DFS Test Report

Report No.:	RF121227E01E-2
FCC ID:	NKR-DTVDWVB
Test Model:	WVBR0-01
Series Model:	WVBR0-25
Received Date:	Dec. 03, 2015
Test Date:	Apr. 06, 2016
Issued Date:	May 12, 2016
Applicant:	Wistron NeWeb Corp.
Address:	20 Park Avenue II, Hsinchu Science Park,Hsinchu 308, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
RF121227E01E-2	Original release.	

1 Certificate of Conformity

Product:	Wireless Video Bridge
Brand:	DIRECTV
Test Model:	WVBR0-01
Series Model:	WVBR0-25
Sample Status:	ENGINEERING SAMPLE
Applicant:	Wistron NeWeb Corp.
Test Date:	Apr. 06, 2016
Standards:	FCC Part 15, Subpart E (Section 15.407) KDB 905462 D02 UNII DFS Compliance Procedures New Rules v01r02

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 : Wendy Wu / Specialist **Date:** May 12, 2016

Approved by : May Chen / Manager **Date:** May 12, 2016

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 (5600~5650MHz will be disable)
Master	✓	✓

2.2 EUT Software and Firmware Version

Table 2: The EUT Software/Firmware Version

No.	Product	Model No.	Software/Firmware Version
1	Wireless Video Bridge	WVBR0-01	Firmware Version:1.0.40 build 171385 2016-03-24 18:33

2.3 Description Of Available Antennas to The EUT

Table 3: Antenna List

Transmitter Circuit	Antenna Type	Gain (dBi)	Frequency range (MHz to MHz)	Connector type
Chain (0)	Dipole	4.77	5150 ~ 5250	i-pex
		4.46	5250 ~ 5350	
		5.19	5470 ~ 5725	
		5.07	5745 ~ 5825	
Chain (1)	Dipole	4.11	5150 ~ 5250	i-pex
		3.46	5250 ~ 5350	
		3.96	5470 ~ 5725	
		4.09	5745 ~ 5825	
Chain (2)	Dipole	4.86	5150 ~ 5250	i-pex
		5.14	5250 ~ 5350	
		4.83	5470 ~ 5725	
		4.50	5745 ~ 5825	
Chain (3)	Dipole	5.12	5150 ~ 5250	i-pex
		5.01	5250 ~ 5350	
		4.57	5470 ~ 5725	
		4.65	5745 ~ 5825	

2.4 EUT Maximum and Minimum Conducted Power

Table 4: The Measured Conducted Output Power

IEEE 802.11n HT40

Frequency Band (MHz)	MAX. Power		MIN. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	23.51	224.486	17.51	56.364
5470~5725	23.57	227.29	17.57	57.148

2.5 EUT Maximum and Minimum EIRP Power

TABLE 5: The EIRP Output Power List

IEEE 802.11n HT40

Frequency Band (MHz)	MAX. Power		MIN. Power	
	Output Power(dBm)	Output Power(mW)	Output Power(dBm)	Output Power(mW)
5250~5350	28.65	732.825	22.65	184.077
5470~5725	28.76	751.623	22.76	188.799

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 **743.019** 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	✓	Not required	✓
DFS Detection Threshold	✓	Not required	✓
Channel Availability Check Time	✓	Not required	Not required
U-NII Detection Bandwidth	✓	Not required	✓

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 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	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{ sec}}}\right)\right\}$	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

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

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. 08, 2015	May. 07, 2016
Vector Signal Generator Agilent	N5182B	MY53051263	Aug. 10, 2015	Aug. 09, 2016
EMCO Horn Antenna	3115	SN00028262	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.

