DFS PORTION of FCC 47 CFR PART 15 SUBPART E
DFS PORTION of INDUSTRY CANADA RSS-247 ISSUE 3

TEST REPORT

FOR

Wireless Smart Speaker

MODEL NUMBER: S45

FCC ID: SBVRM045
IC: 5373A-RM045

REPORT NUMBER: R14896020-D3

ISSUE DATE: 2024-05-02

Prepared for
SONOS, INC.
301 COROMAR DRIVE
GOLETA, CA 93117
USA

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ACCREDITED
CERT #0751.06

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2024-05-02	Initial Issue	John E. Manser III
V2	2024-05-30	Editorial changes	John E. Manser III

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Sonos, Inc.
301 Coromar Drive
Goleta, CA 93117
USA

EUT DESCRIPTION: Wireless Smart Speaker

MODEL: S45

SERIAL NUMBER: C4-38-75-10-14-AC:2

DATE TESTED: 2024-02-12 to 2024-03-25

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
DFS Portion of CFR 47 Part 15 Subpart E	Complies
DFS Portion of INDUSTRY CANADA RSS-247 Issue 3	Complies

UL LLC 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.

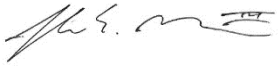
The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released For
UL LLC By:

Frank Ibrahim
Staff Engineer
CONSUMER TECHNOLOGY DIVISION
UL Verification Services Inc.

Prepared By:



John E. Manser III
Laboratory Supervisor
CONSUMER TECHNOLOGY DIVISION
UL LLC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the DFS portion of FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC KDB 789033, KDB 905462 D02, D03 and RSS-247 Issue 3.

3. SUMMARY OF TEST RESULTS

Requirement Description	Result	Remarks
DFS Portion of FCC 47 CFR PART 15 SUBPART E	Complies	
DFS Portion of INDUSTRY CANADA RSS-247 ISSUE 3	Complies	

4. REFERENCE DOCUMENTS

Measurements of transmitter parameters as referenced in this report and all other manufacturer's declarations relevant to the RF test requirements are documented in UL LLC report number R14896020-E12.

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.
Below is a list of the data provided by the customer:

1. Antenna gain and type (see section 7.1.6)

5. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, 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: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

6. DECISION RULES AND MEASUREMENT UNCERTAINTY

6.1. 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.

6.2. 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).

6.3. 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%.

7. DYNAMIC FREQUENCY SELECTION

7.1. OVERVIEW

7.1.1. LIMITS

INDUSTRY CANADA

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

RSS-247 Issue 3

Note: For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

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)
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	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. ≥ 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
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (See Note 1)
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the *U-NII Detection Bandwidth* 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) x (19 x 10^6 /PRI_{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 *Detection Bandwidth* test, *Channel Move Time*, and *Channel Closing Time* tests.

Table 6 – Long Pulse Radar Test Signal

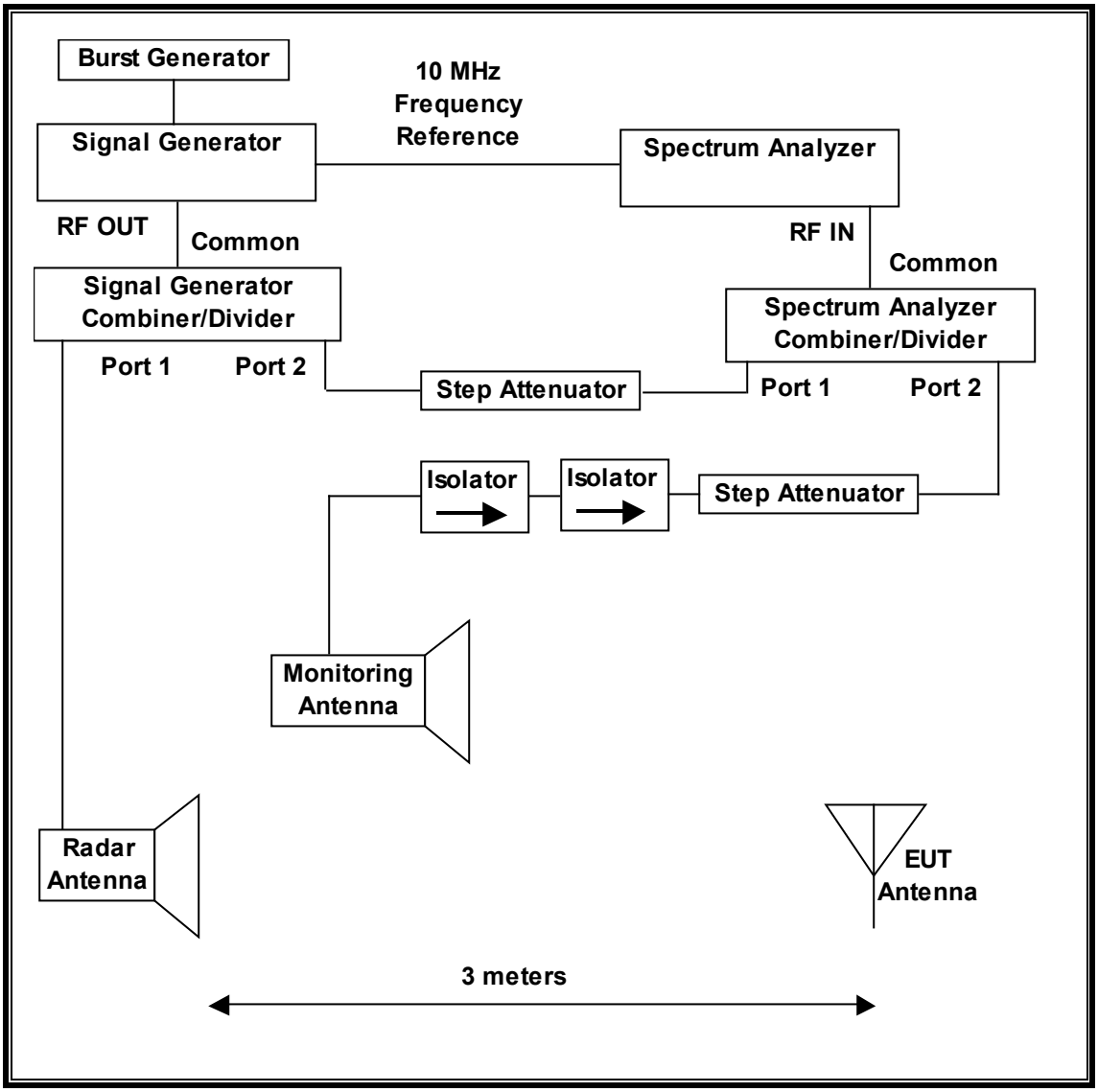
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

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

7.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED 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.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). 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 Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. Traffic that meets or exceed the minimum loading requirement is streamed from the Master device to the Slave Device. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

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 No.**	**Cal Due**
Spectrum Analyzer, PXA, 3Hz to	Keysight	N9030A	89232	2024-08-02
Signal Generator, MXG X-Series RF	Keysight	N5182B	215042	2025-02-06
Frequency Extender	Keysight	N5182BX	215272	2025-02-06
2.5-7.5 GHz Horn Antenna	Advanced Technical Materials INC.	250-441EM-NF/CAL	89408	2024-05-15
Arbitrary Waveform Generator	Keysight	33220A	62879	2024-08-03

7.1.3. 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
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)
PXA Read	3.1	Signal Generator Screen Capture
SGXProject.exe	1.7	Radar Waveform Generation and Download

7.1.4. TEST ROOM ENVIRONMENT

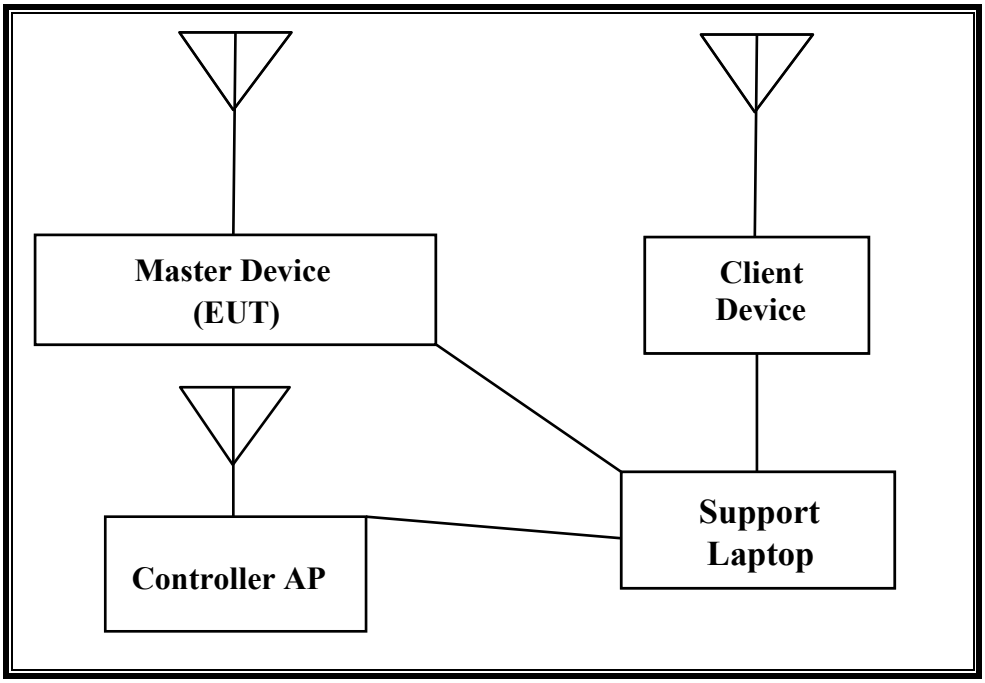
The test room temperature and humidity shall be maintained within normal temperature of 15~35 °C and normal humidity 20~75% (relative humidity).

ENVIRONMENT CONDITION

Parameter	Value
Temperature	23.5 – 26.3 °C
Humidity	24 – 54 %

7.1.5. SETUP OF EUT

RADIATED 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**
Client Device	Sonos	S39	F0-F6-C1-B0-06-FC:F	SBVRM039
Controller AP	ASUS	GT-AXE11000	N21G0X401269LF3	MSQ-RTAXJF00
AP Power Supply	Ac Bel	ADDD011 LPS	ADD01117AG214201655A	N/A
Support Laptop	Lenovo	T460s	PC0GV4H5	PD98260NG
Laptop Power Supply	Lenovo	ADLX90NLC2A	N/A	N/A

7.1.6. DESCRIPTION OF EUT

The EUT is a Wireless Smart Speaker that contains Radio0 and Radio1. Radio0 transmits BT, BLE, 2.4GHz, 5GHz and 6GHz WLAN. Radio1 transmits 5GHz and 6GHz WLAN. The scope of this report covers only the Radio1 DFS requirements.

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

The EUT is a Master Device.

The highest power level within these bands is 24.27 dBm EIRP in the 5250-5350 MHz band and 25.62 dBm EIRP in the 5470-5725 MHz band.

The antenna(s) gain and type, as provided by the manufacturer' are as follows:

The highest gain antenna assembly utilized with the EUT has a gain of 4.1 dBi in the 5250-5350 MHz band and 5.4 dBi in the 5470-5725 MHz band. The lowest gain antenna assembly utilized with the EUT has a gain of 2.3 dBi in the 5250-5350 MHz band and 1.9 dBi in the 5470-5725 MHz band.

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

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

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses three transmitter/receiver chains, each connected to an antenna to perform radiated tests.

The Slave device associated with the EUT during these tests does not have radar detection capability.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the Master Device to the Slave Device using iPerf version 2.0.9 software package.

TPC is/is not required since the maximum EIRP is greater/less than 500 mW (27 dBm).

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

The software installed in the EUT is 79.0-49250-main.

The software installed in the client speaker is 79.0-49250-main.

UNIFORM CHANNEL SPREADING

This function is not required per KDB 905462.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Sonos Soundbar, FCC ID: SBVRM045. The minimum antenna gain for the Master Device is 1.9 dBi.

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

The calibrated radiated DFS Detection Threshold level is set to –64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The software installed in the EUT is 79.0-49250-main.

