



## DFS MEASUREMENT REPORT

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**FCC ID:** 2BH7FBE65OD

**Applicant:** TP-Link Systems Inc.

**Product:** BE11000 Outdoor/Indoor Mesh Wi-Fi 7 Unit

**Model No.:** Deco BE65-Outdoor

**Brand Name:** tp-link

**FCC Classification:** Unlicensed National Information Infrastructure (NII)

**FCC Rule Part(s):** Part 15 Subpart E (Section 15.407)

**Type of Device:** Master

**Result:** Complies

**Received Date:** 2025-02-07

**Test Date:** 2025-02-25 ~ 2025-03-06

**Reviewed By:**

Kevin Guo

**Approved By:**

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 905462. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

**Revision History**

Report No.	Version	Description	Issue Date	Note
R25S1008026-U204	V01	Initial Report	2025-03-21	Valid

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## 1. General Information

### 1.1. Applicant

TP-Link Systems Inc.

10 Mauchly, Irvine, CA 92618

## 1.2. Manufacturer

TP-Link Systems Inc.

10 Mauchly, Irvine, CA 92618

### 1.3. Testing Facility

<input checked="" type="checkbox"/>	<b>Test Site – MRT Suzhou Laboratory</b>
	<b>Laboratory Location (Suzhou - Wuzhong)</b> D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	<b>Laboratory Location (Suzhou - SIP)</b> 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	<b>Laboratory Location (Suzhou - Wujiang)</b> Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China
	<b>Laboratory Accreditations</b>
	A2LA: 3628.01 FCC: CN1166 VCCI: <input type="checkbox"/> R-20025 <input type="checkbox"/> G-20034 <input type="checkbox"/> C-20020 <input type="checkbox"/> T-20020 <input type="checkbox"/> R-20141 <input type="checkbox"/> G-20134 <input type="checkbox"/> C-20103 <input type="checkbox"/> T-20104
	CNAS: L10551 ISED: CN0001
<input type="checkbox"/>	<b>Test Site – MRT Shenzhen Laboratory</b>
	<b>Laboratory Location (Shenzhen)</b> 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	<b>Laboratory Accreditations</b>
	A2LA: 3628.02 FCC: CN1284
CNAS: L10551 ISED: CN0105	
<input type="checkbox"/>	<b>Test Site – MRT Taiwan Laboratory</b>
	<b>Laboratory Location (Taiwan)</b> No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	<b>Laboratory Accreditations</b>
	TAF: 3261 FCC: 291082, TW3261
ISED: TW3261	

**1.4. Product Information**

Product Name	BE11000 Outdoor/Indoor Mesh Wi-Fi 7 Unit
Model No.	Deco BE65-Outdoor
EUT Identification No	20250212Sample#11
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
Bluetooth Specification	V5.4 Single Mode
Antenna Information	Refer to section 1.7
Working Voltage	AC power or PoE Input
Accessory	
PoE Injector	Model: POE4824G Input: 100-240V ~ 50/60Hz, 0.8A Output: 48.0V, 0.5A 24.0W
Remark: 1. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. 2. PoE Injector is not sold with Product.	

### 1.5. Radio Specification under Test

Frequency Range	<p>For 802.11a/n-HT20/ac-VHT20/ax-HE20/be-EHT20: 5260~5320MHz, 5500~5720MHz</p> <p>For 802.11n-HT40/ac-VHT40/ax-HE40/be-EHT40: 5270~5310MHz, 5510~5710MHz</p> <p>For 802.11ac-VHT80/ax-HE80/be-EHT80: 5290MHz, 5530MHz, 5610 MHz, 5690MHz</p> <p>For 802.11ac-VHT160/ax-HE160/be-EHT160: 5250MHz, 5570MHz</p> <p>For 802.11be-EHT240: 5650MHz</p>
Type of Modulation	<p>802.11a/n/ac: OFDM</p> <p>802.11ax/be: OFDMA</p>
Data Rate	<p>802.11a: 6/9/12/18/24/36/48/54Mbps</p> <p>802.11n: up to 300Mbps</p> <p>802.11ac: up to 1733.4Mbps</p> <p>802.11ax: up to 2402Mbps</p> <p>802.11be: up to 4323Mbps</p>
Power-on cycle	Requires 127.6 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band)	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

## 1.6. Working Frequencies

### 802.11a/n-HT20/ac-VHT20/ax-HE20/be-EHT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
52	5260 MHz	56	5280 MHz	60	5300 MHz
64	5320 MHz	100	5500 MHz	104	5520 MHz
108	5540 MHz	112	5560 MHz	116	5580 MHz
120	5600 MHz	124	5620 MHz	128	5640 MHz
132	5660 MHz	136	5680 MHz	140	5700 MHz
144	5720 MHz	--	--	--	--

### 802.11n-HT40/ac-VHT40/ax-HE40/be-EHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz	102	5510 MHz
110	5550 MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	142	5710 MHz	--	--

### 802.11ac-VHT80/ax-HE80/be-EHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290 MHz	106	5530 MHz	122	5610 MHz
138	5690 MHz	--	--	--	--

### 802.11ac-VHT160/ax-HE160/be-EHT160

Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250 MHz	114	5570 MHz	--	--

### 802.11be-EHT240

Channel	Frequency	Channel	Frequency	Channel	Frequency
130	5650 MHz	--	--	--	--



### 1.7. Antenna Details

Antenna Type	Frequency Band (MHz)	T <sub>x</sub> Paths	Antenna Gain (dBi)		Antenna Gain (Elevation angle > 30°) (dBi)		Beamforming Directional Gain (dBi)	Beamforming Directional Gain (Elevation angle > 30°) (dBi)	CDD Directional Gain (dBi)	
			Ant 0	Ant 1	Ant 0	Ant 1			For Power	For PSD
Wi-Fi 5G Antenna										
Dipole	5150 ~ 5250	2	3.14	2.76	-5.03	-5.00	5.03	-1.99	3.14	5.03
	5250 ~ 5350	2	3.52	3.58	--	--	5.14	--	3.58	5.14
	5470 ~ 5725	2	3.01	3.42	--	--	4.65	--	3.42	4.65
	5725 ~ 5850	2	3.15	2.99	--	--	5.06	--	3.15	5.06
Remark:										
1. The device supports CDD Mode and Beamforming mode, details refer to the table as below.										
2. CDD signals are correlated, the directional gain as follows, for power measurements: Array Gain = 0 dB for N <sub>ANT</sub> ≤ 4, the directional gain = max antenna gain + array gain For power spectral density (PSD) measurements: the max directional gain (each angle) = 10 log[(10 <sup>G<sup>1</sup>/20</sup> + 10 <sup>G<sup>2</sup>/20</sup> + ... + 10 <sup>G<sup>N</sup>/20</sup> ) <sup>2</sup> /N <sub>ANT</sub> ]										
3. Beamforming signals are correlated, the directional gain as follows, the max directional gain (each angle) = 10 log[(10 <sup>G<sup>1</sup>/20</sup> + 10 <sup>G<sup>2</sup>/20</sup> + ... + 10 <sup>G<sup>N</sup>/20</sup> ) <sup>2</sup> /N <sub>ANT</sub> ]										
4. The information as above is from the antenna report.										

Test Mode	Tx Paths	CDD Mode	Beamforming Mode
802.11a/n (NII)	2	√	X
802.11ac/ax/be (NII)	2	√	√

## 2. Test Configuration

### 2.1. Test Mode

Mode 1: Operating under AP mode
Mode 1: Operating under Mesh mode

### 2.2. Test Channel

Test Mode	Test Channel	Test Frequency
802.11be-EHT20	100	5500 MHz
802.11be-EHT40	102	5510 MHz
802.11be-EHT80	106	5530 MHz
802.11be-EHT160	50	5250 MHz
802.11be-EHT160	114	5570 MHz
802.11be-EHT240	130	5650 MHz
802.11be-EHT20 - Mesh	100	5500 MHz

### 2.3. Applied Standards

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

- FCC Part 15.407 Section (h)(2)
- KDB 905462 D02v02
- KDB 905462 D04v01

### 2.4. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

### 3. DFS Detection Thresholds and Radar Test Waveforms

#### 3.1. Applicability

The following table from FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 lists the applicable requirements for the DFS testing.

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

**Table 3-1: Applicability of DFS Requirements Prior to Use of a Channel**

Requirement	Operational Mode	
	Master Device or Client With Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

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 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.		

**Table 3-2: Applicability of DFS Requirements during normal operation**

### 3.2. DFS Devices Requirements

**Per FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 the following are the requirements for Master Devices:**

- (a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5250 ~ 5350 MHz and 5470 ~ 5725 MHz bands. DFS is not required in the 5150 ~ 5250 MHz or 5725 ~ 5825 MHz bands.
- (b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.
- (c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.
- (d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).
- (e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.
- (f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period.
- (g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

**Channel Move Time and Channel Closing Transmission Time requirements are listed in the following table.**

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
<p>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.</p> <p>Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.</p> <p>Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.</p>	

**Table 3-3: DFS Response Requirements**

### 3.3. DFS Detection Threshold Values

The DFS detection thresholds are defined for Master devices and Client Devices with In-service monitoring.

These detection thresholds are listed in the following table.