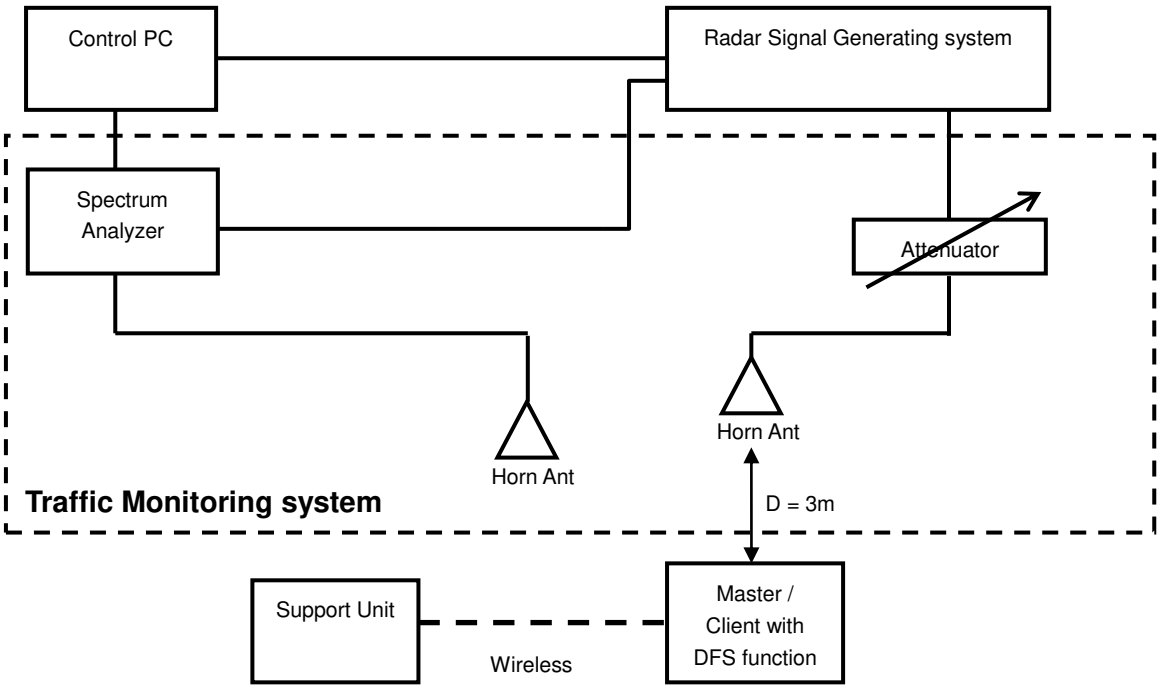
No.	Product	Model No.	Software/Firmware Version
1	Wireless LAN Unit	NP05LM	Driver Version: 06/18/2014, 1026.12.606.2014

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:

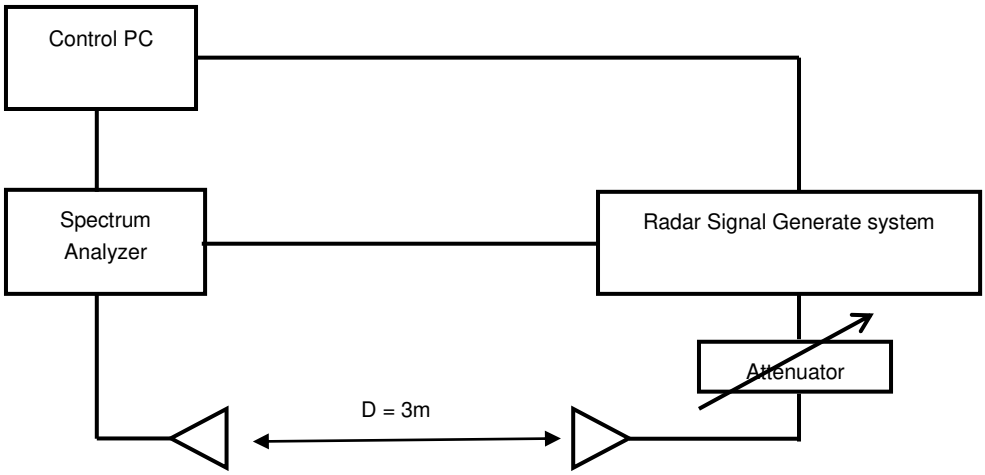
a)	The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode.	
b)	Software to ping the client is permitted to simulate data transfer but must have random ping intervals.	
c)	Timing plots are required 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 5510MHz. 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.



