



DFS TEST REPORT

FCC ID : TLZ-XM710
Equipment : IEEE 802.11 a/b/g/n/ac/ax Wireless LAN 1T1R, 25 x 35 Module
Brand Name : AzureWave
Model Name : AW-XM710
Applicant : AzureWave Technologies, Inc.
8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City ,
Taiwan 231
Manufacturer : AzureWave Technologies, Inc.
8F., No.94, Baozhong Rd. , Xindian Dist., New Taipei City ,
Taiwan 231
Standard : 47 CFR FCC Part 15.407

The product was received on Feb. 26, 2026, and testing was started from May 12, 2026 and completed on May 12, 2026. 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 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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TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A12_4 Ver1.1



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	FCC KDB 905462 7.8.3	DFS: In-Service Monitoring for Channel Move Time (CMT)	PASS	-
3.2	FCC KDB 905462 7.8.3	DFS: In-Service Monitoring for Channel Closing Transmission Time (CCTT)	PASS	-
3.2	FCC KDB 905462 7.8.3	DFS: In-Service Monitoring for Non-Occupancy Period (NOP)	PASS	-
Note: Since the product is client without radar detection function, only Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period are 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/manufacture 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: Muse Chan



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 host system	
Channel Bandwidth	20 MHz 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
Zero-Wait Function	☐ Support	☒ Not Support
Channel Puncturing Function	☐ Supported	
	☒ Unsupported	
Power-on cycle	NA (No Channel Availability Check Function)	
Firmware Number	USBIW610--18.99.5.p65-MM6X18525-(FP99)	
11a, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation. - VHT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation. - HEW20 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM 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

Mode	Min Power (dBm)	Max Power (dBm)	Min EIRP (dBm)	Max EIRP (dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-
5.25-5.35GHz	10.93	16.93	12.00	18.00
5.47-5.725GHz	10.97	16.97	12.66	18.66
802.11ax HEW20_Nss1,(MCS0)_1TX	-	-	-	-
5.25-5.35GHz	10.94	16.94	12.01	18.01
5.47-5.725GHz	10.98	16.98	12.67	18.67

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.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	AzureWave	AW-XM710-ANT	Monopole	N/A	Note 1

Note 1:

Ant.	Gain (dBi)				
	WLAN 2.4GHz	WLAN 5GHz			
		UNII 1	UNII 2A	UNII 2C	UNII 3
1	2.81	1.07	1.07	1.69	2.19

Note 2: The above information was declared by manufacturer.

Note 3: **For 2.4GHz function:**

For IEEE 802.11 b/g/n/VHT/ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

For 5GHz function:

For IEEE 802.11a/n/ac/ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

1.1.3 DFS Band Carrier Frequencies

There is one bandwidth systems.

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

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5250~5350 MHz UNII2A	52	5260 MHz	60	5300 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz UNII2C	100	5500 MHz	124	5620 MHz
	104	5520 MHz	128	5640 MHz
	108	5540 MHz	132	5660 MHz
	112	5560 MHz	136	5680 MHz
	116	5580 MHz	140	5700 MHz
	120	5600 MHz	144	5720 MHz

1.1.4 Table for EUT Combination Information

EUT	Main Chipset	Other Components
1	Main Source	Main Source
2	Main Source	Second Source

Note 1: From the above EUTs, EUT 1 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.1.5 Test Mode of Partial RU

Mode	Partial RU			
802.11ax HEW20	26	52	106	242



1.2 Accessories

N/A

1.3 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	ACER	ZQW	N/A
C	Fixture	AzureWave	2710 I2	N/A
D	WLAN AP	ASUS	RT-AX88U	MSQ-RTAXHP00

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	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	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	DF02-CB	Johnson Liu	20.8~21.3 / 62~66	May 12, 2026

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

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)
1	EUT 1



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 $\geq$ 200 mW	-64 dBm
EIRP < 200 mW and PSD < 10dBm/MHz	-62 dBm
EIRP < 200 mW and PSD $\geq$ 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
<i>Non-Occupancy Period</i>	Yes	Not required	Yes
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Availability Check Time</i>	Yes	Not required	Not required
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

