SPORTON LAB.

Project No : FZ3N2221

VERIFICATION OF COMPLIANCE

Equipment	:	**Industrial Wi-Fi 6 wireless access points / Industrial Wi-Fi 6 wireless clients**
Model No.	:	**AWK-1161C-UN, AWK-1165C-UN, AWK-1161C-UN-T, AWK-1165C-UN-T, AWK-1161C-US, AWK-1165C-US, AWK-1161C-US-T, AWK-1165C-US-T, AWK-1161A-UN, AWK-1165A-UN, AWK-1161A-UN-T, AWK-1165A-UN-T, AWK-1161A-US, AWK-1165A-US, AWK-1161A-US-T, AWK-1165A-US-T**
Applicant	:	**Moxa Inc.** No. 1111, Heping Rd., Bade Dist., Taoyuan City 334004, Taiwan

SPORTON LAB.

I HEREBY DECLARE THAT :

The equipment was **Passed** the test performed according to

47 CFR FCC Part 15.407

The test was carried out on **Dec. 18, 2023** at **SPORTON INTERNATIONAL INC. Hsinhua Laboratory.**

Jackson Tsai

Jackson Tsai

FCC DFS Test Report

FCC ID	**: SLE-AWK1160**
Equipment	**: Industrial Wi-Fi 6 wireless access points / Industrial Wi-Fi 6 wireless clients**
Brand Name	**: MOXA**
Model Name	**: AWK-1161C-UN, AWK-1165C-UN, AWK-1161C-UN-T, AWK-1165C-UN-T, AWK-1161C-US, AWK-1165C-US, AWK-1161C-US-T, AWK-1165C-US-T, AWK-1161A-UN, AWK-1165A-UN, AWK-1161A-UN-T, AWK-1165A-UN-T, AWK-1161A-US, AWK-1165A-US, AWK-1161A-US-T, AWK-1165A-US-T**
EUT Rated Voltage Range	**: DC 9V ~ 30V**
Applicant	**: Moxa Inc. No. 1111, Heping Rd., Bade Dist., Taoyuan City 334004, Taiwan**
Manufacturer	**: Moxa Inc. No. 1111, Heping Rd., Bade Dist., Taoyuan City 334004, Taiwan**
Standard	**: 47 CFR FCC Part 15.407**

The product was received on Nov. 23, 2023, and testing was started from Nov. 30, 2023 and completed on Dec. 18, 2023. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.

Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

Table of Contents

HISTORY OF THIS TEST REPORT 3

SUMMARY OF TEST RESULT 4

1 GENERAL DESCRIPTION 5

1.1 Information 5
1.2 Testing Applied Standards 10
1.3 Testing Location Information 10

2 TEST CONFIGURATION OF EUT 11

2.1 Test Channel Frequencies Configuration 11
2.2 The Worst Case Measurement Configuration 11
2.3 Accessories 12
2.4 Support Equipment 12

3 DYNAMIC FREQUENCY SELECTION (DFS) TEST RESULT 13

3.1 General DFS Information 13
3.2 Radar Test Waveform Calibration 16
3.3 UNII Detection Bandwidth 29
3.4 Channel Availability Check (CAC) 33
3.5 In-service Monitoring 37
3.6 Statistical Performance Check 45

4 TEST EQUIPMENT AND CALIBRATION DATA 81

5 MEASUREMENT UNCERTAINTY 82

Appendix A. Test Photos

Photographs of EUT V01

History of this test report

Report No.	Version	Description	Issued Date
FZ3N2221	01	Initial issue of report	Feb. 21, 2024

Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	KDB 905462 7.8.1	DFS: UNII Detection Bandwidth Measurement	PASS	100% of the 99% BW
3.4	KDB 905462 7.8.2.1	DFS: Initial Channel Availability Check Time	PASS	CAC ≥ 60 sec
3.4	KDB 905462 7.8.2.2	DFS: Radar Burst at the Beginning of the Channel Availability Check Time	PASS	Detection Threshold: -63 dBm
3.4	KDB 905462 7.8.2.3	DFS: Radar Burst at the End of the Channel Availability Check Time	PASS	Detection Threshold: -63 dBm
3.5	KDB 905462 7.8.3	DFS: In-Service Monitoring for Channel Move Time (CMT)	PASS	CMT ≤ 10sec
3.5	KDB 905462 7.8.3	DFS: In-Service Monitoring for Channel Closing Transmission Time (CCTT)	PASS	CCTT ≤ 60 ms starting at CMT 200ms
3.5	KDB 905462 7.8.3	DFS: In-Service Monitoring for Non-Occupancy Period (NOP)	PASS	NOP ≥ 30 min
3.6	KDB 905462 7.8.4	DFS: Statistical Performance Check	PASS	Table 5 - 7 (KDB 905462)
3.1.4	KDB 905462 8.1	User Access Restrictions	PASS	DFS controls

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and explanations:
None

Reviewed by: Ryan Hsiao

Report Producer: Amber Chiu

1 General Description

1.1 Information

1.1.1 RF General Information

Specification Items	Description			
Product Type	WLAN (2TX, 2RX)			
Radio Type	Intentional Transceiver			
Power Type	From DC Power supply			
Modulation	IEEE 802.11a: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11n/ac/ax: see the below table			
Data Rate (Mbps)	IEEE 802.11a: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n/ac/ax: see the below table			
Channel Bandwidth	20/40/80MHz operating channel bandwidth			
Operating Mode	☒	Master		
	☐	Client with radar detection		
	☒	Client without radar detection		
Communication Mode	☒	IP Based (Load Based)	☐	Frame Based
TPC Function	☒	With TPC	☐	Without TPC
Weather Band (5600~5650MHz)	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Power-on cycle	**< Master Mode >** 80MHz: Requires 70.50 seconds to complete its power-on cycle. **< Client Mode** > NA (No Channel Availability Check Function)			
Software / Firmware Version	v1.0 Build 2023_1113_0226			
Note: EUT employ a TPC mechanism and TPC have the capability to operate at least 6 dB below highest RF output power.				

Type of EUT		
☒	Stand-alone	
☐	Combined (EUT where the radio part is fully integrated within another device)	
	Combined Equipment - Brand Name / Model No.:	…
☐	Plug-in radio (EUT intended for a variety of host systems)	
	Host System - Brand Name / Model No.:	
☐	Other:	

Antenna & Bandwidth

Antenna	Two (TX)			
Band width Mode	20 MHz	40 MHz	80 MHz	160 MHz
IEEE 802.11a	V	X	X	X
IEEE 802.11n	V	V	X	X
IEEE 802.11ac	V	V	V	X
IEEE 802.11ax	V	V	V	X

IEEE 11n/ac/ax Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	2	MCS 0-15
802.11n (HT40)	2	MCS 0-15
802.11ac (VHT20)	2	MCS 0-8/Nss1-2
802.11ac (VHT40)	2	MCS 0-9/Nss1-2
802.11ac (VHT80)	2	MCS 0-9/Nss1-2
802.11ax (HEW20)	2	MCS 0-11/Nss1-2
802.11 ax (HEW40)	2	MCS0-11/Nss1-2
802.11 ax (HEW80)	2	MCS0-11/Nss1-2

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT support HT20 and HT40.
Note 2: HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
Note 3: IEEE Std. 802.11ac modulation consists of VHT20, VHT40, VHT80 (VHT: Very High Throughput). Then EUT support VHT20, VHT40, VHT80.
Note 4: VHT20, VHT40, VHT80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
Note 5: HEW20, HEW40, HEW80 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
Note 6: Modulation modes consist of below configuration: 11a: IEEE 802.11a, HT20/HT40: IEEE 802.11n, VHT20/VHT40/VHT80: IEEE 802.11ac, HEW20/HEW40/HEW80: IEEE 802.11ax.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	MOXA	ANT-WDB-ARM-02	Dipole	Reverse SMA	2.4GHz+5GHz
2	MOXA	ANT-WDB-ARM-0202	Dipole	Reverse SMA	2.4GHz+5GHz
3	MOXA	ANT-WSB-AHRM-05-1.5m	Dipole	Reverse SMA	2.4GHz
4	MOXA	MAT-WDB-CA-RM-2-0205	Dipole	Reverse SMA	2.4GHz+5GHz
5	MOXA	MAT-WDB-DA-RM-2-0203-1m	Dipole	Reverse SMA	2.4GHz+5GHz

Ant.	Gain (dBi)	
	2.4G	5G
1	2	2
2	2	2
3	5	-
4	2	5
5	2	3

Note 1: The EUT has five groups of antenna, each group is 2 antennas.

Note 2: EUT can match with above antennas for using. Higher gain in each group of antenna was used to perform the worst configuration and result of that was recorded as the final test result.

For 2.4GHz function:

For IEEE 802.11 b/g/VHT/ax mode (2TX/2RX)

Ant. 1, Ant 2, Ant 3, Ant 4, Ant 5 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax mode (2TX/2RX)

Ant. 1, Ant 2, Ant 4, Ant 5 could transmit/receive simultaneously

1.1.3 DFS Band Carrier Frequencies

There are three bandwidth systems.

For 20MHz bandwidth systems, use Channel 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144.

For 40MHz bandwidth systems, use Channel 54, 62, 102, 110, 118, 126, 134, 142.

For 80MHz bandwidth systems, use Channel 58, 106, 122, 138.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5250~5350 MHz U-NII-2A	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
	58	5290 MHz	-	-
5470~5725 MHz U-NII-2C	100	5500 MHz	124	5620 MHz
	102	5510 MHz	126	5630 MHz
	104	5520 MHz	128	5640 MHz
	106	5530 MHz	132	5660 MHz
	108	5540 MHz	134	5670 MHz
	110	5550 MHz	136	5680 MHz
	112	5560 MHz	138	5690 MHz
	116	5580 MHz	140	5700 MHz
	118	5590 MHz	142	5710 MHz
	120	5600 MHz	144	5720 MHz
	122	5610 MHz	-	-

1.1.4 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model name	Model difference		
	client / AP	10/100/1000 BaseT(X) port	operating temperature
AWK-1161C-US	client	1	-25 to 60°C
AWK-1161C-US-T	client	1	-40 to 75°C
AWK-1161C-UN	client	1	-25 to 60°C
AWK-1161C-UN-T	client	1	-40 to 75°C
AWK-1161A-US	AP	1	-25 to 60°C
AWK-1161A-US-T	AP	1	-40 to 75°C
AWK-1161A-UN	AP	1	-25 to 60°C
AWK-1161A-UN-T	AP	1	-40 to 75°C
AWK-1165C-US	client	5	-25 to 60°C
AWK-1165C-US-T	client	5	-40 to 75°C
AWK-1165C-UN	client	5	-25 to 60°C
AWK-1165C-UN-T	client	5	-40 to 75°C
AWK-1165A-US	AP	5	-25 to 60°C
AWK-1165A-US-T	AP	5	-40 to 75°C
AWK-1165A-UN	AP	5	-25 to 60°C
AWK-1165A-UN-T	AP	5	-40 to 75°C

From the above models, model: AWK-1165C-US-T was selected as representative model for the test and its data was recorded in this report.
Note 1：Client, AP mode and band: All these features are defined by software, to fulfil different condition of use.
Note 2：LAN Ports: For different condition of use, product supports 1 LAN port or 5 LAN ports, it depends on product equipped with I/O board or not.
Note 3：Operating temperature: Model name with -T character, product equipped with heatsink on surface to ensure better cooling capacity.

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

The following reference test guidance is not within the scope of accreditation of TAF:

- KDB 905462 D03 Client Without DFS New Rules v01r02

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua **(TAF:** 3785**)**	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
DFS < Master Mode >	DFS01-HY	Wayne Lin	24.1~26.5°C / 55~57%	30/Nov/2023~01/Dec/2023
DFS < Client Mode >	DFS03-HY	John Yang	22.0~24.0°C / 51~58%	18/Dec/2023
Subcontractor：Sporton International Inc. Hsinchu Laboratory				
☐ Hsinchu **(TAF:** 3787**)**	**ADD:** No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)			
	TEL: 886-3-656-9065		**FAX:** 886-3-656-9085	
Test site Designation No. TW0006 with FCC.				

2 Test Configuration of EUT

2.1 Test Channel Frequencies Configuration

Test Channel Frequencies Configuration	
IEEE Std.	**Test Channel Freq. (MHz)**
802.11ax (HEW20)	5300 MHz
802.11ax (HEW40)	5310 MHz
802.11ax (HEW80)	5290 MHz

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Dynamic Frequency Selection (DFS)
Test Condition	Conducted measurement at transmit chains The EUT shall be configured to operate at the highest transmitter output power setting. If more than one antenna assembly is intended for this power setting, the gain of the antenna assembly with the lowest gain shall be used.
Modulation Mode	802.11ax (HEW20), 802.11ax (HEW40), 802.11ax (HEW80)

2.3 Accessories

Accessories				
Antenna 1*2	Brand Name	MOXA	Model Name	ANT-WDB-ARM-02
Antenna 2*2	Brand Name	MOXA	Model Name	ANT-WDB-ARM-0202
Antenna 3*2	Brand Name	MOXA	Model Name	ANT-WSB-AHRM-05-1.5m
Antenna 4*2	Brand Name	MOXA	Model Name	MAT-WDB-CA-RM-2-0205
Antenna 5*2	Brand Name	MOXA	Model Name	MAT-WDB-DA-RM-2-0203-1m

Reminder: Regarding to more detail and other information, please refer to user manual.

2.4 Support Equipment

Support Equipment < Master Mode >					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	DC Power Supply	GW	GPR-3060D	-	-
2	Notebook	DELL	Latitude E5550	-	-
3	Client(Slave)	DELL	Latitude E5570	-	-
4	Console	MOXA	Uport 1150	-	Provided by Customer
5	LAN to RS232 Cable	MOXA	CBL-RJ45F9-150	-	Provided by Customer

Support Equipment < Client Mode >					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	AP (Master)	NETGEAR	RAXE500	-	-
2	Notebook	DELL	Latitude E5510	-	-
3	Notebook	DELL	Latitude E5550	-	-
4	Shielding Box	EMEC	EM-SHB-650550300-M	-	-
5	DC Power Supply	GW	GPR-3060D	-	-
6	Console	MOXA	Uport 1150	-	Provided by Customer
7	LAN to RS232 Cable	MOXA	CBL-RJ45F9-150	-	Provided by Customer

3 Dynamic Frequency Selection (DFS) Test Result

3.1 General DFS Information

3.1.1 DFS Parameters

Table D.1: DFS requirement values	
Parameter	**Value**
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (Note 1).
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second periods. (Notes 1 and 2).
U-NII Detection Bandwidth	Minimum 100% of the 99% power bandwidth (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 Channel changes (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 is used and for each frequency step the minimum percentage of detection is 90%. Measurements are performed with no data traffic.	

Table D.2: Interference threshold values	
Maximum Transmit Power	**Value (see note)**
EIRP ≥ 200 mW	-64 dBm
EIRP < 200 mW and PSD < 10dBm/MHz	-62 dBm
EIRP < 200 mW and PSD ≥ 10dBm/MHz	-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. Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911.	

3.1.2 Applicability of DFS Requirements Prior to Use of a Channel

Requirement	DFS Operational mode		
	Master	Client without radar detection	Client with radar detection
Non-Occupancy Period	Yes	Not required (See the note)	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

Note :
According to KDB 905462 D03 Client Without DFS New Rules v01r02 (b) 6."An analyzer plot that contains a single 30-minute sweep on the original channel "

3.1.3 Applicability of DFS Requirements during Normal Operation

Requirement	DFS Operational mode		
	Master	Client without radar detection	Client with radar detection
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 Detection	Client Without Radar Detection
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 each of the bonded 20 MHz channels and the channel center frequency.		