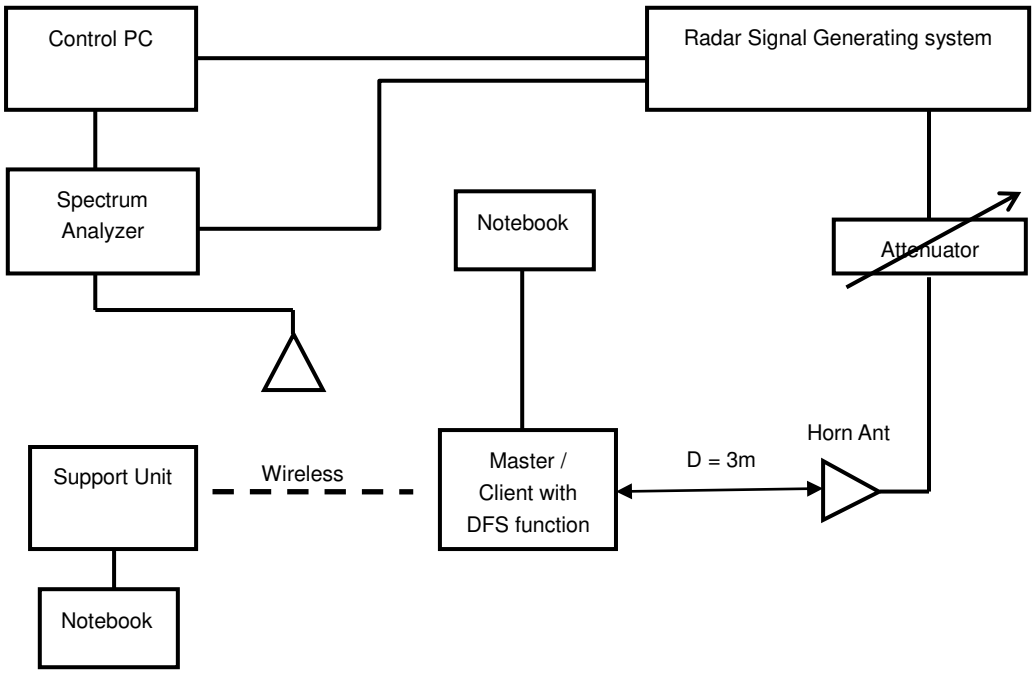
5.3 Deviation From Test Standard

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.



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

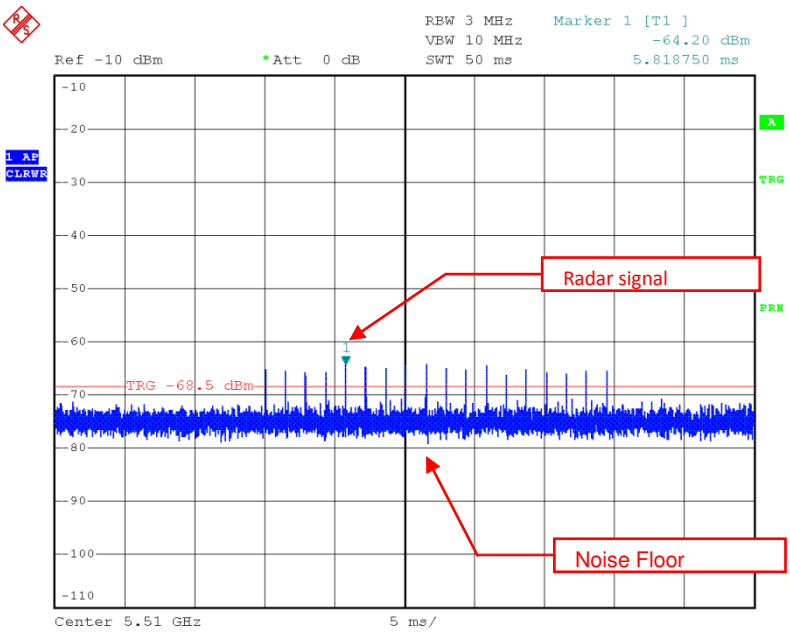
6.2 Test Results

6.2.1 Test Mode: Device Operating In Master Mode.

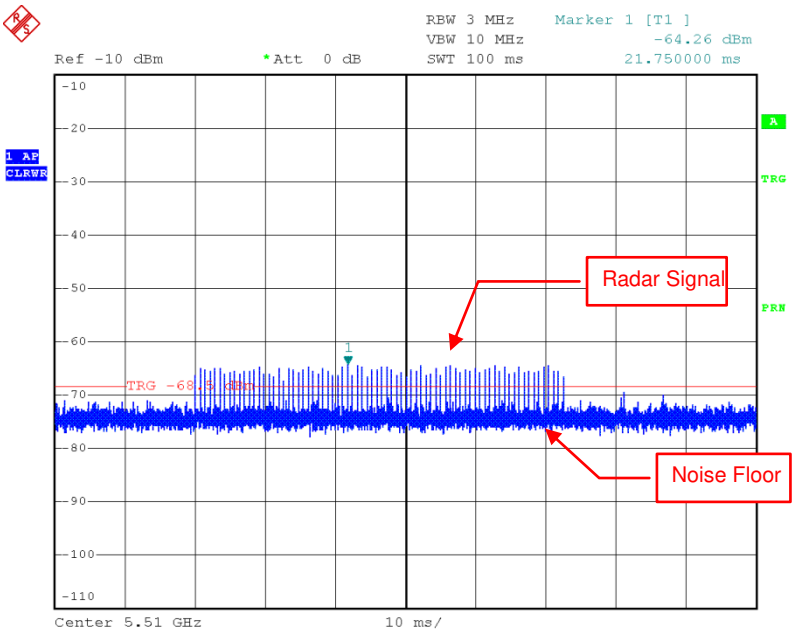
The radar test waveforms are injected into the Master.