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
<p>Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p>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.</p> <p>Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>	

**Table 3-4: Detection Thresholds for Master Devices and Client Devices with Radar Detection**

### 3.4. Parameters of DFS Test Signals

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

#### Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	$\text{Roundup} \left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

**Table 3-5: Parameters for Short Pulse Radar Waveforms**

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds)
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

**Table 3-6: Pulse Repetition Intervals Values for Test A**



### 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 Number of Trials
5	50 - 100	5 - 20	1000 - 2000	1 - 3	8 - 20	80%	30

**Table 3-7: Parameters for Long Pulse Radar Waveforms**

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

### Frequency Hopping Radar Test Waveform

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

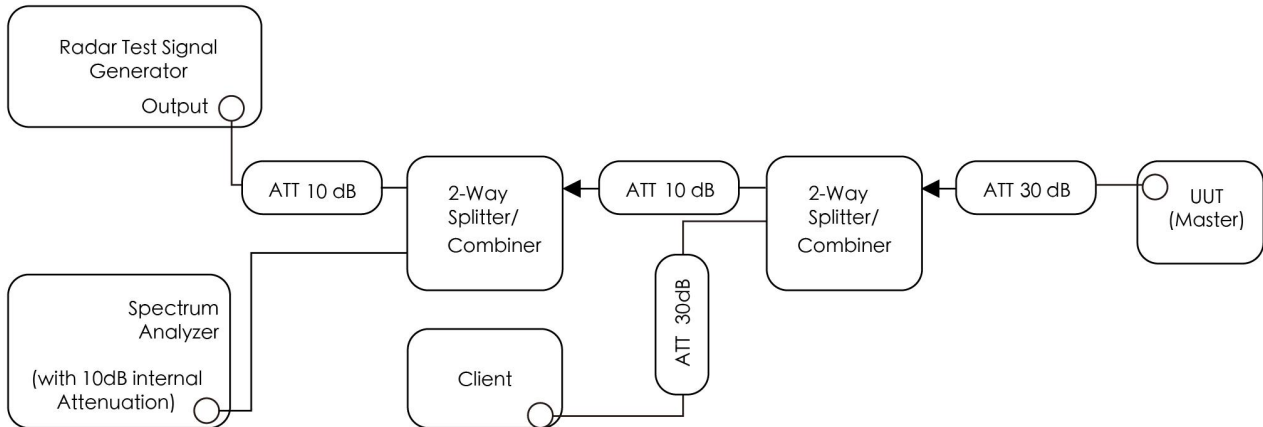
**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

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 – 5724MHz. 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. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

### 3.5. Conducted Test Setup

The FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure 3-1 shows the typical test setup.



**Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters**

#### 4. Measuring Instrument

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2025-09-05	WZ-SR4
Signal Generator	Keysight	N5182B	MRTSUE06451	1 year	2025-06-03	WZ-SR4
Thermohygrometer	testo	608-H1	MRTSUE11256	1 year	2025-10-16	WZ-SR4
Shielding Room	HUAMING	WZ-SR4	MRTSUE06441	N/A	N/A	WZ-SR4
Power Divider	MVE	MVE8577	MRTSUE06268	1 year	2025-10-24	WZ-SR4
Power Divider	MVE	MVE8247	MRTSUE06324	1 year	2025-10-24	WZ-SR4
Attenuator	MVE	MVE2213	MRTSUE11096	1 year	2025-06-05	WZ-SR4
Attenuator	MVE	MVE2213	MRTSUE11097	1 year	2025-06-05	WZ-SR4
Attenuator	MVE	MVE2365	MRTSUE07070	1 year	2025-11-11	WZ-SR4
Attenuator	MVE	MVE2365	MRTSUE07071	1 year	2025-11-11	WZ-SR4
Power Divider	MVE	MVE8576	MRTSUE06259	1 year	2025-10-24	WZ-SR4

#### Client Information

Instrument	Manufacturer	Type No.	Certification Number
Wi-Fi Module	Intel	Intel(R) Wi-Fi 7 BE200 320MHz	FCC ID: PD9BE200NG

Software	Version	Manufacturer	Function
DFS Tool	V 6.9.2	Agilent	DFS Test Software
Pulse Sequencer	V 2.8	R&S	DFS Test Software
Signal Studio	V2.2.0.0	Keysight	DFS Test Software

## 5. Test Result

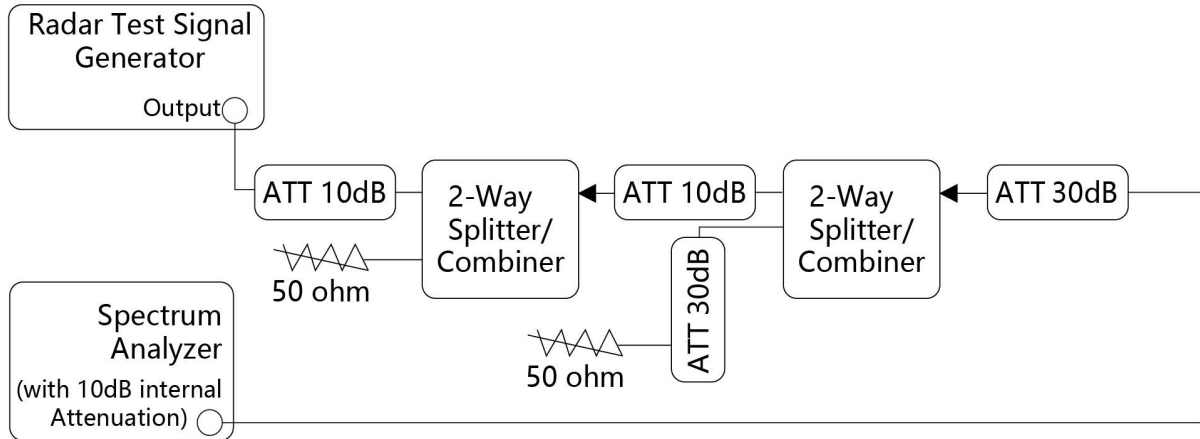
### 5.1. Summary

Parameter	Verdict	Reference
NII Detection Bandwidth Measurement	Pass	Section 5.3
Initial Channel Availability Check Time	Pass	Section 5.4
Radar Burst at the Beginning of the Channel Availability Check Time	Pass	Section 5.5
Radar Burst at the End of the Channel Availability Check Time	Pass	Section 5.6
In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time	Pass	Section 5.7
Non-Occupancy Period	Pass	Section 5.7
Statistical Performance Check	Pass	Section 5.8

## 5.2. Radar Waveform Calibration Measurement

### 5.2.1. Calibration Setup

The conducted test setup was used for this calibration testing. Figure 3-2 shows the typical test setup.



**Figure 3-2: Conducted Test Setup**

### 5.2.2. Calibration Procedure

The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

### 5.2.3. Calibration & Channel Loading Result

Refer to Appendix A.1&A.2.

### 5.3. NII Detection Bandwidth Measurement

#### 5.3.1. Test Limit

Minimum 100% of the NII 99% transmission power bandwidth. During the U-NII Detection Bandwidth detection test, each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

#### 5.3.2. Test Procedure

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as  $F_H$ ) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above  $F_H$  is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as  $F_L$ ) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below  $F_L$  is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows:  $\text{U-NII Detection Bandwidth} = F_H - F_L$
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the

EUT does not comply with DFS requirements.

### **5.3.3. Test Result**

Refer to Appendix A.3.

#### **5.4. Initial Channel Availability Check Time Measurement**

##### **5.4.1. Test 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 on the intended operating frequency.

##### **5.4.2. Test Procedure**

1. The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII Channel that must incorporate DFS functions. At the same time the EUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the Channel occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.
2. The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.
3. Confirm that the EUT initiates transmission on the channel. Measurement system showing its nominal noise floor is marker1.

##### **5.4.3. Test Result**

Refer to Appendix A.4.



## **5.5. Radar Burst at the Beginning of the Channel Availability Check Time Measurement**

### **5.5.1. Test Limit**

In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.5.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is in completion power-up cycle (from T0 to T1). T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

### **5.5.3. Test Result**

Refer to Appendix A.5.

## **5.6. Radar Burst at the End of the Channel Availability Check Time Measurement**

### **5.6.1. Test Limit**

In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.6.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

### **5.6.3. Test Result**

Refer to Appendix A.6.

## **5.7. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement**

### **5.7.1. Test Limit**

The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec. The total duration of Channel Closing Transmission Time is 260ms, consisting of data signals and the aggregate of control signals, by a U-NII device during the Channel Move Time. The Non-Occupancy Period time is 30 minute during which a Channel will not be utilized after a Radar Waveform is detected on that Channel.

### **5.7.2. Test Procedure**

1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.
3. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).
4. Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell (1.5ms) = S (12 \text{ sec}) / B (8000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C = N \times Dwell$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and Dwell is the dwell time per bin.
5. Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this Channel.

### **5.7.3. Test Result**

Refer to Appendix A.7.

