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# TEST REPORT

## For DFS

**Report No.** ..... **CTC20231618E03**  
**FCC ID** ..... **WNA-GN543V**  
**Applicant** ..... **Shenzhen Skyworth Digital Technology Co.,LTD**  
**Address** ..... 14/F,Block A,Skyworth Building,Gaoxin Ave.1.S.,Nanshan District,Shenzhen,China  
**Manufacturer** ..... Shenzhen Skyworth Digital Technology Co.,LTD  
**Address** ..... 14/F,Block A,Skyworth Building,Gaoxin Ave.1.S.,Nanshan District,Shenzhen,China  
**Product Name** ..... **GPON ONT**  
**Trade Mark** ..... SKYWORTH  
**Model/Type reference** ..... GN543V  
**Listed Model(s)** ..... SK-G5110, TCN22  
**Standard** ..... **FCC CFR Title 47 Part 15 Subpart C Section 15.247**  
**Date of receipt of test sample**...: Aug. 01, 2023  
**Date of testing** ..... Aug. 01, 2023 to Sep. 20, 2023  
**Date of issue** ..... Sep. 20, 2023  
**Result** ..... **PASS**

Compiled by:

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Approved by:

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**Testing Laboratory Name**..... **CTC Laboratories, Inc.**

**Address**..... 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

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## TABLE OF CONTENTS

|                                               |            |
|-----------------------------------------------|------------|
| <b>1. TEST SUMMARY .....</b>                  | <b>3</b>   |
| 1.1 TEST STANDARDS .....                      | 3          |
| 1.2 REPORT VERSION.....                       | 3          |
| 1.3 TEST DESCRIPTION.....                     | 3          |
| 1.4 TEST FACILITY .....                       | 4          |
| 1.5 MEASUREMENT UNCERTAINTY.....              | 4          |
| 1.6 ENVIRONMENTAL CONDITIONS.....             | 5          |
| <b>2. GENERAL INFORMATION .....</b>           | <b>6</b>   |
| 2.1 GENERAL DESCRIPTION OF EUT .....          | 6          |
| 2.2 MEASUREMENT INSTRUMENTS LIST .....        | 9          |
| 2.3 ACCESSORY EQUIPMENT INFORMATION .....     | 9          |
| <b>3. DYNAMIC FREQUENCY SELECTION.....</b>    | <b>10</b>  |
| 3.1 APPLICABILITY OF DFS REQUIREMENTS .....   | 10         |
| 3.2 LIMITS .....                              | 11         |
| 3.3 PARAMETERS OF RADAR TEST WAVEFORMS .....  | 12         |
| 3.4 TEST SETUP .....                          | 15         |
| 3.5 TEST PROCEDURE .....                      | 17         |
| 3.6 TEST RESULT .....                         | 25         |
| 3.6.1 DFS DETECTION THRESHOLD.....            | 25         |
| 3.6.2 DFS U-NII Detection Bandwidth.....      | 28         |
| 3.6.3 DFS Channel Availability Check.....     | 30         |
| 3.6.4 DFS In-Service Monitoring.....          | 32         |
| 3.6.5 DFS Statistical Performance Check ..... | 33         |
| <b>EUT TEST PHOTOS.....</b>                   | <b>222</b> |



## 1. TEST SUMMARY

### 1.1 Test Standards

The tests documented in this report were performed in accordance with FCC CFR 47 CFR Part 15, Subpart E, KDB 905462 D02.

### 1.2 Report version

| Revised No. | Date of issue | Description |
|-------------|---------------|-------------|
| 01          | Sep. 20, 2023 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |

### 1.3 Test Description

| CFR 47 Part 15 Subpart E 15.407 (h),<br>KDB 905462 D02 |                            |        |               |
|--------------------------------------------------------|----------------------------|--------|---------------|
| Test Item                                              | Test require               | Result | Test Engineer |
| DFS Detection Threshold                                | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |
| Channel Availability Check Time                        | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |
| Non-Occupancy Period                                   | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |
| U-NII Detection Bandwidth                              | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |
| Channel Closing Transmission Time                      | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |
| Channel Move Time                                      | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |
| Statistical Performance Check                          | FCC 15.407, KDB 905462 D02 | Pass   | Lucy Lan      |

Note:

1. The measurement uncertainty is not included in the test result.
2. N/A: Means this test item is not applicable for this device according to the technology characteristic of device.



## 1.4 Test Facility

### Address of the report laboratory

#### CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

### Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

#### A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

#### FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.

## 1.5 Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.



| Test Items                     | Measurement Uncertainty                                             | Notes |
|--------------------------------|---------------------------------------------------------------------|-------|
| Emission Bandwidth             | $\pm 0.0196\%$                                                      | (1)   |
| Maximum Conduct Output Power   | $\pm 0.766\text{dB}$                                                | (1)   |
| Power Spectral Density         | $\pm 1.22\text{dB}$                                                 | (1)   |
| Band Edge Measurements         | $\pm 1.328\text{dB}$                                                | (1)   |
| Unwanted Emissions Measurement | 9kHz-1GHz: $\pm 0.746\text{dB}$<br>1GHz-26GHz: $\pm 1.328\text{dB}$ | (1)   |
| Frequency Stability            | $\pm 2.76\%$                                                        | (1)   |
| Conducted Emissions 9kHz~30MHz | $\pm 3.08\text{ dB}$                                                | (1)   |
| Radiated Emissions 30~1000MHz  | $\pm 4.51\text{ dB}$                                                | (1)   |
| Radiated Emissions 1~18GHz     | $\pm 5.84\text{ dB}$                                                | (1)   |
| Radiated Emissions 18~40GHz    | $\pm 6.12\text{ dB}$                                                | (1)   |

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 1.6 Environmental conditions

|                   |                   |                                                                                                                 |
|-------------------|-------------------|-----------------------------------------------------------------------------------------------------------------|
| Normal Condition  | Temperature       | 22 °C ~ 28°C                                                                                                    |
|                   | Relative humidity | 50% ~ 65%                                                                                                       |
|                   | Voltage           | The equipment shall be the nominal voltage for which the equipment was designed.                                |
| Extreme Condition | Temperature       | Measurements shall be made over the extremes of the operating temperature range as declared by the manufacturer |
|                   | Voltage           | Measurements shall be made over the extremes of the operating temperature range as declared by the manufacturer |

|                   |                                    |              |
|-------------------|------------------------------------|--------------|
| Normal Condition  | T <sub>N</sub> =Normal Temperature | 22 °C ~ 28°C |
| Extreme Condition | T <sub>L</sub> =Lower Temperature  | 0 °C         |
|                   | T <sub>H</sub> =Higher Temperature | 45 °C        |



## 2. GENERAL INFORMATION

### 2.1 General Description of EUT

|                                 |                                                                                                           |
|---------------------------------|-----------------------------------------------------------------------------------------------------------|
| Product Name:                   | GPON ONT                                                                                                  |
| Trade Mark:                     | SKYWORTH                                                                                                  |
| Model/Type reference:           | GN543V                                                                                                    |
| Listed Model(s):                | SK-G5110, TCN22                                                                                           |
| Product Appearance Description: | All these models are identical in the same PCB, layout and electrical circuit, Different is model number. |
| Power supply:                   | DC12V 1.5A from AC/DC Adapter                                                                             |
| Adapter Model:                  | YS-SKY120150U03P<br>Input: 100-240V~ 50/60Hz 0.6A<br>Output: 12Vdc/1.5A                                   |
| Hardware version:               | /                                                                                                         |
| Software version:               | /                                                                                                         |
| Antenna Type:                   | dipole Antenna                                                                                            |
| Antenna Gain 0&1&2&3:           | 3dBi                                                                                                      |
| Antenna Gain 0&1&2&3:           | 3dBi                                                                                                      |



15.407:U-NIL devices operating in the 5.25-5.35 GHZ band and the 5.47-5.725 GHZ band shall employ a TPC mechanism. The U-NIL device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm A TPC mechanism is not required for systems with an e.i.r.p of less than 500 mw.

U-NIL devices operating in the 5.25-5.35 GHZ and 547-5.725 GHZ bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

1. The EUTradio operates in the following bands:
  - a.5150-5250MHz
  - b.5250-5350MHz
  - c.5470-5725MHz
  - d.5725-5850MHz.
2. The EUT operates in Master mode and does not support bridge mode and MESH mode.
3. The maximum e.i.r.p of the 5GHZ equipment is 23.4dBm and the minimum possible e.i.r.p is 13.37dBm for the UNII-2A and 2C frequency bands.
4. The channel loading data file will be transferred from the Master Device to the Client Device for all test configurations.
5. Information regarding the parameters of the detected Radar Waveforms is not available to the end user.
6. For the 5250-5350MHZ and 5470-5725MH 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.
7. The manufacturer is permitted to select the first channel either manually or randomly. The manufacturer may also block DFS channels from use.
8. The Master requires(137) seconds to complete its power-on cycle.

#### DESCRIPTION OF AVAILABLE ANTENNAS

| Ant. | Frequency (MHz) | Antenna Type   | Antenna Gain (dBi) | Antenna Technology |
|------|-----------------|----------------|--------------------|--------------------|
| 0    | 5150-5850       | dipole Antenna | 3                  | SISO&MIMO          |
| 1    | 5150-5850       | dipole Antenna | 3                  | SISO&MIMO          |
| 2    | 5150-5850       | dipole Antenna | 3                  | SISO&MIMO          |
| 3    | 5150-5850       | dipole Antenna | 3                  | SISO&MIMO          |



## Operation Frequency List:

| Operating Band | 20MHz Bandwidth |                 | 40MHz Bandwidth |                 | 80MHz Bandwidth |                 |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                | Channel         | Frequency (MHz) | Channel         | Frequency (MHz) | Channel         | Frequency (MHz) |
| U-NII-1        | 36              | 5180            | 38              | 5190            | 42              | 5210            |
|                | 40              | 5200            |                 |                 |                 |                 |
|                | 44              | 5220            | 46              | 5230            |                 |                 |
|                | 48              | 5240            |                 |                 |                 |                 |
| U-NII-2A       | 52              | 5260            | 54              | 5270            | 58              | 5290            |
|                | 56              | 5280            |                 |                 |                 |                 |
|                | 60              | 5300            | 62              | 5310            |                 |                 |
|                | 64              | 5320            |                 |                 |                 |                 |
| U-NII-2C       | 100             | 5500            | 102             | 5510            | 106             | 5530            |
|                | 104             | 5520            |                 |                 |                 |                 |
|                | 108             | 5540            | 110             | 5550            |                 |                 |
|                | 112             | 5560            |                 |                 |                 |                 |
|                | 116             | 5580            | 118             | 5590            | 122             | 5610            |
|                | 120             | 5600            |                 |                 |                 |                 |
|                | 124             | 5620            | 126             | 5630            |                 |                 |
|                | 128             | 5640            |                 |                 |                 |                 |
|                | 132             | 5660            | 134             | 5670            |                 |                 |
|                | 136             | 5680            |                 |                 |                 |                 |
| 140            | 5700            |                 |                 |                 |                 |                 |
| U-NII-3        | 149             | 5745            | 151             | 5755            | 155             | 5775            |
|                | 153             | 5765            |                 |                 |                 |                 |
|                | 157             | 5785            | 159             | 5795            |                 |                 |
|                | 161             | 5805            |                 |                 |                 |                 |
|                | 165             | 5825            |                 |                 |                 |                 |



## 2.2 Measurement Instruments List

| Tonscend RF Test System |                                     |              |           |            |                  |
|-------------------------|-------------------------------------|--------------|-----------|------------|------------------|
| Item                    | Test Equipment                      | Manufacturer | Model No. | Serial No. | Calibrated Until |
| 1                       | MXA Signal Analyzer                 | Keysight     | N9020A    | MY46471737 | Dec. 16, 2023    |
| 2                       | Spectrum Analyzer                   | R&S          | FSU26     | 100105     | Dec. 16, 2023    |
| 3                       | Spectrum Analyzer                   | R&S          | FSV40-N   | 101331     | Mar. 14, 2024    |
| 4                       | MXG Vector Signal Generator         | Agilent      | N5182A    | MY47420864 | Dec. 16, 2023    |
| 5                       | PSG Analog Signal Generator         | Agilent      | E8257D    | MY46521908 | Dec. 16, 2023    |
| 6                       | Power Sensor                        | Keysight     | U2021XA   | MY55130004 | Mar. 14, 2024    |
| 7                       | Power Sensor                        | Keysight     | U2021XA   | MY55130006 | Mar. 14, 2024    |
| 8                       | Wideband Radio Communication Tester | R&S          | CMW500    | 102414     | Dec. 16, 2023    |
| 9                       | High and low temperature box        | ESPEC        | MT3035    | /          | Mar. 24, 2024    |
| 10                      | JS1120 RF Test System               | TONSCEND     | v2.6      | /          | /                |

Note: The cable loss has calculated in test result which connection between each test instruments.

## 2.3 Accessory Equipment information

| Equipment Information |                    |              |              |
|-----------------------|--------------------|--------------|--------------|
| Name                  | Model              | S/N          | Manufacturer |
| Notebook              | ThinkBook 14 G3ACL | /            | Lenovo       |
| Mobile Phone          | A08G               | /            | /            |
| Cable Information     |                    |              |              |
| Name                  | Shielded Type      | Ferrite Core | Length       |
| Lan Cable             | Without            | Without      | 1M           |

### 3. Dynamic Frequency Selection

#### 3.1 Applicability of DFS requirements

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

| Requirement                     | Operational Mode                           |                                                         |                                                      |
|---------------------------------|--------------------------------------------|---------------------------------------------------------|------------------------------------------------------|
|                                 | <input checked="" type="checkbox"/> Master | <input type="checkbox"/> Client Without Radar Detection | <input type="checkbox"/> Client With Radar Detection |
| Non-Occupancy Period            | Yes                                        | Not required                                            | Yes                                                  |
| DFS Detection Threshold         | Yes                                        | Not required                                            | Yes                                                  |
| Channel Availability Check Time | Yes                                        | Not required                                            | Not required                                         |
| U-NII Detection Bandwidth       | Yes                                        | Not required                                            | Yes                                                  |

Table 2: Applicability of DFS requirements during normal operation

| Requirement                       | Operational Mode                                                                 |                                                         |
|-----------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------|
|                                   | <input checked="" type="checkbox"/> Master Device or Client with Radar Detection | <input type="checkbox"/> 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 | <input checked="" type="checkbox"/> Master Device or Client with Radar Detection | <input type="checkbox"/> 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.



### 3.2 Limits

#### (1) DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection

| Maximum Transmit Power                                                          | Value (See Notes 1, 2, and 3) |
|---------------------------------------------------------------------------------|-------------------------------|
| EIRP $\geq$ 200 milliwatt                                                       | -64 dBm                       |
| EIRP < 200 milliwatt and<br>power spectral density < 10 dBm/MHz                 | -62 dBm                       |
| EIRP < 200 milliwatt that do not meet the power<br>spectral density requirement | -64 dBm                       |

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

#### (2) DFS Response Requirements

Table 4: DFS Response Requirement Values

| Parameter                         | Value                                                                                                        |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------|
| Non-occupancy period              | Minimum 30 minutes                                                                                           |
| Channel Availability Check Time   | 60 seconds                                                                                                   |
| Channel Move Time                 | 10 seconds<br>See Note 1.                                                                                    |
| Channel Closing Transmission Time | 200 milliseconds + an aggregate of 60 milliseconds over<br>remaining 10 second period.<br>See Notes 1 and 2. |
| U-NII Detection Bandwidth         | Minimum 100% of the U-NII 99% transmission power<br>bandwidth. See Note 3.                                   |

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

### 3.3 Parameters of radar test Waveforms

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.

Table 5 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 5a                                                                     | $\text{Roundup} \left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$ | 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 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 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. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

For example if in Short Pulse Radar Type 1 Test B a PRI of 3066 μsec is selected, the number of pulses

would be Round up  $\left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{3066} \right) \right\} = \text{Round up } \{17.2\} = 18.$

Table 5a - Pulse Repetition Intervals Values for Test A

| 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 | 1355.0 | 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 | 1139.0 | 878  |
| 20 | 1113.6 | 898  |
| 21 | 1089.3 | 918  |
| 22 | 1066.1 | 938  |
| 23 | 326.2  | 3066 |

The aggregate is the average of the percentage of successful detections of Short Pulse Radar Types 1-4. For example, the following table indicates how to compute the aggregate of percentage of successful detections.

| Radar Type                                    | Number of Trials | Number of Successful Detections | Minimum Percentage of Successful Detection |
|-----------------------------------------------|------------------|---------------------------------|--------------------------------------------|
| 1                                             | 35               | 29                              | 82.9%                                      |
| 2                                             | 30               | 18                              | 60%                                        |
| 3                                             | 30               | 27                              | 90%                                        |
| 4                                             | 50               | 44                              | 88%                                        |
| Aggregate (82.9% + 60% + 90% + 88%)/4 = 80.2% |                  |                                 |                                            |

Table 6 – 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                       |

The parameters for this waveforms 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 wave forms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Table 7 – 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                       |

For the Frequency Hopping Radar Type, the same Burst parameters are used for each wave form. The hopping sequence is different for each wave form 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.