7.2. RESULTS FOR 20 MHz BANDWIDTH

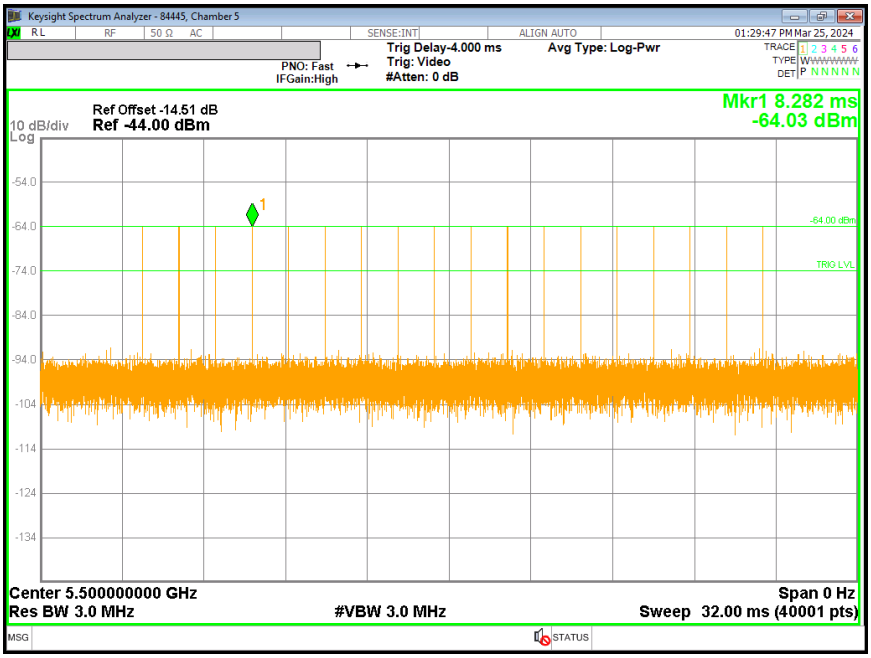
7.2.1. TEST CHANNEL

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

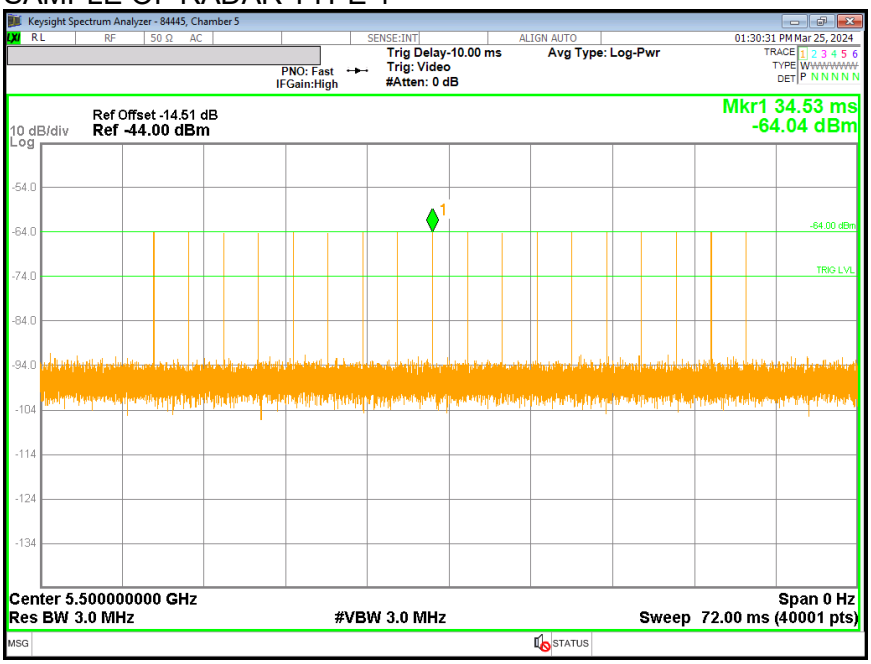
7.2.2. RADAR WAVEFORMS AND TRAFFIC

RADAR WAVEFORMS

SHORT PULSE RADAR TYPE 0

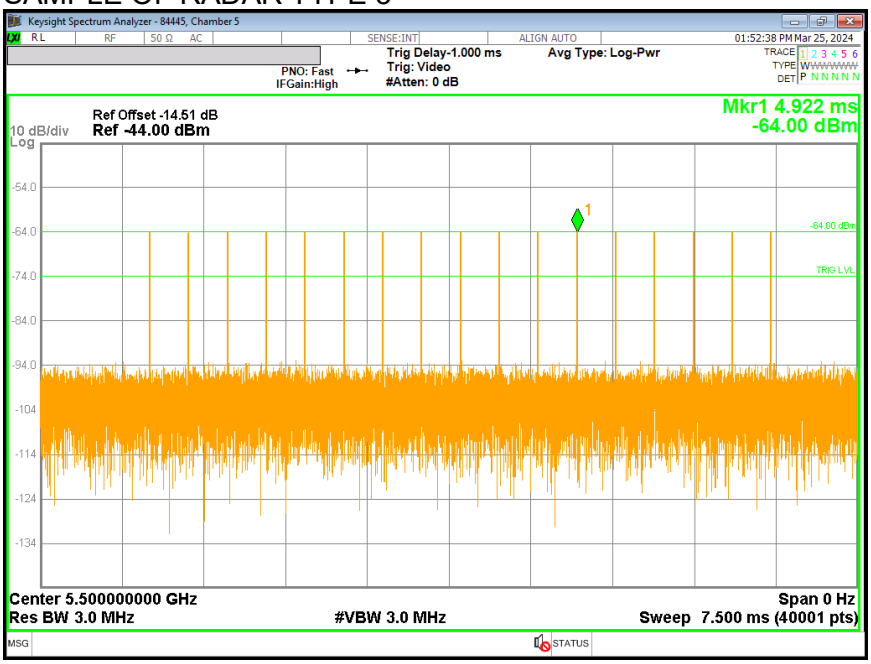


SAMPLE OF RADAR TYPE 1

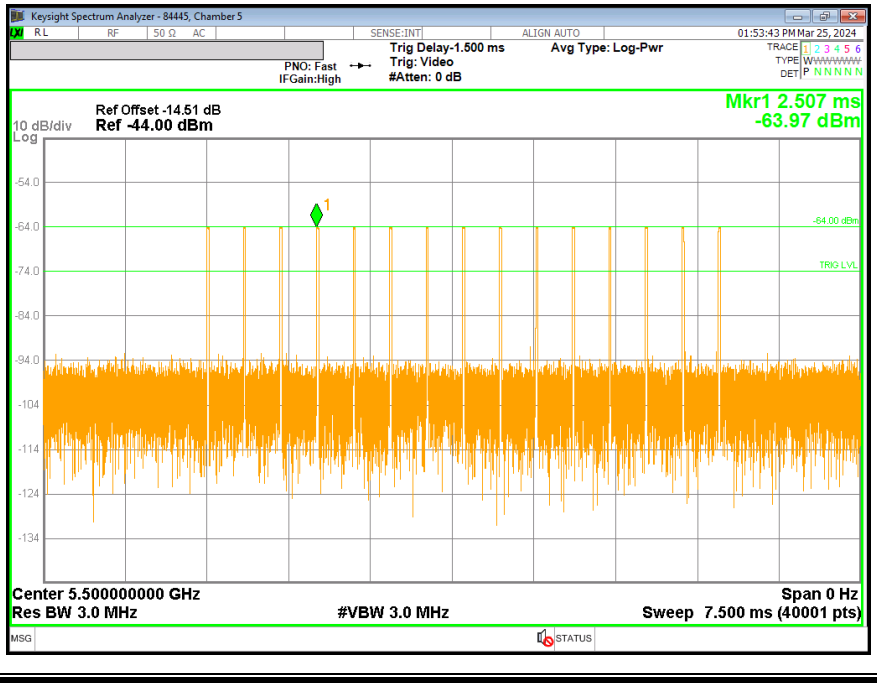


SAMPLE OF RADAR TYPE 2

SAMPLE OF RADAR TYPE 3

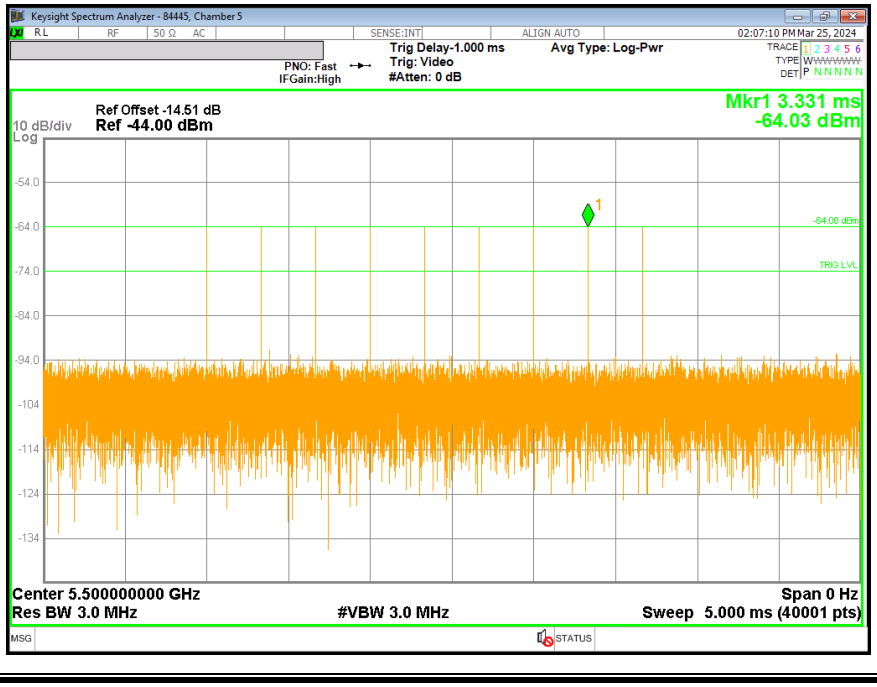


SAMPLE OF RADAR TYPE 4



SAMPLE OF SINGLE BURST OF RADAR TYPE 5

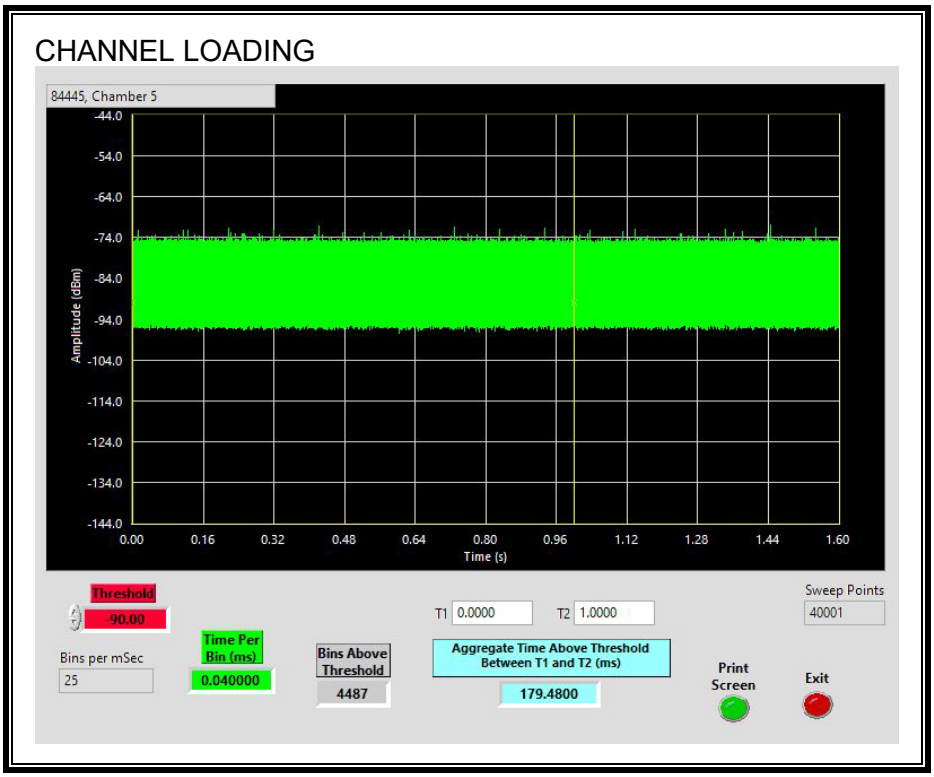
SINGLE BURST OF RADAR TYPE 6



TRAFFIC

TRAFFIC

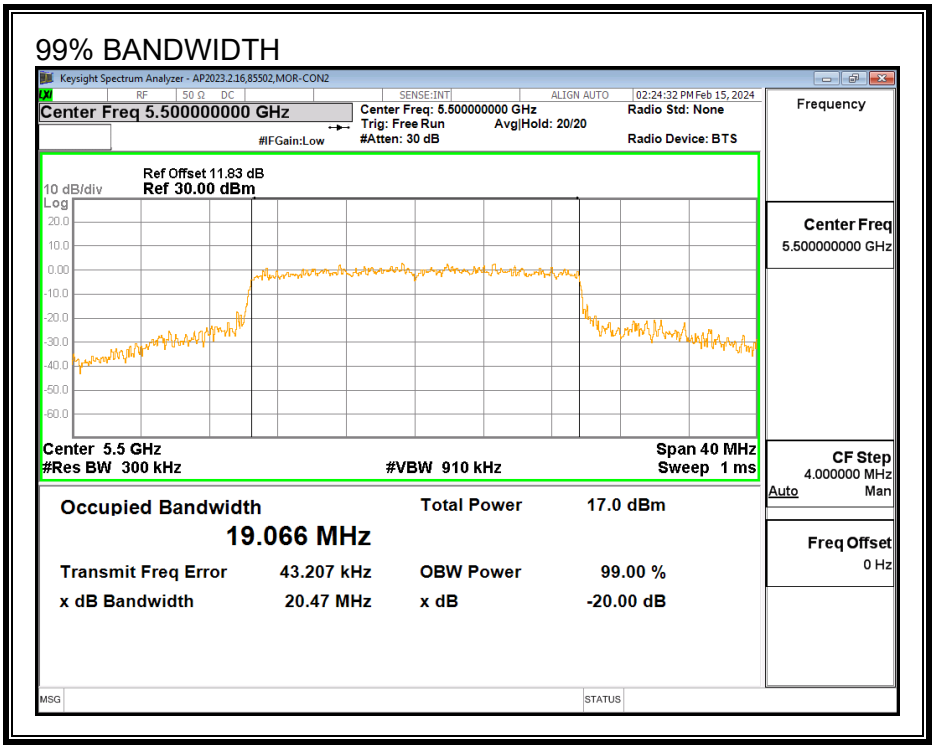
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.95%

7.2.3. 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	19.066	104.9	100

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS

Detection Bandwidth Test Results 84445 Chamber 5

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	5	0	0	
5490	10	9	90	FL
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5510	10	10	100	FH
5511	5	0	0	

7.2.4. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary

Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail	Detection Bandwidth FL	Detection Bandwidth FH	OBW	Test Location	Employee Number	In-Service Monitoring Version
FCC Short Pulse Type 1	30	100.00	60	Pass	5490	5510	19.07	Chamber 5	84445	v4.1
FCC Short Pulse Type 2	30	96.67	60	Pass	5490	5510	19.07	Chamber 5	84445	v4.1
FCC Short Pulse Type 3	30	100.00	60	Pass	5490	5510	19.07	Chamber 5	84445	v4.1
FCC Short Pulse Type 4	30	100.00	60	Pass	5490	5510	19.07	Chamber 5	84445	v4.1
Aggregate		99.17	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5490	5510	19.07	Chamber 5	84445	v4.1
FCC Hopping Type 6	42	100.00	70	Pass	5490	5510		Chamber 5	84445	v4.1

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	5492	Yes
1002	1	918	58	A	5500	Yes
1003	1	778	68	A	5497	Yes
1004	1	598	89	A	5492	Yes
1005	1	758	70	A	5496	Yes
1006	1	878	61	A	5491	Yes
1007	1	538	99	A	5506	Yes
1008	1	698	76	A	5492	Yes
1009	1	818	65	A	5497	Yes
1010	1	798	67	A	5503	Yes
1011	1	938	57	A	5500	Yes
1012	1	718	74	A	5491	Yes
1013	1	678	78	A	5496	Yes
1014	1	518	102	A	5504	Yes
1015	1	618	86	A	5501	Yes
1016	1	1804	30	B	5496	Yes
1017	1	890	60	B	5493	Yes
1018	1	1651	32	B	5496	Yes
1019	1	866	61	B	5497	Yes
1020	1	563	94	B	5496	Yes
1021	1	1260	42	B	5500	Yes
1022	1	2281	24	B	5509	Yes
1023	1	1913	28	B	5502	Yes
1024	1	1869	29	B	5503	Yes
1025	1	1631	33	B	5500	Yes
1026	1	1716	31	B	5498	Yes
1027	1	1607	33	B	5498	Yes
1028	1	628	85	B	5506	Yes
1029	1	648	82	B	5503	Yes
1030	1	1151	46	B	5494	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	4.6	161	28	5500	Yes
2002	1.3	174	27	5508	Yes
2003	4.8	219	24	5493	Yes
2004	1.6	156	23	5509	Yes
2005	1.2	205	24	5501	Yes
2006	4.6	188	24	5497	Yes
2007	2.5	203	25	5509	Yes
2008	1.9	229	29	5497	Yes
2009	1.9	210	23	5500	Yes
2010	3.8	202	24	5508	Yes
2011	2.1	225	26	5498	Yes
2012	4.1	183	28	5501	Yes
2013	2.6	173	26	5492	Yes
2014	3	216	28	5509	Yes
2015	3.9	210	27	5507	Yes
2016	2.2	176	26	5502	Yes
2017	1.4	216	26	5494	Yes
2018	4.1	230	25	5496	Yes
2019	3.5	194	29	5502	Yes
2020	4.4	211	25	5499	Yes
2021	2.1	179	29	5494	No
2022	3.3	163	25	5502	Yes
2023	1.2	178	23	5499	Yes
2024	4.7	165	27	5490	Yes
2025	2.8	185	28	5496	Yes
2026	2.5	176	29	5492	Yes
2027	4.9	162	24	5501	Yes
2028	2.8	158	25	5495	Yes
2029	3.5	228	24	5505	Yes
2030	1.7	190	26	5497	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	7.6	356	17	5509	Yes
3002	10	384	16	5501	Yes
3003	9.2	378	16	5510	Yes
3004	7.8	419	16	5499	Yes
3005	7.2	307	17	5510	Yes
3006	6.2	361	16	5500	Yes
3007	9.9	395	17	5497	Yes
3008	7	461	16	5501	Yes
3009	9	258	18	5509	Yes
3010	8.4	470	16	5509	Yes
3011	6.5	279	16	5492	Yes
3012	6.2	253	17	5504	Yes
3013	8.6	459	18	5508	Yes
3014	6.5	446	16	5502	Yes
3015	7.2	414	18	5497	Yes
3016	9.5	296	16	5502	Yes
3017	6.3	277	16	5506	Yes
3018	8.7	305	18	5496	Yes
3019	7.9	298	17	5493	Yes
3020	8.7	339	16	5492	Yes
3021	10	479	16	5497	Yes
3022	9	281	18	5509	Yes
3023	8.6	316	16	5501	Yes
3024	9.8	382	18	5492	Yes
3025	7.7	429	17	5493	Yes
3026	7.1	391	17	5493	Yes
3027	9.3	451	18	5510	Yes
3028	9	425	16	5495	Yes
3029	7.3	380	16	5509	Yes
3030	9.3	367	18	5506	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	20	335	15	5491	Yes
4002	15.9	468	16	5501	Yes
4003	17.9	331	13	5506	Yes
4004	14.3	477	14	5506	Yes
4005	12.4	352	12	5492	Yes
4006	14.1	260	16	5501	Yes
4007	12.7	399	14	5490	Yes
4008	14.9	453	13	5509	Yes
4009	14	487	16	5507	Yes
4010	12.3	303	14	5496	Yes
4011	11.9	350	15	5502	Yes
4012	19.8	311	12	5509	Yes
4013	15.5	371	13	5501	Yes
4014	14.8	346	16	5508	Yes
4015	15.8	301	15	5504	Yes
4016	15.6	288	14	5493	Yes
4017	17.1	255	13	5503	Yes
4018	13	388	12	5493	Yes
4019	15	251	16	5499	Yes
4020	16.2	397	13	5494	Yes
4021	18.6	273	15	5505	Yes
4022	11.2	431	15	5509	Yes
4023	18.9	320	12	5491	Yes
4024	12	256	12	5507	Yes
4025	11.1	408	15	5499	Yes
4026	18.6	474	12	5504	Yes
4027	18.1	270	13	5504	Yes
4028	16.9	483	16	5509	Yes
4029	12.6	292	12	5504	Yes
4030	11.9	266	15	5490	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	5497	Yes
13	5497	Yes
14	5497	Yes
15	5497	Yes
16	5497	Yes
17	5497	Yes
18	5497	Yes
19	5497	Yes
20	5497	Yes
21	5503	Yes
22	5504	Yes
23	5503	Yes
24	5504	Yes
25	5503	Yes
26	5504	Yes
27	5503	Yes
28	5506	Yes
29	5505	Yes
30	5505	Yes