3.1.4 User Access Restrictions

User Access Restrictions	
☒	DFS controls (hardware or software) related to radar detection are NOT accessible to the user. Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms is not available to the end user.

3.1.5 Channel Loading/Data Streaming

☐	The data file (MPEG-4) has been transmitting in a streaming mode.
☒	Software to ping the client is permitted to simulate data transfer with random ping intervals.
☒	Minimum channel loading of approximately 17%.
☐	Unicast protocol has been used.

3.2 Radar Test Waveform Calibration

3.2.1 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1A	1	15 unique PRI in KDB 905462 D02 Table 5a	$Roundup\left\{\left(\frac{1}{360}\right)\times\left(\frac{19\times10^6}{PRI}\right)\right\}$	60%	15
1B	1	15 unique PRI within 518-3066, Excluding 1A PRI		60%	15
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.					

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

3.2.2 Long Pulse Radar Test Waveform

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

Each waveform is defined as follows:

- The transmission period for the Long Pulse Radar test signal is 12 seconds.
- There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst Count.
- Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
- The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
- Each pulse has a linear FM chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a transmission period will have the same chirp width. The chirp is centered on the pulse. For example, with a radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.

- If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the time between the first and second pulses is chosen independently of the time between the second and third pulses.
- The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst Count. Each interval is of length (12,000,000 / Burst Count) microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and [(12,000,000 / Burst Count) – (Total Burst Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen independently.

3.2.3 Frequency Hopping Radar Test Waveform

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

The FCC Type 6 waveform uses a static waveform with 100 bursts in the instruments ARB. In addition, the RF list mode is operated with a list containing 100 frequencies from a randomly generated list and it had be ensured that at least one of the random frequencies falls into the UNII Detection Bandwidth of the DUT. Each burst from the waveform file initiates a trigger pulse at the beginning that switches the RF list from one item to the next one.

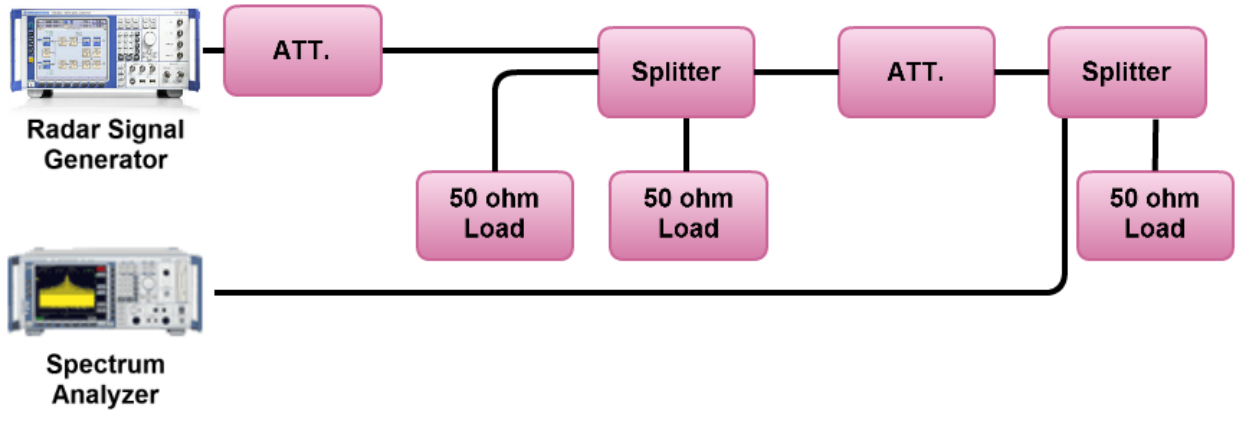
3.2.4 DFS Threshold Level

DFS Threshold Level	
DFS Threshold level: -64 dBm	☒ at the antenna connector
	☐ in front of the antenna
The Interference **Radar Detection Threshold Level** is *-64 dBm + 0 [dBi]* = -64 dBm. That had been taken into account the output power range and antenna gain.	