### 3.4 Test Setup

#### SYSTEM TEST CONFIGURATION

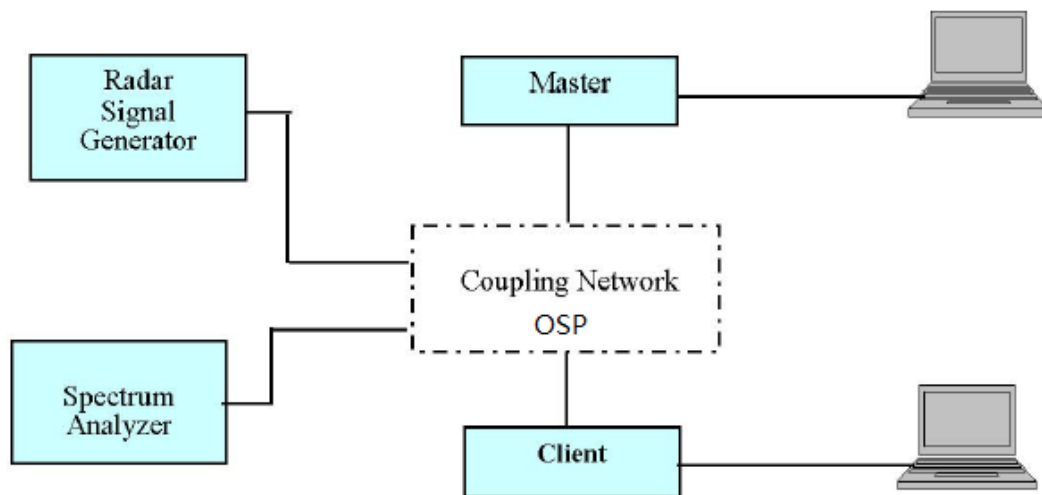
Description of Test Configuration:

The EUT was configured for testing in an engineering mode which was provided by the manufacturer. Stream the test file from the Master Device to the Client Device for IP based systems or frame based systems which dynamically allocate the talk/listen ratio.

Software to ping the client is used to simulate data transfer with a minimum channel loading of approximately 17% or greater. EUT Exercise Software

The test was performed under: DOS command, which was provided by the manufacturer.

#### System Block Diagram



## Conducted Method

### 7.2.1 Setup for Master with injection at the Master

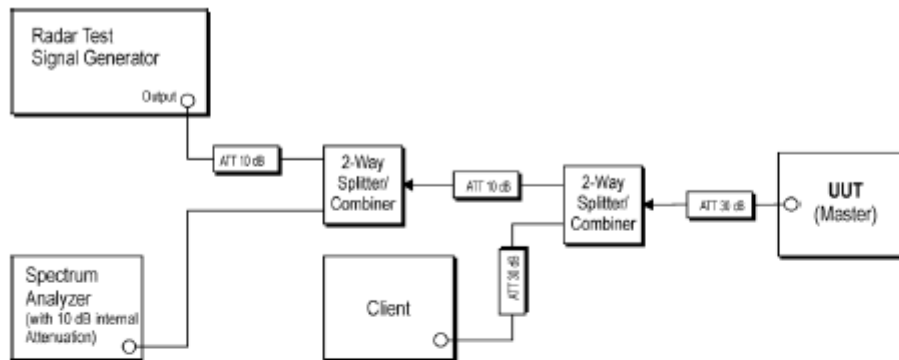


Figure 2: Example Conducted Setup where UUT is a Master and Radar Test Waveforms are injected into the Master

### 7.2.2 Setup for Client with injection at the Master

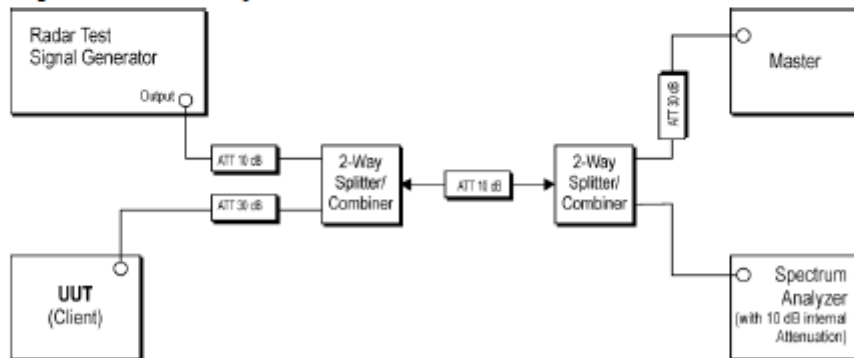


Figure 3: Example Conducted Setup where UUT is a Client and Radar Test Waveforms are injected into the Master

### 7.2.3 Setup for Client with injection at the Client

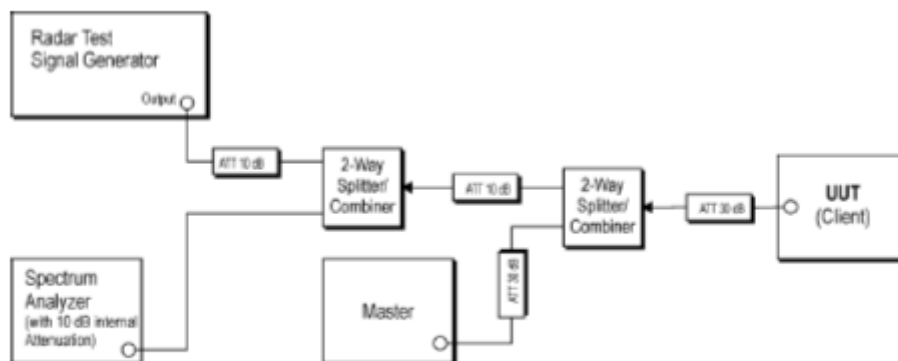


Figure 4: Example Conducted Setup where UUT is a Client and Radar Test Waveforms are injected into the Client

### 3.5 Test Procedure

Please refer to KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02 Clause 7.8.

#### 6.5.1 U-NII Detection Bandwidth

Set up the generating equipment as shown in Figure 8, or equivalent. Set up the DFS timing monitoring equipment as shown in Figure 13 or Figure 14. Set up the overall system for either radiated or conducted coupling to the UUT.

Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0 – 4 in Table 5 at the center frequency of the UUT Operating Channel at the specified DFS Detection Threshold level found in Table 3.

Set the UUT up as a standalone 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.

Generate a single radar Burst, and note the response of the UUT. Repeat for a minimum of 10 trials. The UUT must detect the Radar Waveform within the DFS band using the specified U-NII Detection Bandwidth criterion shown in Table 4. 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.

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 4. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.

Starting at the center frequency of the UUT operating Channel, decrease 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 4. Repeat this measurement in 1MHz steps at frequencies 5 MHz above where the detection rate begins to fall. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.

The U-NII Detection Bandwidth is calculated as follows:

$$\text{U-NII Detection Bandwidth} = \text{FH} - \text{FL}$$

The U-NII Detection Bandwidth must meet the U-NII Detection Bandwidth criterion specified in Table 4. Otherwise, the UUT does not comply with DFS requirements. This is essential to ensure that the UUT is capable of detecting Radar Waveforms across the same frequency spectrum that contains the significant energy from the system. In the case that the U-NII Detection Bandwidth is greater than or equal to the 99 percent power bandwidth for the measured FH and FL, the test can be truncated and the U-NII Detection Bandwidth can be reported as the measured FH and FL.

#### 6.5.2 Performance Requirements Check

The following tests must be performed for U-NII device certification: Initial Channel Startup Check with a radar Burst at start of Channel Availability Check and with a radar Burst at end of Channel Availability Check; In-Service Monitoring; and the 30 minute Non-Occupancy Period.

#### 6.5.3.1 Initial Channel Availability Check Time

The Initial Channel Availability Check Time tests that the UUT does not emit beacon, control, or data signals on the test Channel until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. This test does not use any Radar Waveforms and only needs to be performed one time.

a) 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 UUT 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 4 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.

b) The UUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.

c) Confirm that the UUT initiates transmission on the channel

This measurement can be used to determine the length of the power-on cycle if it is not supplied by the manufacturer. If the spectrum analyzer sweep is started at the same time the UUT is powered on and the UUT does not begin transmissions until it has completed the cycle, the power-on time can be determined by comparing the two times.

#### 6.5.3.2 Radar Burst at the Beginning of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the test 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. This is illustrated in Figure 15.

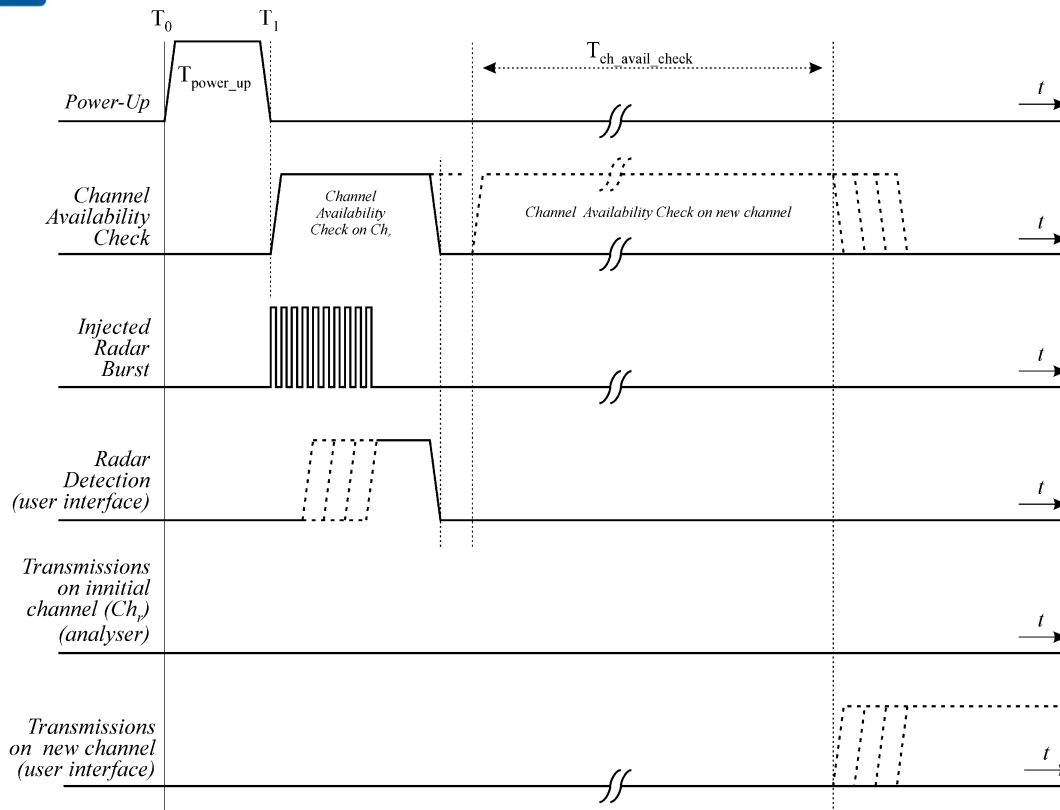
a) The Radar Waveform generator and UUT are connected using the applicable test setup described in the sections on configuration for Conducted Tests (7.2) or Radiated Tests (7.3) and the power of the UUT is switched off.

b) The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence (T<sub>power\_up</sub>). The Channel Availability Check Time commences on Chr at instant T1 and will end no sooner than T1 + T<sub>ch\_avail\_check</sub>.

c) A single Burst of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T1. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.

d) Visual indication or measured results on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of Chr for UUT emissions will continue for 2.5 minutes after the radar Burst has been generated.

e) Verify that during the 2.5 minute measurement window no UUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.



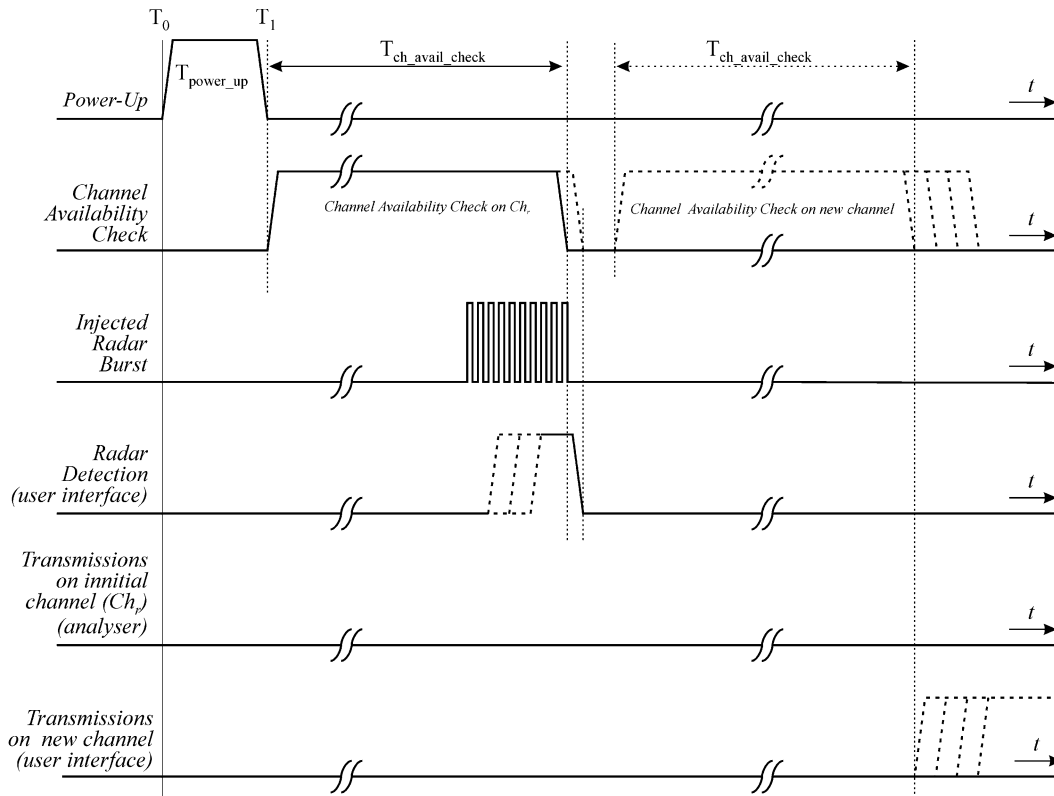
**Figure 15: Example of timing for radar testing at the beginning of the Channel Availability Check Time**

#### 6.5.3.3 Radar Burst at the End of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the test 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 + 1dB occurs at the end of the Channel Availability Check Time. This is illustrated in Figure 16.

- The Radar Waveform generator and UUT are connected using the applicable test setup described in the sections for Conducted Tests (7.2) or Radiated Tests (7.3) and the power of the UUT is switched off.
- The UUT is powered on at  $T_0$ .  $T_1$  denotes the instant when the UUT has completed its power-up sequence ( $T_{power\_up}$ ). The Channel Availability Check Time commences on  $Ch_r$  at instant  $T_1$  and will end no sooner than  $T_1 + T_{ch\_avail\_check}$ .
- A single Burst of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at  $T_1 + 54$  seconds. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- Visual indication or measured results on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of  $Ch_r$  for UUT emissions will continue for 2.5 minutes after the radar Burst has been generated.

e) Verify that during the 2.5 minute measurement window no UUT transmissions occurred on Chr. The Channel Availability Check results will be recorded.