3.1.3 Applicability of DFS Requirements during Normal Operation

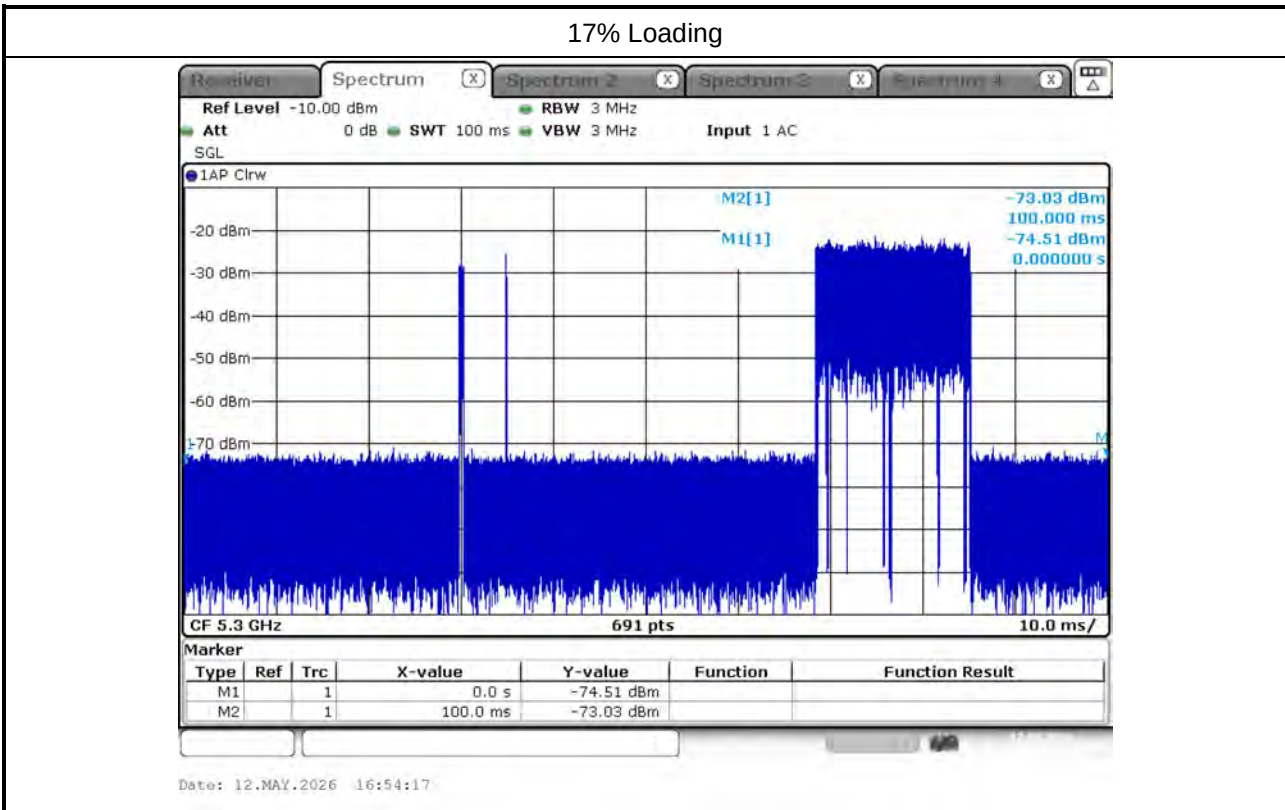
Requirement	DFS Operational mode		
	Master	Client without radar detection	Client with radar detection
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Closing Transmission Time</i>	Yes	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

