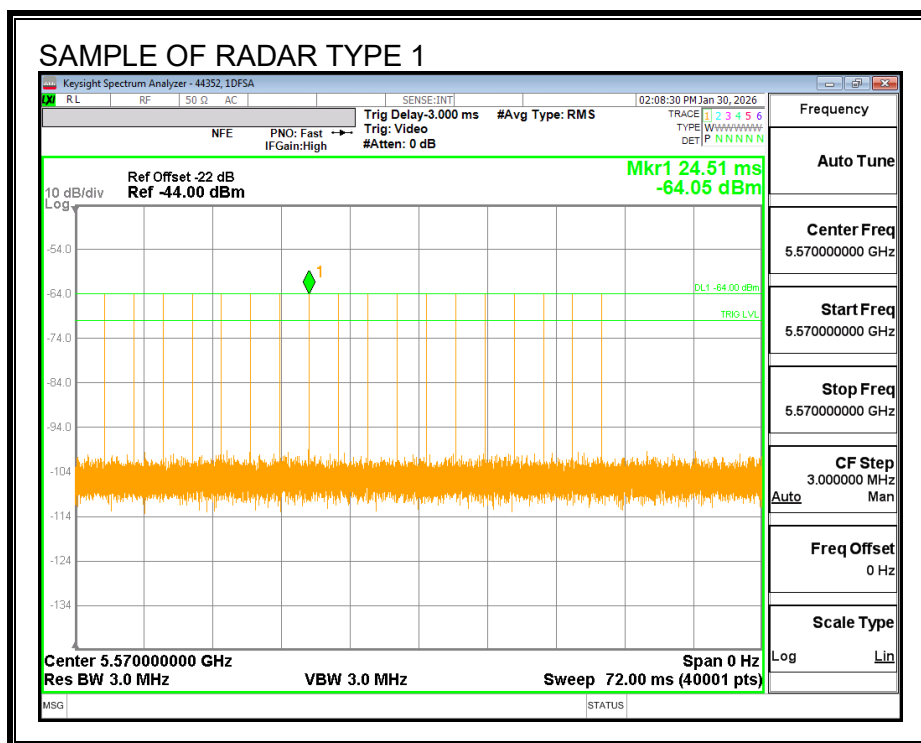
Note: The Type 5 randomized parameters tested are located in Appendix A.

TYPE 6 DETECTION PROBABILITY

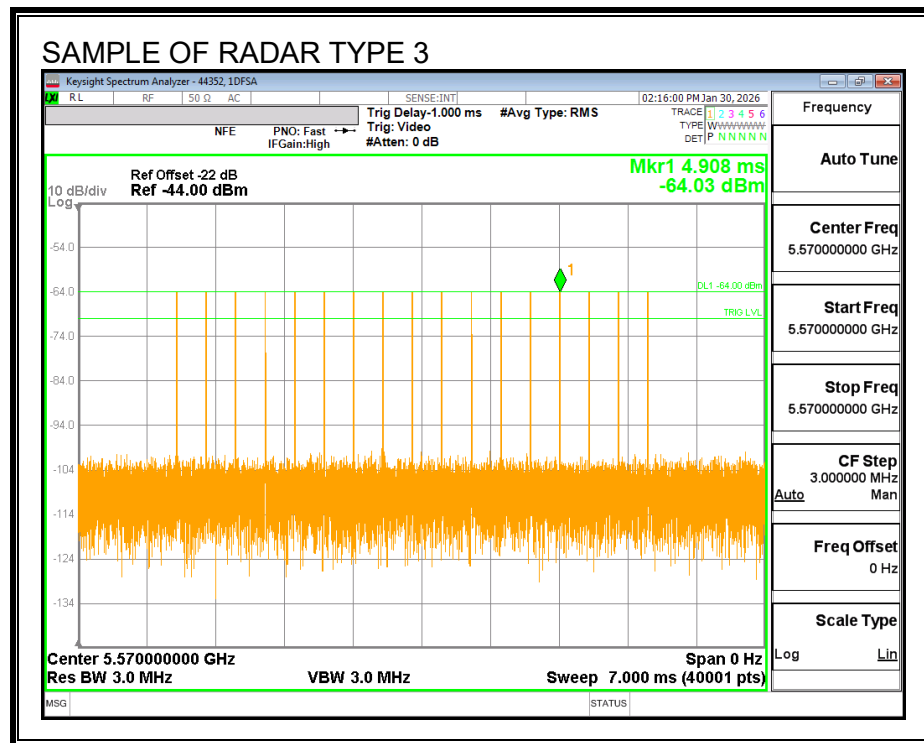
Data Sheet for FCC Hopping Radar Type 6				
1 us Pulse Width, 333 us PRI, 9 Pulses per Burst, 1 Burst per Hop				
NTIA August 2005 Hopping Sequence				
Trial	Starting Index Within Sequence	Signal Generator Frequency (MHz)	Hops within Detection BW	Successful Detection (Yes/No)
1	668	5490	20	Yes
2	1143	5491	14	Yes
3	1618	5492	16	Yes
4	2093	5493	13	Yes
5	2568	5494	19	Yes
6	3043	5495	15	Yes
7	3518	5496	21	Yes
8	3993	5497	16	Yes
9	4468	5498	12	Yes
10	4943	5499	22	Yes
11	5418	5500	16	Yes
12	5893	5501	16	Yes
13	6368	5502	18	Yes
14	6843	5503	15	Yes
15	7318	5504	23	Yes
16	7793	5505	18	Yes
17	8268	5506	22	Yes
18	8743	5507	14	Yes
19	9218	5508	14	Yes
20	9693	5509	23	Yes
21	10168	5510	21	Yes
22	10643	5511	14	Yes
23	11118	5512	12	Yes
24	11593	5513	21	Yes
25	12068	5514	20	Yes
26	12543	5515	17	Yes
27	13018	5516	18	Yes
28	13493	5517	19	Yes
29	13968	5518	15	Yes
30	14443	5519	13	Yes
31	14918	5520	22	Yes
32	15393	5521	19	Yes
33	15868	5522	15	Yes
34	16343	5523	17	Yes
35	16818	5524	21	Yes
36	17293	5525	16	Yes
37	17768	5526	13	Yes
38	18243	5527	16	Yes