**Figure 16: Example of timing for radar testing towards the end of the Channel Availability Check Time**

#### 6.5.4 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period

These tests define how the following DFS parameters are verified during In-Service Monitoring;

- Channel Closing Transmission Time
- Channel Move Time
- Non-Occupancy Period

The steps below define the procedure to determine the above mentioned parameters 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).

a) One frequency will be chosen from the Operating Channels of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.

b) In case the UUT is a U-NII device operating as a Client Device (with or without DFS), a U-NII device operating as a Master Device will be used to allow the UUT (Client device) to Associate with the Master Device. In case the UUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will Associate with the UUT (Master). In both cases for conducted tests, the Radar Waveform generator will be connected to the Master Device. For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.

c) Stream the channel loading test file from the Master Device to the Client Device on the test Channel for the entire period of the test.

d) At time  $T_0$  the Radar Waveform generator sends a Burst of pulses for one of the Radar Type 0 in Table 5 at levels defined in Table 3, on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.

e) Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Measure and record the Channel Move Time and Channel Closing Transmission Time if radar detection occurs. Figure 17 illustrates Channel Closing Transmission Time.

f) When operating as a Master Device, monitor the UUT for more than 30 minutes following instant  $T_2$  to verify that the UUT does not resume any transmissions on this Channel. Perform this test once and record the measurement result.

g) In case the UUT is a U-NII device operating as a Client Device with In-Service Monitoring, perform steps a) to f).

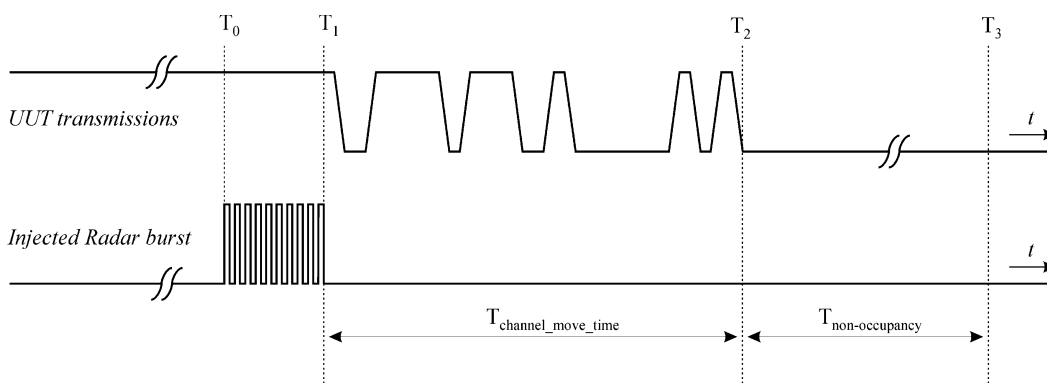


Figure 17: Example of Channel Closing Transmission Time & Channel Closing Time



#### 6.5.5 Statistical Performance Check

The steps below define the procedure to determine the minimum percentage of successful detection requirements found in Tables 5-7 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).

- a) One frequency will be chosen from the Operating Channels of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands.
- b) In case the UUT is a U-NII device operating as a Client Device (with or without Radar Detection), a U-NII device operating as a Master Device will be used to allow the UUT (Client device) to Associate with the Master Device. In case the UUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will Associate with the UUT (Master). In both cases for conducted tests, the Radar Waveform generator will be connected to the Master Device. For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.
- c) Stream the channel loading test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
- d) At time T<sub>0</sub> the Radar Waveform generator sends the individual waveform for each of the Radar Types 1- 6 in Tables 5-7, at levels defined in Table 3, on the Operating Channel. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
- e) Observe the transmissions of the UUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Radar Type 0 to ensure detection occurs.
- f) 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.
- g) In case the UUT is a U-NII device operating as a Client Device with In-Service Monitoring, perform steps a) to f).

#### 7.8.4.1 Short Pulse Radar Test

Once the performance requirements check is complete, statistical data will be gathered, to determine the ability of the device to detect the radar test waveforms (Short Pulse Radar Types 1-4) found in Table 5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trials. The percentage of successful detection is calculated by:

$$\frac{\text{TotalWaveformDetections}}{\text{TotalWaveformTrials}} \times 100 = \text{Percentage of Successful Detection Radar Waveform } N = P_d N$$

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

$$\frac{P_{d1} + P_{d2} + P_{d3} + P_{d4}}{4}$$

The minimum number of trails, minimum percentage of successful detection and the aggregate minimum percentage of successful detection are found in Table 5.

#### 7.8.4.2 Long Pulse Radar Test

Statistical data will be gathered to determine the ability of the device to detect the Long Pulse Radar Type 5 found in Table 6. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trials.

Three subsets of trials will be performed with a minimum of ten trials per subset. The subset of trials differ in where the Long Pulse Type 5 Signal is tuned in frequency:

- the Channel center frequency (Figure 18);
- tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the low edge of the UUT Occupied Bandwidth (Figure 19); and
- tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the high edge of the UUT Occupied Bandwidth (Figure 20).

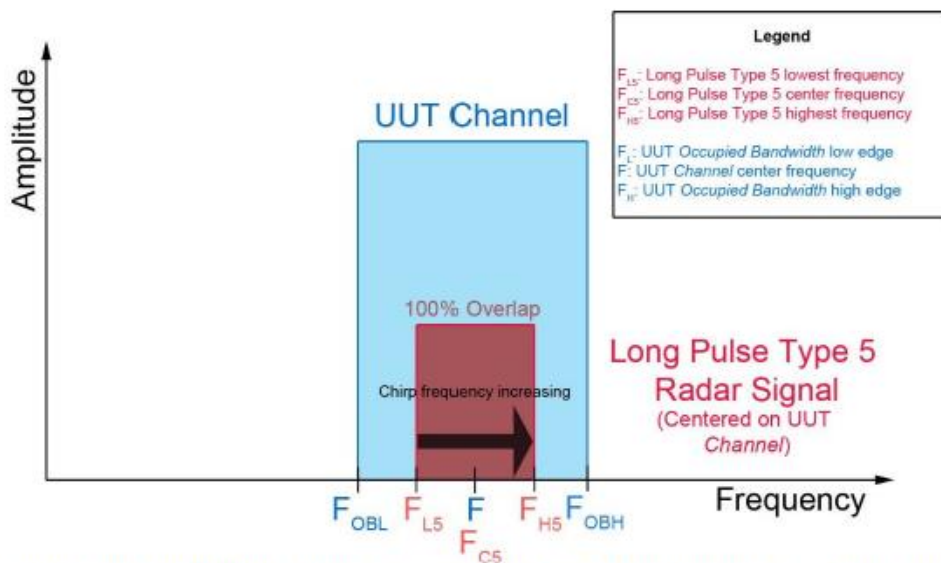


Figure 18: Example of the Relationship Between Long Pulse Type 5 Signal and the U-NII channel when the Signal is Tuned to the UUT Channel Center Frequency

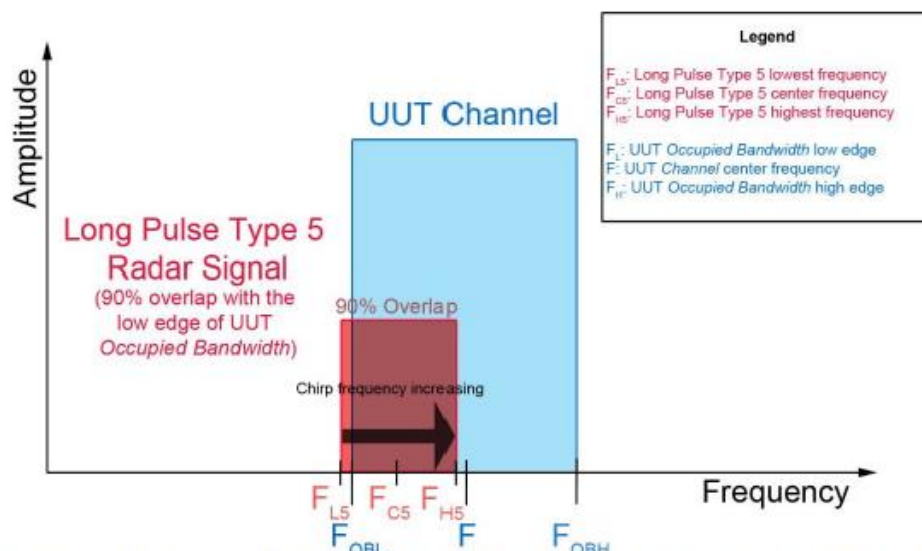


Figure 19: Example of the Relationship Between Long Pulse Type 5 Signal and the U-NII channel when the Signal is Tuned so that 90% of the Radar Signal Overlaps with the Low Edge of the UUT Occupied Bandwidth

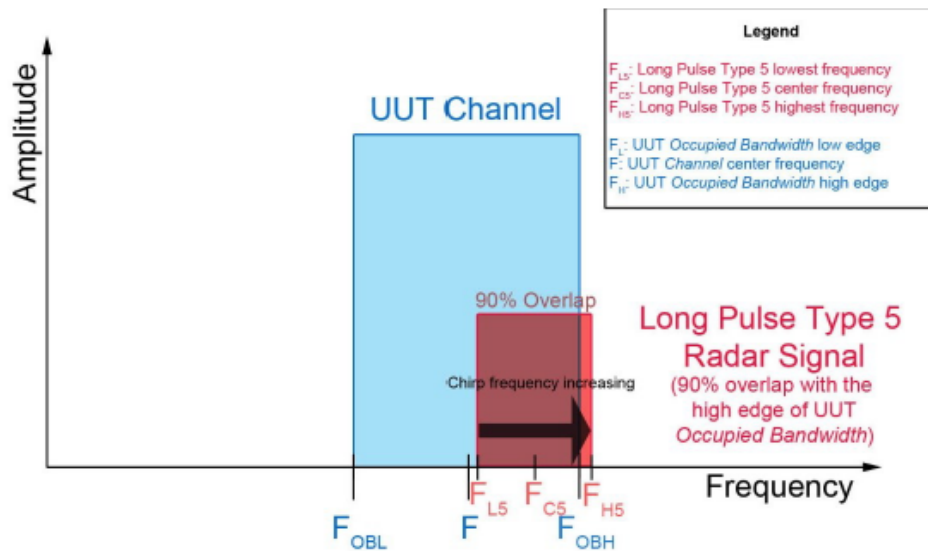


Figure 20: Example of the Relationship Between Long Pulse Type 5 Signal and the U-NII channel when the Signal is Tuned so that 90% of the Radar Signal Overlaps with the High Edge of the UUT Occupied Bandwidth

For subset case 1: the center frequency of the signal generator will remain fixed at the center of the UUT Channel.

For subset case 2: to retain 90% frequency overlap between the radar signal and the UUT Occupied Bandwidth, the center frequency of the signal generator will vary for each of the ten trials in subset case 2. The center frequency of the signal generator for each trial is calculated by:

$$F_L + (0.4 * \text{Chirp Width [in MHz]})$$

For subset case 3: to retain 90% frequency overlap between the radar signal and the UUT Occupied Bandwidth, the center frequency of the signal generator will vary for each of the ten trials in subset case 3. The center frequency of the signal generator for each trial is calculated by:

$$F_H - (0.4 * \text{Chirp Width [in MHz]})$$

The percentage of successful detection is calculated by dividing the sum of the detections for the three subsets by the sum of trials for the three subsets:

$$\frac{\text{TotalWaveformDetections}}{\text{TotalWaveformTrials}} \times 100$$

#### 7.8.4.3 Frequency Hopping Radar Test

Statistical data will be gathered to determine the ability of the device to detect the Frequency Hopping radar test signal (radar type 6) found in Table 7. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs. The probability of successful detection is calculated by:

$$\frac{\text{TotalWaveformDetections}}{\text{TotalWaveformTrials}} \times 100$$

### 3.6 Test Result

#### 3.6.1 DFS DETECTION THRESHOLD

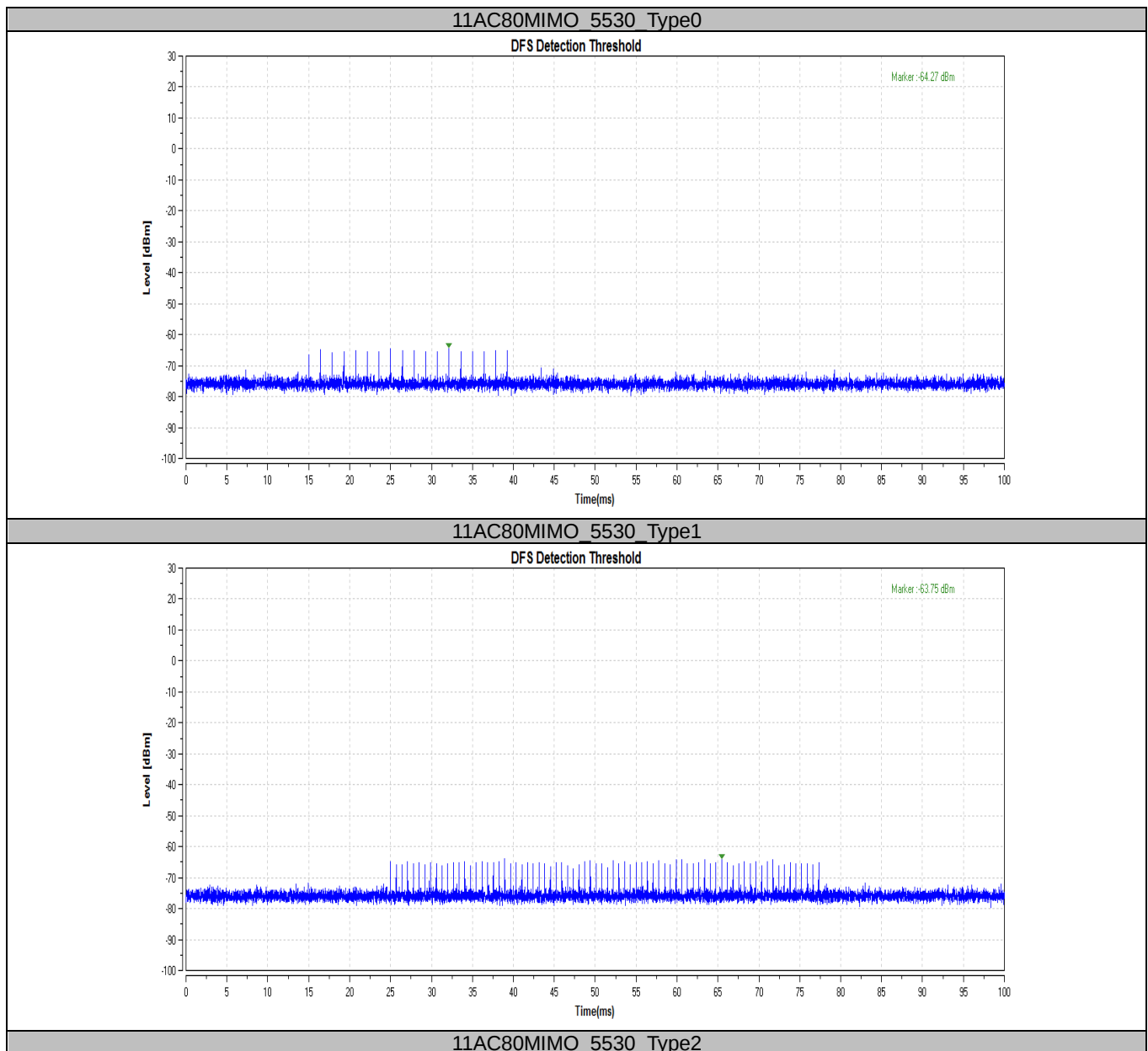
The EUT operates in 5230-5350 MHz and 5470-5723 MHz range

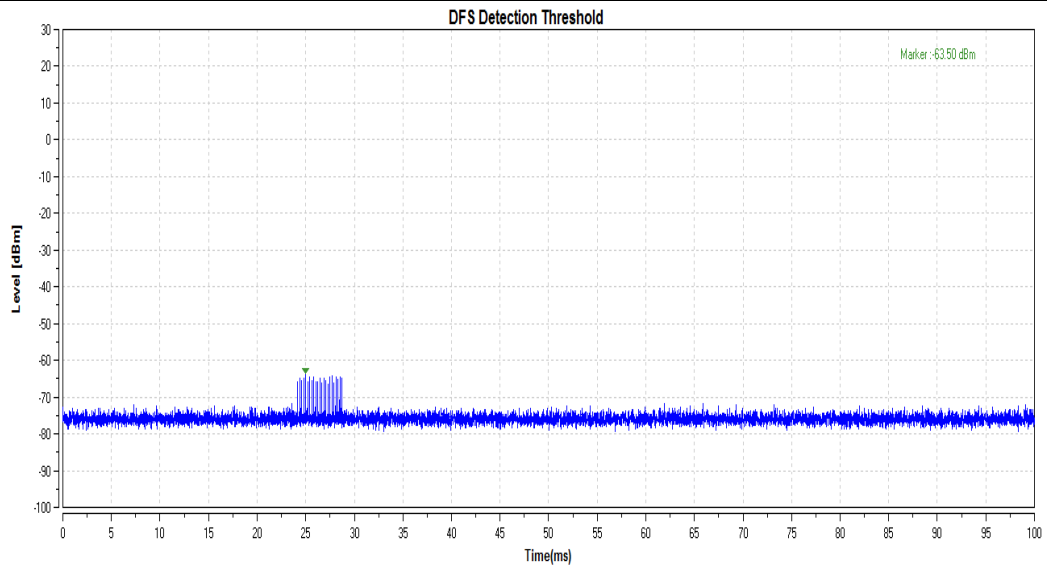
The maximum conducted output power of EUT is 20.4dbm Directional gain is 3dBi, the Maximum EIRP=20.4+3=23.4dBm, Therefore the required interference threshold level

is -64dbm, the required radiated threshold at antenna port is -62dbm. The calibrated radiated DFS detection threshold level is set to -64dBm, threshold level=-64dBm + antenna gain=-61dBm.