3.2.5 Calibration Setup

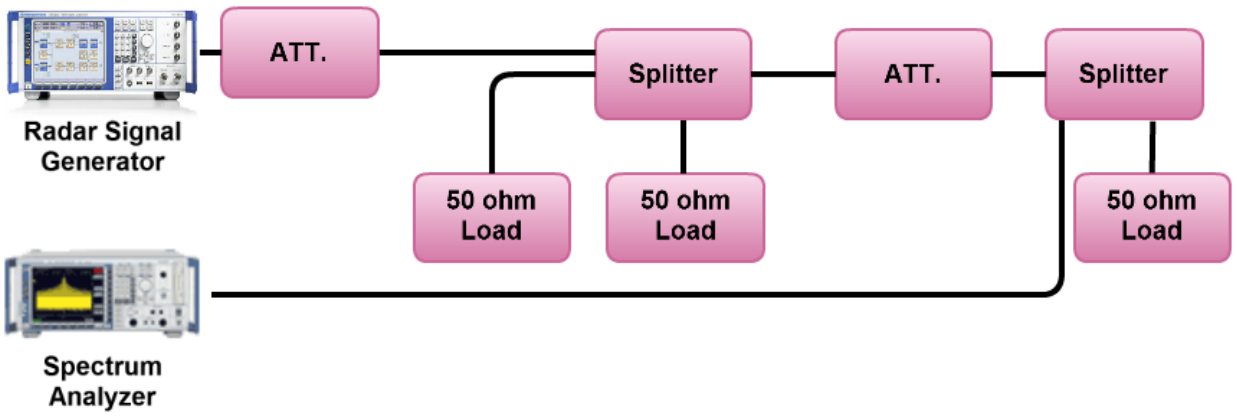
< Master Mode >

Master Conducted Calibration Setup



< Client Mode >

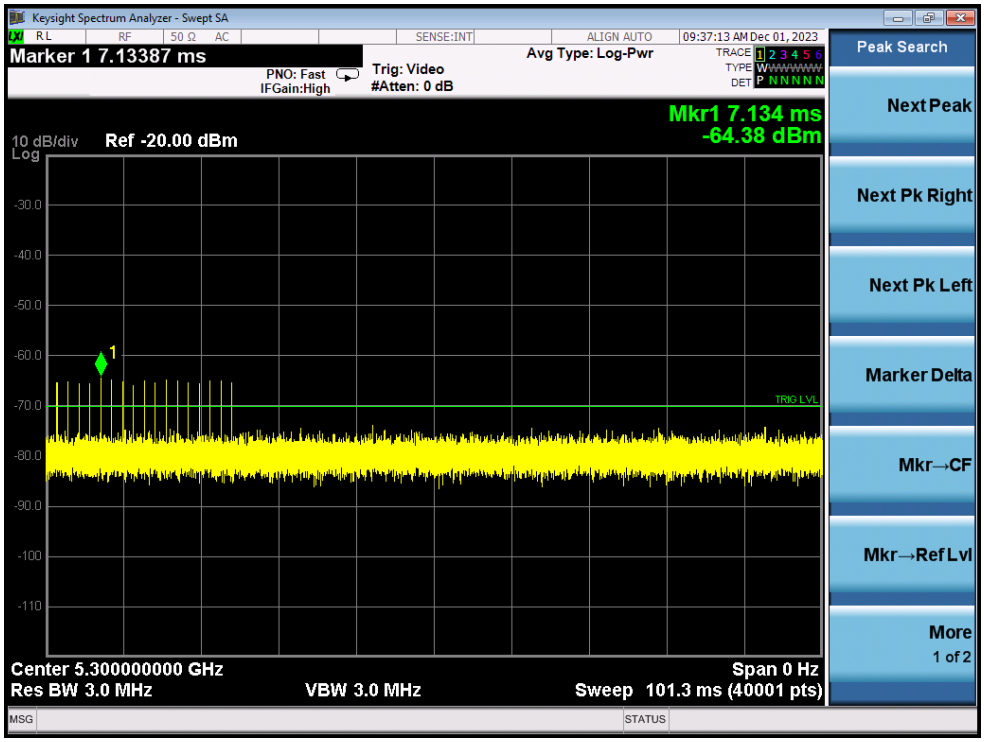
Client Conducted Calibration Setup



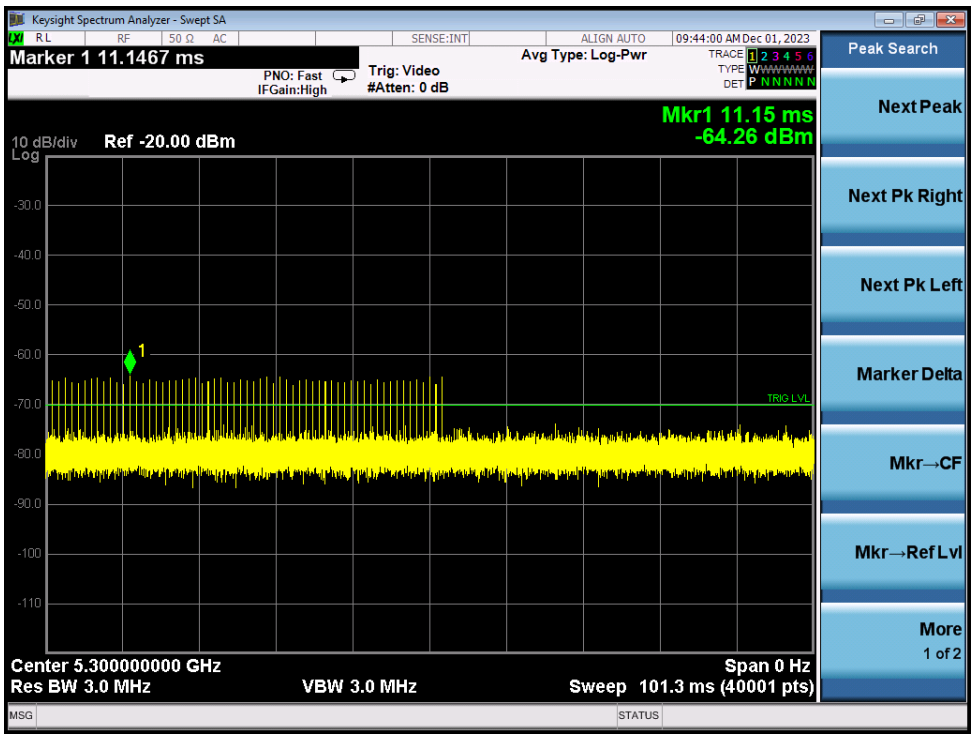
3.2.6 Radar Waveform calibration Plot

< Master Mode >

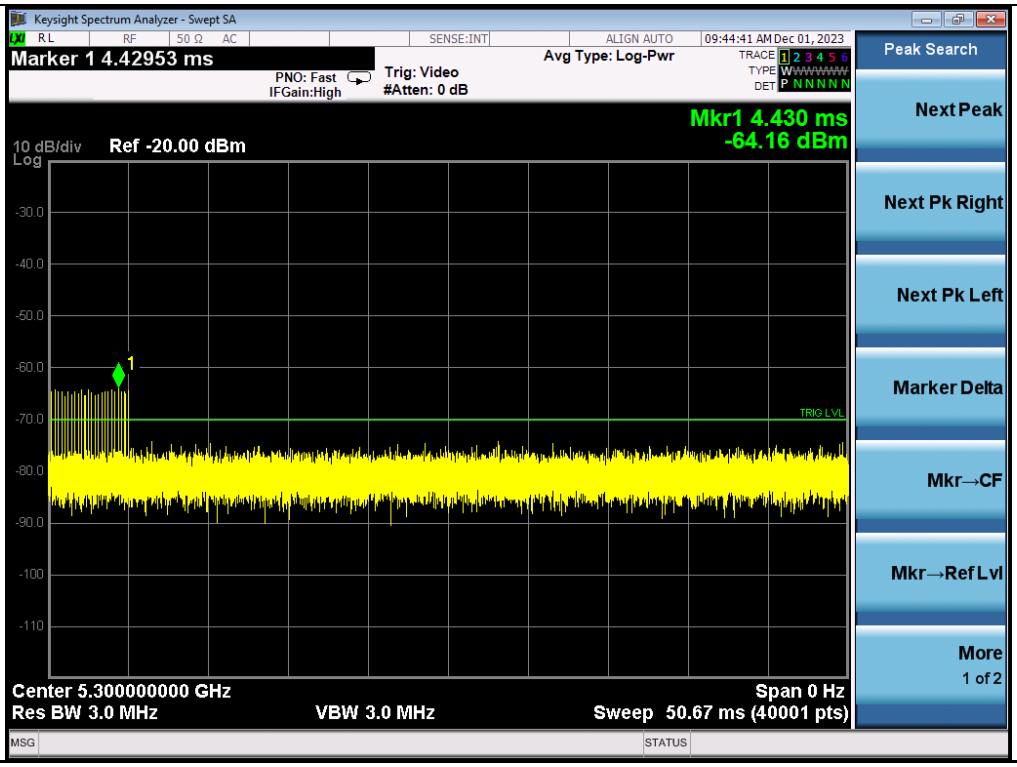
Radar #0 DFS detection threshold level



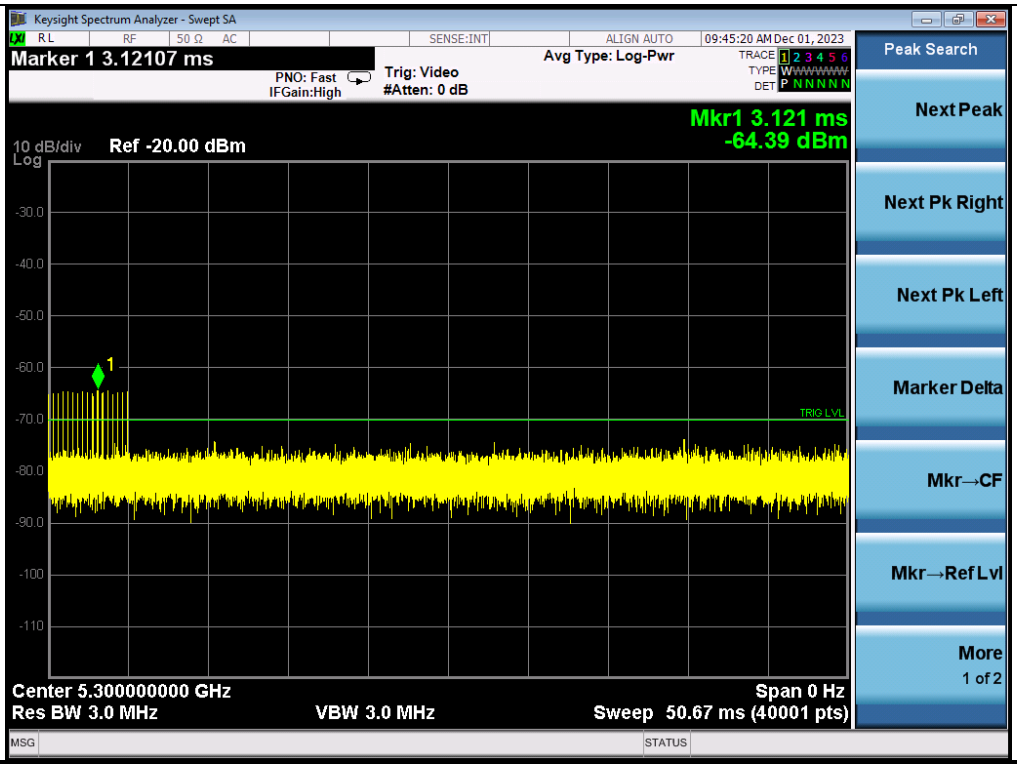
Radar #1 DFS detection threshold level



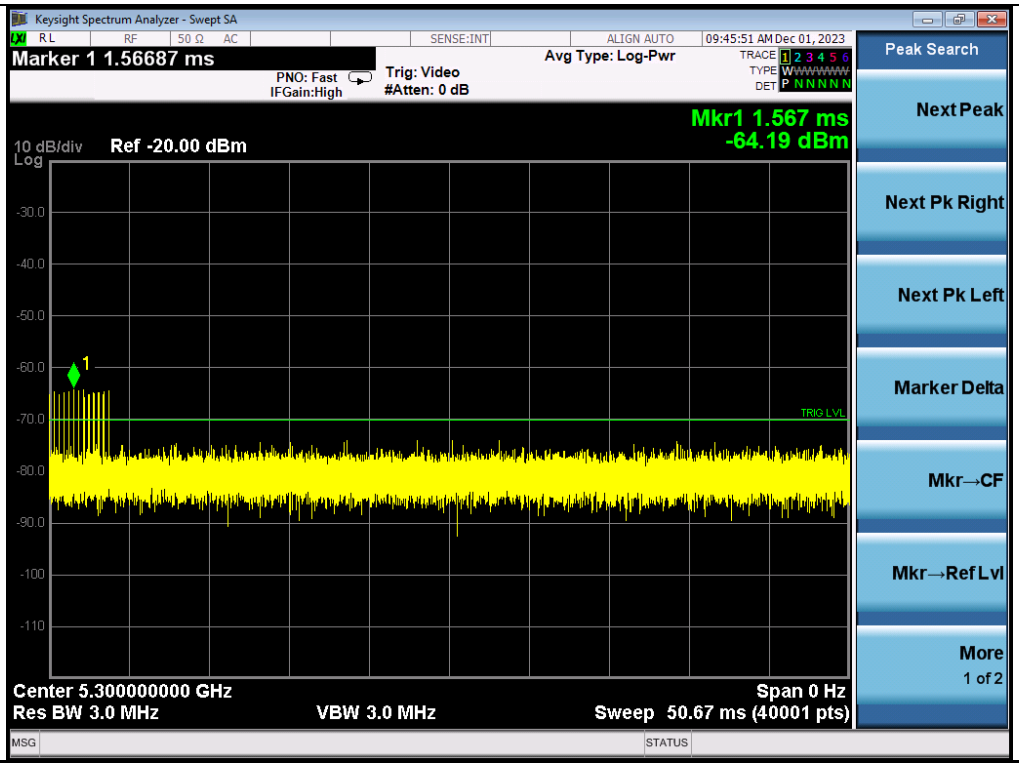
Radar #2 DFS detection threshold level



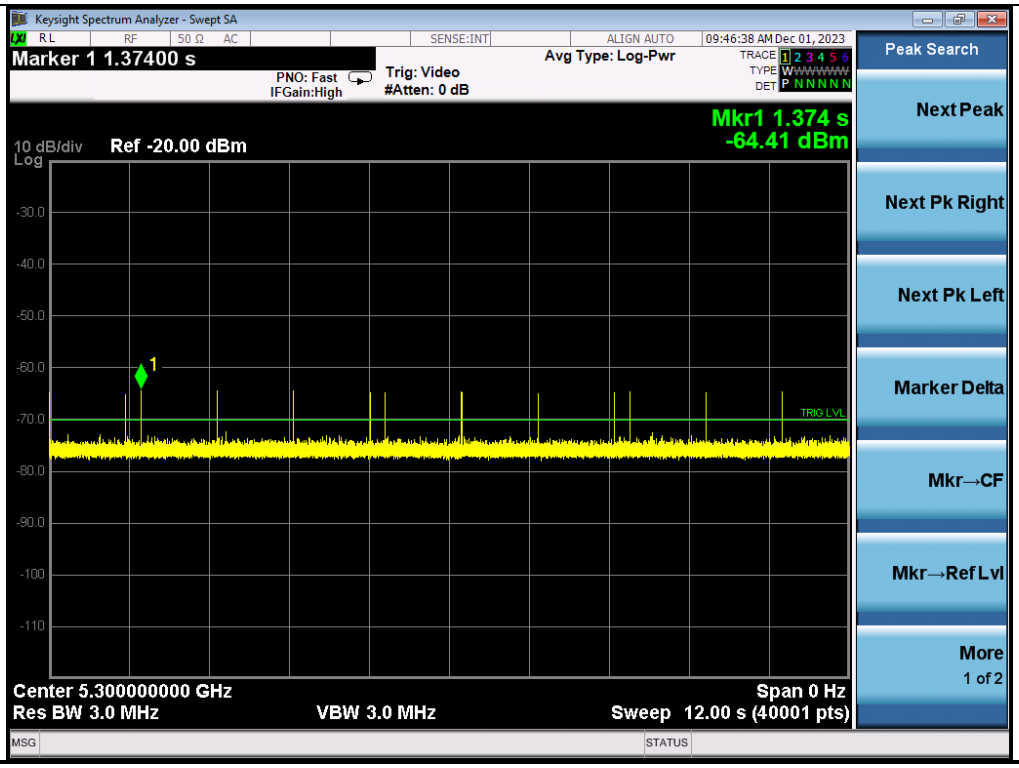
Radar #3 DFS detection threshold level



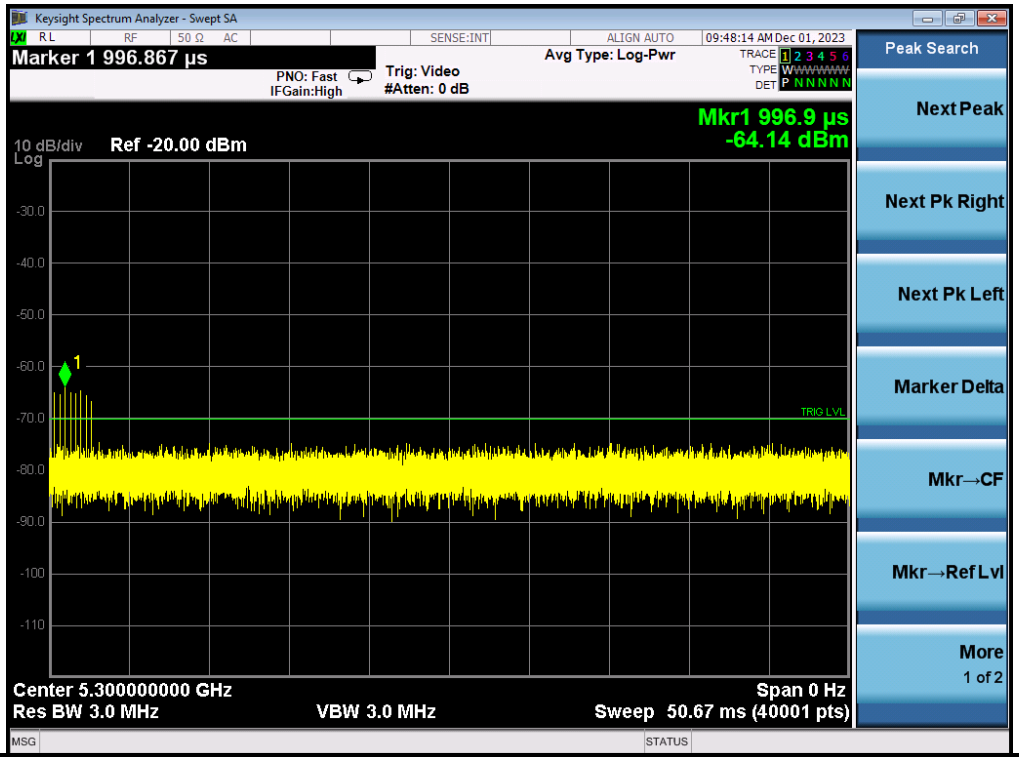
Radar #4 DFS detection threshold level



Radar #5 DFS detection threshold level

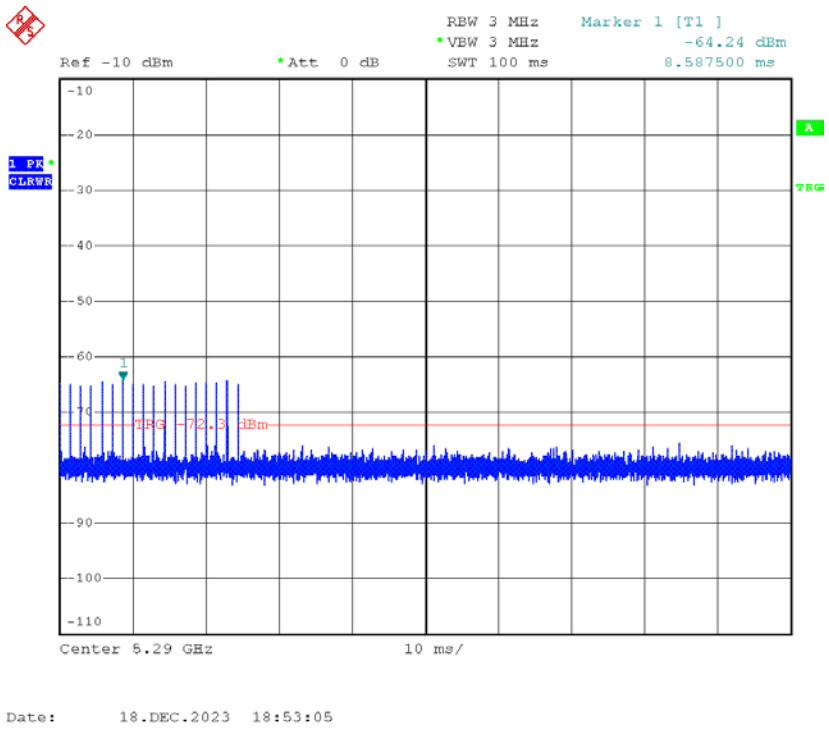


Radar #6 DFS detection threshold level



< Client Mode >

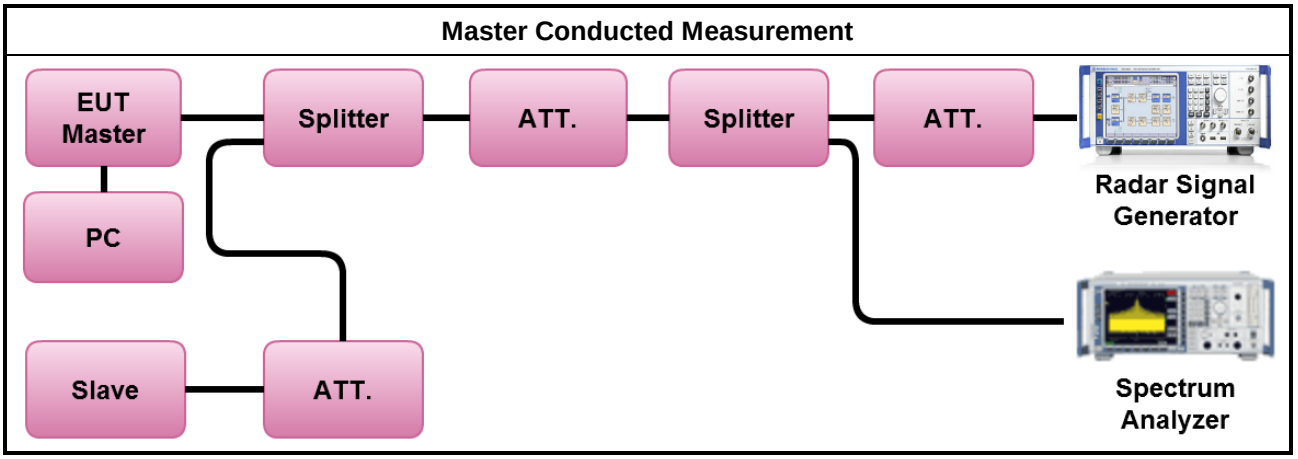
Radar #0 DFS detection threshold level



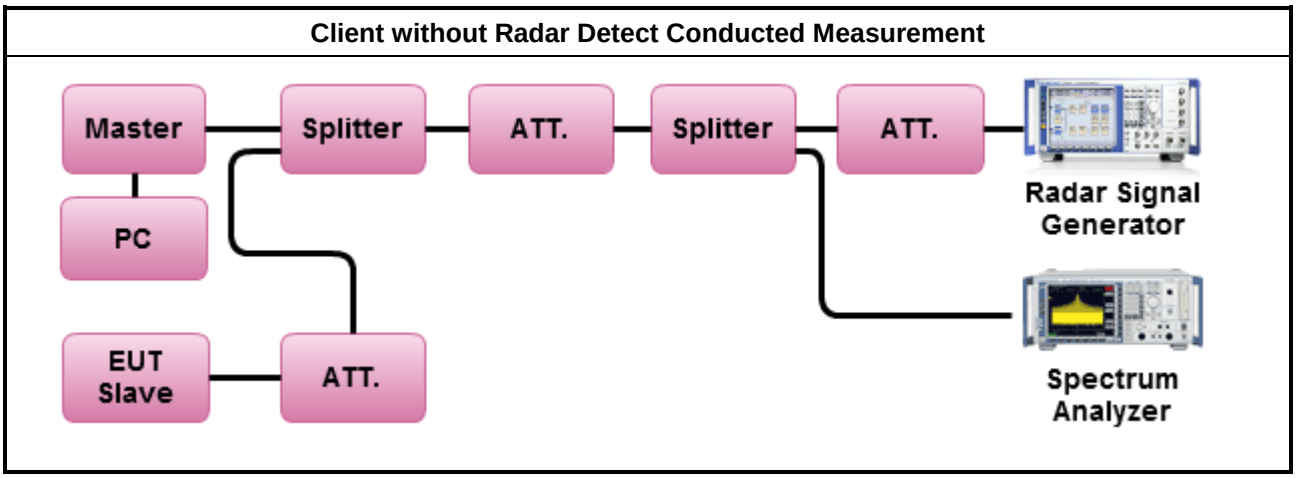
3.2.7 Test Setup

A spectrum analyzer is used as a monitor to verify that the EUT has vacated the Channel within the (Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and Channel move.

