DFS Test Report

Report No.: RF150430E02B-2

FCC ID: PY315200309

Test Model: R8500

Received Date: May 07, 2015

Test Date: July 15 to 21, 2016

Issued Date: Aug. 02, 2016

Applicant: NETGEAR, Inc.

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Table of Contents

Release Control Record **3**

1 Certificate of Conformity **4**

2 EUT Information **5**

2.1 Operating Frequency Bands and Mode of EUT 5
2.2 EUT Software and Firmware Version 5
2.3 Description of Available Antennas to the EUT 6
2.4 EUT Maximum and Minimum Conducted Power 7
2.5 EUT Maximum and Minimum EIRP Power 10
2.6 Transmit Power Control (TPc) 12
2.7 Statement of Manufacturer 12

3. U-NII DFS Rule Requirements **13**

3.1 Working Modes and Required Test Items 13
3.2 Test Limits And Radar Signal Parameters 14

4. Test & Support Equipment List **17**

4.1 Test Instruments 17
4.2 Description of Support Units 17

5. Test Procedure **18**

5.1 DFS Measurement System 18
5.2 Calibration of DFS Detection Threshold Level 19
5.3 Deviation from Test Standard 19
5.4 Radiated Test Setup Configuration 20

6. Test Results **21**

6.1 Summary of Test Results 21
6.2 Test Results 22
6.2.1 Test Mode: Device Operating In Master Mode. 22
6.2.2 U-NII Detection Bandwidth 27
6.2.3 Channel Availability Check Time 34
6.2.4 Channel Closing Transmission and Channel Move Time 36
6.2.5 Non- Occupancy Period 69

7. Information on the Testing Laboratories **71**

8. APPENDIX-A **72**

9. APPENDIX-B **132**

Release Control Record

Issue No.	Description	Date Issued
RF150430E02B-2	Original release.	Aug. 02, 2016

1 Certificate of Conformity

Product: Nighthawk X8 Tri Band WiFi Router

Brand: NETGEAR

Test Model: R8500

Sample Status: ENGINEERING SAMPLE

Applicant: NETGEAR, Inc.

Test Date: July 15 to 21, 2016

Standards: FCC Part 15, Subpart E (Section 15.407)

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Aug. 02, 2016

Midoli Peng / Specialist

Approved by : _____ , **Date:** Aug. 02, 2016

May Chen / Manager

2 EUT Information

2.1 Operating Frequency Bands and Mode of EUT

Table 1: Operating Frequency Bands and Mode of EUT

Operational Mode	Operating Frequency Range	
	5250~5350MHz	5470~5725MHz
Master	✓	✓

2.2 EUT Software and Firmware Version

Table 2: The EUT Software/Firmware Version

No.	Product	Model No.	Software/Firmware Version
1	Nighthawk X8 Tri Band WiFi Router	R8500	V1.0.2.38.2_1.0.47

2.3 Description of Available Antennas to the EUT

Table 3: Antenna List

Antenna No.	Ant. Gain(dBi)	Frequency range (GHz to GHz)	Antenna Type	Connecter Type
Internal (1)	3.99	5.15~5.25	Dipole	i-pex(MHF)
	3.71	5.25~5.35	Dipole	i-pex(MHF)
	3.71	5.47~5.725	Dipole	i-pex(MHF)
	3.98	5.725~5.85	Dipole	i-pex(MHF)
Internal (2)	3.99	5.15~5.25	Dipole	i-pex(MHF)
	3.71	5.25~5.35	Dipole	i-pex(MHF)
	3.71	5.47~5.725	Dipole	i-pex(MHF)
	3.98	5.725~5.85	Dipole	i-pex(MHF)
Internal (3)	3.99	5.15~5.25	Dipole	i-pex(MHF)
	3.71	5.25~5.35	Dipole	i-pex(MHF)
	3.71	5.47~5.725	Dipole	i-pex(MHF)
	3.98	5.725~5.85	Dipole	i-pex(MHF)
Internal (4)	3.99	5.15~5.25	Dipole	i-pex(MHF)
	3.71	5.25~5.35	Dipole	i-pex(MHF)
	3.71	5.47~5.725	Dipole	i-pex(MHF)
	3.98	5.725~5.85	Dipole	i-pex(MHF)
External (1)	0.67	2.4~2.4835	Dipole	i-pex(MHF)
	-0.84	5.15~5.25	Dipole	i-pex(MHF)
	-1.38	5.25~5.35	Dipole	i-pex(MHF)
	-1.6	5.47~5.725	Dipole	i-pex(MHF)
	-1.79	5.725~5.85	Dipole	i-pex(MHF)
External (2)	0.67	2.4~2.4835	Dipole	i-pex(MHF)
	-0.84	5.15~5.25	Dipole	i-pex(MHF)
	-1.38	5.25~5.35	Dipole	i-pex(MHF)
	-1.6	5.47~5.725	Dipole	i-pex(MHF)
	-1.79	5.725~5.85	Dipole	i-pex(MHF)
External (3)	0.67	2.4~2.4835	Dipole	i-pex(MHF)
	-0.84	5.15~5.25	Dipole	i-pex(MHF)
	-1.38	5.25~5.35	Dipole	i-pex(MHF)
	-1.6	5.47~5.725	Dipole	i-pex(MHF)
	-1.79	5.725~5.85	Dipole	i-pex(MHF)
External (4)	0.67	2.4~2.4835	Dipole	i-pex(MHF)
	-0.84	5.15~5.25	Dipole	i-pex(MHF)
	-1.38	5.25~5.35	Dipole	i-pex(MHF)
	-1.6	5.47~5.725	Dipole	i-pex(MHF)
	-1.79	5.725~5.85	Dipole	i-pex(MHF)

Note. : 1. For 2.4GHz &5GHz (U-NII-1 & U-NII-2A) band was used External antenna only.
2. For 5GHz (U-NII-2C & U-NII-3) band was used Internal antenna only.

The Directional gain table:

Frequency (MHz)	Max Gain (dBi)
5250-5350	4.64
Note : Directional gain = -1.38dBi + 10log(4) = 4.64dBi	

Frequency (MHz)	Max Gain (dBi)
5470~5725	6.23

Note:

1. Non-TxBF mode & TxBF mode antenna gain refer to KDB 662911 F 2) f) (ii)

$$DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

2.4 EUT Maximum and Minimum Conducted Power

Table 4: The Measured Conducted Output Power

CDD Mode

802.11a

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.95	248.145	17.95	62.373
5470~5725	23.82	241.215	17.82	60.534

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.90	245.243	17.90	61.660
5470~5725	23.86	243.361	17.86	61.094

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.91	245.888	17.91	61.802
5470~5725	23.97	249.545	17.97	62.661

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.76	237.612	17.76	59.704
5470~5725	23.86	243.457	17.86	61.094

Beamforming Mode

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.90	245.243	17.90	61.660
5470~5725	23.76	237.876	17.76	59.704

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.91	245.888	17.91	61.802
5470~5725	23.76	237.906	17.76	59.704

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.76	237.612	17.76	59.704
5470~5725	23.65	231.877	17.65	58.210

2.5 EUT Maximum and Minimum EIRP Power

Table 5: The EIRP Output Power List

CDD Mode

802.11a

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	22.57	180.595	16.57	45.394
5470~5725	27.53	566.767	21.53	142.233

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	22.52	178.483	16.52	44.875
5470~5725	27.57	571.809	21.57	143.549

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	22.53	178.952	16.53	44.978
5470~5725	27.68	586.339	21.68	147.231

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	22.38	172.929	16.38	43.451
5470~5725	27.57	572.035	21.57	143.549

Beamforming Mode

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	28.54	713.833	22.54	179.473
5470~5725	29.99	998.506	23.99	250.611

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	28.55	715.710	22.55	179.887
5470~5725	29.99	998.632	23.99	250.611

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power		Min. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	28.40	691.621	22.40	173.780
5470~5725	29.88	973.325	23.88	244.343

2.6 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.

Maximum EIRP of this device is **998.632** mW which more than 500mW, therefore it's require TPC function.

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

2.7 Statement of Manufacturer

Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms is not available to the end user.

3. U-NII DFS Rule Requirements

3.1 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.

Table 6: Applicability of DFS Requirements Prior To Use a Channel

Requirement	Operational Mode		
	Master	**Client without radar detection**	**Client with radar detection**
Non-Occupancy Period	✓	✓ note	✓
DFS Detection Threshold	✓	Not required	✓
Channel Availability Check Time	✓	Not required	Not required
U-NII Detection Bandwidth	✓	Not required	✓
Note: Regarding KDB 905462 D03 Client Without DFS New Rules v01r01 section (b)(5/6), If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear. An analyzer plot that contains a single 30-minute sweep on the original channel			

Table 7: Applicability of DFS Requirements During Normal Operation.

Requirement	Operational Mode	
	Master or Client with radar detection	**Client without radar detection**
DFS Detection Threshold	✓	Not required
Channel Closing Transmission Time	✓	✓
Channel Move Time	✓	✓
U-NII Detection Bandwidth	✓	Not required

Additional requirements for devices with multiple bandwidth modes	Master or Client with radar detection	Client without radar detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

3.2 Test Limits And Radar Signal Parameters

Detection Threshold Values

Table 8: DFS Detection Thresholds For Master Devices And Client Devices With Radar Detection

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

Table 9: 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.	

Parameters of DFS Test Signals

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 10: 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	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu sec}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066μ sec, with a minimum increment of 1μ sec, 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.

Table 11: 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

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.

a) the Channel center frequency
b) tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the low edge of the UUT Occupied Bandwidth
c) tuned frequencies such that 90% of the Long Pulse Type 5 frequency modulation is within the high edge of the UUT Occupied Bandwidth

It include 10 trails for every subset, the formula as below,

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:

FL+(0.4$*Chirp\ Width$ [$in\ MHz$])

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:

FH−(0.4$*Chirp\ Width$ [$in\ MHz$])

Table 12: 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

4. Test & Support Equipment List

4.1 Test Instruments

Table 13: Test Instruments List

Description & Manufacturer	Model No.	Serial No	Date Of Calibration	Due Date Of Calibration
Spectrum Analyzer R&S	FSP40	100060	May 11, 2016	May 10, 2017
Vector Signal Generator Agilent	N5182B	MY53051263	Aug. 10, 2015	Aug. 09, 2016
Horn_Antenna EMCO	1018G	0001	Jan 08, 2016	Jan. 07, 2017

4.2 Description of Support Units

Table 14: Support Unit Information.

No.	Product	Brand	Model No.	FCC ID	Spec
1	Wireless LAN Unit	NEC	NP05LM	RRK-NECNP05LM	

NOTE: This device was functioned as a ☐Master ☒Slave device during the DFS test.

Table 15: Software/Firmware Information.

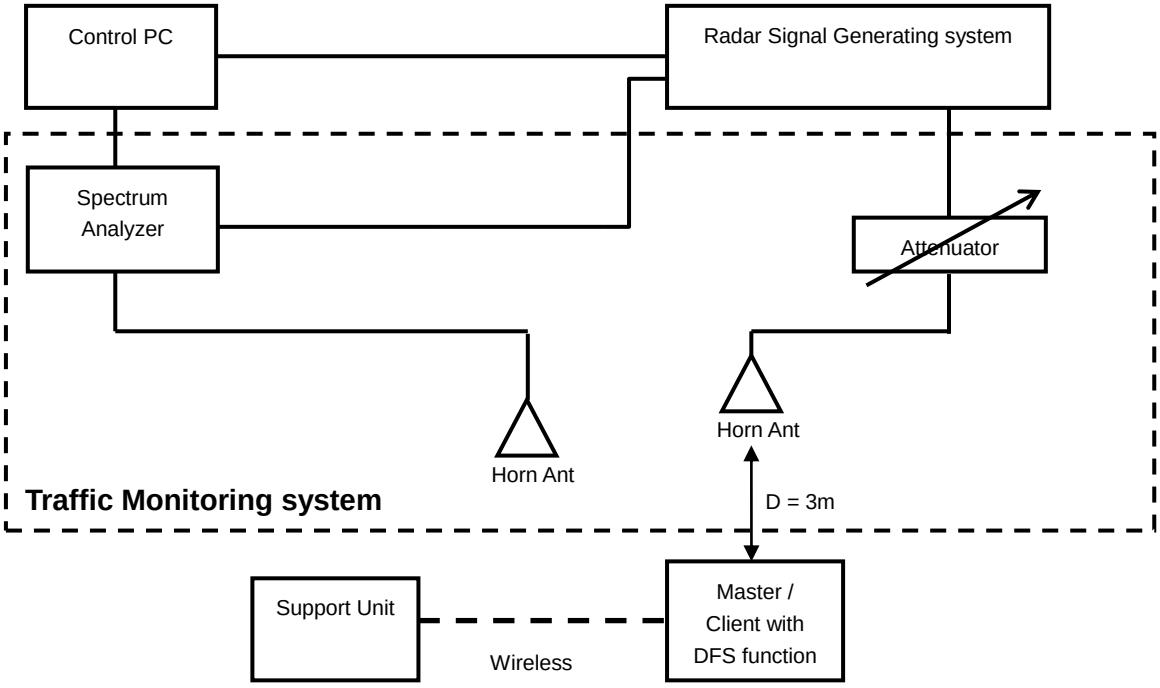
No.	Product	Model No.	Software/Firmware Version
1	Wireless LAN Unit	NP05LM	Driver Version: 06/18/2014, 1026.12.606.2014

5. Test Procedure

5.1 DFS Measurement System

A complete DFS Measurement System consists of two subsystems: (1) the Radar Signal Generating system and (2) the Traffic Monitoring system. The control PC is necessary for generating the Radar waveforms in Table 10, 11 and 12. The traffic monitoring subsystem is specified to the type of unit under test (UUT).

Radiated Setup Configuration of DFS Measurement System



Channel Loading

System testing will be performed with channel-loading using means appropriate to the data types that are used by the unlicensed device. The following requirements apply:

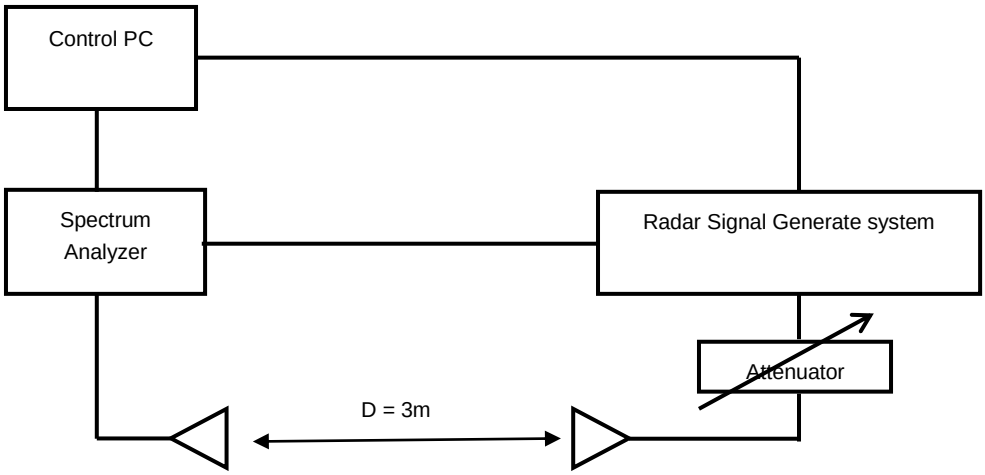
a)	The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode.	
b)	Software to ping the client is permitted to simulate data transfer but must have random ping intervals.	
c)	Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater.	✓
d)	Unicast or Multicast protocols are preferable but other protocols may be used. The appropriate protocol used must be described in the test procedures.	

5.2 Calibration of DFS Detection Threshold Level

The measured channel is 5500MHz and 5510MHz and 5530MHz. The radar signal was the same as transmitted channels, and injected into the antenna of AP (master) or Client Device with Radar Detection, measured the channel closing transmission time and channel move time.

Radiated setup configuration of Calibration of DFS Detection Threshold Level

The calibrated conducted detection threshold level is set to -64dBm. The tested level is lower than required level hence it provides margin to the limit.



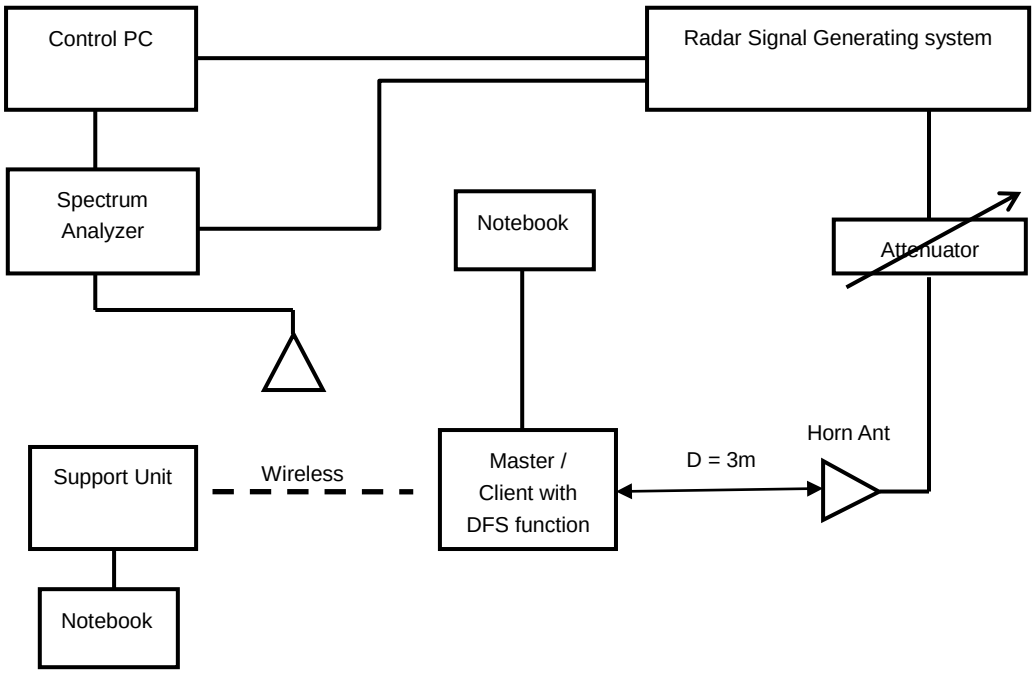
5.3 Deviation from Test Standard

No deviation.

5.4 Radiated Test Setup Configuration

Master mode

The EUT is a U-NII Device operating in Master mode. The radar test signals are injected into the Master Device.



Note: The UUT main beam of the antenna is directly toward the radar emitter during testing.

6. Test Results

6.1 Summary of Test Results

Clause	Test Parameter	Remarks	Pass/Fail
15.407	DFS Detection Threshold	Applicable	Pass
15.407	Channel Availability Check Time	Applicable	Pass
15.407	Channel Move Time	Applicable	Pass
15.407	Channel Closing Transmission Time	Applicable	Pass
15.407	Non- Occupancy Period	Applicable	Pass
15.407	U-NII Detection Bandwidth	Applicable	Pass

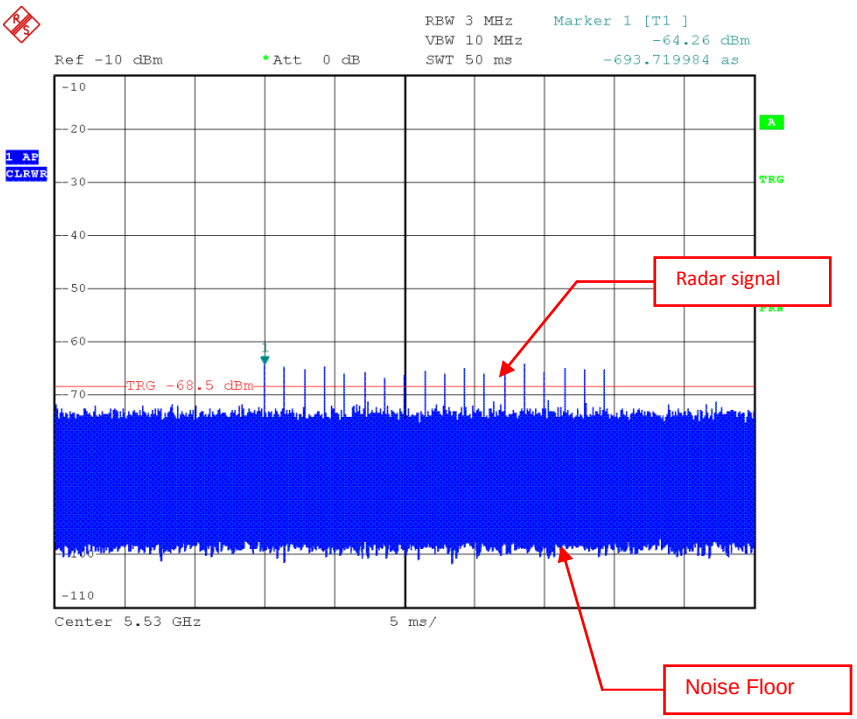
6.2 Test Results

6.2.1 Test Mode: Device Operating In Master Mode.

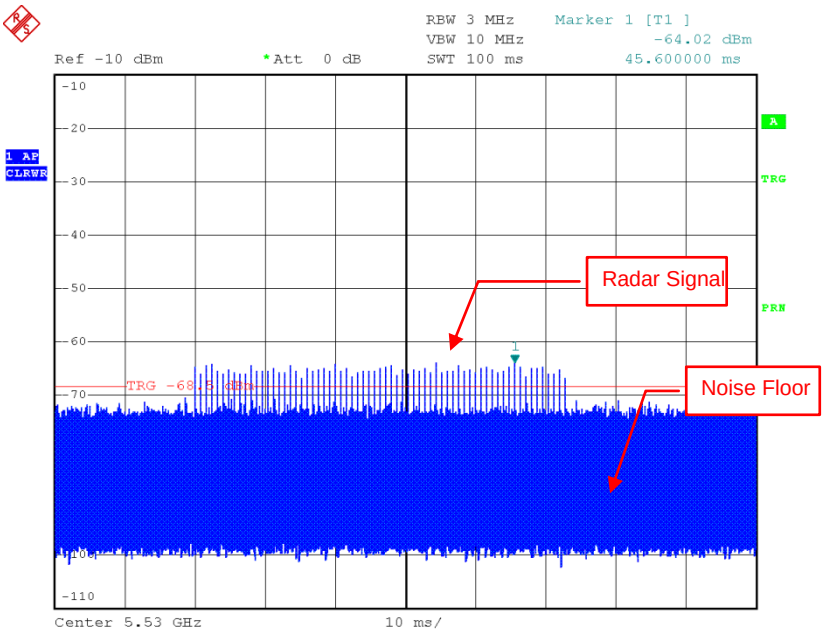
The radar test waveforms are injected into the Master.
This test was investigated for different bandwidth (20MHz、40MHz and 80MHz).
The following plots was done on 80MHz as a representative

DFS Detection Threshold

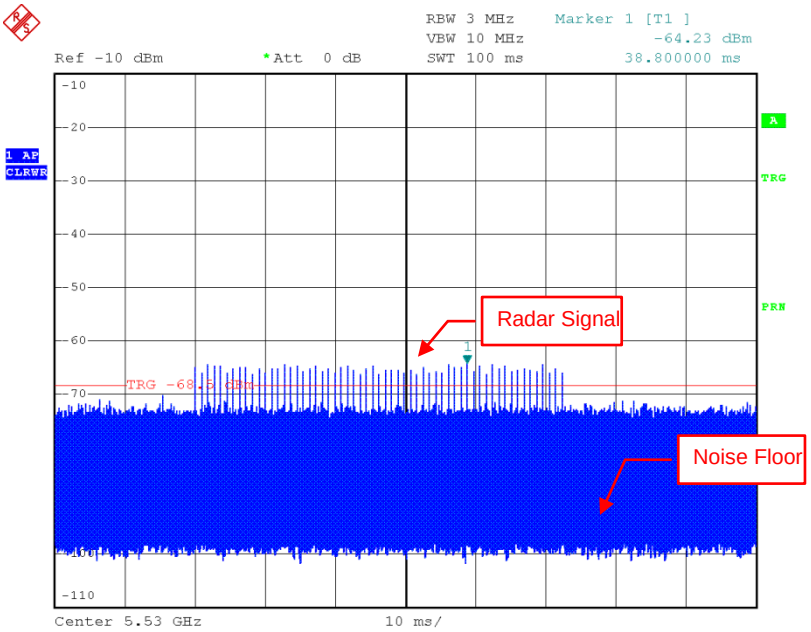
For detection threshold level of -64dBm, the tested level is lower than required level for 1dB, hence it provides margin to the limit.



