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# **FCC Test Report**

Iton Technology Corp. **Applicant** 

7 Floor East, Building C, Shenzhen

**International Innovation Center, No.1006 Address** 

Shennan Rd. Futian Dist, Shenzhen, China

**Product Name** BW3752-50B1

Dec. 26, 2023 **Report Date** 

Shenzhen Anbotek Contribution



Laboratory Limited



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# **TEST REPORT**

Applicant : Iton Technology Corp.

Manufacturer : Iton Technology Corp.

Product Name : BW3752-50B1

Test Model No. : BW3752-50B1

BW3752-50B2, BW3752-50B3, BW3752-50B4, BW3752-50B5,

Reference Model No. : BW3752-50B6, BW3752-50B7, BW3752-50B8

Trade Mark : N/A

Rating(s) : Input: DC 3.3V

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 Oct. 28, 2023

Date of Test Oct. 28~Nov. 23, 2023

Prepared By

(TuTu Hong)

Approved & Authorized Signer

(Edward Pan)

**Shenzhen Anbotek Compliance Laboratory Limited** 

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# **Revision History**

Re	Report Version Description		Issued Date			
VU	R00	Anbot	Origin	al Issue.	botek	Dec. 26, 2023
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potek	Anbotek	. Va	nbo hotek Anbotek A	upotek Aupotek	Anbo	ter Yupp Polek





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# 1. General Information

# 1.1. Client Information

Pre-	age, von
Applicant	: Iton Technology Corp.
Address	7 Floor East, Building C, Shenzhen International Innovation Center, No.100 Shennan Rd. Futian Dist, Shenzhen, China
Manufacturer	: Iton Technology Corp.
Address	7 Floor East, Building C, Shenzhen International Innovation Center, No.100 Shennan Rd. Futian Dist, Shenzhen, China
Factory	: Iton Technology Corp.
Address	7 Floor East, Building C, Shenzhen International Innovation Center, No.100 Shennan Rd. Futian Dist, Shenzhen, China

# 1.2. Description of Device (EUT)

Product Name	:	BW3752-50B1
Test Model No.	:	BW3752-50B1
Reference Model No.	:	BW3752-50B2, BW3752-50B3, BW3752-50B4, BW3752-50B5, BW3752-50B6, BW3752-50B7, BW3752-50B8 (Note: All samples are the same except the model number, so we prepare "BW3752-50B1" for test only.)
Trade Mark	:	N/A tek Anbotek Anbotek Anbotek Anbotek Anbotek
Test Power Supply	:	DC 3.3V via Debug board
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter		N/A Anborek Anborek Anborek Anborek Anborek Anborek
RF Specification		
Operation Mode	:	⋈ a       ⋈ n(HT20)       ⋈ n(HT40)       ⋈ ac(VHT20)         ⋈ ac(VHT40)       ⋈ ac(VHT80)       ⋈ ac(VHT160)       ⋈ ax(HEW20)         ⋈ ax(HEW40)       ⋈ ax(HEW80)       ⋈ ax(HEW160)
Device Type	:	☐ Outdoor AP ☐ Indoor AP ☐ Point-to-point AP ☐ Client
TPC Function	:	☐ With TPC ☑ Without TPC
DFS Type	:	Slave without radar detection ☐ Slave with radar detection ☐ Master
Operation Frequency	:	⊠ Wi-Fi 5.3G: 5250~5350MHz ⊠ Wi-Fi 5.6G: 5470~5725MHz

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S.	⊠ 2 Channels for 40MHz bandwidth (5270-5310MHz)
	⊠ 1 Channels for 80MHz bandwidth (5290MHz)
	Wi-Fi 5.6G:
	⊠ 11 Channels for 20MHz bandwidth (5500-5700MHz)
4	⊠ 5 Channels for 40MHz bandwidth (5510-5670MHz)
	⊠ 2 Channels for 80MHz bandwidth (5530~5610MHz)
r <sup>i</sup>	⊠ 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)

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.