## 5.8. Statistical Performance Check Measurement

### 5.8.1. Test Limit

The minimum percentage of successful detection requirements found in below table when a radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

Radar Type	Minimum Number of Trails	Detection Probability
0	30	$P_d \geq 60\%$
1	30(15 of test A and 15 of test B)	$P_d \geq 60\%$
2	30	$P_d \geq 60\%$
3	30	$P_d \geq 60\%$
4	30	$P_d \geq 60\%$
Aggregate (Radar Types 1-4)	120	$P_d \geq 80\%$
5	30	$P_d \geq 80\%$
6	30	$P_d \geq 70\%$

Note: The percentage of successful detection is calculated by:  
 $(\text{Total Waveform Detections} / \text{Total Waveform Trails}) * 100 = \text{Probability of Detection Radar Waveform In}$   
 addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows:  $(P_{d1} + P_{d2} + P_{d3} + P_{d4}) / 4$ .

### 5.8.2. Test Procedure

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. At time T0 the Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels equal to the DFS Detection Threshold + 1dB, on the Operating Channel.
3. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 0 to ensure detection occurs.
4. Observe the transmissions of the EUT 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.
5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
6. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table

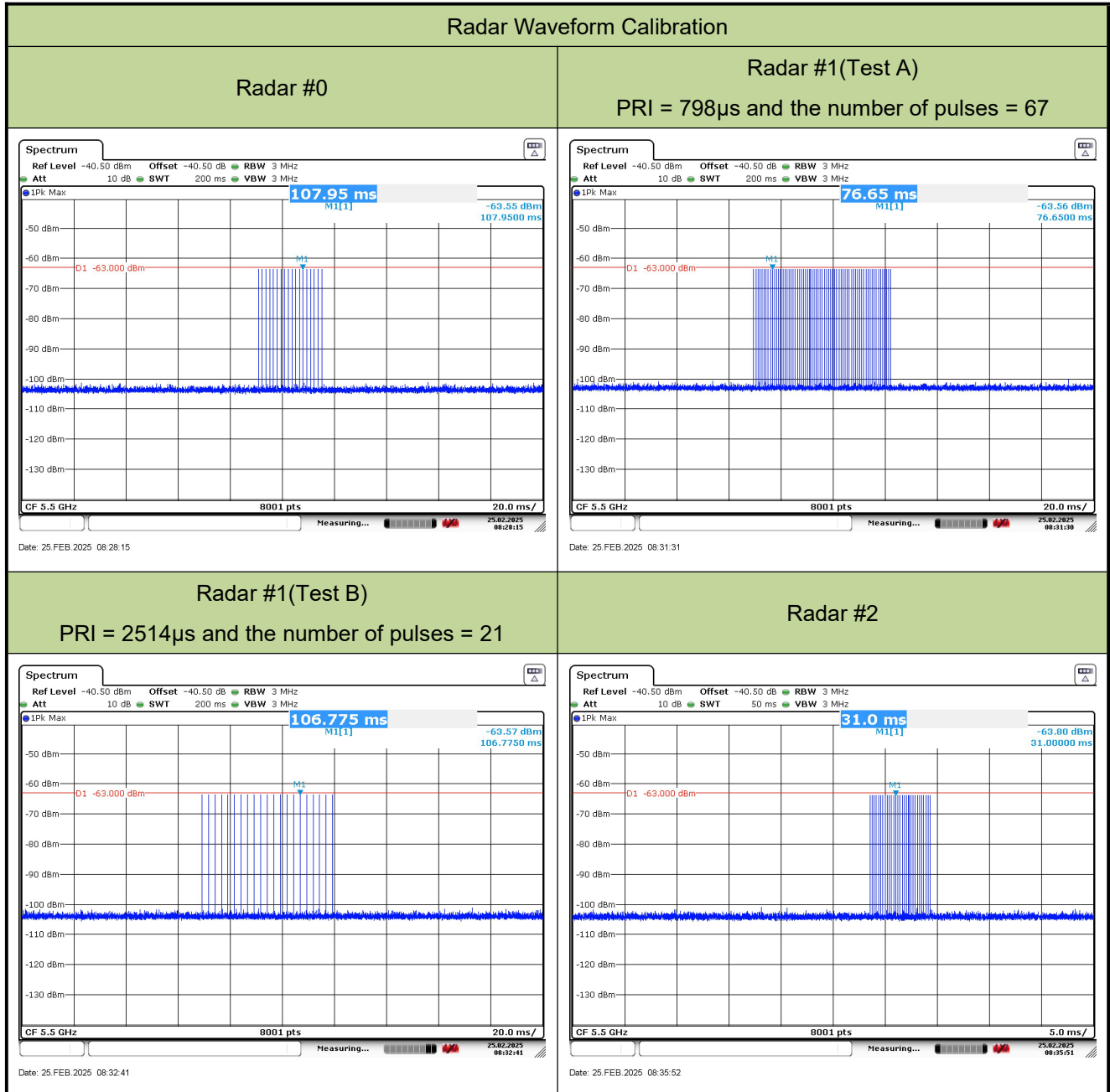
### 5.8.3. Test Result

Refer to Appendix A.8.

## Appendix A – Test Result

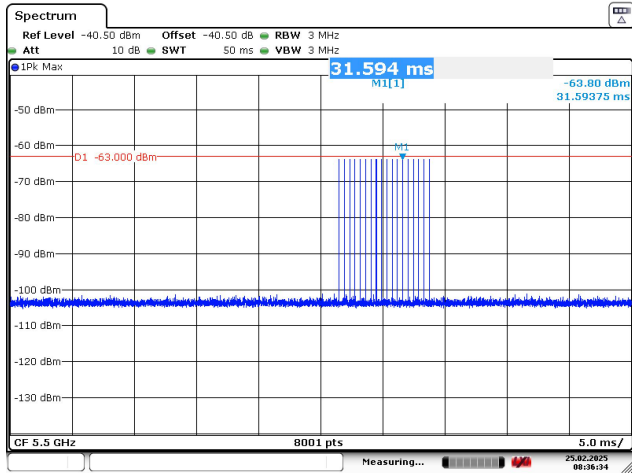
### A.1 Calibration Test Result

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-25	Test Item	Radar Waveform Calibration



