Testing Laboratory 3787

DFS TEST REPORT

FCC ID	:	Z3WAIR4980
Equipment	:	Wi-Fi 6E Smart Mesh System
Brand Name	:	Airties
Model Name	:	Air 4980
Applicant	:	Airties Wireless Networks Sehit Mehmet Mikdat Uluunlu Sokagi No:23 Esentepe, Sisli İstanbul, 34394 Turkey
Manufacturer	:	Airties Wireless Networks Sehit Mehmet Mikdat Uluunlu Sokagi No:23 Esentepe, Sisli İstanbul, 34394 Turkey
Standard	:	47 CFR FCC Part 15.407

The product was received on Jan. 13, 2023, and testing was started from Feb. 01, 2023 and completed on Feb. 01, 2023. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 and shown compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FZ211129-02	01	Initial issue of report	Mar. 29, 2023

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.3	FCC KDB 905462 7.8.4	DFS: Statistical Performance Check	PASS	-
3.1.4	FCC KDB 905462 8.1	User Access Restrictions	N/A	Manufacturer attestation NOT accessible to user
Note: Mesh mode, only Statistical Performance Check (Section 7.8.4) on one of the radar types is required to perform.				

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen
Report Producer: Sophia Shiung

1 General Description

1.1 Information

1.1.1 RF General Information

Specification Items	Description	
Frequency Range	5250 MHz – 5350 MHz 5470 MHz – 5725 MHz	
Power Type	From power adapter	
Channel Bandwidth	20/40/80/160 MHz operating channel bandwidth	
Operating Mode	☒ Master (AP Router and Mesh)	
	☐ 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
Channel Puncturing Function	☐ Supported	☒ Unsupported
Support RU	☒ Full RU	☐ Partial RU
Power-on cycle	160MHz: Requires 75.652 seconds to complete its power-on cycle.	
Firmware Number	4.127.8.0_wltest	
HW version	PCB-4980-D01-M01-R06	
SW version	4.127.8.0	
SN	AE2852204000275	
◆ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation. ◆ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. ◆ HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation. ◆ EUT employ a TPC mechanism and TPC have the capability to operate at least 6 dB below highest RF output power.		

Note: The above information was declared by manufacturer.

TPC Power Result

For non beamforming mode

Mode	Min Power (dBm)	Max Power (dBm)	Min EIRP (dBm)	Max EIRP (dBm)
802.11a_Nss1,(6Mbps)_2TX	-	-	-	-
5.25-5.35GHz	17.78	23.78	20.13	26.13
5.47-5.725GHz	17.62	23.62	18.99	24.99

For beamforming mode

Mode	Min Power (dBm)	Max Power (dBm)	Min EIRP (dBm)	Max EIRP (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.25-5.35GHz	17.80	23.80	21.14	27.14
5.47-5.725GHz	17.84	23.84	20.50	26.50
802.11ax HEW40-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.25-5.35GHz	17.96	23.96	21.30	27.30
5.47-5.725GHz	17.78	23.78	20.44	26.44
802.11ax HEW80-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.25-5.35GHz	17.89	23.89	21.23	27.23
5.47-5.725GHz	17.79	23.79	20.45	26.45
802.11ax HEW160-BF_Nss1,(MCS0)_2TX	-	-	-	-
5.25-5.35GHz	13.70	19.70	17.04	23.04
5.47-5.725GHz	15.10	21.10	17.76	23.76

Note: The manufacturer declared that TPC is applied to this equipment. The test result of TPC is equal to RF output power minus 6dBm which is recorded as a reference for the manufacturer.