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#### 1.3. Auxiliary Equipment Used During Test

Description	Rating(s)
Master device	Manufacturer: Micronet Union Technology(Chengdu) Co., Ltd Equipment: AC1200 Gigabit Dual Band Wi-Fi Router Model: T18-21A FCC ID: 2A22E-WWYLT18
Debug board	Model: ROC-RK3568-PC Manufacturer: firefly
Adapter	Model: DWIN-120200Z Input: AC 100-240V 50/60Hz 1.0A Output: 12 2A
Dipole Antenna	Gain: Wi-Fi 2.4G&BT: 2.53 dBi Wi-Fi 5.2G: 1.87 dBi; Wi-Fi 5.3G: 2.11 dBi; Wi-Fi 5.6G: 2.93 dBi; Wi-Fi 5.8G: 3.16 dBi

#### 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.







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#### 1.6. 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.
- 3. 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.





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# 1.7. Channel List

Frequency Band	Mode	Test channel	Frequency (MHz)
	ok botek Anbore An	CH 52	5260
	OFDM	CH 56	5280
	802.11a/n(HT20) /ac(VHT20)/ax(HEW20)	CH 60	5300
5.3GHz	/do(\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CH 64	5320
	OFDM	CH 54	5270
	802.11n(HT40)/ac(VHT40)/ax(HEW 40)	CH 62	5310
Anbotek Anbot	OFDM 802.11ac(VHT80)/ax(HEW80)	CH 58	5290
	hotek Anbotek Anbo	CH 100	5500
	Anbotek Anbotek Anbotek	CH 104	5200
		CH 108	5540
	Anbotek Anbotek Anbotek	CH 112	5560
	OFDM	CH 116	5580
	802.11a/n(HT20)	CH 120	5600
	/ac(VHT20)/ax(HEW20)	CH 124	5620
	Anbotek Anbotek Anbotek	CH 128	5640
Anbore.	10 N	CH 132	5660
5.6GHz	Anbotek Anbotek Anbotek	CH 136	5680
	Anbo tek anbotek Anbor	CH 140	5700
	otek Anbo cek abotek An	CH 102	5510
	OFDM	CH 110	5550
	802.11n(HT40)/ac(VHT40)/ax(HEW	CH 118	5590
	40)	CH 126	5630
	An Anbotek Anbo	CH 134	5670
	OFDM	CH 106	5530
	802.11ac(VHT80)/ax(HEW80)	CH 122	5610
Link!	The state of the s	Lett' Div	100





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#### 1.8. Antenna Specification:

Ant.	Antenna Type	Connector	Gain (dBi)
1(WiFi 5.3)	Dipole Antenna	Anbore N/A	2.11 And
2(WiFi 5.3)	Dipole Antenna	N/A Ando	2.11
1(WiFi 5.6)	Dipole Antenna	N/A Anborr	2.93
2(WiFi 5.6)	Dipole Antenna	N/A	2.93

Note: 1) This EUT supports CDD, and all antennas have the same gain, Directional gain = GANT+Array Gain.

For power measurements, Array Gain=0dB (NANT≤4), so the Directional gain=5.94.

For power spectral density measurements, NANT=2, NSS = 1.

So the Directional gain=GANT+Array Gain=GANT+10log(NANT/ NSS)dBi=2.93+10log(2/1)dBi=5.94.

- 2) Beamforming gain: 3dB. Directional gain = 2.93+3=5.93 dB.
- 3) The antenna gain and beamforming gain are provided by the manufacturer

### 1.9. Table for Antenna Configuration:

For Non Beamforming:

Operating Mode TX	2TX	
Mode		
802.11a	V (Ant. 1/Ant. 2)	
802.11n(HT20)	V (Ant. 1 + Ant. 2)	
802.11ac(HT20)	V (Ant. 1 + Ant. 2)	
802.11n(HT40)	V (Ant. 1 + Ant. 2)	
802.11ac(HT40)	V (Ant. 1 + Ant. 2)	
802.11ac(HT80)	V (Ant. 1 + Ant. 2)	
802.11ax(HEW20)	V (Ant. 1 + Ant. 2)	
802.11ax(HEW40)	V (Ant. 1 + Ant. 2)	
802.11ax(HEW80)	V (Ant. 1 + Ant. 2)	