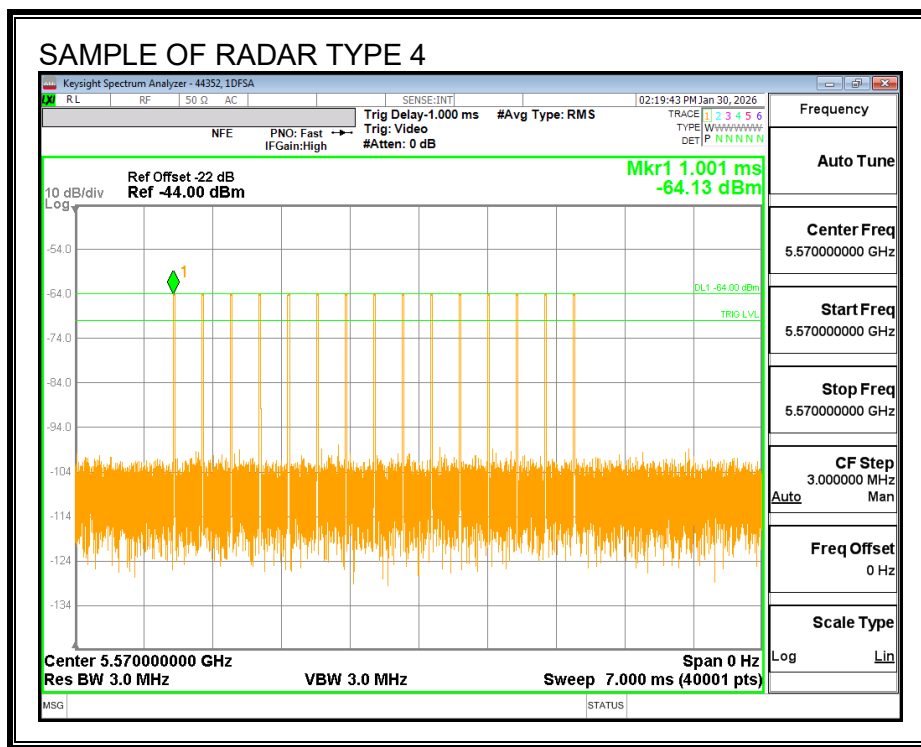
TYPE 6 DETECTION PROBABILITY (CONTINUED)