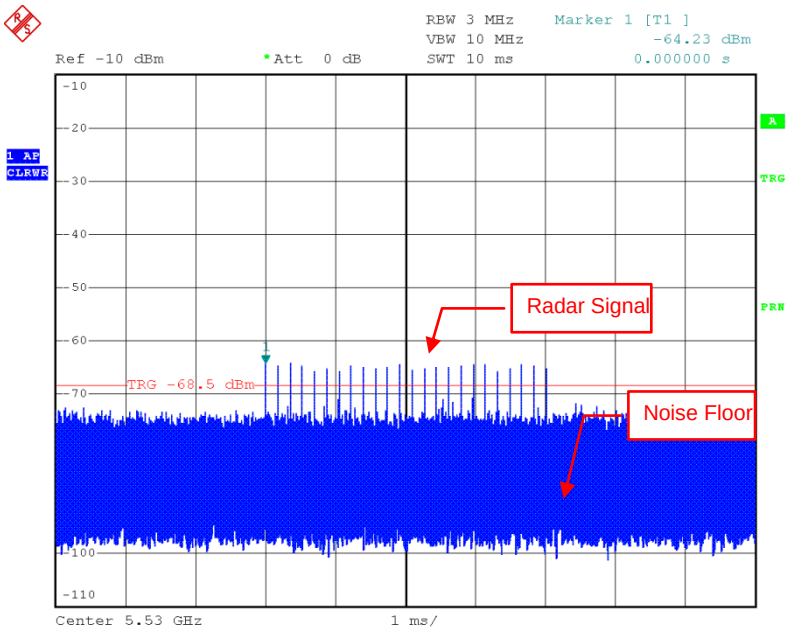
Radar Signal 0



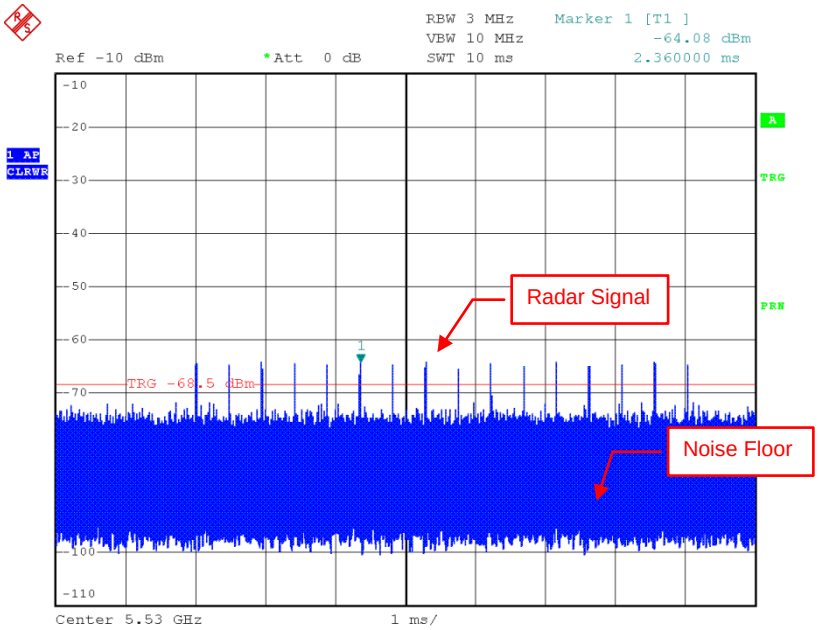
Radar Signal 1 (Test A)



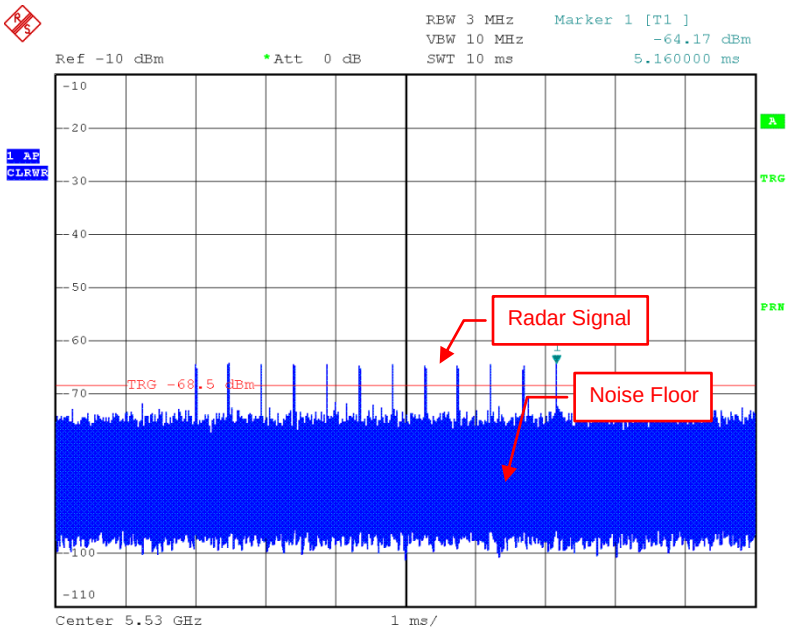
Radar Signal 1 (Test B)



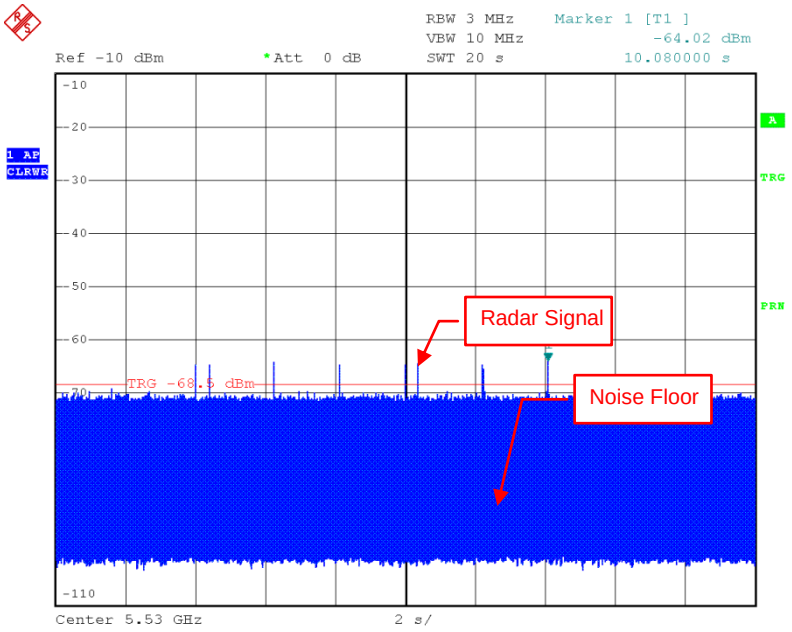
Radar Signal 2



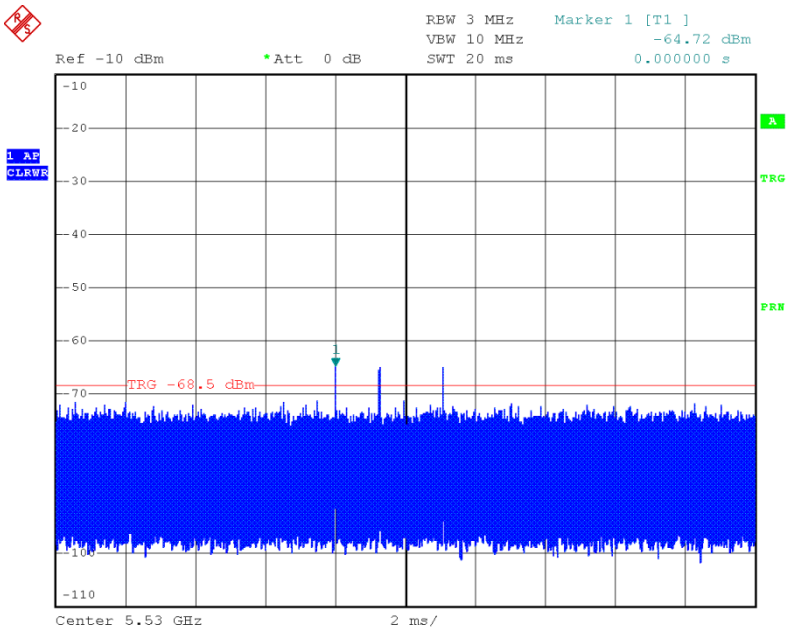
Radar Signal 3



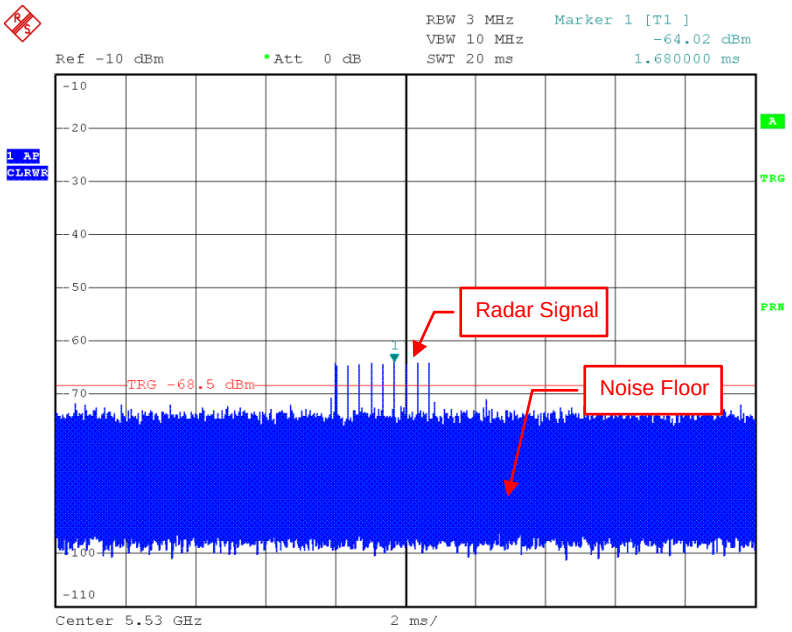
Single Burst of Radar Signal 4



Radar Signal 5



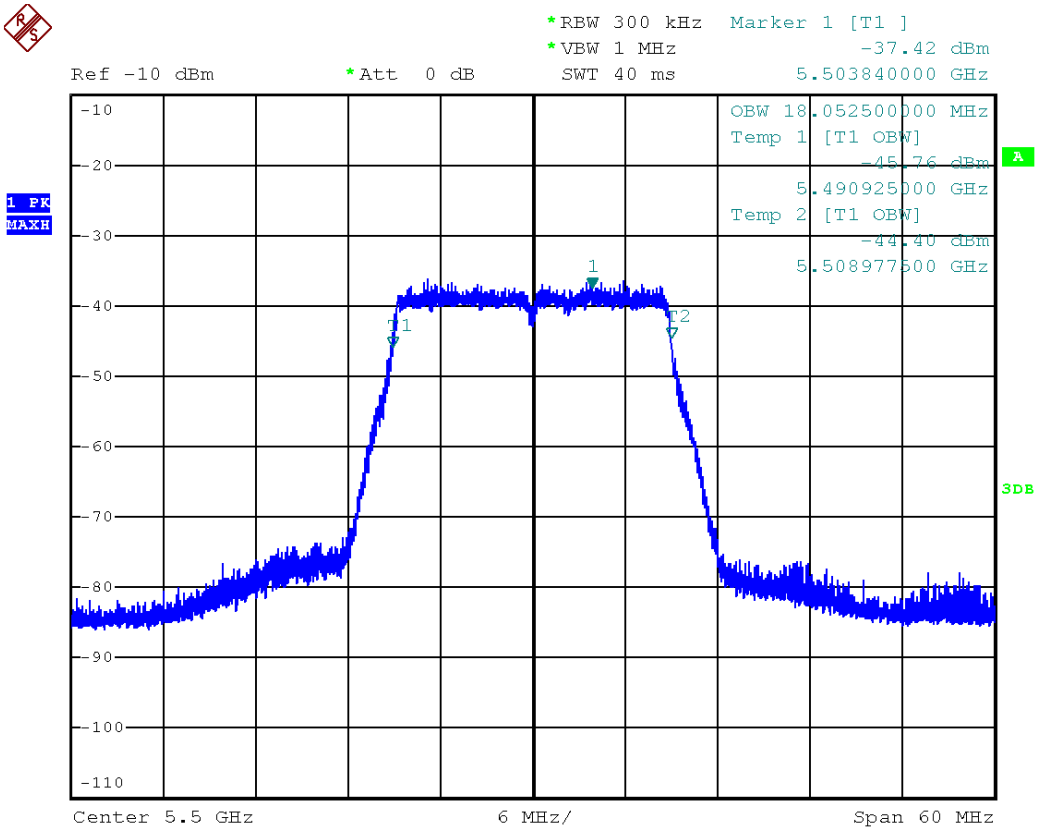
Single Burst of Radar Signal 5



Radar Signal 6

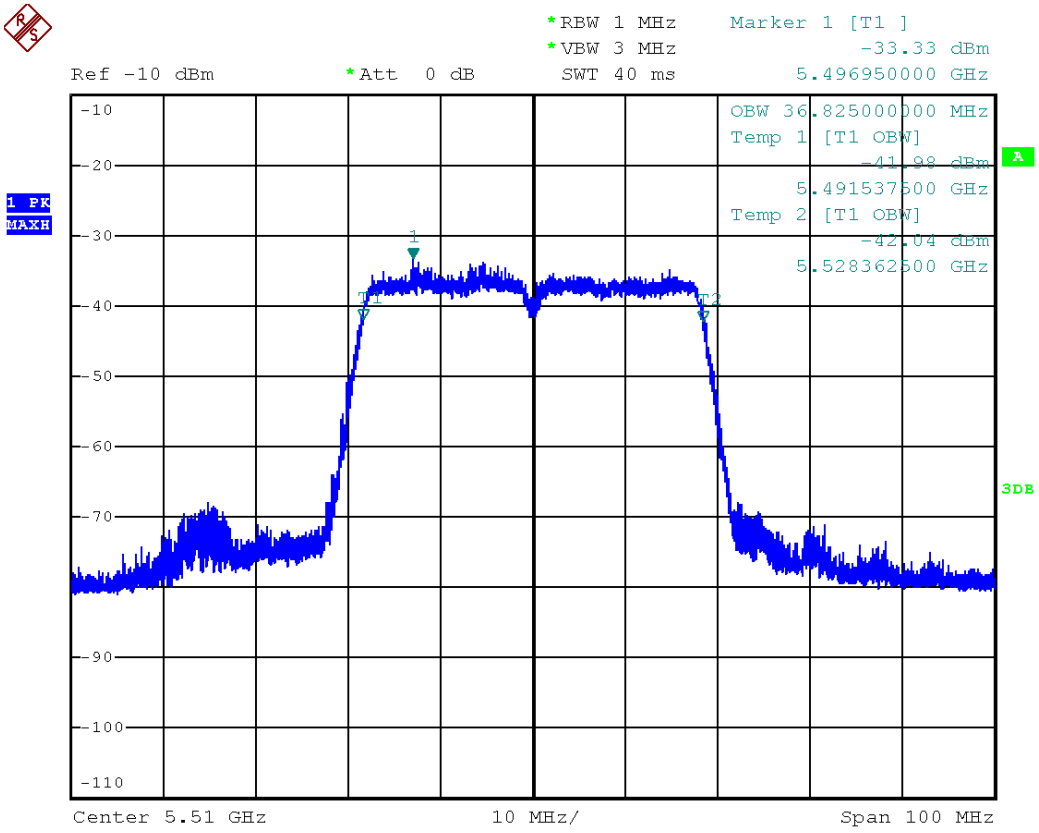
6.2.2 U-NII Detection Bandwidth

IEEE 802.11ac VHT20



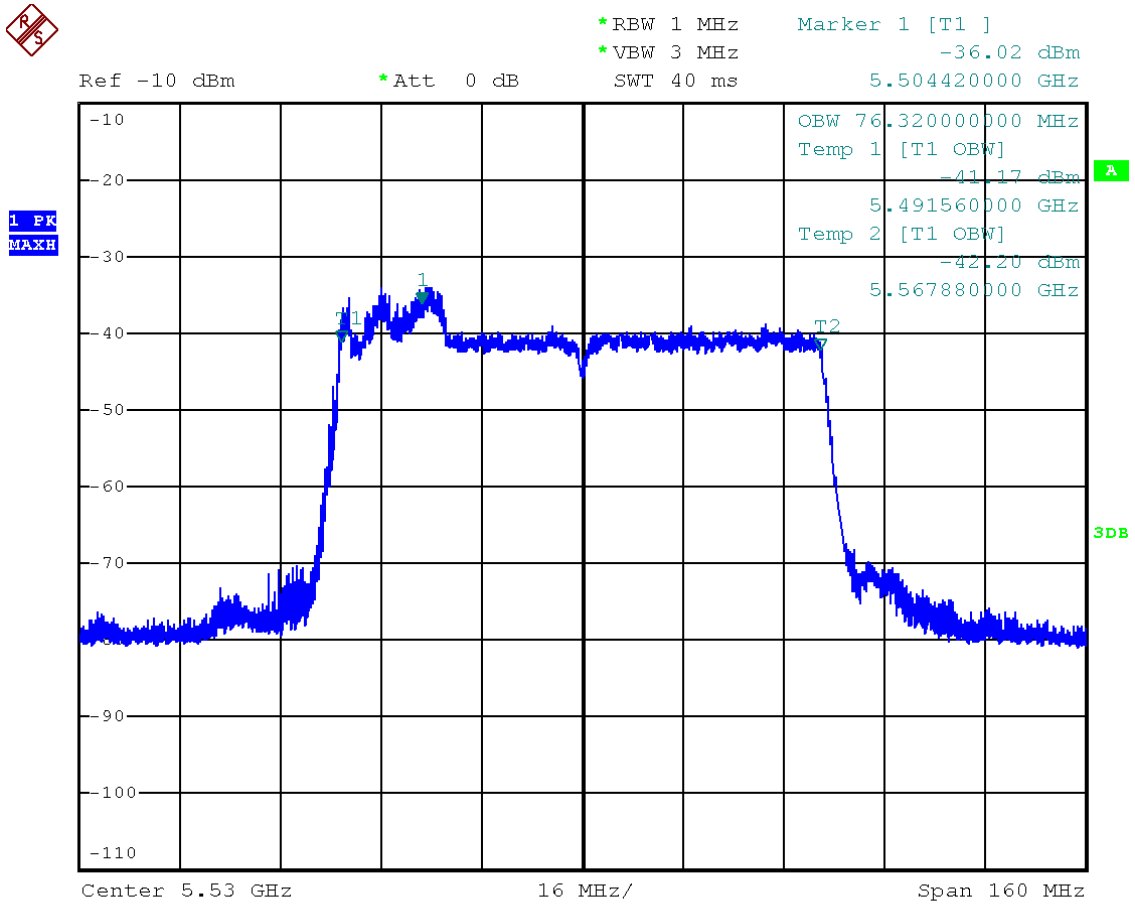
U-NII 99% Channel bandwidth

IEEE 802.11ac VHT40



U-NII 99% Channel bandwidth

IEEE 802.11ac VHT80



U-NII 99% Channel bandwidth

Detection Bandwidth Test - IEEE 802.11ac VHT20											
Radar Type 0 EUT Frequency: 5500MHz EUT 99% Power bandwidth: 18.0525MHz Detection bandwidth limit (100% of EUT 99% Power bandwidth): 18.0525MHz Detection bandwidth (5510(FH) – 5490(FL)) : 20MHz Test Result : PASS											
Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5.490G(FL)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90
5.491G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.492G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.493G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.494G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.495G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.496G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.497G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.498G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.499G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.500G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.501G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.502G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.503G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.504G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.505G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.506G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.507G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.508G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.509G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.510G(FH)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90

Detection Bandwidth Test - IEEE 802.11ac VHT40											
Radar Type 0 EUT Frequency: 5510MHz EUT 99% Power bandwidth: 36.825MHz Detection bandwidth limit (100% of EUT 99% Power bandwidth): 36.825MHz Detection bandwidth (5529(FH) – 5491(FL)) : 38MHz Test Result : PASS											
Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5.491G(FL)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	90
5.492G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.493G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.494G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.495G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.496G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.497G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.498G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.499G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.500G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.501G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.502G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.503G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.504G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.505G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.506G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.507G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.508G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.509G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.510G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.511G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.512G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.513G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.514G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.515G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.516G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.517G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.518G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.519G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.520G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.521G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.522G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.523G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.524G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.525G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.526G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.527G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.528G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.529G(FH)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	90

Detection Bandwidth Test - IEEE 802.11ac VHT80											
Radar Type 0 EUT Frequency: 5530MHz EUT 99% Power bandwidth: 76.32MHz Detection bandwidth limit (100% of EUT 99% Power bandwidth): 76.32MHz Detection bandwidth (5569(FH) – 5491(FL)) : 78MHz Test Result : PASS											
Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5.491G(FL)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.492G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.493G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.494G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.495G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.496G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.497G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.498G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.499G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.500G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.501G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.502G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.503G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.504G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.505G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.506G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.507G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.508G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.509G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.510G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.511G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.512G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.513G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.514G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.515G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.516G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.517G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.518G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.519G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.520G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.521G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.522G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.523G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.524G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.525G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.526G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.527G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.528G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.529G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.530G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.531G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.532G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.533G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.534G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.535G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

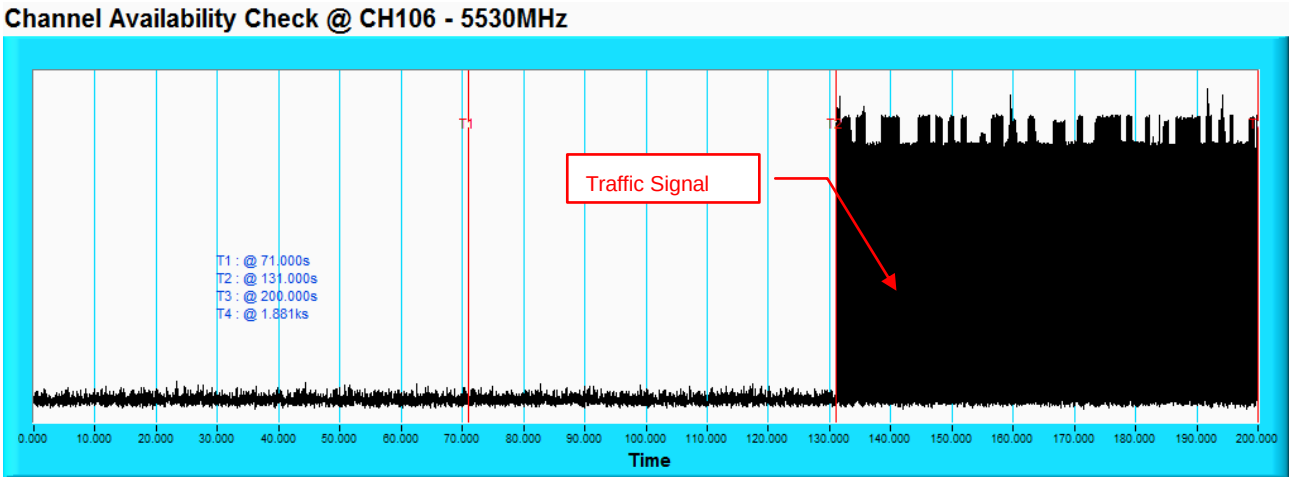
5.536G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.537G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.538G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.539G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.540G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.541G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.542G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.543G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.544G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.545G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.546G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.547G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.548G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.549G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.550G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.551G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.552G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.553G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.554G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.555G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.556G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.557G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.558G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.559G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.560G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.561G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.562G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.563G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.564G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.565G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.566G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.567G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.568G	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100
5.569G(FH)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	90

6.2.3 Channel Availability Check Time

If the EUT successfully detected the radar burst, it should be observed as the EUT has no transmissions occurred until the EUT starts transmitting on another channel.