< Master Mode >



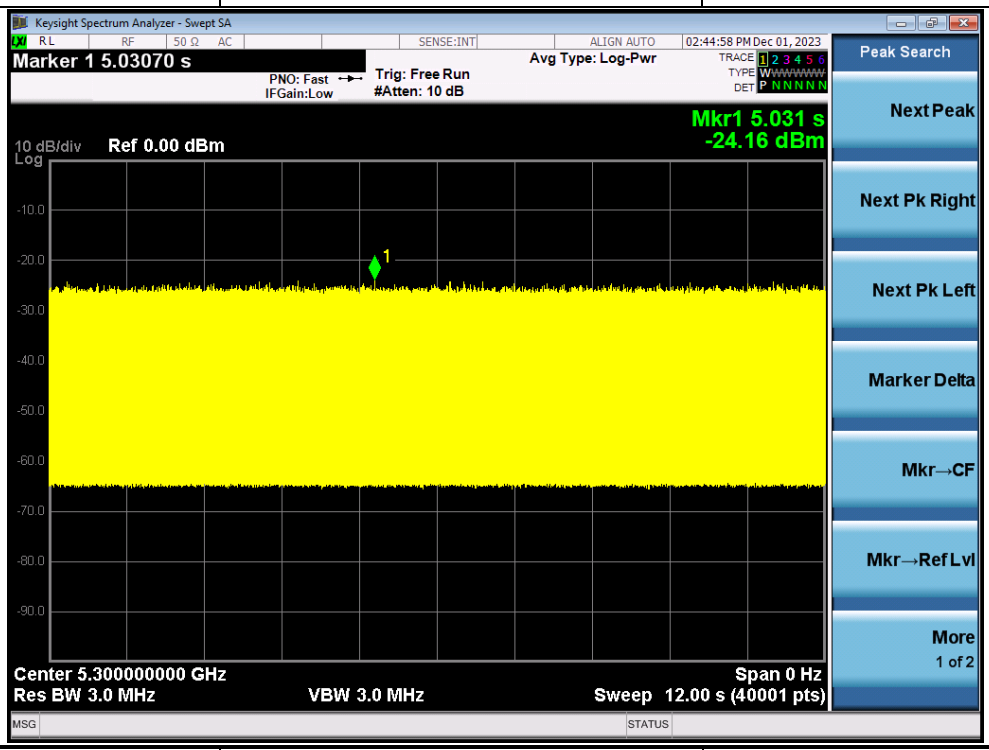
<Client Mode >



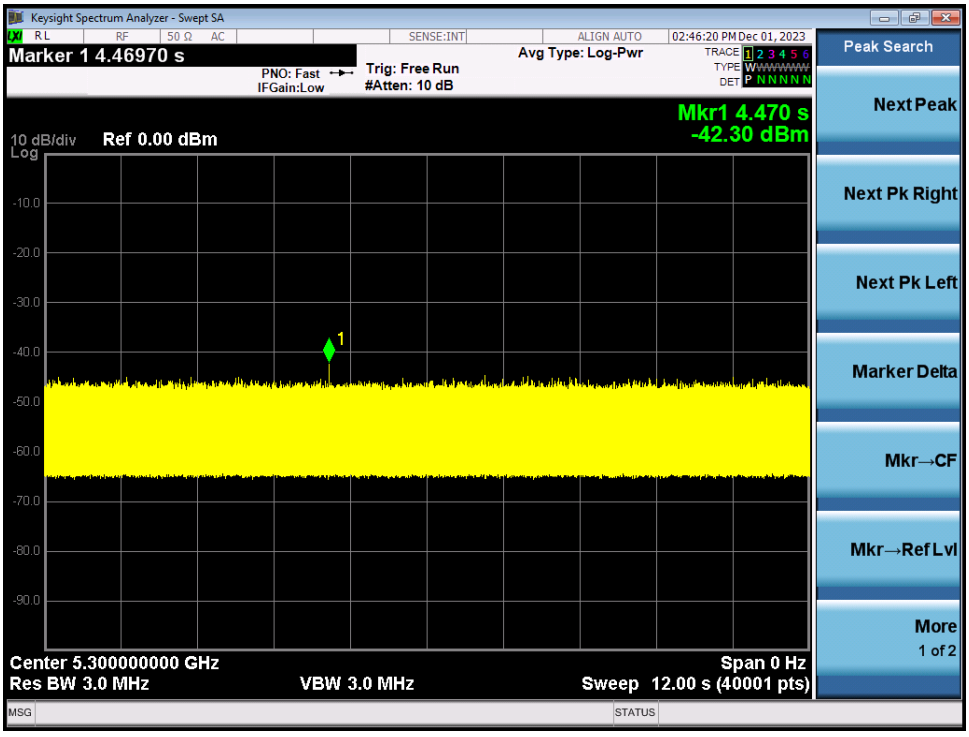
3.2.8 Data traffic Plot

< Master Mode >

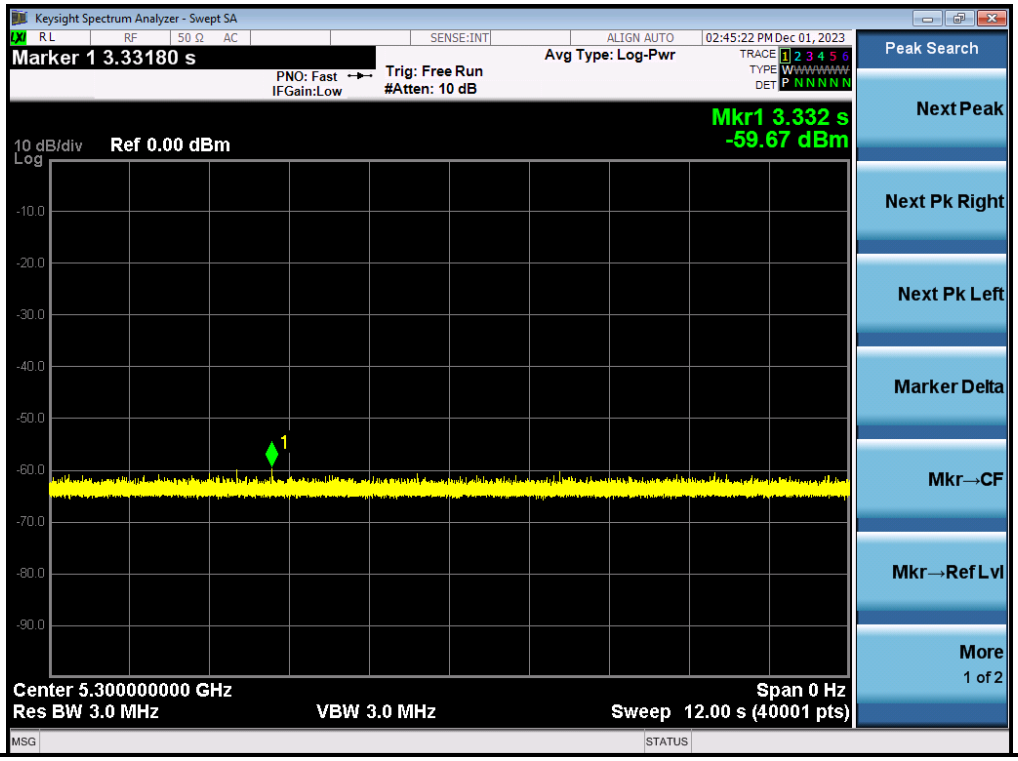
EUT Data traffic Plot	Modulation Mode: 802.11ax (HEW80)	Test Frequency: 5300 MHz



Client Data Traffic Plot	Modulation Mode: 802.11ax (HEW80)	Test Frequency: 5300 MHz

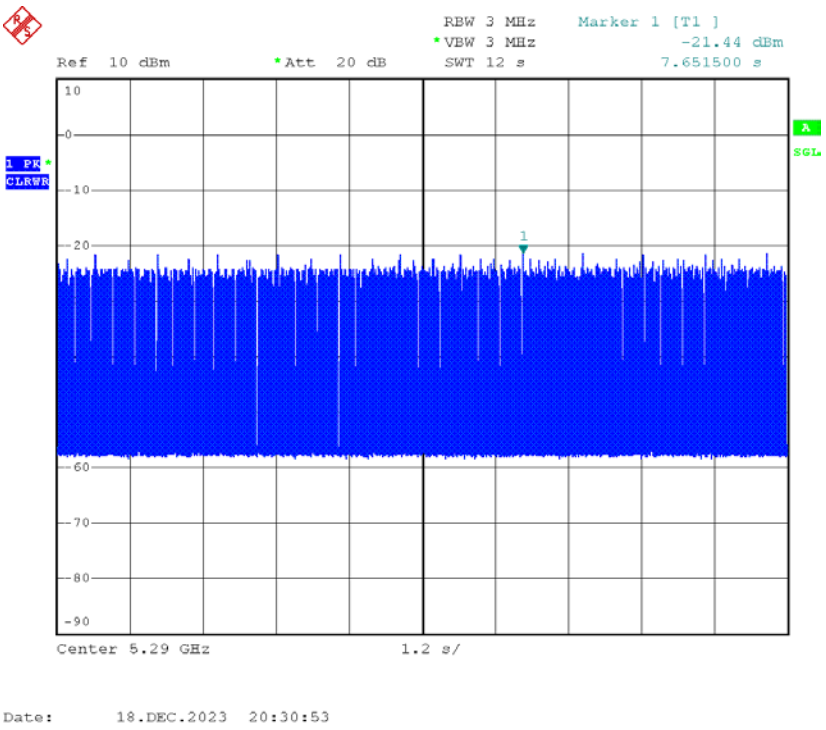


Without Data Traffic Plot	Modulation Mode: 802.11ax (HEW80)	Test Frequency: 5300 MHz

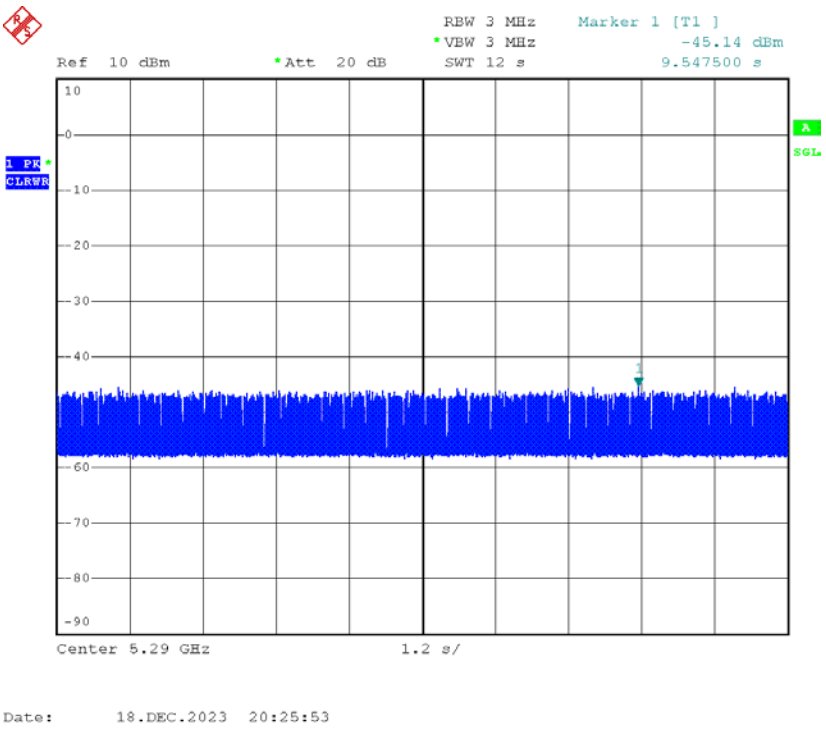


< Client Mode >

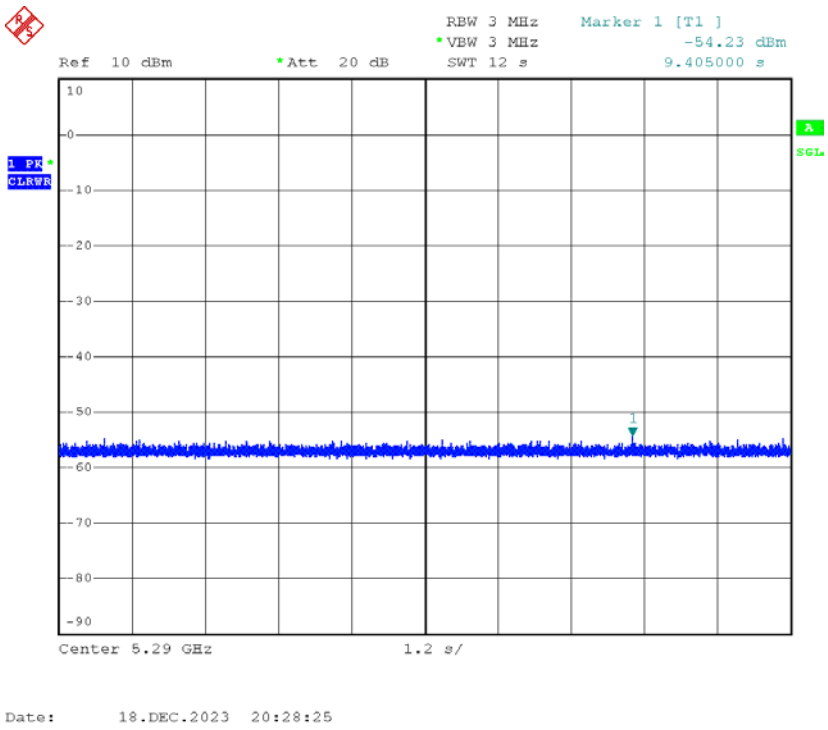
EUT Data traffic Plot	Modulation Mode: 802.11ax (HEW80)	Test Frequency: 5290 MHz



Master Data Traffic Plot	Modulation Mode: 802.11ax (HEW80)	Test Frequency: 5290 MHz



Without Data Traffic Plot	Modulation Mode: 802.11ax (HEW80)	Test Frequency: 5290 MHz



3.3 UNII Detection Bandwidth

3.3.1 UNII Detection Bandwidth Limit

< Master Mode >

Channel Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	UNII Detection Bandwidth Min. Limit (MHz)
20	19.129	20
40	38.383	39
80	77.898	78
UNII Detection Bandwidth is minimum 100% of the 99% power bandwidth. A single radar Burst is generated for a minimum of 10 trials, and the response of the UUT is noted. The UUT must detect the Radar Waveform 90% or more of the time.		

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method
☒ During the U-NII Detection Bandwidth detection test, radar type 0 is used and for each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic. The EUT is set up as a standalone device (no associated Client and no traffic). The radar frequency is increased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The highest frequency at which detection is greater than or equal to 90% is denoted as F_H. The radar frequency is decreased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The lowest frequency at which detection is greater than or equal to 90% is denoted as F_L. UNII Detection Bandwidth = F_H - F_L.

3.3.4 Test Result of UNII Detection Bandwidth

< Master Mode >

EUT Frequency=5300 MHz											
Channel Bandwidth (MHz)	**20**										
Radar Frequency (MHz)	**DFS Detection Trials (1=Detection, 0= No Detection)**										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5290	1	1	1	1	1	1	1	1	1	1	100
5295	1	1	1	1	1	1	1	1	1	1	100
5300	1	1	1	1	1	1	1	1	1	1	100
5305	1	1	1	1	1	1	1	1	1	1	100
5310	1	1	1	1	1	1	1	1	1	1	100
Radar Type 0-Detection Bandwidth (MHz) =											20
UNII Detection Bandwidth Min. Limit (MHz) =											20
Test Result											**Complied**

< Master Mode >

EUT Frequency=5310 MHz											
Channel Bandwidth (MHz)	**40**										
Radar Frequency (MHz)	**DFS Detection Trials (1=Detection, 0= No Detection)**										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5290	1	1	1	1	1	1	1	1	1	1	100
5295	1	1	1	1	1	1	1	1	1	1	100
5300	1	1	1	1	1	1	1	1	1	1	100
5305	1	1	1	1	1	1	1	1	1	1	100
5310	1	1	1	1	1	1	1	1	1	1	100
5315	1	1	1	1	1	1	1	1	1	1	100
5320	1	1	1	1	1	1	1	1	1	1	100
5325	1	1	1	1	1	1	1	1	1	1	100
5330	1	1	1	1	1	1	1	1	1	1	100
Radar Type 0-Detection Bandwidth (MHz) =											40
UNII Detection Bandwidth Min. Limit (MHz) =											39
Test Result											**Complied**

< Master Mode >

EUT Frequency=5290 MHz											
Channel Bandwidth (MHz)	**80**										
Radar Frequency (MHz)	**DFS Detection Trials (1=Detection, 0= No Detection)**										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5250	1	1	1	1	1	1	1	1	1	1	100
5255	1	1	1	1	1	1	1	1	1	1	100
5260	1	1	1	1	1	1	1	1	1	1	100
5265	1	1	1	1	1	1	1	1	1	1	100
5270	1	1	1	1	1	1	1	1	1	1	100
5275	1	1	1	1	1	1	1	1	1	1	100
5280	1	1	1	1	1	1	1	1	1	1	100
5285	1	1	1	1	1	1	1	1	1	1	100
5290	1	1	1	1	1	1	1	1	1	1	100
5295	1	1	1	1	1	1	1	1	1	1	100
5300	1	1	1	1	1	1	1	1	1	1	100
5305	1	1	1	1	1	1	1	1	1	1	100
5310	1	1	1	1	1	1	1	1	1	1	100
5315	1	1	1	1	1	1	1	1	1	1	100
5320	1	1	1	1	1	1	1	1	1	1	100
5325	1	1	1	1	1	1	1	1	1	1	100
5330	1	1	1	1	1	1	1	1	1	1	100
Radar Type 0-Detection Bandwidth (MHz) =											80
UNII Detection Bandwidth Min. Limit (MHz) =											78
Test Result											**Complied**

3.4 Channel Availability Check (CAC)

3.4.1 Channel Availability Check Limit

Channel Availability Check Limit	
☒	The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute (60 sec) on the intended operating frequency.