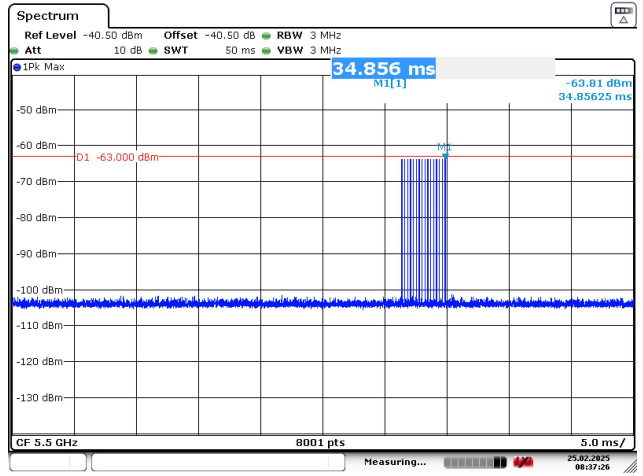
## Radar Waveform Calibration

### Radar #3



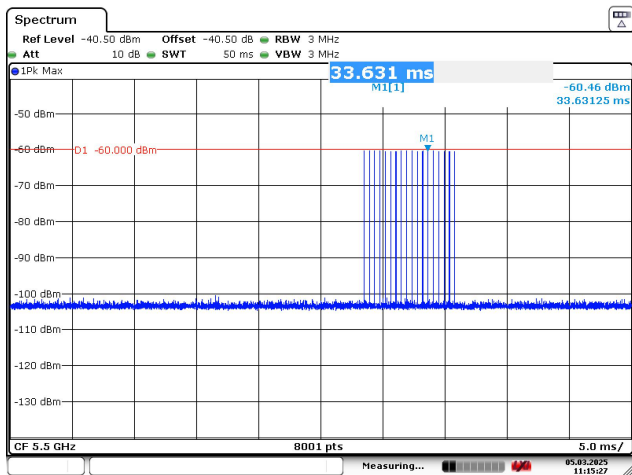
Date: 25 FEB 2025 08:36:34

### Radar #4



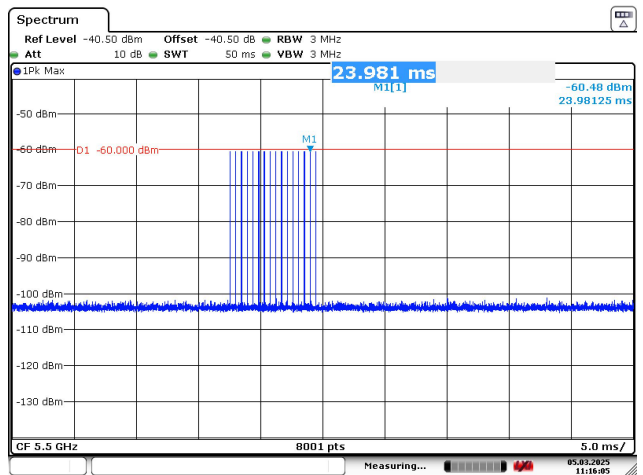
Date: 25 FEB 2025 08:37:26

### Radar #3-1



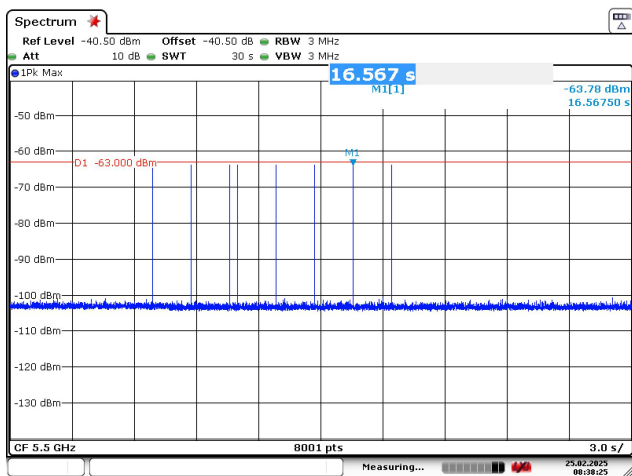
Date: 5 MAR 2025 11:15:28

### Radar #4-1



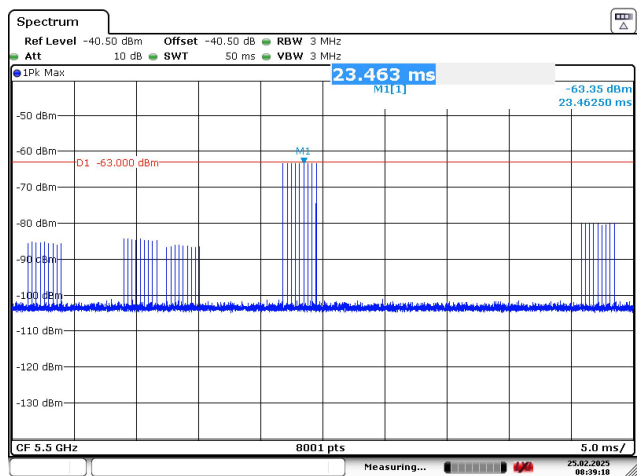
Date: 5 MAR 2025 11:16:06

### Radar #5



Date: 25 FEB 2025 08:38:25

### Radar #6

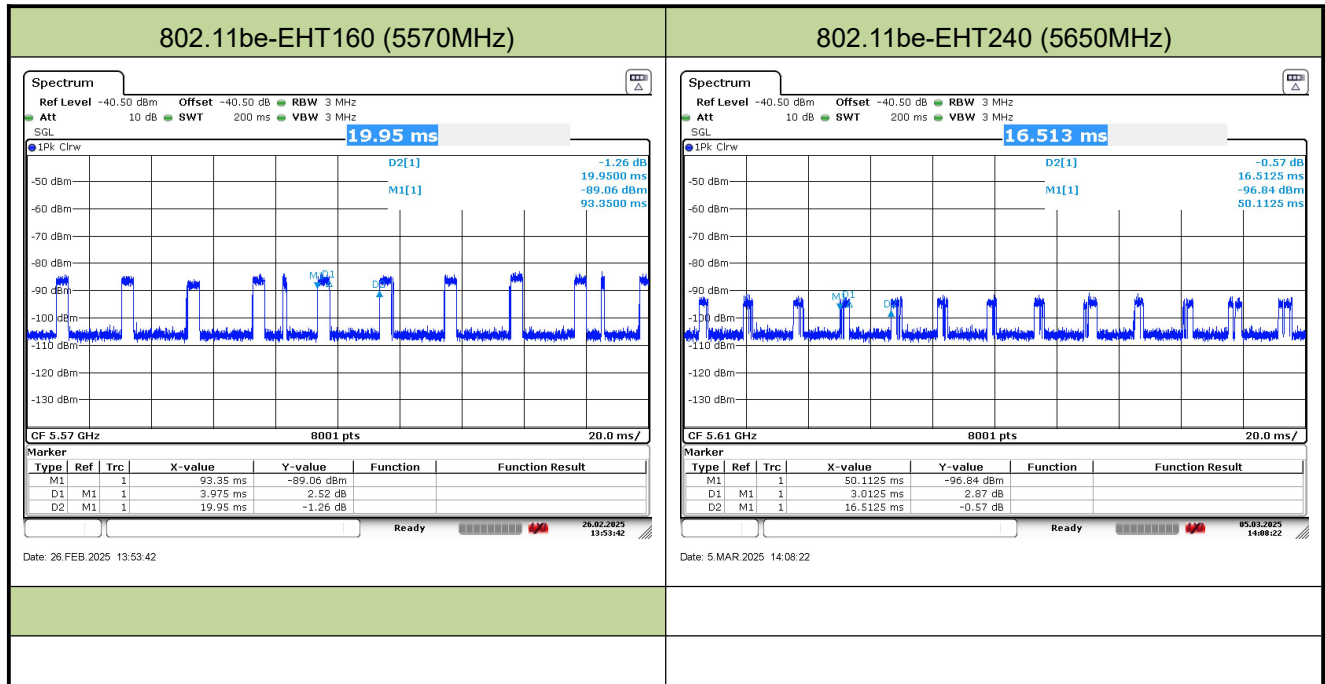


Date: 25 FEB 2025 08:39:19

## A.2 Channel Loading Test Result

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-26 ~ 2025-03-05	Test Item	Channel Loading
Test Mode	Mode 1		





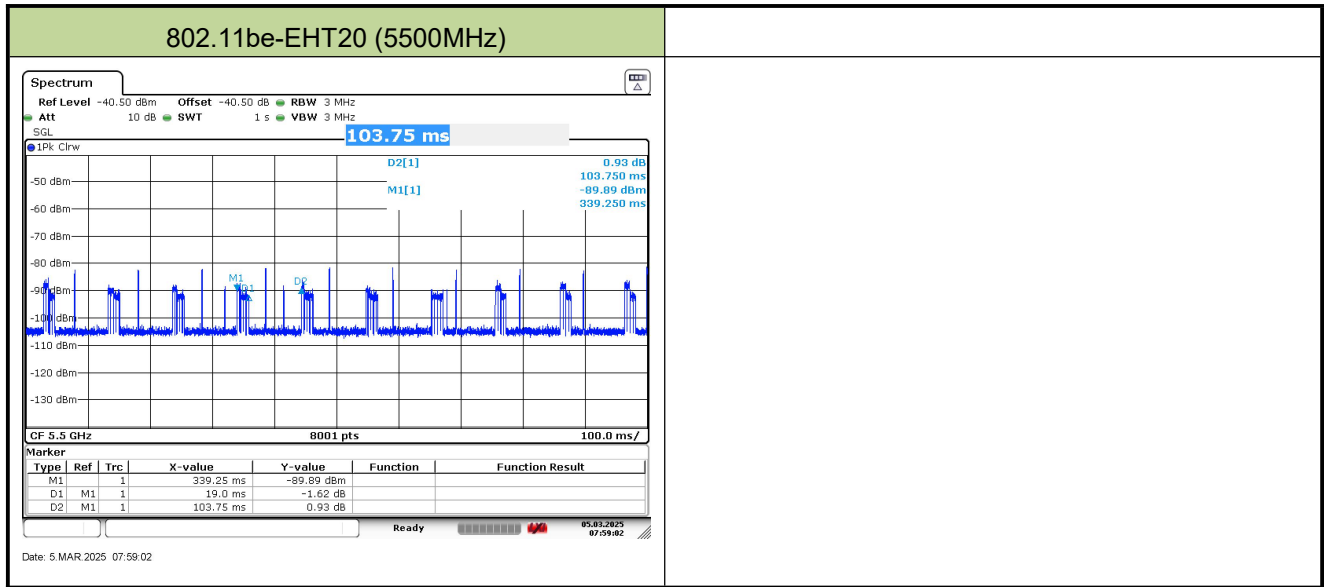
Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11be-EHT20	5500 MHz	19.04%	≥ 17%	Pass
802.11be-EHT40	5510 MHz	17.53%	≥ 17%	Pass
802.11be-EHT80	5530 MHz	18.95%	≥ 17%	Pass
802.11be-EHT160	5250 MHz	17.36%	≥ 17%	Pass
802.11be-EHT160	5570 MHz	19.92%	≥ 17%	Pass
802.11be-EHT240	5650 MHz	18.24%	≥ 17%	Pass

Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device.

Packet ratio = Time On / (Time On + Off Time).



Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-26 ~ 2025-03-05	Test Item	Channel Loading
Test Mode	Mode 2		



Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11be-EHT20	5500 MHz	18.31%	≥ 17%	Pass

Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device.

Packet ratio = Time On / (Time On + Off Time).

### A.3 NII Detection Bandwidth Test Result

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-27		
Test Item	Detection Bandwidth (802.11be-EHT20 mode - 5500MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490 F <sub>L</sub>	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510 F <sub>H</sub>	1	1	1	1	1	1	1	1	1	1	100%
<p>Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 19.098MHz. (See the 99% BW section of the RF report for further measurement details).</p> <p>Note 2: Detection Bandwidth = <math>F_H - F_L = 5510\text{MHz} - 5490\text{MHz} = 20\text{MHz}</math></p> <p>Note 3: NII Detection Bandwidth Min. Limit (MHz): <math>19.098\text{MHz} \times 100\% = 19.098\text{MHz}</math>.</p>											

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-27		
Test Item	Detection Bandwidth (802.11be-EHT40 mode - 5510MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490F <sub>L</sub>	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530 F <sub>H</sub>	1	1	1	1	1	1	1	1	1	1	100%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 37.997MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5530\text{MHz} - 5490\text{MHz} = 40\text{MHz}$ .