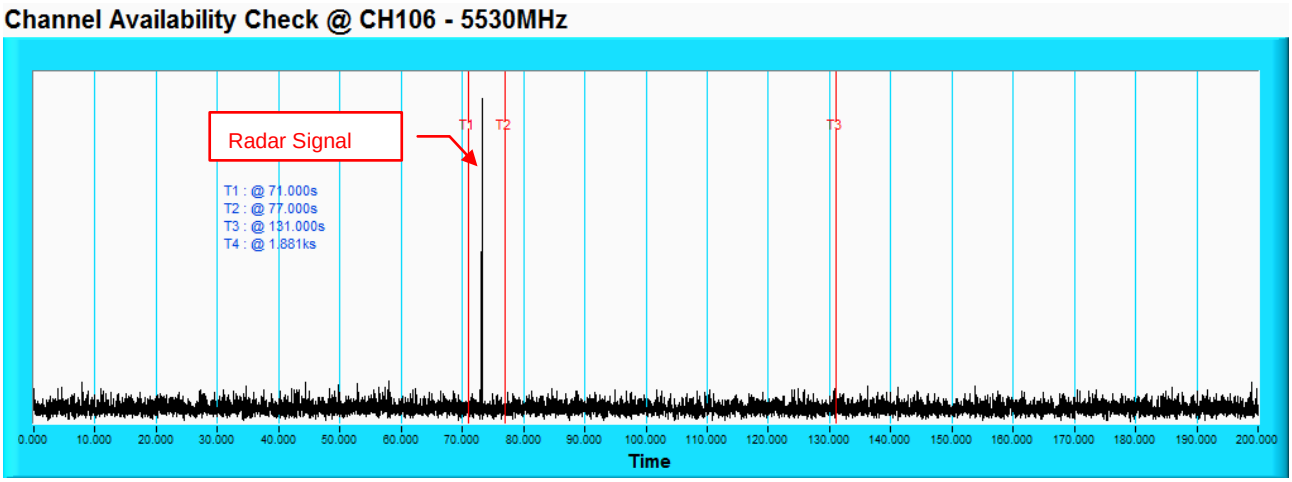
Timing of Radar Signal	Observation	
	EUT	Spectrum Analyzer
Within 1 to 6 second	Detected	No transmissions
Within 54 to 60 second	Detected	No transmissions

Initial Channel Availability Check Time



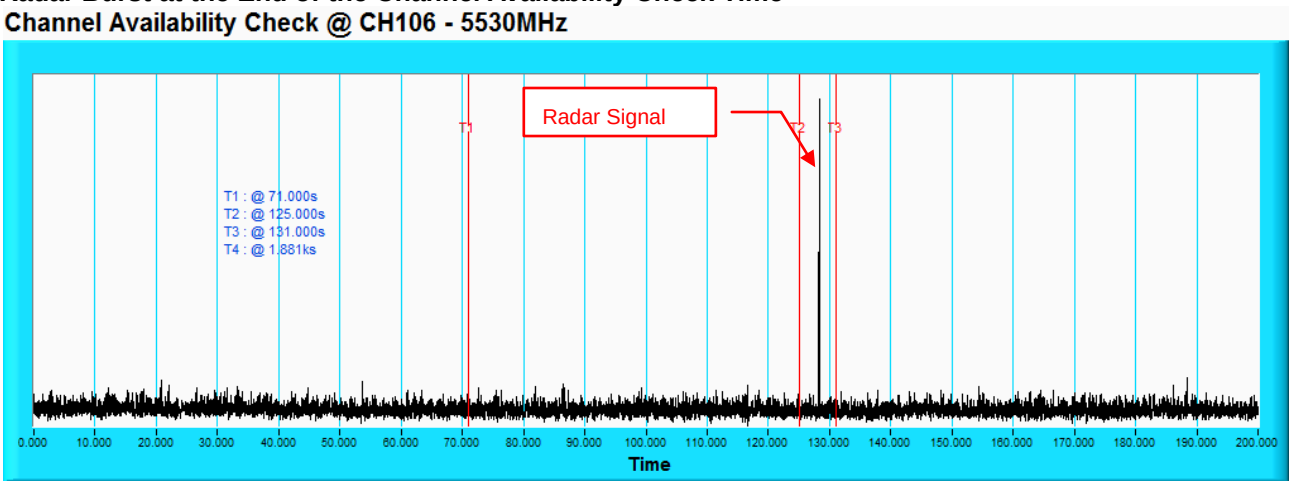
NOTE: T1 denotes the end of power-up time period is 71th second. T2 denotes the end of Channel Availability Check time is 131th second. Channel Availability Check time is equal to (T2 – T1) 60 seconds.

Radar Burst at the Beginning of the Channel Availability Check Time



NOTE: T1 denotes the end of power up time period is 71th second. T2 denotes 77th second and the radar burst was commenced within a 6 second window starting from the end of power-up sequence. T3 denotes the 131th second.

Radar Burst at the End of the Channel Availability Check Time

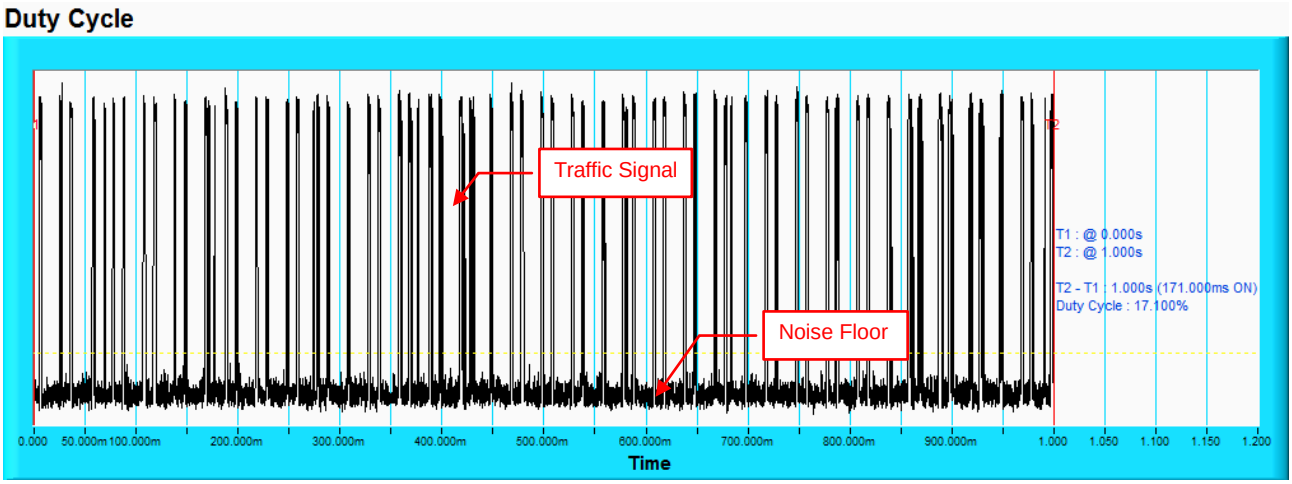


NOTE: T1 denotes the end of power up time period is 71th second.T2 denotes 125th second and the radar burst was commenced within 54th second to 60th second window starting from the end of power-up sequence. T3 denotes the 131th second.

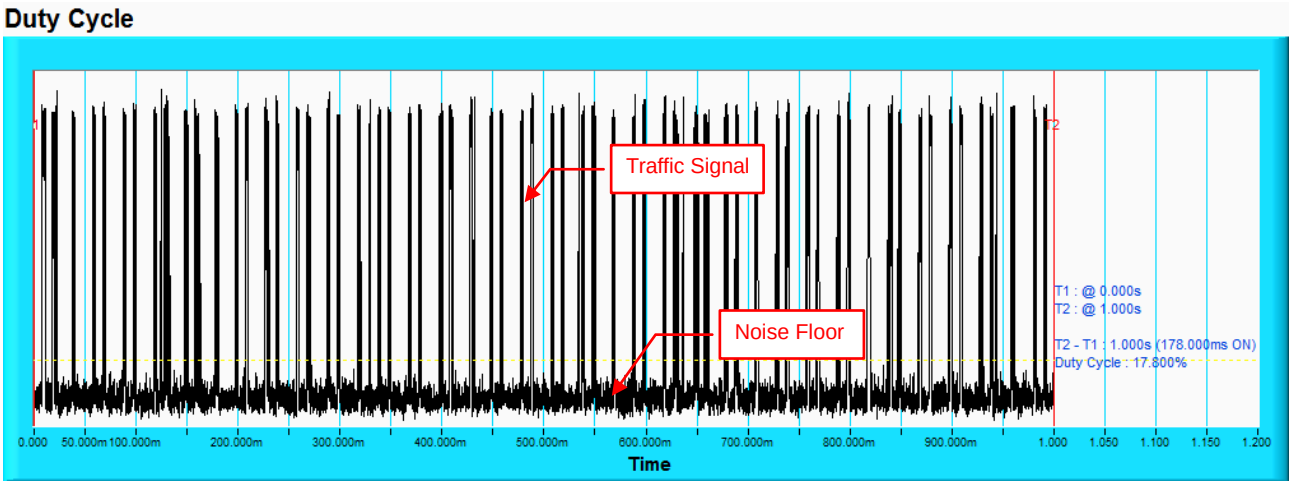
6.2.4 Channel Closing Transmission and Channel Move Time

Wireless Traffic Loading

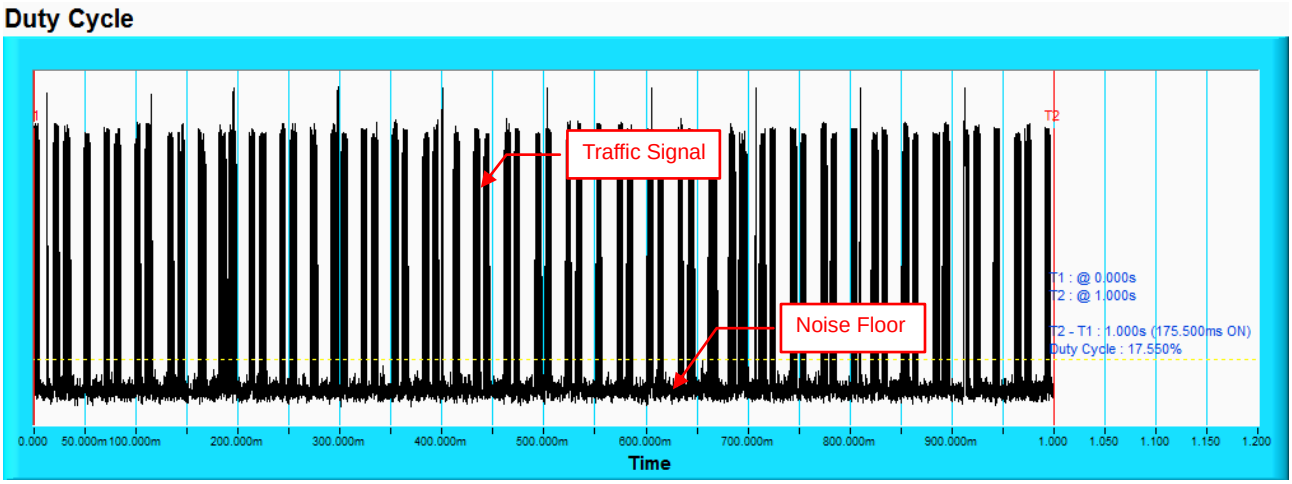
IEEE 802.11ac VHT20



IEEE 802.11ac VHT40



IEEE 802.11ac VHT80



IEEE 802.11ac VHT20

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Number of Trials(Times)	Percentage of Successful Detection (%)
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 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu\,sec}}\right)\right\}$	18	30	93.3
2	1-5	150-230	23-29	30	86.7
3	6-10	200-500	16-18	30	80
4	11-20	200-500	12-16	30	76.7
Aggregate (Radar Types 1-4)				120	84.2

Table 2: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Number of Trials(Times)	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	30	83.3

Table 3: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Number of Trials(Times)	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	30	90

IEEE 802.11ac VHT40

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Number of Trials(Times)	Percentage of Successful Detection (%)
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 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu\,sec}}\right)\right\}$	18	30	90
2	1-5	150-230	23-29	30	83.3
3	6-10	200-500	16-18	30	76.7
4	11-20	200-500	12-16	30	76.7
Aggregate (Radar Types 1-4)				120	81.7

Table 2: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Number of Trials(Times)	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	30	80

Table 3: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Number of Trials(Times)	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	30	93.3

.

IEEE 802.11ac VHT80

Table 1: Short Pulse Radar Test Waveforms.

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Number of Trials(Times)	Percentage of Successful Detection (%)
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 μ sec, with a minimum increment of 1 μ sec, excluding PRI values selected in Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{PRI_{\mu\,sec}}\right)\right\}$	18	30	93.3
2	1-5	150-230	23-29	30	86.7
3	6-10	200-500	16-18	30	73.3
4	11-20	200-500	12-16	30	73.3
Aggregate (Radar Types 1-4)				120	81.7

Table 2: Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per Burst	Number of Bursts	Number of Trials(Times)	Percentage of Successful Detection (%)
5	50-100	5-20	1000-2000	1-3	8-20	30	83.3

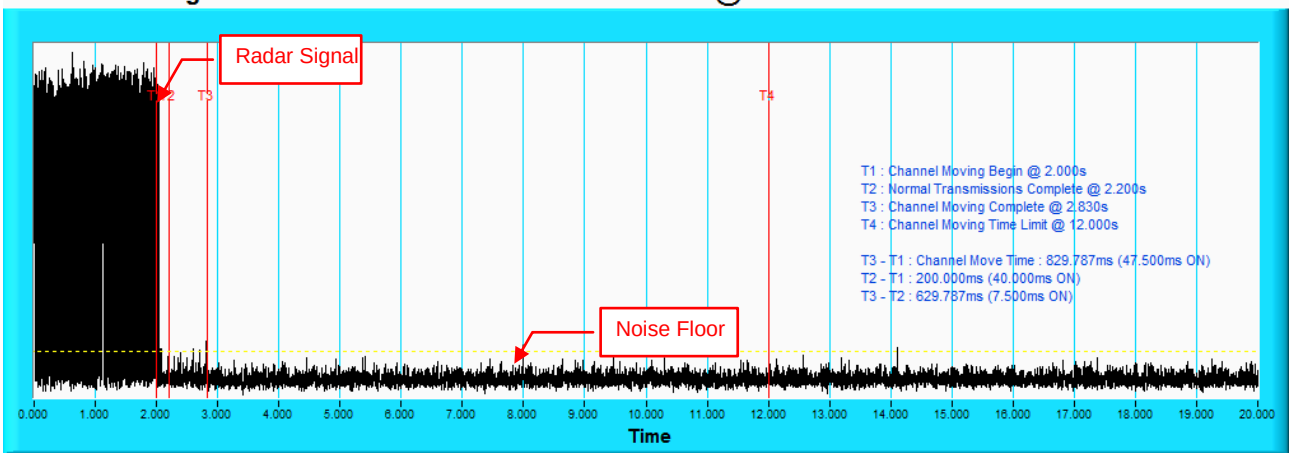
Table 3: Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Number of Trials(Times)	Percentage of Successful Detection (%)
6	1	333	9	0.333	300	30	90

Radar signal 0

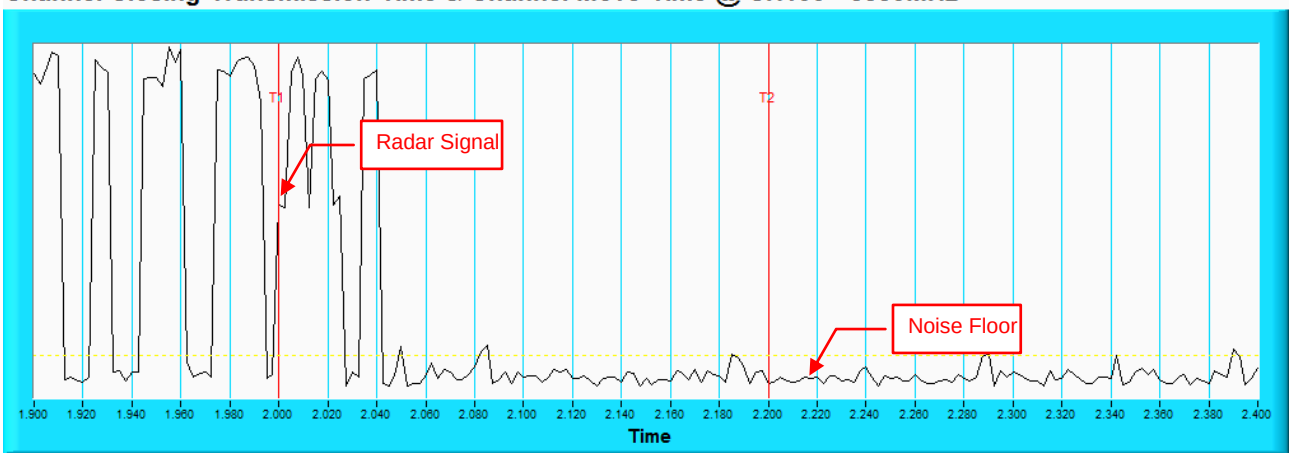
IEEE 802.11ac VHT80

Channel Closing Transmission Time & Channel Move Time @ CH106 - 5530MHz



NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

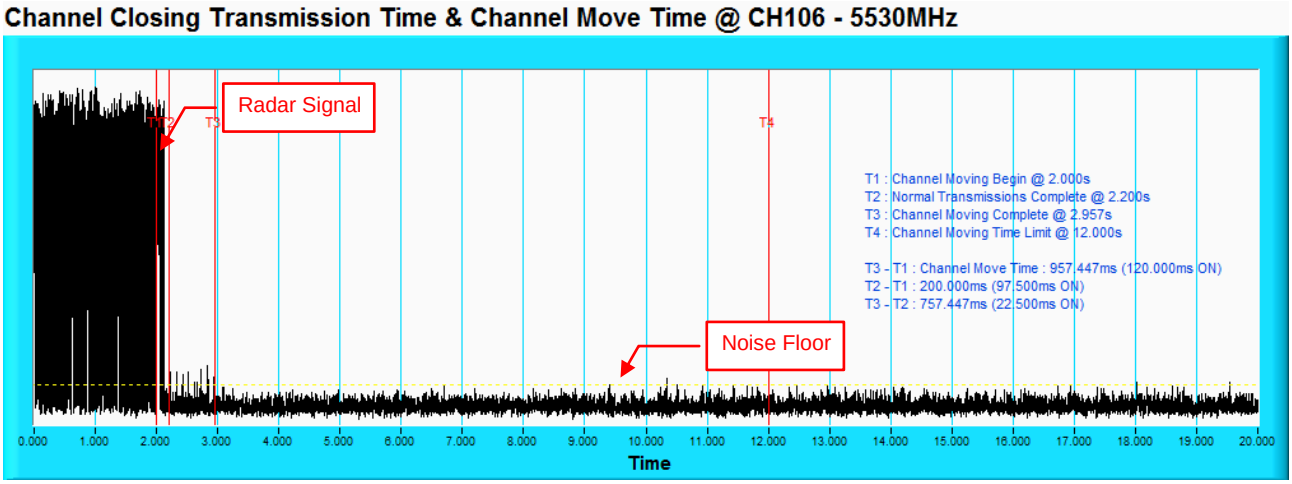
Channel Closing Transmission Time & Channel Move Time @ CH106 - 5530MHz



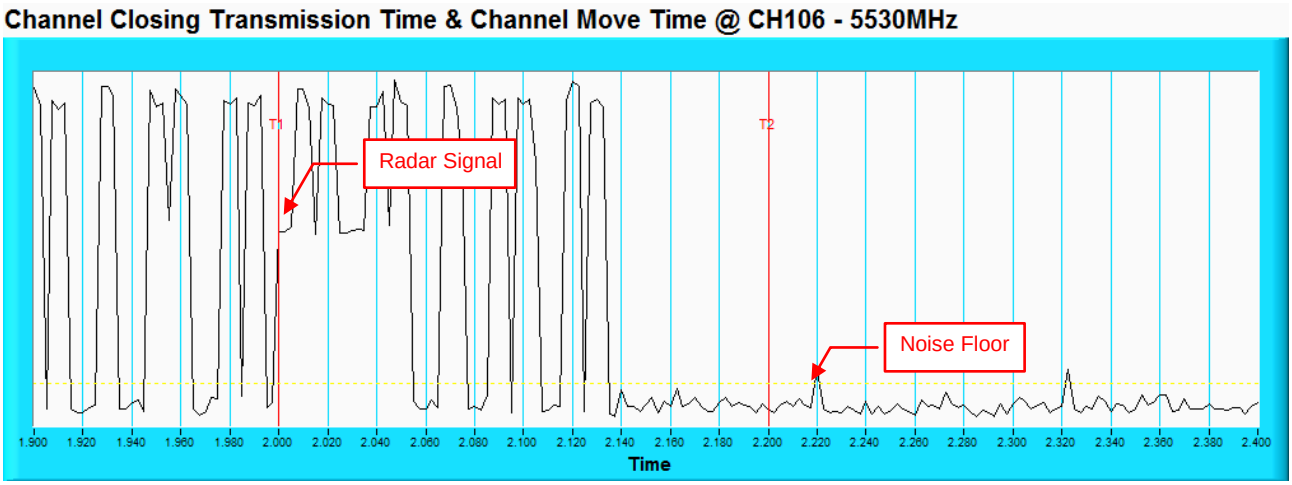
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 1

IEEE 802.11ac VHT80



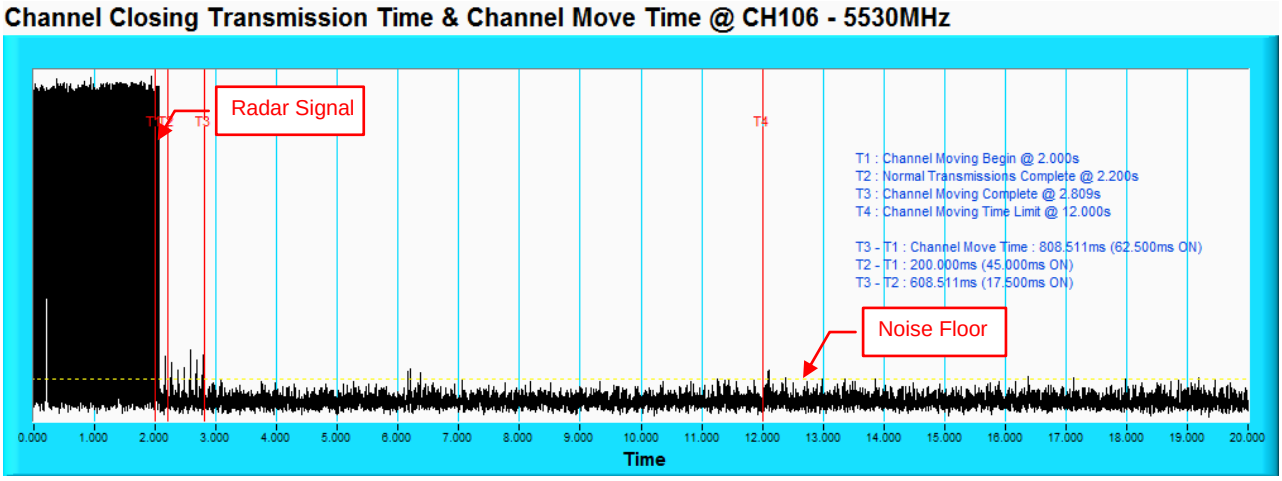
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