Note: The Type 5 randomized parameters tested are located in Appenix 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	785	5490	3	Yes
2	1260	5491	1	Yes
3	1735	5492	5	Yes
4	2210	5493	5	Yes
5	2685	5494	5	Yes
6	3160	5495	3	Yes
7	3635	5496	3	Yes
8	4110	5497	3	Yes
9	4585	5498	5	Yes
10	5060	5499	1	Yes
11	5535	5500	1	Yes
12	6010	5501	3	Yes
13	6485	5502	3	Yes
14	6960	5503	4	Yes
15	7435	5504	4	Yes
16	7910	5505	4	Yes
17	8385	5506	2	Yes
18	8860	5507	3	Yes
19	9335	5508	6	Yes
20	9810	5509	6	Yes
21	10285	5510	4	Yes
22	10760	5490	5	Yes
23	11235	5491	6	Yes
24	11710	5492	4	Yes
25	12185	5493	3	Yes
26	12660	5494	4	Yes
27	13135	5495	3	Yes
28	13610	5496	3	Yes
29	14085	5497	2	Yes
30	14560	5498	3	Yes
31	15035	5499	5	Yes
32	15510	5500	5	Yes
33	15985	5501	4	Yes
34	16460	5502	5	Yes
35	16935	5503	6	Yes
36	17410	5504	3	Yes
37	17885	5505	5	Yes
38	18360	5506	3	Yes
39	18835	5507	3	Yes
40	19310	5508	5	Yes
41	19785	5509	3	Yes
42	20260	5510	4	Yes

7.3. RESULTS FOR 40 MHz BANDWIDTH

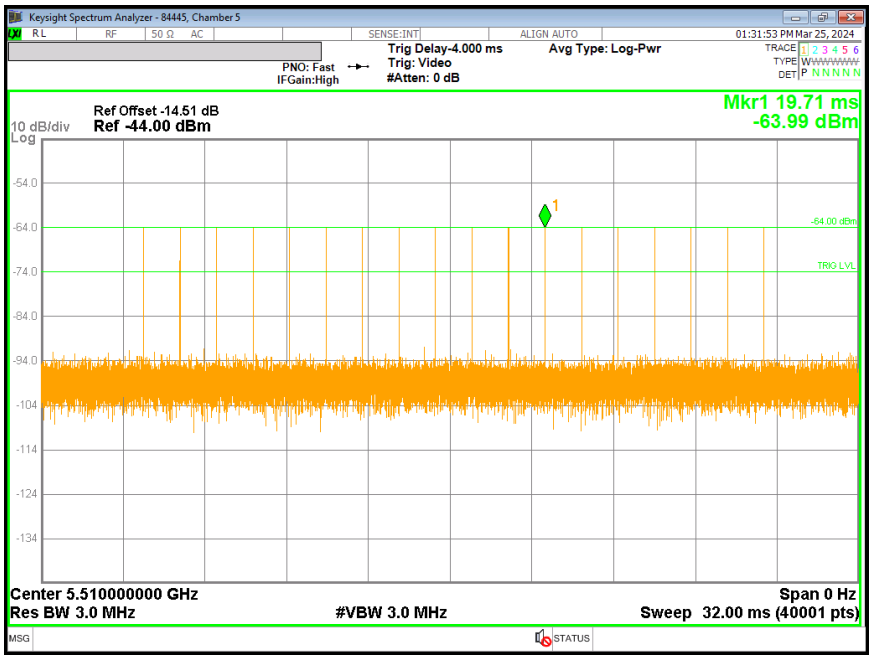
7.3.1. TEST CHANNEL

All tests were performed at a channel center frequency of 5310 MHz.

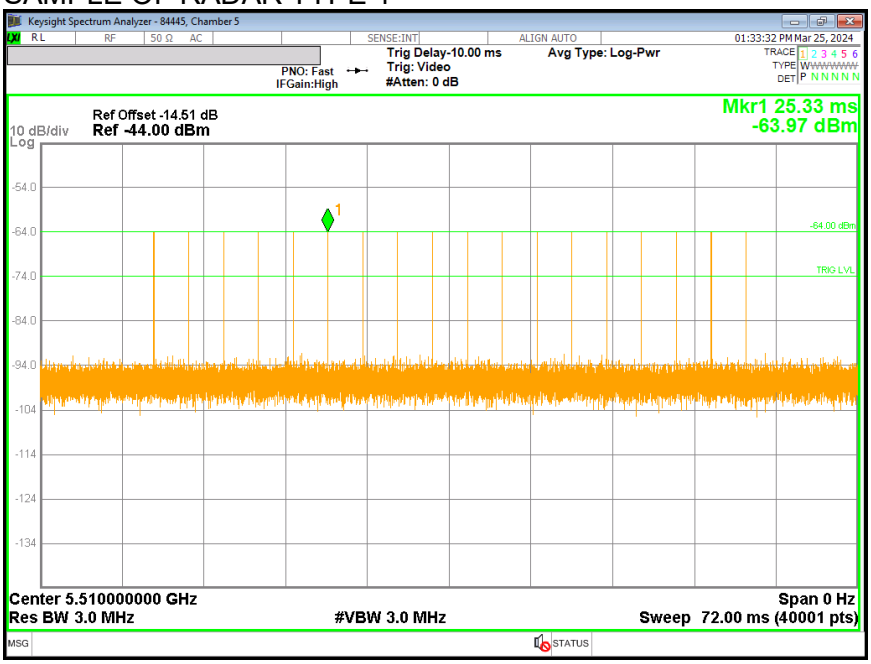
7.3.2. RADAR WAVEFORMS AND TRAFFIC

RADAR WAVEFORMS

SHORT PULSE RADAR TYPE 0



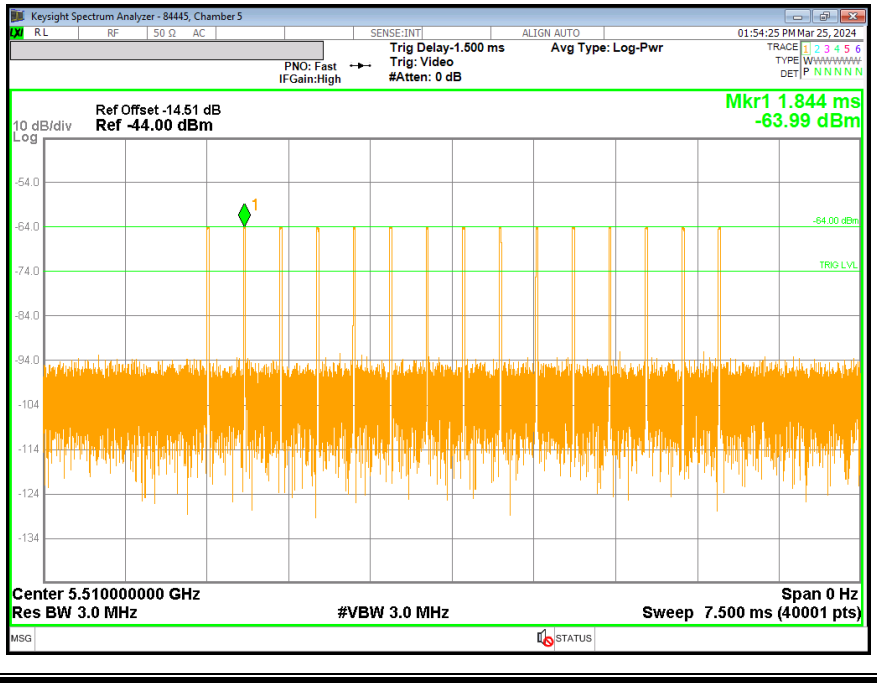
SAMPLE OF RADAR TYPE 1



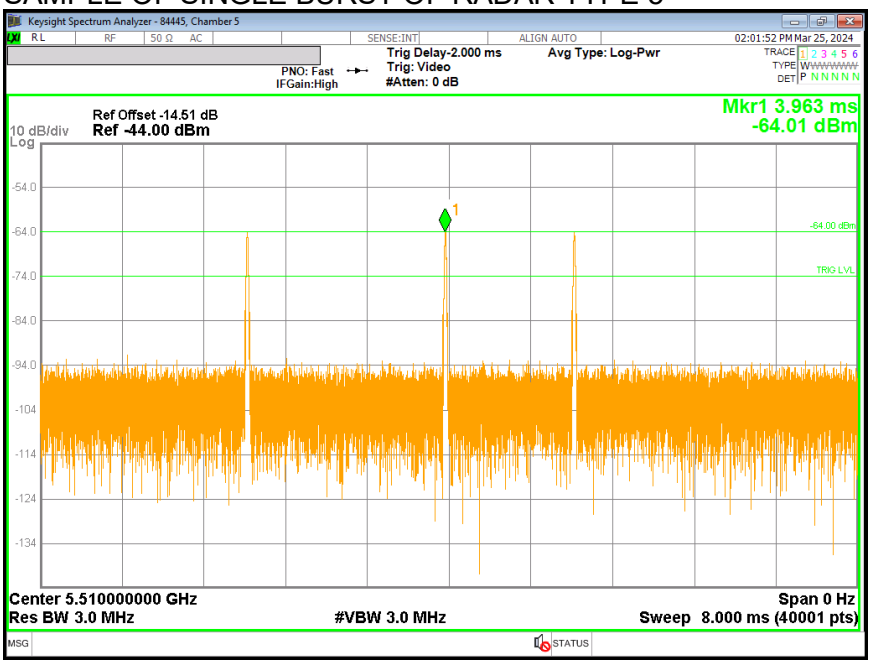
SAMPLE OF RADAR TYPE 2

SAMPLE OF RADAR TYPE 3

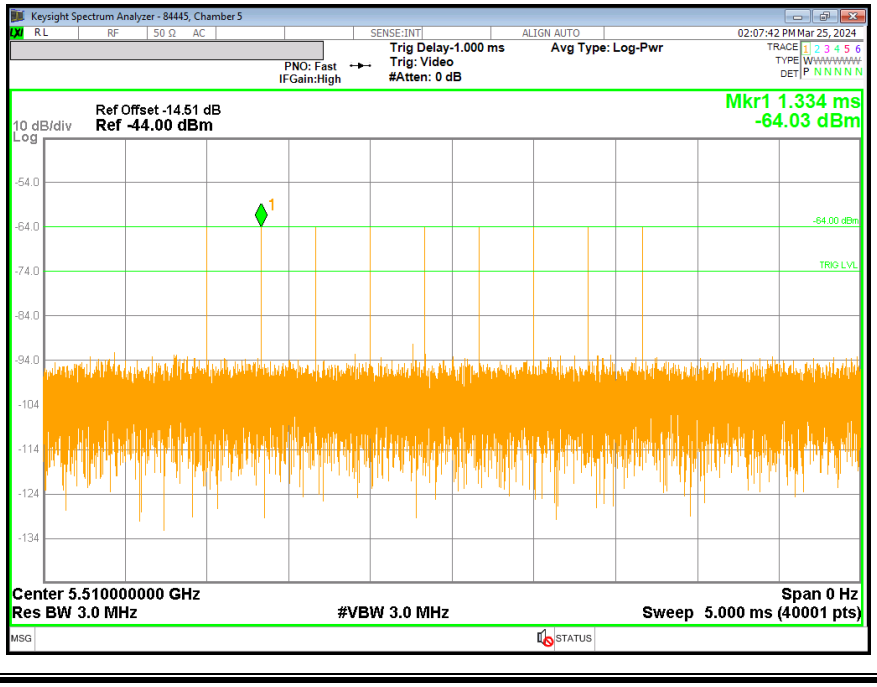
SAMPLE OF RADAR TYPE 4



SAMPLE OF SINGLE BURST OF RADAR TYPE 5



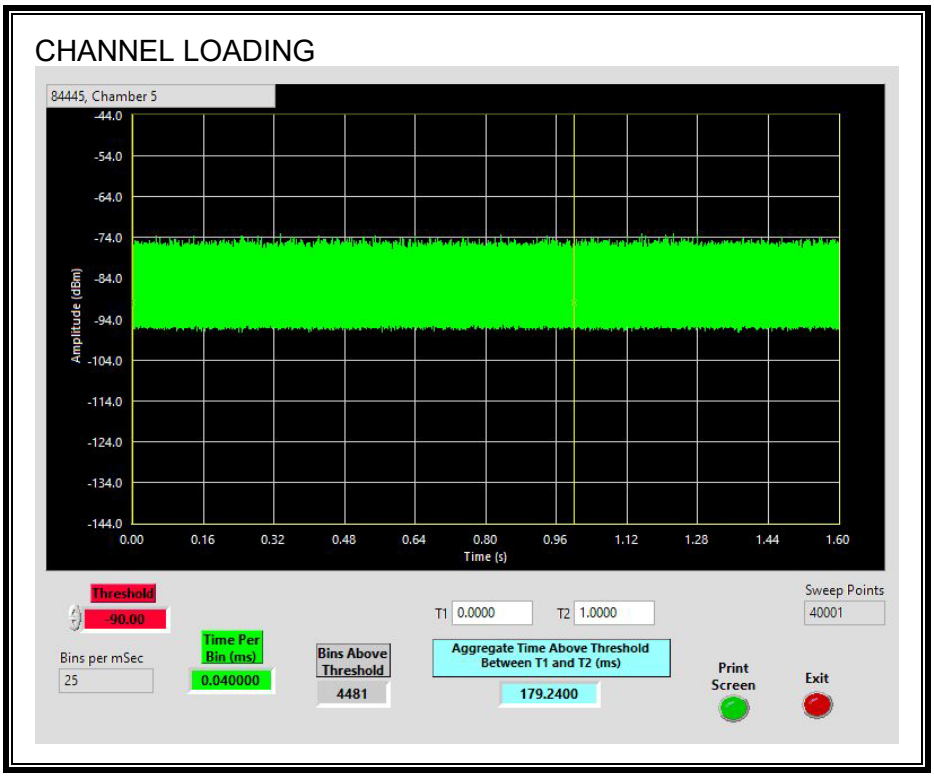
SINGLE BURST OF RADAR TYPE 6



TRAFFIC

TRAFFIC

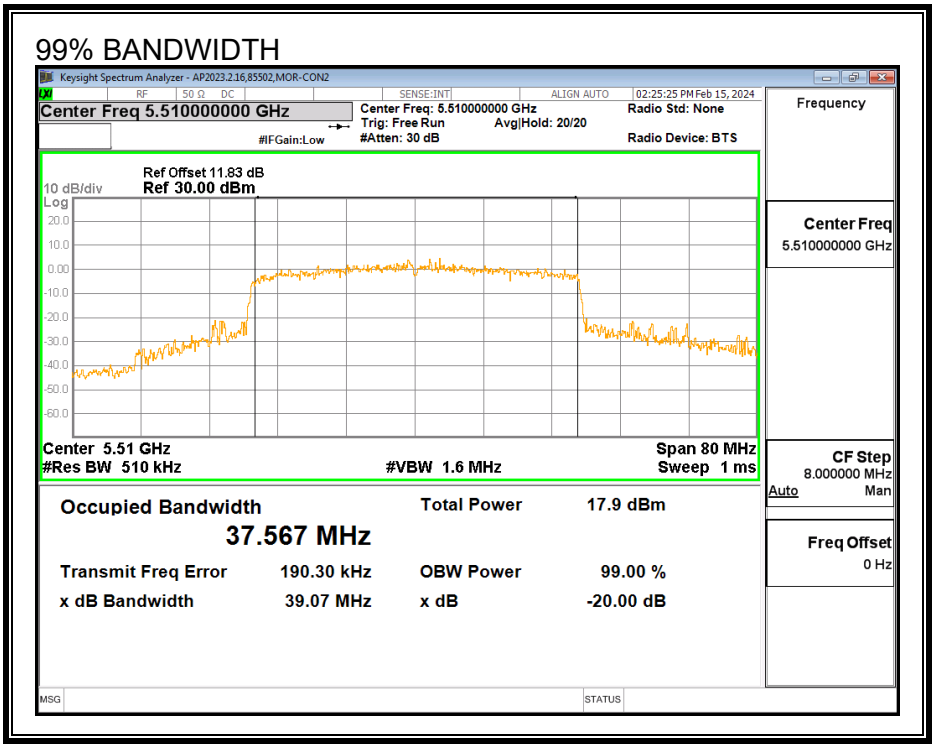
CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.92%