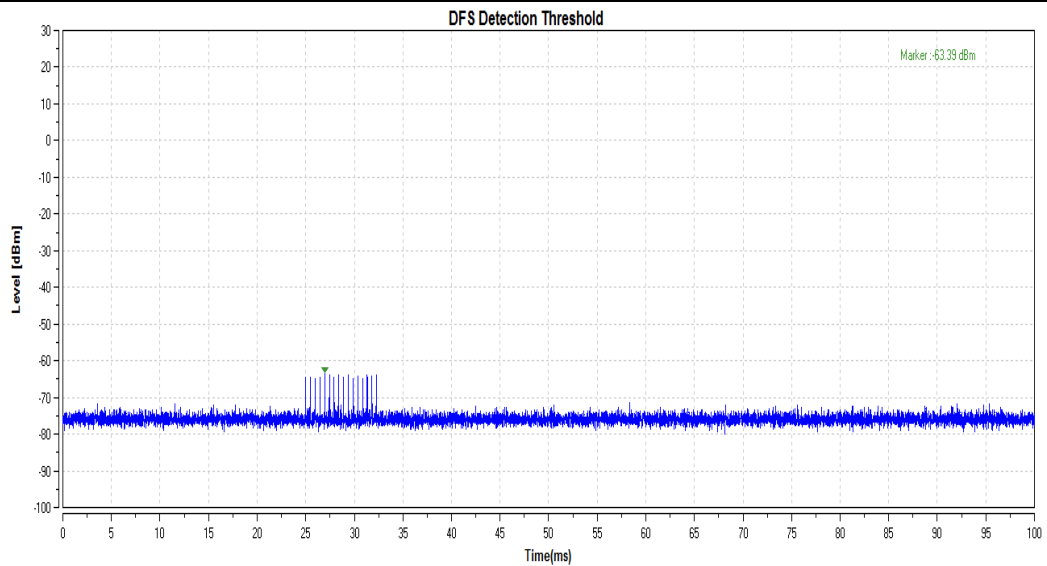
| DFS Threshold Level       |               |        |
|---------------------------|---------------|--------|
| DFS Threshold Level Value | Limit         | Result |
| -64dBm                    | $\leq$ -61dBm | Pass   |

Note:EUT'Maxmun.E.I.R.P>200 mw

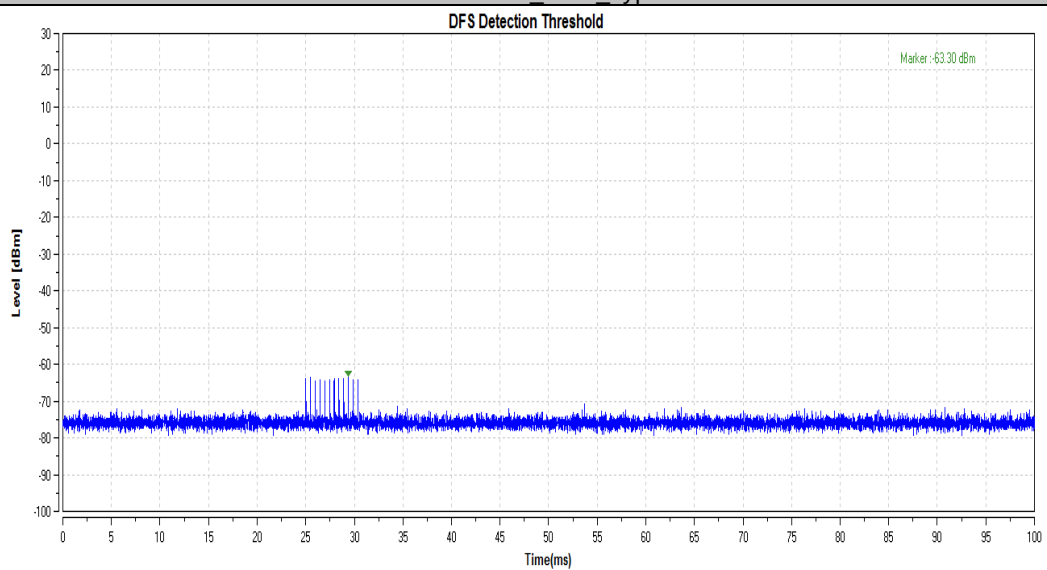




11AC80MIMO\_5530\_Type3



11AC80MIMO\_5530\_Type4



11AC80MIMO\_5530\_Type5

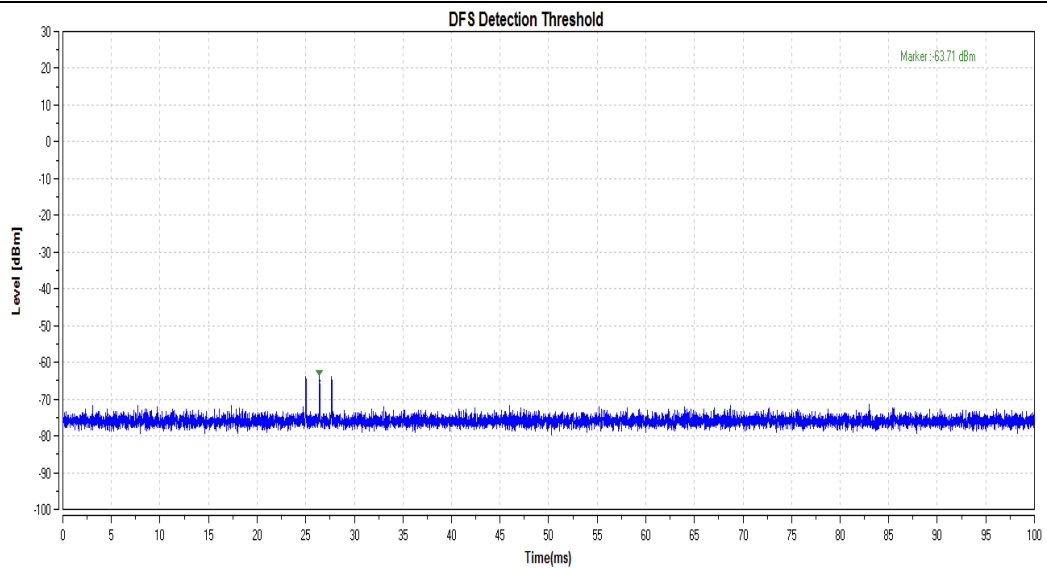
CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

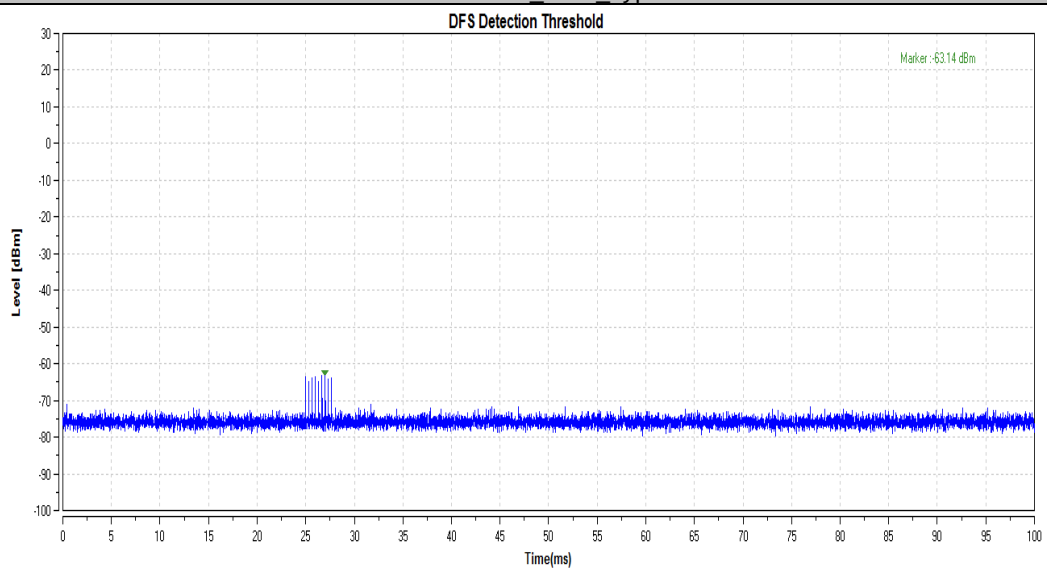
Tel.: (86)755-27521059 Fax: (86)755-27521011 [Http://www.sz-ctc.org.cn](http://www.sz-ctc.org.cn)

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## 11AC80MIMO\_5530\_Type6



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<http://yz.cnca.cn>



### 3.6.2 DFS U-NII Detection Bandwidth

Test according to FCC title 47 part 15 §15.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02

| TestMode   | Channel | FL[MHz] | FH[MHz] | Detection Bandwidth [MHz] | OCB [MHz] | Ratio [%] | Limit [%] | Verdict |
|------------|---------|---------|---------|---------------------------|-----------|-----------|-----------|---------|
| 11AC20MIMO | 5500    | 5490    | 5510    | 20                        | 17.5      | 114.29    | ≥100      | PASS    |
| 11AC40MIMO | 5510    | 5485    | 5533    | 48                        | 36.112    | 132.92    | ≥100      | PASS    |
| 11AC80MIMO | 5530    | 5491    | 5574    | 83                        | 75.52     | 109.90    | ≥100      | PASS    |

| Test Mode  | Channel | Radar Freq. | Trial 1 | Trial 2 | Trial 3 | Trial 4 | Trial 5 | Trial 6 | Trial 7 | Trial 8 | Trial 9 | Trial 10 | Ratio (%) |
|------------|---------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-----------|
| 11AC20MIMO | 5500    | 5485        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5486        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5487        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5488        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5489        | 1       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 10        |
|            |         | 5490        | 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       |
|            |         | 5511        | 1       | 1       | 0       | 0       | 0       | 0       | 1       | 1       | 1       | 1        | 60        |
|            |         | 5512        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5513        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5514        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5515        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
| 11AC40MIMO | 5510    | 5480        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5481        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5482        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5483        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5484        | 1       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 10        |
|            |         | 5485        | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1        | 100       |
|            |         | 5490        | 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       |
|            |         | 5531        | 1       | 1       | 1       | 1       | 1       | 0       | 1       | 1       | 1       | 1        | 90        |
|            |         | 5532        | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1        | 100       |
|            |         | 5533        | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1        | 100       |
| 11AC80MIMO | 5530    | 5490        | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0       | 0        | 0         |
|            |         | 5491        | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1        | 100       |
|            |         | 5492        | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1        | 100       |
|            |         | 5493        | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1       | 1        | 100       |
|            |         | 5494        | 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       |

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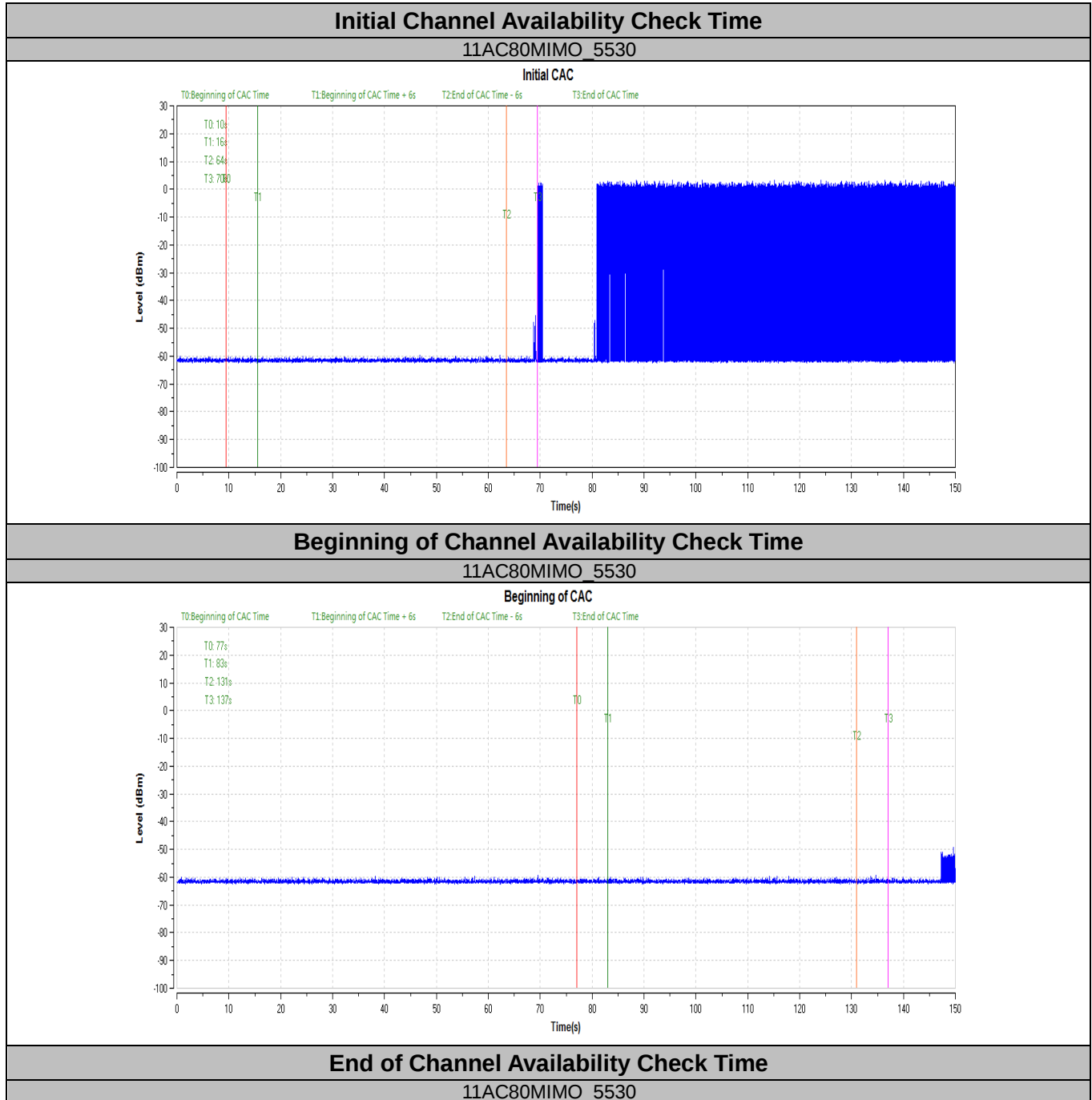
|  |  |      |   |   |   |   |   |   |   |   |   |   |     |
|--|--|------|---|---|---|---|---|---|---|---|---|---|-----|
|  |  | 5540 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 5545 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 5550 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 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 |
|  |  | 5571 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 5572 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 5573 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 5574 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 100 |
|  |  | 5575 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0   |