3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

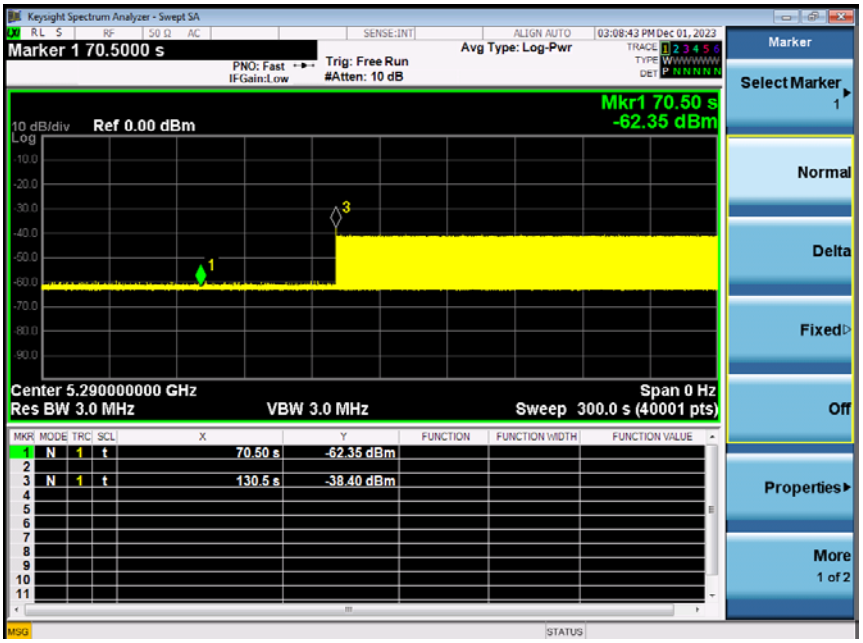
Test Method	
☒	For Initial Channel Availability Check Time. The EUT does not emit beacon, control, or data signals on the test Channel until the power-up sequence has been completed and the UNII device checks for Radar Waveforms for one minute on the test Channel. This test does not use any Radar Waveforms.
☒	For Radar Burst at the Beginning of the Channel Availability Check Time. To verify successful radar detection on the selected Channel during a period equal to the Beginning of the Channel Availability Check Time.
☒	For Radar Burst at the End of the Channel Availability Check Time. To verify successful radar detection on the selected Channel during a period equal to the End of the Channel Availability Check Time.

3.4.4 Test Result of Initial Channel Availability Check Time

< Master Mode >

Modulation Mode	Freq.	Radar Test Signal
802.11ax (HEW80)	5290 MHz	N/A

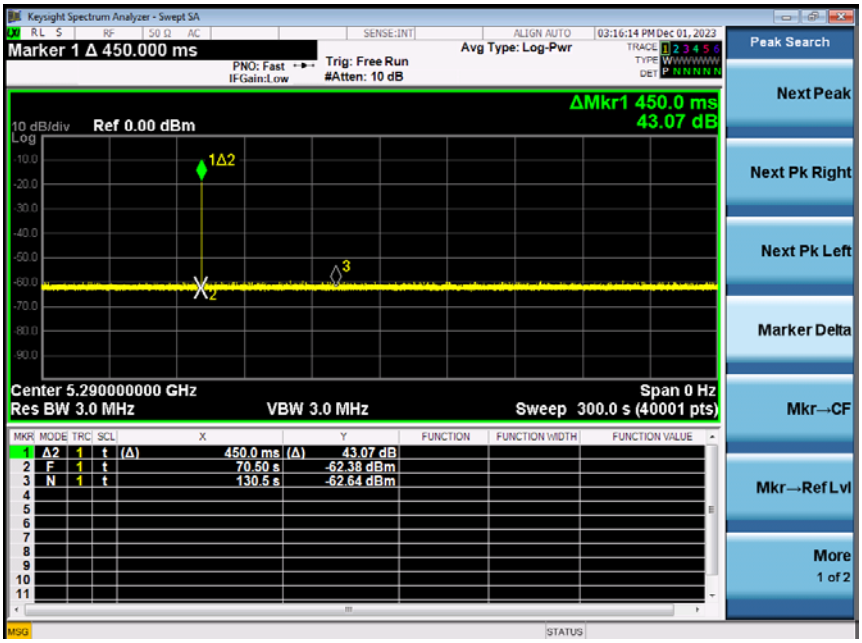
The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (70.50 sec). The initial power up time of the EUT is indicated by marker 1 (70.500 sec). Initial beacons/data transmissions are indicated by marker 2 (130.50 sec).



Test Result	Complied

3.4.5 Test Result of Radar Burst at the Beginning of the Channel Availability Check Time

< Master Mode >

Modulation Mode	Freq. (MHz)	Radar Type Signal
802.11ax (HEW80)	5290 MHz	0
Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 229.050 seconds after the radar Burst has been generated. Verify that during the 300 seconds measurement window no EUT transmissions occurred.		
		
Test Result	**Complied**	

3.4.6 Test Result of Radar Burst at the End of the Channel Availability Check Time

< Master Mode >

Modulation Mode	Freq. (MHz)	Radar Type Signal
802.11ax (HEW80)	5290 MHz	0

Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 171.050 seconds after the radar Burst has been generated. Verify that during the 300 seconds measurement window no EUT transmissions occurred.

Test Result	Complied

3.5 In-service Monitoring

3.5.1 In-service Monitoring Limit

In-service Monitoring Limit	
Channel Move Time	10 sec
Channel Closing Transmission Time	200 ms + an aggregate of 60 ms over remaining 10 sec periods.
Non-occupancy period	Minimum 30 minutes

3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method	
☒	Verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time. Client Device will associate with the EUT. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the EUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time limits.
☒	Verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time. One 12 sec plot needs to be reported for the Short Pulse Radar Types 0. And zoom-in a 60 ms plot verified channel closing time for the aggregate transmission time starting from 200ms after the end of the radar signal to the completion of the channel move.
☒	Verified during In-Service Monitoring; Non-Occupancy Period. Client Device will associate with the EUT. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the EUT during the observation time (Non-Occupancy Period). Compare the Non-Occupancy Period limits.

3.5.4 Test Result of In-service Monitoring

Modulation Mode: 802.11ax (HEW80)
< Master Mode >

Parameter	Test Result	Limit
	Type 0	
Test Channel (MHz)	5290 MHz	-
Channel Move Time (sec.)	0.5021	< 10s
Channel Closing Transmission Time (ms) (Note)	2.4	< 60ms
Non-Occupancy Period (min.)	≧30	≧ 30 min

< Client Mode >

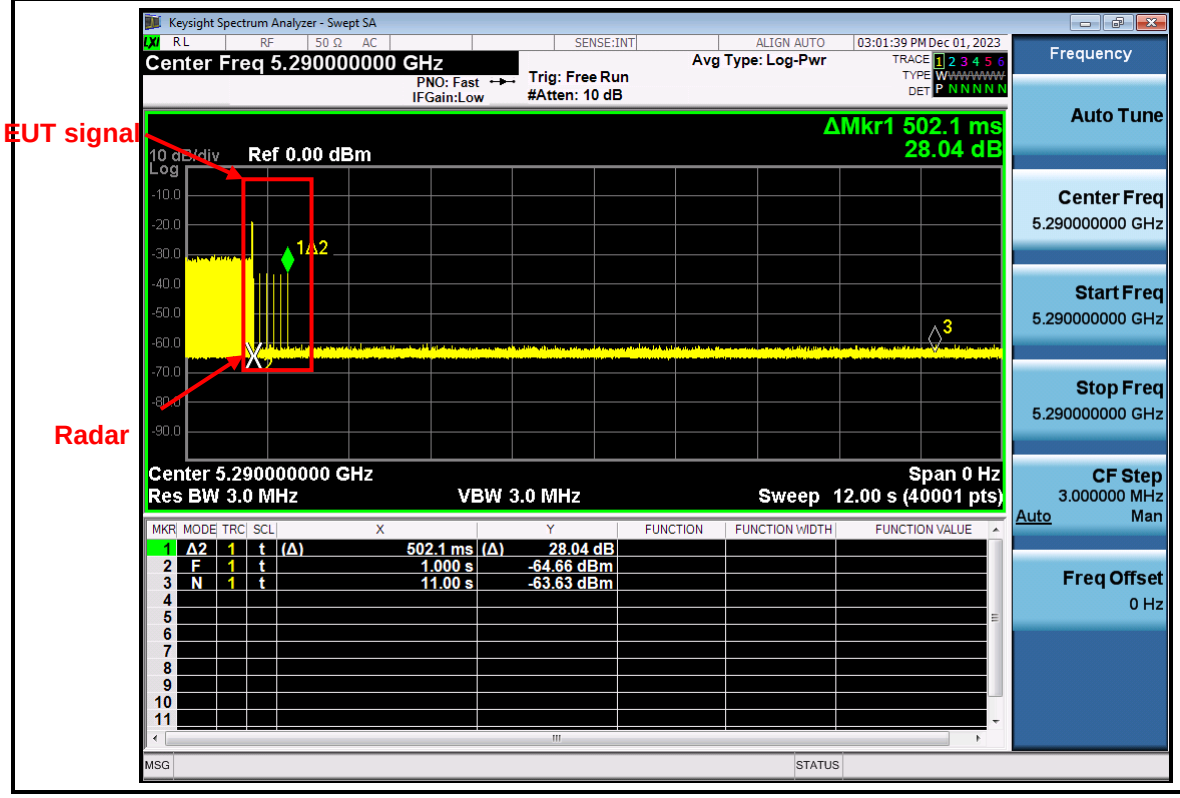
Parameter	Test Result	Limit
	Type 0	
Test Channel (MHz)	5290 MHz	-
Channel Move Time (sec.)	0.878	< 10s
Channel Closing Transmission Time (ms) (Note)	40.5	< 60ms
Non-Occupancy Period (min.)	≧30	≧ 30 min

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

3.5.5 Test Plot of In-Service Monitoring for Channel Move Time

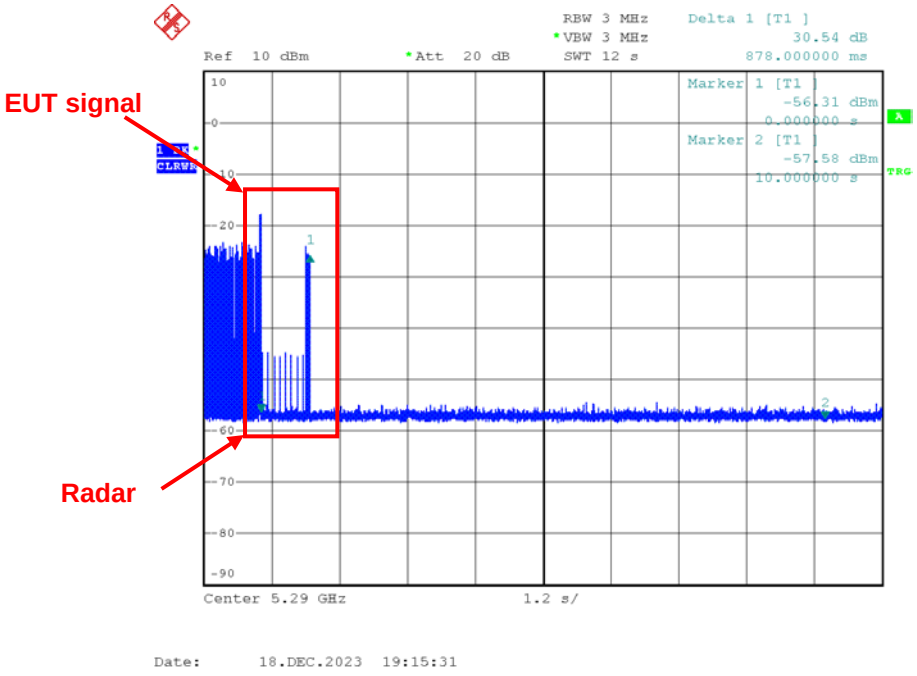
< Master Mode >

Modulation Mode	Freq.	Radar Type
802.11ax (HEW80)	5290 MHz	0



<Client Mode >

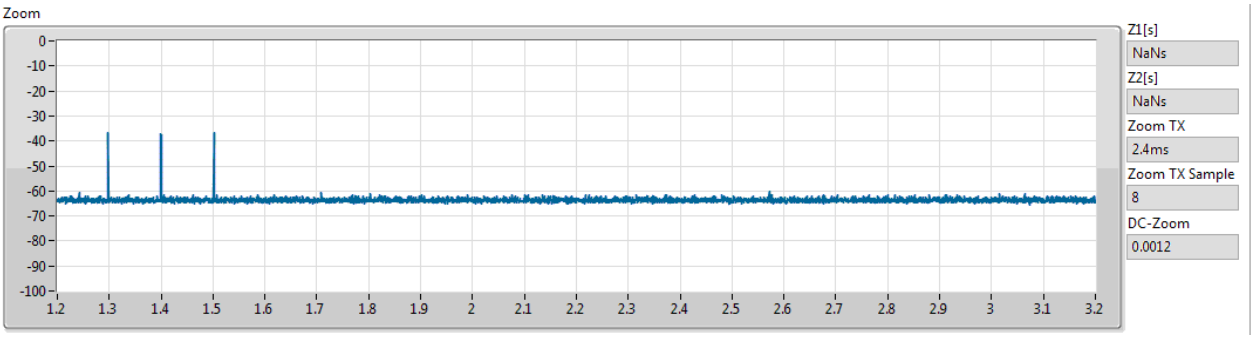
Modulation Mode	Freq.	Radar Type
802.11ax (HEW80)	5290 MHz	0