7.3.3. 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	5531	41	37.567	109.1	100

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS

Detection Bandwidth Test Results 84445 Chamber 5

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	5	0	0	
5490	10	10	100	FL
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5510	10	9	90	
5515	10	10	100	
5520	10	10	100	
5525	10	10	100	
5530	10	10	100	
5531	10	10	100	FH
5532	5	0	0	

7.3.4. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary

Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail	Detection Bandwidth FL	Detection Bandwidth FH	OBW	Test Location	Employee Number	In-Service Monitoring Version
FCC Short Pulse Type 1	30	100.00	60	Pass	5490	5531	37.57	Chamber 5	84445	v4.1
FCC Short Pulse Type 2	30	100.00	60	Pass	5490	5531	37.57	Chamber 5	84445	v4.1
FCC Short Pulse Type 3	30	100.00	60	Pass	5490	5531	37.57	Chamber 5	84445	v4.1
FCC Short Pulse Type 4	30	100.00	60	Pass	5490	5531	37.57	Chamber 5	84445	v4.1
Aggregate		100.00	80	Pass						
FCC Long Pulse Type 5	30	100.00	80	Pass	5490	5531	37.57	Chamber 5	84445	v4.1
FCC Hopping Type 6	42	100.00	70	Pass	5490	5531		Chamber 5	84445	v4.1

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	5493	Yes
1002	1	918	58	A	5510	Yes
1003	1	778	68	A	5496	Yes
1004	1	598	89	A	5520	Yes
1005	1	758	70	A	5490	Yes
1006	1	878	61	A	5530	Yes
1007	1	538	99	A	5529	Yes
1008	1	698	76	A	5505	Yes
1009	1	818	65	A	5504	Yes
1010	1	798	67	A	5529	Yes
1011	1	938	57	A	5502	Yes
1012	1	718	74	A	5523	Yes
1013	1	678	78	A	5497	Yes
1014	1	518	102	A	5498	Yes
1015	1	618	86	A	5508	Yes
1016	1	1804	30	B	5495	Yes
1017	1	890	60	B	5527	Yes
1018	1	1651	32	B	5527	Yes
1019	1	866	61	B	5508	Yes
1020	1	563	94	B	5521	Yes
1021	1	1260	42	B	5519	Yes
1022	1	2281	24	B	5521	Yes
1023	1	1913	28	B	5518	Yes
1024	1	1869	29	B	5501	Yes
1025	1	1631	33	B	5528	Yes
1026	1	1716	31	B	5530	Yes
1027	1	1607	33	B	5504	Yes
1028	1	628	85	B	5509	Yes
1029	1	648	82	B	5500	Yes
1030	1	1151	46	B	5518	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	4.6	161	28	5518	Yes
2002	1.3	174	27	5499	Yes
2003	4.8	219	24	5516	Yes
2004	1.6	156	23	5493	Yes
2005	1.2	205	24	5497	Yes
2006	4.6	188	24	5527	Yes
2007	2.5	203	25	5490	Yes
2008	1.9	229	29	5524	Yes
2009	1.9	210	23	5519	Yes
2010	3.8	202	24	5492	Yes
2011	2.1	225	26	5507	Yes
2012	4.1	183	28	5508	Yes
2013	2.6	173	26	5499	Yes
2014	3	216	28	5531	Yes
2015	3.9	210	27	5504	Yes
2016	2.2	176	26	5493	Yes
2017	1.4	216	26	5528	Yes
2018	4.1	230	25	5525	Yes
2019	3.5	194	29	5513	Yes
2020	4.4	211	25	5527	Yes
2021	2.1	179	29	5527	Yes
2022	3.3	163	25	5491	Yes
2023	1.2	178	23	5517	Yes
2024	4.7	165	27	5519	Yes
2025	2.8	185	28	5495	Yes
2026	2.5	176	29	5506	Yes
2027	4.9	162	24	5522	Yes
2028	2.8	158	25	5521	Yes
2029	3.5	228	24	5496	Yes
2030	1.7	190	26	5507	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	7.6	356	17	5523	Yes
3002	10	384	16	5525	Yes
3003	9.2	378	16	5499	Yes
3004	7.8	419	16	5525	Yes
3005	7.2	307	17	5531	Yes
3006	6.2	361	16	5495	Yes
3007	9.9	395	17	5501	Yes
3008	7	461	16	5494	Yes
3009	9	258	18	5516	Yes
3010	8.4	470	16	5502	Yes
3011	6.5	279	16	5508	Yes
3012	6.2	253	17	5508	Yes
3013	8.6	459	18	5503	Yes
3014	6.5	446	16	5496	Yes
3015	7.2	414	18	5510	Yes
3016	9.5	296	16	5512	Yes
3017	6.3	277	16	5520	Yes
3018	8.7	305	18	5501	Yes
3019	7.9	298	17	5518	Yes
3020	8.7	339	16	5517	Yes
3021	10	479	16	5492	Yes
3022	9	281	18	5498	Yes
3023	8.6	316	16	5530	Yes
3024	9.8	382	18	5527	Yes
3025	7.7	429	17	5531	Yes
3026	7.1	391	17	5505	Yes
3027	9.3	451	18	5520	Yes
3028	9	425	16	5511	Yes
3029	7.3	380	16	5495	Yes
3030	9.3	367	18	5519	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	20	335	15	5493	Yes
4002	15.9	468	16	5527	Yes
4003	17.9	331	13	5495	Yes
4004	14.3	477	14	5531	Yes
4005	12.4	352	12	5499	Yes
4006	14.1	260	16	5513	Yes
4007	12.7	399	14	5496	Yes
4008	14.9	453	13	5519	Yes
4009	14	487	16	5509	Yes
4010	12.3	303	14	5529	Yes
4011	11.9	350	15	5529	Yes
4012	19.8	311	12	5526	Yes
4013	15.5	371	13	5517	Yes
4014	14.8	346	16	5529	Yes
4015	15.8	301	15	5529	Yes
4016	15.6	288	14	5509	Yes
4017	17.1	255	13	5517	Yes
4018	13	388	12	5527	Yes
4019	15	251	16	5494	Yes
4020	16.2	397	13	5509	Yes
4021	18.6	273	15	5496	Yes
4022	11.2	431	15	5518	Yes
4023	18.9	320	12	5522	Yes
4024	12	256	12	5497	Yes
4025	11.1	408	15	5491	Yes
4026	18.6	474	12	5503	Yes
4027	18.1	270	13	5506	Yes
4028	16.9	483	16	5504	Yes
4029	12.6	292	12	5522	Yes
4030	11.9	266	15	5509	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	5497	Yes
13	5498	Yes
14	5497	Yes
15	5498	Yes
16	5497	Yes
17	5498	Yes
18	5497	Yes
19	5498	Yes
20	5497	Yes
21	5522	Yes
22	5523	Yes
23	5522	Yes
24	5523	Yes
25	5522	Yes
26	5523	Yes
27	5522	Yes
28	5525	Yes
29	5524	Yes
30	5524	Yes

Note: The Type 5 randomized parameters tested are located in Appenix 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	554	5490	9	Yes
2	1029	5491	11	Yes
3	1504	5492	6	Yes
4	1979	5493	9	Yes
5	2454	5494	12	Yes
6	2929	5495	11	Yes
7	3404	5496	10	Yes
8	3879	5497	6	Yes
9	4354	5498	10	Yes
10	4829	5499	8	Yes
11	5304	5500	9	Yes
12	5779	5501	9	Yes
13	6254	5502	11	Yes
14	6729	5503	10	Yes
15	7204	5504	7	Yes
16	7679	5505	9	Yes
17	8154	5506	6	Yes
18	8629	5507	9	Yes
19	9104	5508	6	Yes
20	9579	5509	13	Yes
21	10054	5510	8	Yes
22	10529	5511	8	Yes
23	11004	5512	6	Yes
24	11479	5513	6	Yes
25	11954	5514	9	Yes
26	12429	5515	14	Yes
27	12904	5516	7	Yes
28	13379	5517	13	Yes
29	13854	5518	17	Yes
30	14329	5519	4	Yes
31	14804	5520	9	Yes
32	15279	5521	5	Yes
33	15754	5522	10	Yes
34	16229	5523	8	Yes
35	16704	5524	7	Yes
36	17179	5525	8	Yes
37	17654	5526	7	Yes
38	18129	5527	9	Yes
39	18604	5528	11	Yes
40	19079	5529	8	Yes
41	19554	5530	6	Yes
42	20029	5531	9	Yes