1.1.2 Antenna Information

Ant.	2.4GHz port	5GHz port	6E port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	1	-	AirTies	A00	PCB antenna	N/A	Note 1
2	2	2	-	AirTies	A11	PCB antenna	N/A	
3	-	-	1	AirTies	A0X	PCB antenna	N/A	
4	-	-	2	AirTies	A1X	PCB antenna	N/A	
5	-	-	3	AirTies	A2X	PCB antenna	N/A	
6	-	-	4	AirTies	A3X	PCB antenna	N/A	

Note 1:

Ant.	Antenna Gain (dBi)								
	WLAN	WLAN 5GHz				WLAN 6E			
	2.4GHz	UNII 1	UNII 2A	UNII 2C	UNII 3	UNII 5	UNII 6	UNII 7	UNII 8
1	3.36	1.62	2.35	1.37	1.01	-	-	-	-
2	4.06	1.92	1.59	0.54	2.18	-	-	-	-
3	-	-	-	-	-	2.40	1.29	1.05	3.33
4	-	-	-	-	-	3.01	2.18	1.57	2.00
5	-	-	-	-	-	3.06	2.14	1.20	2.68
6	-	-	-	-	-	1.30	1.61	2.56	2.70

Ant.	Directional Gain (dBi)									
	WLAN 2.4GHz		WLAN 5GHz							
			UNII 1		UNII 2A		UNII 2C		UNII 3	
	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S	2T1S	2T2S
1	4.66	1.65	3.10	0.11	3.34	0.33	2.66	-0.35	3.60	0.59
2										

Ant.	Directional Gain (dBi)											
	WLAN 6E											
	UNII 5			UNII 6			UNII 7			UNII 8		
	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S	4T1S	4T2S	4T4S
3	5.10	3.06	0.15	3.92	2.18	-1.09	3.57	2.56	-1.30	5.90	3.33	-0.03
4												
5												
6												

Note 2: The EUT has six antennas.
Note 3: The brand/model/antenna type information was declared by manufacturer.
Note 4: Maximum Directional Gain following KDB662911 D03.
The antenna report is provided in the operational description for this application.

For 2.4GHz:
For IEEE 802.11b/g/n/VHT/ax mode (2TX/2RX):
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.
For 5GHz UNII 1~3:
For IEEE 802.11a/n/ac/ax mode (2TX/2RX):
Port 1 and Port 2 can be used as transmitting/receiving antenna.
Port 1 and Port 2 could transmit/receive simultaneously.
For 5GHz UNII 5~8:
For IEEE 802.11ax mode (4TX/4RX):
Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.
Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

1.1.3 Table for EUT supports function

Function	Supports type	Support Band
AP Router	Master	2.4GHz / 5GHz / 6E
Mesh	Master	5GHz / 6E

Note: The AP router was selected to test.

1.1.4 DFS Band Carrier Frequencies

There are four 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.

For 160MHz bandwidth systems, use Channel 50, 114

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5250~5350 MHz Band 2	50	5250 MHz	58	5290 MHz
	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz Band 3	100	5500 MHz	122	5610 MHz
	102	5510 MHz	124	5620 MHz
	104	5520 MHz	126	5630 MHz
	106	5530 MHz	128	5640 MHz
	108	5540 MHz	132	5660 MHz
	110	5550 MHz	134	5670 MHz
	112	5560 MHz	136	5680 MHz
	114	5570 MHz	138	5690 MHz
	116	5580 MHz	140	5700 MHz
	118	5590 MHz	142	5710 MHz
	120	5600 MHz	144	5720 MHz

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FZ211129.