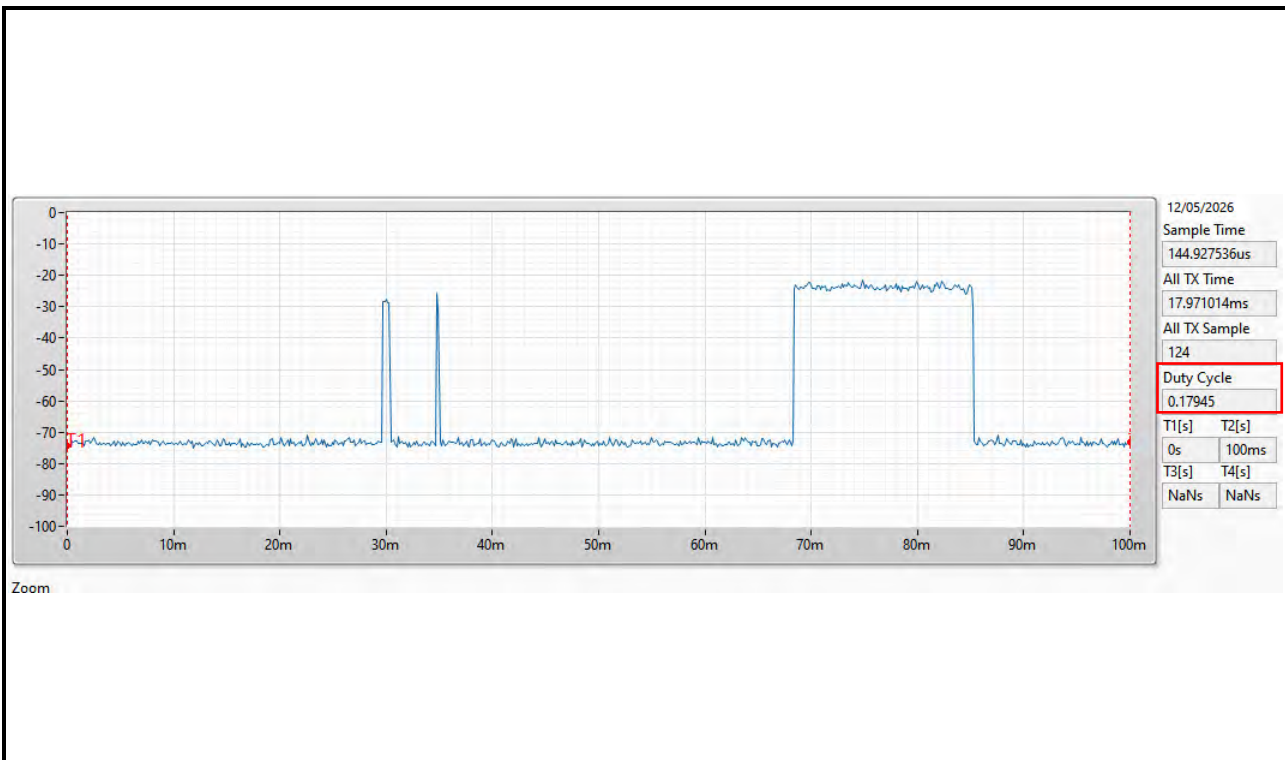
Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test 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 Channel Loading/Data Streaming

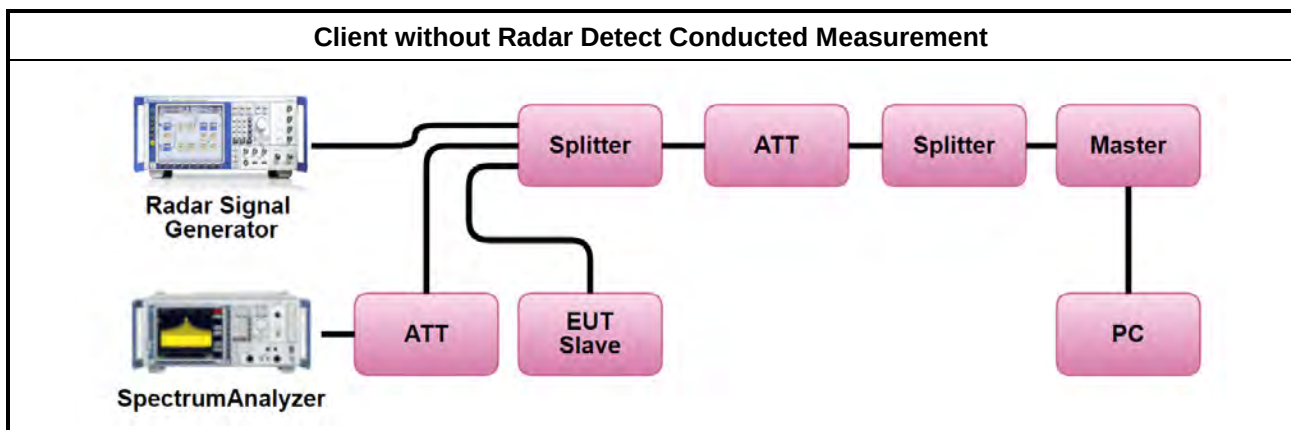
☐	The data file (MPEG-4) has been transmitting in a streaming mode.
☒	Software to ping the client is permitted to simulate data transfer with random ping intervals.
☒	Minimum channel loading of approximately 17%.
☐	Unicast protocol has been used.