For Beamforming:

1 of Boarmorning.	All All
Operating Mode TX	2TX
Mode	
802.11a	V (Ant. 1/Ant. 2)
802.11n(HT20)	V (Ant. 1 + Ant. 2)
802.11ac(HT20)	V (Ant. 1 + Ant. 2)
802.11n(HT40)	V (Ant. 1 + Ant. 2)
802.11ac(HT40)	V (Ant. 1 + Ant. 2)
802.11ac(HT80)	V (Ant. 1 + Ant. 2)
802.11ax(HEW20)	V (Ant. 1 + Ant. 2)
802.11ax(HEW40)	V (Ant. 1 + Ant. 2)
802.11ax(HEW80)	V (Ant. 1 + Ant. 2)

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### 1.10. Maximum Output Power And E.I.R.P.

Mode: TX (802.11a)						
Frequency Band	Max Average	Gain	Max. e.i.r.p.	Max. e.i.r.p.		
(MHz)	Output	(dBi)	(dBm)	(mW)		
	Power (dBm)	,	,	,		
5250~5350	12.71	2.11	14.82	30.34		
5470~5725	18.4	3.16	21.56	143.22		

	Мо	de: TX (802.11n(HT2	(0))	
Frequency Band	Max Average	Directional Gain	Max. e.i.r.p.	Max. e.i.r.p.
(MHz)	Output	(dBi)	(dBm)	(mW)
	Power (dBm)			
5250~5350	12.441	5.12	17.561	57.03
5470~5725	18.177	5.94	24.117	258.05

Mode: TX (802.11ac(HT20))						
Frequency Band	Max Average	Max Average Directional Gain Max. e.i.r.p. Max. e.i.r.p				
(MHz)	Output	(dBi)	(dBm)	(mW)		
	Power (dBm)					
5250~5350	12.671	5.12	17.791	60.13		
5470~5725	17.83	5.94	23.77	238.23		

Mode: TX (802.11ax(HEW20))					
Frequency Band	Max Average	Gain	Max. e.i.r.p.	Max. e.i.r.p.	
(MHz)	Output	(dBi)	(dBm)	(mW)	
	Power (dBm)				
5250~5350	12.746	5.12	17.866	61.18	
5470~5725	19.133	5.94	25.073	321.59	

Mode: TX (802.11n(HT40))						
Frequency Band	Max Average Directional Gain Max. e.i.r.p. Max. e.i.r.					
(MHz)	Output	(dBi)	(dBm)	(mW)		
	Power (dBm)					
5250~5350	13.154	5.12	18.274	67.20		
5470~5725	19.225	5.94	25.165	328.47		

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Mode: TX (802.11ac(VHT40))					
Frequency Band (MHz)	Max Average Output Power (dBm)	Gain (dBi)	Max. e.i.r.p. (dBm)	Max. e.i.r.p. (mW)	
5250~5350	13.59	5.12 Ann	18.71	74.30	
5470~5725	18.918	5.94	24.858	306.06	

r i	Mode: TX (802.11ax(HEW40))						
Frequency Band Max Average Gain Max. e.i.r.p. Max. e.i.r.p.							
	(MHz)	Output	(dBi)	(dBm)	(mW)		
		Power (dBm)					
	5250~5350	12.071	5.12	17.191	52.37		
30	5470~5725	18.981	5.94	24.921	310.53		

Mode: TX (802.11ac(VHT80))						
Frequency Band	Max Average	Max Average Gain Max. e.i.r.p. Max. e.i.r.p.				
(MHz)	Output	(dBi)	(dBm)	(mW)		
	Power (dBm)					
5250~5350	13.829	5.12	18.949	78.51		
5470~5725	19.775	5.94	25.715	372.82		

Mode: TX (802.11ax(HEW80))					
Frequency Band	Max Average Gain Max. e.i.r.p. Max. e.i.r.p.				
(MHz)	Output	(dBi)	(dBm)	(mW)	
	Power (dBm)				
5250~5350	13.597	5.12	18.717	74.42	
5470~5725	20.273	5.94	26.213	418.12	





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### 1.11. 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.

