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FCC Test Report

Applicant D2G Group LLC

81 Commerce Drive, Fall River, **Address**

Massachusetts, 02720, United States

55inch Digital Signage Floor Standing 2-Sided, IR Touch **Product Name**

Jan. 31, 2024 **Report Date**

Compliance laboratory **Shenzhen Anbote** Compliance Laboratory Limited * Approved









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TEST REPORT

Applicant : D2G Group LLC

Manufacturer : Shenzhen I-Pivot Intelligent Technology Co., Ltd

Product Name : 55inch Digital Signage Floor Standing 2-Sided, IR Touch

Test Model No. : DF055TDB

Reference Model No. : DF043TDB, DF055TDW

Trade Mark : Displays2go

Rated Voltage: AC 100-240V

Rating(s) : Rated Current: 1.4-2.9A

Rated Frequency: 50/60Hz

Max Power Consumption: 260W

Test Standard(s) : FCC Part15 Subpart E, Paragraph 15.407

Test Method(s) : FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart E requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt Nov. 20, 2023

Date of Test Nov. 20 ~ Dec. 06, 2023

Nian Xiu Chen Prepared By

(Nianxiu Chen)

Approved & Authorized Signer

(Edward Pan)

Shenzhen Anbotek Compliance Laboratory Limited

Code:AB-RF-05-b







Revision History

| Report Version | Description | Issued Date | | |
|--------------------|-------------------------|---------------------|--|--|
| R00 | Original Issue. | Jan. 31, 2024 | | |
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| potek Anbotek Anbo | anbotek Anbotek Anbotek | Wupoter Wupo | | |





1. General Information

1.1. Client Information

| Applicant | : D2G Group LLC |
|--------------|---|
| Address | : 81 Commerce Drive, Fall River, Massachusetts, 02720, United States |
| Manufacturer | : Shenzhen I-Pivot Intelligent Technology Co., Ltd |
| Address | 2nd Floor, Building 2A, Dacheng Industrial Zone, No. 357 Jihua Rd, Longgang District, Shenzhen, Guangdong, China |
| Factory | : Shenzhen I-Pivot Intelligent Technology Co., Ltd |
| Address | 2nd Floor, Building 2A, Dacheng Industrial Zone, No. 357 Jihua Rd, Longgang District, Shenzhen, Guangdong, China |

1.2. Description of Device (EUT)

| Product Name | : | 55inch Digital Signage Floor Standing 2-Sided, IR Touch |
|---------------------|---|---|
| Test Model No. | : | DF055TDB |
| Reference Model No. | : | DF043TDB, DF055TDW (Note: According to the model differences on page 6, we prepare "DF055TDB" for test only.) |
| Trade Mark | : | Displays2go |
| Test Power Supply | : | AC 120V, 60Hz |
| Test Sample No. | : | 1-2-1(Normal Sample), 1-2-2(Engineering Sample) |
| Adapter | : | N/Anbotek Anbotek Anbotek Anbotek Anbotek Anbotek |
| RF Specification | | |
| Operation Mode | : | $oxed{\boxtimes}$ a $oxed{\boxtimes}$ n(HT20) $oxed{\boxtimes}$ n(HT40) $oxed{\boxtimes}$ ac(VHT20) $oxed{\boxtimes}$ ac(VHT40) $oxed{\square}$ ac(VHT80) $oxed{\square}$ ac(VHT160) $oxed{\boxtimes}$ ax(HEW20) $oxed{\boxtimes}$ ax(HEW40) $oxed{\square}$ ax(HEW80) $oxed{\square}$ ax(HEW160) |
| Device Type | : | ☐ Outdoor AP ☐ Indoor AP ☐ Point-to-point AP ☐ Client |
| TPC Function | : | ☐ With TPC ⊠ Without TPC |
| DFS Type | : | |
| Operation Frequency | : | ⊠ Wi-Fi 5.3G: 5250~5350MHz ⊠ Wi-Fi 5.6G: 5470~5725MHz |
| Number of Channel | : | Wi-Fi 5.3G: |