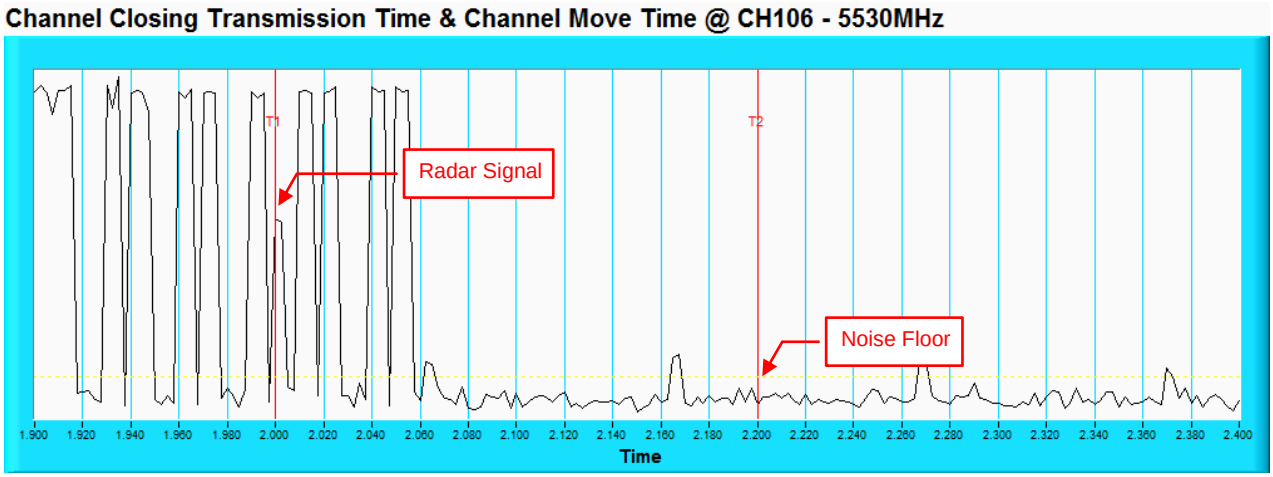
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 2

IEEE 802.11ac VHT80



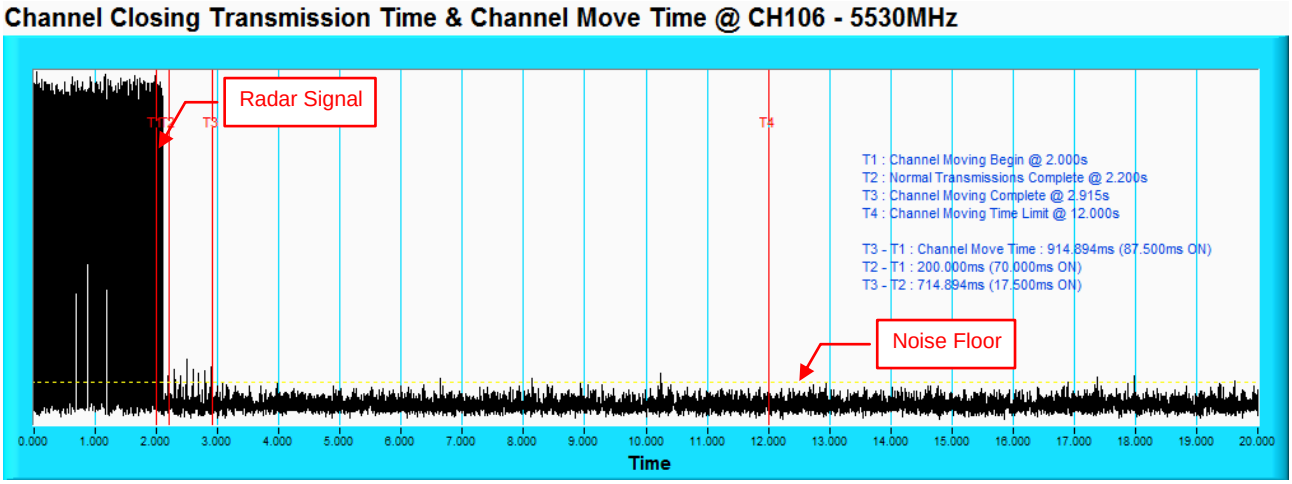
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



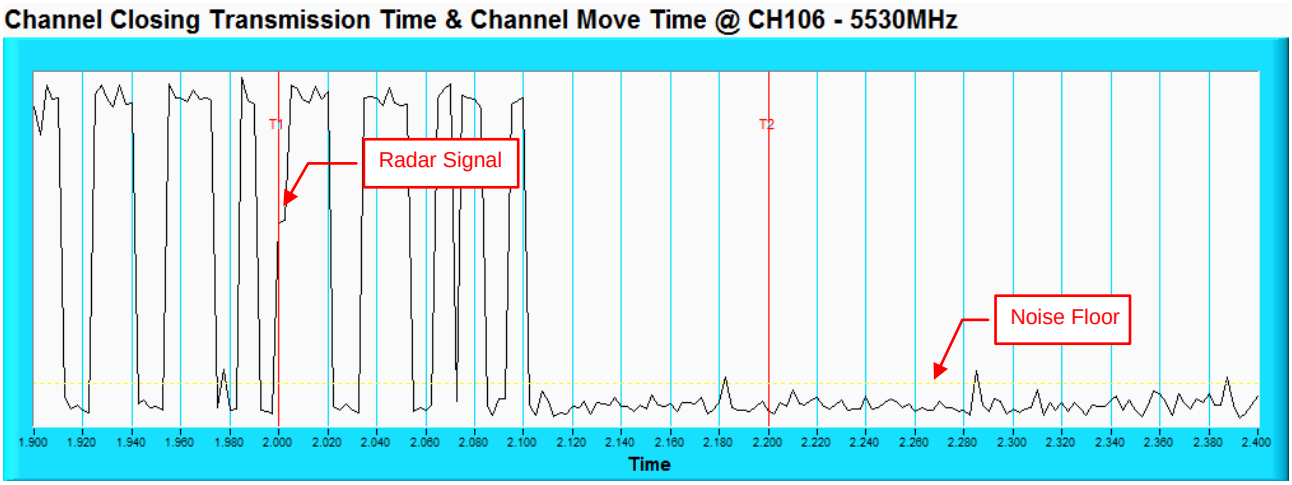
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 3

IEEE 802.11ac VHT80



NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

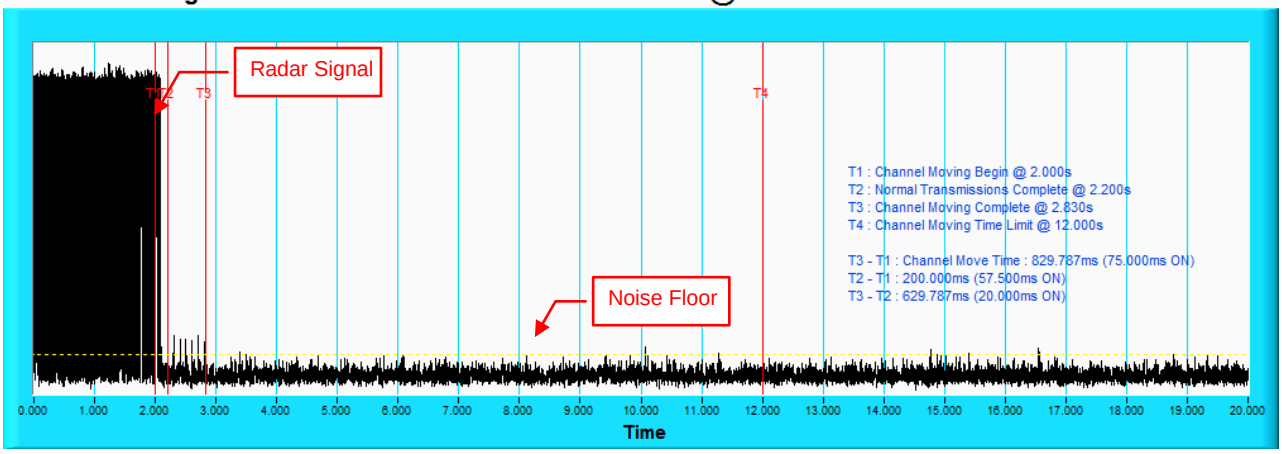


NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 4

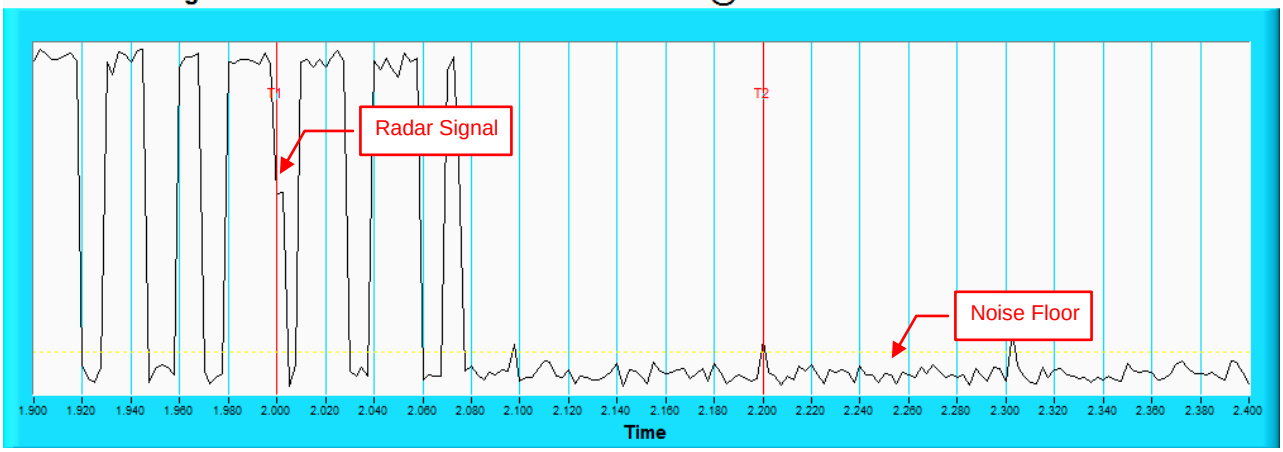
IEEE 802.11ac VHT80

Channel Closing Transmission Time & Channel Move Time @ CH106 - 5530MHz



NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.

Channel Closing Transmission Time & Channel Move Time @ CH106 - 5530MHz



NOTE: Zoom in of the first 500ms after radar signal applied.

802.11ac (VHT20)

Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (Pulse per seconds)	Pulses per Burst	Pulse Repetition Interval (microseconds)	Detection
1	5500	10	1433	76	698	Yes
2	5507	20	1114	59	898	Yes
3	5494	2	1859	99	538	Yes
4	5492	9	1475	78	678	No
5	5498	14	1285	68	778	Yes
6	5500	16	1223	65	818	Yes
7	5505	1	1931	102	518	Yes
8	5498	18	1166	62	858	Yes
9	5493	21	1089	58	918	Yes
10	5494	6	1618	86	618	Yes
11	5508	7	1567	83	638	Yes
12	5504	13	1319	70	758	Yes
13	5495	12	1355	72	738	Yes
14	5505	3	1792	95	558	Yes
15	5493	19	1139	61	878	Yes
16	5504		848.2	45	1179	Yes
17	5500		1675	89	597	Yes
18	5500		429	23	2331	Yes
19	5492		896.9	48	1115	Yes
20	5506		525.8	28	1902	Yes
21	5509		509.2	27	1964	Yes
22	5507		639.4	34	1564	No
23	5507		504.8	27	1981	Yes
24	5496		855.4	46	1169	Yes
25	5499		346	19	2890	Yes
26	5507		759.3	41	1317	Yes
27	5499		446.6	24	2239	Yes
28	5500		458.9	25	2179	Yes
29	5494		357.8	19	2795	Yes
30	5494		435.9	24	2294	Yes
						Detection Rate: 93.3 %

802.11ac (VHT20)

Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5500	28	4	203	Yes
2	5496	26	3.3	172	No
3	5499	28	4.4	222	Yes
4	5502	26	2.9	162	Yes
5	5503	27	3.4	174	Yes
6	5496	27	3.6	177	Yes
7	5504	24	1.8	214	Yes
8	5498	29	5	169	No
9	5506	28	4.3	159	Yes
10	5492	28	4	187	Yes
11	5493	24	1.9	220	Yes
12	5493	25	2.7	154	Yes
13	5505	26	2.8	198	Yes
14	5509	26	2.7	161	Yes
15	5498	23	1.3	184	Yes
16	5491	25	2.6	164	Yes
17	5504	26	3.1	165	Yes
18	5507	24	2	202	Yes
19	5508	25	2.2	204	No
20	5493	24	1.9	175	No
21	5505	29	4.5	193	Yes
22	5499	26	3	155	Yes
23	5506	29	4.6	150	Yes
24	5505	23	1.2	192	Yes
25	5498	29	4.9	160	Yes
26	5493	25	2.3	151	Yes
27	5495	27	3.9	205	Yes
28	5504	29	4.8	216	Yes
29	5498	29	4.6	213	Yes
30	5507	27	3.4	176	Yes
					Detection Rate: 86.7 %

802.11ac (VHT20)

Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5500	18	9	221	Yes
2	5493	17	8.3	478	Yes
3	5493	18	9.4	463	Yes
4	5504	17	7.9	353	Yes
5	5498	17	8.4	200	No
6	5497	17	8.6	236	Yes
7	5491	16	6.8	408	Yes
8	5505	18	10	326	Yes
9	5501	18	9.3	283	Yes
10	5499	18	9	439	Yes
11	5500	16	6.9	371	Yes
12	5501	17	7.7	403	Yes
13	5499	17	7.8	292	Yes
14	5492	17	7.7	420	No
15	5497	16	6.3	431	No
16	5498	17	7.6	424	Yes
17	5507	17	8.1	434	No
18	5505	16	7	383	Yes
19	5491	16	7.2	495	Yes
20	5500	16	6.9	319	No
21	5492	18	9.5	440	Yes
22	5497	17	8	259	Yes
23	5496	18	9.6	443	Yes
24	5499	16	6.2	423	No
25	5504	18	9.9	464	Yes
26	5494	16	7.3	446	Yes
27	5496	18	8.9	279	Yes
28	5505	18	9.8	329	Yes
29	5493	18	9.6	272	Yes
30	5503	17	8.4	470	Yes
					Detection Rate: 80 %

802.11ac (VHT20)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5500	15	17.7	221	Yes
2	5491	14	16.1	478	Yes
3	5492	16	18.6	463	Yes
4	5506	14	15.2	353	No
5	5494	14	16.3	200	Yes
6	5506	15	16.9	236	Yes
7	5503	13	12.9	408	Yes
8	5509	16	19.9	326	Yes
9	5493	16	18.4	283	Yes
10	5503	15	17.8	439	Yes
11	5493	13	13.1	371	No
12	5506	14	14.8	403	Yes
13	5493	14	15	292	No
14	5496	14	14.9	420	Yes
15	5501	12	11.7	431	Yes
16	5492	13	14.5	424	Yes
17	5505	14	15.8	434	Yes
18	5509	13	13.3	383	Yes
19	5499	13	13.7	495	Yes
20	5502	13	13	319	No
21	5507	16	18.9	440	No
22	5508	14	15.4	259	Yes
23	5506	16	18.9	443	Yes
24	5505	12	11.6	423	Yes
25	5496	16	19.6	464	No
26	5506	13	13.9	446	Yes
27	5504	15	17.4	279	No
28	5494	16	19.5	329	Yes
29	5494	16	19.1	272	Yes
30	5499	15	16.4	470	Yes
					Detection Rate:76.7 %

802.11ac (VHT20)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	13	5500	LP_Signal_01	Yes
2	15	5500	LP_Signal_02	Yes
3	18	5500	LP_Signal_03	Yes
4	10	5500	LP_Signal_04	Yes
5	6	5500	LP_Signal_05	No
6	19	5500	LP_Signal_06	Yes
7	16	5500	LP_Signal_07	Yes
8	20	5500	LP_Signal_08	Yes
9	14	5500	LP_Signal_09	Yes
10	6	5500	LP_Signal_10	Yes
11	18	5497	LP_Signal_11	Yes
12	14	5496	LP_Signal_12	Yes
13	14	5496	LP_Signal_13	Yes
14	8	5493	LP_Signal_14	Yes
15	6	5492	LP_Signal_15	Yes
16	7	5493	LP_Signal_16	Yes
17	10	5494	LP_Signal_17	Yes
18	5	5492	LP_Signal_18	Yes
19	5	5492	LP_Signal_19	Yes
20	10	5494	LP_Signal_20	Yes
21	13	5505	LP_Signal_21	Yes
22	5	5508	LP_Signal_22	No
23	8	5507	LP_Signal_23	Yes
24	14	5504	LP_Signal_24	Yes
25	20	5502	LP_Signal_25	Yes
26	19	5502	LP_Signal_26	No
27	6	5508	LP_Signal_27	Yes
28	16	5504	LP_Signal_28	Yes
29	7	5507	LP_Signal_29	Yes
30	13	5505	LP_Signal_30	Yes
				Detection Rate: 93.3 %

The Long Pulse Radar pattern shown in Appendix A.1

802.11ac (VHT20)

Type 6 Radar Statistical Performances				
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	9	1	333.3	Yes
2	9	1	333.3	Yes
3	9	1	333.3	Yes
4	9	1	333.3	Yes
5	9	1	333.3	Yes
6	9	1	333.3	Yes
7	9	1	333.3	Yes
8	9	1	333.3	Yes
9	9	1	333.3	No
10	9	1	333.3	Yes
11	9	1	333.3	Yes
12	9	1	333.3	Yes
13	9	1	333.3	Yes
14	9	1	333.3	Yes
15	9	1	333.3	No
16	9	1	333.3	Yes
17	9	1	333.3	Yes
18	9	1	333.3	No
19	9	1	333.3	Yes
20	9	1	333.3	Yes
21	9	1	333.3	Yes
22	9	1	333.3	Yes
23	9	1	333.3	Yes
24	9	1	333.3	Yes
25	9	1	333.3	Yes
26	9	1	333.3	Yes
27	9	1	333.3	Yes
28	9	1	333.3	Yes
29	9	1	333.3	Yes
30	9	1	333.3	Yes
				Detection Rate: 90 %

802.11ac (VHT20)

Type 6 Radar Statistical Performances		
Trial #	Hopping Frequency Sequence Name	Detection
1	HOP_FREQ_SEQ_01	Yes
2	HOP_FREQ_SEQ_02	Yes
3	HOP_FREQ_SEQ_03	Yes
4	HOP_FREQ_SEQ_04	Yes
5	HOP_FREQ_SEQ_05	Yes
6	HOP_FREQ_SEQ_06	Yes
7	HOP_FREQ_SEQ_07	Yes
8	HOP_FREQ_SEQ_08	Yes
9	HOP_FREQ_SEQ_09	No
10	HOP_FREQ_SEQ_10	Yes
11	HOP_FREQ_SEQ_11	Yes
12	HOP_FREQ_SEQ_12	Yes
13	HOP_FREQ_SEQ_13	Yes
14	HOP_FREQ_SEQ_14	Yes
15	HOP_FREQ_SEQ_15	No
16	HOP_FREQ_SEQ_16	Yes
17	HOP_FREQ_SEQ_17	Yes
18	HOP_FREQ_SEQ_18	No
19	HOP_FREQ_SEQ_19	Yes
20	HOP_FREQ_SEQ_20	Yes
21	HOP_FREQ_SEQ_21	Yes
22	HOP_FREQ_SEQ_22	Yes
23	HOP_FREQ_SEQ_23	Yes
24	HOP_FREQ_SEQ_24	Yes
25	HOP_FREQ_SEQ_25	Yes
26	HOP_FREQ_SEQ_26	Yes
27	HOP_FREQ_SEQ_27	Yes
28	HOP_FREQ_SEQ_28	Yes
29	HOP_FREQ_SEQ_29	Yes
30	HOP_FREQ_SEQ_30	Yes
		Detection Rate: 90 %

The Frequency Hopping Radar pattern shown in Appendix A.2

802.11ac (VHT40)

Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (Pulse per seconds)	Pulses per Burst	Pulse Repetition Interval (microseconds)	Detection
1	5510	10	1433	76	698	Yes
2	5520	20	1114	59	898	Yes
3	5500	2	1859	99	538	Yes
4	5494	9	1475	78	678	Yes
5	5509	14	1285	68	778	Yes
6	5494	16	1223	65	818	Yes
7	5513	1	1931	102	518	Yes
8	5508	18	1166	62	858	Yes
9	5519	21	1089	58	918	Yes
10	5525	6	1618	86	618	Yes
11	5527	7	1567	83	638	No
12	5521	13	1319	70	758	Yes
13	5509	12	1355	72	738	Yes
14	5517	3	1792	95	558	Yes
15	5519	19	1139	61	878	Yes
16	5510		848.2	45	1179	Yes
17	5511		1675	89	597	Yes
18	5497		429	23	2331	Yes
19	5524		896.9	48	1115	No
20	5517		525.8	28	1902	Yes
21	5512		509.2	27	1964	Yes
22	5492		639.4	34	1564	Yes
23	5494		504.8	27	1981	Yes
24	5523		855.4	46	1169	Yes
25	5518		346	19	2890	Yes
26	5512		759.3	41	1317	Yes
27	5512		446.6	24	2239	Yes
28	5515		458.9	25	2179	Yes
29	5504		357.8	19	2795	No
30	5521		435.9	24	2294	Yes
Detection Rate: 90 %						

802.11ac (VHT40)

Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	28	4	203	Yes
2	5520	26	3.3	172	Yes
3	5500	28	4.4	222	Yes
4	5520	26	2.9	162	Yes
5	5504	27	3.4	174	Yes
6	5523	27	3.6	177	Yes
7	5516	24	1.8	214	No
8	5521	29	5	169	Yes
9	5499	28	4.3	159	Yes
10	5527	28	4	187	No
11	5496	24	1.9	220	No
12	5506	25	2.7	154	Yes
13	5513	26	2.8	198	No
14	5521	26	2.7	161	Yes
15	5507	23	1.3	184	Yes
16	5495	25	2.6	164	Yes
17	5504	26	3.1	165	Yes
18	5499	24	2	202	Yes
19	5504	25	2.2	204	Yes
20	5493	24	1.9	175	Yes
21	5516	29	4.5	193	Yes
22	5500	26	3	155	Yes
23	5507	29	4.6	150	Yes
24	5512	23	1.2	192	Yes
25	5514	29	4.9	160	Yes
26	5520	25	2.3	151	No
27	5512	27	3.9	205	Yes
28	5493	29	4.8	216	Yes
29	5504	29	4.6	213	Yes
30	5497	27	3.4	176	Yes
					Detection Rate: 83.3 %

802.11ac (VHT40)

Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	18	9	221	No
2	5520	17	8.3	478	No
3	5500	18	9.4	463	Yes
4	5515	17	7.9	353	Yes
5	5526	17	8.4	200	No
6	5501	17	8.6	236	Yes
7	5504	16	6.8	408	Yes
8	5496	18	10	326	No
9	5492	18	9.3	283	Yes
10	5505	18	9	439	Yes
11	5523	16	6.9	371	Yes
12	5497	17	7.7	403	Yes
13	5506	17	7.8	292	Yes
14	5515	17	7.7	420	Yes
15	5507	16	6.3	431	No
16	5506	17	7.6	424	Yes
17	5514	17	8.1	434	Yes
18	5520	16	7	383	Yes
19	5523	16	7.2	495	Yes
20	5509	16	6.9	319	Yes
21	5502	18	9.5	440	No
22	5525	17	8	259	Yes
23	5522	18	9.6	443	Yes
24	5513	16	6.2	423	Yes
25	5521	18	9.9	464	Yes
26	5519	16	7.3	446	Yes
27	5525	18	8.9	279	Yes
28	5508	18	9.8	329	No
29	5500	18	9.6	272	Yes
30	5505	17	8.4	470	Yes
					Detection Rate: 76.7 %

802.11ac (VHT40)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	15	17.7	221	Yes
2	5520	14	16.1	478	Yes
3	5500	16	18.6	463	Yes
4	5507	14	15.2	353	Yes
5	5508	14	16.3	200	Yes
6	5506	15	16.9	236	Yes
7	5523	13	12.9	408	Yes
8	5523	16	19.9	326	No
9	5496	16	18.4	283	Yes
10	5498	15	17.8	439	No
11	5497	13	13.1	371	No
12	5528	14	14.8	403	No
13	5496	14	15	292	No
14	5495	14	14.9	420	Yes
15	5516	12	11.7	431	Yes
16	5496	13	14.5	424	Yes
17	5502	14	15.8	434	Yes
18	5516	13	13.3	383	Yes
19	5498	13	13.7	495	Yes
20	5497	13	13	319	Yes
21	5513	16	18.9	440	Yes
22	5514	14	15.4	259	Yes
23	5499	16	18.9	443	Yes
24	5512	12	11.6	423	Yes
25	5492	16	19.6	464	Yes
26	5528	13	13.9	446	Yes
27	5526	15	17.4	279	No
28	5506	16	19.5	329	No
29	5516	16	19.1	272	Yes
30	5514	15	16.4	470	Yes
					Detection Rate: 76.7%

802.11ac (VHT40)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	13	5510	LP_Signal_01	Yes
2	15	5510	LP_Signal_02	Yes
3	18	5510	LP_Signal_03	Yes
4	10	5510	LP_Signal_04	Yes
5	6	5510	LP_Signal_05	No
6	19	5510	LP_Signal_06	Yes
7	16	5510	LP_Signal_07	Yes
8	20	5510	LP_Signal_08	Yes
9	14	5510	LP_Signal_09	Yes
10	6	5510	LP_Signal_10	No
11	18	5498	LP_Signal_11	Yes
12	14	5497	LP_Signal_12	Yes
13	14	5497	LP_Signal_13	Yes
14	8	5494	LP_Signal_14	Yes
15	6	5493	LP_Signal_15	Yes
16	7	5494	LP_Signal_16	Yes
17	10	5495	LP_Signal_17	Yes
18	5	5493	LP_Signal_18	Yes
19	5	5493	LP_Signal_19	Yes
20	10	5495	LP_Signal_20	Yes
21	13	5524	LP_Signal_21	Yes
22	5	5527	LP_Signal_22	No
23	8	5526	LP_Signal_23	No
24	14	5523	LP_Signal_24	Yes
25	20	5521	LP_Signal_25	Yes
26	19	5521	LP_Signal_26	Yes
27	6	5527	LP_Signal_27	No
28	16	5523	LP_Signal_28	Yes
29	7	5526	LP_Signal_29	Yes
30	13	5524	LP_Signal_30	Yes
				Detection Rate: 83.3 %

The Long Pulse Radar pattern shown in Appendix A.1

802.11ac (VHT40)

Type 6 Radar Statistical Performances				
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	9	1	333.3	Yes
2	9	1	333.3	Yes
3	9	1	333.3	Yes
4	9	1	333.3	Yes
5	9	1	333.3	Yes
6	9	1	333.3	Yes
7	9	1	333.3	Yes
8	9	1	333.3	Yes
9	9	1	333.3	Yes
10	9	1	333.3	Yes
11	9	1	333.3	Yes
12	9	1	333.3	Yes
13	9	1	333.3	Yes
14	9	1	333.3	Yes
15	9	1	333.3	Yes
16	9	1	333.3	Yes
17	9	1	333.3	Yes
18	9	1	333.3	Yes
19	9	1	333.3	No
20	9	1	333.3	No
21	9	1	333.3	Yes
22	9	1	333.3	Yes
23	9	1	333.3	Yes
24	9	1	333.3	Yes
25	9	1	333.3	Yes
26	9	1	333.3	Yes
27	9	1	333.3	Yes
28	9	1	333.3	Yes
29	9	1	333.3	Yes
30	9	1	333.3	Yes
				Detection Rate: 93.3 %

802.11ac (VHT40)

Type 6 Radar Statistical Performances		
Trial #	Hopping Frequency Sequence Name	Detection
1	HOP_FREQ_SEQ_01	Yes
2	HOP_FREQ_SEQ_02	Yes
3	HOP_FREQ_SEQ_03	Yes
4	HOP_FREQ_SEQ_04	Yes
5	HOP_FREQ_SEQ_05	Yes
6	HOP_FREQ_SEQ_06	Yes
7	HOP_FREQ_SEQ_07	Yes
8	HOP_FREQ_SEQ_08	Yes
9	HOP_FREQ_SEQ_09	Yes
10	HOP_FREQ_SEQ_10	Yes
11	HOP_FREQ_SEQ_11	Yes
12	HOP_FREQ_SEQ_12	Yes
13	HOP_FREQ_SEQ_13	Yes
14	HOP_FREQ_SEQ_14	Yes
15	HOP_FREQ_SEQ_15	Yes
16	HOP_FREQ_SEQ_16	Yes
17	HOP_FREQ_SEQ_17	Yes
18	HOP_FREQ_SEQ_18	Yes
19	HOP_FREQ_SEQ_19	No
20	HOP_FREQ_SEQ_20	No
21	HOP_FREQ_SEQ_21	Yes
22	HOP_FREQ_SEQ_22	Yes
23	HOP_FREQ_SEQ_23	Yes
24	HOP_FREQ_SEQ_24	Yes
25	HOP_FREQ_SEQ_25	Yes
26	HOP_FREQ_SEQ_26	Yes
27	HOP_FREQ_SEQ_27	Yes
28	HOP_FREQ_SEQ_28	Yes
29	HOP_FREQ_SEQ_29	Yes
30	HOP_FREQ_SEQ_30	Yes
		Detection Rate: 93.3 %

The Frequency Hopping Radar pattern shown in Appendix A.2

802.11ac (VHT80)

Type 1 Radar Statistical Performances						
Trial #	Test Frequency (MHz)	Pulse Repetition Frequency Number (1 to 23)	Pulse Repetition Frequency (Pulse per seconds)	Pulses per Burst	Pulse Repetition Interval (microseconds)	Detection
1	5530	10	1433	76	698	Yes
2	5540	20	1114	59	898	No
3	5560	2	1859	99	538	Yes
4	5520	9	1475	78	678	Yes
5	5500	14	1285	68	778	Yes
6	5524	16	1223	65	818	Yes
7	5555	1	1931	102	518	Yes
8	5530	18	1166	62	858	Yes
9	5551	21	1089	58	918	Yes
10	5562	6	1618	86	618	Yes
11	5566	7	1567	83	638	Yes
12	5545	13	1319	70	758	Yes
13	5526	12	1355	72	738	Yes
14	5559	3	1792	95	558	No
15	5514	19	1139	61	878	Yes
16	5566		848.2	45	1179	Yes
17	5554		1675	89	597	Yes
18	5515		429	23	2331	Yes
19	5558		896.9	48	1115	Yes
20	5560		525.8	28	1902	Yes
21	5512		509.2	27	1964	Yes
22	5568		639.4	34	1564	Yes
23	5522		504.8	27	1981	Yes
24	5499		855.4	46	1169	Yes
25	5559		346	19	2890	Yes
26	5553		759.3	41	1317	Yes
27	5524		446.6	24	2239	Yes
28	5530		458.9	25	2179	Yes
29	5550		357.8	19	2795	Yes
30	5493		435.9	24	2294	Yes
						Detection Rate: 93.3 %

802.11ac (VHT80)

Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5530	28	4	203	Yes
2	5540	26	3.3	172	Yes
3	5560	28	4.4	222	Yes
4	5520	26	2.9	162	Yes
5	5500	27	3.4	174	Yes
6	5509	27	3.6	177	Yes
7	5534	24	1.8	214	Yes
8	5539	29	5	169	No
9	5553	28	4.3	159	Yes
10	5494	28	4	187	Yes
11	5505	24	1.9	220	Yes
12	5536	25	2.7	154	No
13	5538	26	2.8	198	Yes
14	5518	26	2.7	161	Yes
15	5531	23	1.3	184	Yes
16	5511	25	2.6	164	Yes
17	5500	26	3.1	165	No
18	5511	24	2	202	Yes
19	5523	25	2.2	204	Yes
20	5565	24	1.9	175	Yes
21	5538	29	4.5	193	Yes
22	5508	26	3	155	Yes
23	5533	29	4.6	150	No
24	5510	23	1.2	192	Yes
25	5548	29	4.9	160	Yes
26	5498	25	2.3	151	Yes
27	5502	27	3.9	205	Yes
28	5536	29	4.8	216	Yes
29	5558	29	4.6	213	Yes
30	5527	27	3.4	176	Yes
					Detection Rate: 86.7 %

802.11ac (VHT80)

Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5530	18	9	221	No
2	5540	17	8.3	478	Yes
3	5560	18	9.4	463	Yes
4	5520	17	7.9	353	Yes
5	5500	17	8.4	200	Yes
6	5531	17	8.6	236	Yes
7	5558	16	6.8	408	Yes
8	5523	18	10	326	Yes
9	5545	18	9.3	283	No
10	5511	18	9	439	Yes
11	5512	16	6.9	371	No
12	5525	17	7.7	403	Yes
13	5527	17	7.8	292	Yes
14	5524	17	7.7	420	No
15	5503	16	6.3	431	Yes
16	5549	17	7.6	424	No
17	5519	17	8.1	434	Yes
18	5524	16	7	383	Yes
19	5507	16	7.2	495	Yes
20	5531	16	6.9	319	Yes
21	5553	18	9.5	440	Yes
22	5509	17	8	259	No
23	5549	18	9.6	443	Yes
24	5529	16	6.2	423	No
25	5501	18	9.9	464	Yes
26	5535	16	7.3	446	Yes
27	5539	18	8.9	279	Yes
28	5534	18	9.8	329	No
29	5535	18	9.6	272	Yes
30	5550	17	8.4	470	Yes
					Detection Rate: 73.3 %

802.11ac (VHT80)

Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5530	15	17.7	221	Yes
2	5540	14	16.1	478	No
3	5560	16	18.6	463	Yes
4	5520	14	15.2	353	No
5	5500	14	16.3	200	Yes
6	5545	15	16.9	236	Yes
7	5527	13	12.9	408	No
8	5494	16	19.9	326	Yes
9	5559	16	18.4	283	Yes
10	5538	15	17.8	439	Yes
11	5542	13	13.1	371	Yes
12	5494	14	14.8	403	No
13	5504	14	15	292	Yes
14	5496	14	14.9	420	Yes
15	5517	12	11.7	431	Yes
16	5510	13	14.5	424	Yes
17	5515	14	15.8	434	Yes
18	5498	13	13.3	383	No
19	5568	13	13.7	495	Yes
20	5501	13	13	319	Yes
21	5547	16	18.9	440	Yes
22	5528	14	15.4	259	Yes
23	5550	16	18.9	443	No
24	5525	12	11.6	423	No
25	5510	16	19.6	464	Yes
26	5506	13	13.9	446	Yes
27	5548	15	17.4	279	No
28	5528	16	19.5	329	Yes
29	5521	16	19.1	272	Yes
30	5533	15	16.4	470	Yes
					Detection Rate: 73.3 %

802.11ac (VHT80)

Type 5 Radar Statistical Performances				
Trial #	Minimum Chirp Width(MHz)	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	13	5530	LP_Signal_01	YES
2	15	5530	LP_Signal_02	YES
3	18	5530	LP_Signal_03	NO
4	10	5530	LP_Signal_04	YES
5	6	5530	LP_Signal_05	YES
6	19	5530	LP_Signal_06	YES
7	16	5530	LP_Signal_07	YES
8	20	5530	LP_Signal_08	YES
9	14	5530	LP_Signal_09	NO
10	6	5530	LP_Signal_10	YES
11	18	5498	LP_Signal_11	YES
12	14	5497	LP_Signal_12	YES
13	14	5497	LP_Signal_13	YES
14	8	5494	LP_Signal_14	YES
15	6	5493	LP_Signal_15	YES
16	7	5494	LP_Signal_16	YES
17	10	5495	LP_Signal_17	NO
18	5	5493	LP_Signal_18	NO
19	5	5493	LP_Signal_19	YES
20	10	5495	LP_Signal_20	YES
21	13	5564	LP_Signal_21	YES
22	5	5567	LP_Signal_22	YES
23	8	5566	LP_Signal_23	YES
24	14	5563	LP_Signal_24	YES
25	20	5561	LP_Signal_25	YES
26	19	5561	LP_Signal_26	YES
27	6	5567	LP_Signal_27	YES
28	16	5563	LP_Signal_28	YES
29	7	5566	LP_Signal_29	YES
30	13	5564	LP_Signal_30	NO
				Detection Rate: 83.3 %

The Long Pulse Radar pattern shown in Appendix A.1

802.11ac (VHT80)

Type 6 Radar Statistical Performances				
Trial #	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	9	1	333.3	Yes
2	9	1	333.3	Yes
3	9	1	333.3	Yes
4	9	1	333.3	Yes
5	9	1	333.3	Yes
6	9	1	333.3	Yes
7	9	1	333.3	Yes
8	9	1	333.3	Yes
9	9	1	333.3	Yes
10	9	1	333.3	Yes
11	9	1	333.3	Yes
12	9	1	333.3	Yes
13	9	1	333.3	Yes
14	9	1	333.3	No
15	9	1	333.3	Yes
16	9	1	333.3	Yes
17	9	1	333.3	Yes
18	9	1	333.3	Yes
19	9	1	333.3	Yes
20	9	1	333.3	Yes
21	9	1	333.3	Yes
22	9	1	333.3	Yes
23	9	1	333.3	Yes
24	9	1	333.3	No
25	9	1	333.3	Yes
26	9	1	333.3	Yes
27	9	1	333.3	Yes
28	9	1	333.3	Yes
29	9	1	333.3	Yes
30	9	1	333.3	No
				Detection Rate: 90 %

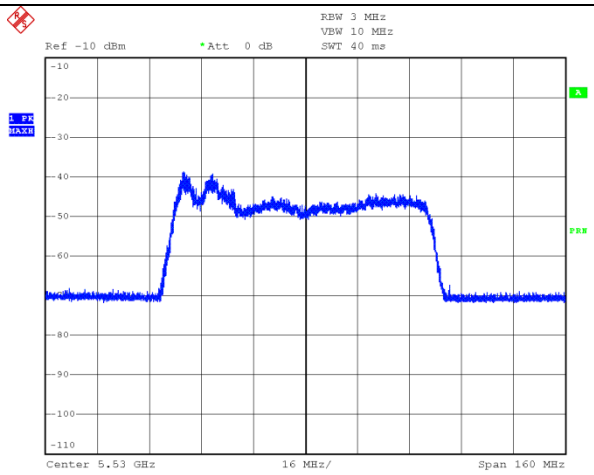
802.11ac (VHT80)

Type 6 Radar Statistical Performances		
Trial #	Hopping Frequency Sequence Name	Detection
1	HOP_FREQ_SEQ_01	Yes
2	HOP_FREQ_SEQ_02	Yes
3	HOP_FREQ_SEQ_03	Yes
4	HOP_FREQ_SEQ_04	Yes
5	HOP_FREQ_SEQ_05	Yes
6	HOP_FREQ_SEQ_06	Yes
7	HOP_FREQ_SEQ_07	Yes
8	HOP_FREQ_SEQ_08	Yes
9	HOP_FREQ_SEQ_09	Yes
10	HOP_FREQ_SEQ_10	Yes
11	HOP_FREQ_SEQ_11	Yes
12	HOP_FREQ_SEQ_12	Yes
13	HOP_FREQ_SEQ_13	Yes
14	HOP_FREQ_SEQ_14	No
15	HOP_FREQ_SEQ_15	Yes
16	HOP_FREQ_SEQ_16	Yes
17	HOP_FREQ_SEQ_17	Yes
18	HOP_FREQ_SEQ_18	Yes
19	HOP_FREQ_SEQ_19	Yes
20	HOP_FREQ_SEQ_20	Yes
21	HOP_FREQ_SEQ_21	Yes
22	HOP_FREQ_SEQ_22	Yes
23	HOP_FREQ_SEQ_23	Yes
24	HOP_FREQ_SEQ_24	No
25	HOP_FREQ_SEQ_25	Yes
26	HOP_FREQ_SEQ_26	Yes
27	HOP_FREQ_SEQ_27	Yes
28	HOP_FREQ_SEQ_28	Yes
29	HOP_FREQ_SEQ_29	Yes
30	HOP_FREQ_SEQ_30	No
		Detection Rate: 90 %

The Frequency Hopping Radar pattern shown in Appendix A.2

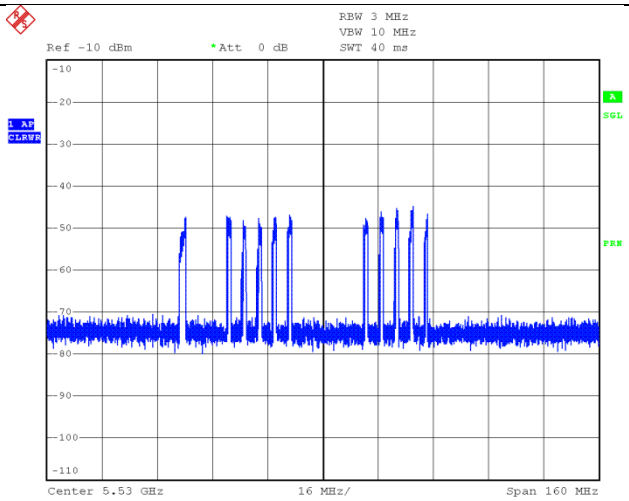
6.2.5 Non- Occupancy Period

1) Test results demonstrating an associated client link is established with the master on a test frequency.



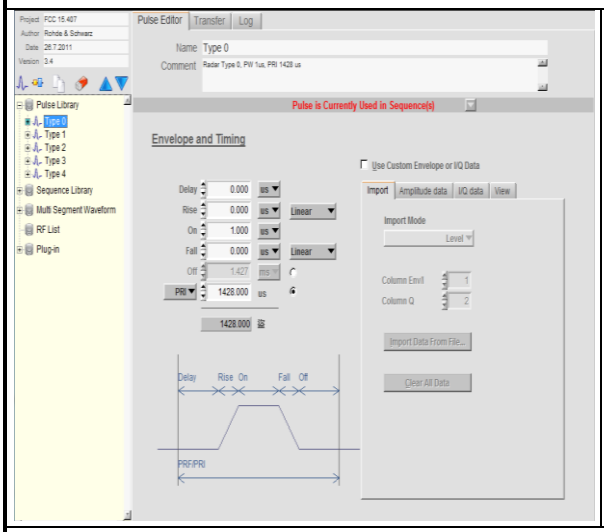
EUT (master) links with Client on 5530MHz

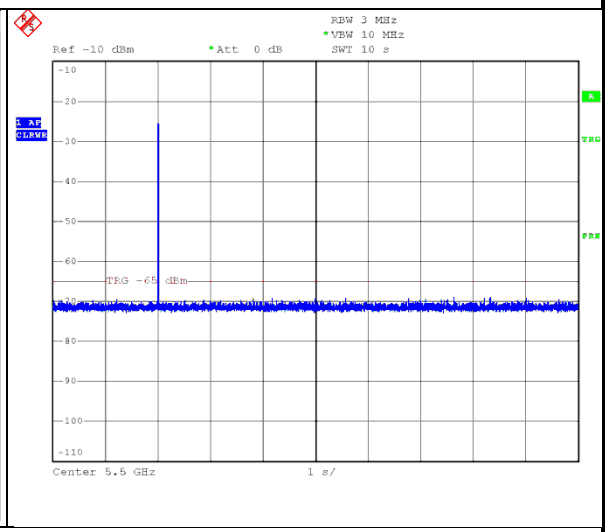
2) The master and DFS-certified client device are associated, and system testing will be performed with channel-loading for a non-occupancy period test.



Client performed with channel-loading via master.

3). The device transmits one type of radar as specified in the DFS Order.





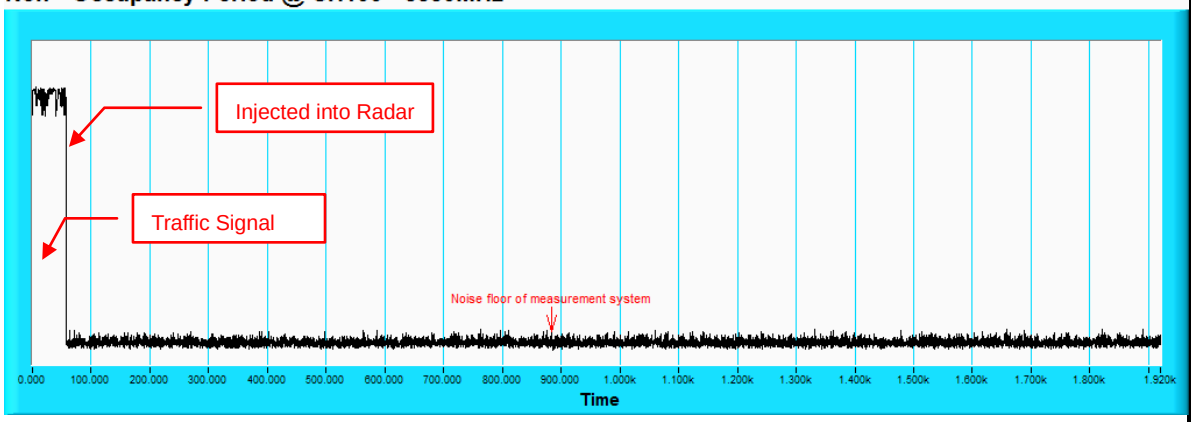
Radar 0 is used to test during DFS testing.

4) The test frequency has been monitored to ensure no transmission of any type has occurred for 30 minutes;

Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear;

5)An analyzer plot that contains a single 30-minute sweep on the original test frequency.

Non - Occupancy Period @ CH106 - 5530MHz



7. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab:
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The address and road map of all our labs can be found in our web site also.