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $37.997\text{MHz} \times 100\% = 37.997\text{MHz}$ .

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-27		
Test Item	Detection Bandwidth (802.11be-EHT80 mode - 5530MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490 F <sub>L</sub>	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5570 F <sub>H</sub>	1	1	1	1	1	1	1	1	1	1	100%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 77.822MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5570\text{MHz} - 5490\text{MHz} = 80\text{MHz}$ .

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $77.822\text{MHz} \times 100\% = 77.822\text{MHz}$ .

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-27		
Test Item	Detection Bandwidth (802.11be-EHT160 mode - 5250MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5250 F <sub>L</sub>	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 F <sub>H</sub>	1	1	1	1	1	1	1	1	1	1	100%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5250MHz. The 99% channel bandwidth within U-NII Band-2A is 78.455MHz ( $99\% \text{ BW} / 2 = 156.91\text{MHz} / 2 = 78.455\text{MHz}$ ). (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5330\text{MHz} - 5250\text{MHz} = 80\text{MHz}$ .

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $78.455\text{MHz} \times 100\% = 78.455\text{MHz}$ .

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-27		
Test Item	Detection Bandwidth (802.11be-EHT160 mode - 5570MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490 F <sub>L</sub>	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5570	1	1	1	1	1	1	1	1	1	1	100%
5575	1	1	1	1	1	1	1	1	1	1	100%
5580	1	1	1	1	1	1	1	1	1	1	100%
5585	1	1	1	1	1	1	1	1	1	1	100%
5590	1	1	1	1	1	1	1	1	1	1	100%
5595	1	1	1	1	1	1	1	1	1	1	100%
5600	1	1	1	1	1	1	1	1	1	1	100%
5605	1	1	1	1	1	1	1	1	1	1	100%
5610	1	1	1	1	1	1	1	1	1	1	100%
5615	1	1	1	1	1	1	1	1	1	1	100%
5620	1	1	1	1	1	1	1	1	1	1	100%
5625	1	1	1	1	1	1	1	1	1	1	100%
5630	1	1	1	1	1	1	1	1	1	1	100%
5635	1	1	1	1	1	1	1	1	1	1	100%
5640	1	1	1	1	1	1	1	1	1	1	100%
5645	1	1	1	1	1	1	1	1	1	1	100%
5650 F <sub>H</sub>	1	1	1	1	1	1	1	1	1	1	100%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5570MHz. The 99% channel bandwidth is 156.88MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5650\text{MHz} - 5490\text{MHz} = 160\text{MHz}$

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $156.88\text{MHz} \times 100\% = 156.88\text{MHz}$ .

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-03-05		
Test Item	Detection Bandwidth (802.11be-EHT240 mode - 5650MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490 FL	1	1	1	1	0	1	1	1	1	1	90%
5495	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5570	1	1	1	1	1	1	1	1	1	1	100%
5575	1	1	1	1	1	1	1	1	1	1	100%
5580	1	1	1	1	1	1	1	1	1	1	100%
5585	1	1	1	1	1	1	1	1	1	1	100%
5590	1	1	1	1	1	1	1	1	1	1	100%
5595	1	1	1	1	1	1	1	1	1	1	100%
5600	1	1	1	1	1	1	1	1	1	1	100%
5605	1	1	1	1	1	1	1	1	1	1	100%
5610	1	1	1	1	1	1	1	1	1	1	100%
5615	1	1	1	1	1	1	1	1	1	1	100%
5620	1	1	1	1	1	1	1	1	1	1	100%
5625	1	1	1	1	1	1	1	1	1	1	100%
5630	1	1	1	1	1	1	1	1	1	1	100%
5635	1	1	1	1	1	1	1	1	1	1	100%
5640	1	1	1	1	1	1	1	1	1	1	100%
5645	1	1	1	1	1	1	1	1	1	1	100%
5650	1	1	1	1	1	1	1	1	1	1	100%



5655	1	1	1	1	1	1	1	1	1	1	100%
5660	1	1	1	1	1	1	1	1	1	1	100%
5665	1	1	1	1	1	1	1	1	1	1	100%
5670	1	1	1	1	1	1	1	1	1	1	100%
5675	1	1	1	1	1	1	1	1	1	1	100%
5680	1	1	1	1	1	1	1	1	1	1	100%
5685	1	1	1	1	1	1	1	1	1	1	100%
5690	1	1	1	1	1	1	1	1	1	1	100%
5695	1	1	1	1	1	1	1	1	1	1	100%
5700	1	1	1	1	1	1	1	1	1	1	100%
5705	1	1	1	1	1	1	1	1	1	1	100%
5710	1	1	1	1	1	1	1	1	1	1	100%
5715	1	1	1	1	1	1	1	1	1	1	100%
5720	1	1	1	1	1	1	1	1	1	1	100%
5725	1	1	1	1	1	1	1	1	1	1	100%
5730FH	1	1	1	1	1	1	1	0	1	1	90%

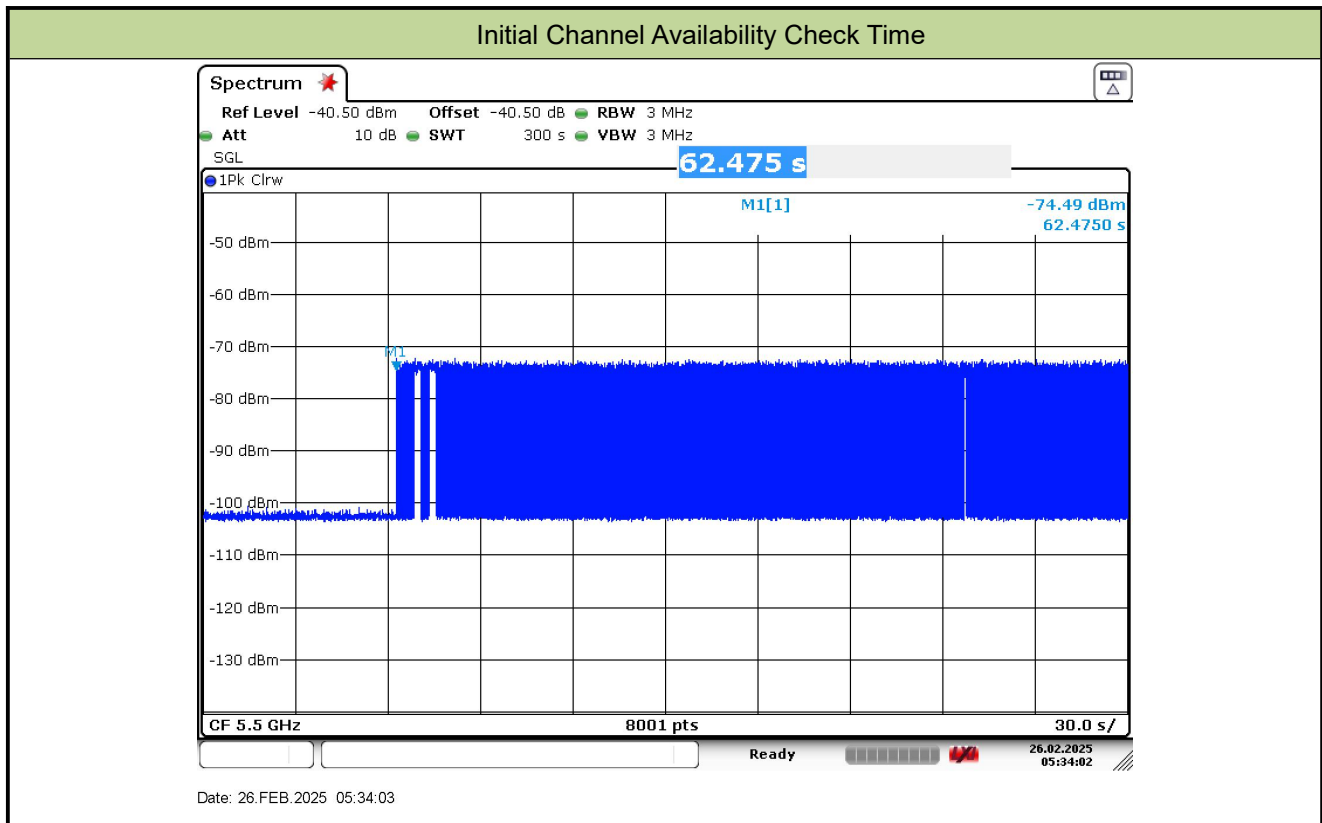
Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5650MHz. The 99% channel bandwidth is 236.408MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5730\text{MHz} - 5490\text{MHz} = 240\text{MHz}$

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $236.40\text{MHz} \times 100\% = 236.40\text{MHz}$ .