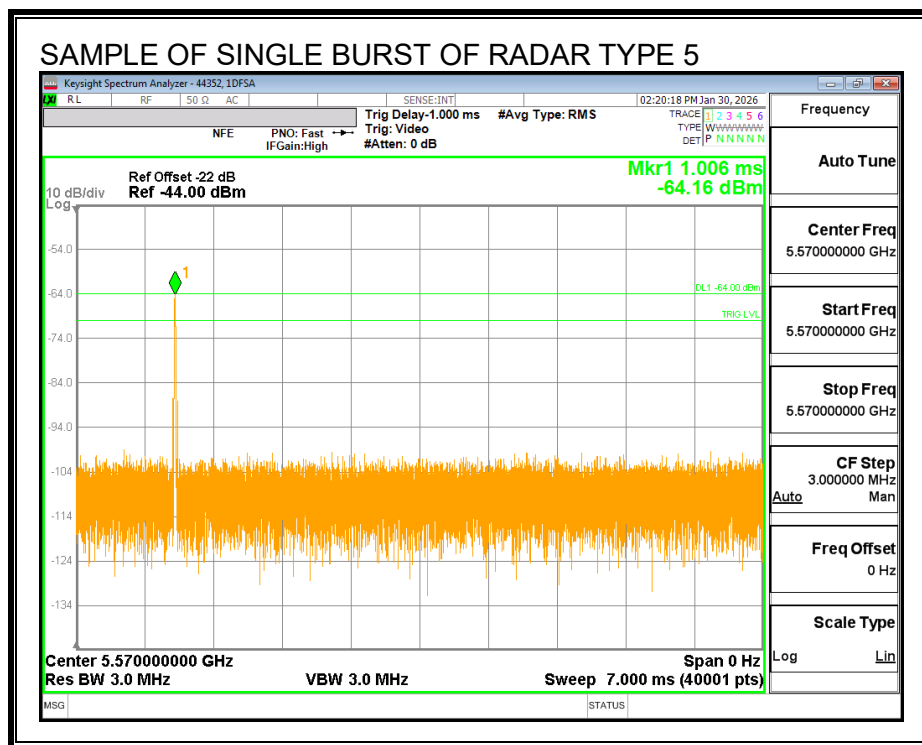
39	18718	5528	14	Yes
40	19193	5529	14	Yes
41	19668	5530	21	Yes
42	20143	5531	20	Yes
43	20618	5532	23	Yes
44	21093	5533	16	Yes
45	21568	5534	4	Yes
46	22043	5535	15	Yes
47	22518	5536	16	Yes
48	22993	5537	19	Yes
49	23468	5538	18	Yes
50	23943	5539	19	Yes
51	24418	5540	20	Yes
52	24893	5541	10	Yes
53	25368	5542	16	Yes
54	25843	5543	12	Yes
55	26318	5544	16	Yes
56	26793	5545	15	Yes
57	27268	5546	18	Yes
58	27743	5547	14	Yes
59	28218	5548	9	Yes
60	28693	5549	16	Yes
61	29168	5550	14	Yes
62	29643	5551	19	Yes
63	30118	5552	20	Yes
64	30593	5553	15	Yes
65	31068	5554	22	Yes
66	31543	5555	19	Yes
67	32018	5556	16	Yes
68	32493	5557	12	Yes
69	32968	5558	16	Yes
70	33443	5559	15	Yes
71	33918	5560	11	Yes
72	34393	5561	21	Yes
73	34868	5562	17	Yes
74	35343	5563	12	Yes
75	35818	5564	18	Yes
76	36293	5565	12	Yes
77	36768	5566	16	Yes
78	37243	5567	17	Yes
79	37718	5568	13	Yes
80	38193	5569	15	Yes
81	38668	5570	14	Yes