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| by. | offer and the state of the stat |
|--------------------|--|
| | ⊠4 Channels for 20MHz bandwidth (5260-5320MHz) |
| | ⊠ 2 Channels for 40MHz bandwidth (5270-5310MHz) |
| | ☐ 1 Channels for 80MHz bandwidth (5290MHz) |
| | Wi-Fi 5.6G: |
| | ⊠ 11 Channels for 20MHz bandwidth (5500-5700MHz) |
| | ⊠ 5 Channels for 40MHz bandwidth (5510-5670MHz) |
| | ☐ 2 Channels for 80MHz bandwidth (5530~5610MHz) |
| | ⊠ 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| M | ⊠ 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) |
| Modulation Type | : ⊠ 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) |
| | ⊠ 802.11ax: OFDMA(BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) |
| Antonno Typo | module1: Rod Antenna |
| Antenna Type | module2: Rod Antenna |
| | module1: |
| | Wi-Fi 5.3G: 5.17dBi |
| Antonno Coin/Dools | Wi-Fi 5.6G: 5.21dBi |
| Antenna Gain(Peak) | module2: |
| | Wi-Fi 5.3G: 5.17dBi |
| | Wi-Fi 5.6G: 5.21dBi |

Remark: 1) All of the RF specification are provided by customer. 2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Model differences:

| Model No. | Product Description | Trade Mark | color | inch | Touch function |
|-----------|--|-------------|-------|------|----------------|
| DF055TDB | 55inch Digital Signage Floor Standing 2-Sided, IR Touch | tek Anborel | Black | 55 | Infrared touch |
| DF043TDB | 43inch Digital Signage Floor Standing 2-Sided, IR Touch | Displays2go | Black | 43 | Infrared touch |
| DF055TDW | 55inch Digital Signage Floor Standing 2-Sided, IR Touch | Anbotek A | White | 55 | Infrared touch |

1.3. Auxiliary Equipment Used During Test

| o | Description | Rating(s) |
|----|---------------|---|
| | Master device | Manufacturer: Micronet Union Technology(Chengdu) Co., Ltd |
| N. | | Model: T18-21A |
| | Anbore. And | FCC-ID: 2A22E-WWYLT262 |

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1.4. Description of Test Facility

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

FCC-Registration No.: 434132

Shenzhen Anbotek Compliance Laboratory Limited, 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 No. 434132.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.

1.5. Disclaimer

- 1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- 2. The test report is invalid if there is any evidence and/or falsification.
- The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- 4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
- 5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- 6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.







1.6. Channel List

| Frequency Band | Mode | Test channel | Frequency (MHz) |
|----------------|--|--------------|--------------------|
| Anbotek Anbo | otek Anbotek Anbote An | CH 52 | 5260 |
| | OFDM for 802.11a/n(HT20) /ac(VHT20) | CH 56 | 5280 |
| E 2011- | OFDMA for 802.11ax(HEW20) | CH 60 | 5300 |
| 5.3GHz | Vunn Vupotek Vupo, Viek | CH 64 | 5320 |
| | OFDM for 802.11n(HT40)/ac(HT40) | CH 54 | 5270 |
| | OFDMA for 802.11ax(HEW40) | CH 62 | 5310 |
| Anbotek An | Anbotek Anbotek Anbotek Anb | CH 100 | 5500 |
| | stek vupo. W. | CH 104 | 5200 |
| | 100 | CH 108 | 5540 |
| | k Anbotek Anbotek Anbotek | CH 112 | 5560 |
| | ak hotek Anbotek Anbo | CH 116 | 5580 |
| | OFDM for 802.11a/n(HT20) /ac(VHT20) OFDMA for 802.11ax(HEW20) | CH 120 | 5600 |
| | Anbore Anbore | CH 124 | 5620 |
| E 60U- | Anbotek Anbotek Anbotek A | CH 128 | 5640 |
| | And tek unbotek Anbo | CH 132 | 5660 |
| | stek Anbotek Anbotek Anbotek | CH 136 | 5680 |
| | of Anti-botek Anbotek Anbo | CH 140 | 5700 |
| | nboth Anbotek Anbotek Anb | CH 102 | 5510 |
| | Anbotek Anbotek Anbotek Arbotek Ar | CH 110 | 5550 |
| | OFDM for 802.11n(HT40)/ac(HT40) OFDMA for 802.11ax(HEW40) | CH 118 | 5590 |
| | Anbore Anbore | CH 126 | 5630 |
| | tak Vupote Vur | CH 134 | 5670 |