7.4. RESULTS FOR 80 MHz BANDWIDTH

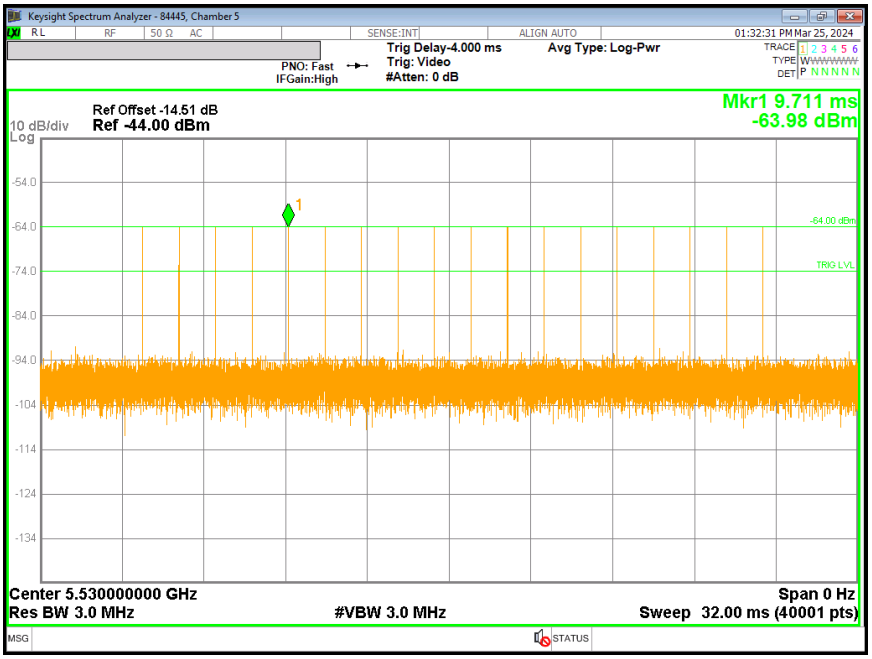
7.4.1. TEST CHANNEL

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

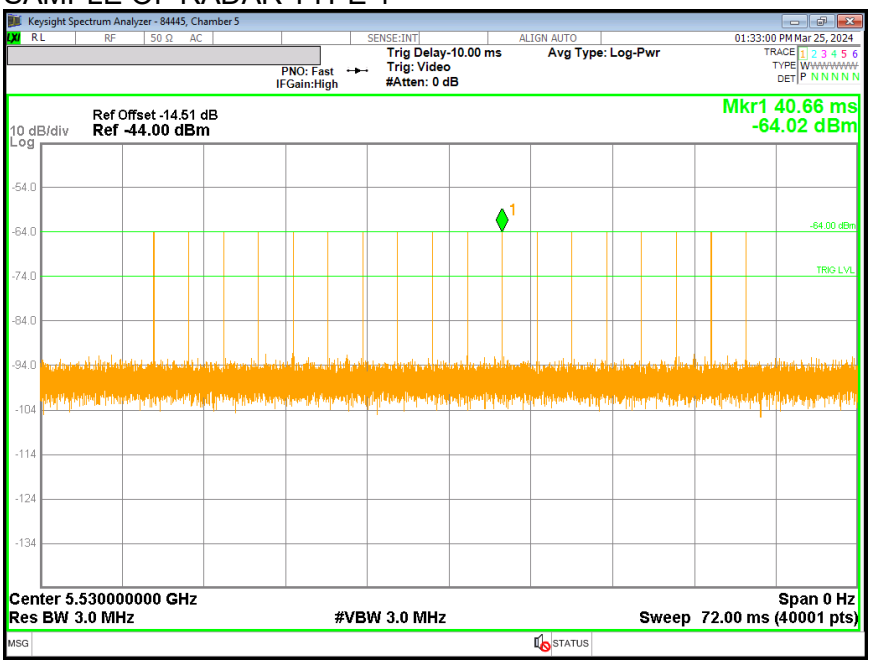
7.4.2. RADAR WAVEFORMS AND TRAFFIC

RADAR WAVEFORMS

SHORT PULSE RADAR TYPE 0



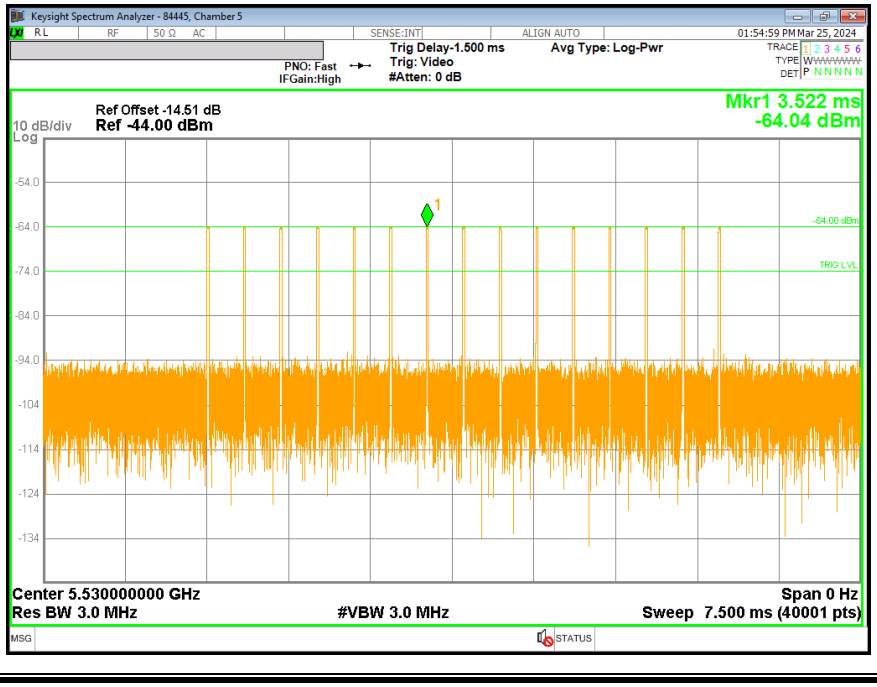
SAMPLE OF RADAR TYPE 1



SAMPLE OF RADAR TYPE 2

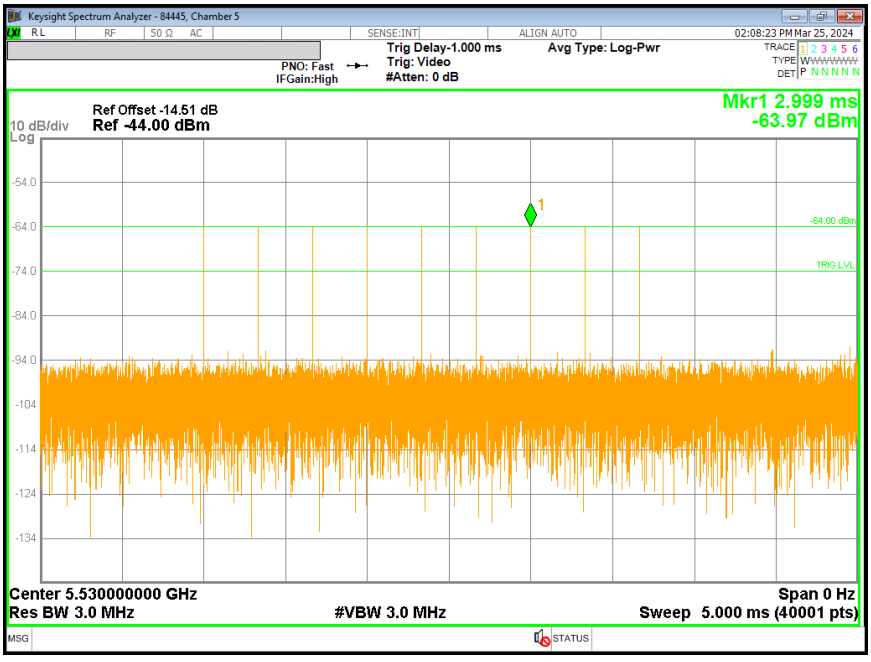
SAMPLE OF RADAR TYPE 3

SAMPLE OF RADAR TYPE 4



SAMPLE OF SINGLE BURST OF RADAR TYPE 5

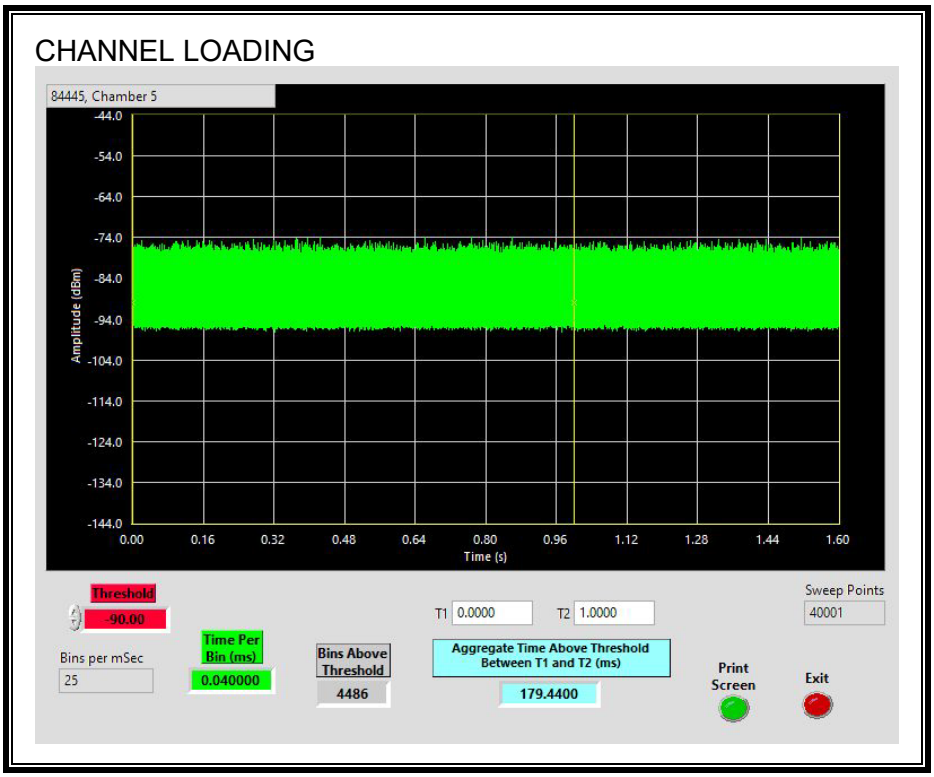
SINGLE BURST OF RADAR TYPE 6



TRAFFIC

TRAFFIC

CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 17.94%

7.4.3. CHANNEL AVAILABILITY CHECK TIME

PROCEDURE TO DETERMINE INITIAL CAC TIMING

A software command was sent to the EUT to jump to the test channel. The time from the command being sent to the initialization of traffic was measured as the time required for the EUT to complete the transition to the test channel. The time it took to process the command, and get off the previous channel is 60 seconds less than this total power-up time.

PROCEDURE FOR TIMING OF RADAR BURST

With a link established on a random channel, the channel jump command was sent to the EUT. A radar signal was triggered within 0 to 6 seconds after the processing period, and transmissions on the channel were monitored on the spectrum analyzer.

The Non-Occupancy list was cleared. With a link established on a random channel, the channel jump command was sent. A radar signal was triggered within 54 to 60 seconds after the processing period, and transmissions on the channel were monitored on the spectrum analyzer.

QUANTITATIVE RESULTS

No Radar Triggered

Timing of Command (sec)	Timing of Start of Traffic (sec)	Total Channel Jump Time (sec)	Initial Command Processing Time (sec)
0	70.37	70.37	10.37

Radar Near Beginning of CAC

Timing of Command (sec)	Timing of Radar Burst (sec)	Radar Relative to Command (sec)	Radar Relative to Start of CAC (sec)
0	11.42	11.4	1.05

Radar Near End of CAC

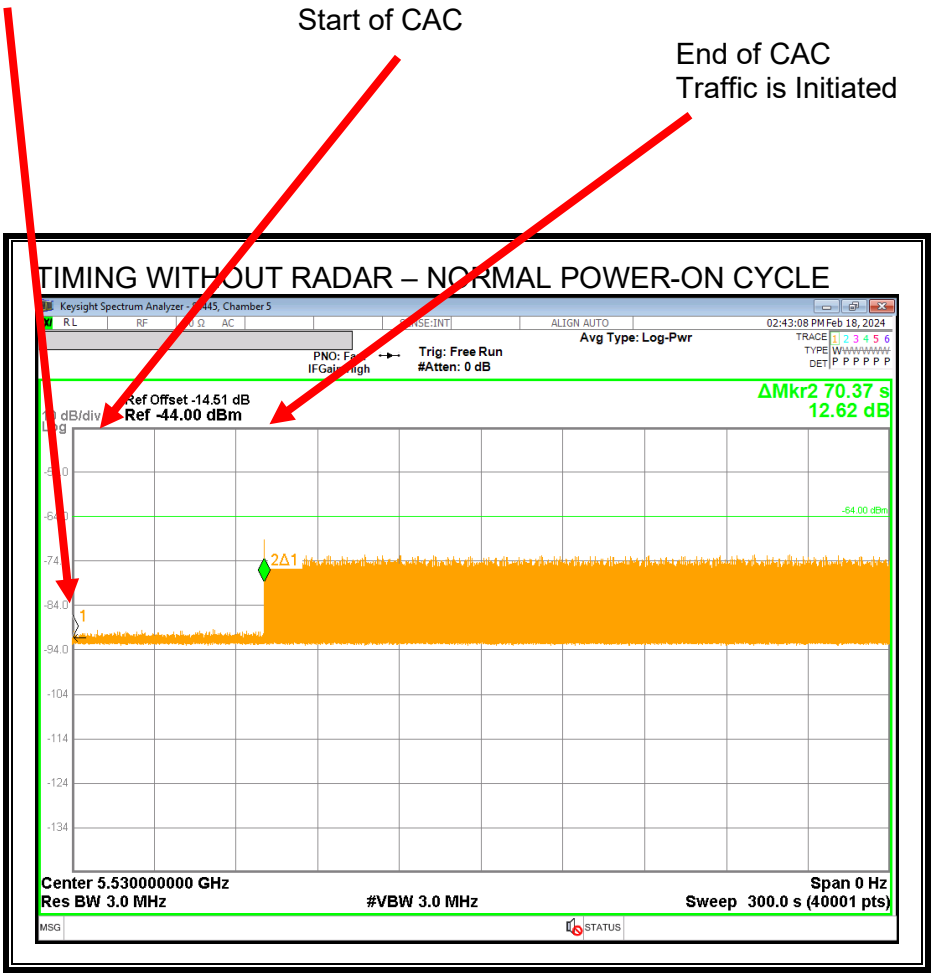
Timing of Command (sec)	Timing of Radar Burst (sec)	Radar Relative to Command (sec)	Radar Relative to Start of CAC (sec)
0	69.43	69.4	59.06

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 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

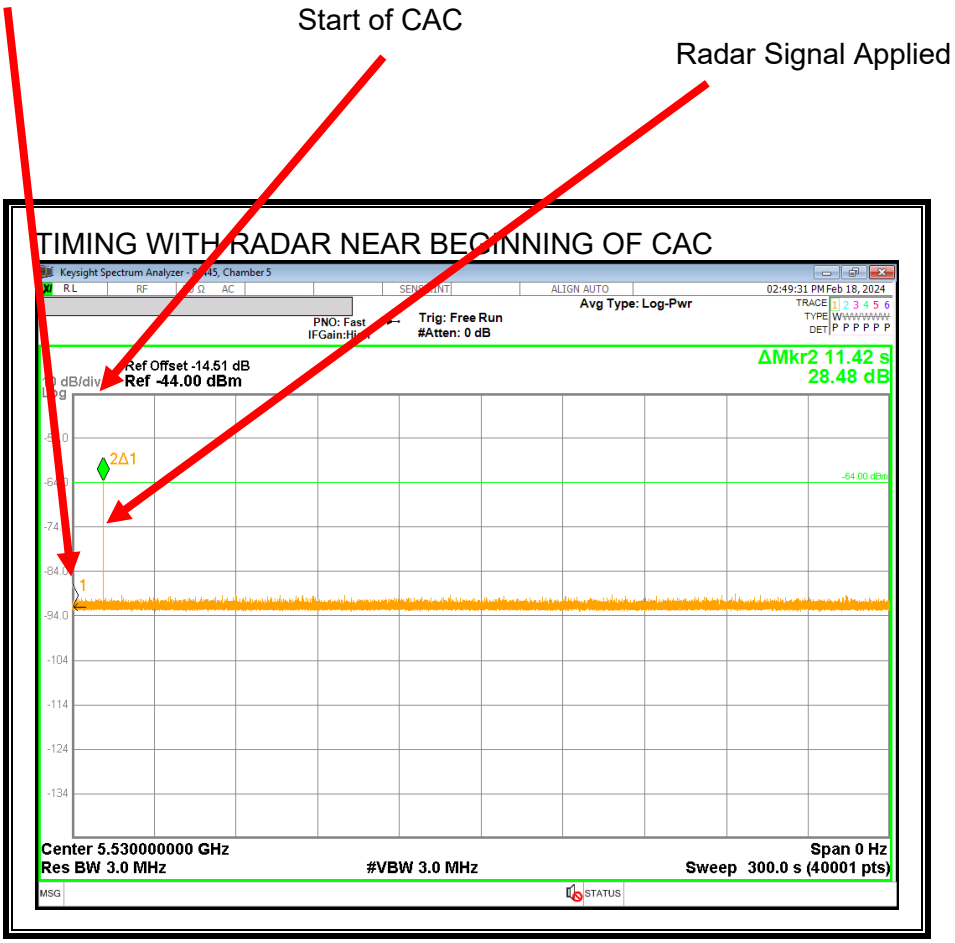
Software Command Sent



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

TIMING WITH RADAR NEAR BEGINNING OF CAC

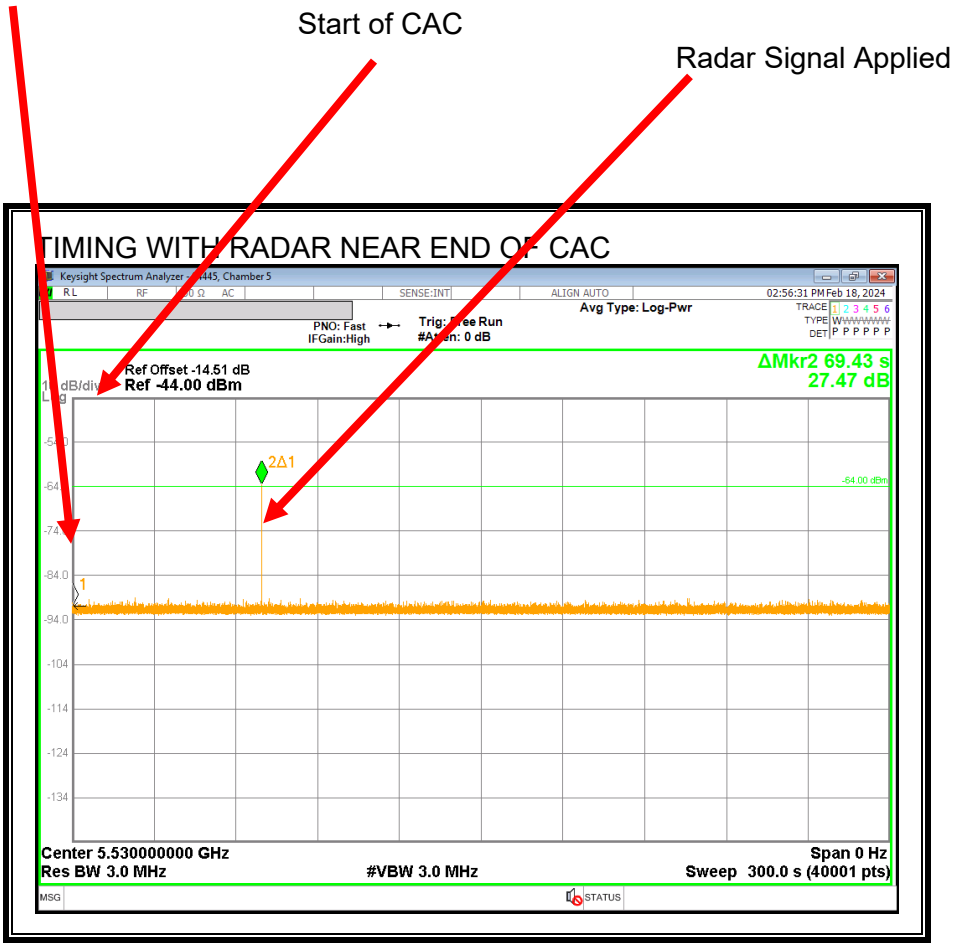
Software Command Sent



No EUT transmissions were observed after the radar signal.

TIMING WITH RADAR NEAR END OF CAC

Software Command Sent



No EUT transmissions were observed after the radar signal.

7.4.4. 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.

7.4.5. 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).