#### A.4 Initial Channel Availability Check Time Test Result

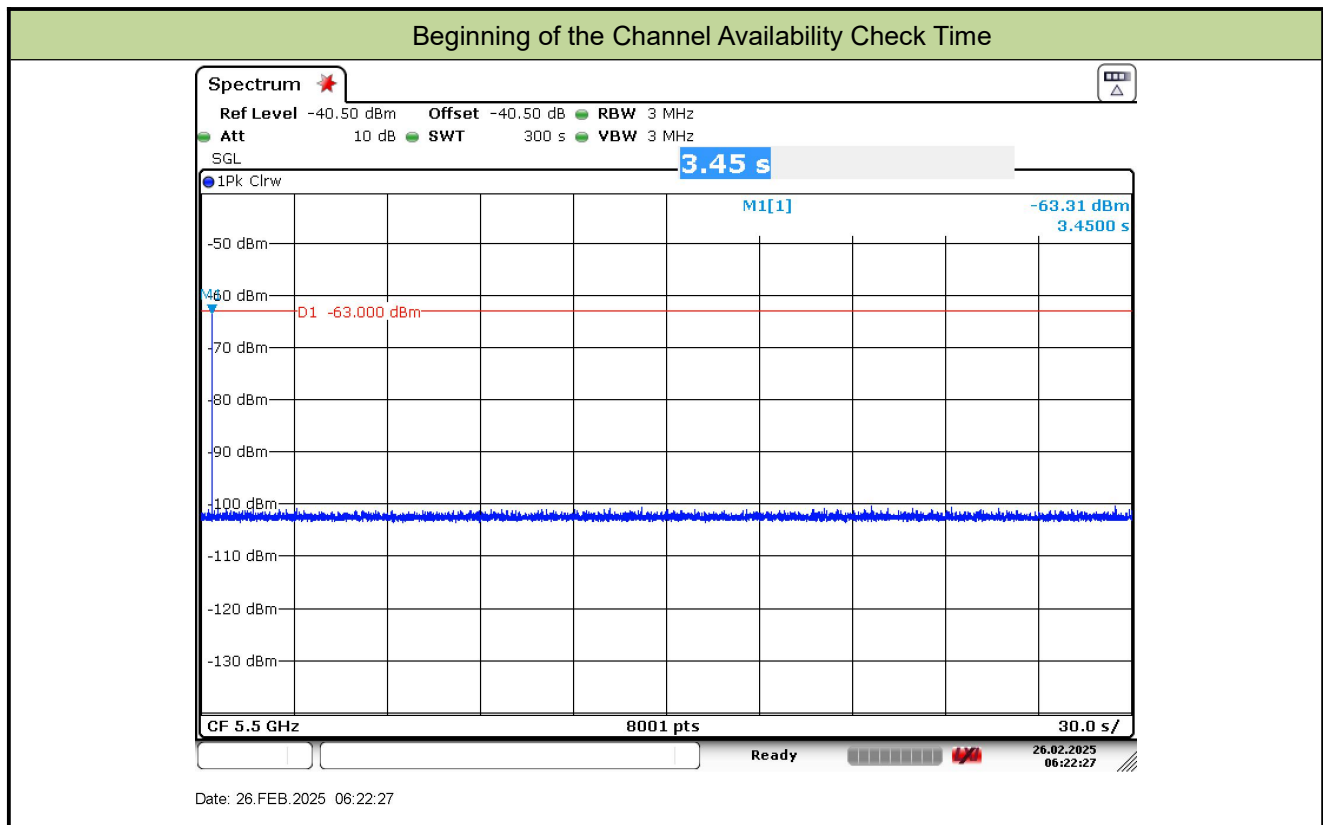
Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-26		
Test Item	Initial Channel Availability Check Time (802.11be-EHT20 mode - 5500MHz)		



Note: The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (2.475 sec). Initial beacons/data transmissions are indicated by marker 1 (62.475 sec).

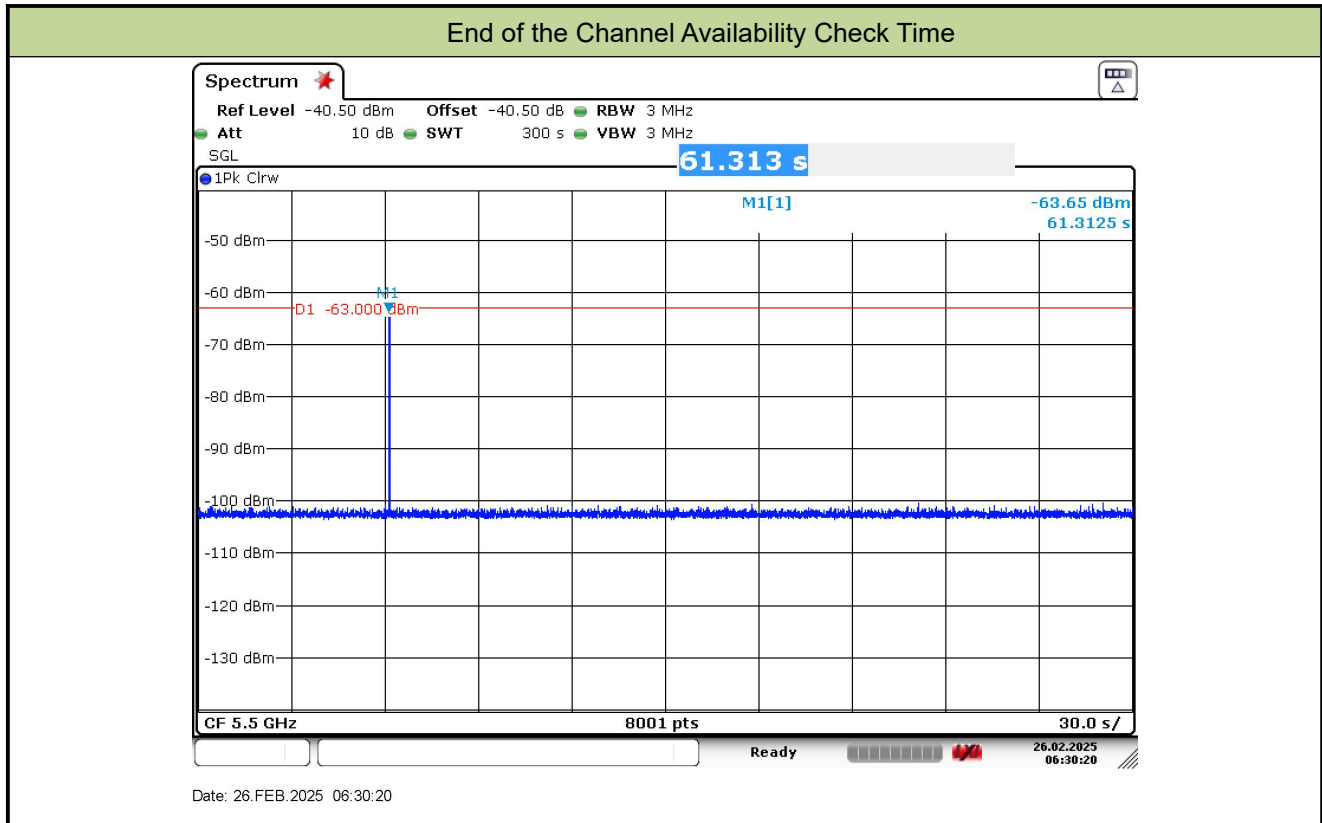
### A.5 Radar Burst at the Beginning of the Channel Availability Check Time Test Result

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-26		
Test Item	Beginning of the Channel Availability Check Time (802.11be-EHT20 mode - 5500MHz)		