1.7. Antenna Specification:

| Ant. | | Antenna Type | Connector | Gain (dBi) |
|------|-----------------|------------------|--------------|------------------------------|
| 1 | botek botek | upor Am | Anboten Anbo | module1: Wi-Fi 5.3G: 5.17dBi |
| | Anbore And Otek | Anbotek Dad Anbo | N/A | Wi-Fi 5.6G: 5.21dBi |
| | Anbotek Anbo | Rod | N/A | module2: Wi-Fi 5.3G: 5.17dBi |
| 6 | | An otek Anbote | Anbo | Wi-Fi 5.6G: 5.21dBi |

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1.8. Table for Antenna Configuration:

module1/ module2:

| Operating Mode | | 1TX |
|-----------------|---------|---------------------------------|
| | TX Mode | e IIA |
| 802.11a | Aupo | k notek Anbore V Ann tek nobote |
| 802.11n(HT20) | anbore | And Lak above Ando |
| 802.11ac(VHT20) | Ya 4a. | Notek Anbor An Votek unbore And |
| 802.11ax(HEW20) | bu. | stek subores AV ak horek |
| 802.11n(HT40) | botok | Anbore Vanbore And tek |
| 802.11ac(VHT40) | rotek | Anbore And sek V sporek Anbo |
| 802.11ax(HEW40) | AUG | Auporek Auporek Aupore |

1.9. Maximum Output Power And E.I.R.P.

module1:

| Test Mode | Frequency Band (MHz) | Max Average Output Power (dBm) | Gain (dBi) | Max. e.i.r.p. (dBm) | Max. e.i.r.p. (mW) |
|----------------------------|----------------------------|--------------------------------------|---------------|------------------------|---|
| 000.44- | 5250~5350 | 13.77 | 5.17 | 18.94 | 78.34 |
| 802.11a | 5470~5725 | 13.28 | 5.21 | 18.49 | (mW) 78.34 70.63 77.27 70.63 60.26 58.75 71.29 65.46 69.66 50.47 82.79 64.86 95.50 |
| 000 44- (LITOO) | 5250~5350 | 13.71 | 5.17 | 18.88 | (mW) 78.34 70.63 77.27 70.63 60.26 58.75 71.29 65.46 69.66 50.47 82.79 64.86 95.50 |
| 802.11n(HT20) | 5470~5725 | 13.28 | 5.21 | 18.49 | 70.63 |
| 000.44 (LIT40) | 5250~5350 | 12.63 | 5.17 | 17.80 | 60.26 |
| 802.11n(HT40) | 5470~5725 | 12.48 | 5.21 | 17.69 | 58.75 |
| 000 44 (\((\) (\) (\) | 5250~5350 | 13.36 | 5.17 | 18.53 | 71.29 |
| 802.11ac(VHT20) | 5470~5725 | 12.95 | 5.21 | 18.16 | 71.29 |
| 000 44 (\((\) (\) (\) (\) | 5250~5350 | 13.26 | 5.17 | 18.43 | 69.66 |
| 802.11ac(VHT40) | 5470~5725 | 11.82 | 5.21 | 17.03 | 50.47 |
| 000 44 (UE)(00) | 5250~5350 | 14.01 | 5.17 | 19.18 | 82.79 |
| 802.11ax(HEW20) | 5470~5725 | 12.91 | 5.21 | 18.12 | 64.86 |
| 802.11ax(HEW40) | 5250~5350 | 14.63 | 5.17 And | 19.80 | 95.50 |
| | 5470~5725 | 13.28 | 5.21 | 18.49 | 70.63 |