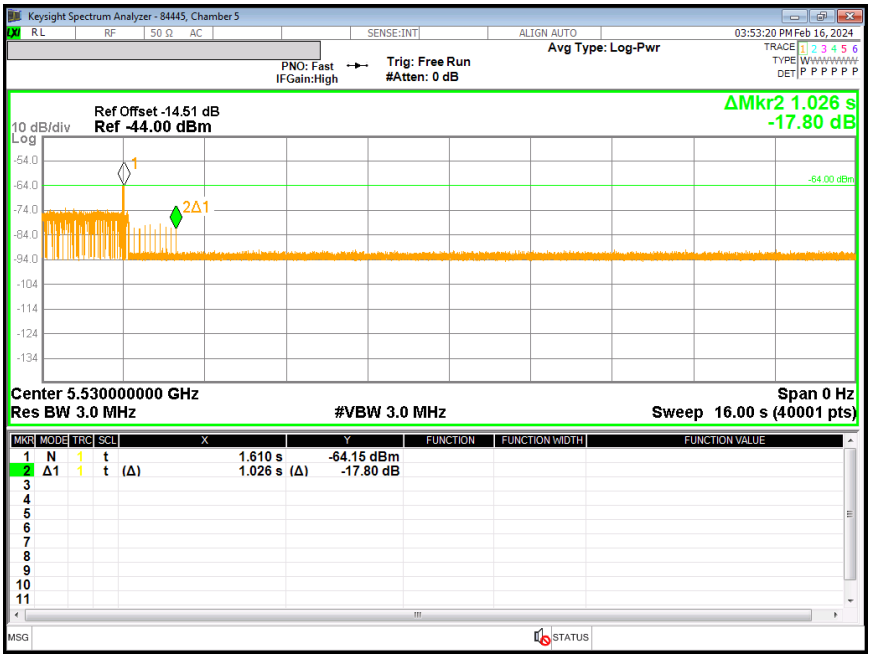
RESULTS

Channel Move Time (sec)	Limit (sec)
1.026	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
10.8	60

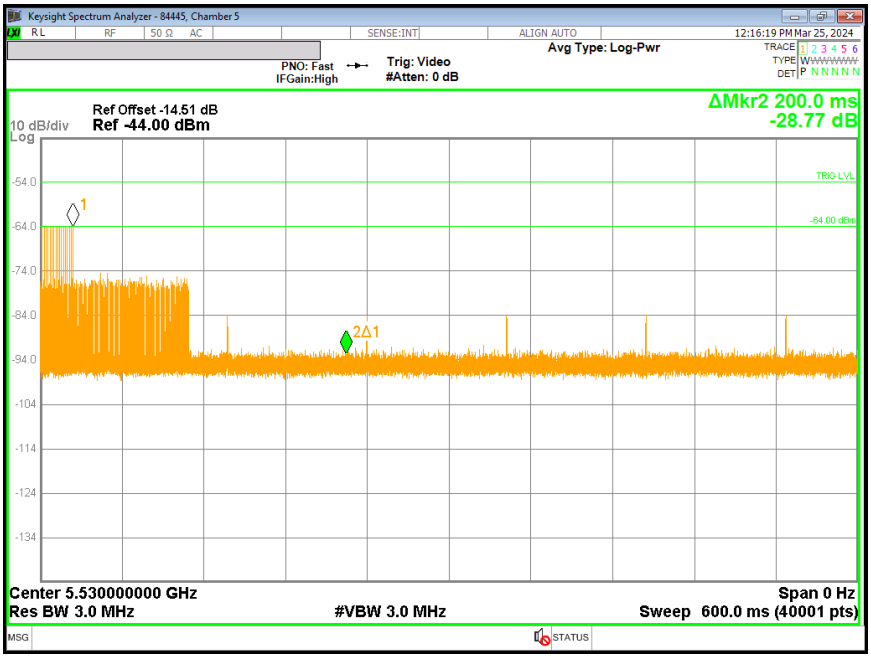
MOVE TIME

MOVE TIME



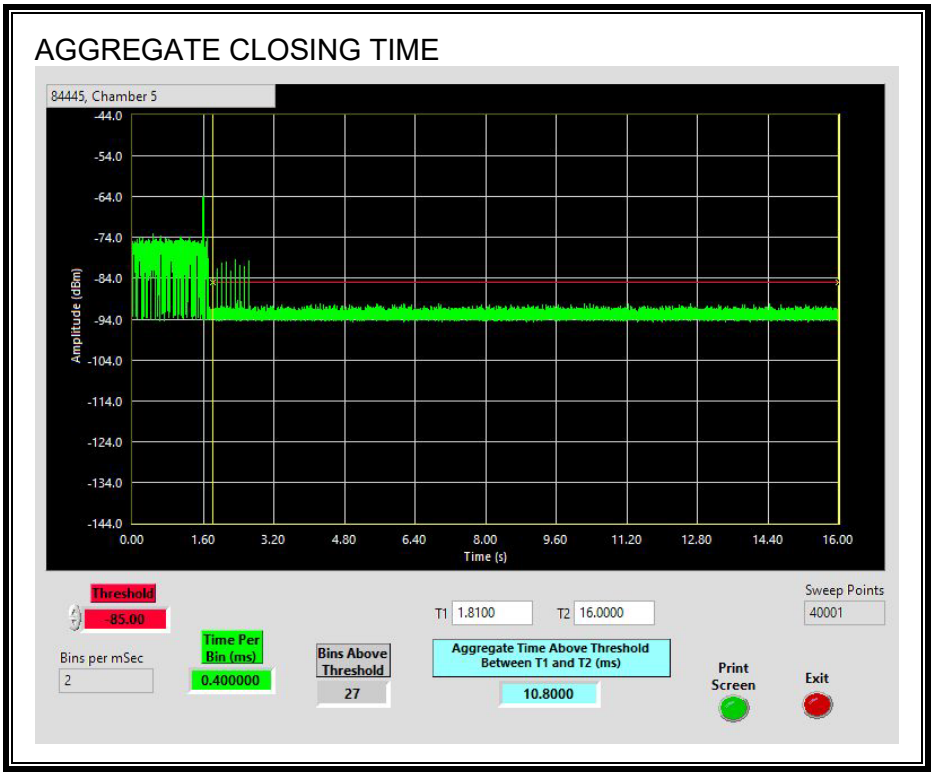
CHANNEL CLOSING TIME

CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

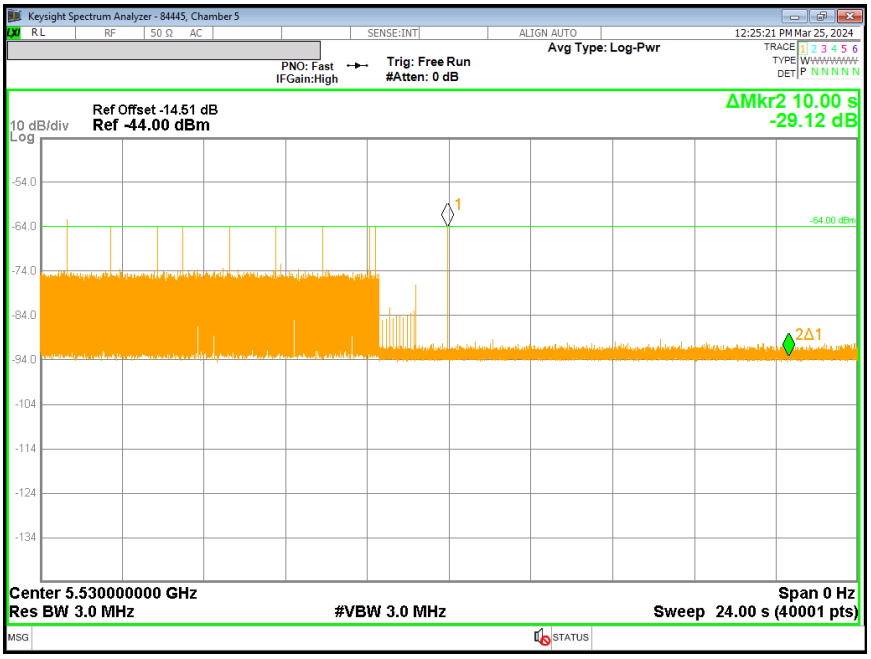
Only intermittent transmissions are observed during the aggregate monitoring period.



LONG PULSE CHANNEL MOVE TIME

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

MOVE TIME FOR LONG PULSE RADAR

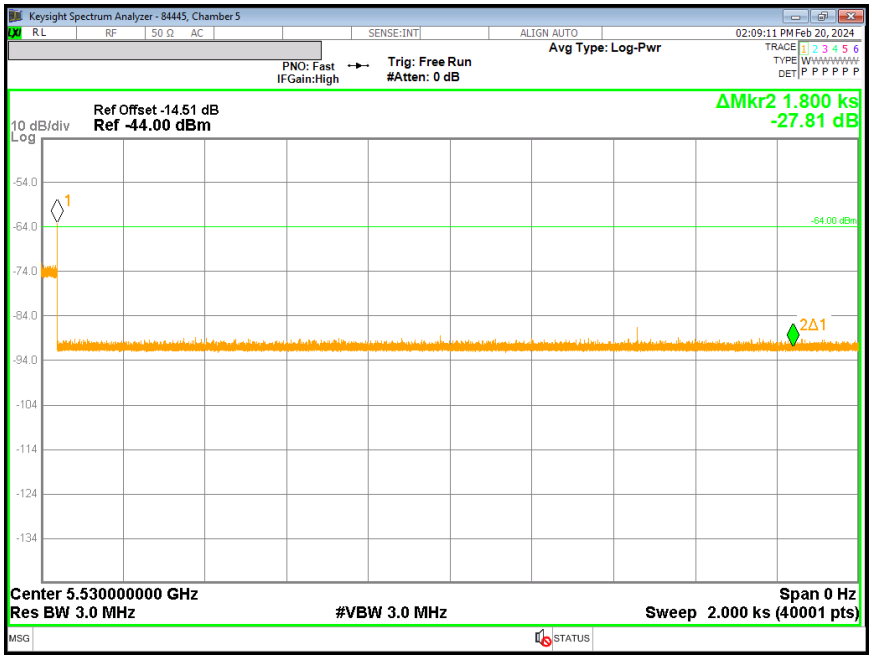


7.4.6. NON-OCCUPANCY PERIOD

RESULTS

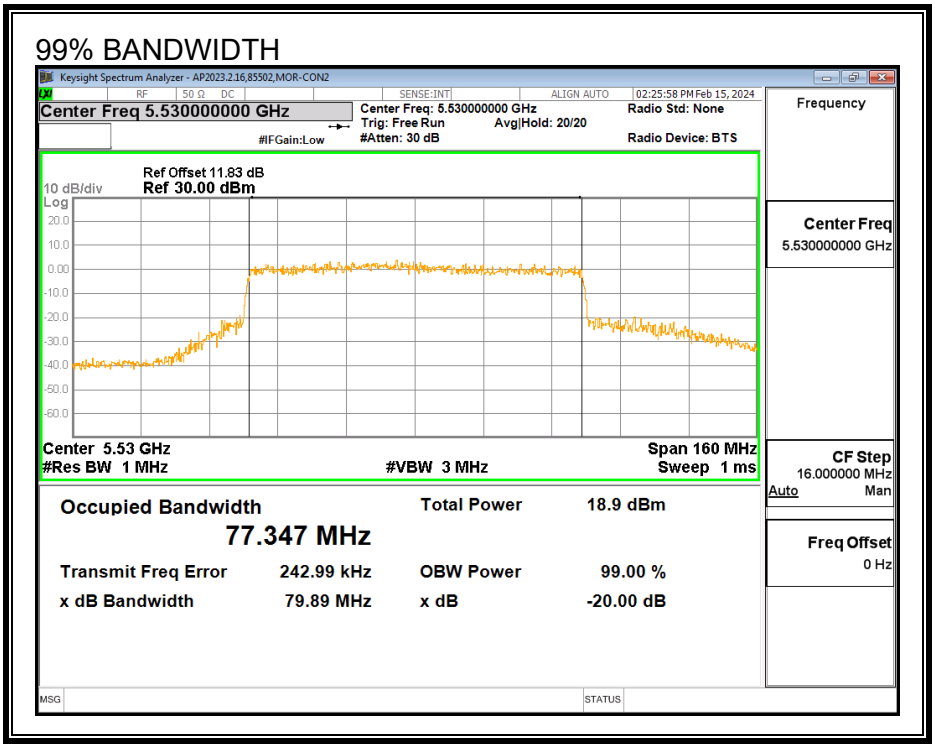
No EUT transmissions were observed on the test channel during the 30-minute observation time.

NON-OCCUPANCY PERIOD



7.4.7. 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 (%)
5489	5571	82	77.347	106.0	100

DETECTION BANDWIDTH PROBABILITY

DETECTION BANDWIDTH PROBABILITY RESULTS

Detection Bandwidth Test Results 84445 Chamber 5

FCC Type 0 Waveform: 1 us Pulse Width, 1428 us PRI, 18 Pulses per Burst

Frequency (MHz)	Number of Trials	Number Detected	Detection (%)	Mark
5488	5	0	0	
5489	10	10	100	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	9	90	
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	
5571	10	10	100	FH
5572	5	0	0	

7.4.8. IN-SERVICE MONITORING

RESULTS

FCC Radar Test Summary

Signal Type	Number of Trials	Detection (%)	Limit (%)	Pass/Fail	Detection Bandwidth FL	Detection Bandwidth FH	OBW	Test Location	Employee Number	In-Service Monitoring Version
FCC Short Pulse Type 1	30	100.00	60	Pass	5489	5571	77.35	Chamber 5	84445	v4.1
FCC Short Pulse Type 2	30	100.00	60	Pass	5489	5571	77.35	Chamber 5	84445	v4.1
FCC Short Pulse Type 3	30	86.67	60	Pass	5489	5571	77.35	Chamber 5	84445	v4.1
FCC Short Pulse Type 4	30	90.00	60	Pass	5489	5571	77.35	Chamber 5	84445	v4.1
Aggregate		94.17	80	Pass						
FCC Long Pulse Type 5	30	96.67	80	Pass	5489	5571	77.35	Chamber 5	84445	v4.1
FCC Hopping Type 6	83	100.00	70	Pass	5489	5571		Chamber 5	84445	v4.1