8. APPENDIX-A

RADAR TEST SIGNAL

A.1 The Long Pulse Radar Pattern

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_01

Number of Bursts in Trial: 14

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	13	75.9	1288	1131	-
2	2	13	81.6	1676	1707	-
3	3	13	92.8	1136	1497	1687
4	1	13	66.6	1127	-	-
5	1	13	53.7	1242	-	-
6	3	13	96	1792	1439	1759
7	3	13	86.6	1783	1429	1476
8	3	13	98.3	1530	1084	1965
9	2	13	79.3	1837	1727	-
10	1	13	53.3	1323	-	-
11	3	13	93.5	1412	1220	1901
12	2	13	80.8	1972	1501	-
13	2	13	78.5	1000	1881	-
14	1	13	61.6	1471	-	-
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_02

Number of Bursts in Trial: 16

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	15	54	1104	-	-
2	1	15	57.4	1244	-	-
3	1	15	66.3	1929	-	-
4	1	15	52.7	1405	-	-
5	1	15	51.4	1849	-	-
6	2	15	67.4	1864	1150	-
7	2	15	77.2	1884	1666	-
8	1	15	51.8	1224	-	-
9	1	15	59.4	1235	-	-
10	2	15	78.7	1955	1022	-
11	3	15	98.7	1134	1297	1149
12	3	15	94.4	1602	1683	1956
13	1	15	55.5	1331	-	-
14	3	15	87.2	1318	1567	1535
15	1	15	56.8	1638	-	-
16	2	15	77.5	1488	1065	-
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_03

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	18	99.4	1878	1913	1777
2	3	18	93.9	1990	1890	1059
3	2	18	76.2	1658	1138	-
4	1	18	65.7	1801	-	-
5	1	18	59.1	1765	-	-
6	1	18	66.3	1354	-	-
7	3	18	90	1936	1579	1420
8	1	18	62	1994	-	-
9	2	18	78.5	1855	1025	-
10	2	18	66.9	1301	1531	-
11	2	18	74.3	1176	1003	-
12	1	18	66.4	1370	-	-
13	2	18	77.8	1820	1299	-
14	3	18	87.3	1550	1406	1711
15	3	18	88.1	1291	1919	1035
16	1	18	62.1	1239	-	-
17	3	18	88	1492	1107	1931
18	2	18	83.1	1336	1993	-
19	2	18	70.8	1147	1619	-
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_04

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	10	97	1998	1498	1639
2	3	10	96.1	1248	1749	1389
3	2	10	78.9	1005	1419	-
4	1	10	53.3	1543	-	-
5	1	10	56.8	1036	-	-
6	3	10	89.9	1716	1766	1600
7	2	10	74	1873	1070	-
8	2	10	72.1	1198	1511	-
9	1	10	64	1252	-	-
10	2	10	67.9	1601	1343	-
11	1	10	59.4	1474	-	-
12	3	10	90.5	1690	1152	1581
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_05

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	6	99.5	1340	1045	1744
2	3	6	91.4	1880	1937	1788
3	1	6	51.7	1933	-	-
4	1	6	54	1366	-	-
5	3	6	99.6	1122	1324	1163
6	1	6	54.6	1798	-	-
7	1	6	62.7	1240	-	-
8	1	6	52.5	1898	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_06

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	19	87.8	1168	1255	1203
2	2	19	67.5	1524	1894	-
3	1	19	54.3	1757	-	-
4	2	19	74.3	1082	1058	-
5	3	19	84.5	1266	1795	1891
6	3	19	93.2	1620	1397	1408
7	1	19	60.8	1165	-	-
8	2	19	74	1813	1850	-
9	2	19	72.2	1810	1920	-
10	3	19	90.7	1627	1174	1089
11	3	19	86.6	1814	1057	1661
12	1	19	56.3	1751	-	-
13	2	19	72.5	2000	1968	-
14	1	19	66.3	1012	-	-
15	1	19	59.9	1958	-	-
16	2	19	81.5	1175	1472	-
17	2	19	70.4	1487	1883	-
18	3	19	90.5	1942	1838	1939
19	2	19	69.4	1645	1322	-
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_07

Number of Bursts in Trial: 17

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	16	75.8	1570	1391	-
2	3	16	85.1	1778	1454	1311
3	3	16	94.2	1729	1355	1868
4	2	16	75.9	1493	1283	-
5	3	16	94.1	1081	1367	1442
6	2	16	69.1	1080	1700	-
7	2	16	76.5	1309	1520	-
8	2	16	74.8	1760	1608	-
9	2	16	75.1	1694	1233	-
10	2	16	76.1	1948	1121	-
11	2	16	83.2	1335	1917	-
12	3	16	88.5	1721	1495	1105
13	1	16	57.5	1514	-	-
14	2	16	75.2	1534	1460	-
15	2	16	80.5	1693	1525	-
16	2	16	83.1	1186	1399	-
17	2	16	79.5	1465	1120	-
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_08

Number of Bursts in Trial: 20

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	20	91.7	1441	1113	1289
2	1	20	54.6	1630	-	-
3	2	20	68.9	1378	1564	-
4	1	20	63.6	1319	-	-
5	2	20	79.1	1215	1699	-
6	3	20	100	1545	1761	1987
7	3	20	100	1762	1204	1790
8	2	20	73.4	1229	1773	-
9	2	20	81.4	1930	1166	-
10	1	20	53	1469	-	-
11	2	20	67.9	1871	1997	-
12	2	20	83.1	1827	1341	-
13	2	20	81.4	1209	1557	-
14	2	20	70.2	1459	1781	-
15	3	20	83.6	1261	1197	1628
16	1	20	59.1	1344	-	-
17	3	20	85.2	1796	1552	1230
18	3	20	86.9	1991	1701	1708
19	2	20	67.4	1016	1954	-
20	3	20	93.6	1039	1448	1357

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_09

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	14	91.6	1415	1513	1709
2	1	14	60.2	1974	-	-
3	1	14	55.2	1073	-	-
4	1	14	58	1383	-	-
5	2	14	68.3	1992	1231	-
6	3	14	85.8	1006	1470	1457
7	3	14	98	1983	1226	1854
8	3	14	89.1	1578	1673	1435
9	1	14	52.1	1430	-	-
10	2	14	79	1770	1416	-
11	2	14	81.1	1232	1126	-
12	3	14	92	1302	1763	1791
13	2	14	83.2	1237	1395	-
14	2	14	80.4	1110	1521	-
15	3	14	89.9	1554	1225	1555
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_10

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	6	65.8	1585	-	-
2	2	6	71.6	1806	1805	-
3	1	6	55.7	1799	-	-
4	3	6	96.8	1787	1180	1728
5	3	6	85.1	1440	1872	1686
6	3	6	94.3	1982	1612	1135
7	1	6	52.5	1533	-	-
8	1	6	62.7	1797	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_11

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	18	66.1	1305	-	-
2	1	18	58.6	1598	-	-
3	3	18	91.8	1404	1117	1681
4	3	18	93.7	1473	1062	1924
5	1	18	55.8	1462	-	-
6	3	18	99.6	1674	1629	1276
7	2	18	79.4	1351	1433	-
8	2	18	72.4	1834	1922	-
9	3	18	88.4	1273	1489	1400
10	1	18	63	1893	-	-
11	3	18	89.5	1285	1553	1500
12	3	18	87.9	1274	1250	1876
13	2	18	81.5	1688	1828	-
14	3	18	99.4	1054	1506	1425
15	1	18	60.9	1303	-	-
16	3	18	95.4	1866	1109	1207
17	3	18	93.3	1719	1067	1607
18	1	18	52	1649	-	-
19	1	18	60.9	1424	-	-
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_12

Number of Bursts in Trial: 16

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	14	71.2	1076	1452	-
2	1	14	52.4	1026	-	-
3	2	14	71.9	1364	1597	-
4	2	14	75.9	1944	1566	-
5	3	14	100	1841	1840	1624
6	1	14	50.9	1599	-	-
7	2	14	80.4	1304	1879	-
8	2	14	67.8	1300	1317	-
9	3	14	87.5	1328	1663	1278
10	2	14	79.4	1218	1809	-
11	3	14	90.2	1949	1434	1647
12	2	14	82.4	1087	1752	-
13	3	14	99.4	1656	1614	1074
14	3	14	89.1	1911	1409	1861
15	3	14	97.6	1023	1447	1310
16	3	14	89.2	1772	1875	1349
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_13

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	14	99.5	1995	1486	1715
2	2	14	76.6	1010	1586	-
3	3	14	92.2	1407	1144	1874
4	3	14	92.1	1945	1692	1835
5	3	14	89.5	1910	1722	1356
6	2	14	72.8	1793	1892	-
7	1	14	56.6	1664	-	-
8	3	14	92.8	1774	1196	1943
9	2	14	79	1851	1390	-
10	3	14	93.8	1989	1966	1190
11	3	14	92.6	1484	1677	1882
12	1	14	58.3	1037	-	-
13	1	14	66.4	1669	-	-
14	1	14	60.7	1365	-	-
15	1	14	60.4	1219	-	-
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_14

Number of Bursts in Trial: 11

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	8	53.4	1745	-	-
2	2	8	83.1	1345	1115	-
3	3	8	83.4	1279	1210	1969
4	2	8	81.3	1271	1125	-
5	1	8	60.2	1013	-	-
6	3	8	94.3	1588	1179	1467
7	2	8	82.7	1032	1583	-
8	3	8	91.8	1818	1723	1580
9	3	8	92.7	1529	1885	1128
10	2	8	75.4	1836	1327	-
11	2	8	81.8	1710	1009	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_15

Number of Bursts in Trial: 9

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	6	91.9	1083	1905	1726
2	3	6	93	1334	1754	1313
3	3	6	98.2	1295	1463	1234
4	2	6	80.7	1697	1921	-
5	3	6	90.2	1644	1143	1095
6	3	6	98.8	1571	1432	1739
7	3	6	83.9	1028	1140	1928
8	1	6	60.2	1559	-	-
9	1	6	61.4	1507	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_16

Number of Bursts in Trial: 9

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	7	68.8	1281	1735	-
2	1	7	51.1	1071	-	-
3	1	7	59.9	1392	-	-
4	2	7	71.4	1384	1348	-
5	3	7	98.5	1603	1496	1541
6	3	7	95.9	1049	1667	1193
7	2	7	79.1	1061	1294	-
8	3	7	97	1714	1713	1843
9	1	7	56.1	1859	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_17

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	10	58.4	1542	-	-
2	2	10	72	1286	1494	-
3	1	10	51.3	1075	-	-
4	2	10	76.7	1675	1030	-
5	2	10	69	1258	1616	-
6	3	10	86.7	1815	1853	1730
7	3	10	99.4	1130	1398	1213
8	1	10	65.9	1338	-	-
9	1	10	57.7	1646	-	-
10	3	10	87.3	1417	1160	1569
11	3	10	95	1403	1830	1523
12	2	10	66.7	1986	1112	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_18

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	5	84.8	1703	1449	1665
2	3	5	99.5	1008	1051	1952
3	1	5	66.6	1746	-	-
4	1	5	57.7	1191	-	-
5	2	5	80.9	1491	1635	-
6	1	5	63.6	1696	-	-
7	3	5	94.7	1951	1678	1153
8	3	5	98.3	1249	1691	1776
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_19

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	5	53.6	1923	-	-
2	3	5	93.8	1361	1330	1561
3	2	5	74.5	1860	1517	-
4	1	5	56.2	1643	-	-
5	3	5	99.3	1182	1046	1195
6	3	5	91.7	1654	1808	1260
7	1	5	52.2	1753	-	-
8	2	5	73.1	1618	1091	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_20

Number of Bursts in Trial: 12

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	10	62	1976	-	-
2	2	10	82.9	1371	1194	-
3	1	10	64.4	1102	-	-
4	1	10	65.1	1268	-	-
5	3	10	85.7	1844	1648	1589
6	3	10	85.6	1363	1241	1807
7	3	10	84.3	1048	1590	1270
8	1	10	53.4	1522	-	-
9	2	10	80.4	1167	1804	-
10	1	10	65.2	1372	-	-
11	2	10	73.9	1593	1263	-
12	1	10	61.4	1653	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_21

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	13	81.4	1129	1698	-
2	2	13	74.2	1512	1172	-
3	3	13	91	1359	1740	1066
4	3	13	96.6	1015	1927	1743
5	1	13	65.3	1985	-	-
6	3	13	94.8	1099	1156	1097
7	3	13	84	1786	1078	1246
8	1	13	51.7	1007	-	-
9	3	13	93.4	1393	1505	1934
10	1	13	63.7	1002	-	-
11	2	13	67.5	1386	1572	-
12	2	13	82.2	1040	1718	-
13	3	13	84.4	1360	1764	1742
14	3	13	98.7	1438	1321	1733
15	1	13	52.5	1738	-	-
16						
17						
18						
19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_22

Number of Bursts in Trial: 8

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	5	64.6	1329	-	-
2	3	5	97.6	1362	1171	1725
3	3	5	95.2	1973	1332	1216
4	2	5	77.5	1388	1183	-
5	2	5	77.4	1926	1287	-
6	3	5	84.4	1205	1124	1895
7	2	5	76.2	1562	1346	-
8	1	5	53.9	1915	-	-
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_23

Number of Bursts in Trial: 10

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	8	74.9	1609	1456	-
2	2	8	72.9	1410	1794	-
3	2	8	79.8	1847	1546	-
4	2	8	81	1337	1539	-
5	3	8	99.2	1622	1296	1042
6	1	8	65.2	1610	-	-
7	1	8	63.2	1888	-	-
8	2	8	77.3	1201	1413	-
9	1	8	65.7	1532	-	-
10	3	8	89.7	1750	1824	1537
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_24

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	14	83.2	1682	1284	-
2	2	14	66.9	1164	1414	-
3	2	14	79.4	1702	1857	-
4	1	14	52.7	1342	-	-
5	2	14	77.9	1660	1093	-
6	3	14	90.9	1133	1812	1451
7	1	14	54.5	1547	-	-
8	1	14	57.6	1326	-	-
9	1	14	50.5	1831	-	-
10	2	14	79.8	1670	1418	-
11	3	14	98.4	1426	1961	1200
12	1	14	65.4	1984	-	-
13	2	14	82.3	1282	1869	-
14	2	14	80.7	1387	1756	-
15	3	14	87	1784	1613	1106
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_25

Number of Bursts in Trial: 20

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	20	83.1	1576	1887	-
2	2	20	69.6	1941	1842	-
3	1	20	55.9	1633	-	-
4	3	20	85.3	1173	1050	1085
5	3	20	87.8	1996	1689	1510
6	3	20	96.6	1839	1170	1101
7	2	20	77	1918	1503	-
8	1	20	55.1	1502	-	-
9	2	20	70.2	1068	1565	-
10	1	20	66.1	1775	-	-
11	2	20	73.7	1056	1540	-
12	3	20	85.6	1755	1069	1189
13	1	20	63.7	1257	-	-
14	3	20	84.8	1549	1422	1385
15	3	20	86.5	1817	1504	1306
16	2	20	80.1	1401	1671	-
17	3	20	86.4	1169	1055	1445
18	1	20	51.8	1103	-	-
19	3	20	92.6	1816	1485	1277
20	1	20	51.2	1027	-	-

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_26

Number of Bursts in Trial: 19

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	19	81.8	1253	1096	-
2	2	19	73.2	1374	1833	-
3	1	19	61.8	1148	-	-
4	2	19	69.6	1214	1582	-
5	1	19	54.3	1758	-	-
6	2	19	72.9	1568	1098	-
7	2	19	69.8	1822	1431	-
8	3	19	83.8	1333	1577	1053
9	3	19	96.5	1769	1468	1908
10	1	19	55.6	1450	-	-
11	1	19	59.4	1962	-	-
12	3	19	90.6	1293	1020	1515
13	3	19	99.1	1980	1536	1611
14	3	19	94.1	1017	1018	1650
15	1	19	66.1	1526	-	-
16	3	19	95.6	1947	1033	1748
17	1	19	57.3	1970	-	-
18	3	19	92	1455	1604	1642
19	2	19	78	1396	1217	-
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_27

Number of Bursts in Trial: 9

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	6	93.2	1118	1377	1925
2	1	6	56.1	1865	-	-
3	1	6	61.7	1312	-	-
4	1	6	59.2	1957	-	-
5	3	6	86.7	1528	1031	1556
6	1	6	54.2	1747	-	-
7	1	6	55.2	1446	-	-
8	3	6	90.9	1826	1280	1662
9	2	6	72.8	1145	1634	-
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_28

Number of Bursts in Trial: 17

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	16	64.1	1902	-	-
2	3	16	99.7	1243	1877	1480
3	1	16	61.9	1381	-	-
4	1	16	63.6	1741	-	-
5	3	16	89.8	1846	1437	1903
6	2	16	79.5	1509	1684	-
7	1	16	55.2	1789	-	-
8	1	16	59.8	1967	-	-
9	1	16	57.7	1478	-	-
10	3	16	86.3	1832	1999	1428
11	2	16	81	1041	1734	-
12	1	16	64.8	1573	-	-
13	2	16	76.8	1595	1043	-
14	3	16	93.3	1116	1292	1632
15	1	16	58.6	1548	-	-
16	1	16	64.5	1320	-	-
17	1	16	56.6	1358	-	-
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_29

Number of Bursts in Trial: 9

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	7	83.1	1181	1141	-
2	3	7	86.6	1516	1325	1461
3	2	7	69.7	1785	1950	-
4	2	7	68.7	1380	1916	-
5	3	7	90.9	1158	1222	1767
6	2	7	72.8	1935	1862	-
7	3	7	94.4	1262	1657	1800
8	2	7	73.8	1251	1780	-
9	3	7	99.4	1606	1077	1852
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_30

Number of Bursts in Trial: 15

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	13	95.1	1247	1592	1151
2	2	13	70	1154	1594	-
3	1	13	63.9	1960	-	-
4	2	13	75.2	1199	1680	-
5	1	13	65.4	1640	-	-
6	3	13	99.1	1896	1146	1978
7	2	13	82.1	1187	1655	-
8	3	13	97	1825	1184	1245
9	2	13	69.7	1544	1519	-
10	3	13	96.9	1475	1848	1421
11	3	13	93.8	1339	1019	1863
12	3	13	95.9	1227	1014	1139
13	1	13	50.8	1907	-	-
14	2	13	69.5	1221	1768	-
15	3	13	88.8	1427	1038	1803
16						
17						
18						
19						
20						