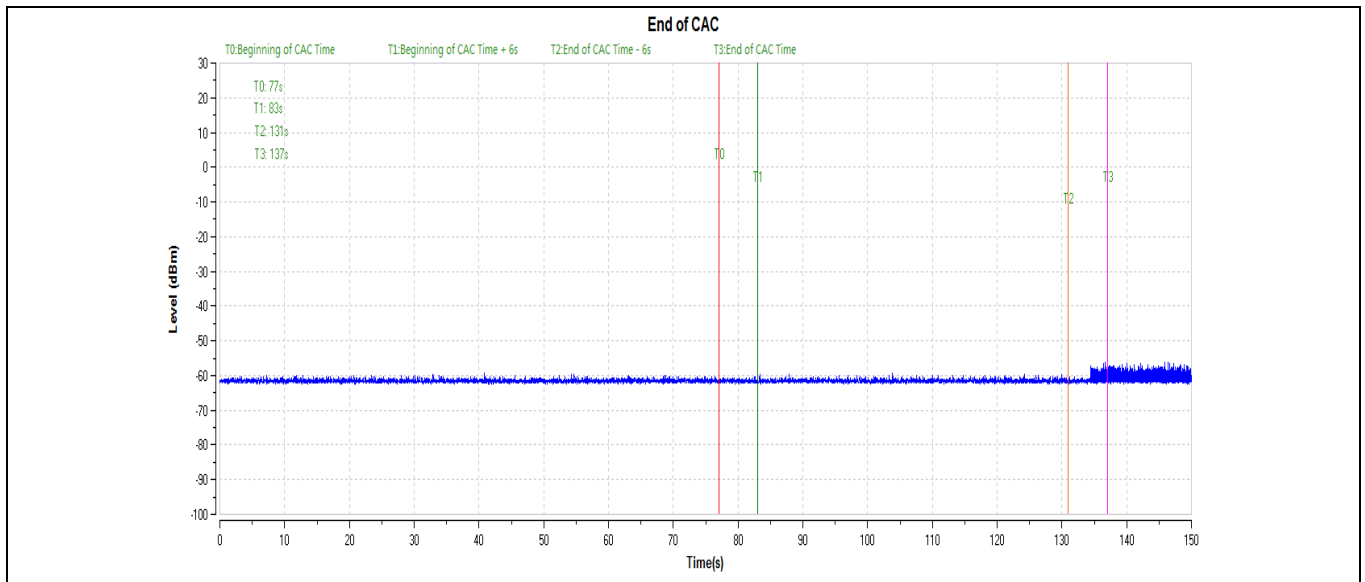


### 3.6.3 DFS Channel Availability Check

DFS Channel Availability Check (5530 MHz; 80 MHz)

Test according to FCC title 47 part 15 §15.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02





CAC Time: 60s



### 3.6.4 DFS In-Service Monitoring

DFS In-Service Monitoring (5530 MHz;80 MHz)

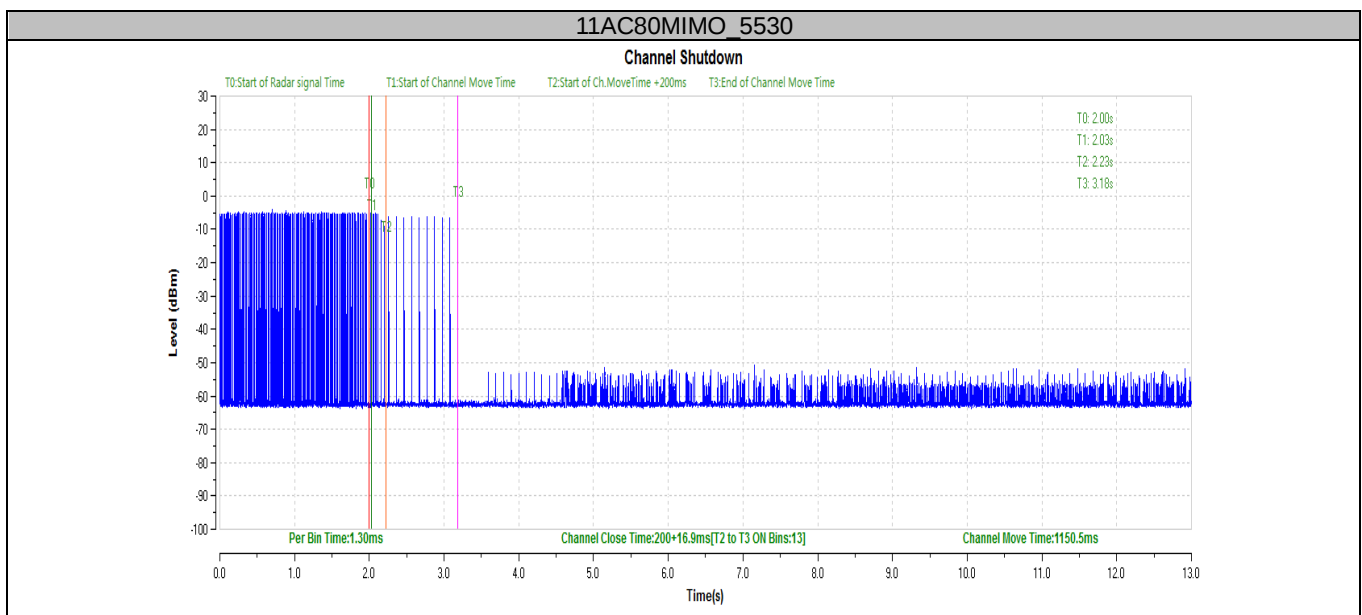
Test according to FCC title 47 part 15 §15.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02

| TestMode   | Channel | CCT[ms]  | Limit[ms] | CMT[ms] | Limit[ms] | Verdict |
|------------|---------|----------|-----------|---------|-----------|---------|
| 11AC80MIMO | 5530    | 200+16.9 | 200+60    | 1150.5  | 10000     | PASS    |

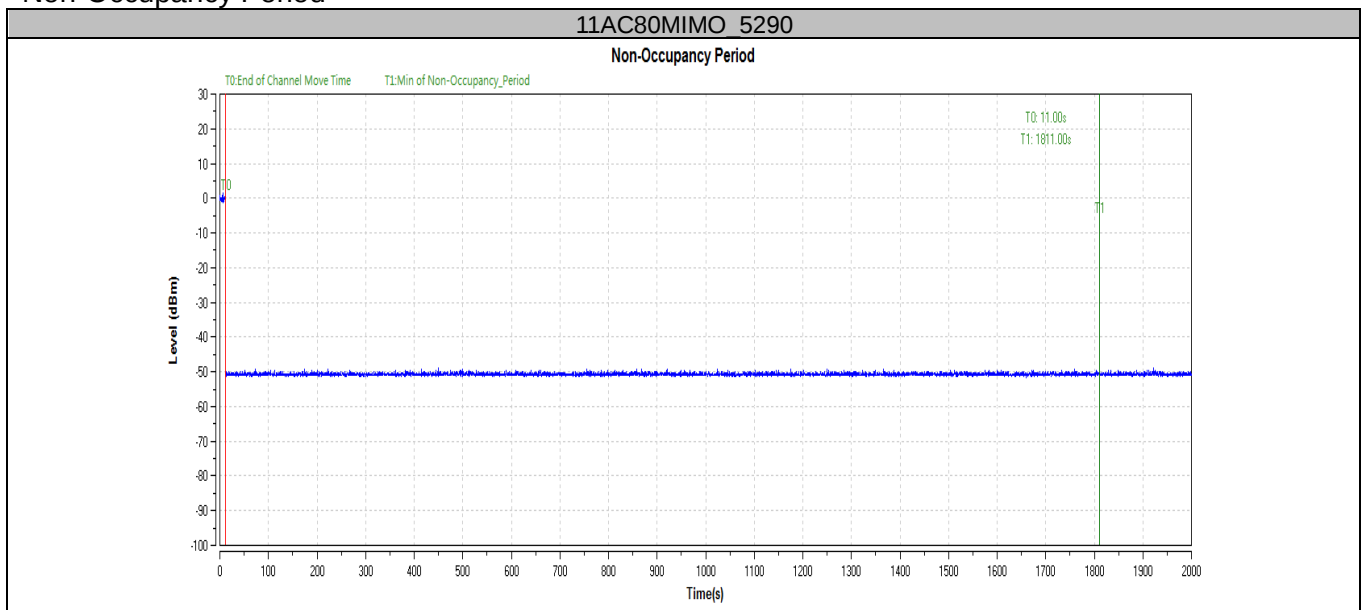
| TestMode   | Channel | Result         | Limit[s] | Verdict |
|------------|---------|----------------|----------|---------|
| 11AC80MIMO | 5530    | see test graph | ≥1800    | PASS    |

CMT: Channel Move Time

CCT: Channel Closing Transmission Time



### Non-Occupancy Period



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### 3.6.5 DFS Statistical Performance Check

Note: that the frequency of the injected signal is varied across the signal 99% bandwidth from trial to trial.

| TestMode   | Channel | Radar Type | Pass Times | Fail Times | Probability (%) | Limit (%) | Verdict |
|------------|---------|------------|------------|------------|-----------------|-----------|---------|
| 11AC20MIMO | 5500    | Type1      | 30         | 0          | 100.00          | 60        | PASS    |
|            |         | Type2      | 29         | 1          | 96.67           | 60        | PASS    |
|            |         | Type3      | 23         | 7          | 76.67           | 60        | PASS    |
|            |         | Type4      | 22         | 8          | 73.33           | 60        | PASS    |
|            |         | Type 1-4   | ---        | ---        | 86.67           | 80        | PASS    |
|            |         | Type5      | 28         | 2          | 93.33           | 70        | PASS    |
|            |         | Type6      | 24         | 6          | 80.00           | 80        | PASS    |
| 11AC40MIMO | 5510    | Type1      | 28         | 2          | 93.33           | 60        | PASS    |
|            |         | Type2      | 30         | 0          | 100.00          | 60        | PASS    |
|            |         | Type3      | 24         | 6          | 80.00           | 60        | PASS    |
|            |         | Type4      | 19         | 11         | 63.33           | 60        | PASS    |
|            |         | Type 1-4   | ---        | ---        | 84.17           | 80        | PASS    |
|            |         | Type5      | 30         | 0          | 100.00          | 70        | PASS    |
|            |         | Type6      | 29         | 1          | 96.67           | 80        | PASS    |
| 11AC80MIMO | 5530    | Type1      | 30         | 0          | 100.00          | 60        | PASS    |
|            |         | Type2      | 30         | 0          | 100.00          | 60        | PASS    |
|            |         | Type3      | 29         | 1          | 96.67           | 60        | PASS    |
|            |         | Type4      | 22         | 8          | 73.33           | 60        | PASS    |
|            |         | Type 1-4   | ---        | ---        | 92.50           | 80        | PASS    |
|            |         | Type5      | 28         | 2          | 93.33           | 70        | PASS    |
|            |         | Type6      | 30         | 0          | 100.00          | 80        | PASS    |



| TestMode   | Channel | Radar Type | Trial ID | Pulse width(μs) | PRI(μs) | Pulses per Burst | Detection (1: Yes; 0: No) |
|------------|---------|------------|----------|-----------------|---------|------------------|---------------------------|
| 11AC20MIMO | 5500    | Type1      | 0        | 1.0             | 938.0   | 57               | 1                         |
|            |         | Type1      | 1        | 1.0             | 698.0   | 76               | 1                         |
|            |         | Type1      | 2        | 1.0             | 618.0   | 86               | 1                         |
|            |         | Type1      | 3        | 1.0             | 538.0   | 99               | 1                         |
|            |         | Type1      | 4        | 1.0             | 878.0   | 61               | 1                         |
|            |         | Type1      | 5        | 1.0             | 3066.0  | 18               | 1                         |
|            |         | Type1      | 6        | 1.0             | 638.0   | 83               | 1                         |
|            |         | Type1      | 7        | 1.0             | 918.0   | 58               | 1                         |
|            |         | Type1      | 8        | 1.0             | 838.0   | 63               | 1                         |
|            |         | Type1      | 9        | 1.0             | 858.0   | 62               | 1                         |
|            |         | Type1      | 10       | 1.0             | 798.0   | 67               | 1                         |
|            |         | Type1      | 11       | 1.0             | 718.0   | 74               | 1                         |
|            |         | Type1      | 12       | 1.0             | 578.0   | 92               | 1                         |
|            |         | Type1      | 13       | 1.0             | 598.0   | 89               | 1                         |
|            |         | Type1      | 14       | 1.0             | 558.0   | 95               | 1                         |
|            |         | Type1      | 15       | 1.0             | 2536.0  | 21               | 1                         |
|            |         | Type1      | 16       | 1.0             | 966.0   | 55               | 1                         |
|            |         | Type1      | 17       | 1.0             | 827.0   | 64               | 1                         |
|            |         | Type1      | 18       | 1.0             | 2501.0  | 22               | 1                         |
|            |         | Type1      | 19       | 1.0             | 2595.0  | 21               | 1                         |
|            |         | Type1      | 20       | 1.0             | 1114.0  | 48               | 1                         |
|            |         | Type1      | 21       | 1.0             | 1302.0  | 41               | 1                         |
|            |         | Type1      | 22       | 1.0             | 3045.0  | 18               | 1                         |
|            |         | Type1      | 23       | 1.0             | 1624.0  | 33               | 1                         |
|            |         | Type1      | 24       | 1.0             | 2878.0  | 19               | 1                         |
|            |         | Type1      | 25       | 1.0             | 1027.0  | 52               | 1                         |
|            |         | Type1      | 26       | 1.0             | 2485.0  | 22               | 1                         |
|            |         | Type1      | 27       | 1.0             | 1600.0  | 33               | 1                         |
|            |         | Type1      | 28       | 1.0             | 1172.0  | 46               | 1                         |
|            |         | Type1      | 29       | 1.0             | 1177.0  | 45               | 1                         |
|            |         | Type2      | 0        | 3.2             | 179.0   | 26               | 1                         |
|            |         | Type2      | 1        | 1.1             | 207.0   | 23               | 1                         |
|            |         | Type2      | 2        | 2.1             | 230.0   | 24               | 1                         |
|            |         | Type2      | 3        | 4.8             | 200.0   | 29               | 1                         |
|            |         | Type2      | 4        | 3.9             | 214.0   | 28               | 1                         |
|            |         | Type2      | 5        | 2.9             | 222.0   | 26               | 0                         |
|            |         | Type2      | 6        | 3.2             | 204.0   | 26               | 1                         |
|            |         | Type2      | 7        | 2.5             | 192.0   | 25               | 1                         |
|            |         | Type2      | 8        | 3.1             | 164.0   | 26               | 1                         |
|            |         | Type2      | 9        | 1.2             | 156.0   | 23               | 1                         |
|            |         | Type2      | 10       | 3.9             | 210.0   | 27               | 1                         |
|            |         | Type2      | 11       | 4.6             | 201.0   | 29               | 1                         |
|            |         | Type2      | 12       | 3.2             | 162.0   | 26               | 1                         |
|            |         | Type2      | 13       | 2.2             | 197.0   | 25               | 1                         |
|            |         | Type2      | 14       | 4.5             | 163.0   | 29               | 1                         |
|            |         | Type2      | 15       | 3.0             | 203.0   | 26               | 1                         |
|            |         | Type2      | 16       | 5.0             | 168.0   | 29               | 1                         |
|            |         | Type2      | 17       | 2.4             | 217.0   | 25               | 1                         |
|            |         | Type2      | 18       | 2.9             | 191.0   | 26               | 1                         |
|            |         | Type2      | 19       | 2.3             | 166.0   | 25               | 1                         |
|            |         | Type2      | 20       | 3.7             | 150.0   | 27               | 1                         |
|            |         | Type2      | 21       | 2.2             | 176.0   | 25               | 1                         |
|            |         | Type2      | 22       | 4.9             | 195.0   | 29               | 1                         |
|            |         | Type2      | 23       | 2.9             | 202.0   | 26               | 1                         |
|            |         | Type2      | 24       | 2.5             | 178.0   | 25               | 1                         |
|            |         | Type2      | 25       | 1.1             | 206.0   | 23               | 1                         |
|            |         | Type2      | 26       | 3.8             | 155.0   | 27               | 1                         |
|            |         | Type2      | 27       | 4.7             | 157.0   | 29               | 1                         |
|            |         | Type2      | 28       | 2.4             | 224.0   | 25               | 1                         |
|            |         | Type2      | 29       | 4.2             | 159.0   | 28               | 1                         |
|            |         | Type3      | 0        | 8.2             | 355.0   | 17               | 1                         |
|            |         | Type3      | 1        | 8.2             | 355.0   | 17               | 1                         |