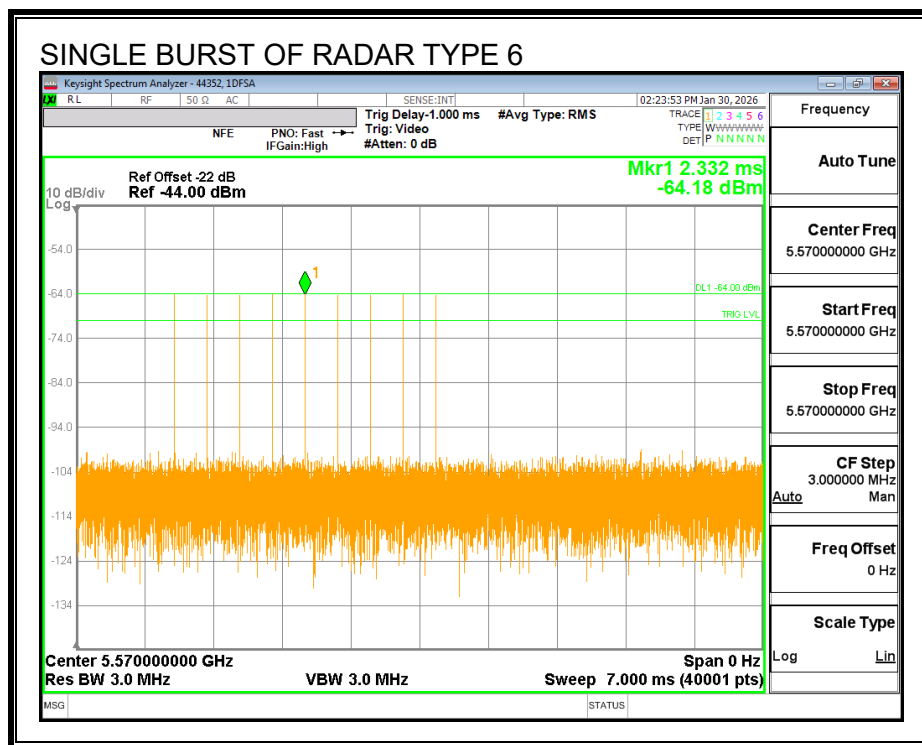




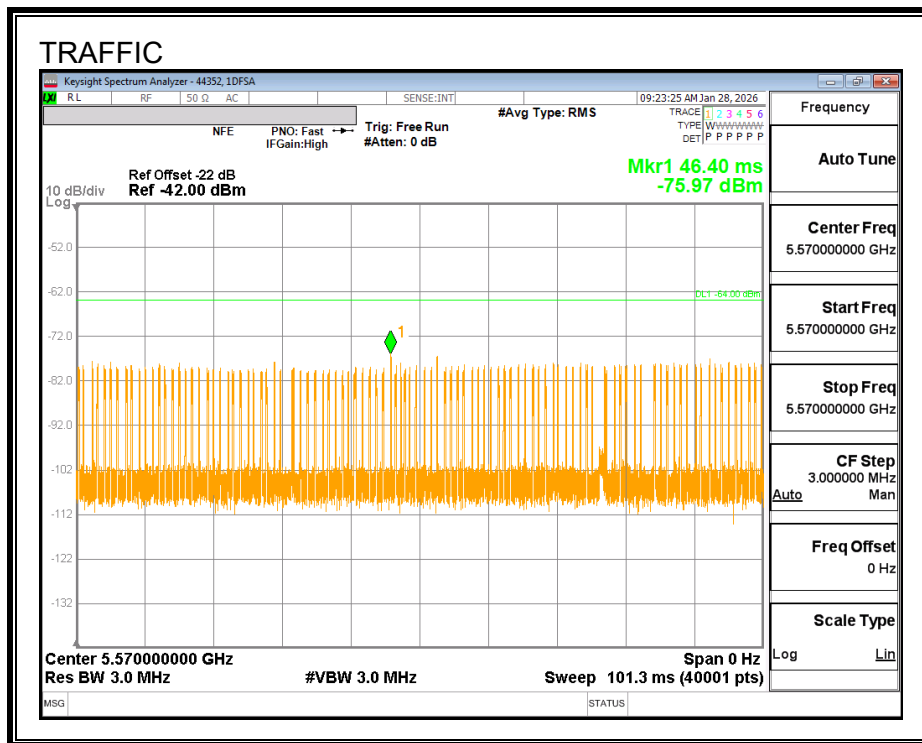




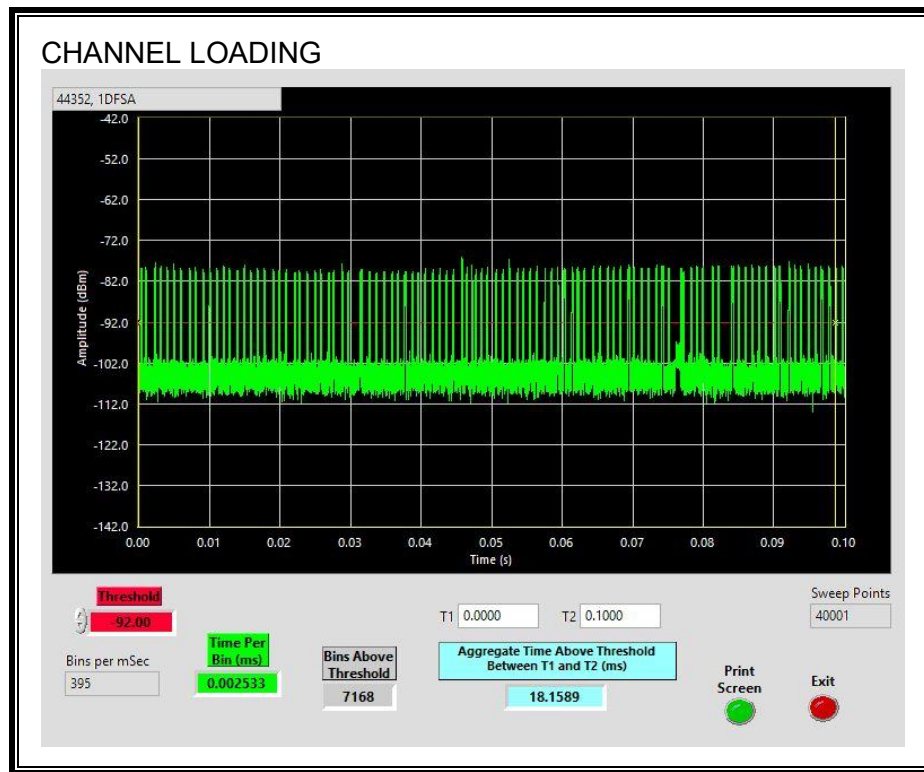




TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 18.1589%.

5.5.3. 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)
15.89	89.56	73.7	13.7

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)
16.32	30.53	14.2	0.5

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)
16.34	88.38	72.0	58.4