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Adding Mesh function in WLAN 5GHz full band.	Statistical Performance Check (Section 7.8.4) on one of the radar types.
2. Adding adapter 2 (Brand: NetBit, Model: NBS24M120200VU) 3. 6G＆5G FEM supply 0201 package MLCCs have been changed to 0402 MLCCs. (C328,C356,C384,C412,C892,C930,C385, C390, C893, C899, C931, C937 footprint change) 4. ECAPs as inserted in 5V DC switcher output according to more stabilize the supply voltage. 5. MLCCs have been added to CPU Core regulator output and Radio IC Core regulator output according to broadcom suggestion 6. Reserved MLCCs have been added according to 1.8V power rail measurements. 7. 3.3V DC switcher and its peripheral components have been changed due to component shortage and availability. 8. 5V DC switcher and its peripheral components have been changed (different vendor) due to component shortage and availability. 9. JTAG_SEL functionality of Radio IC has been disabled due to it is not used. 10. PCB layout and P/N changed from PCB-4980-D01-M01-R05 to PCB-4980-D01-M01-R06 due to the changes listed above 11. Change U6 component (NAND Flash) due to component shortage and availability (Original Brand: Macronix, Model: MX30LF1G18AC-TJ / New Brand: SkyHigh, Model: S34ML01G200TFV000)	After evaluation, it does not need to re-test.

1.2 Accessories

Accessories			
Equipment Name	**Brand Name**	**Model Name**	**Rating**
Adapter 1	MOSO	MS-V2000R120-024H0-US	INPUT: 100-240V, 50/60Hz, 0.7A max. OUTPUT: 12.0V, 2.0A
Adapter 2	NetBit	NBS24M120200VU	INPUT: 100-120V~, 50/60Hz, 0.6A OUTPUT: 12.0V, 2.0A
Others			
RJ-45 cable*1, non-shielded, 1.5m			

1.3 Support Equipment

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	Notebook	Lenovo	L490	N/A
B	Notebook	Lenovo	L440	N/A
C	WLAN AP	AirTies	Air 4980	N/A
D	DHCP Router	AirTies	Air 5453v2	N/A

1.4 Applicable Standards

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

- 47 CFR FCC Part 15.407
- FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

1.5 Testing Location Information

Testing Location Information	
Test Lab.：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. TW3787 with FCC. Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
DFS	DF01-CB	Bruce Yang	20.9~21.9 / 61~64	Feb. 01, 2023

2 Test Configuration of EUT

2.1 Test Channel Frequencies Configuration

Test Channel Frequencies Configuration	
IEEE Std.	**Test Channel Freq. (MHz)**
802.11ax (HEW160)	5570 MHz

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Dynamic Frequency Selection (DFS)
Test Condition	Radiated measurement 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. The DFS radar test signals have been aligned to the direction corresponding to the EUT's maximum antenna gain.
Modulation Mode	802.11ax (HEW160)
Test mode	EUT (Mesh mode)

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 662911D01.	

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	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

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

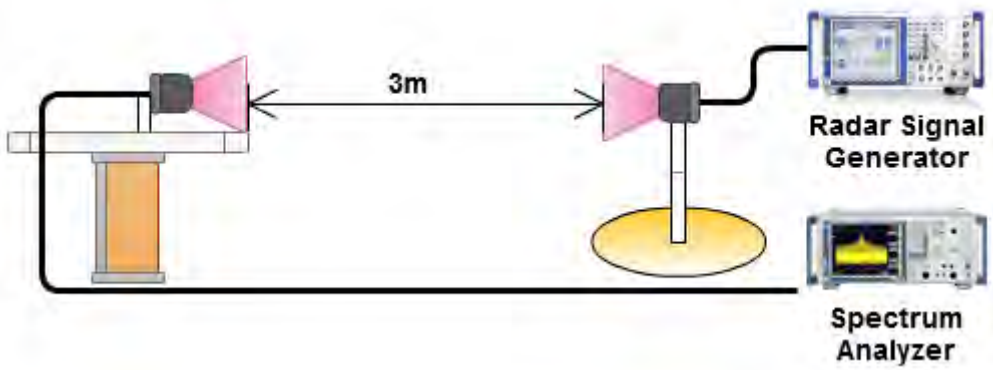
For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:
The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group.

3.2.4 DFS Threshold Level

DFS Threshold Level	
DFS Threshold level: -63 dBm	☐ at the antenna connector
	☒ in front of the antenna
The Interference **Radar Detection Threshold Level** is is *-64 dBm + 0 [dBi] + 1 dB* = -63 dBm. That had been been taken into account the output power range and antenna gain.	