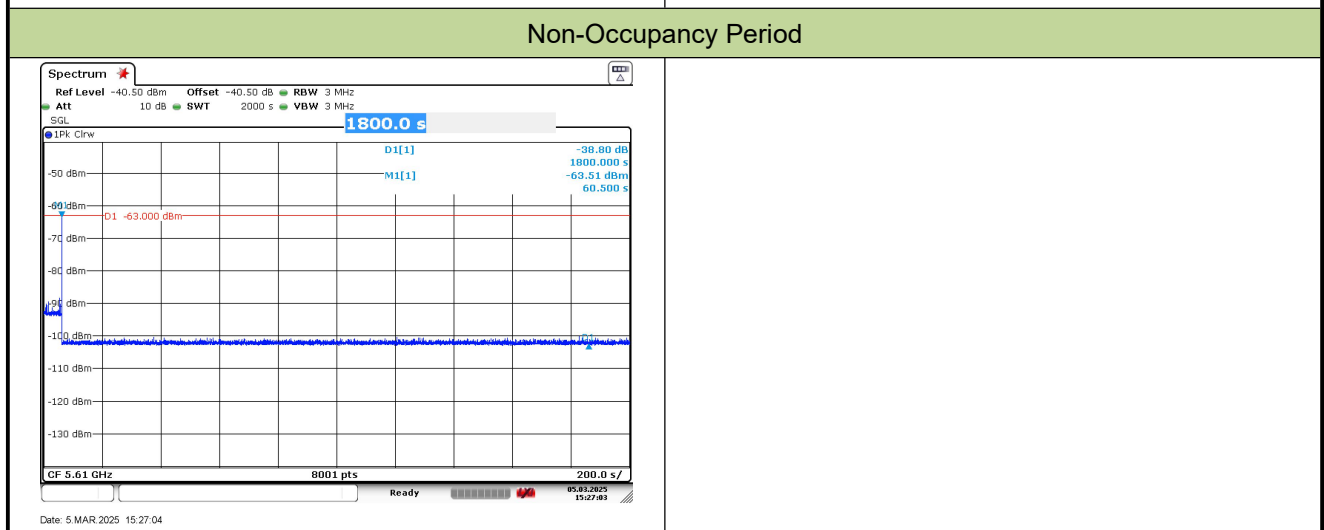
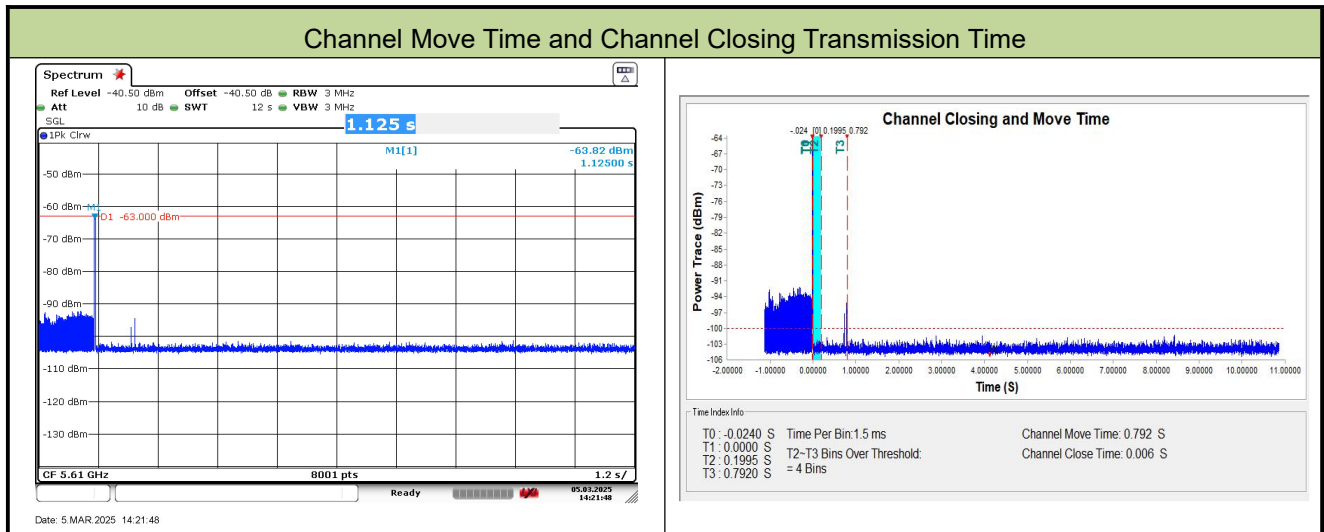
### A.6 Radar Burst at the End of the Channel Availability Check Time Test Result

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-26		
Test Item	End of the Channel Availability Check Time (802.11be-EHT20 mode - 5500MHz)		



## A.7 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Test Result

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-03-05		
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11be-EHT240 mode - 5650MHz)		



Parameter	Test Result	Limit
Channel Move Time (s)	0.792s	<10s
Channel Closing Transmission Time (ms) (Note)	6.0ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 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.

### A.8 Statistical Performance Check

Test Site	WZ-SR4	Test Engineer	Ant Wang
Test Date	2025-02-27		
Test Item	Radar Statistical Performance Check (802.11be-EHT20 – 5500MHz) - AP Mode		

Radar Type 1-4 - Radar Statistical Performance								
Trial	Radar Type 1		Radar Type 2		Radar Type 3		Radar Type 4	
	Frequency (MHz)	1=detect 0=no detect	Frequency (MHz)	1=detect 0=no detect	Frequency (MHz)	1=detect 0=no detect	Frequency (MHz)	1=detect 0=no detect
0	5493	1	5500	1	5499	1	5498	1
1	5492	1	5493	1	5501	1	5494	1
2	5506	1	5510	1	5495	1	5495	0
3	5502	1	5498	1	5504	1	5510	0
4	5498	1	5501	1	5502	0	5503	1
5	5494	1	5495	1	5510	1	5496	1
6	5509	1	5496	1	5506	1	5492	1
7	5504	1	5497	1	5492	1	5505	1
8	5510	1	5504	1	5494	1	5504	1
9	5496	1	5505	1	5507	1	5506	1
10	5505	1	5492	1	5493	0	5493	1
11	5501	1	5509	1	5505	1	5497	1
12	5500	1	5503	1	5498	0	5502	1
13	5508	1	5491	1	5500	1	5509	1
14	5491	1	5494	1	5497	1	5508	1
15	5503	1	5507	1	5503	0	5507	1
16	5495	1	5506	1	5508	1	5491	1
17	5497	1	5508	1	5491	1	5499	1
18	5507	1	5499	1	5496	1	5501	0
19	5499	1	5502	0	5509	1	5500	1
20	5501	1	5496	1	5493	0	5491	1
21	5506	1	5501	1	5494	1	5505	1
22	5501	1	5510	1	5493	1	5498	1
23	5505	1	5493	1	5496	1	5497	1
24	5493	1	5496	1	5508	1	5507	1
25	5510	1	5509	1	5490	1	5502	0
26	5500	1	5507	0	5491	0	5510	1
27	5507	1	5503	1	5504	1	5505	0

Trial	Radar Type 1		Radar Type 2		Radar Type 3		Radar Type 4	
	Frequency	1=detect	Frequency	1=detect	Frequency	1=detect	Frequency	1=detect
	(MHz)	0=no detect	(MHz)	0=no detect	(MHz)	0=no detect	(MHz)	0=no detect
28	5492	1	5502	1	5505	1	5509	1
29	5490	1	5490	1	5490	1	5490	1
Probability:	100.0%		93.3%		80.0%		83.3%	
Aggregate:	89.2% (>80%)							

Radar Type 1 - Radar Waveform							Radar Type 2 - Radar Waveform						
	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)		Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 1	1.0	538.0	99	53262.0	Download	0	Type 2	1.6	204.0	24	4896.0
Download	1	Type 1	1.0	598.0	89	53222.0	Download	1	Type 2	3.0	185.0	26	4290.0
Download	2	Type 1	1.0	778.0	68	52904.0	Download	2	Type 2	1.8	190.0	24	4560.0
Download	3	Type 1	1.0	638.0	83	52954.0	Download	3	Type 2	3.4	214.0	27	5778.0
Download	4	Type 1	1.0	738.0	72	53136.0	Download	4	Type 2	2.8	168.0	26	4368.0
Download	5	Type 1	1.0	818.0	65	53170.0	Download	5	Type 2	1.7	156.0	24	3744.0
Download	6	Type 1	1.0	618.0	86	53148.0	Download	6	Type 2	2.4	215.0	25	5375.0
Download	7	Type 1	1.0	918.0	58	53244.0	Download	7	Type 2	2.2	157.0	25	3925.0
Download	8	Type 1	1.0	798.0	67	53466.0	Download	8	Type 2	2.5	167.0	25	4175.0
Download	9	Type 1	1.0	698.0	76	53048.0	Download	9	Type 2	1.3	178.0	23	4094.0
Download	10	Type 1	1.0	3066.0	18	55188.0	Download	10	Type 2	2.6	221.0	25	5525.0
Download	11	Type 1	1.0	578.0	92	53176.0	Download	11	Type 2	3.8	182.0	27	4914.0
Download	12	Type 1	1.0	558.0	95	53010.0	Download	12	Type 2	3.8	152.0	27	4104.0
Download	13	Type 1	1.0	518.0	102	52836.0	Download	13	Type 2	2.4	218.0	25	5450.0
Download	14	Type 1	1.0	898.0	59	52982.0	Download	14	Type 2	1.8	199.0	24	4776.0
Download	15	Type 1	1.0	831.0	64	53184.0	Download	15	Type 2	1.2	212.0	23	4876.0
Download	16	Type 1	1.0	2386.0	23	54878.0	Download	16	Type 2	3.9	222.0	28	6216.0
Download	17	Type 1	1.0	1813.0	30	54390.0	Download	17	Type 2	3.8	155.0	27	4185.0
Download	18	Type 1	1.0	590.0	90	53100.0	Download	18	Type 2	3.9	189.0	27	5103.0
Download	19	Type 1	1.0	2595.0	21	54495.0	Download	19	Type 2	1.5	159.0	23	3657.0
Download	20	Type 1	1.0	1389.0	38	52782.0	Download	20	Type 2	3.9	230.0	28	6440.0
Download	21	Type 1	1.0	3012.0	18	54216.0	Download	21	Type 2	3.6	205.0	27	5535.0
Download	22	Type 1	1.0	1684.0	32	53888.0	Download	22	Type 2	2.3	174.0	25	4350.0
Download	23	Type 1	1.0	1887.0	28	52836.0	Download	23	Type 2	1.6	162.0	24	3888.0
Download	24	Type 1	1.0	587.0	90	52830.0	Download	24	Type 2	4.2	225.0	28	6300.0
Download	25	Type 1	1.0	1523.0	35	53305.0	Download	25	Type 2	3.9	184.0	28	5152.0
Download	26	Type 1	1.0	700.0	76	53200.0	Download	26	Type 2	1.0	208.0	23	4784.0
Download	27	Type 1	1.0	2455.0	22	54010.0	Download	27	Type 2	4.8	185.0	29	5385.0
Download	28	Type 1	1.0	2326.0	23	53498.0	Download	28	Type 2	1.4	228.0	23	5244.0
Download	29	Type 1	1.0	2093.0	26	54418.0	Download	29	Type 2	1.0	186.0	23	4278.0