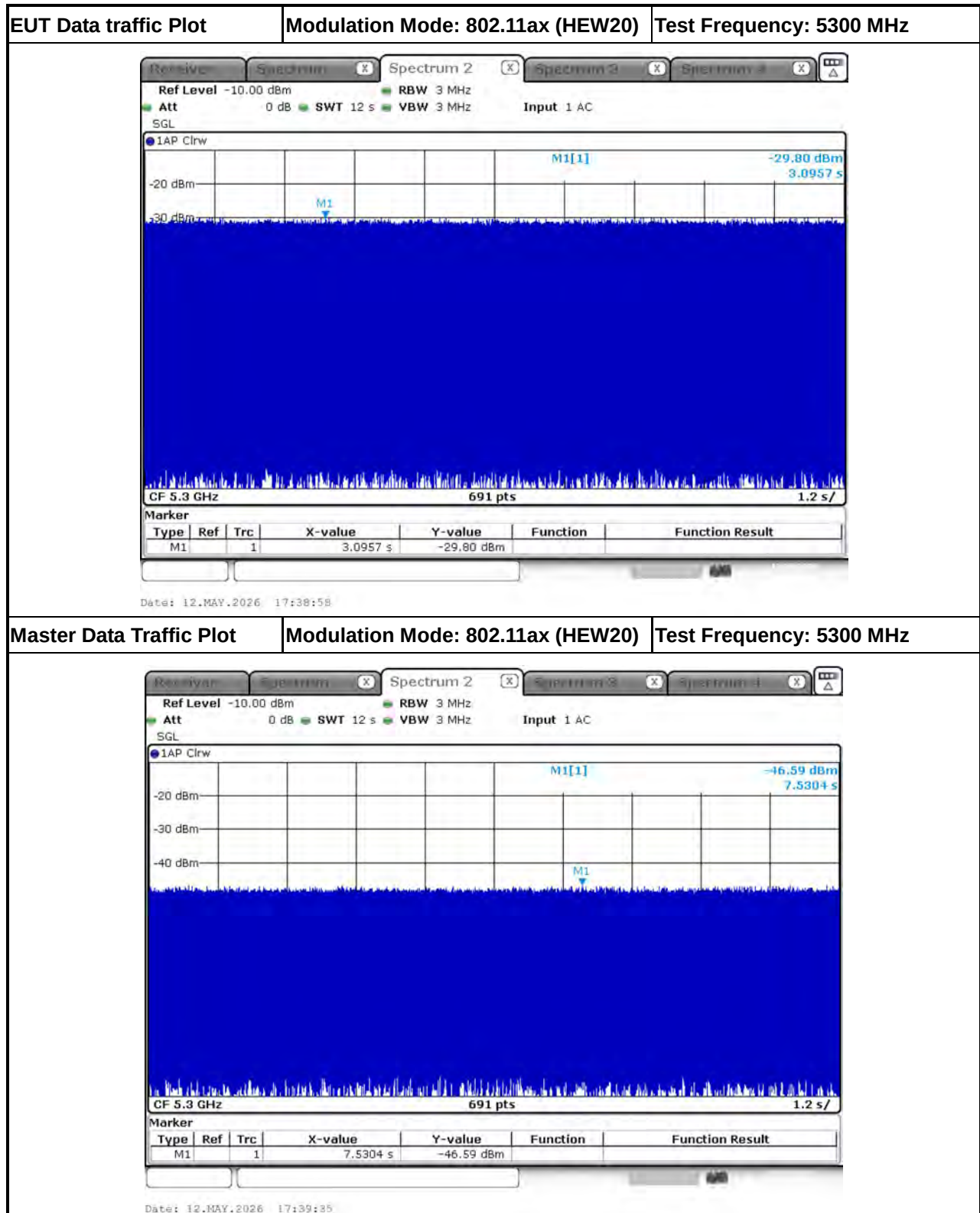


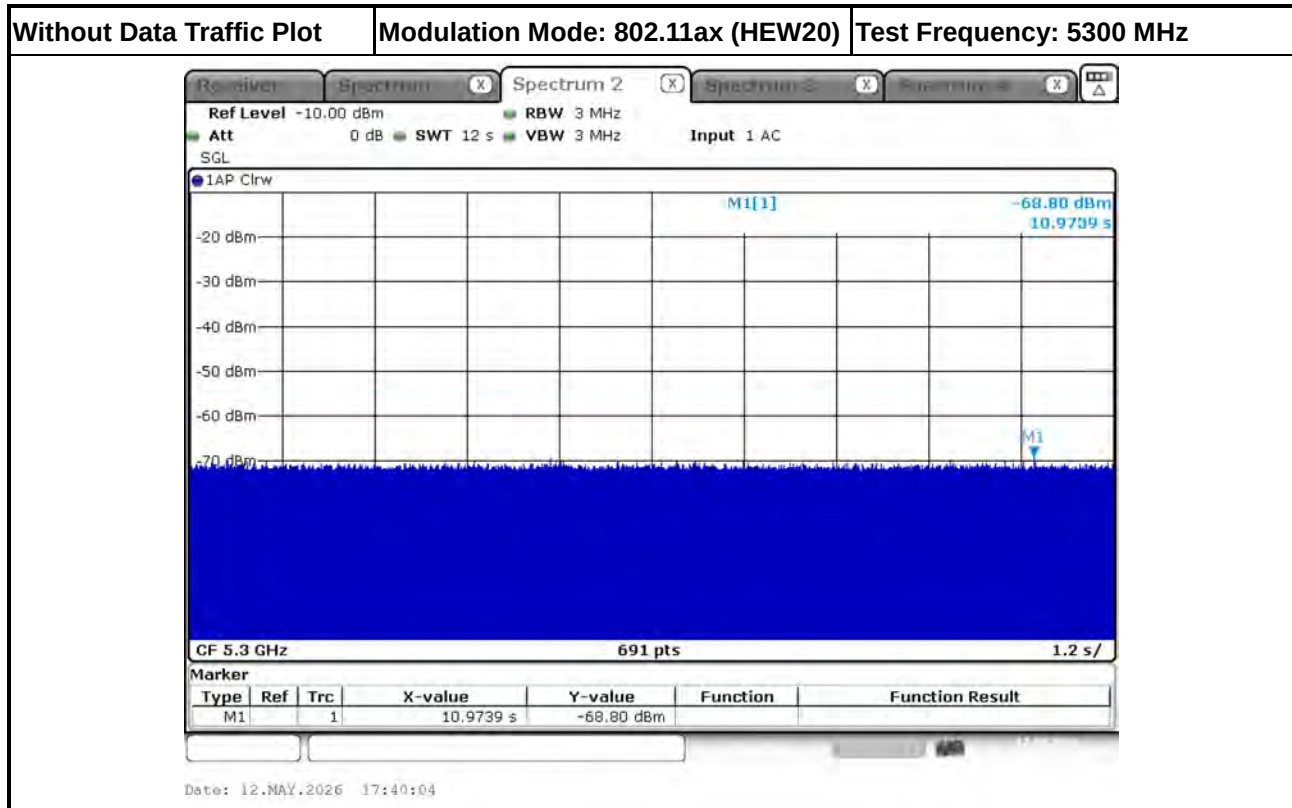
3.1.5 Test Setup

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.