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	5517	Yes
1002	1	918	58	A	5516	Yes
1003	1	778	68	A	5529	Yes
1004	1	598	89	A	5535	Yes
1005	1	758	70	A	5542	Yes
1006	1	878	61	A	5528	Yes
1007	1	538	99	A	5491	Yes
1008	1	698	76	A	5560	Yes
1009	1	818	65	A	5533	Yes
1010	1	798	67	A	5539	Yes
1011	1	938	57	A	5511	Yes
1012	1	718	74	A	5542	Yes
1013	1	678	78	A	5505	Yes
1014	1	518	102	A	5570	Yes
1015	1	618	86	A	5570	Yes
1016	1	1804	30	B	5554	Yes
1017	1	890	60	B	5529	Yes
1018	1	1651	32	B	5510	Yes
1019	1	866	61	B	5524	Yes
1020	1	563	94	B	5502	Yes
1021	1	1260	42	B	5511	Yes
1022	1	2281	24	B	5530	Yes
1023	1	1913	28	B	5557	Yes
1024	1	1869	29	B	5500	Yes
1025	1	1631	33	B	5531	Yes
1026	1	1716	31	B	5541	Yes
1027	1	1607	33	B	5527	Yes
1028	1	628	85	B	5536	Yes
1029	1	648	82	B	5556	Yes
1030	1	1151	46	B	5563	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	4.6	161	28	5554	Yes
2002	1.3	174	27	5516	Yes
2003	4.8	219	24	5568	Yes
2004	1.6	156	23	5532	Yes
2005	1.2	205	24	5565	Yes
2006	4.6	188	24	5493	Yes
2007	2.5	203	25	5491	Yes
2008	1.9	229	29	5519	Yes
2009	1.9	210	23	5559	Yes
2010	3.8	202	24	5503	Yes
2011	2.1	225	26	5509	Yes
2012	4.1	183	28	5506	Yes
2013	2.6	173	26	5553	Yes
2014	3	216	28	5513	Yes
2015	3.9	210	27	5502	Yes
2016	2.2	176	26	5535	Yes
2017	1.4	216	26	5563	Yes
2018	4.1	230	25	5533	Yes
2019	3.5	194	29	5507	Yes
2020	4.4	211	25	5549	Yes
2021	2.1	179	29	5498	Yes
2022	3.3	163	25	5557	Yes
2023	1.2	178	23	5519	Yes
2024	4.7	165	27	5503	Yes
2025	2.8	185	28	5512	Yes
2026	2.5	176	29	5498	Yes
2027	4.9	162	24	5557	Yes
2028	2.8	158	25	5519	Yes
2029	3.5	228	24	5537	Yes
2030	1.7	190	26	5553	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	7.6	356	17	5563	Yes
3002	10	384	16	5511	Yes
3003	9.2	378	16	5503	Yes
3004	7.8	419	16	5511	Yes
3005	7.2	307	17	5495	Yes
3006	6.2	361	16	5538	Yes
3007	9.9	395	17	5544	Yes
3008	7	461	16	5552	Yes
3009	9	258	18	5534	Yes
3010	8.4	470	16	5509	Yes
3011	6.5	279	16	5562	Yes
3012	6.2	253	17	5542	No
3013	8.6	459	18	5541	Yes
3014	6.5	446	16	5552	Yes
3015	7.2	414	18	5495	Yes
3016	9.5	296	16	5525	Yes
3017	6.3	277	16	5499	Yes
3018	8.7	305	18	5546	Yes
3019	7.9	298	17	5565	Yes
3020	8.7	339	16	5562	Yes
3021	10	479	16	5501	Yes
3022	9	281	18	5541	Yes
3023	8.6	316	16	5497	Yes
3024	9.8	382	18	5569	No
3025	7.7	429	17	5541	Yes
3026	7.1	391	17	5550	Yes
3027	9.3	451	18	5493	No
3028	9	425	16	5542	No
3029	7.3	380	16	5560	Yes
3030	9.3	367	18	5503	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	20	335	15	5547	Yes
4002	15.9	468	16	5514	Yes
4003	17.9	331	13	5503	Yes
4004	14.3	477	14	5493	Yes
4005	12.4	352	12	5566	Yes
4006	14.1	260	16	5508	Yes
4007	12.7	399	14	5570	Yes
4008	14.9	453	13	5520	Yes
4009	14	487	16	5549	Yes
4010	12.3	303	14	5545	Yes
4011	11.9	350	15	5525	No
4012	19.8	311	12	5516	Yes
4013	15.5	371	13	5539	No
4014	14.8	346	16	5533	Yes
4015	15.8	301	15	5526	Yes
4016	15.6	288	14	5527	Yes
4017	17.1	255	13	5563	Yes
4018	13	388	12	5537	No
4019	15	251	16	5563	Yes
4020	16.2	397	13	5530	Yes
4021	18.6	273	15	5519	Yes
4022	11.2	431	15	5569	Yes
4023	18.9	320	12	5513	Yes
4024	12	256	12	5529	Yes
4025	11.1	408	15	5552	Yes
4026	18.6	474	12	5553	Yes
4027	18.1	270	13	5524	Yes
4028	16.9	483	16	5542	Yes
4029	12.6	292	12	5522	Yes
4030	11.9	266	15	5537	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	No
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	5498	Yes
13	5498	Yes
14	5498	Yes
15	5498	Yes
16	5498	Yes
17	5498	Yes
18	5498	Yes
19	5498	Yes
20	5498	Yes
21	5562	Yes
22	5563	Yes
23	5562	Yes
24	5563	Yes
25	5562	Yes
26	5563	Yes
27	5562	Yes
28	5565	Yes
29	5564	Yes
30	5564	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	732	5489	18	Yes
2	1207	5490	20	Yes
3	1682	5491	16	Yes
4	2157	5492	16	Yes
5	2632	5493	12	Yes
6	3107	5494	15	Yes
7	3582	5495	18	Yes
8	4057	5496	15	Yes
9	4532	5497	15	Yes
10	5007	5498	12	Yes
11	5482	5499	17	Yes
12	5957	5500	20	Yes
13	6432	5501	21	Yes
14	6907	5502	12	Yes
15	7382	5503	22	Yes
16	7857	5504	19	Yes
17	8332	5505	23	Yes
18	8807	5506	11	Yes
19	9282	5507	14	Yes
20	9757	5508	14	Yes
21	10232	5509	21	Yes
22	10707	5510	15	Yes
23	11182	5511	15	Yes
24	11657	5512	22	Yes
25	12132	5513	17	Yes
26	12607	5514	18	Yes
27	13082	5515	15	Yes
28	13557	5516	15	Yes
29	14032	5517	15	Yes
30	14507	5518	23	Yes
31	14982	5519	17	Yes
32	15457	5520	14	Yes
33	15932	5521	14	Yes
34	16407	5522	19	Yes
35	16882	5523	21	Yes
36	17357	5524	19	Yes
37	17832	5525	14	Yes
38	18307	5526	17	Yes
39	18782	5527	16	Yes
40	19257	5528	15	Yes
41	19732	5529	14	Yes
42	20207	5530	23	Yes

TYPE 6 DETECTION PROBABILITY (CONTINUED)

43	20682	5531	18	Yes
44	21157	5532	25	Yes
45	21632	5533	19	Yes
46	22107	5534	21	Yes
47	22582	5535	19	Yes
48	23057	5536	24	Yes
49	23532	5537	22	Yes
50	24007	5538	26	Yes
51	24482	5539	15	Yes
52	24957	5540	8	Yes
53	25432	5541	14	Yes
54	25907	5542	18	Yes
55	26382	5543	14	Yes
56	26857	5544	14	Yes
57	27332	5545	15	Yes
58	27807	5546	24	Yes
59	28282	5547	14	Yes
60	28757	5548	23	Yes
61	29232	5549	15	Yes
62	29707	5550	16	Yes
63	30182	5551	19	Yes
64	30657	5552	20	Yes
65	31132	5553	17	Yes
66	31607	5554	14	Yes
67	32082	5555	12	Yes
68	32557	5556	19	Yes
69	33032	5557	15	Yes
70	33507	5558	16	Yes
71	33982	5559	23	Yes
72	34457	5560	14	Yes
73	34932	5561	17	Yes
74	35407	5562	14	Yes
75	35882	5563	16	Yes
76	36357	5564	22	Yes
77	36832	5565	15	Yes
78	37307	5566	19	Yes
79	37782	5567	14	Yes
80	38257	5568	19	Yes
81	38732	5569	21	Yes
82	39207	5570	22	Yes
83	39682	5571	18	Yes

8. APENDIX A: FCC TYPE 5 RADAR PARAMETERS

FCC Long Pulse 03-22-2024 14:54:35

Waveform Num = 1
Num of Bursts = 10
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	671716									
1		1	5	60	1578	0	0	671716	0	1199999
	1260036									
2		2	5	75	1458	1073	0	1933330	1200000	2399999
	1372417									
3		1	5	95	1586	0	0	3308278	2400000	3599999
	736289									
4		1	5	90	1630	0	0	4046153	3600000	4799999
	1372986									
5		1	5	80	1142	0	0	5420769	4800000	5999999
	1372951									
6		1	5	50	1655	0	0	6794862	6000000	7199999
	1372979									
7		1	5	100	1168	0	0	8169496	7200000	8399999
	1372772									
8		1	5	90	1681	0	0	9543436	8400000	9599999
	163173									
9		3	5	60	1193	1099	1133	9708290	9600000	10799999
	2115824									
10		3	5	85	1912	1502	1218	11827539	10800000	11999999

Total number of pulses in waveform = 15

Waveform Num = 2
Num of Bursts = 10
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	180051									
1		3	11	50	1937	1261	1244	180051	0	1199999
	1675616									
2		3	11	85	1757	1296	1963	1860109	1200000	2399999
	1236642									
3		3	11	70	1741	1432	1313	3101767	2400000	3599999
	1358240									
4		3	11	95	1826	1201	1766	4464493	3600000	4799999
	1349835									
5		2	11	65	1544	1603	0	5819121	4800000	5999999
	941575									
6		2	11	90	1014	1364	0	6763843	6000000	7199999
	1410949									
7		2	11	95	1877	1784	0	8177170	7200000	8399999
	1297680									
8		3	11	70	1929	1595	1185	9478511	8400000	9599999
	941512									
9		2	11	95	1065	1415	0	10424732	9600000	10799999
	850034									
10		2	11	100	1459	1835	0	11277246	10800000	11999999

Total number of pulses in waveform = 25

Waveform Num = 3
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	422569									
1		3	20	85	1236	1484	1125	422569	0	999999
	1244034									
2		1	20	100	1270	0	0	1670448	1000000	1999999
	734016									
3		2	20	75	1416	1450	0	2405734	2000000	2999999
	877848									
4		1	20	50	1228	0	0	3286448	3000000	3999999
	759972									
5		2	20	55	1475	1698	0	4047648	4000000	4999999
	1508795									
6		1	20	60	1578	0	0	5559616	5000000	5999999
	1049656									
7		2	20	75	1458	1073	0	6610850	6000000	6999999
	1143317									
8		1	20	95	1586	0	0	7756698	7000000	7999999
	613409									
9		1	20	90	1630	0	0	8371693	8000000	8999999
	1143886									
10		1	20	80	1142	0	0	9517209	9000000	9999999
	1143851									
11		1	20	50	1655	0	0	10662202	10000000	10999999
	1143899									
12		1	20	100	1168	0	0	11807756	11000000	11999999

Total number of pulses in waveform = 17

Waveform Num = 4
Num of Bursts = 9
Burst Interval (us) = 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	132505									
1		3	17	100	1886	1210	1193	132505	0	1333332
	2147454									
2		1	17	50	1706	0	0	2284248	1333333	2666665
	887762									
3		3	17	75	1218	1860	1158	3173716	2666666	3999998
	1022178									
4		3	17	50	1937	1261	1244	4200130	3999999	5333331
	1862522									
5		3	17	85	1757	1296	1963	6067094	5333332	6666664
	1374588									
6		3	17	70	1741	1432	1313	7446698	6666665	7999997
	1509747									
7		3	17	95	1826	1201	1766	8960931	7999998	9333330
	1500261									
8		2	17	65	1544	1603	0	10465985	9333331	10666663
	1046415									
9		2	17	90	1014	1364	0	11515547	10666664	11999996

Total number of pulses in waveform = 23

Waveform Num = 5
Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	738415									
1		3	19	90	1817	1774	1389	738415	0	799999
	727463									
2		2	19	60	1903	1543	0	1470858	800000	1599999
	621048									
3		1	19	70	1689	0	0	2095352	1600000	2399999
	1075780									
4		3	19	75	1835	1399	1356	3172821	2400000	3199999
	360318									
5		3	19	85	1236	1484	1125	3537729	3200000	3999999
	994614									
6		1	19	100	1270	0	0	4536188	4000000	4799999
	586896									
7		2	19	75	1416	1450	0	5124354	4800000	5599999
	701868									
8		1	19	50	1228	0	0	5829088	5600000	6399999
	607772									
9		2	19	55	1475	1698	0	6438088	6400000	7199999
	1206255									
10		1	19	60	1578	0	0	7647516	7200000	7999999
	839276									
11		2	19	75	1458	1073	0	8488370	8000000	8799999
	914217									
12		1	19	95	1586	0	0	9405118	8800000	9599999
	490529									
13		1	19	90	1630	0	0	9897233	9600000	10399999
	914786									
14		1	19	80	1142	0	0	10813649	10400000	11199999
	914751									
15		1	19	50	1655	0	0	11729542	11200000	11999999

Total number of pulses in waveform = 25

Waveform Num = 6
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	798615									
1		1	19	90	1107	0	0	798615	0	999999
	299550									
2		3	19	100	1886	1210	1193	1099272	1000000	1999999
	1609321									
3		1	19	50	1706	0	0	2712882	2000000	2999999
	665296									
4		3	19	75	1218	1860	1158	3379884	3000000	3999999
	765811									
5		3	19	50	1937	1261	1244	4149931	4000000	4999999
	1395256									
6		3	19	85	1757	1296	1963	5549629	5000000	5999999
	1029722									
7		3	19	70	1741	1432	1313	6584367	6000000	6999999
	1130980									
8		3	19	95	1826	1201	1766	7719833	7000000	7999999
	1124195									
9		2	19	65	1544	1603	0	8848821	8000000	8999999
	784315									
10		2	19	90	1014	1364	0	9636283	9000000	9999999
	1175149									
11		2	19	95	1877	1784	0	10813810	10000000	10999999
	1080580									
12		3	19	70	1929	1595	1185	11898051	11000000	11999999

Total number of pulses in waveform = 29

Waveform Num = 7
Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	495352									
1		1	18	70	1689	0	0	495352	0	799999
	1075780									
2		3	18	75	1835	1399	1356	1572821	800000	1599999
	360318									
3		3	18	85	1236	1484	1125	1937729	1600000	2399999
	994614									
4		1	18	100	1270	0	0	2936188	2400000	3199999
	586896									
5		2	18	75	1416	1450	0	3524354	3200000	3999999
	701868									
6		1	18	50	1228	0	0	4229088	4000000	4799999
	607772									
7		2	18	55	1475	1698	0	4838088	4800000	5599999
	1206255									
8		1	18	60	1578	0	0	6047516	5600000	6399999
	839276									
9		2	18	75	1458	1073	0	6888370	6400000	7199999
	914217									
10		1	18	95	1586	0	0	7805118	7200000	7999999
	490529									
11		1	18	90	1630	0	0	8297233	8000000	8799999
	914786									
12		1	18	80	1142	0	0	9213649	8800000	9599999
	914751									
13		1	18	50	1655	0	0	10129542	9600000	10399999
	914819									
14		1	18	100	1168	0	0	11046016	10400000	11199999
	914572									
15		1	18	90	1681	0	0	11961756	11200000	11999999

Total number of pulses in waveform = 22

Waveform Num = 8
Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	57055									
1		1	8	55	1133	0	0	57055	0	631578
	1112315									
2		3	8	85	1912	1502	1218	1170503	631579	1263157
	91235									
3		1	8	70	1732	0	0	1266370	1263158	1894736
	1048609									
4		3	8	60	1244	1150	1715	2316711	1894737	2526315
	481991									
5		3	8	65	1963	1552	1801	2802811	2526316	3157894
	878320									
6		3	8	70	1313	1587	1988	3686447	3157895	3789473
	315558									
7		3	8	60	1766	1724	1339	4006893	3789474	4421052
	906516									
8		2	8	80	1852	1492	0	4918238	4421053	5052631
	489927									
9		1	8	70	1638	0	0	5411509	5052632	5684210
	515033									
10		3	8	95	1784	1817	1774	5928180	5684211	6315789
	910251									
11		3	8	80	1185	1903	1543	6843806	6315790	6947368
	489779									
12		1	8	70	1689	0	0	7338216	6947369	7578947
	848226									
13		3	8	75	1835	1399	1356	8188131	7578948	8210526
	284091									
14		3	8	85	1236	1484	1125	8476812	8210527	8842105
	784576									
15		1	8	100	1270	0	0	9265233	8842106	9473684
	463005									
16		2	8	75	1416	1450	0	9729508	9473685	10105263
	553674									
17		1	8	50	1228	0	0	10286048	10105264	10736842
	479604									
18		2	8	55	1475	1698	0	10766880	10736843	11368421
	951485									
19		1	8	60	1578	0	0	11721538	11368422	12000000

Total number of pulses in waveform = 40

Waveform Num = 9
Num of Bursts = 14
Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	742175									
1		2	13	50	1613	1278	0	742175	0	857142
	650139									
2		2	13	90	1057	1749	0	1395205	857143	1714285
	758669									
3		2	13	65	1629	1142	0	2156680	1714286	2571428
	979423									
4		1	13	50	1655	0	0	3138874	2571429	3428571
	980270									
5		1	13	100	1168	0	0	4120799	3428572	4285714
	980030									
6		1	13	90	1681	0	0	5101997	4285715	5142857
	116441									
7		3	13	60	1193	1099	1133	5220119	5142858	6000000
	1509276									
8		3	13	85	1912	1502	1218	6732820	6000001	6857143
	124054									
9		1	13	70	1732	0	0	6861506	6857144	7714286
	1424715									
10		3	13	60	1244	1150	1715	8287953	7714287	8571429
	655450									
11		3	13	65	1963	1552	1801	8947512	8571430	9428572
	1194537									
12		3	13	70	1313	1587	1988	10147365	9428573	10285715
	935101									
13		3	13	60	1359	1317	1933	11087354	10285716	11142858
	124314									
14		1	13	60	1445	0	0	11216277	11142859	12000001