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Module2:

| Frequency Band (MHz) | Max Average Output Power (dBm) | Gain (dBi) | Max. e.i.r.p. (dBm) | Max. e.i.r.p. (mW) |
|----------------------------|--|---|---|---|
| 5250~5350 | 13.73 | 5.17 | 18.90 | 77.62 |
| 5470~5725 | 13.25 | 5.21 | 18.46 | 70.15 |
| 5250~5350 | 13.73 | 5.17 | 18.90 | 77.62 |
| 5470~5725 | 13.21 | 5.21 | 18.42 | 69.50 |
| 5250~5350 | 12.57 | 5.17 | 17.74 | 59.43 |
| 5470~5725 | 12.41 | 5.21 | 17.62 | 57.81 |
| 5250~5350 | 13.40 | 5.17 | 18.57 | 71.94 |
| 5470~5725 | 12.90 | 5.21 | 18.11 | 64.71 |
| 5250~5350 | 13.19 | 5.17 | 18.36 | 68.55 |
| 5470~5725 | 12.02 | 5.21 | 17.23 | 52.84 |
| 5250~5350 | 13.93 | 5.17 | 19.10 | 81.28 |
| 5470~5725 | 12.89 | 5.21 | 18.10 | 64.57 |
| 5250~5350 | 14.60 | 5.17 | 19.77 | 94.84 |
| 5470~5725 | 13.35 | 5.21 | 18.56 | 71.78 |
| | Band (MHz) 5250~5350 5470~5725 5250~5350 5470~5725 5250~5350 5470~5725 5250~5350 5470~5725 5250~5350 5470~5725 5250~5350 5470~5725 5250~5350 5470~5725 5250~5350 | Band (MHz) Output Power (dBm) 5250~5350 13.73 5470~5725 13.25 5250~5350 13.73 5470~5725 13.21 5250~5350 12.57 5470~5725 12.41 5250~5350 13.40 5470~5725 12.90 5250~5350 13.19 5470~5725 12.02 5250~5350 13.93 5470~5725 12.89 5250~5350 14.60 | Band (MHz) Output Power (dBi) Gain (dBi) 5250~5350 13.73 5.17 5470~5725 13.25 5.21 5250~5350 13.73 5.17 5470~5725 13.21 5.21 5250~5350 12.57 5.17 5470~5725 12.41 5.21 5250~5350 13.40 5.17 5470~5725 12.90 5.21 5250~5350 13.19 5.17 5470~5725 12.02 5.21 5250~5350 13.93 5.17 5470~5725 12.89 5.21 5250~5350 14.60 5.17 | Band (MHz) Output Power (dBm) Gain (dBi) Max. e.i.r.p. (dBm) 5250~5350 13.73 5.17 18.90 5470~5725 13.25 5.21 18.46 5250~5350 13.73 5.17 18.90 5470~5725 13.21 5.21 18.42 5250~5350 12.57 5.17 17.74 5470~5725 12.41 5.21 17.62 5250~5350 13.40 5.17 18.57 5470~5725 12.90 5.21 18.11 5250~5350 13.19 5.17 18.36 5470~5725 12.02 5.21 17.23 5250~5350 13.93 5.17 19.10 5470~5725 12.89 5.21 18.10 5250~5350 14.60 5.17 19.77 |





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1.10. Transmit Power Control (TPC)

U-NII 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-NII 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.

| 3 | Applicable | EIRP | FCC 15.407 (h)(1) |
|---|-----------------|--------|---|
| 2 | otek hotek | >500mW | The TPC mechanism is required for system with an EIRP of above 500mW |
| | Anborek Anborel | <500mW | The TPC mechanism is not required for system with an EIRP of less 500mW |

The UUT can adjust a transmitter's output power based on the signal level present at the receiver.TPC is auto controlled by software.





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2. U-NII DFS Rule Requirements

2.1. Working Modes and Required Test Items

The manufacturer shall state whether the UUT is capable of operating as a Master and/or a Client. If the UUT is capable of operating in more than one operating mode then each operating mode shall be tested separately. See tables 6 and 7 for the applicability of DFS requirements for each of the operational modes.