3.1.6 Data traffic Plot





3.2 In-service Monitoring

3.2.1 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

3.2.2 Measuring Instruments

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

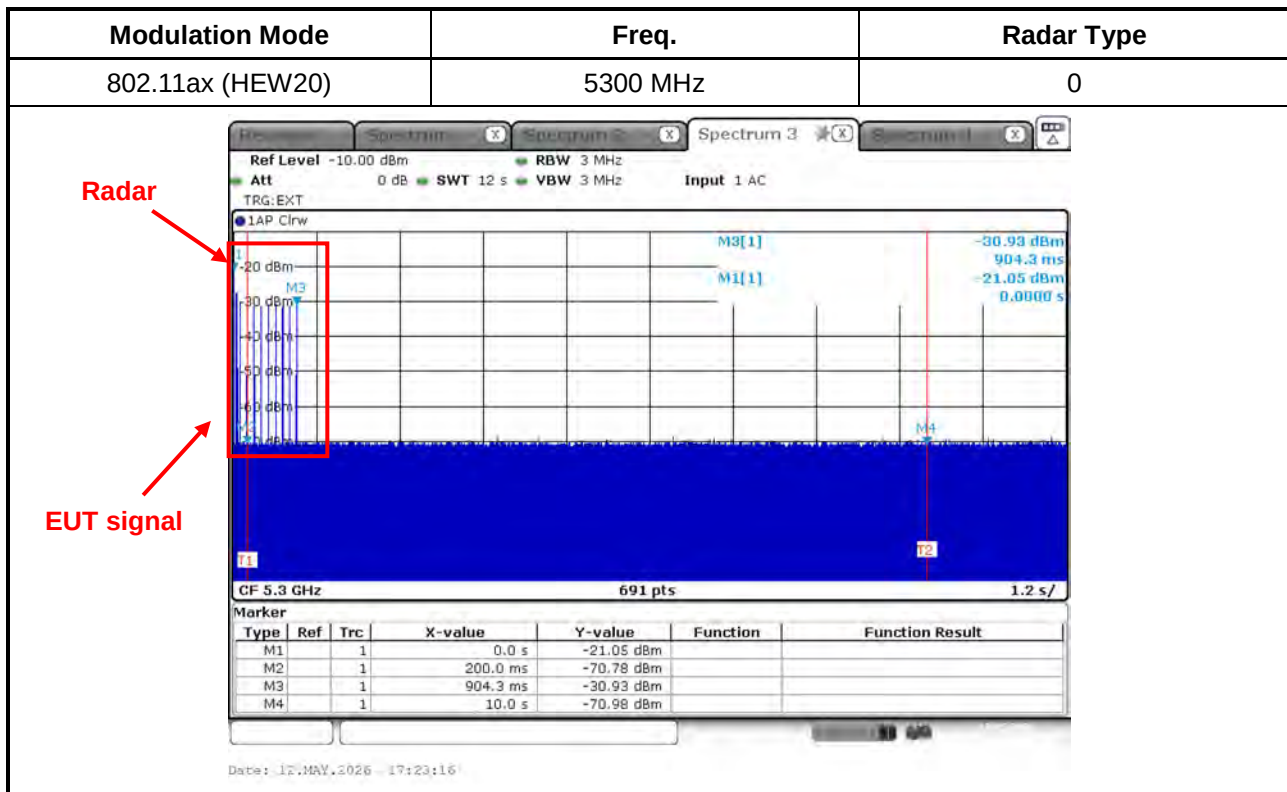
3.2.3 Test Procedures

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.

3.2.4 Test Result of Channel Move Time

Modulation Mode: 802.11ax (HEW20)

Parameter	Test Result	Limit
	Type 0	
Test Channel (MHz)	5300 MHz	-
Channel Move Time (sec.)	0.904	< 10s



3.2.5 Test Result of Channel Closing Transmission Time

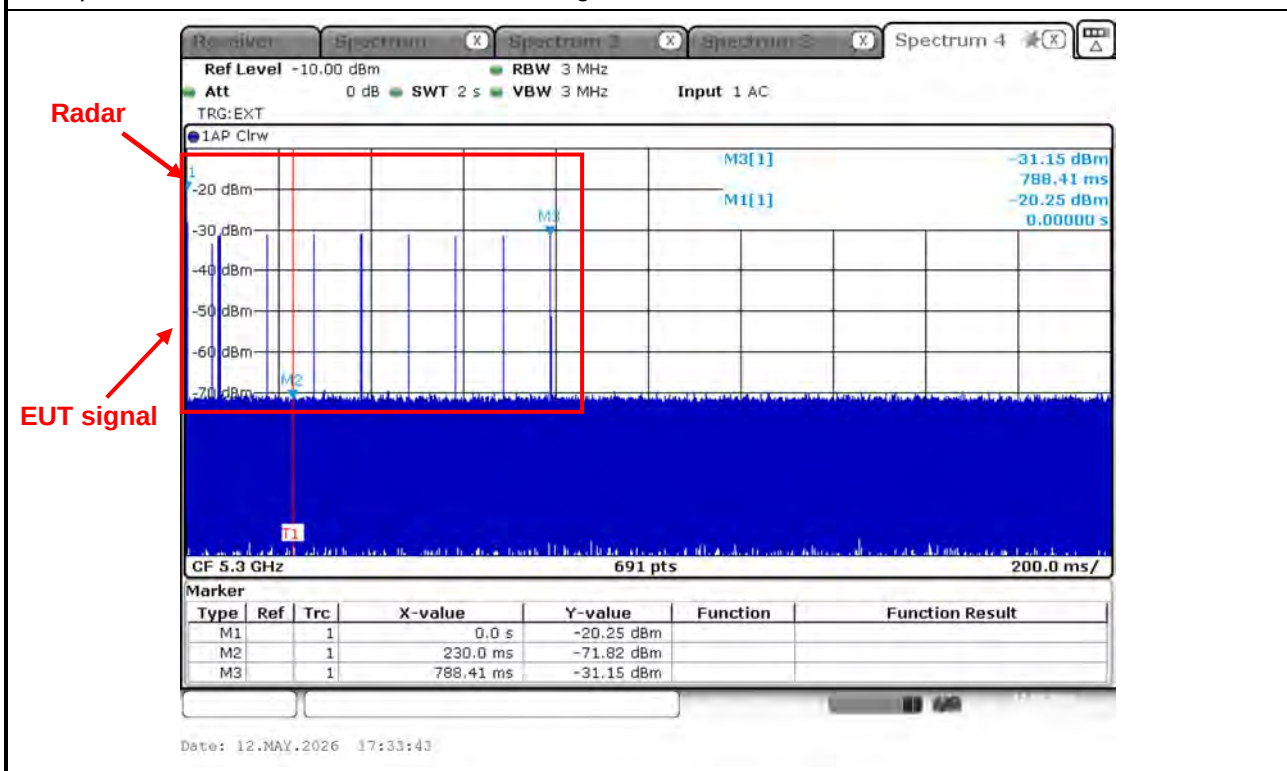
Modulation Mode: 802.11ax (HEW20)