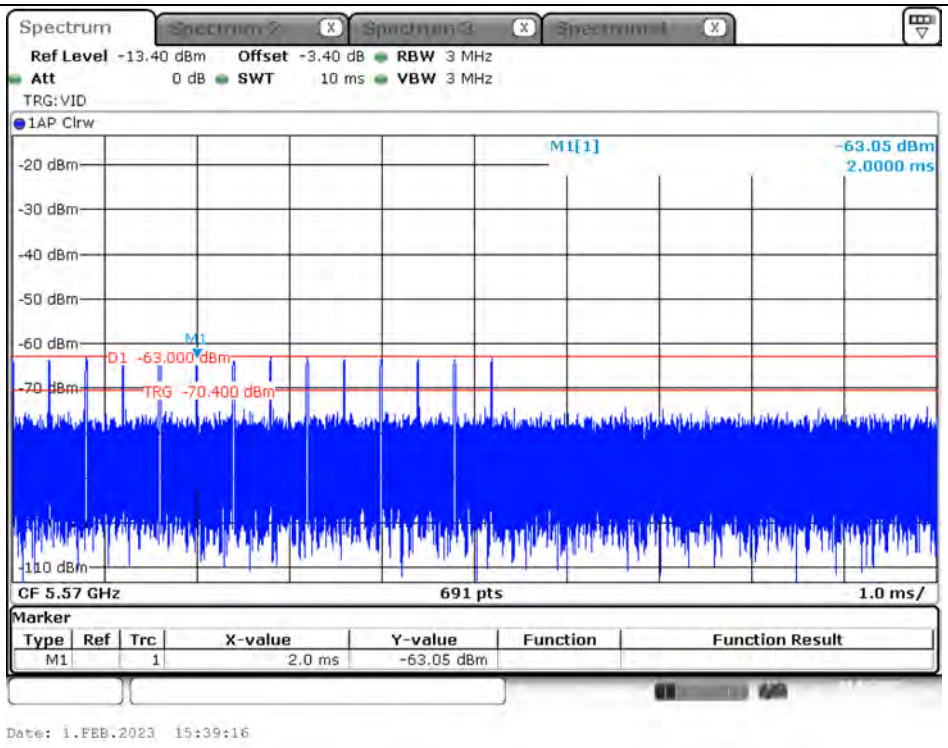
3.2.5 Calibration Setup

Master Radiated Calibration Setup



3.2.6 Radar Waveform calibration Plot

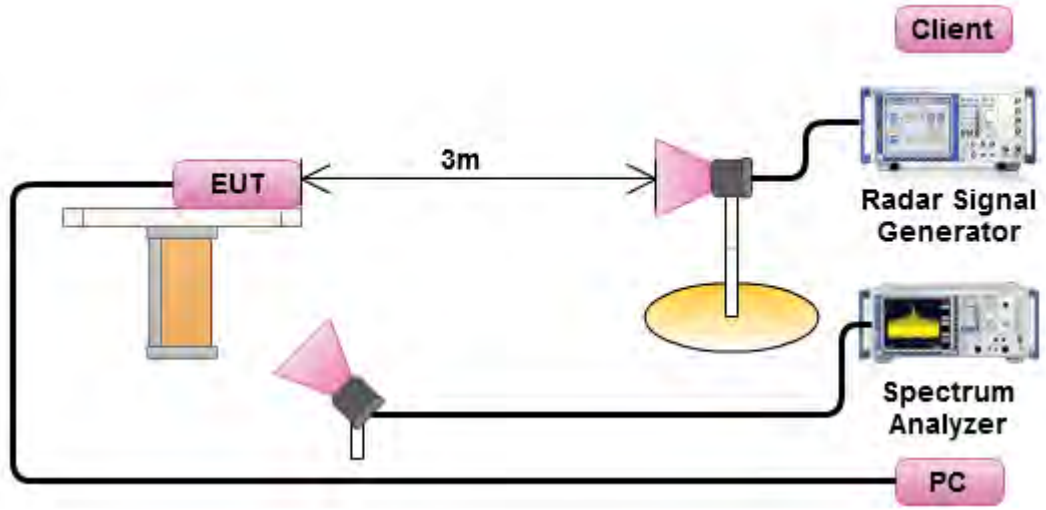
Test Frequency: 5570 MHz
Radar #4 DFS detection threshold level