Applicability of DFS Requirements Prior to Use a Channel

| | | Operational Mod | de |
|---------------------------------|--------------|----------------------|-------------------|
| Requirement | N4 4 | Client without radar | Client with radar |
| | Master | detection | detection |
| Non-Occupancy Period | okek V Ambo. | Not required | And Viek |
| DFS Detection Threshold | notek V Ant | Not required | over My |
| Channel Availability Check Time | V | Not required | Not required |
| U-NII Detection Bandwidth | And Vak | Not required | arek V nobotek |

Applicability of DFS Requirements during Normal Operation

| | Operational Mode | | | | | |
|-----------------------------------|------------------|----------------------|-------------------|--|--|--|
| Requirement | Mostor | Client without radar | Client with radar | | | |
| | Master | detection | detection | | | |
| DFS Detection Threshold | Anboten A | Not required | inbore A niek | | | |
| Channel Closing Transmission Time | Anbolek | Anborek Anborek | Anbotek V Anb | | | |
| Channel Move Time | P.V. | abotek V Anbot | k hately Ambotes | | | |
| U-NII Detection Bandwidth | ok Vanbo | Not required | And Vek anboi | | | |

| Additional requirements for devices | Master Device or Client | Client Without Radar | |
|--|-------------------------------------|--|--|
| with multiple bandwidth modes | with Radar Detection | Detection | |
| U-NII Detection Bandwidth and Statistical Performance Check | All BW modes must be tested | Not required | |
| Channel Move Time and Channel Closing Transmission Time | Test using widest BW mode available | Test using the widest BW mode available for the link | |
| All other tests | Any single BW mode | Not required | |

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

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2.2. Test Limits and Radar Signal Parameters

Detection Threshold Values:

DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

| M : T : 10 | Value |
|--|-------------------------|
| Maximum Transmit Power | (See Notes 1, 2, and 3) |
| EIRP ≥ 200 milliwatt | -64 dBm |
| EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz | -62 dBm |
| EIRP < 200 milliwatt that do not meet the power spectral density requirement | -64 dBm |

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.

Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

Test Limit:

DFS Response Requirement Values

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

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

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate 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.

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Parameters of DFS Test Signals And Minimum Percentage of Successful Detections:

Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Short Pulse Radar Test Waveforms

| Radar | Pulse Width | PRI | Number of Pulses | Minimum | Minimum |
|-----------|-----------------|--|---|---------------|------------|
| Type | (µsec) | (μsec) | Number of Fulses | Percentage of | Number of |
| Type | (μεςς) | (μισος) | | Successful | Trials |
| | | | | Detection | THUIS |
| 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 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 | Roundup $ \left\{ \frac{1}{360} \right\}. $ $\left\{ \frac{19 \cdot 10^6}{\text{PRI}_{\mu \text{sec}}} \right\} $ | 60% | 30 |
| 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 Roundup
$$\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{3066} \right) \right\} = \text{Round up } \{17.2\} = 18$$







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Pulse Repetition Intervals Values for Test A

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

The aggregate is the average of the percentage of successful detections of Short Pulse Radar Types 1-4.

Long Pulse Radar Test Waveform

| ,o | 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 |
|----|---------------|--------------------------|-------------------------|---------------|----------------------------------|---------------------|--|--------------------------------|
| 4 | 5, botek | 5-100 | 5-20 | 1000-2000 | 1-3 | 8-20 | 80% | 30 |

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Frequency Hopping Radar Test Waveform

| 4 | 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 |
|---|---------------|--------------------------|---------------|-------------------|--------------------------|---|--|--------------------------------|
| n | otek 6 Anl | Jotek 1 Anb | 333 | nborek 9 M | 0.333 | 300 | 70% | 30 |

For the Frequency Hopping Radar Type, the same Burst parameters are µsed for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm: If a segment does not contain at least 1 frequency within the U-NII Detection Bandwidth of the UUT, then that segment is not µsed.

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. 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.