3.5.6 Test Plot of In-Service Monitoring for Channel Closing Transmission Time

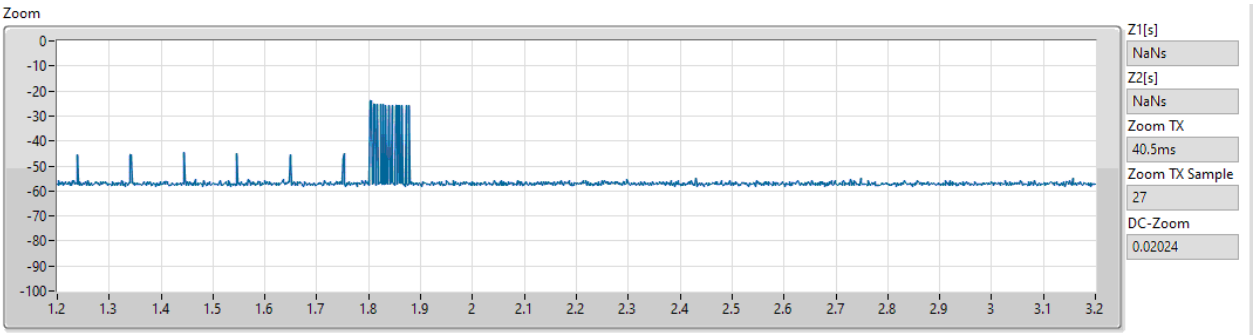
< Master Mode >

Modulation Mode	Freq.	Radar Type
802.11ax (HEW80)	5290 MHz	0
Channel Closing Transmission Time is comprised of 200 ms starting at the beginning of the Channel Move Time plus 60ms additional intermittent control signals		



<Client Mode >

Modulation Mode	Freq.	Radar Type
802.11ax (HEW80)	5290 MHz	0
Channel Closing Transmission Time is comprised of 200 ms starting at the beginning of the Channel Move Time plus 60ms additional intermittent control signals		



3.5.7 Test Plot of In-Service Monitoring for Non-Occupancy Period

<Master Mode >

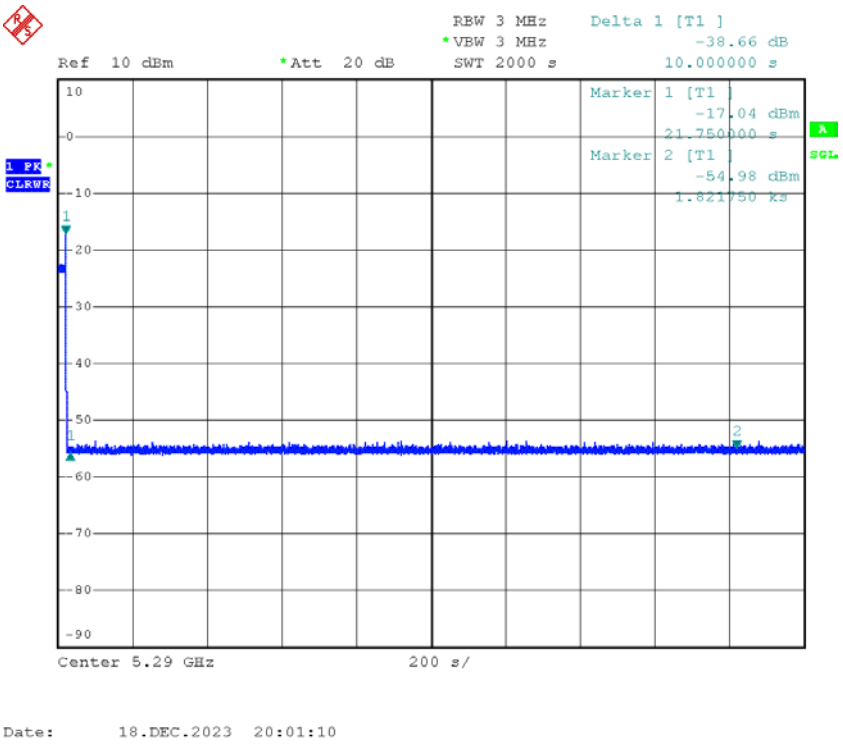
Modulation Mode	Freq.
802.11ax (HEW80)	5290 MHz

Non-Occupancy Period
During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.

<Client Mode >

Modulation Mode	Freq.
802.11ax (HEW80)	5290 MHz

Non-associated test
Master was off.
During the 30 minutes observation time, The UUT did not make any transmissions in the DFS band after UUT power up.



3.6 Statistical Performance Check

3.6.1 Statistical Performance Check Limit

Radar Type	Minimum Percentage of Successful Detection (Pd)	Minimum Trials
1	60%	30
2	60%	30
3	60%	30
4	60%	30
Aggregate (Radar Types 1-4)	80%	120
5	80%	30
6	70%	30

The percentage of successful detection is calculated by:

$$\frac{TotalWaveformDetections}{TotalWaveformTrails} \times 100 = \text{Probability of Detection Radar Waveform}$$

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

$$\frac{Pd1 + Pd2 + Pd3 + Pd4}{4}$$

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

Test Method
☒ For Statistical Performance Check test. Demonstrating a minimum channel loading of approximately 17% or greater of the test. Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 1-4 and 6 to ensure detection occurs. Then Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.

3.6.4 Test Result of Statistical Performance Check

<Master Mode >
Modulation Mode: 802.11ax (HEW20)

Type 1 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulse Per Second)	PRI (us)	1=Detection 0=No Detection
1	5301	1	1930.5	518	1
2	5300	23	326.2	3066	1
3	5296	19	1139.0	878	1
4	5297	12	1355.0	738	1
5	5296	4	1730.1	578	1
6	5301	8	1519.8	658	1
7	5296	15	1253.1	798	1
8	5296	6	1618.1	618	1
9	5304	14	1285.3	778	1
10	5299	3	1792.1	558	1
11	5291	13	1319.3	758	1
12	5292	9	1474.9	678	1
13	5293	7	1567.4	638	1
14	5292	17	1193.3	838	1
15	5293	10	1432.7	698	1
16	5292	-	1692.0	591	0
17	5292	-	328.1	3048	1
18	5292	-	373.4	2678	1
19	5292	-	574.4	1741	1
20	5292	-	1216.5	822	1
21	5306	-	801.3	1248	1
22	5306	-	488.5	2047	1
23	5307	-	956.0	1046	1
24	5306	-	517.6	1932	1
25	5306	-	1422.5	703	1
26	5308	-	542.0	1845	1
27	5309	-	741.3	1349	1
28	5307	-	881.8	1134	1
29	5306	-	427.4	2340	1
30	5308	-	628.9	1590	1
Detection Percentage (%)					96.667
Limit					60%
Test Result					**Complied**

Type 2 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5300	2.6	221	23	1
2	5301	4.6	198	27	1
3	5301	1.1	184	29	1
4	5298	4.8	203	24	1
5	5302	2.4	162	25	1
6	5297	3.4	204	28	1
7	5296	2.3	170	27	0
8	5299	3.5	184	23	1
9	5302	4.9	150	27	1
10	5301	4.6	211	29	1
11	5294	2.9	158	23	0
12	5294	2.6	226	27	1
13	5294	1.6	204	26	1
14	5295	3.9	181	25	1
15	5295	4.6	202	24	0
16	5295	4.1	194	27	1
17	5294	2.3	193	28	1
18	5291	3.9	173	29	1
19	5294	4.3	188	23	1
20	5294	1.5	215	26	0
21	5307	4.9	227	27	1
22	5307	1.1	199	23	1
23	5308	4.5	155	29	0
24	5306	4.0	190	27	1
25	5309	2.4	151	23	1
26	5308	2.5	180	28	1
27	5306	2.5	228	23	0
28	5307	2.5	203	25	0
29	5306	1.5	188	25	1
30	5306	1.9	217	24	1
Detection Percentage (%)					76.667
Limit					60%
Test Result					**Complied**

Type 3 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection ; 0=No Detection
1	5299	8.0	205	16	1
2	5300	6.7	382	18	1
3	5299	8.6	418	16	1
4	5303	9.4	351	17	1
5	5302	7.4	383	18	1
6	5304	9.8	232	16	1
7	5300	9.1	377	17	0
8	5300	9.6	457	16	1
9	5297	8.0	471	18	1
10	5300	9.0	304	18	1
11	5292	8.0	316	17	1
12	5292	9.8	325	16	0
13	5291	8.0	409	17	1
14	5292	9.9	200	17	1
15	5294	8.8	458	16	1
16	5294	8.0	232	18	1
17	5292	8.3	250	16	1
18	5291	8.7	270	16	0
19	5292	7.7	350	17	1
20	5294	7.1	230	16	1
21	5309	7.3	416	18	1
22	5309	7.6	498	18	1
23	5308	7.3	286	17	0
24	5307	7.3	287	16	1
25	5307	7.5	462	17	1
26	5306	6.2	300	17	1
27	5309	6.4	323	18	0
28	5306	7.1	420	16	1
29	5306	7.2	395	18	1
30	5308	8.4	377	16	1
Detection Percentage (%)					83.333
Limit					60%
Test Result					**Complied**

Type 4 Radar Statistical Performance

Trial #	*Test Freq. (MHz)*	*Pulse Width (us)*	*PRI (us)*	*Pulses / Burst*	*1=Detection 0=No Detection*
1	5300	18.0	242	15	1
2	5302	19.9	279	12	1
3	5303	12.9	487	14	1
4	5298	15.0	452	13	0
5	5303	16.3	230	12	1
6	5302	19.8	238	13	1
7	5296	18.2	420	16	0
8	5297	16.3	452	15	1
9	5300	14.2	495	12	1
10	5296	17.8	228	16	0
11	5295	19.1	211	16	1
12	5295	18.4	283	15	1
13	5292	11.8	411	12	1
14	5294	14.2	284	13	1
15	5291	13.9	202	12	1
16	5294	17.8	340	14	1
17	5291	15.6	290	16	1
18	5294	14.6	250	16	1
19	5294	14.4	484	15	1
20	5294	18.9	387	13	0
21	5307	11.1	348	15	1
22	5307	13.8	291	16	0
23	5308	14.3	295	12	0
24	5307	12.5	300	12	1
25	5308	12.5	322	14	0
26	5309	12.5	383	13	1
27	5306	15.7	322	16	1
28	5307	19.8	469	13	1
29	5307	18.6	406	15	0
30	5307	15.9	238	14	1
Detection Percentage (%)					73.333
Limit					60%
Test Result					**Complied**

Total Type 1~4 Radar Statistical Performance

Radar Type #	Detection Percentage (%)
1	96.667
2	76.667
3	83.333
4	73.333
Aggregate (Radar Types 1-4)	82.500
Limit	80%
Test Result	**Complied**

Type 5 Radar Statistical Performance

Center Freq. (MHz)	Low Edge (MHz)	High Edge (MHz)	VSG Freq. (MHz)	Detection
5300	5290.4	5309.5		
Trial	Chirp	Offset		
1	11	0	5300.00	1
2	5	0	5300.00	1
3	20	0	5300.00	1
4	13	0	5300.00	1
5	11	0	5300.00	1
6	16	0	5300.00	1
7	11	0	5300.00	1
8	20	0	5300.00	1
9	9	0	5300.00	1
10	15	0	5300.00	1
11	20	1.60	5298.40	1
12	6	7.20	5292.80	1
13	13	4.40	5295.60	1
14	10	5.60	5294.40	1
15	16	3.20	5296.80	1
16	11	5.20	5294.80	1
17	7	6.80	5293.20	1
18	15	3.60	5296.40	1
19	7	6.80	5293.20	1
20	20	1.60	5298.40	1
21	6	7.10	5307.10	1
22	11	5.10	5305.10	1
23	16	3.10	5303.10	1
24	6	7.10	5307.10	1
25	9	5.90	5305.90	1
26	10	5.50	5305.50	1
27	18	2.30	5302.30	1
28	19	1.90	5301.90	1
29	14	3.90	5303.90	1
30	13	4.30	5304.30	1
Total				30
Detection Percentage (%)				100%
Limit				80%
Test Result				**Complied**

Type 6 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulses / Hop	Pulse Width (us)	PRI (us)	1=Detection 0=No Detection
1	5300	9	1	333	1
2	5300	9	1	333	1
3	5300	9	1	333	1
4	5300	9	1	333	1
5	5300	9	1	333	1
6	5300	9	1	333	1
7	5300	9	1	333	1
8	5300	9	1	333	1
9	5300	9	1	333	1
10	5300	9	1	333	1
11	5300	9	1	333	1
12	5300	9	1	333	1
13	5300	9	1	333	1
14	5300	9	1	333	1
15	5300	9	1	333	1
16	5300	9	1	333	1
17	5300	9	1	333	1
18	5300	9	1	333	1
19	5300	9	1	333	1
20	5300	9	1	333	1
21	5300	9	1	333	1
22	5300	9	1	333	1
23	5300	9	1	333	1
24	5300	9	1	333	1
25	5300	9	1	333	1
26	5300	9	1	333	1
27	5300	9	1	333	1
28	5300	9	1	333	1
29	5300	9	1	333	1
30	5300	9	1	333	1
Detection Percentage (%)					100.00
Limit					70%
Test Result					**Complied**

< Master Mode >

Modulation Mode: 802.11ax (HEW40)

Type 1 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulse Per Second)	PRI (us)	1=Detection 0=No Detection
1	5309	1	1930.5	518	1
2	5298	23	326.2	3066	1
3	5303	19	1139.0	878	1
4	5297	12	1355.0	738	1
5	5303	4	1730.1	578	1
6	5295	8	1519.8	658	0
7	5294	15	1253.1	798	1
8	5295	6	1618.1	618	1
9	5293	14	1285.3	778	1
10	5292	3	1792.1	558	1
11	5309	13	1319.3	758	1
12	5309	9	1474.9	678	1
13	5306	7	1567.4	638	0
14	5309	17	1193.3	838	1
15	5306	10	1432.7	698	1
16	5322	-	1692.0	591	1
17	5317	-	328.1	3048	1
18	5324	-	373.4	2678	1
19	5321	-	574.4	1741	1
20	5323	-	1216.5	822	1
21	5314	-	801.3	1248	1
22	5313	-	488.5	2047	1
23	5313	-	956.0	1046	1
24	5313	-	517.6	1932	1
25	5311	-	1422.5	703	1
26	5328	-	542.0	1845	1
27	5327	-	741.3	1349	1
28	5328	-	881.8	1134	1
29	5328	-	427.4	2340	1
30	5329	-	628.9	1590	1
Detection Percentage (%)					93.333
Limit					60%
Test Result					**Complied**

Type 2 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5310	2.6	221	23	1
2	5300	4.6	198	27	1
3	5298	1.1	184	29	1
4	5297	4.8	203	24	1
5	5300	2.4	162	25	1
6	5293	3.4	204	28	1
7	5293	2.3	170	27	1
8	5295	3.5	184	23	1
9	5294	4.9	150	27	1
10	5291	4.6	211	29	1
11	5306	2.9	158	23	0
12	5309	2.6	226	27	1
13	5309	1.6	204	26	1
14	5309	3.9	181	25	1
15	5308	4.6	202	24	1
16	5319	4.1	194	27	0
17	5320	2.3	193	28	1
18	5316	3.9	173	29	1
19	5319	4.3	188	23	1
20	5319	1.5	215	26	0
21	5311	4.9	227	27	1
22	5314	1.1	199	23	1
23	5312	4.5	155	29	1
24	5311	4.0	190	27	0
25	5315	2.4	151	23	1
26	5327	2.5	180	28	1
27	5329	2.5	228	23	1
28	5325	2.5	203	25	1
29	5327	1.5	188	25	1
30	5327	1.9	217	24	1
Detection Percentage (%)					86.667
Limit					60%
Test Result					**Complied**