Parameter	Test Result	Limit
	Type 0	
Test Channel (MHz)	5300 MHz	-
Channel Closing Transmission Time (ms) (Note)	37.681	< 60ms

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.

Modulation Mode	Freq.	Radar Type
802.11ax (HEW20)	5300 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



Dwell is the dwell time per spectrum analyzer sampling bin.

S is the sweep time

B is the number of spectrum analyzer sampling bins

C is the intermittent control signals of Channel Closing Transmission Time

N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission

Dwell (2.898ms)= S (2000 ms) / B (690)

C (37.681 ms) = N (13) X Dwell (2.898ms)

3.2.6 Test Result of Non-Occupancy Period

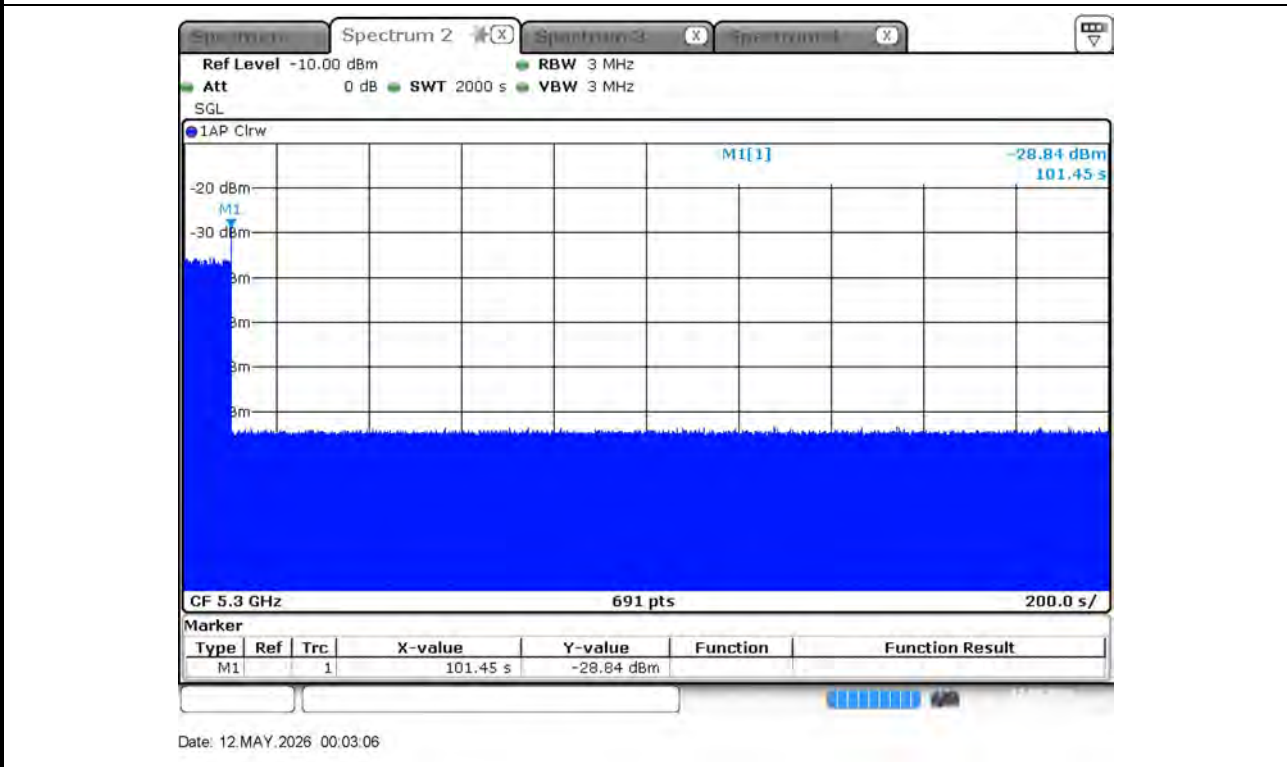
Modulation Mode: 802.11ax (HEW20)