Radar Type 3 - Radar Waveform							Radar Type 4 - Radar Waveform						
	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)		Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 3	6.6	411.0	16	6576.0	Download	0	Type 4	12.5	411.0	12	4932.0
Download	1	Type 3	8.0	365.0	17	6205.0	Download	1	Type 4	15.6	365.0	14	5110.0
Download	2	Type 3	6.8	335.0	16	5360.0	Download	2	Type 4	12.8	335.0	12	4020.0
Download	3	Type 3	8.4	448.0	17	7616.0	Download	3	Type 4	16.4	448.0	15	6720.0
Download	4	Type 3	7.8	392.0	17	6664.0	Download	4	Type 4	15.0	392.0	14	5488.0
Download	5	Type 3	6.7	277.0	16	4432.0	Download	5	Type 4	12.7	277.0	12	3324.0
Download	6	Type 3	7.4	394.0	17	6698.0	Download	6	Type 4	14.1	394.0	13	5122.0
Download	7	Type 3	7.2	244.0	16	3904.0	Download	7	Type 4	13.8	244.0	13	3172.0
Download	8	Type 3	7.5	330.0	17	5610.0	Download	8	Type 4	14.5	330.0	13	4290.0
Download	9	Type 3	6.3	344.0	16	5504.0	Download	9	Type 4	11.7	344.0	12	4128.0
Download	10	Type 3	7.6	422.0	17	7174.0	Download	10	Type 4	14.6	422.0	14	5908.0
Download	11	Type 3	8.8	237.0	18	4266.0	Download	11	Type 4	17.3	237.0	15	3555.0
Download	12	Type 3	8.8	345.0	18	6210.0	Download	12	Type 4	17.3	345.0	15	5175.0
Download	13	Type 3	7.4	329.0	17	5593.0	Download	13	Type 4	14.2	329.0	13	4277.0
Download	14	Type 3	6.8	230.0	16	3680.0	Download	14	Type 4	12.9	230.0	13	2990.0
Download	15	Type 3	6.2	352.0	16	5632.0	Download	15	Type 4	11.6	352.0	12	4224.0
Download	16	Type 3	8.9	449.0	18	8082.0	Download	16	Type 4	17.5	449.0	15	6735.0
Download	17	Type 3	8.8	306.0	18	5508.0	Download	17	Type 4	17.2	306.0	15	4590.0
Download	18	Type 3	8.9	380.0	18	6940.0	Download	18	Type 4	17.4	380.0	15	5700.0
Download	19	Type 3	6.5	384.0	16	6144.0	Download	19	Type 4	12.1	384.0	12	4608.0
Download	20	Type 3	8.9	341.0	18	6138.0	Download	20	Type 4	17.5	341.0	15	5115.0
Download	21	Type 3	8.6	276.0	17	4692.0	Download	21	Type 4	16.7	276.0	15	4140.0
Download	22	Type 3	7.3	438.0	16	7008.0	Download	22	Type 4	13.9	438.0	13	5694.0
Download	23	Type 3	6.6	289.0	16	4624.0	Download	23	Type 4	12.4	289.0	12	3468.0
Download	24	Type 3	9.2	427.0	18	7686.0	Download	24	Type 4	18.1	427.0	15	6405.0
Download	25	Type 3	8.9	321.0	18	5778.0	Download	25	Type 4	17.5	321.0	15	4815.0
Download	26	Type 3	6.0	219.0	16	3504.0	Download	26	Type 4	11.1	219.0	12	2628.0
Download	27	Type 3	9.8	316.0	18	5688.0	Download	27	Type 4	19.5	316.0	16	5056.0
Download	28	Type 3	6.4	340.0	16	5440.0	Download	28	Type 4	12.0	340.0	12	4080.0
Download	29	Type 3	6.0	483.0	16	7728.0	Download	29	Type 4	11.1	483.0	12	5796.0



Radar Type 5 - Radar Statistical Performance					
Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
0	5500	1	15	5492.4	1
1	5500	1	16	5496.4	1
2	5500	1	17	5496.4	1
3	5500	1	18	5496.4	1
4	5500	1	19	5492.8	1
5	5500	1	20	5503.6	1
6	5500	1	21	5504	1
7	5500	1	22	5506	1
8	5500	1	23	5507.2	1
9	5500	1	24	5503.2	1
10	5494.4	1	25	5503.6	1
11	5496.4	1	26	5508	1
12	5496.4	1	27	5502	1
13	5494	1	28	5507.6	1
14	5493.2	1	29	5508	1
Detection Percentage (%)			100.0%		

Type 5 Radar Waveform_0								
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)	
0	494628.0	58.5	7	1	1975.0	—	—	
1	783953.0	75.4	7	2	1879.0	1979.0	—	
2	1076552.0	59.9	7	1	1076.0	—	—	
3	168169.0	80.2	7	2	1378.0	1381.0	—	
4	458408.0	72.5	7	2	1182.0	1916.0	—	
5	749503.0	59.6	7	1	1806.0	—	—	
6	1038866.0	67.1	7	2	1508.0	1722.0	—	
7	132521.0	65.6	7	1	1683.0	—	—	
8	422724.0	69.4	7	2	1281.0	1611.0	—	
9	714132.0	54.3	7	1	1094.0	—	—	
Type 5 Radar Waveform_1								
Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)	
0	716577.0	70.3	13	2	1008.0	1219.0	—	
1	68864.0	84.7	13	3	1771.0	1120.0	1080.0	
2	275698.0	85.1	13	3	1614.0	1577.0	1048.0	
3	483085.0	68.0	13	2	1870.0	1431.0	—	
4	691316.0	60.8	13	1	1881.0	—	—	
5	43510.0	53.5	13	1	1331.0	—	—	
6	250354.0	86.0	13	3	1171.0	1189.0	1416.0	
7	456853.0	84.6	13	3	1288.0	1403.0	1961.0	
8	663494.0	85.4	13	3	1590.0	1276.0	1934.0	
9	17948.0	56.2	13	1	1103.0	—	—	
10	224874.0	85.9	13	3	1681.0	1009.0	1033.0	
11	432350.0	81.8	13	2	1285.0	1461.0	—	
12	640270.0	66.4	13	1	1808.0	—	—	
13	848421.0	57.9	13	1	1097.0	—	—	

Type 5 Radar Waveform\_2

Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	279349.0	89.2	8	3	1338.0	1392.0	1545.0
1	569367.0	86.1	8	3	1747.0	1047.0	1447.0
2	861306.0	50.9	8	1	1556.0	—	—
3	1149249.0	97.0	8	3	1709.0	1506.0	1167.0
4	244163.0	56.0	8	1	1651.0	—	—
5	534720.0	50.7	8	1	1831.0	—	—
6	824502.0	82.9	8	2	1109.0	1900.0	—
7	1115980.0	52.9	8	1	1752.0	—	—
8	207947.0	83.4	8	3	1050.0	1264.0	1727.0
9	499109.0	65.7	8	1	1390.0	—	—

Type 5 Radar Waveform\_3

Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	526180.0	51.1	14	1	1473.0	—	—
1	716907.0	84.2	14	3	1319.0	1724.0	1693.0
2	114638.0	90.0	14	3	1335.0	1415.0	1158.0
3	307721.0	97.8	14	3	1793.0	1013.0	1087.0
4	500654.0	93.7	14	3	1153.0	1022.0	1953.0
5	694815.0	70.0	14	2	1785.0	1039.0	—
6	90982.0	73.3	14	2	1589.0	1203.0	—
7	284410.0	81.6	14	2	1426.0	1142.0	—
8	476261.0	89.6	14	3	1222.0	1987.0	1949.0
9	671939.0	56.8	14	1	1708.0	—	—
10	67123.0	81.3	14	2	1423.0	1880.0	—
11	260774.0	53.0	14	1	1996.0	—	—
12	452590.0	99.1	14	3	1783.0	1259.0	1985.0
13	646088.0	83.8	14	3	1021.0	1736.0	1418.0
14	43356.0	75.6	14	2	1019.0	1670.0	—

Type 5 Radar Waveform\_4

Burst ID	Burst Offset (us)	Pulse Width (us)	Chirp Width (MHz)	Number of Pulses per Burst	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
0	273519.0	51.6	12	1	1854.0	—	—
1	495633.0	93.5	12	3	1046.0	1585.0	1656.0
2	718007.0	99.2	12	3	1543.0	1875.0	1458.0
3	22594.0	55.0	12	1	1014.0	—	—
4	245267.0	86.5	12	3	1882.0	1131.0	1579.0
5	469420.0	64.2	12	1	1861.0	—	—
6	692596.0	76.7	12	2	1100.0	1091.0	—
7	916957.0	58.9	12	1	1168.0	—	—
8	218504.0	51.9	12	1	1741.0	—	—
9	440795.0	91.0	12	3	1625.0	1269.0	1270.0
10	663462.0	86.4	12	3	1710.0	1312.0	1417.0
11	889568.0	58.6	12	1	1010.0	—	—
12	190748.0	70.2	12	2	1756.0	1104.0	—