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3. Test Equipment List

| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|-------------------|-----------------------------------|--------------|-----------|------------|---------------|------------------|
| 1. _A r | MAX Spectrum Analysis | Agilent | N9020A | MY51170037 | Oct. 12, 2023 | 1 Year |
| 2. | MXA Spectrum Analysis | KEYSIGHT | N9020A | MY53280032 | Oct. 12, 2023 | 1 Year |
| 3. | RF Control Unit | Tonscend | JS0806-2 | 21G8060455 | Oct. 12, 2023 | 1 Year |
| Abot | MXG RF Vector Signal Generator | Agilent | N5182A | MY48180656 | Oct. 12, 2023 | 1 Year |





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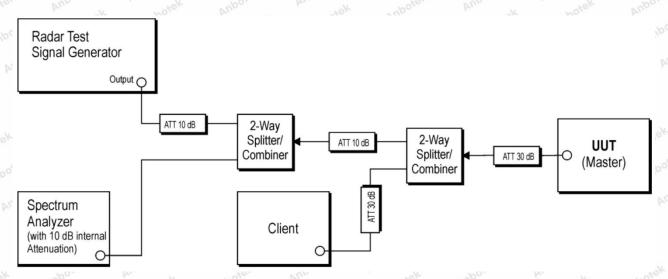
4. Dynamic Frequency Selection (DFS)

4.1. DFS Measurement System

Test Procedure:

- 1. Master device and client device are set up by conduction method as the following configuration.
- The client device is connected to notebook and to access a IP address on wireless connection with the master device.
- 3. Then the master device is connected to another notebook to access a IP address.
- 4. Finally, let the two IP addresses run traffic with each other through the Run flow software "iPerf.exe' to reach 17% channel loading as below.
- 5. The time for the device to fully start up is 65s.

Setup for Master with injection at the Master



Radar Test Waveforms are injected into the Master.





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4.2. Calibration of DFS Detection Threshold Level

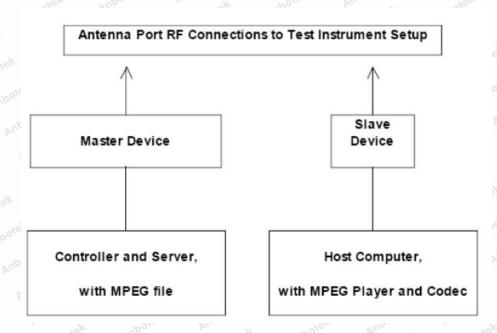
A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected in place of the master device and the signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of -64dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. Measure the amplitude and calculate the difference from -64 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of -64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak

level of the waveform is at a displayed level equal to the required or desired interference detection threshold. Separate signal generator amplitude settings are determined as required for each radar type.



4.3. Deviation from Test Standard

No deviation.







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5. Test Results

5.1. Summary of Test Results

| Standard | Test Type | Remarks | Result |
|------------|-----------------------------------|------------|--------|
| FCC 15.407 | Channel Move Time | Applicable | PASS |
| FCC 15.407 | Channel Closing Transmission Time | Applicable | PASS |
| FCC 15.407 | Channel Loading | Applicable | PASS |

5.2. DFS Detection Threshold

| Calibration: | | | | | | |
|---|-----------|--------------|-----------|-------------|-------|-------|
| WiFi 5.3G module1/ module2: | | | | | | |
| nbotek Anbotek Anbotek | DFS Thres | hold Level | Anhotek | Anboren | k Anb | ek |
| DFS Threshold Level (5.17dBi antenna): -55.83 | | □At | the anten | na connecto | L VI | potek |
| Anbotek Anbo hotek An | | front of the | e antenna | horek | | |

Note: For SISO mode, the maximum EIRP is less than 200 milliwatt, the antenna gain is 5.17dBi. According to clause 2.2 of this report. The detection threshold level is -55.83dBm.

WiFi 5.6G module1/ module2:

| DFS Thresh | old Level |
|--|---------------------------|
| DFS Threshold Level (5.21dBi antenna): -55.79dBi | ✓At the antenna connector |
| Andorek Andorek Andorek | ☐In front of the antenna |

Note: For SISO mode, the maximum EIRP is less than 200 milliwatt, the antenna gain is 5.21dBi. According to clause 2.2 of this report. The detection threshold level is -55.79dBm.

Please refer to Appendix A of the Appendix Test Data.

5.3. Channel Move Time And Channel Closing Transmission Time

Please refer to Appendix C of the Appendix Test Data.

5.4. Channel Loading

Please refer to Appendix B of the Appendix Test Data.

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APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files Appendix I -- Test Setup Photograph_DFS

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

End of Report

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