31	Applicable	EIRP	FCC 15.407 (h)(1)
5/0	otek botek	>500mW	The TPC mechanism is required for system with an EIRP of above 500mW
0.000	Anbotek Anbotel	<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 Mode			
Requirement	N4 4	Client without radar	Client with radar	
	Master	detection	detection	
Non-Occupancy Period	okek A Mupo	Not required	And Viek	
DFS Detection Threshold	hotek V Ant	Not required	oter My	
Channel Availability Check Time	V	Not required	Not required	
U-NII Detection Bandwidth	And V	Not required	Mr. Jupotek	

#### Applicability of DFS Requirements during Normal Operation

	Operational Mode				
Requirement	Master	Client without radar detection	Client with radar detection		
DFS Detection Threshold	Nupote 1	Not required	Tupo, A Otok		
Channel Closing Transmission Time	Anb Vek	Anborek Anborek	Anbotek V Anbotek		
Channel Move Time	V	abotek / Anbo	wored Anbore		
U-NII Detection Bandwidth	Vanbour 1	Not required	Am Vek		

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

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

#### Long Pulse Radar Test Waveform

0,0	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 Anbotek	5-100	5-20	1000-2000	1-3	8-20	80%	30

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#### Frequency Hopping Radar Test Waveform

7.	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
10	ootek 6 Anl	otek 1 Anb	333	norek 9	0.333	300	70%	30

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

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. <sub>A</sub> r	MAX Spectrum Analysis	Agilent	N9020A	MY51170037	Feb. 23, 2023	1 Year
2.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	Feb. 23, 2023	1 Year
3.	RF Control Unit	Tonscend	JS0806-2	21G8060455	Feb. 23, 2023	1 Year
4.00	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Feb. 23, 2023	1 Year





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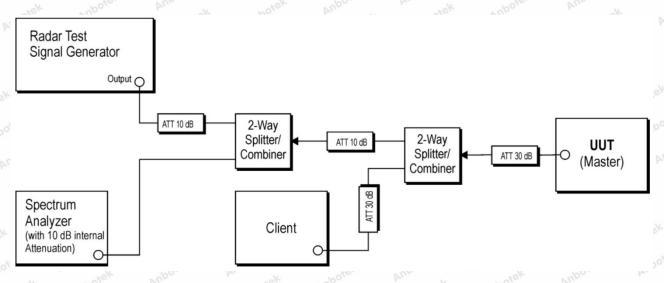
### 4. Dynamic Frequency Selection (DFS)

#### 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 EUT to fully restart up is 65s.
- 6. The time for the master device to fully restart 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

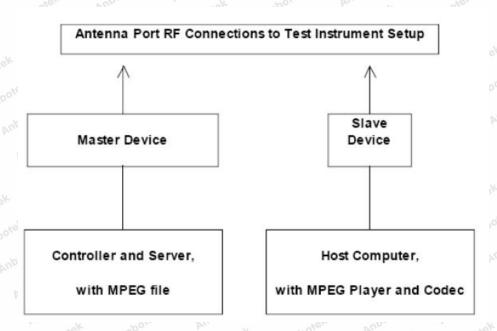
A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected in place of the master device and the signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of -64dBm as measured on the spectrum analyzer.

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





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5.2. DFS Detection Threshold

Calibration:

And	Anborek	Anborratek	DFS TI	nreshold Le	vel	hotek.	Anborek	Anboratek
DFS Thres			rek Anb	otek but	1At th	e antenn	a connector	k Anbo
antenna):-	57.06dBm			inbotek	In fro	nt of the	antenna	otek vup

Note: For SISO mode, the maximum EIRP is less than 200 milliwatt, the antenna gain is 2.93dBi. For MIMO mode, the maximum EIRP is more than 200 milliwatt, the directional gain is 5.94dBi, According to clause 2.2 of this report. The detection threshold level is -57.06dBm.

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