QUALITATIVE RESULTS

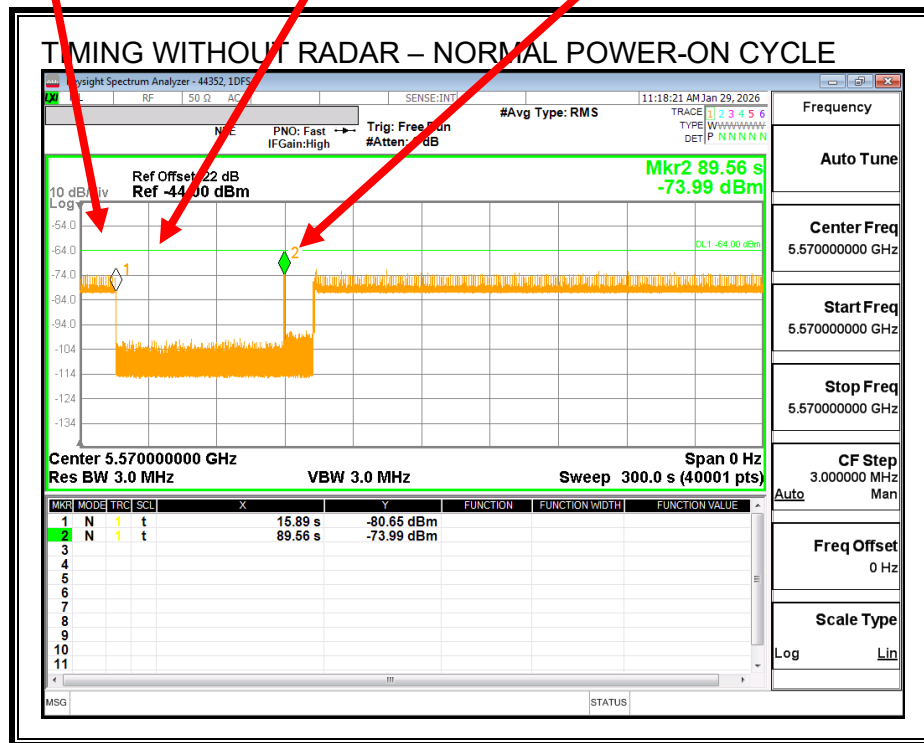
Timing of Radar Burst	Display on Control Computer	Spectrum Analyzer Display
No Radar Triggered	EUT marks Channel as active	Transmissions begin on channel after completion of the initial power-up cycle and the CAC
Within 0 to 6 second window	EUT indicates radar detected	No transmissions on channel
Within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