Type 3 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5311	8.0	205	16	1
2	5298	6.7	382	18	0
3	5299	8.6	418	16	1
4	5297	9.4	351	17	1
5	5304	7.4	383	18	1
6	5295	9.8	232	16	1
7	5295	9.1	377	17	1
8	5295	9.6	457	16	0
9	5292	8.0	471	18	1
10	5293	9.0	304	18	1
11	5308	8.0	316	17	0
12	5306	9.8	325	16	0
13	5306	8.0	409	17	0
14	5306	9.9	200	17	1
15	5306	8.8	458	16	0
16	5322	8.0	232	18	1
17	5323	8.3	250	16	1
18	5318	8.7	270	16	1
19	5319	7.7	350	17	0
20	5318	7.1	230	16	1
21	5312	7.3	416	18	1
22	5311	7.6	498	18	1
23	5314	7.3	286	17	0
24	5311	7.3	287	16	1
25	5314	7.5	462	17	1
26	5327	6.2	300	17	0
27	5329	6.4	323	18	1
28	5329	7.1	420	16	1
29	5325	7.2	395	18	0
30	5326	8.4	377	16	1
Detection Percentage (%)					66.667
Limit					60%
Test Result					**Complied**

Type 4 Radar Statistical Performance

Trial #	*Test Freq. (MHz)*	*Pulse Width (us)*	*PRI (us)*	*Pulses / Burst*	*1=Detection 0=No Detection*
1	5312	18.0	242	15	1
2	5298	19.9	279	12	0
3	5301	12.9	487	14	1
4	5301	15.0	452	13	1
5	5300	16.3	230	12	1
6	5292	19.8	238	13	0
7	5293	18.2	420	16	1
8	5291	16.3	452	15	0
9	5291	14.2	495	12	0
10	5291	17.8	228	16	1
11	5307	19.1	211	16	1
12	5307	18.4	283	15	1
13	5309	11.8	411	12	1
14	5308	14.2	284	13	1
15	5308	13.9	202	12	1
16	5323	17.8	340	14	1
17	5322	15.6	290	16	1
18	5320	14.6	250	16	0
19	5322	14.4	484	15	1
20	5316	18.9	387	13	1
21	5315	11.1	348	15	1
22	5312	13.8	291	16	0
23	5314	14.3	295	12	1
24	5313	12.5	300	12	1
25	5314	12.5	322	14	0
26	5328	12.5	383	13	0
27	5325	15.7	322	16	1
28	5328	19.8	469	13	1
29	5325	18.6	406	15	1
30	5325	15.9	238	14	1
Detection Percentage (%)					73.333
Limit					60%
Test Result					**Complied**

Total Type 1~4 Radar Statistical Performance

Radar Type #	Detection Percentage (%)
1	93.333
2	86.667
3	66.667
4	73.333
Aggregate (Radar Types 1-4)	80.000
Limit	80%
Test Result	**Complied**

Type 5 Radar Statistical Performance

Center Freq. (MHz)	Low Edge (MHz)	High Edge (MHz)	VSG Freq. (MHz)	Detection
5310	5290.5	5329.5		
Trial	Chirp	Offset		
1	11	0	5310.00	1
2	5	0	5310.00	1
3	20	0	5310.00	1
4	13	0	5310.00	1
5	11	0	5310.00	1
6	16	0	5310.00	1
7	11	0	5310.00	1
8	20	0	5310.00	1
9	9	0	5310.00	1
10	15	0	5310.00	1
11	20	11.5	5298.50	1
12	6	17.1	5292.90	1
13	13	14.3	5295.70	1
14	10	15.5	5294.50	1
15	16	13.1	5296.90	1
16	11	15.1	5294.90	1
17	7	16.7	5293.30	1
18	15	13.5	5296.50	1
19	7	16.7	5293.30	1
20	20	11.5	5298.50	1
21	6	17.1	5327.10	1
22	11	15.1	5325.10	1
23	16	13.1	5323.10	1
24	6	17.1	5327.10	1
25	9	15.9	5325.90	1
26	10	15.5	5325.50	1
27	18	12.3	5322.30	1
28	19	11.9	5321.90	1
29	14	13.9	5323.90	1
30	13	14.3	5324.30	1
Total				30
Detection Percentage (%)				100%
Limit				80%
Test Result				**Complied**

6 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulses / Hop	Pulse Width (us)	PRI (us)	1=Detection 0=No Detection
1	5310	9	1	333	1
2	5310	9	1	333	1
3	5310	9	1	333	1
4	5310	9	1	333	1
5	5310	9	1	333	1
6	5310	9	1	333	1
7	5310	9	1	333	1
8	5310	9	1	333	1
9	5310	9	1	333	1
10	5310	9	1	333	1
11	5310	9	1	333	1
12	5310	9	1	333	1
13	5310	9	1	333	1
14	5310	9	1	333	1
15	5310	9	1	333	1
16	5310	9	1	333	1
17	5310	9	1	333	1
18	5310	9	1	333	1
19	5310	9	1	333	1
20	5310	9	1	333	1
21	5310	9	1	333	1
22	5310	9	1	333	1
23	5310	9	1	333	1
24	5310	9	1	333	1
25	5310	9	1	333	1
26	5310	9	1	333	1
27	5310	9	1	333	1
28	5310	9	1	333	1
29	5310	9	1	333	1
30	5310	9	1	333	1
Detection Percentage (%)					100.00
Limit					70%
Test Result					**Complied**

< Master Mode >

Modulation Mode: 802.11ax (HEW80)

Type 1 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulse Per Second)	PRI (us)	1=Detection 0=No Detection
1	5290	1	1930.5	518	1
2	5254	23	326.2	3066	1
3	5254	19	1139.0	878	1
4	5251	12	1355.0	738	1
5	5256	4	1730.1	578	1
6	5263	8	1519.8	658	1
7	5260	15	1253.1	798	1
8	5270	6	1618.1	618	1
9	5274	14	1285.3	778	1
10	5274	3	1792.1	558	0
11	5283	13	1319.3	758	1
12	5275	9	1474.9	678	1
13	5282	7	1567.4	638	1
14	5290	17	1193.3	838	1
15	5294	10	1432.7	698	1
16	5293	-	1692.0	591	1
17	5288	-	328.1	3048	1
18	5303	-	373.4	2678	1
19	5304	-	574.4	1741	1
20	5298	-	1216.5	822	1
21	5312	-	801.3	1248	1
22	5313	-	488.5	2047	1
23	5314	-	956.0	1046	1
24	5317	-	517.6	1932	1
25	5318	-	1422.5	703	1
26	5318	-	542.0	1845	1
27	5329	-	741.3	1349	1
28	5327	-	881.8	1134	1
29	5327	-	427.4	2340	1
30	5327	-	628.9	1590	1
Detection Percentage (%)					96.667
Limit					60%
Test Result					**Complied**

Type 2 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	2.6	221	23	1
2	5253	4.6	198	27	0
3	5253	1.1	184	29	1
4	5254	4.8	203	24	1
5	5255	2.4	162	25	1
6	5265	3.4	204	28	0
7	5259	2.3	170	27	1
8	5271	3.5	184	23	1
9	5270	4.9	150	27	1
10	5273	4.6	211	29	1
11	5280	2.9	158	23	0
12	5282	2.6	226	27	1
13	5280	1.6	204	26	1
14	5286	3.9	181	25	1
15	5289	4.6	202	24	1
16	5287	4.1	194	27	1
17	5292	2.3	193	28	0
18	5303	3.9	173	29	1
19	5305	4.3	188	23	1
20	5299	1.5	215	26	0
21	5308	4.9	227	27	1
22	5306	1.1	199	23	1
23	5307	4.5	155	29	1
24	5324	4.0	190	27	1
25	5323	2.4	151	23	1
26	5321	2.5	180	28	1
27	5327	2.5	228	23	1
28	5326	2.5	203	25	1
29	5329	1.5	188	25	1
30	5328	1.9	217	24	1
Detection Percentage (%)					83.333
Limit					60%
Test Result					**Complied**

Type 3 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	8.0	205	16	1
2	5289	6.7	382	18	1
3	5251	8.6	418	16	1
4	5253	9.4	351	17	1
5	5255	7.4	383	18	1
6	5261	9.8	232	16	1
7	5265	9.1	377	17	1
8	5266	9.6	457	16	0
9	5267	8.0	471	18	1
10	5274	9.0	304	18	1
11	5281	8.0	316	17	1
12	5284	9.8	325	16	1
13	5277	8.0	409	17	0
14	5287	9.9	200	17	1
15	5290	8.8	458	16	1
16	5287	8.0	232	18	1
17	5288	8.3	250	16	0
18	5295	8.7	270	16	1
19	5296	7.7	350	17	1
20	5300	7.1	230	16	1
21	5307	7.3	416	18	0
22	5307	7.6	498	18	1
23	5308	7.3	286	17	1
24	5323	7.3	287	16	1
25	5320	7.5	462	17	0
26	5322	6.2	300	17	1
27	5327	6.4	323	18	1
28	5328	7.1	420	16	1
29	5327	7.2	395	18	1
30	5327	8.4	377	16	1
Detection Percentage (%)					83.333
Limit					60%
Test Result					**Complied**

Type 4 Radar Statistical Performance

Trial #	*Test Freq. (MHz)*	*Pulse Width (us)*	*PRI (us)*	*Pulses / Burst*	*1=Detection 0=No Detection*
1	5290	18.0	242	15	1
2	5289	19.9	279	12	1
3	5252	12.9	487	14	1
4	5251	15.0	452	13	1
5	5256	16.3	230	12	1
6	5265	19.8	238	13	1
7	5255	18.2	420	16	1
8	5268	16.3	452	15	1
9	5269	14.2	495	12	0
10	5270	17.8	228	16	1
11	5285	19.1	211	16	1
12	5277	18.4	283	15	1
13	5280	11.8	411	12	1
14	5294	14.2	284	13	1
15	5292	13.9	202	12	1
16	5286	17.8	340	14	1
17	5292	15.6	290	16	1
18	5295	14.6	250	16	0
19	5303	14.4	484	15	1
20	5300	18.9	387	13	1
21	5306	11.1	348	15	1
22	5308	13.8	291	16	1
23	5313	14.3	295	12	1
24	5318	12.5	300	12	1
25	5325	12.5	322	14	1
26	5315	12.5	383	13	1
27	5329	15.7	322	16	1
28	5327	19.8	469	13	1
29	5327	18.6	406	15	1
30	5327	15.9	238	14	1
Detection Percentage (%)					93.333
Limit					60%
Test Result					**Complied**

Total Type 1~4 Radar Statistical Performance

Radar Type #	Detection Percentage (%)
1	96.667
2	83.333
3	83.333
4	93.333
Aggregate (Radar Types 1-4)	89.167
Limit	80%
Test Result	**Complied**

Type 5 Radar Statistical Performance

Center Freq. (MHz)	Low Edge (MHz)	High Edge (MHz)	VSG Freq. (MHz)	Detection
5290	5251.1	5328.8		
Trial	Chirp	Offset		
1	11	0	5290.00	1
2	5	0	5290.00	1
3	20	0	5290.00	1
4	13	0	5290.00	1
5	11	0	5290.00	1
6	16	0	5290.00	1
7	11	0	5290.00	1
8	20	0	5290.00	1
9	9	0	5290.00	1
10	15	0	5290.00	1
11	20	30.90	5259.10	1
12	6	36.50	5253.50	1
13	13	33.70	5256.30	1
14	10	34.90	5255.10	1
15	16	32.50	5257.50	1
16	11	34.50	5255.50	1
17	7	36.10	5253.90	1
18	15	32.90	5257.10	1
19	7	36.10	5253.90	1
20	20	30.90	5259.10	0
21	6	36.40	5326.40	1
22	11	34.40	5324.40	1
23	16	32.40	5322.40	1
24	6	36.40	5326.40	0
25	9	35.20	5325.20	1
26	10	34.80	5324.80	0
27	18	31.60	5321.60	1
28	19	31.20	5321.20	0
29	14	33.20	5323.20	1
30	13	33.60	5323.60	1
Total				26
Detection Percentage (%)				87%
Limit				80%
Test Result				**Complied**

Type 6 Radar Statistical Performance

Trial #	Test Freq. (MHz)	Pulses / Hop	Pulse Width (us)	PRI (us)	1=Detection 0=No Detection
1	5290	9	1	333	1
2	5290	9	1	333	1
3	5290	9	1	333	1
4	5290	9	1	333	1
5	5290	9	1	333	1
6	5290	9	1	333	1
7	5290	9	1	333	1
8	5290	9	1	333	1
9	5290	9	1	333	1
10	5290	9	1	333	1
11	5290	9	1	333	1
12	5290	9	1	333	1
13	5290	9	1	333	1
14	5290	9	1	333	1
15	5290	9	1	333	1
16	5290	9	1	333	1
17	5290	9	1	333	1
18	5290	9	1	333	1
19	5290	9	1	333	1
20	5290	9	1	333	1
21	5290	9	1	333	1
22	5290	9	1	333	1
23	5290	9	1	333	1
24	5290	9	1	333	1
25	5290	9	1	333	1
26	5290	9	1	333	1
27	5290	9	1	333	1
28	5290	9	1	333	1
29	5290	9	1	333	1
30	5290	9	1	333	1
Detection Percentage (%)					100.000
Limit					70%
Test Result					**Complied**

Data Sheet for Radar Type 5

Trail Number			1			
Number of Bursts in Trial			8			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	62.1	11			1091
2	2	56	11	1729		133
3	2	91.3	11	1230		1057
4	3	50.7	11	1762	1616	1442
5	2	92.6	11	1723		544
6	2	87.3	11	1302		1089
7	2	59.5	11	1291		1374
8	2	52.2	11	1653		1237

Trail Number			2			
Number of Bursts in Trial			9			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	3	90	5	1007	1326	30
2	2	73.7	5	1785		979
3	1	78.1	5			683
4	2	92.4	5	1281		950
5	1	61.2	5			612
6	3	67.2	5	1525	1870	17
7	1	78.5	5			429
8	2	60.3	5	1931		936
9	3	92.9	5	1403	1476	548

Trail Number			3			
Number of Bursts in Trial			10			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	3	63.4	20	1574	1607	801
2	1	98	20			966
3	1	58.7	20			185
4	1	88	20			1012
5	3	79.5	20	1562	1370	943
6	3	57.1	20	1900	1188	686
7	2	64.4	20	1090		599
8	1	78.7	20			1089
9	1	69.3	20			188
10	3	55.3	20	1375	1691	933

Trail Number			4			
Number of Bursts in Trial			11			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	74.3	13	1642		24
2	1	83.1	13			985
3	2	59.5	13	1680		988
4	2	59.8	13	1786		800
5	2	77.6	13	1617		339
6	2	79.9	13	1553		1040
7	1	56	13			544
8	3	71.4	13	1406	1927	452
9	1	97.4	13			204
10	2	98.3	13	1037		926
11	1	63.6	13			1052

Trail Number			5			
Number of Bursts in Trial			12			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	50	11			557
2	2	62.5	11	1731		567
3	2	55.4	11	1070		460
4	1	65.7	11			4
5	2	58	11	1512		64
6	2	60.9	11	1230		650
7	3	89.6	11	1598	1738	235
8	3	84.4	11	1271	1617	873
9	3	72.3	11	1498	1321	901
10	1	58.9	11			663
11	2	74.8	11	1584		919
12	1	71.8	11			375