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|            |      |       |    |      |        |    |   |
|------------|------|-------|----|------|--------|----|---|
|            |      | Type3 | 2  | 7.1  | 344.0  | 16 | 1 |
|            |      | Type3 | 3  | 9.8  | 288.0  | 18 | 1 |
|            |      | Type3 | 4  | 8.9  | 230.0  | 18 | 0 |
|            |      | Type3 | 5  | 7.9  | 432.0  | 17 | 1 |
|            |      | Type3 | 6  | 8.2  | 207.0  | 17 | 0 |
|            |      | Type3 | 7  | 7.5  | 443.0  | 17 | 1 |
|            |      | Type3 | 8  | 8.1  | 439.0  | 17 | 0 |
|            |      | Type3 | 9  | 6.2  | 223.0  | 16 | 1 |
|            |      | Type3 | 10 | 8.9  | 208.0  | 18 | 1 |
|            |      | Type3 | 11 | 9.6  | 463.0  | 18 | 0 |
|            |      | Type3 | 12 | 8.2  | 441.0  | 17 | 1 |
|            |      | Type3 | 13 | 7.2  | 323.0  | 16 | 1 |
|            |      | Type3 | 14 | 9.5  | 297.0  | 18 | 1 |
|            |      | Type3 | 15 | 8.0  | 412.0  | 17 | 0 |
|            |      | Type3 | 16 | 10.0 | 324.0  | 18 | 1 |
|            |      | Type3 | 17 | 7.4  | 271.0  | 17 | 1 |
|            |      | Type3 | 18 | 7.9  | 349.0  | 17 | 1 |
|            |      | Type3 | 19 | 7.3  | 409.0  | 16 | 1 |
|            |      | Type3 | 20 | 8.7  | 373.0  | 18 | 1 |
|            |      | Type3 | 21 | 7.2  | 254.0  | 16 | 0 |
|            |      | Type3 | 22 | 9.9  | 274.0  | 18 | 0 |
|            |      | Type3 | 23 | 7.9  | 278.0  | 17 | 1 |
|            |      | Type3 | 24 | 7.5  | 317.0  | 17 | 1 |
|            |      | Type3 | 25 | 6.1  | 260.0  | 16 | 1 |
|            |      | Type3 | 26 | 8.8  | 211.0  | 18 | 1 |
|            |      | Type3 | 27 | 9.7  | 272.0  | 18 | 1 |
|            |      | Type3 | 28 | 7.4  | 264.0  | 17 | 1 |
|            |      | Type3 | 29 | 9.2  | 284.0  | 18 | 1 |
|            |      | Type4 | 0  | 16.0 | 355.0  | 14 | 1 |
|            |      | Type4 | 1  | 11.3 | 487.0  | 12 | 0 |
|            |      | Type4 | 2  | 13.5 | 344.0  | 13 | 1 |
|            |      | Type4 | 3  | 19.4 | 288.0  | 16 | 1 |
|            |      | Type4 | 4  | 17.5 | 230.0  | 15 | 1 |
|            |      | Type4 | 5  | 15.3 | 432.0  | 14 | 1 |
|            |      | Type4 | 6  | 15.9 | 207.0  | 14 | 1 |
|            |      | Type4 | 7  | 14.3 | 443.0  | 13 | 0 |
|            |      | Type4 | 8  | 15.8 | 439.0  | 14 | 1 |
|            |      | Type4 | 9  | 11.5 | 223.0  | 12 | 1 |
|            |      | Type4 | 10 | 17.4 | 208.0  | 15 | 0 |
|            |      | Type4 | 11 | 19.0 | 463.0  | 16 | 0 |
|            |      | Type4 | 12 | 16.0 | 441.0  | 14 | 1 |
|            |      | Type4 | 13 | 13.8 | 323.0  | 13 | 1 |
|            |      | Type4 | 14 | 18.9 | 297.0  | 16 | 1 |
|            |      | Type4 | 15 | 15.5 | 412.0  | 14 | 1 |
|            |      | Type4 | 16 | 19.9 | 324.0  | 16 | 0 |
|            |      | Type4 | 17 | 14.1 | 271.0  | 13 | 1 |
|            |      | Type4 | 18 | 15.2 | 349.0  | 14 | 1 |
|            |      | Type4 | 19 | 13.8 | 409.0  | 13 | 1 |
|            |      | Type4 | 20 | 17.1 | 373.0  | 15 | 1 |
|            |      | Type4 | 21 | 13.8 | 254.0  | 13 | 1 |
|            |      | Type4 | 22 | 19.8 | 274.0  | 16 | 1 |
|            |      | Type4 | 23 | 15.3 | 278.0  | 14 | 0 |
|            |      | Type4 | 24 | 14.5 | 317.0  | 13 | 1 |
|            |      | Type4 | 25 | 11.3 | 260.0  | 12 | 1 |
|            |      | Type4 | 26 | 17.3 | 211.0  | 15 | 0 |
|            |      | Type4 | 27 | 19.2 | 272.0  | 16 | 1 |
|            |      | Type4 | 28 | 14.2 | 264.0  | 13 | 1 |
|            |      | Type4 | 29 | 18.2 | 284.0  | 15 | 0 |
| 11AC40MIMO | 5510 | Type1 | 0  | 1.0  | 938.0  | 57 | 1 |
|            |      | Type1 | 1  | 1.0  | 698.0  | 76 | 1 |
|            |      | Type1 | 2  | 1.0  | 618.0  | 86 | 1 |
|            |      | Type1 | 3  | 1.0  | 538.0  | 99 | 1 |
|            |      | Type1 | 4  | 1.0  | 878.0  | 61 | 1 |
|            |      | Type1 | 5  | 1.0  | 3066.0 | 18 | 1 |
|            |      | Type1 | 6  | 1.0  | 638.0  | 83 | 1 |

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|       |    |     |        |    |   |
|-------|----|-----|--------|----|---|
| Type1 | 7  | 1.0 | 918.0  | 58 | 1 |
| Type1 | 8  | 1.0 | 838.0  | 63 | 1 |
| Type1 | 9  | 1.0 | 858.0  | 62 | 1 |
| Type1 | 10 | 1.0 | 798.0  | 67 | 1 |
| Type1 | 11 | 1.0 | 718.0  | 74 | 0 |
| Type1 | 12 | 1.0 | 578.0  | 92 | 1 |
| Type1 | 13 | 1.0 | 598.0  | 89 | 1 |
| Type1 | 14 | 1.0 | 558.0  | 95 | 0 |
| Type1 | 15 | 1.0 | 2536.0 | 21 | 1 |
| Type1 | 16 | 1.0 | 966.0  | 55 | 1 |
| Type1 | 17 | 1.0 | 827.0  | 64 | 1 |
| Type1 | 18 | 1.0 | 2501.0 | 22 | 1 |
| Type1 | 19 | 1.0 | 2595.0 | 21 | 1 |
| Type1 | 20 | 1.0 | 1114.0 | 48 | 1 |
| Type1 | 21 | 1.0 | 1302.0 | 41 | 1 |
| Type1 | 22 | 1.0 | 3045.0 | 18 | 1 |
| Type1 | 23 | 1.0 | 1624.0 | 33 | 1 |
| Type1 | 24 | 1.0 | 2878.0 | 19 | 1 |
| Type1 | 25 | 1.0 | 1027.0 | 52 | 1 |
| Type1 | 26 | 1.0 | 2485.0 | 22 | 1 |
| Type1 | 27 | 1.0 | 1600.0 | 33 | 1 |
| Type1 | 28 | 1.0 | 1172.0 | 46 | 1 |
| Type1 | 29 | 1.0 | 1177.0 | 45 | 1 |
| Type2 | 0  | 3.2 | 179.0  | 26 | 1 |
| Type2 | 1  | 1.1 | 207.0  | 23 | 1 |
| Type2 | 2  | 2.1 | 230.0  | 24 | 1 |
| Type2 | 3  | 4.8 | 200.0  | 29 | 1 |
| Type2 | 4  | 3.9 | 214.0  | 28 | 1 |
| Type2 | 5  | 2.9 | 222.0  | 26 | 1 |
| Type2 | 6  | 3.2 | 204.0  | 26 | 1 |
| Type2 | 7  | 2.5 | 192.0  | 25 | 1 |
| Type2 | 8  | 3.1 | 164.0  | 26 | 1 |
| Type2 | 9  | 1.2 | 156.0  | 23 | 1 |
| Type2 | 10 | 3.9 | 210.0  | 27 | 1 |
| Type2 | 11 | 4.6 | 201.0  | 29 | 1 |
| Type2 | 12 | 3.2 | 162.0  | 26 | 1 |
| Type2 | 13 | 2.2 | 197.0  | 25 | 1 |
| Type2 | 14 | 4.5 | 163.0  | 29 | 1 |
| Type2 | 15 | 3.0 | 203.0  | 26 | 1 |
| Type2 | 16 | 5.0 | 168.0  | 29 | 1 |
| Type2 | 17 | 2.4 | 217.0  | 25 | 1 |
| Type2 | 18 | 2.9 | 191.0  | 26 | 1 |
| Type2 | 19 | 2.3 | 166.0  | 25 | 1 |
| Type2 | 20 | 3.7 | 150.0  | 27 | 1 |
| Type2 | 21 | 2.2 | 176.0  | 25 | 1 |
| Type2 | 22 | 4.9 | 195.0  | 29 | 1 |
| Type2 | 23 | 2.9 | 202.0  | 26 | 1 |
| Type2 | 24 | 2.5 | 178.0  | 25 | 1 |
| Type2 | 25 | 1.1 | 206.0  | 23 | 1 |
| Type2 | 26 | 3.8 | 155.0  | 27 | 1 |
| Type2 | 27 | 4.7 | 157.0  | 29 | 1 |
| Type2 | 28 | 2.4 | 224.0  | 25 | 1 |
| Type2 | 29 | 4.2 | 159.0  | 28 | 1 |
| Type3 | 0  | 8.2 | 355.0  | 17 | 1 |
| Type3 | 1  | 6.1 | 487.0  | 16 | 0 |
| Type3 | 2  | 7.1 | 344.0  | 16 | 1 |
| Type3 | 3  | 9.8 | 288.0  | 18 | 1 |
| Type3 | 4  | 8.9 | 230.0  | 18 | 1 |
| Type3 | 5  | 7.9 | 432.0  | 17 | 1 |
| Type3 | 6  | 8.2 | 207.0  | 17 | 1 |
| Type3 | 7  | 7.5 | 443.0  | 17 | 1 |
| Type3 | 8  | 8.1 | 439.0  | 17 | 1 |
| Type3 | 9  | 6.2 | 223.0  | 16 | 1 |
| Type3 | 10 | 8.9 | 208.0  | 18 | 1 |
| Type3 | 11 | 9.6 | 463.0  | 18 | 1 |

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|            |      |       |    |      |        |    |   |
|------------|------|-------|----|------|--------|----|---|
|            |      | Type3 | 12 | 8.2  | 441.0  | 17 | 1 |
|            |      | Type3 | 13 | 7.2  | 323.0  | 16 | 1 |
|            |      | Type3 | 14 | 9.5  | 297.0  | 18 | 1 |
|            |      | Type3 | 15 | 8.0  | 412.0  | 17 | 0 |
|            |      | Type3 | 16 | 10.0 | 324.0  | 18 | 1 |
|            |      | Type3 | 17 | 7.4  | 271.0  | 17 | 1 |
|            |      | Type3 | 18 | 7.9  | 349.0  | 17 | 1 |
|            |      | Type3 | 19 | 7.3  | 409.0  | 16 | 1 |
|            |      | Type3 | 20 | 8.7  | 373.0  | 18 | 1 |
|            |      | Type3 | 21 | 7.2  | 254.0  | 16 | 0 |
|            |      | Type3 | 22 | 9.9  | 274.0  | 18 | 1 |
|            |      | Type3 | 23 | 7.9  | 278.0  | 17 | 1 |
|            |      | Type3 | 24 | 7.5  | 317.0  | 17 | 1 |
|            |      | Type3 | 25 | 6.1  | 260.0  | 16 | 1 |
|            |      | Type3 | 26 | 8.8  | 211.0  | 18 | 0 |
|            |      | Type3 | 27 | 9.7  | 272.0  | 18 | 0 |
|            |      | Type3 | 28 | 7.4  | 264.0  | 17 | 0 |
|            |      | Type3 | 29 | 9.2  | 284.0  | 18 | 1 |
|            |      | Type4 | 0  | 16.0 | 355.0  | 14 | 0 |
|            |      | Type4 | 1  | 11.3 | 487.0  | 12 | 0 |
|            |      | Type4 | 2  | 13.5 | 344.0  | 13 | 1 |
|            |      | Type4 | 3  | 19.4 | 288.0  | 16 | 1 |
|            |      | Type4 | 4  | 17.5 | 230.0  | 15 | 1 |
|            |      | Type4 | 5  | 15.3 | 432.0  | 14 | 0 |
|            |      | Type4 | 6  | 15.9 | 207.0  | 14 | 0 |
|            |      | Type4 | 7  | 14.3 | 443.0  | 13 | 1 |
|            |      | Type4 | 8  | 15.8 | 439.0  | 14 | 0 |
|            |      | Type4 | 9  | 11.5 | 223.0  | 12 | 0 |
|            |      | Type4 | 10 | 17.4 | 208.0  | 15 | 0 |
|            |      | Type4 | 11 | 19.0 | 463.0  | 16 | 1 |
|            |      | Type4 | 12 | 16.0 | 441.0  | 14 | 0 |
|            |      | Type4 | 13 | 13.8 | 323.0  | 13 | 1 |
|            |      | Type4 | 14 | 18.9 | 297.0  | 16 | 1 |
|            |      | Type4 | 15 | 15.5 | 412.0  | 14 | 0 |
|            |      | Type4 | 16 | 19.9 | 324.0  | 16 | 1 |
|            |      | Type4 | 17 | 14.1 | 271.0  | 13 | 1 |
|            |      | Type4 | 18 | 15.2 | 349.0  | 14 | 1 |
|            |      | Type4 | 19 | 13.8 | 409.0  | 13 | 1 |
|            |      | Type4 | 20 | 17.1 | 373.0  | 15 | 1 |
|            |      | Type4 | 21 | 13.8 | 254.0  | 13 | 1 |
|            |      | Type4 | 22 | 19.8 | 274.0  | 16 | 1 |
|            |      | Type4 | 23 | 15.3 | 278.0  | 14 | 1 |
|            |      | Type4 | 24 | 14.5 | 317.0  | 13 | 1 |
|            |      | Type4 | 25 | 11.3 | 260.0  | 12 | 0 |
|            |      | Type4 | 26 | 17.3 | 211.0  | 15 | 1 |
|            |      | Type4 | 27 | 19.2 | 272.0  | 16 | 1 |
|            |      | Type4 | 28 | 14.2 | 264.0  | 13 | 1 |
|            |      | Type4 | 29 | 18.2 | 284.0  | 15 | 0 |
| 11AC80MIMO | 5530 | Type1 | 0  | 1.0  | 938.0  | 57 | 1 |
|            |      | Type1 | 1  | 1.0  | 698.0  | 76 | 1 |
|            |      | Type1 | 2  | 1.0  | 618.0  | 86 | 1 |
|            |      | Type1 | 3  | 1.0  | 538.0  | 99 | 1 |
|            |      | Type1 | 4  | 1.0  | 878.0  | 61 | 1 |
|            |      | Type1 | 5  | 1.0  | 3066.0 | 18 | 1 |
|            |      | Type1 | 6  | 1.0  | 638.0  | 83 | 1 |
|            |      | Type1 | 7  | 1.0  | 918.0  | 58 | 1 |
|            |      | Type1 | 8  | 1.0  | 838.0  | 63 | 1 |
|            |      | Type1 | 9  | 1.0  | 858.0  | 62 | 1 |
|            |      | Type1 | 10 | 1.0  | 798.0  | 67 | 1 |
|            |      | Type1 | 11 | 1.0  | 718.0  | 74 | 1 |
|            |      | Type1 | 12 | 1.0  | 578.0  | 92 | 1 |
|            |      | Type1 | 13 | 1.0  | 598.0  | 89 | 1 |
|            |      | Type1 | 14 | 1.0  | 558.0  | 95 | 1 |
|            |      | Type1 | 15 | 1.0  | 2536.0 | 21 | 1 |
|            |      | Type1 | 16 | 1.0  | 966.0  | 55 | 1 |