A.2 The Frequency Hopping Radar pattern

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_01							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.551G	2	5.488G	3	5.414G	4	5.690G
5	5.570G	6	5.335G	7	5.581G	8	5.429G
9	5.706G	10	5.391G	11	5.356G	12	5.431G
13	5.442G	14	5.666G	15	5.689G	16	5.338G
17	5.286G	18	5.603G	19	5.399G	20	5.514G
21	5.340G	22	5.557G	23	5.313G	24	5.482G
25	5.680G	26	5.427G	27	5.674G	28	5.713G
29	5.522G	30	5.494G	31	5.509G	32	5.701G
33	5.425G	34	5.309G	35	5.504G	36	5.694G
37	5.564G	38	5.692G	39	5.327G	40	5.434G
41	5.478G	42	5.622G	43	5.517G	44	5.477G
45	5.515G	46	5.578G	47	5.330G	48	5.471G
49	5.271G	50	5.326G	51	5.655G	52	5.707G
53	5.274G	54	5.290G	55	5.552G	56	5.639G
57	5.405G	58	5.617G	59	5.420G	60	5.709G
61	5.276G	62	5.486G	63	5.556G	64	5.407G
65	5.621G	66	5.467G	67	5.668G	68	5.562G
69	5.536G	70	5.328G	71	5.490G	72	5.343G
73	5.699G	74	5.649G	75	5.583G	76	5.624G
77	5.499G	78	5.567G	79	5.720G	80	5.673G
81	5.357G	82	5.677G	83	5.629G	84	5.652G
85	5.685G	86	5.545G	87	5.613G	88	5.612G
89	5.620G	90	5.458G	91	5.658G	92	5.656G
93	5.535G	94	5.575G	95	5.333G	96	5.498G
97	5.566G	98	5.362G	99	5.625G	100	5.372G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_02							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.700G	2	5.693G	3	5.590G	4	5.669G
5	5.455G	6	5.362G	7	5.557G	8	5.351G
9	5.441G	10	5.320G	11	5.685G	12	5.567G
13	5.561G	14	5.562G	15	5.433G	16	5.621G
17	5.403G	18	5.325G	19	5.305G	20	5.524G
21	5.679G	22	5.722G	23	5.560G	24	5.696G
25	5.310G	26	5.572G	27	5.515G	28	5.477G
29	5.661G	30	5.619G	31	5.699G	32	5.532G
33	5.277G	34	5.523G	35	5.468G	36	5.528G
37	5.632G	38	5.343G	39	5.510G	40	5.711G
41	5.655G	42	5.385G	43	5.670G	44	5.719G
45	5.673G	46	5.461G	47	5.313G	48	5.612G
49	5.505G	50	5.694G	51	5.347G	52	5.355G
53	5.558G	54	5.489G	55	5.345G	56	5.642G
57	5.358G	58	5.394G	59	5.447G	60	5.563G
61	5.338G	62	5.538G	63	5.635G	64	5.419G
65	5.401G	66	5.437G	67	5.509G	68	5.678G
69	5.552G	70	5.623G	71	5.328G	72	5.499G
73	5.620G	74	5.717G	75	5.463G	76	5.360G
77	5.293G	78	5.412G	79	5.404G	80	5.645G
81	5.617G	82	5.350G	83	5.508G	84	5.639G
85	5.283G	86	5.672G	87	5.671G	88	5.565G
89	5.398G	90	5.473G	91	5.474G	92	5.370G
93	5.383G	94	5.395G	95	5.724G	96	5.570G
97	5.553G	98	5.389G	99	5.327G	100	5.402G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_03							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.616G	2	5.593G	3	5.412G	4	5.699G
5	5.355G	6	5.583G	7	5.352G	8	5.553G
9	5.580G	10	5.639G	11	5.317G	12	5.519G
13	5.467G	14	5.401G	15	5.554G	16	5.420G
17	5.568G	18	5.643G	19	5.584G	20	5.558G
21	5.448G	22	5.533G	23	5.516G	24	5.618G
25	5.418G	26	5.527G	27	5.492G	28	5.426G
29	5.693G	30	5.447G	31	5.398G	32	5.451G
33	5.499G	34	5.678G	35	5.373G	36	5.430G
37	5.393G	38	5.548G	39	5.367G	40	5.518G
41	5.478G	42	5.428G	43	5.705G	44	5.574G
45	5.612G	46	5.377G	47	5.346G	48	5.356G
49	5.572G	50	5.720G	51	5.406G	52	5.510G
53	5.329G	54	5.301G	55	5.559G	56	5.621G
57	5.295G	58	5.692G	59	5.489G	60	5.668G
61	5.495G	62	5.493G	63	5.434G	64	5.358G
65	5.400G	66	5.353G	67	5.395G	68	5.535G
69	5.682G	70	5.411G	71	5.354G	72	5.595G
73	5.537G	74	5.695G	75	5.631G	76	5.701G
77	5.526G	78	5.582G	79	5.321G	80	5.504G
81	5.465G	82	5.700G	83	5.421G	84	5.432G
85	5.388G	86	5.360G	87	5.649G	88	5.672G
89	5.304G	90	5.469G	91	5.472G	92	5.361G
93	5.542G	94	5.509G	95	5.604G	96	5.587G
97	5.461G	98	5.323G	99	5.575G	100	5.619G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_04							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.315G	2	5.385G	3	5.544G	4	5.527G
5	5.637G	6	5.499G	7	5.405G	8	5.595G
9	5.382G	10	5.443G	11	5.423G	12	5.691G
13	5.380G	14	5.650G	15	5.305G	16	5.411G
17	5.294G	18	5.655G	19	5.398G	20	5.693G
21	5.474G	22	5.542G	23	5.337G	24	5.432G
25	5.555G	26	5.644G	27	5.625G	28	5.410G
29	5.379G	30	5.298G	31	5.682G	32	5.507G
33	5.275G	34	5.510G	35	5.310G	36	5.641G
37	5.616G	38	5.543G	39	5.512G	40	5.485G
41	5.401G	42	5.449G	43	5.434G	44	5.724G
45	5.472G	46	5.316G	47	5.416G	48	5.477G
49	5.273G	50	5.619G	51	5.351G	52	5.486G
53	5.672G	54	5.681G	55	5.712G	56	5.548G
57	5.465G	58	5.623G	59	5.500G	60	5.708G
61	5.626G	62	5.332G	63	5.348G	64	5.574G
65	5.367G	66	5.517G	67	5.400G	68	5.553G
69	5.592G	70	5.404G	71	5.353G	72	5.392G
73	5.513G	74	5.463G	75	5.349G	76	5.707G
77	5.547G	78	5.582G	79	5.440G	80	5.580G
81	5.551G	82	5.363G	83	5.593G	84	5.514G
85	5.277G	86	5.309G	87	5.578G	88	5.671G
89	5.678G	90	5.524G	91	5.424G	92	5.508G
93	5.594G	94	5.700G	95	5.652G	96	5.673G
97	5.662G	98	5.466G	99	5.614G	100	5.506G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_05							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.685G	2	5.319G	3	5.437G	4	5.701G
5	5.674G	6	5.702G	7	5.517G	8	5.404G
9	5.443G	10	5.471G	11	5.376G	12	5.614G
13	5.515G	14	5.411G	15	5.450G	16	5.469G
17	5.475G	18	5.661G	19	5.610G	20	5.412G
21	5.716G	22	5.694G	23	5.341G	24	5.389G
25	5.378G	26	5.539G	27	5.309G	28	5.544G
29	5.409G	30	5.422G	31	5.620G	32	5.687G
33	5.526G	34	5.704G	35	5.405G	36	5.644G
37	5.627G	38	5.359G	39	5.640G	40	5.424G
41	5.372G	42	5.532G	43	5.617G	44	5.353G
45	5.676G	46	5.690G	47	5.664G	48	5.688G
49	5.371G	50	5.419G	51	5.388G	52	5.671G
53	5.721G	54	5.507G	55	5.692G	56	5.714G
57	5.473G	58	5.303G	59	5.575G	60	5.703G
61	5.391G	62	5.635G	63	5.438G	64	5.533G
65	5.719G	66	5.428G	67	5.603G	68	5.658G
69	5.385G	70	5.589G	71	5.712G	72	5.569G
73	5.275G	74	5.529G	75	5.622G	76	5.447G
77	5.581G	78	5.588G	79	5.362G	80	5.655G
81	5.579G	82	5.407G	83	5.723G	84	5.461G
85	5.573G	86	5.384G	87	5.632G	88	5.675G
89	5.540G	90	5.478G	91	5.439G	92	5.619G
93	5.451G	94	5.310G	95	5.444G	96	5.541G
97	5.434G	98	5.325G	99	5.349G	100	5.491G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_06							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.566G	2	5.598G	3	5.575G	4	5.467G
5	5.513G	6	5.421G	7	5.440G	8	5.411G
9	5.536G	10	5.407G	11	5.550G	12	5.460G
13	5.540G	14	5.388G	15	5.339G	16	5.595G
17	5.308G	18	5.348G	19	5.643G	20	5.351G
21	5.383G	22	5.518G	23	5.581G	24	5.669G
25	5.614G	26	5.413G	27	5.370G	28	5.708G
29	5.477G	30	5.722G	31	5.679G	32	5.525G
33	5.340G	34	5.343G	35	5.320G	36	5.539G
37	5.710G	38	5.323G	39	5.396G	40	5.592G
41	5.603G	42	5.719G	43	5.636G	44	5.717G
45	5.649G	46	5.473G	47	5.577G	48	5.554G
49	5.633G	50	5.648G	51	5.362G	52	5.345G
53	5.622G	54	5.425G	55	5.700G	56	5.620G
57	5.452G	58	5.346G	59	5.470G	60	5.448G
61	5.533G	62	5.638G	63	5.580G	64	5.589G
65	5.501G	66	5.468G	67	5.441G	68	5.416G
69	5.269G	70	5.327G	71	5.318G	72	5.567G
73	5.627G	74	5.309G	75	5.672G	76	5.617G
77	5.445G	78	5.436G	79	5.355G	80	5.601G
81	5.446G	82	5.517G	83	5.682G	84	5.376G
85	5.605G	86	5.621G	87	5.686G	88	5.488G
89	5.500G	90	5.691G	91	5.604G	92	5.478G
93	5.480G	94	5.684G	95	5.514G	96	5.588G
97	5.693G	98	5.657G	99	5.393G	100	5.545G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_07							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.393G	2	5.522G	3	5.449G	4	5.692G
5	5.596G	6	5.723G	7	5.527G	8	5.624G
9	5.327G	10	5.681G	11	5.708G	12	5.441G
13	5.286G	14	5.724G	15	5.496G	16	5.695G
17	5.486G	18	5.360G	19	5.562G	20	5.487G
21	5.619G	22	5.689G	23	5.561G	24	5.584G
25	5.337G	26	5.675G	27	5.651G	28	5.450G
29	5.497G	30	5.354G	31	5.472G	32	5.557G
33	5.424G	34	5.608G	35	5.335G	36	5.539G
37	5.492G	38	5.503G	39	5.309G	40	5.364G
41	5.629G	42	5.667G	43	5.558G	44	5.410G
45	5.715G	46	5.478G	47	5.687G	48	5.688G
49	5.530G	50	5.618G	51	5.601G	52	5.707G
53	5.531G	54	5.617G	55	5.598G	56	5.710G
57	5.588G	58	5.501G	59	5.578G	60	5.633G
61	5.409G	62	5.703G	63	5.502G	64	5.397G
65	5.534G	66	5.606G	67	5.380G	68	5.454G
69	5.352G	70	5.533G	71	5.508G	72	5.525G
73	5.373G	74	5.705G	75	5.418G	76	5.528G
77	5.570G	78	5.552G	79	5.484G	80	5.604G
81	5.706G	82	5.551G	83	5.383G	84	5.361G
85	5.475G	86	5.625G	87	5.346G	88	5.614G
89	5.350G	90	5.328G	91	5.674G	92	5.586G
93	5.381G	94	5.512G	95	5.725G	96	5.390G
97	5.547G	98	5.429G	99	5.709G	100	5.662G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_08							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.536G	2	5.511G	3	5.483G	4	5.718G
5	5.682G	6	5.621G	7	5.326G	8	5.421G
9	5.503G	10	5.472G	11	5.325G	12	5.429G
13	5.357G	14	5.725G	15	5.471G	16	5.581G
17	5.659G	18	5.673G	19	5.724G	20	5.499G
21	5.303G	22	5.432G	23	5.412G	24	5.660G
25	5.482G	26	5.377G	27	5.465G	28	5.578G
29	5.469G	30	5.345G	31	5.473G	32	5.406G
33	5.717G	34	5.321G	35	5.420G	36	5.389G
37	5.597G	38	5.401G	39	5.358G	40	5.622G
41	5.519G	42	5.649G	43	5.528G	44	5.509G
45	5.470G	46	5.489G	47	5.573G	48	5.505G
49	5.589G	50	5.577G	51	5.512G	52	5.538G
53	5.569G	54	5.302G	55	5.722G	56	5.387G
57	5.566G	58	5.598G	59	5.664G	60	5.583G
61	5.385G	62	5.537G	63	5.507G	64	5.486G
65	5.594G	66	5.567G	67	5.632G	68	5.575G
69	5.366G	70	5.436G	71	5.368G	72	5.545G
73	5.694G	74	5.643G	75	5.356G	76	5.696G
77	5.669G	78	5.547G	79	5.692G	80	5.674G
81	5.610G	82	5.620G	83	5.531G	84	5.680G
85	5.382G	86	5.652G	87	5.376G	88	5.460G
89	5.497G	90	5.624G	91	5.375G	92	5.417G
93	5.491G	94	5.477G	95	5.488G	96	5.479G
97	5.689G	98	5.607G	99	5.380G	100	5.453G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_09							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.530G	2	5.461G	3	5.327G	4	5.559G
5	5.535G	6	5.660G	7	5.398G	8	5.549G
9	5.454G	10	5.499G	11	5.670G	12	5.594G
13	5.414G	14	5.545G	15	5.551G	16	5.657G
17	5.555G	18	5.497G	19	5.460G	20	5.610G
21	5.492G	22	5.341G	23	5.591G	24	5.576G
25	5.356G	26	5.508G	27	5.361G	28	5.553G
29	5.661G	30	5.556G	31	5.665G	32	5.366G
33	5.685G	34	5.371G	35	5.350G	36	5.579G
37	5.682G	38	5.686G	39	5.408G	40	5.709G
41	5.633G	42	5.547G	43	5.679G	44	5.656G
45	5.431G	46	5.628G	47	5.640G	48	5.450G
49	5.358G	50	5.596G	51	5.711G	52	5.712G
53	5.615G	54	5.412G	55	5.483G	56	5.675G
57	5.575G	58	5.624G	59	5.520G	60	5.382G
61	5.275G	62	5.484G	63	5.488G	64	5.415G
65	5.706G	66	5.562G	67	5.590G	68	5.567G
69	5.642G	70	5.481G	71	5.331G	72	5.516G
73	5.372G	74	5.395G	75	5.541G	76	5.518G
77	5.405G	78	5.598G	79	5.511G	80	5.654G
81	5.462G	82	5.574G	83	5.343G	84	5.458G
85	5.351G	86	5.716G	87	5.546G	88	5.379G
89	5.509G	90	5.319G	91	5.345G	92	5.680G
93	5.335G	94	5.424G	95	5.337G	96	5.600G
97	5.724G	98	5.416G	99	5.696G	100	5.564G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_10							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.488G	2	5.646G	3	5.471G	4	5.393G
5	5.724G	6	5.387G	7	5.642G	8	5.439G
9	5.671G	10	5.600G	11	5.339G	12	5.621G
13	5.360G	14	5.539G	15	5.369G	16	5.593G
17	5.291G	18	5.495G	19	5.427G	20	5.700G
21	5.499G	22	5.634G	23	5.649G	24	5.368G
25	5.661G	26	5.713G	27	5.325G	28	5.420G
29	5.588G	30	5.623G	31	5.631G	32	5.416G
33	5.639G	34	5.308G	35	5.364G	36	5.505G
37	5.391G	38	5.476G	39	5.388G	40	5.484G
41	5.501G	42	5.336G	43	5.395G	44	5.508G
45	5.711G	46	5.459G	47	5.521G	48	5.567G
49	5.601G	50	5.517G	51	5.725G	52	5.486G
53	5.624G	54	5.331G	55	5.419G	56	5.492G
57	5.516G	58	5.458G	59	5.438G	60	5.692G
61	5.479G	62	5.597G	63	5.478G	64	5.502G
65	5.481G	66	5.583G	67	5.614G	68	5.378G
69	5.346G	70	5.669G	71	5.523G	72	5.509G
73	5.358G	74	5.410G	75	5.643G	76	5.575G
77	5.640G	78	5.722G	79	5.557G	80	5.433G
81	5.490G	82	5.595G	83	5.674G	84	5.456G
85	5.443G	86	5.626G	87	5.560G	88	5.463G
89	5.553G	90	5.402G	91	5.656G	92	5.514G
93	5.535G	94	5.555G	95	5.694G	96	5.374G
97	5.319G	98	5.504G	99	5.633G	100	5.538G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_11							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.647G	2	5.436G	3	5.492G	4	5.404G
5	5.385G	6	5.336G	7	5.577G	8	5.497G
9	5.509G	10	5.478G	11	5.430G	12	5.374G
13	5.656G	14	5.680G	15	5.683G	16	5.407G
17	5.361G	18	5.455G	19	5.470G	20	5.475G
21	5.535G	22	5.717G	23	5.518G	24	5.573G
25	5.419G	26	5.662G	27	5.632G	28	5.363G
29	5.610G	30	5.381G	31	5.376G	32	5.706G
33	5.561G	34	5.307G	35	5.708G	36	5.453G
37	5.698G	38	5.701G	39	5.645G	40	5.445G
41	5.642G	42	5.525G	43	5.629G	44	5.344G
45	5.403G	46	5.523G	47	5.408G	48	5.580G
49	5.700G	50	5.584G	51	5.684G	52	5.501G
53	5.517G	54	5.703G	55	5.375G	56	5.482G
57	5.339G	58	5.410G	59	5.415G	60	5.592G
61	5.283G	62	5.365G	63	5.542G	64	5.434G
65	5.394G	66	5.370G	67	5.328G	68	5.712G
69	5.710G	70	5.620G	71	5.346G	72	5.526G
73	5.566G	74	5.456G	75	5.590G	76	5.655G
77	5.545G	78	5.461G	79	5.606G	80	5.624G
81	5.377G	82	5.529G	83	5.670G	84	5.556G
85	5.585G	86	5.393G	87	5.627G	88	5.654G
89	5.583G	90	5.302G	91	5.457G	92	5.543G
93	5.690G	94	5.630G	95	5.567G	96	5.507G
97	5.516G	98	5.447G	99	5.565G	100	5.520G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_12							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.511G	2	5.510G	3	5.605G	4	5.502G
5	5.703G	6	5.290G	7	5.512G	8	5.479G
9	5.629G	10	5.670G	11	5.359G	12	5.598G
13	5.552G	14	5.658G	15	5.551G	16	5.417G
17	5.312G	18	5.445G	19	5.665G	20	5.580G
21	5.698G	22	5.368G	23	5.684G	24	5.461G
25	5.613G	26	5.376G	27	5.693G	28	5.683G
29	5.274G	30	5.389G	31	5.533G	32	5.449G
33	5.546G	34	5.704G	35	5.488G	36	5.400G
37	5.303G	38	5.346G	39	5.362G	40	5.578G
41	5.373G	42	5.573G	43	5.603G	44	5.549G
45	5.432G	46	5.528G	47	5.525G	48	5.527G
49	5.633G	50	5.288G	51	5.386G	52	5.436G
53	5.537G	54	5.387G	55	5.583G	56	5.344G
57	5.422G	58	5.600G	59	5.720G	60	5.339G
61	5.385G	62	5.409G	63	5.639G	64	5.486G
65	5.357G	66	5.596G	67	5.360G	68	5.632G
69	5.705G	70	5.403G	71	5.544G	72	5.636G
73	5.388G	74	5.305G	75	5.638G	76	5.404G
77	5.570G	78	5.710G	79	5.365G	80	5.547G
81	5.685G	82	5.476G	83	5.451G	84	5.556G
85	5.348G	86	5.518G	87	5.536G	88	5.519G
89	5.686G	90	5.397G	91	5.456G	92	5.561G
93	5.647G	94	5.723G	95	5.624G	96	5.539G
97	5.426G	98	5.454G	99	5.501G	100	5.717G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_13							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.393G	2	5.419G	3	5.406G	4	5.503G
5	5.274G	6	5.473G	7	5.549G	8	5.358G
9	5.374G	10	5.426G	11	5.709G	12	5.636G
13	5.650G	14	5.569G	15	5.515G	16	5.630G
17	5.322G	18	5.302G	19	5.361G	20	5.684G
21	5.708G	22	5.280G	23	5.651G	24	5.626G
25	5.523G	26	5.724G	27	5.580G	28	5.410G
29	5.299G	30	5.583G	31	5.614G	32	5.653G
33	5.444G	34	5.402G	35	5.594G	36	5.713G
37	5.427G	38	5.498G	39	5.390G	40	5.520G
41	5.491G	42	5.640G	43	5.368G	44	5.693G
45	5.645G	46	5.488G	47	5.316G	48	5.559G
49	5.341G	50	5.463G	51	5.666G	52	5.540G
53	5.526G	54	5.365G	55	5.582G	56	5.680G
57	5.388G	58	5.466G	59	5.497G	60	5.431G
61	5.441G	62	5.364G	63	5.317G	64	5.545G
65	5.537G	66	5.670G	67	5.517G	68	5.673G
69	5.683G	70	5.624G	71	5.657G	72	5.521G
73	5.408G	74	5.586G	75	5.530G	76	5.660G
77	5.477G	78	5.552G	79	5.327G	80	5.353G
81	5.722G	82	5.538G	83	5.412G	84	5.403G
85	5.548G	86	5.326G	87	5.542G	88	5.672G
89	5.668G	90	5.539G	91	5.423G	92	5.534G
93	5.518G	94	5.401G	95	5.382G	96	5.644G
97	5.415G	98	5.336G	99	5.628G	100	5.581G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_14							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.456G	2	5.413G	3	5.672G	4	5.530G
5	5.702G	6	5.489G	7	5.633G	8	5.441G
9	5.458G	10	5.550G	11	5.676G	12	5.408G
13	5.600G	14	5.339G	15	5.657G	16	5.533G
17	5.562G	18	5.606G	19	5.551G	20	5.484G
21	5.474G	22	5.473G	23	5.440G	24	5.612G
25	5.260G	26	5.314G	27	5.340G	28	5.583G
29	5.618G	30	5.517G	31	5.604G	32	5.362G
33	5.312G	34	5.301G	35	5.411G	36	5.531G
37	5.321G	38	5.410G	39	5.617G	40	5.573G
41	5.522G	42	5.582G	43	5.454G	44	5.401G
45	5.399G	46	5.293G	47	5.553G	48	5.353G
49	5.324G	50	5.491G	51	5.592G	52	5.558G
53	5.709G	54	5.526G	55	5.434G	56	5.594G
57	5.561G	58	5.506G	59	5.364G	60	5.711G
61	5.291G	62	5.501G	63	5.667G	64	5.500G
65	5.691G	66	5.436G	67	5.420G	68	5.643G
69	5.563G	70	5.427G	71	5.696G	72	5.459G
73	5.532G	74	5.425G	75	5.378G	76	5.469G
77	5.651G	78	5.374G	79	5.359G	80	5.660G
81	5.387G	82	5.555G	83	5.624G	84	5.369G
85	5.285G	86	5.549G	87	5.615G	88	5.356G
89	5.712G	90	5.576G	91	5.482G	92	5.690G
93	5.278G	94	5.355G	95	5.323G	96	5.670G
97	5.580G	98	5.723G	99	5.540G	100	5.477G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_15							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.487G	2	5.593G	3	5.536G	4	5.422G
5	5.630G	6	5.302G	7	5.664G	8	5.499G
9	5.660G	10	5.364G	11	5.475G	12	5.408G
13	5.432G	14	5.429G	15	5.329G	16	5.562G
17	5.716G	18	5.474G	19	5.471G	20	5.409G
21	5.674G	22	5.591G	23	5.451G	24	5.550G
25	5.279G	26	5.346G	27	5.577G	28	5.587G
29	5.454G	30	5.725G	31	5.394G	32	5.410G
33	5.588G	34	5.463G	35	5.497G	36	5.378G
37	5.679G	38	5.418G	39	5.314G	40	5.526G
41	5.292G	42	5.366G	43	5.485G	44	5.720G
45	5.452G	46	5.702G	47	5.469G	48	5.441G
49	5.266G	50	5.703G	51	5.369G	52	5.345G
53	5.631G	54	5.333G	55	5.459G	56	5.342G
57	5.373G	58	5.424G	59	5.627G	60	5.483G
61	5.308G	62	5.698G	63	5.619G	64	5.625G
65	5.382G	66	5.448G	67	5.535G	68	5.673G
69	5.519G	70	5.426G	71	5.542G	72	5.467G
73	5.421G	74	5.691G	75	5.393G	76	5.495G
77	5.723G	78	5.532G	79	5.704G	80	5.383G
81	5.637G	82	5.445G	83	5.565G	84	5.527G
85	5.489G	86	5.583G	87	5.360G	88	5.374G
89	5.286G	90	5.655G	91	5.647G	92	5.602G
93	5.533G	94	5.620G	95	5.470G	96	5.554G
97	5.632G	98	5.661G	99	5.628G	100	5.368G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_16							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.537G	2	5.611G	3	5.651G	4	5.568G
5	5.518G	6	5.590G	7	5.512G	8	5.700G
9	5.351G	10	5.338G	11	5.591G	12	5.530G
13	5.618G	14	5.366G	15	5.543G	16	5.579G
17	5.522G	18	5.536G	19	5.594G	20	5.374G
21	5.393G	22	5.725G	23	5.659G	24	5.424G
25	5.352G	26	5.718G	27	5.724G	28	5.360G
29	5.720G	30	5.391G	31	5.348G	32	5.451G
33	5.686G	34	5.619G	35	5.504G	36	5.716G
37	5.377G	38	5.285G	39	5.436G	40	5.681G
41	5.407G	42	5.372G	43	5.498G	44	5.541G
45	5.520G	46	5.454G	47	5.383G	48	5.453G
49	5.329G	50	5.671G	51	5.558G	52	5.410G
53	5.596G	54	5.523G	55	5.547G	56	5.415G
57	5.563G	58	5.400G	59	5.460G	60	5.556G
61	5.653G	62	5.654G	63	5.656G	64	5.598G
65	5.574G	66	5.315G	67	5.437G	68	5.430G
69	5.466G	70	5.696G	71	5.447G	72	5.402G
73	5.440G	74	5.476G	75	5.624G	76	5.418G
77	5.286G	78	5.573G	79	5.608G	80	5.413G
81	5.306G	82	5.350G	83	5.513G	84	5.709G
85	5.421G	86	5.560G	87	5.511G	88	5.387G
89	5.632G	90	5.670G	91	5.342G	92	5.644G
93	5.678G	94	5.305G	95	5.426G	96	5.580G
97	5.324G	98	5.301G	99	5.546G	100	5.411G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_17							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.666G	2	5.702G	3	5.502G	4	5.364G
5	5.608G	6	5.432G	7	5.457G	8	5.641G
9	5.481G	10	5.306G	11	5.563G	12	5.425G
13	5.381G	14	5.322G	15	5.514G	16	5.372G
17	5.680G	18	5.506G	19	5.350G	20	5.579G
21	5.688G	22	5.397G	23	5.430G	24	5.532G
25	5.660G	26	5.523G	27	5.419G	28	5.437G
29	5.590G	30	5.471G	31	5.310G	32	5.545G
33	5.712G	34	5.708G	35	5.623G	36	5.536G
37	5.461G	38	5.607G	39	5.615G	40	5.614G
41	5.392G	42	5.653G	43	5.354G	44	5.569G
45	5.443G	46	5.547G	47	5.362G	48	5.459G
49	5.581G	50	5.538G	51	5.441G	52	5.395G
53	5.632G	54	5.692G	55	5.363G	56	5.357G
57	5.436G	58	5.542G	59	5.701G	60	5.410G
61	5.624G	62	5.628G	63	5.558G	64	5.374G
65	5.338G	66	5.722G	67	5.529G	68	5.595G
69	5.676G	70	5.458G	71	5.706G	72	5.442G
73	5.667G	74	5.477G	75	5.352G	76	5.582G
77	5.600G	78	5.431G	79	5.633G	80	5.719G
81	5.332G	82	5.413G	83	5.675G	84	5.399G
85	5.277G	86	5.500G	87	5.401G	88	5.360G
89	5.564G	90	5.341G	91	5.377G	92	5.424G
93	5.639G	94	5.586G	95	5.438G	96	5.593G
97	5.314G	98	5.635G	99	5.724G	100	5.515G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_18							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.713G	2	5.381G	3	5.665G	4	5.356G
5	5.413G	6	5.525G	7	5.383G	8	5.667G
9	5.685G	10	5.297G	11	5.639G	12	5.395G
13	5.365G	14	5.681G	15	5.579G	16	5.605G
17	5.557G	18	5.710G	19	5.516G	20	5.721G
21	5.268G	22	5.701G	23	5.438G	24	5.504G
25	5.718G	26	5.524G	27	5.464G	28	5.673G
29	5.638G	30	5.586G	31	5.670G	32	5.535G
33	5.606G	34	5.580G	35	5.675G	36	5.435G
37	5.357G	38	5.578G	39	5.645G	40	5.648G
41	5.432G	42	5.599G	43	5.552G	44	5.614G
45	5.574G	46	5.482G	47	5.660G	48	5.449G
49	5.641G	50	5.657G	51	5.470G	52	5.392G
53	5.360G	54	5.427G	55	5.330G	56	5.359G
57	5.316G	58	5.671G	59	5.500G	60	5.628G
61	5.659G	62	5.353G	63	5.664G	64	5.558G
65	5.453G	66	5.680G	67	5.662G	68	5.501G
69	5.545G	70	5.355G	71	5.377G	72	5.652G
73	5.590G	74	5.429G	75	5.390G	76	5.433G
77	5.272G	78	5.532G	79	5.534G	80	5.404G
81	5.371G	82	5.367G	83	5.627G	84	5.618G
85	5.289G	86	5.596G	87	5.704G	88	5.502G
89	5.287G	90	5.651G	91	5.490G	92	5.426G
93	5.709G	94	5.370G	95	5.589G	96	5.646G
97	5.281G	98	5.487G	99	5.602G	100	5.457G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_19							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.705G	2	5.339G	3	5.519G	4	5.458G
5	5.453G	6	5.421G	7	5.415G	8	5.542G
9	5.334G	10	5.680G	11	5.686G	12	5.629G
13	5.639G	14	5.313G	15	5.712G	16	5.536G
17	5.424G	18	5.391G	19	5.522G	20	5.523G
21	5.676G	22	5.390G	23	5.701G	24	5.588G
25	5.362G	26	5.613G	27	5.452G	28	5.704G
29	5.363G	30	5.491G	31	5.411G	32	5.367G
33	5.672G	34	5.513G	35	5.565G	36	5.502G
37	5.264G	38	5.440G	39	5.546G	40	5.350G
41	5.668G	42	5.611G	43	5.388G	44	5.640G
45	5.319G	46	5.706G	47	5.628G	48	5.505G
49	5.495G	50	5.584G	51	5.660G	52	5.435G
53	5.287G	54	5.326G	55	5.699G	56	5.579G
57	5.284G	58	5.295G	59	5.474G	60	5.651G
61	5.564G	62	5.487G	63	5.478G	64	5.551G
65	5.445G	66	5.413G	67	5.521G	68	5.365G
69	5.503G	70	5.404G	71	5.402G	72	5.645G
73	5.456G	74	5.436G	75	5.548G	76	5.568G
77	5.372G	78	5.692G	79	5.333G	80	5.571G
81	5.356G	82	5.422G	83	5.716G	84	5.608G
85	5.634G	86	5.625G	87	5.371G	88	5.635G
89	5.309G	90	5.358G	91	5.577G	92	5.427G
93	5.461G	94	5.377G	95	5.499G	96	5.504G
97	5.392G	98	5.648G	99	5.683G	100	5.417G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_20							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.472G	2	5.534G	3	5.632G	4	5.672G
5	5.284G	6	5.570G	7	5.567G	8	5.565G
9	5.584G	10	5.590G	11	5.621G	12	5.471G
13	5.585G	14	5.540G	15	5.696G	16	5.445G
17	5.269G	18	5.619G	19	5.332G	20	5.701G
21	5.330G	22	5.671G	23	5.640G	24	5.663G
25	5.642G	26	5.547G	27	5.530G	28	5.368G
29	5.616G	30	5.465G	31	5.607G	32	5.436G
33	5.648G	34	5.425G	35	5.488G	36	5.381G
37	5.414G	38	5.697G	39	5.421G	40	5.357G
41	5.355G	42	5.518G	43	5.310G	44	5.407G
45	5.334G	46	5.692G	47	5.684G	48	5.685G
49	5.350G	50	5.337G	51	5.611G	52	5.718G
53	5.526G	54	5.483G	55	5.695G	56	5.586G
57	5.474G	58	5.635G	59	5.336G	60	5.675G
61	5.435G	62	5.674G	63	5.325G	64	5.505G
65	5.615G	66	5.520G	67	5.416G	68	5.658G
69	5.305G	70	5.562G	71	5.542G	72	5.402G
73	5.639G	74	5.630G	75	5.419G	76	5.572G
77	5.494G	78	5.380G	79	5.427G	80	5.578G
81	5.403G	82	5.460G	83	5.449G	84	5.724G
85	5.554G	86	5.430G	87	5.691G	88	5.596G
89	5.660G	90	5.662G	91	5.643G	92	5.545G
93	5.647G	94	5.694G	95	5.625G	96	5.614G
97	5.426G	98	5.464G	99	5.558G	100	5.666G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_21							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.667G	2	5.359G	3	5.650G	4	5.433G
5	5.409G	6	5.572G	7	5.340G	8	5.436G
9	5.712G	10	5.325G	11	5.380G	12	5.631G
13	5.624G	14	5.450G	15	5.642G	16	5.349G
17	5.612G	18	5.697G	19	5.476G	20	5.559G
21	5.492G	22	5.426G	23	5.657G	24	5.669G
25	5.518G	26	5.294G	27	5.524G	28	5.455G
29	5.315G	30	5.311G	31	5.564G	32	5.574G
33	5.333G	34	5.662G	35	5.404G	36	5.576G
37	5.313G	38	5.582G	39	5.393G	40	5.412G
41	5.528G	42	5.640G	43	5.628G	44	5.672G
45	5.701G	46	5.444G	47	5.482G	48	5.651G
49	5.291G	50	5.725G	51	5.364G	52	5.373G
53	5.397G	54	5.653G	55	5.378G	56	5.346G
57	5.587G	58	5.549G	59	5.614G	60	5.396G
61	5.585G	62	5.299G	63	5.664G	64	5.480G
65	5.376G	66	5.301G	67	5.496G	68	5.428G
69	5.388G	70	5.410G	71	5.556G	72	5.389G
73	5.490G	74	5.675G	75	5.705G	76	5.629G
77	5.626G	78	5.342G	79	5.371G	80	5.526G
81	5.605G	82	5.477G	83	5.402G	84	5.690G
85	5.568G	86	5.513G	87	5.703G	88	5.451G
89	5.670G	90	5.550G	91	5.557G	92	5.719G
93	5.413G	94	5.553G	95	5.613G	96	5.500G
97	5.604G	98	5.303G	99	5.689G	100	5.661G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_22							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.605G	2	5.692G	3	5.596G	4	5.412G
5	5.577G	6	5.372G	7	5.320G	8	5.385G
9	5.509G	10	5.361G	11	5.406G	12	5.671G
13	5.449G	14	5.428G	15	5.588G	16	5.707G
17	5.543G	18	5.659G	19	5.632G	20	5.695G
21	5.649G	22	5.492G	23	5.446G	24	5.401G
25	5.416G	26	5.286G	27	5.506G	28	5.677G
29	5.400G	30	5.691G	31	5.655G	32	5.513G
33	5.493G	34	5.624G	35	5.636G	36	5.590G
37	5.585G	38	5.608G	39	5.518G	40	5.398G
41	5.456G	42	5.462G	43	5.650G	44	5.345G
45	5.524G	46	5.441G	47	5.500G	48	5.607G
49	5.499G	50	5.323G	51	5.348G	52	5.432G
53	5.303G	54	5.447G	55	5.610G	56	5.681G
57	5.473G	58	5.474G	59	5.668G	60	5.679G
61	5.705G	62	5.665G	63	5.498G	64	5.431G
65	5.443G	66	5.475G	67	5.480G	68	5.552G
69	5.402G	70	5.356G	71	5.688G	72	5.442G
73	5.660G	74	5.554G	75	5.631G	76	5.572G
77	5.536G	78	5.561G	79	5.528G	80	5.579G
81	5.430G	82	5.522G	83	5.724G	84	5.556G
85	5.501G	86	5.682G	87	5.581G	88	5.545G
89	5.461G	90	5.359G	91	5.658G	92	5.704G
93	5.380G	94	5.673G	95	5.669G	96	5.502G
97	5.301G	98	5.325G	99	5.369G	100	5.377G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_23							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.594G	2	5.527G	3	5.665G	4	5.458G
5	5.498G	6	5.510G	7	5.388G	8	5.441G
9	5.275G	10	5.654G	11	5.408G	12	5.650G
13	5.512G	14	5.612G	15	5.502G	16	5.334G
17	5.405G	18	5.500G	19	5.678G	20	5.370G
21	5.602G	22	5.306G	23	5.596G	24	5.522G
25	5.710G	26	5.331G	27	5.690G	28	5.669G
29	5.406G	30	5.329G	31	5.526G	32	5.340G
33	5.332G	34	5.718G	35	5.635G	36	5.342G
37	5.290G	38	5.547G	39	5.586G	40	5.562G
41	5.493G	42	5.686G	43	5.663G	44	5.598G
45	5.620G	46	5.401G	47	5.371G	48	5.434G
49	5.357G	50	5.708G	51	5.400G	52	5.711G
53	5.582G	54	5.443G	55	5.713G	56	5.343G
57	5.439G	58	5.575G	59	5.658G	60	5.397G
61	5.302G	62	5.558G	63	5.667G	64	5.697G
65	5.689G	66	5.378G	67	5.395G	68	5.628G
69	5.415G	70	5.322G	71	5.549G	72	5.546G
73	5.380G	74	5.348G	75	5.377G	76	5.442G
77	5.698G	78	5.438G	79	5.608G	80	5.576G
81	5.672G	82	5.477G	83	5.535G	84	5.682G
85	5.564G	86	5.555G	87	5.638G	88	5.482G
89	5.583G	90	5.455G	91	5.656G	92	5.707G
93	5.404G	94	5.384G	95	5.326G	96	5.679G
97	5.276G	98	5.376G	99	5.589G	100	5.369G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_24							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.485G	2	5.302G	3	5.450G	4	5.436G
5	5.688G	6	5.375G	7	5.492G	8	5.682G
9	5.467G	10	5.655G	11	5.391G	12	5.561G
13	5.395G	14	5.486G	15	5.452G	16	5.432G
17	5.412G	18	5.357G	19	5.327G	20	5.685G
21	5.347G	22	5.511G	23	5.582G	24	5.581G
25	5.632G	26	5.590G	27	5.529G	28	5.372G
29	5.416G	30	5.351G	31	5.547G	32	5.714G
33	5.438G	34	5.568G	35	5.681G	36	5.622G
37	5.273G	38	5.465G	39	5.505G	40	5.691G
41	5.305G	42	5.411G	43	5.342G	44	5.455G
45	5.530G	46	5.674G	47	5.358G	48	5.433G
49	5.266G	50	5.477G	51	5.680G	52	5.677G
53	5.603G	54	5.301G	55	5.623G	56	5.423G
57	5.466G	58	5.621G	59	5.546G	60	5.672G
61	5.393G	62	5.458G	63	5.370G	64	5.588G
65	5.631G	66	5.724G	67	5.427G	68	5.576G
69	5.593G	70	5.429G	71	5.533G	72	5.425G
73	5.687G	74	5.646G	75	5.562G	76	5.525G
77	5.535G	78	5.723G	79	5.703G	80	5.397G
81	5.369G	82	5.651G	83	5.647G	84	5.721G
85	5.392G	86	5.717G	87	5.441G	88	5.495G
89	5.488G	90	5.352G	91	5.440G	92	5.560G
93	5.545G	94	5.523G	95	5.354G	96	5.526G
97	5.587G	98	5.313G	99	5.567G	100	5.496G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_25							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.501G	2	5.332G	3	5.571G	4	5.686G
5	5.438G	6	5.529G	7	5.534G	8	5.693G
9	5.543G	10	5.723G	11	5.406G	12	5.455G
13	5.354G	14	5.540G	15	5.484G	16	5.604G
17	5.428G	18	5.444G	19	5.340G	20	5.549G
21	5.688G	22	5.283G	23	5.687G	24	5.351G
25	5.350G	26	5.434G	27	5.486G	28	5.451G
29	5.644G	30	5.365G	31	5.464G	32	5.708G
33	5.369G	34	5.319G	35	5.696G	36	5.372G
37	5.493G	38	5.650G	39	5.422G	40	5.640G
41	5.704G	42	5.496G	43	5.530G	44	5.586G
45	5.310G	46	5.634G	47	5.520G	48	5.559G
49	5.680G	50	5.603G	51	5.664G	52	5.513G
53	5.703G	54	5.408G	55	5.318G	56	5.576G
57	5.724G	58	5.511G	59	5.614G	60	5.683G
61	5.718G	62	5.294G	63	5.347G	64	5.466G
65	5.450G	66	5.448G	67	5.580G	68	5.446G
69	5.489G	70	5.447G	71	5.449G	72	5.574G
73	5.602G	74	5.312G	75	5.548G	76	5.584G
77	5.297G	78	5.582G	79	5.374G	80	5.516G
81	5.410G	82	5.555G	83	5.681G	84	5.398G
85	5.572G	86	5.522G	87	5.405G	88	5.441G
89	5.565G	90	5.592G	91	5.609G	92	5.689G
93	5.391G	94	5.333G	95	5.465G	96	5.507G
97	5.715G	98	5.394G	99	5.700G	100	5.356G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_26							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.399G	2	5.652G	3	5.582G	4	5.697G
5	5.452G	6	5.545G	7	5.380G	8	5.343G
9	5.725G	10	5.592G	11	5.529G	12	5.405G
13	5.253G	14	5.643G	15	5.598G	16	5.617G
17	5.593G	18	5.560G	19	5.326G	20	5.534G
21	5.508G	22	5.372G	23	5.682G	24	5.491G
25	5.495G	26	5.396G	27	5.503G	28	5.477G
29	5.427G	30	5.501G	31	5.430G	32	5.589G
33	5.571G	34	5.712G	35	5.658G	36	5.665G
37	5.371G	38	5.553G	39	5.569G	40	5.717G
41	5.621G	42	5.517G	43	5.699G	44	5.566G
45	5.428G	46	5.627G	47	5.583G	48	5.688G
49	5.437G	50	5.448G	51	5.445G	52	5.570G
53	5.375G	54	5.562G	55	5.364G	56	5.488G
57	5.677G	58	5.403G	59	5.502G	60	5.523G
61	5.678G	62	5.536G	63	5.620G	64	5.466G
65	5.596G	66	5.454G	67	5.316G	68	5.673G
69	5.645G	70	5.357G	71	5.530G	72	5.378G
73	5.458G	74	5.511G	75	5.516G	76	5.440G
77	5.609G	78	5.702G	79	5.705G	80	5.494G
81	5.550G	82	5.515G	83	5.548G	84	5.547G
85	5.490G	86	5.676G	87	5.415G	88	5.684G
89	5.681G	90	5.659G	91	5.449G	92	5.576G
93	5.407G	94	5.351G	95	5.475G	96	5.376G
97	5.614G	98	5.637G	99	5.626G	100	5.470G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_27							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.677G	2	5.335G	3	5.532G	4	5.602G
5	5.509G	6	5.716G	7	5.607G	8	5.409G
9	5.486G	10	5.714G	11	5.619G	12	5.341G
13	5.424G	14	5.401G	15	5.723G	16	5.549G
17	5.407G	18	5.298G	19	5.681G	20	5.517G
21	5.488G	22	5.295G	23	5.387G	24	5.724G
25	5.468G	26	5.639G	27	5.597G	28	5.477G
29	5.462G	30	5.692G	31	5.332G	32	5.617G
33	5.334G	34	5.611G	35	5.574G	36	5.600G
37	5.637G	38	5.672G	39	5.711G	40	5.514G
41	5.627G	42	5.328G	43	5.493G	44	5.569G
45	5.715G	46	5.344G	47	5.508G	48	5.454G
49	5.541G	50	5.442G	51	5.423G	52	5.720G
53	5.542G	54	5.481G	55	5.684G	56	5.670G
57	5.675G	58	5.392G	59	5.479G	60	5.586G
61	5.435G	62	5.393G	63	5.550G	64	5.487G
65	5.430G	66	5.482G	67	5.444G	68	5.567G
69	5.311G	70	5.667G	71	5.377G	72	5.504G
73	5.301G	74	5.365G	75	5.626G	76	5.525G
77	5.632G	78	5.646G	79	5.445G	80	5.618G
81	5.548G	82	5.536G	83	5.350G	84	5.671G
85	5.421G	86	5.510G	87	5.582G	88	5.492G
89	5.461G	90	5.491G	91	5.397G	92	5.434G
93	5.357G	94	5.463G	95	5.609G	96	5.403G
97	5.661G	98	5.596G	99	5.469G	100	5.655G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_28							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.636G	2	5.408G	3	5.589G	4	5.353G
5	5.517G	6	5.280G	7	5.558G	8	5.723G
9	5.507G	10	5.522G	11	5.487G	12	5.406G
13	5.501G	14	5.513G	15	5.686G	16	5.581G
17	5.679G	18	5.300G	19	5.716G	20	5.469G
21	5.614G	22	5.465G	23	5.498G	24	5.381G
25	5.493G	26	5.326G	27	5.632G	28	5.494G
29	5.635G	30	5.335G	31	5.602G	32	5.525G
33	5.479G	34	5.388G	35	5.417G	36	5.639G
37	5.690G	38	5.462G	39	5.678G	40	5.569G
41	5.710G	42	5.472G	43	5.391G	44	5.572G
45	5.582G	46	5.500G	47	5.630G	48	5.364G
49	5.480G	50	5.442G	51	5.345G	52	5.458G
53	5.368G	54	5.689G	55	5.435G	56	5.369G
57	5.450G	58	5.299G	59	5.708G	60	5.637G
61	5.657G	62	5.698G	63	5.490G	64	5.565G
65	5.399G	66	5.365G	67	5.477G	68	5.631G
69	5.414G	70	5.685G	71	5.358G	72	5.483G
73	5.560G	74	5.473G	75	5.356G	76	5.576G
77	5.503G	78	5.379G	79	5.346G	80	5.570G
81	5.457G	82	5.382G	83	5.392G	84	5.523G
85	5.289G	86	5.423G	87	5.478G	88	5.376G
89	5.520G	90	5.644G	91	5.328G	92	5.419G
93	5.398G	94	5.360G	95	5.380G	96	5.384G
97	5.456G	98	5.583G	99	5.606G	100	5.431G