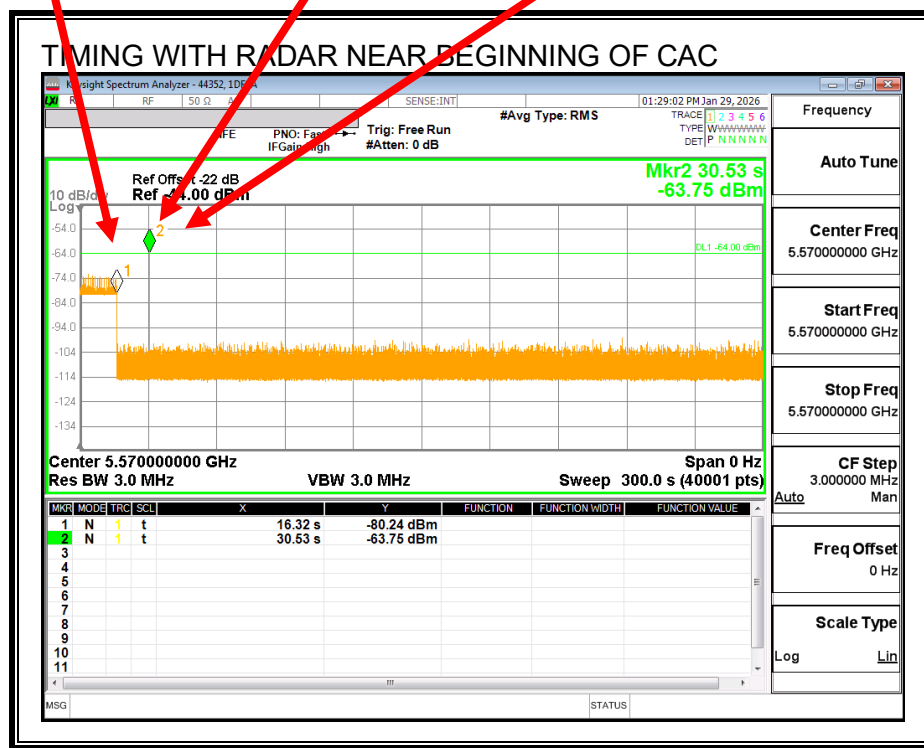
Traffic ceases

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

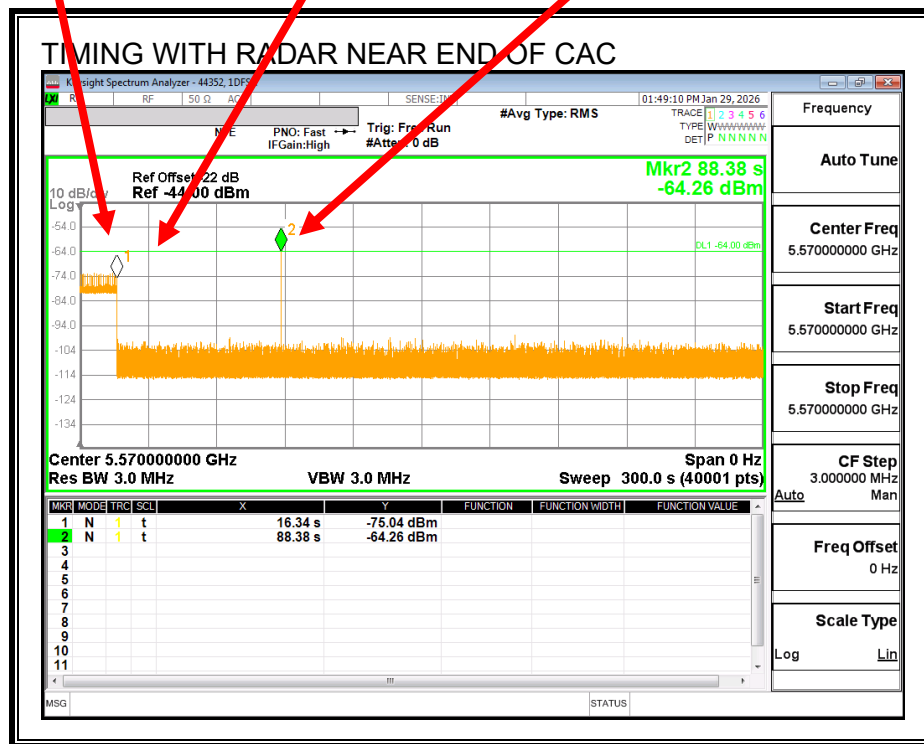
Traffic ceases

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.

5.5.4. 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.

5.5.5. 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)
0.2308	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.4	60