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|       |    |      |        |    |   |
|-------|----|------|--------|----|---|
| Type1 | 17 | 1.0  | 827.0  | 64 | 1 |
| Type1 | 18 | 1.0  | 2501.0 | 22 | 1 |
| Type1 | 19 | 1.0  | 2595.0 | 21 | 1 |
| Type1 | 20 | 1.0  | 1114.0 | 48 | 1 |
| Type1 | 21 | 1.0  | 1302.0 | 41 | 1 |
| Type1 | 22 | 1.0  | 3045.0 | 18 | 1 |
| Type1 | 23 | 1.0  | 1624.0 | 33 | 1 |
| Type1 | 24 | 1.0  | 2878.0 | 19 | 1 |
| Type1 | 25 | 1.0  | 1027.0 | 52 | 1 |
| Type1 | 26 | 1.0  | 2485.0 | 22 | 1 |
| Type1 | 27 | 1.0  | 1600.0 | 33 | 1 |
| Type1 | 28 | 1.0  | 1172.0 | 46 | 1 |
| Type1 | 29 | 1.0  | 1177.0 | 45 | 1 |
| Type2 | 0  | 3.2  | 179.0  | 26 | 1 |
| Type2 | 1  | 1.1  | 207.0  | 23 | 1 |
| Type2 | 2  | 2.1  | 230.0  | 24 | 1 |
| Type2 | 3  | 4.8  | 200.0  | 29 | 1 |
| Type2 | 4  | 3.9  | 214.0  | 28 | 1 |
| Type2 | 5  | 2.9  | 222.0  | 26 | 1 |
| Type2 | 6  | 3.2  | 204.0  | 26 | 1 |
| Type2 | 7  | 2.5  | 192.0  | 25 | 1 |
| Type2 | 8  | 3.1  | 164.0  | 26 | 1 |
| Type2 | 9  | 1.2  | 156.0  | 23 | 1 |
| Type2 | 10 | 3.9  | 210.0  | 27 | 1 |
| Type2 | 11 | 4.6  | 201.0  | 29 | 1 |
| Type2 | 12 | 3.2  | 162.0  | 26 | 1 |
| Type2 | 13 | 2.2  | 197.0  | 25 | 1 |
| Type2 | 14 | 4.5  | 163.0  | 29 | 1 |
| Type2 | 15 | 3.0  | 203.0  | 26 | 1 |
| Type2 | 16 | 5.0  | 168.0  | 29 | 1 |
| Type2 | 17 | 2.4  | 217.0  | 25 | 1 |
| Type2 | 18 | 2.9  | 191.0  | 26 | 1 |
| Type2 | 19 | 2.3  | 166.0  | 25 | 1 |
| Type2 | 20 | 3.7  | 150.0  | 27 | 1 |
| Type2 | 21 | 2.2  | 176.0  | 25 | 1 |
| Type2 | 22 | 4.9  | 195.0  | 29 | 1 |
| Type2 | 23 | 2.9  | 202.0  | 26 | 1 |
| Type2 | 24 | 2.5  | 178.0  | 25 | 1 |
| Type2 | 25 | 1.1  | 206.0  | 23 | 1 |
| Type2 | 26 | 3.8  | 155.0  | 27 | 1 |
| Type2 | 27 | 4.7  | 157.0  | 29 | 1 |
| Type2 | 28 | 2.4  | 224.0  | 25 | 1 |
| Type2 | 29 | 4.2  | 159.0  | 28 | 1 |
| Type3 | 0  | 8.2  | 355.0  | 17 | 1 |
| Type3 | 1  | 6.1  | 487.0  | 16 | 1 |
| Type3 | 2  | 7.1  | 344.0  | 16 | 1 |
| Type3 | 3  | 9.8  | 288.0  | 18 | 1 |
| Type3 | 4  | 8.9  | 230.0  | 18 | 1 |
| Type3 | 5  | 7.9  | 432.0  | 17 | 1 |
| Type3 | 6  | 8.2  | 207.0  | 17 | 1 |
| Type3 | 7  | 7.5  | 443.0  | 17 | 1 |
| Type3 | 8  | 8.1  | 439.0  | 17 | 1 |
| Type3 | 9  | 6.2  | 223.0  | 16 | 1 |
| Type3 | 10 | 8.9  | 208.0  | 18 | 1 |
| Type3 | 11 | 9.6  | 463.0  | 18 | 1 |
| Type3 | 12 | 8.2  | 441.0  | 17 | 1 |
| Type3 | 13 | 7.2  | 323.0  | 16 | 1 |
| Type3 | 14 | 9.5  | 297.0  | 18 | 1 |
| Type3 | 15 | 8.0  | 412.0  | 17 | 1 |
| Type3 | 16 | 10.0 | 324.0  | 18 | 1 |
| Type3 | 17 | 7.4  | 271.0  | 17 | 1 |
| Type3 | 18 | 7.9  | 349.0  | 17 | 1 |
| Type3 | 19 | 7.3  | 409.0  | 16 | 1 |
| Type3 | 20 | 8.7  | 373.0  | 18 | 1 |
| Type3 | 21 | 7.2  | 254.0  | 16 | 0 |

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|  |       |    |      |       |    |   |
|--|-------|----|------|-------|----|---|
|  | Type3 | 22 | 9.9  | 274.0 | 18 | 1 |
|  | Type3 | 23 | 7.9  | 278.0 | 17 | 1 |
|  | Type3 | 24 | 7.5  | 317.0 | 17 | 1 |
|  | Type3 | 25 | 6.1  | 260.0 | 16 | 1 |
|  | Type3 | 26 | 8.8  | 211.0 | 18 | 1 |
|  | Type3 | 27 | 9.7  | 272.0 | 18 | 1 |
|  | Type3 | 28 | 7.4  | 264.0 | 17 | 1 |
|  | Type3 | 29 | 9.2  | 284.0 | 18 | 1 |
|  | Type4 | 0  | 16.0 | 355.0 | 14 | 0 |
|  | Type4 | 1  | 11.3 | 487.0 | 12 | 1 |
|  | Type4 | 2  | 13.5 | 344.0 | 13 | 1 |
|  | Type4 | 3  | 19.4 | 288.0 | 16 | 1 |
|  | Type4 | 4  | 17.5 | 230.0 | 15 | 1 |
|  | Type4 | 5  | 15.3 | 432.0 | 14 | 1 |
|  | Type4 | 6  | 15.9 | 207.0 | 14 | 0 |
|  | Type4 | 7  | 14.3 | 443.0 | 13 | 0 |
|  | Type4 | 8  | 15.8 | 439.0 | 14 | 0 |
|  | Type4 | 9  | 11.5 | 223.0 | 12 | 1 |
|  | Type4 | 10 | 17.4 | 208.0 | 15 | 1 |
|  | Type4 | 11 | 19.0 | 463.0 | 16 | 1 |
|  | Type4 | 12 | 16.0 | 441.0 | 14 | 1 |
|  | Type4 | 13 | 13.8 | 323.0 | 13 | 1 |
|  | Type4 | 14 | 18.9 | 297.0 | 16 | 1 |
|  | Type4 | 15 | 15.5 | 412.0 | 14 | 1 |
|  | Type4 | 16 | 19.9 | 324.0 | 16 | 1 |
|  | Type4 | 17 | 14.1 | 271.0 | 13 | 1 |
|  | Type4 | 18 | 15.2 | 349.0 | 14 | 1 |
|  | Type4 | 19 | 13.8 | 409.0 | 13 | 1 |
|  | Type4 | 20 | 17.1 | 373.0 | 15 | 1 |
|  | Type4 | 21 | 13.8 | 254.0 | 13 | 1 |
|  | Type4 | 22 | 19.8 | 274.0 | 16 | 1 |
|  | Type4 | 23 | 15.3 | 278.0 | 14 | 1 |
|  | Type4 | 24 | 14.5 | 317.0 | 13 | 0 |
|  | Type4 | 25 | 11.3 | 260.0 | 12 | 0 |
|  | Type4 | 26 | 17.3 | 211.0 | 15 | 1 |
|  | Type4 | 27 | 19.2 | 272.0 | 16 | 0 |
|  | Type4 | 28 | 14.2 | 264.0 | 13 | 0 |
|  | Type4 | 29 | 18.2 | 284.0 | 15 | 1 |



| TestMode   | Channel | Radar Type | Trial ID | Number Of Bursts | Wavform Length (s)) | Radar Frequency | Detection (1: Yes; 0: No) |
|------------|---------|------------|----------|------------------|---------------------|-----------------|---------------------------|
| 11AC20MIMO | 5500    | Type5      | 0        | 15               | 12                  | 5500            | 1                         |
|            |         | Type5      | 1        | 8                | 12                  | 5500            | 0                         |
|            |         | Type5      | 2        | 11               | 12                  | 5500            | 1                         |
|            |         | Type5      | 3        | 20               | 12                  | 5500            | 1                         |
|            |         | Type5      | 4        | 17               | 12                  | 5500            | 1                         |
|            |         | Type5      | 5        | 14               | 12                  | 5500            | 1                         |
|            |         | Type5      | 6        | 15               | 12                  | 5500            | 1                         |
|            |         | Type5      | 7        | 12               | 12                  | 5500            | 1                         |
|            |         | Type5      | 8        | 14               | 12                  | 5500            | 1                         |
|            |         | Type5      | 9        | 8                | 12                  | 5500            | 1                         |
|            |         | Type5      | 10       | 17               | 12                  | 5497.9          | 1                         |
|            |         | Type5      | 11       | 19               | 12                  | 5499.1          | 1                         |
|            |         | Type5      | 12       | 15               | 12                  | 5496.7          | 1                         |
|            |         | Type5      | 13       | 12               | 12                  | 5495.5          | 1                         |
|            |         | Type5      | 14       | 19               | 12                  | 5498.7          | 1                         |
|            |         | Type5      | 15       | 14               | 12                  | 5496.3          | 1                         |
|            |         | Type5      | 16       | 20               | 12                  | 5499.5          | 1                         |
|            |         | Type5      | 17       | 12               | 12                  | 5495.5          | 1                         |
|            |         | Type5      | 18       | 14               | 12                  | 5496.3          | 1                         |
|            |         | Type5      | 19       | 12               | 12                  | 5495.5          | 1                         |
|            |         | Type5      | 20       | 16               | 12                  | 5502.5          | 1                         |
|            |         | Type5      | 21       | 12               | 12                  | 5504.9          | 1                         |
|            |         | Type5      | 22       | 20               | 12                  | 5500.5          | 1                         |
|            |         | Type5      | 23       | 14               | 12                  | 5503.7          | 1                         |
|            |         | Type5      | 24       | 13               | 12                  | 5504.1          | 1                         |
|            |         | Type5      | 25       | 8                | 12                  | 5506.5          | 0                         |
|            |         | Type5      | 26       | 17               | 12                  | 5502.1          | 1                         |
|            |         | Type5      | 27       | 19               | 12                  | 5500.9          | 1                         |
|            |         | Type5      | 28       | 12               | 12                  | 5504.5          | 1                         |
|            |         | Type5      | 29       | 18               | 12                  | 5501.7          | 1                         |
| 11AC40MIMO | 5510    | Type5      | 0        | 15               | 12                  | 5510            | 1                         |
|            |         | Type5      | 1        | 8                | 12                  | 5510            | 1                         |
|            |         | Type5      | 2        | 11               | 12                  | 5510            | 1                         |
|            |         | Type5      | 3        | 20               | 12                  | 5510            | 1                         |
|            |         | Type5      | 4        | 17               | 12                  | 5510            | 1                         |
|            |         | Type5      | 5        | 14               | 12                  | 5510            | 1                         |
|            |         | Type5      | 6        | 15               | 12                  | 5510            | 1                         |
|            |         | Type5      | 7        | 12               | 12                  | 5510            | 1                         |
|            |         | Type5      | 8        | 14               | 12                  | 5510            | 1                         |
|            |         | Type5      | 9        | 8                | 12                  | 5510            | 1                         |
|            |         | Type5      | 10       | 17               | 12                  | 5498.4          | 1                         |
|            |         | Type5      | 11       | 19               | 12                  | 5499.6          | 1                         |
|            |         | Type5      | 12       | 15               | 12                  | 5497.2          | 1                         |
|            |         | Type5      | 13       | 12               | 12                  | 5496            | 1                         |
|            |         | Type5      | 14       | 19               | 12                  | 5499.2          | 1                         |
|            |         | Type5      | 15       | 14               | 12                  | 5496.8          | 1                         |
|            |         | Type5      | 16       | 20               | 12                  | 5500            | 1                         |
|            |         | Type5      | 17       | 12               | 12                  | 5496            | 1                         |
|            |         | Type5      | 18       | 14               | 12                  | 5496.8          | 1                         |
|            |         | Type5      | 19       | 12               | 12                  | 5496            | 1                         |
|            |         | Type5      | 20       | 16               | 12                  | 5522            | 1                         |
|            |         | Type5      | 21       | 12               | 12                  | 5524.4          | 1                         |
|            |         | Type5      | 22       | 20               | 12                  | 5520            | 1                         |
|            |         | Type5      | 23       | 14               | 12                  | 5523.2          | 1                         |
|            |         | Type5      | 24       | 13               | 12                  | 5523.6          | 1                         |
|            |         | Type5      | 25       | 8                | 12                  | 5526            | 1                         |
|            |         | Type5      | 26       | 17               | 12                  | 5521.6          | 1                         |
|            |         | Type5      | 27       | 19               | 12                  | 5520.4          | 1                         |
|            |         | Type5      | 28       | 12               | 12                  | 5524            | 1                         |
|            |         | Type5      | 29       | 18               | 12                  | 5521.2          | 1                         |
| 11AC80MIMO | 5530    | Type5      | 0        | 15               | 12                  | 5530            | 1                         |

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|  |  |       |    |    |    |         |   |
|--|--|-------|----|----|----|---------|---|
|  |  | Type5 | 1  | 8  | 12 | 5530    | 1 |
|  |  | Type5 | 2  | 11 | 12 | 5530    | 1 |
|  |  | Type5 | 3  | 20 | 12 | 5530    | 1 |
|  |  | Type5 | 4  | 17 | 12 | 5530    | 1 |
|  |  | Type5 | 5  | 14 | 12 | 5530    | 1 |
|  |  | Type5 | 6  | 15 | 12 | 5530    | 1 |
|  |  | Type5 | 7  | 12 | 12 | 5530    | 1 |
|  |  | Type5 | 8  | 14 | 12 | 5530    | 1 |
|  |  | Type5 | 9  | 8  | 12 | 5530    | 1 |
|  |  | Type5 | 10 | 17 | 12 | 5498.65 | 1 |
|  |  | Type5 | 11 | 19 | 12 | 5499.85 | 1 |
|  |  | Type5 | 12 | 15 | 12 | 5497.45 | 1 |
|  |  | Type5 | 13 | 12 | 12 | 5496.25 | 1 |
|  |  | Type5 | 14 | 19 | 12 | 5499.45 | 1 |
|  |  | Type5 | 15 | 14 | 12 | 5497.05 | 1 |
|  |  | Type5 | 16 | 20 | 12 | 5500.25 | 1 |
|  |  | Type5 | 17 | 12 | 12 | 5496.25 | 1 |
|  |  | Type5 | 18 | 14 | 12 | 5497.05 | 1 |
|  |  | Type5 | 19 | 12 | 12 | 5496.25 | 1 |
|  |  | Type5 | 20 | 16 | 12 | 5561.75 | 0 |
|  |  | Type5 | 21 | 12 | 12 | 5564.15 | 1 |
|  |  | Type5 | 22 | 20 | 12 | 5559.75 | 1 |
|  |  | Type5 | 23 | 14 | 12 | 5562.95 | 1 |
|  |  | Type5 | 24 | 13 | 12 | 5563.35 | 1 |
|  |  | Type5 | 25 | 8  | 12 | 5565.75 | 1 |
|  |  | Type5 | 26 | 17 | 12 | 5561.35 | 0 |
|  |  | Type5 | 27 | 19 | 12 | 5560.15 | 1 |
|  |  | Type5 | 28 | 12 | 12 | 5563.75 | 1 |
|  |  | Type5 | 29 | 18 | 12 | 5560.95 | 1 |

| TestMode   | Channel | Radar Type | Trial ID | Pulse width (μs) | PRI (μs) | Pulses per Hop | Detection (1: Yes; 0: No) |
|------------|---------|------------|----------|------------------|----------|----------------|---------------------------|
| 11AC20MIMO | 5500    | Type6      | 0        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 1        | 1                | 333.3    | 9              | 0                         |
|            |         | Type6      | 2        | 1                | 333.3    | 9              | 0                         |
|            |         | Type6      | 3        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 4        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 5        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 6        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 7        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 8        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 9        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 10       | 1                | 333.3    | 9              | 0                         |
|            |         | Type6      | 11       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 12       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 13       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 14       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 15       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 16       | 1                | 333.3    | 9              | 0                         |
|            |         | Type6      | 17       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 18       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 19       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 20       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 21       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 22       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 23       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 24       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 25       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 26       | 1                | 333.3    | 9              | 0                         |
|            |         | Type6      | 27       | 1                | 333.3    | 9              | 0                         |
|            |         | Type6      | 28       | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 29       | 1                | 333.3    | 9              | 1                         |
| 11AC40MIMO | 5510    | Type6      | 0        | 1                | 333.3    | 9              | 1                         |
|            |         | Type6      | 1        | 1                | 333.3    | 9              | 1                         |