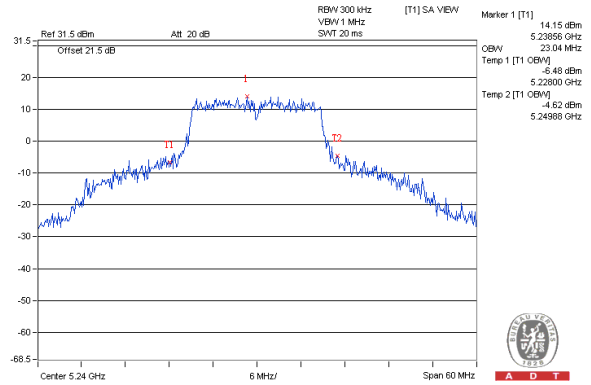
Hopping Frequency Sequence Name: HOP_FREQ_SEQ_29							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.378G	2	5.707G	3	5.336G	4	5.533G
5	5.678G	6	5.692G	7	5.391G	8	5.491G
9	5.652G	10	5.662G	11	5.455G	12	5.627G
13	5.384G	14	5.721G	15	5.686G	16	5.649G
17	5.633G	18	5.682G	19	5.314G	20	5.676G
21	5.392G	22	5.536G	23	5.617G	24	5.345G
25	5.429G	26	5.309G	27	5.725G	28	5.555G
29	5.368G	30	5.303G	31	5.313G	32	5.653G
33	5.501G	34	5.648G	35	5.618G	36	5.444G
37	5.606G	38	5.541G	39	5.591G	40	5.584G
41	5.548G	42	5.656G	43	5.684G	44	5.560G
45	5.671G	46	5.590G	47	5.428G	48	5.611G
49	5.435G	50	5.481G	51	5.420G	52	5.558G
53	5.667G	54	5.664G	55	5.494G	56	5.526G
57	5.502G	58	5.640G	59	5.403G	60	5.389G
61	5.365G	62	5.615G	63	5.569G	64	5.382G
65	5.413G	66	5.593G	67	5.321G	68	5.547G
69	5.412G	70	5.556G	71	5.724G	72	5.691G
73	5.426G	74	5.497G	75	5.621G	76	5.646G
77	5.390G	78	5.306G	79	5.634G	80	5.474G
81	5.610G	82	5.605G	83	5.544G	84	5.537G
85	5.409G	86	5.424G	87	5.438G	88	5.553G
89	5.425G	90	5.645G	91	5.351G	92	5.397G
93	5.399G	94	5.512G	95	5.469G	96	5.465G
97	5.575G	98	5.369G	99	5.717G	100	5.393G

Hopping Frequency Sequence Name: HOP_FREQ_SEQ_30							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.450G	2	5.707G	3	5.552G	4	5.661G
5	5.634G	6	5.557G	7	5.562G	8	5.421G
9	5.469G	10	5.614G	11	5.510G	12	5.522G
13	5.350G	14	5.711G	15	5.578G	16	5.519G
17	5.451G	18	5.463G	19	5.513G	20	5.453G
21	5.621G	22	5.668G	23	5.345G	24	5.341G
25	5.479G	26	5.426G	27	5.523G	28	5.628G
29	5.688G	30	5.491G	31	5.375G	32	5.433G
33	5.608G	34	5.560G	35	5.573G	36	5.480G
37	5.351G	38	5.535G	39	5.559G	40	5.666G
41	5.542G	42	5.329G	43	5.613G	44	5.691G
45	5.544G	46	5.347G	47	5.493G	48	5.492G
49	5.684G	50	5.401G	51	5.434G	52	5.658G
53	5.681G	54	5.572G	55	5.410G	56	5.394G
57	5.577G	58	5.495G	59	5.319G	60	5.384G
61	5.386G	62	5.662G	63	5.377G	64	5.484G
65	5.678G	66	5.364G	67	5.616G	68	5.460G
69	5.558G	70	5.419G	71	5.618G	72	5.629G
73	5.305G	74	5.471G	75	5.518G	76	5.541G
77	5.505G	78	5.567G	79	5.424G	80	5.565G
81	5.366G	82	5.644G	83	5.369G	84	5.462G
85	5.392G	86	5.397G	87	5.344G	88	5.598G
89	5.624G	90	5.556G	91	5.423G	92	5.509G
93	5.301G	94	5.379G	95	5.719G	96	5.663G
97	5.506G	98	5.532G	99	5.571G	100	5.709G

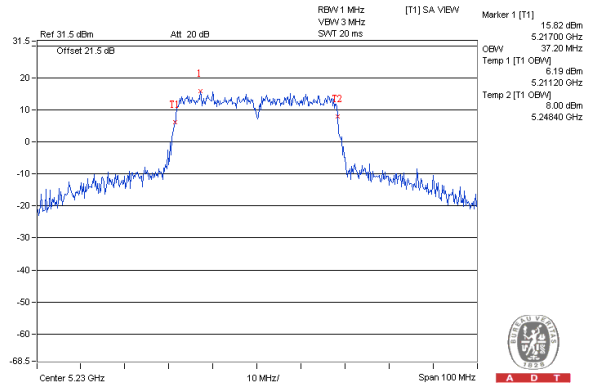
9. APPENDIX-B

BAND EDGE AT NEARBY DFS BAND

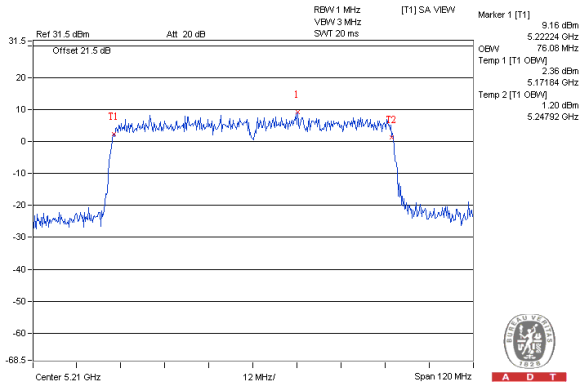
1) Test results demonstrating last channel (99% OBW) shall not exceed the band edge on 5150~5250MHz.



EUT (Master) links with client on 802.11ac (VHT20) mode



EUT (Master) links with client on 802.11ac (VHT40) mode



EUT (Master) links with client on 802.11ac (VHT80) mode

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