Parameter	Test Result	Limit
	Type 0	
Test Channel (MHz)	5300 MHz	-
Non-Occupancy Period (min.)	≥ 30	≥ 30 min

Modulation Mode	Freq.
802.11ax (HEW20)	5300 MHz

Non-Occupancy Period

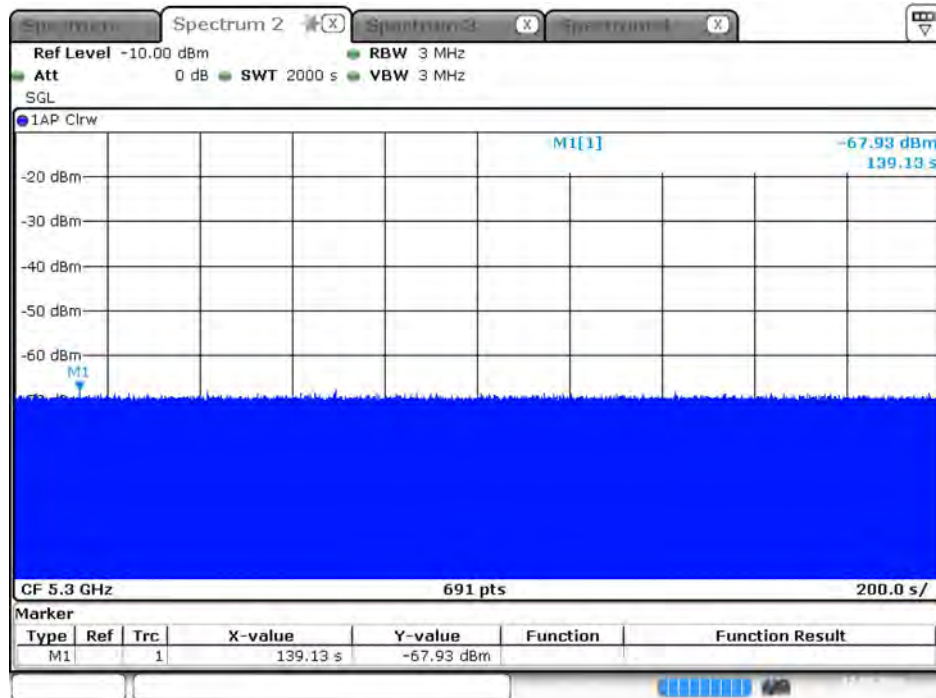
During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.



**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.



Date: 12.MAY.2026 23:14:41



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101025	9kHz ~ 40GHz	Nov. 12, 2025	Nov. 11, 2026	Conducted (DF02-CB)
Vector Signal generator	R&S	SMU200A	105352	25MHz-6GHz	Aug. 25, 2025	Aug. 24, 2026	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	Cable-60	1~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	Cable-61	1~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (DF02-CB)
RF Cable-high	Woken	RG402	Cable-63	1~18 GHz	Sep. 30, 2025	Sep. 29, 2026	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-8G -05	1 ~ 8GHz	Sep. 20, 2025	Sep. 19, 2026	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-8G -06	1 ~ 8GHz	Sep. 20, 2025	Sep. 19, 2026	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-8G -07	1 ~ 8GHz	Sep. 20, 2025	Sep. 19, 2026	Conducted (DF02-CB)
RF Power Divider	STI	2 Way	DV-8G -08	1 ~ 8GHz	Sep. 20, 2025	Sep. 19, 2026	Conducted (DF02-CB)
Test Software	SPORTON	DFS Test	V1.01	5.25GHz-5.725GHz	N.C.R.	N.C.R.	Conducted (DF02-CB)

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

NCR means Non-Calibration required.



5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Conducted Emission	2.7 dB	Confidence levels of 95%