Trail Number			6			
Number of Bursts in Trial			13			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	88.1	16	1257		846
2	1	58.7	16			725
3	2	97.1	16	1037		30
4	3	83.1	16	1029	1106	490
5	1	62.1	16			262
6	2	71.4	16	1058		283
7	2	86.3	16	1867		49
8	3	77.3	16	1418	1876	634
9	1	78.9	16			304
10	3	79.2	16	1055	1572	564
11	3	52	16	1582	1836	852
12	3	56.5	16	1195	1542	525
13	3	100	16	1638	1729	750

Trail Number			7			
Number of Bursts in Trial			14			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	92.7	11	1208		231
2	2	81.3	11	1144		804
3	2	60.4	11	1555		34
4	2	62.1	11	1320		427
5	1	50	11			577
6	3	65.9	11	1020	1365	3
7	2	73.8	11	1308		51
8	2	74.3	11	1143		360
9	1	62.9	11			394
10	2	74.8	11	1404		317
11	2	69.7	11	1309		532
12	2	69.8	11	1688		339
13	2	77.4	11	1857		381
14	1	55.1	11			426

Trail Number			8			
Number of Bursts in Trial			15			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	91.7	20			776
2	2	90	20	1196		187
3	3	92.3	20	1486	1853	448
4	2	66.8	20	1545		702
5	1	64	20			403
6	3	95.4	20	1123	1473	230
7	3	66.8	20	1867	1401	604
8	3	67.7	20	1472	1397	38
9	1	68.2	20			735
10	2	82.2	20	1297		610
11	1	92.1	20			618
12	2	57	20	1764		705
13	2	58.5	20	1310		22
14	3	85.5	20	1630	1447	641
15	2	82.2	20	1371		109

Trail Number			9			
Number of Bursts in Trial			16			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	74.4	9	1707		442
2	2	63.6	9	1725		280
3	2	71.3	9	1704		459
4	3	77.6	9	1063	1405	197
5	3	65.2	9	1731	1294	101
6	3	55.1	9	1109	1549	17
7	2	96.8	9	1034		131
8	3	80.8	9	1533	1051	365
9	1	60.4	9			222
10	2	61.8	9	1312		371
11	2	71.3	9	1657		33
12	2	98.1	9	1024		291
13	1	57.9	9			188
14	1	91.8	9			163
15	2	56.7	9	1259		426
16	2	89.7	9	1690		606

Trail Number			10			
Number of Bursts in Trial			17			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	74.4	15	1107		462
2	1	87.6	15			653
3	2	61.7	15	1741		457
4	2	57.5	15	1566		388
5	2	66.1	15	1855		63
6	3	70.1	15	1044	1012	136
7	1	66.4	15			343
8	1	59.2	15			349
9	2	88.3	15	1240		362
10	1	64.7	15			221
11	2	73	15	1703		144
12	2	81.7	15	1450		671
13	3	70.1	15	1741	1278	320
14	1	63.6	15			196
15	1	58.7	15			413
16	2	65.9	15	1478		170
17	1	72.7	15			564

Trail Number			11			
Number of Bursts in Trial			18			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	72.1	20	1193		130
2	3	76.3	20	1484	1390	114
3	1	86.1	20			14
4	1	73.2	20			604
5	1	81.2	20			548
6	2	99.5	20	1398		173
7	1	93.9	20			262
8	2	75.9	20	1921		38
9	3	79.2	20	1100	1429	84
10	3	77	20	1166	1799	610
11	1	91.8	20			339
12	3	56.8	20	1330	1556	580
13	2	83.1	20	1556		295
14	2	63	20	1552		156
15	1	65.7	20			439
16	1	64.5	20			188
17	1	88.5	20			419
18	1	60.6	20			205

Trail Number			12			
Number of Bursts in Trial			19			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	90.5	6	1299		381
2	2	88.4	6	1418		327
3	2	53.7	6	1055		536
4	1	80.5	6			285
5	1	50.4	6			398
6	2	61.2	6	1749		439
7	2	78.8	6	1065		129
8	3	75	6	1748	1820	325
9	2	96.7	6	1254		440
10	3	76.3	6	1848	1106	397
11	1	73.3	6			232
12	2	92.4	6	1317		91
13	2	92.4	6	1854		256
14	3	64.4	6	1240	1634	582
15	2	67.3	6	1473		117
16	2	84.1	6	1795		202
17	1	80.9	6			135
18	1	74.6	6			396
19	2	97.6	6	1805		615

Trail Number			13			
Number of Bursts in Trial			20			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	66.1	13	1417		388
2	2	86.7	13	1693		348
3	2	70.5	13	1263		215
4	2	78	13	1446		28
5	2	66	13	1185		585
6	2	80.6	13	1855		65
7	1	95.5	13			92
8	1	98.8	13			68
9	3	64.3	13	1641	1108	517
10	1	75.1	13			121
11	2	72.6	13	1499		448
12	1	60.3	13			567
13	2	54.9	13	1056		245
14	2	98.8	13	1023		584
15	2	60.9	13	1243		579
16	2	62.7	13	1226		464
17	1	80.1	13			89
18	2	70.9	13	1711		153
19	1	90.7	13			282
20	1	98.9	13			71

Trail Number			14			
Number of Bursts in Trial			8			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	67.5	10	1542		947
2	3	83.6	10	1272	1696	124
3	2	93.2	10	1877		701
4	1	55.6	10			1123
5	3	84.2	10	1733	1619	756
6	3	69.1	10	1612	1071	1
7	2	66.9	10	1905		7
8	3	86.8	10	1697	1621	1082

Trail Number			15			
Number of Bursts in Trial			9			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	62.2	16	1571		949
2	2	85	16	1669		189
3	2	64.5	16	1505		176
4	2	50.4	16	1325		538
5	2	66.1	16	1483		908
6	2	71.2	16	1110		1017
7	3	53.7	16	1445	1677	492
8	3	62.5	16	1596	1341	349
9	3	62	16	1929	1221	1105

Trail Number			16			
Number of Bursts in Trial			10			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	80.5	11	1910		284
2	2	64.2	11	1661		751
3	2	90.1	11	1041		491
4	2	69.8	11	1495		107
5	1	73.1	11			490
6	3	77.2	11	1418	1145	1155
7	3	52.6	11	1732	1787	772
8	2	71.4	11	1562		121
9	2	89.8	11	1491		89
10	2	76.4	11	1355		615

Trail Number			17			
Number of Bursts in Trial			11			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	51.2	7	1236		740
2	1	71.7	7			941
3	2	74.7	7	1164		370
4	2	50.9	7	1919		371
5	2	65.2	7	1206		1033
6	2	98	7	1182		346
7	2	58.7	7	1612		639
8	1	63.8	7			1056
9	3	86.3	7	1545	1065	205
10	1	94.4	7			753
11	3	88.5	7	1699	1319	58

Trail Number			18			
Number of Bursts in Trial			12			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	88.7	15	1405		448
2	3	90.2	15	1544	1235	621
3	1	96.5	15			512
4	2	80.5	15	1090		321
5	2	63.7	15	1268		798
6	1	53.4	15			809
7	2	52.3	15	1043		301
8	3	54.7	15	1701	1104	796
9	3	75.6	15	1923	1729	669
10	2	59.2	15	1244		369
11	1	56.3	15			51
12	2	87.8	15	1608		733

Trail Number			19			
Number of Bursts in Trial			13			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	68.2	7	1104		229
2	2	58.4	7	1627		488
3	3	74.7	7	1861	1015	137
4	2	58.2	7	1593		520
5	1	51.6	7			799
6	2	94.7	7	1469		43
7	2	70.7	7	1091		126
8	2	82.9	7	1472		607
9	3	62.7	7	1168	1453	527
10	2	63.1	7	1529		143
11	1	96.1	7			176
12	2	57	7	1457		882
13	3	95.6	7	1707	1501	214

Trail Number			20			
Number of Bursts in Trial			14			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	95.7	20			117
2	1	93.1	20			720
3	1	55.8	20			297
4	1	76.7	20			284
5	2	68	20	1686		472
6	3	94.1	20	1796	1393	264
7	2	53.9	20	1293		525
8	1	99.3	20			155
9	2	73.3	20	1458		65
10	2	93.3	20	1196		451
11	3	55.8	20	1895	1034	243
12	1	66.4	20			228
13	2	65.6	20	1732		746
14	2	76.5	20	1187		522

Trail Number			21			
Number of Bursts in Trial			15			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	85.1	6			565
2	2	72.5	6	1648		211
3	1	67.5	6			348
4	2	56.1	6	1360		156
5	1	71.1	6			718
6	2	93.1	6	1391		400
7	1	56.5	6			482
8	1	63.8	6			703
9	2	67.4	6	1727		780
10	1	52.3	6			102
11	3	62.4	6	1228	1715	304
12	2	53.3	6	1630		57
13	2	83.1	6	1205		768
14	2	93.7	6	1085		461
15	2	90.7	6	1297		746

Trail Number			22			
Number of Bursts in Trial			16			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	98.8	11	1439		95
2	1	54.5	11			676
3	2	80.5	11	1360		8
4	2	55.9	11	1906		373
5	2	72.1	11	1623		254
6	2	84.4	11	1604		480
7	1	78.5	11			663
8	1	88	11			314
9	2	74.7	11	1157		596
10	2	97.1	11	1673		264
11	1	81.6	11			740
12	1	83.6	11			163
13	3	87.6	11	1757	1322	628
14	2	58.5	11	1372		132
15	3	91.8	11	1767	1183	106
16	2	58.8	11	1432		659

Trail Number			23			
Number of Bursts in Trial			17			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	96	16			284
2	2	92.5	16	1241		488
3	2	89.5	16	1347		76
4	2	74.8	16	1607		688
5	2	60.6	16	1523		28
6	2	71.5	16	1659		383
7	2	71.1	16	1454		182
8	1	98.7	16			20
9	2	85.1	16	1770		576
10	2	89.2	16	1086		410
11	2	60.7	16	1101		458
12	2	75.2	16	1719		348
13	2	75.7	16	1799		481
14	3	56.7	16	1132	1884	587
15	2	65	16	1885		480
16	2	64.6	16	1910		195
17	3	69.9	16	1410	1190	396

Trail Number			24			
Number of Bursts in Trial			18			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	3	83.8	6	1290	1021	536
2	2	66.9	6	1112		44
3	3	91	6	1220	1504	611
4	2	86.1	6	1678		456
5	3	65.5	6	1928	1222	330
6	1	62.6	6			297
7	3	68.7	6	1505	1200	351
8	3	59.2	6	1452	1114	230
9	1	73.9	6			222
10	1	77.2	6			57
11	2	96.4	6	1357		399
12	2	99.9	6	1173		299
13	2	99.9	6	1520		464
14	1	86.7	6			294
15	1	92.6	6			653
16	1	77.1	6			550
17	2	81.1	6	1664		566
18	3	68.4	6	1536	1309	580

Trail Number			25			
Number of Bursts in Trial			19			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	3	68.2	9	1723	1868	471
2	3	83.7	9	1711	1405	368
3	2	69.7	9	1781		425
4	1	59.7	9			440
5	2	96.7	9	1484		123
6	2	95.8	9	1319		261
7	3	71.3	9	1095	1354	332
8	3	53.2	9	1527	1427	427
9	2	69.5	9	1771		397
10	3	63.9	9	1075	1447	67
11	2	93.4	9	1783		174
12	2	77.3	9	1564		17
13	2	73.1	9	1294		216
14	1	77.4	9			292
15	3	57.2	9	1722	1886	619
16	2	68.7	9	1629		233
17	1	60.8	9			226
18	3	69.7	9	1128	1224	599
19	1	62.2	9			433

Trail Number			26			
Number of Bursts in Trial			20			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	80.5	10			90
2	3	62.6	10	1406	1343	319
3	3	85.6	10	1190	1529	384
4	2	83.9	10	1208		567
5	2	92.4	10	1488		234
6	2	54	10	1529		535
7	3	81.3	10	1501	1812	325
8	1	98.5	10			532
9	1	85.8	10			272
10	2	84.7	10	1593		182
11	2	83.3	10	1705		134
12	2	79.8	10	1567		286
13	1	77.9	10			368
14	3	98.4	10	1510	1569	290
15	2	79.9	10	1588		231
16	3	78	10	1140	1353	353
17	3	55.2	10	1700	1327	53
18	3	71.9	10	1081	1224	44
19	1	62	10			298
20	3	70.5	10	1888	1442	529

Trail Number			27			
Number of Bursts in Trial			8			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	2	69.1	18	1076		1436
2	2	62.1	18	1688		22
3	2	94.8	18	1891		897
4	1	75.8	18			1186
5	2	65.4	18	1713		589
6	2	97.7	18	1292		614
7	3	98.1	18	1670	1711	506
8	2	85.4	18	1672		776

Trail Number			28			
Number of Bursts in Trial			9			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	3	82	19	1233	1713	679
2	3	87.7	19	1554	1123	473
3	2	98.9	19	1518		869
4	1	55	19			719
5	1	93.6	19			902
6	2	58.7	19	1641		1243
7	2	88.7	19	1387		410
8	1	60.3	19			1154
9	1	97.7	19			512

Trail Number			29			
Number of Bursts in Trial			10			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	1	69.6	14			1131
2	1	74.5	14			290
3	1	60.9	14			895
4	1	74.6	14			202
5	2	99.3	14	1501		139
6	2	95.3	14	1065		854
7	2	91.9	14	1722		219
8	2	51	14	1285		57
9	2	87.7	14	1747		141
10	1	87.2	14			596

Trail Number			30			
Number of Bursts in Trial			11			
Burst	Number of Pulses	Pulse Width (usec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (us)	Pulse 2-to-3 Spacing (us)	Starting Location Within Interval (ms)
1	3	59.9	13	1901	1196	935
2	2	77.1	13	1590		1038
3	2	62.7	13	1227		690
4	1	77.1	13			547
5	3	99.8	13	1798	1790	551
6	2	61.5	13	1135		876
7	2	77.5	13	1583		448
8	2	57.3	13	1890		736
9	2	53.5	13	1757		362
10	1	66.6	13			836
11	3	80.7	13	1811	1289	410

4 Test Equipment and Calibration Data

< Master Mode >

Instrument	Manufacturer/ Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	Keysight	N9010A	MY55150165	9kHz~7GHz	15/Dec/2022	14/Dec/2023
Vector Signal Generator	Keysight	N5182B	MY53051912	9kHz~6GHz	28/Nov/2023	27/Nov/2024
DFS-Adaptivity	Sporton	Ver 2.7	N/A	N/A	N/A	N/A
Keysight Signal Studio for DFS Radar Profiles	Keysight	2.0.0.0	N/A	N/A	N/A	N/A
InServiceMonitor Utility	Sporton	N/A	N/A	N/A	N/A	N/A

NCR: No Calibration Required.

< Client Mode >

Instrument	Manufacturer/ Brand Name	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSP30	100793	9 kHz ~ 30GHz	14/Jun/2023	13/Jun/2024
Vector Signal Generator	R&S	SMW200A	111529	100kHz~7.5GHz	20/Mar/2023	19/Mar/2024
DFS-Adaptivity	Sporton	Ver 2.7	N/A	N/A	N/A	N/A

NCR: No Calibration Required.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Threshold Level	1.2 dB	Confidence levels of 95%
Statistical Performance Check	3.33 %	Confidence levels of 95%
CMT	36.52 ms	Confidence levels of 95%
CCTT	8 ms	Confidence levels of 95%
NOP	0 min	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%