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|            |      |       |    |   |       |   |   |
|------------|------|-------|----|---|-------|---|---|
|            |      | Type6 | 2  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 3  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 4  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 5  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 6  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 7  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 8  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 9  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 10 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 11 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 12 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 13 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 14 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 15 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 16 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 17 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 18 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 19 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 20 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 21 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 22 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 23 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 24 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 25 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 26 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 27 | 1 | 333.3 | 9 | 0 |
|            |      | Type6 | 28 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 29 | 1 | 333.3 | 9 | 1 |
| 11AC80MIMO | 5530 | Type6 | 0  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 1  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 2  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 3  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 4  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 5  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 6  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 7  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 8  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 9  | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 10 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 11 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 12 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 13 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 14 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 15 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 16 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 17 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 18 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 19 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 20 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 21 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 22 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 23 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 24 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 25 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 26 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 27 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 28 | 1 | 333.3 | 9 | 1 |
|            |      | Type6 | 29 | 1 | 333.3 | 9 | 1 |



| TestMode   | Channel | Radar Type | Trial ID | Burst ID | Burst Offset (μs) | Chirp Width (MHz) | Number Of Pulses | Pulse Width (μs) | PRI1 (μs) | PRI2 (μs) | PRI3 (μs) |
|------------|---------|------------|----------|----------|-------------------|-------------------|------------------|------------------|-----------|-----------|-----------|
| 11AC20MIMO | 5500    | Type5      | 0        | 0        | 636185.0          | 13                | 2                | 77.8             | 1665.0    | 1477.0    | ---       |
|            |         | Type5      | 0        | 1        | 32674.0           | 13                | 1                | 51.9             | 1074.0    | ---       | ---       |
|            |         | Type5      | 0        | 2        | 226294.0          | 13                | 1                | 63.8             | 1584.0    | ---       | ---       |
|            |         | Type5      | 0        | 3        | 417976.0          | 13                | 3                | 96.6             | 1682.0    | 1786.0    | 1843.0    |
|            |         | Type5      | 0        | 4        | 611152.0          | 13                | 3                | 85.9             | 1795.0    | 1215.0    | 1729.0    |
|            |         | Type5      | 0        | 5        | 8789.0            | 13                | 2                | 73.7             | 1198.0    | 1549.0    | ---       |
|            |         | Type5      | 0        | 6        | 201917.0          | 13                | 2                | 77.2             | 1837.0    | 1819.0    | ---       |
|            |         | Type5      | 0        | 7        | 395530.0          | 13                | 2                | 68.4             | 1587.0    | 1114.0    | ---       |
|            |         | Type5      | 0        | 8        | 588564.0          | 13                | 2                | 76.7             | 2000.0    | 1155.0    | ---       |
|            |         | Type5      | 0        | 9        | 783794.0          | 13                | 1                | 53.2             | 1147.0    | ---       | ---       |
|            |         | Type5      | 0        | 10       | 177933.0          | 13                | 3                | 85.7             | 1433.0    | 1695.0    | 1394.0    |
|            |         | Type5      | 0        | 11       | 370624.0          | 13                | 3                | 94.3             | 1670.0    | 1426.0    | 1935.0    |
|            |         | Type5      | 0        | 12       | 564893.0          | 13                | 2                | 77.6             | 1294.0    | 1671.0    | ---       |
|            |         | Type5      | 0        | 13       | 759583.0          | 13                | 1                | 65.7             | 1512.0    | ---       | ---       |
|            |         | Type5      | 0        | 14       | 154262.0          | 13                | 3                | 93.5             | 1444.0    | 1130.0    | 1468.0    |
| 11AC40MIMO | 5510    | Type5      | 0        | 0        | 636185.0          | 13                | 2                | 77.8             | 1665.0    | 1477.0    | ---       |
|            |         | Type5      | 0        | 1        | 32674.0           | 13                | 1                | 51.9             | 1074.0    | ---       | ---       |
|            |         | Type5      | 0        | 2        | 226294.0          | 13                | 1                | 63.8             | 1584.0    | ---       | ---       |
|            |         | Type5      | 0        | 3        | 417976.0          | 13                | 3                | 96.6             | 1682.0    | 1786.0    | 1843.0    |
|            |         | Type5      | 0        | 4        | 611152.0          | 13                | 3                | 85.9             | 1795.0    | 1215.0    | 1729.0    |
|            |         | Type5      | 0        | 5        | 8789.0            | 13                | 2                | 73.7             | 1198.0    | 1549.0    | ---       |
|            |         | Type5      | 0        | 6        | 201917.0          | 13                | 2                | 77.2             | 1837.0    | 1819.0    | ---       |
|            |         | Type5      | 0        | 7        | 395530.0          | 13                | 2                | 68.4             | 1587.0    | 1114.0    | ---       |
|            |         | Type5      | 0        | 8        | 588564.0          | 13                | 2                | 76.7             | 2000.0    | 1155.0    | ---       |
|            |         | Type5      | 0        | 9        | 783794.0          | 13                | 1                | 53.2             | 1147.0    | ---       | ---       |
|            |         | Type5      | 0        | 10       | 177933.0          | 13                | 3                | 85.7             | 1433.0    | 1695.0    | 1394.0    |
|            |         | Type5      | 0        | 11       | 370624.0          | 13                | 3                | 94.3             | 1670.0    | 1426.0    | 1935.0    |
|            |         | Type5      | 0        | 12       | 564893.0          | 13                | 2                | 77.6             | 1294.0    | 1671.0    | ---       |
|            |         | Type5      | 0        | 13       | 759583.0          | 13                | 1                | 65.7             | 1512.0    | ---       | ---       |
|            |         | Type5      | 0        | 14       | 154262.0          | 13                | 3                | 93.5             | 1444.0    | 1130.0    | 1468.0    |
| 11AC80MIMO | 5530    | Type5      | 0        | 0        | 636185.0          | 13                | 2                | 77.8             | 1665.0    | 1477.0    | ---       |
|            |         | Type5      | 0        | 1        | 32674.0           | 13                | 1                | 51.9             | 1074.0    | ---       | ---       |
|            |         | Type5      | 0        | 2        | 226294.0          | 13                | 1                | 63.8             | 1584.0    | ---       | ---       |
|            |         | Type5      | 0        | 3        | 417976.0          | 13                | 3                | 96.6             | 1682.0    | 1786.0    | 1843.0    |
|            |         | Type5      | 0        | 4        | 611152.0          | 13                | 3                | 85.9             | 1795.0    | 1215.0    | 1729.0    |
|            |         | Type5      | 0        | 5        | 8789.0            | 13                | 2                | 73.7             | 1198.0    | 1549.0    | ---       |
|            |         | Type5      | 0        | 6        | 201917.0          | 13                | 2                | 77.2             | 1837.0    | 1819.0    | ---       |
|            |         | Type5      | 0        | 7        | 395530.0          | 13                | 2                | 68.4             | 1587.0    | 1114.0    | ---       |
|            |         | Type5      | 0        | 8        | 588564.0          | 13                | 2                | 76.7             | 2000.0    | 1155.0    | ---       |
|            |         | Type5      | 0        | 9        | 783794.0          | 13                | 1                | 53.2             | 1147.0    | ---       | ---       |
|            |         | Type5      | 0        | 10       | 177933.0          | 13                | 3                | 85.7             | 1433.0    | 1695.0    | 1394.0    |
|            |         | Type5      | 0        | 11       | 370624.0          | 13                | 3                | 94.3             | 1670.0    | 1426.0    | 1935.0    |
|            |         | Type5      | 0        | 12       | 564893.0          | 13                | 2                | 77.6             | 1294.0    | 1671.0    | ---       |
|            |         | Type5      | 0        | 13       | 759583.0          | 13                | 1                | 65.7             | 1512.0    | ---       | ---       |
|            |         | Type5      | 0        | 14       | 154262.0          | 13                | 3                | 93.5             | 1444.0    | 1130.0    | 1468.0    |



| TestMode   | Channel | Radar Type | Trial ID | Burst ID | Burst Offset (μs) | Chirp Width (MHz) | Number Of Pulses | Pulse Width (μs) | PRI1 (μs) | PRI2 (μs) | PRI3 (μs) |
|------------|---------|------------|----------|----------|-------------------|-------------------|------------------|------------------|-----------|-----------|-----------|
| 11AC20MIMO | 5500    | Type5      | 1        | 0        | 653020.0          | 5                 | 2                | 75.0             | 1880.0    | 1527.0    | ---       |
|            |         | Type5      | 1        | 1        | 1015643.0         | 5                 | 3                | 99.4             | 1401.0    | 1262.0    | 1257.0    |
|            |         | Type5      | 1        | 2        | 1379398.0         | 5                 | 2                | 67.4             | 1531.0    | 1403.0    | ---       |
|            |         | Type5      | 1        | 3        | 245489.0          | 5                 | 2                | 73.6             | 1449.0    | 1041.0    | ---       |
|            |         | Type5      | 1        | 4        | 609113.0          | 5                 | 1                | 65.9             | 1432.0    | ---       | ---       |
|            |         | Type5      | 1        | 5        | 970852.0          | 5                 | 3                | 83.8             | 1356.0    | 1292.0    | 1419.0    |
|            |         | Type5      | 1        | 6        | 1335913.0         | 5                 | 1                | 65.5             | 1543.0    | ---       | ---       |
|            |         | Type5      | 1        | 7        | 200406.0          | 5                 | 3                | 98.6             | 1548.0    | 1796.0    | 1728.0    |
| 11AC40MIMO | 5510    | Type5      | 1        | 0        | 653020.0          | 5                 | 2                | 75.0             | 1880.0    | 1527.0    | ---       |
|            |         | Type5      | 1        | 1        | 1015643.0         | 5                 | 3                | 99.4             | 1401.0    | 1262.0    | 1257.0    |
|            |         | Type5      | 1        | 2        | 1379398.0         | 5                 | 2                | 67.4             | 1531.0    | 1403.0    | ---       |
|            |         | Type5      | 1        | 3        | 245489.0          | 5                 | 2                | 73.6             | 1449.0    | 1041.0    | ---       |
|            |         | Type5      | 1        | 4        | 609113.0          | 5                 | 1                | 65.9             | 1432.0    | ---       | ---       |
|            |         | Type5      | 1        | 5        | 970852.0          | 5                 | 3                | 83.8             | 1356.0    | 1292.0    | 1419.0    |
|            |         | Type5      | 1        | 6        | 1335913.0         | 5                 | 1                | 65.5             | 1543.0    | ---       | ---       |
|            |         | Type5      | 1        | 7        | 200406.0          | 5                 | 3                | 98.6             | 1548.0    | 1796.0    | 1728.0    |
| 11AC80MIMO | 5530    | Type5      | 1        | 0        | 653020.0          | 5                 | 2                | 75.0             | 1880.0    | 1527.0    | ---       |
|            |         | Type5      | 1        | 1        | 1015643.0         | 5                 | 3                | 99.4             | 1401.0    | 1262.0    | 1257.0    |
|            |         | Type5      | 1        | 2        | 1379398.0         | 5                 | 2                | 67.4             | 1531.0    | 1403.0    | ---       |
|            |         | Type5      | 1        | 3        | 245489.0          | 5                 | 2                | 73.6             | 1449.0    | 1041.0    | ---       |
|            |         | Type5      | 1        | 4        | 609113.0          | 5                 | 1                | 65.9             | 1432.0    | ---       | ---       |
|            |         | Type5      | 1        | 5        | 970852.0          | 5                 | 3                | 83.8             | 1356.0    | 1292.0    | 1419.0    |
|            |         | Type5      | 1        | 6        | 1335913.0         | 5                 | 1                | 65.5             | 1543.0    | ---       | ---       |
|            |         | Type5      | 1        | 7        | 200406.0          | 5                 | 3                | 98.6             | 1548.0    | 1796.0    | 1728.0    |

| TestMode   | Channel | Radar Type | Trial ID | Burst ID | Burst Offset (μs) | Chirp Width (MHz) | Number Of Pulses | Pulse Width (μs) | PRI1 (μs) | PRI2 (μs) | PRI3 (μs) |
|------------|---------|------------|----------|----------|-------------------|-------------------|------------------|------------------|-----------|-----------|-----------|
| 11AC20MIMO | 5500    | Type5      | 2        | 0        | 409565.0          | 9                 | 2                | 73.8             | 1806.0    | 1538.0    | ---       |
|            |         | Type5      | 2        | 1        | 673692.0          | 9                 | 2                | 69.5             | 1117.0    | 1649.0    | ---       |
|            |         | Type5      | 2        | 2        | 938562.0          | 9                 | 1                | 51.9             | 1651.0    | ---       | ---       |
|            |         | Type5      | 2        | 3        | 113209.0          | 9                 | 3                | 84.6             | 1976.0    | 1032.0    | 1271.0    |
|            |         | Type5      | 2        | 4        | 376726.0          | 9                 | 3                | 95.4             | 1060.0    | 1903.0    | 1388.0    |
|            |         | Type5      | 2        | 5        | 641212.0          | 9                 | 2                | 68.0             | 1368.0    | 1351.0    | ---       |
|            |         | Type5      | 2        | 6        | 903714.0          | 9                 | 3                | 89.6             | 1338.0    | 1514.0    | 1573.0    |
|            |         | Type5      | 2        | 7        | 80863.0           | 9                 | 2                | 81.9             | 1022.0    | 1689.0    | ---       |
|            |         | Type5      | 2        | 8        | 344067.0          | 9                 | 3                | 88.3             | 1810.0    | 1330.0    | 1838.0    |
|            |         | Type5      | 2        | 9        | 609331.0          | 9                 | 1                | 53.7             | 1597.0    | ---       | ---       |
| 11AC40MIMO | 5510    | Type5      | 2        | 10       | 871542.0          | 9                 | 3                | 91.3             | 1961.0    | 1106.0    | 1001.0    |
|            |         | Type5      | 2        | 0        | 409565.0          | 9                 | 2                | 73.8             | 1806.0    | 1538.0    | ---       |
|            |         | Type5      | 2        | 1        | 673692.0          | 9                 | 2                | 69.5             | 1117.0    | 1649.0    | ---       |
|            |         | Type5      | 2        | 2        | 938562.0          | 9                 | 1                | 51.9             | 1651.0    | ---       | ---       |
|            |         | Type5      | 2        | 3        | 113209.0          | 9                 | 3                | 84.6             | 1976.0    | 1032.0    | 1271.0    |
|            |         | Type5      | 2        | 4        | 376726.0          | 9                 | 3                | 95.4             | 1060.0    | 1903.0    | 1388.0    |
|            |         | Type5      | 2        | 5        | 641212.0          | 9                 | 2                | 68.0             | 1368.0    | 1351.0    | ---       |
|            |         | Type5      | 2        | 6        | 903714.0          | 9                 | 3                | 89.6             | 1338.0    | 1514.0    | 1573.0    |
|            |         | Type5      | 2        | 7        | 80863.0           | 9                 | 2                | 81.9             | 1022.0    | 1689.0    | ---       |
|            |         | Type5      | 2        | 8        | 344067.0          | 9                 | 3                | 88.3             | 1810.0    | 1330.0    | 1838.0    |
| 11AC80MIMO | 5530    | Type5      | 2        | 9        | 609331.0          | 9                 | 1                | 53.7             | 1597.0    | ---       | ---       |
|            |         | Type5      | 2        | 10       | 871542.0          | 9                 | 3                | 91.3             | 1961.0    | 1106.0    | 1001.0    |
|            |         | Type5      | 2        | 0        | 409565.0          | 9                 | 2                | 73.8             | 1806.0    | 1538.0    | ---       |
|            |         | Type5      | 2        | 1        | 673692.0          | 9                 | 2                | 69.5             | 1117.0    | 1649.0    | ---       |
|            |         | Type5      | 2        | 2        | 938562.0          | 9                 | 1                | 51.9             | 1651.0    | ---       | ---       |
|            |         | Type5      | 2        | 3        | 113209.0          | 9                 | 3                | 84.6             | 1976.0    | 1032.0    | 1271.0    |
|            |         | Type5      | 2        | 4        | 376726.0          | 9                 | 3                | 95.4             | 1060.0    | 1903.0    | 1388.0    |
|            |         | Type5      | 2        | 5        | 641212.0          | 9                 | 2                | 68.0             | 1368.0    | 1351.0    | ---       |
|            |         | Type5      | 2        | 6        | 903714.0          | 9                 | 3                | 89.6             | 1338.0    | 1514.0    | 1573.0    |
|            |         | Type5      | 2        | 7        | 80863.0           | 9                 | 2                | 81.9             | 1022.0    | 1689.0    | ---       |

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