Total number of pulses in waveform = 29

Waveform Num = 10
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	346262	3	14	60	1163	1488	1470	346262	0	923076
2	746125	2	14	70	1984	1522	0	1096508	923077	1846153
3	753950	3	14	75	1136	1436	1659	1853964	1846154	2769230
4	959232	1	14	60	1539	0	0	2817427	2769231	3692307
5	1400343	2	14	100	1950	1565	0	4219309	3692308	4615384
6	1055110	1	14	95	1077	0	0	5277934	4615385	5538461
7	1055708	1	14	85	1590	0	0	6334719	5538462	6461538
8	134080	1	14	55	1103	0	0	6470389	6461539	7384615
9	1488024	1	14	50	1616	0	0	7959516	7384616	8307692
10	614390	3	14	95	1128	1770	1068	8575522	8307693	9230769
11	792971	2	14	100	1847	1171	0	9372459	9230770	10153846
12	1393085	1	14	55	1051	0	0	10768562	10153847	11076923
13	472648	1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 11
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 12
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	346262									
1		3	14	60	1163	1488	1470	346262	0	923076
	746125									
2		2	14	70	1984	1522	0	1096508	923077	1846153
	753950									
3		3	14	75	1136	1436	1659	1853964	1846154	2769230
	959232									
4		1	14	60	1539	0	0	2817427	2769231	3692307
	1400343									
5		2	14	100	1950	1565	0	4219309	3692308	4615384
	1055110									
6		1	14	95	1077	0	0	5277934	4615385	5538461
	1055708									
7		1	14	85	1590	0	0	6334719	5538462	6461538
	134080									
8		1	14	55	1103	0	0	6470389	6461539	7384615
	1488024									
9		1	14	50	1616	0	0	7959516	7384616	8307692
	614390									
10		3	14	95	1128	1770	1068	8575522	8307693	9230769
	792971									
11		2	14	100	1847	1171	0	9372459	9230770	10153846
	1393085									
12		1	14	55	1051	0	0	10768562	10153847	11076923
	472648									
13		1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 13
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 14
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	346262	3	14	60	1163	1488	1470	346262	0	923076
2	746125	2	14	70	1984	1522	0	1096508	923077	1846153
3	753950	3	14	75	1136	1436	1659	1853964	1846154	2769230
4	959232	1	14	60	1539	0	0	2817427	2769231	3692307
5	1400343	2	14	100	1950	1565	0	4219309	3692308	4615384
6	1055110	1	14	95	1077	0	0	5277934	4615385	5538461
7	1055708	1	14	85	1590	0	0	6334719	5538462	6461538
8	134080	1	14	55	1103	0	0	6470389	6461539	7384615
9	1488024	1	14	50	1616	0	0	7959516	7384616	8307692
10	614390	3	14	95	1128	1770	1068	8575522	8307693	9230769
11	792971	2	14	100	1847	1171	0	9372459	9230770	10153846
12	1393085	1	14	55	1051	0	0	10768562	10153847	11076923
13	472648	1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 15
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 16
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	346262	3	14	60	1163	1488	1470	346262	0	923076
2	746125	2	14	70	1984	1522	0	1096508	923077	1846153
3	753950	3	14	75	1136	1436	1659	1853964	1846154	2769230
4	959232	1	14	60	1539	0	0	2817427	2769231	3692307
5	1400343	2	14	100	1950	1565	0	4219309	3692308	4615384
6	1055110	1	14	95	1077	0	0	5277934	4615385	5538461
7	1055708	1	14	85	1590	0	0	6334719	5538462	6461538
8	134080	1	14	55	1103	0	0	6470389	6461539	7384615
9	1488024	1	14	50	1616	0	0	7959516	7384616	8307692
10	614390	3	14	95	1128	1770	1068	8575522	8307693	9230769
11	792971	2	14	100	1847	1171	0	9372459	9230770	10153846
12	1393085	1	14	55	1051	0	0	10768562	10153847	11076923
13	472648	1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 17
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 18
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	346262									
1		3	14	60	1163	1488	1470	346262	0	923076
	746125									
2		2	14	70	1984	1522	0	1096508	923077	1846153
	753950									
3		3	14	75	1136	1436	1659	1853964	1846154	2769230
	959232									
4		1	14	60	1539	0	0	2817427	2769231	3692307
	1400343									
5		2	14	100	1950	1565	0	4219309	3692308	4615384
	1055110									
6		1	14	95	1077	0	0	5277934	4615385	5538461
	1055708									
7		1	14	85	1590	0	0	6334719	5538462	6461538
	134080									
8		1	14	55	1103	0	0	6470389	6461539	7384615
	1488024									
9		1	14	50	1616	0	0	7959516	7384616	8307692
	614390									
10		3	14	95	1128	1770	1068	8575522	8307693	9230769
	792971									
11		2	14	100	1847	1171	0	9372459	9230770	10153846
	1393085									
12		1	14	55	1051	0	0	10768562	10153847	11076923
	472648									
13		1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 19
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 20
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	346262									
1		3	14	60	1163	1488	1470	346262	0	923076
	746125									
2		2	14	70	1984	1522	0	1096508	923077	1846153
	753950									
3		3	14	75	1136	1436	1659	1853964	1846154	2769230
	959232									
4		1	14	60	1539	0	0	2817427	2769231	3692307
	1400343									
5		2	14	100	1950	1565	0	4219309	3692308	4615384
	1055110									
6		1	14	95	1077	0	0	5277934	4615385	5538461
	1055708									
7		1	14	85	1590	0	0	6334719	5538462	6461538
	134080									
8		1	14	55	1103	0	0	6470389	6461539	7384615
	1488024									
9		1	14	50	1616	0	0	7959516	7384616	8307692
	614390									
10		3	14	95	1128	1770	1068	8575522	8307693	9230769
	792971									
11		2	14	100	1847	1171	0	9372459	9230770	10153846
	1393085									
12		1	14	55	1051	0	0	10768562	10153847	11076923
	472648									
13		1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 21
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 22
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	346262									
1		3	14	60	1163	1488	1470	346262	0	923076
	746125									
2		2	14	70	1984	1522	0	1096508	923077	1846153
	753950									
3		3	14	75	1136	1436	1659	1853964	1846154	2769230
	959232									
4		1	14	60	1539	0	0	2817427	2769231	3692307
	1400343									
5		2	14	100	1950	1565	0	4219309	3692308	4615384
	1055110									
6		1	14	95	1077	0	0	5277934	4615385	5538461
	1055708									
7		1	14	85	1590	0	0	6334719	5538462	6461538
	134080									
8		1	14	55	1103	0	0	6470389	6461539	7384615
	1488024									
9		1	14	50	1616	0	0	7959516	7384616	8307692
	614390									
10		3	14	95	1128	1770	1068	8575522	8307693	9230769
	792971									
11		2	14	100	1847	1171	0	9372459	9230770	10153846
	1393085									
12		1	14	55	1051	0	0	10768562	10153847	11076923
	472648									
13		1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 23
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 24
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	346262									
1		3	14	60	1163	1488	1470	346262	0	923076
	746125									
2		2	14	70	1984	1522	0	1096508	923077	1846153
	753950									
3		3	14	75	1136	1436	1659	1853964	1846154	2769230
	959232									
4		1	14	60	1539	0	0	2817427	2769231	3692307
	1400343									
5		2	14	100	1950	1565	0	4219309	3692308	4615384
	1055110									
6		1	14	95	1077	0	0	5277934	4615385	5538461
	1055708									
7		1	14	85	1590	0	0	6334719	5538462	6461538
	134080									
8		1	14	55	1103	0	0	6470389	6461539	7384615
	1488024									
9		1	14	50	1616	0	0	7959516	7384616	8307692
	614390									
10		3	14	95	1128	1770	1068	8575522	8307693	9230769
	792971									
11		2	14	100	1847	1171	0	9372459	9230770	10153846
	1393085									
12		1	14	55	1051	0	0	10768562	10153847	11076923
	472648									
13		1	14	95	1462	0	0	11242261	11076924	12000000

Total number of pulses in waveform = 22

Waveform Num = 25
Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	221242									
1		2	15	60	1966	1898	0	221242	0	999999
	1030424									
2		3	15	55	1676	1633	1248	1255530	1000000	1999999
	1131001									
3		3	15	75	1762	1402	1702	2391088	2000000	2999999
	1406956									
4		1	15	80	1480	0	0	3802910	3000000	3999999
	501661									
5		3	15	85	1727	1684	1299	4306051	4000000	4999999
	1438883									
6		2	15	55	1813	1453	0	5749644	5000000	5999999
	1080516									
7		3	15	65	1599	1530	1855	6833426	6000000	6999999
	714886									
8		3	15	65	1266	1350	1890	7553296	7000000	7999999
	775952									
9		1	15	70	1035	0	0	8333754	8000000	8999999
	1245725									
10		1	15	95	1180	0	0	9580514	9000000	9999999
	734107									
11		2	15	70	1795	1359	0	10315801	10000000	10999999
	766520									
12		3	15	100	1137	1196	1445	11085475	11000000	11999999

Total number of pulses in waveform = 27

Waveform Num = 26
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	346262									
1		3	14	60	1163	1488	1470	346262	0	923076
	746125									
2		2	14	70	1984	1522	0	1096508	923077	1846153
	753950									
3		3	14	75	1136	1436	1659	1853964	1846154	2769230
	959232									
4		1	14	60	1539	0	0	2817427	2769231	3692307
	1400343									
5		2	14	100	1950	1565	0	4219309	3692308	4615384
	1055110									
6		1	14	95	1077	0	0	5277934	4615385	5538461
	1055708									
7		1	14	85	1590	0	0	6334719	5538462	6461538
	566078									
8		1	14	80	1572	0	0	6902387	6461539	7384615
	747902									
9		2	14	75	1084	1092	0	7651861	7384616	8307692
	1353270									
10		2	14	80	1238	1537	0	9007307	8307693	9230769
	810708									
11		1	14	70	1315	0	0	9820790	9230770	10153846
	456401									
12		2	14	75	1563	1520	0	10278506	10153847	11076923
	904813									
13		3	14	65	1932	1648	1821	11186402	11076924	12000000

Total number of pulses in waveform = 24

Waveform Num = 27
Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst
	385054									
1		2	16	70	1691	1205	0	385054	0	666666
	761204									
2		1	16	55	1718	0	0	1149154	666667	1333333
	295334									
3		2	16	100	1230	1871	0	1446206	1333334	2000000
	720011									
4		3	16	90	1016	1949	1273	2169318	2000001	2666667
	1004427									
5		1	16	60	1152	0	0	3177983	2666668	3333334
	300480									
6		3	16	100	1564	1281	1922	3479615	3333335	4000001
	730427									
7		2	16	90	1067	2000	0	4214809	4000002	4666668
	937354									
8		1	16	60	1778	0	0	5155230	4666669	5333335
	509993									
9		3	16	65	1024	1615	1863	5667001	5333336	6000002
	928610									
10		3	16	75	1376	1649	1050	6600113	6000003	6666669
	333229									
11		3	16	60	1829	1786	1401	6937417	6666670	7333336
	957076									
12		2	16	85	1914	1555	0	7899509	7333337	8000003
	517285									
13		1	16	70	1700	0	0	8420263	8000004	8666670
	543461									
14		3	16	100	1846	1880	1837	8965424	8666671	9333337
	961060									
15		3	16	85	1247	1965	1606	9932047	9333338	10000004
	517145									
16		1	16	75	1751	0	0	10454010	10000005	10666671
	517436									
17		1	16	75	1897	0	0	10973197	10666672	11333338
	556291									
18		2	16	50	1042	1709	0	11531385	11333339	12000005

Total number of pulses in waveform = 37

Waveform Num = 28
Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	585205									
1		2	8	55	1059	1333	0	585205	0	799999
	586360									
2		2	8	80	1478	1512	0	1173957	800000	1599999
	701883									
3		1	8	55	1290	0	0	1878830	1600000	2399999
	607597									
4		2	8	60	1537	1760	0	2487717	2400000	3199999
	1130699									
5		2	8	65	1640	1623	0	3621713	3200000	3999999
	646866									
6		2	8	75	1135	1675	0	4271842	4000000	4799999
	1075740									
7		3	8	85	1821	1119	1811	5350392	4800000	5599999
	707257									
8		2	8	70	1691	1205	0	6062400	5600000	6399999
	913938									
9		1	8	55	1718	0	0	6979234	6400000	7199999
	354600									
10		2	8	100	1230	1871	0	7335552	7200000	7999999
	864744									
11		3	8	90	1016	1949	1273	8203397	8000000	8799999
	1206120									
12		1	8	60	1152	0	0	9413755	8800000	9599999
	360839									
13		3	8	100	1564	1281	1922	9775746	9600000	10399999
	877454									
14		2	8	90	1067	2000	0	10657967	10400000	11199999
	1125500									
15		1	8	60	1778	0	0	11786534	11200000	11999999

Total number of pulses in waveform = 29

Waveform Num = 29
Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	334995									
1		1	10	80	1863	0	0	334995	0	666666
	929919									
2		3	10	75	1376	1649	1050	1266777	666667	1333333
	333229									
3		3	10	60	1829	1786	1401	1604081	1333334	2000000
	957076									
4		2	10	85	1914	1555	0	2566173	2000001	2666667
	517285									
5		1	10	70	1700	0	0	3086927	2666668	3333334
	543461									
6		3	10	100	1846	1880	1837	3632088	3333335	4000001
	961060									
7		3	10	85	1247	1965	1606	4598711	4000002	4666668
	517145									
8		1	10	75	1751	0	0	5120674	4666669	5333335
	517436									
9		1	10	75	1897	0	0	5639861	5333336	6000002
	556291									
10		2	10	50	1042	1709	0	6198049	6000003	6666669
	505245									
11		2	10	60	1486	1178	0	6706045	6666670	7333336
	1005053									
12		1	10	90	1589	0	0	7713762	7333337	8000003
	346282									
13		2	10	75	1469	1084	0	8061633	8000004	8666670
	760971									
14		1	10	65	1597	0	0	8825157	8666671	9333337
	716197									
15		2	10	90	1110	1384	0	9542951	9333338	10000004
	799619									
16		2	10	80	1529	1563	0	10345064	10000005	10666671
	938001									
17		1	10	85	1341	0	0	11286157	10666672	11333338
	505214									
18		2	10	95	1119	1811	0	11792712	11333339	12000005

Total number of pulses in waveform = 33

Waveform Num = 30
Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	659563									
1		3	10	60	1580	1144	1102	659563	0	923076
	415838									
2		3	10	70	1982	1230	1871	1079227	923077	1846153
	996699									
3		3	10	90	1016	1949	1273	2081009	1846154	2769230
	1392299									
4		1	10	60	1152	0	0	3477546	2769231	3692307
	416556									
5		3	10	100	1564	1281	1922	3895254	3692308	4615384
	1013171									
6		2	10	90	1067	2000	0	4913192	4615385	5538461
	1299174									
7		1	10	60	1778	0	0	6215433	5538462	6461538
	707198									
8		3	10	65	1024	1615	1863	6924409	6461539	7384615
	1288046									
9		3	10	75	1376	1649	1050	8216957	7384616	8307692
	462331									
10		3	10	60	1829	1786	1401	8683363	8307693	9230769
	1327461									
11		2	10	85	1914	1555	0	10015840	9230770	10153846
	716848									
12		1	10	70	1700	0	0	10736157	10153847	11076923
	753692									
13		3	10	100	1846	1880	1837	11491549	11076924	12000000

Total number of pulses in waveform = 31

9. SETUP PHOTOS

DYNAMIC FREQUENCY SELECTION MEASUREMENT SETUP

Please refer to the R14896020-EP1 report.

END OF TEST REPORT