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 Radiated Measurement



3.3 Statistical Performance Check

3.3.1 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:

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

3.3.2 Measuring Instruments

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

3.3.3 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.

3.3.4 Test Result of Statistical Performance Check

Modulation Mode: 802.11ax (HEW160)

Type 4 Radar Statistical Performance

Trial #	*Test Freq. (MHz)*	*Pulse Width (us)*	*PRI (us)*	*Pulses / Burst*	*1=Detection 0=No Detection*
1	5509	18.0	242	15	1
2	5631	19.9	279	12	1
3	5523	12.9	487	14	1
4	5620	15.0	452	13	0
5	5577	16.3	230	12	1
6	5610	19.8	238	13	1
7	5573	18.2	420	16	1
8	5589	16.3	452	15	1
9	5524	14.2	495	12	1
10	5494	17.8	228	16	1
11	5623	19.1	211	16	0
12	5625	18.4	283	15	1
13	5508	11.8	411	12	1
14	5530	14.2	284	13	1
15	5527	13.9	202	12	0
16	5553	17.8	340	14	1
17	5513	15.6	290	16	0
18	5585	14.6	250	16	1
19	5504	14.4	484	15	0
20	5512	18.9	387	13	1
21	5594	11.1	348	15	1
22	5495	13.8	291	16	1
23	5518	14.3	295	12	1
24	5505	12.5	300	12	1
25	5496	12.5	322	14	0
26	5556	12.5	383	13	1
27	5607	15.7	322	16	1
28	5548	19.8	469	13	0
29	5593	18.6	406	15	1
30	5615	15.9	238	14	0
Detection Percentage (%)					73.333
Limit					60%
Test Result					**Complied**

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101026	9kHz~40GHz	Nov. 25, 2022	Nov. 24, 2023	Radiated (DF01-CB)
Vector Signal generator	R&S	SMU200A	102782	100kHz-6GHz	Sep. 04, 2022	Sep. 03, 2023	Radiated (DF01-CB)
Horn Antenna	COM-POWER	AH-118	071187	1GHz – 18GHz	Sep. 16, 2022	Sep. 15, 2023	Radiated (DF01-CB)
Horn Antenna	COM-POWER	AH-118	071042	1GHz – 18GHz	Dec. 15, 2022	Dec. 14, 2023	Radiated (DF01-CB)
RF Power Divider	MTJ	2 Way	DF01-DV-03	1GHz ~ 8GHz	Oct. 04, 2022	Oct. 03, 2023	Radiated (DF01-CB)
RF Power Divider	MTJ	2 Way	DF01-DV-02	1GHz ~ 8GHz	Oct. 04, 2022	Oct. 03, 2023	Radiated (DF01-CB)
RF Power Divider	MTJ	4 Way	DF01-DV-01	1GHz ~ 6GHz	Oct. 04, 2022	Oct. 03, 2023	Radiated (DF01-CB)
RF Cable-high	Woken	RG402	High Cable-57	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Radiated (DF01-CB)
RF Cable-high	Woken	RG402	High Cable-58	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Radiated (DF01-CB)
RF Cable-high	Woken	RG402	High Cable-59	1 GHz –18 GHz	Oct. 03, 2022	Oct. 02, 2023	Radiated (DF01-CB)

Note: Calibration Interval of instruments listed above is one year.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Radiated Emission	3.6 dB	Confidence levels of 95%