DFS Detection Threshold

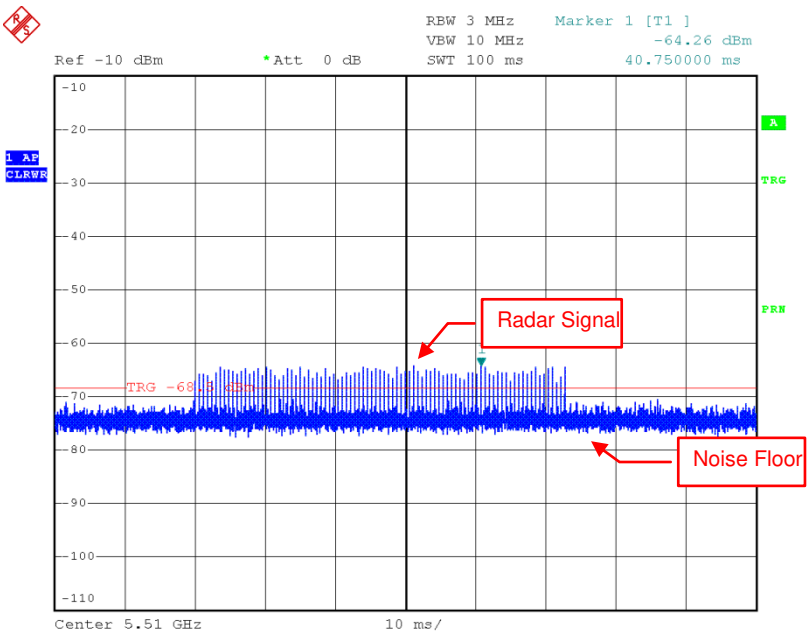
For detection threshold level of -64dBm, the tested level is lower than required level for 1dB, hence it provides margin to the limit.



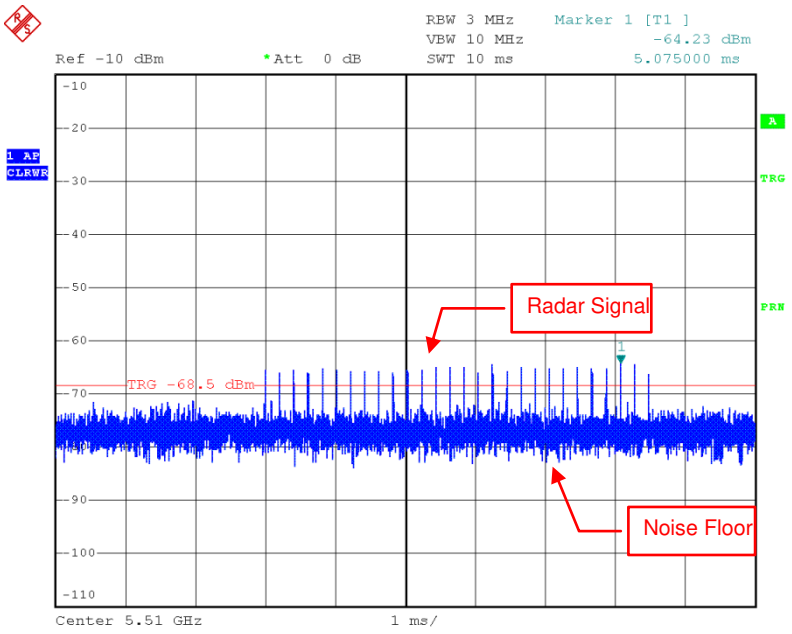
Radar Signal 0



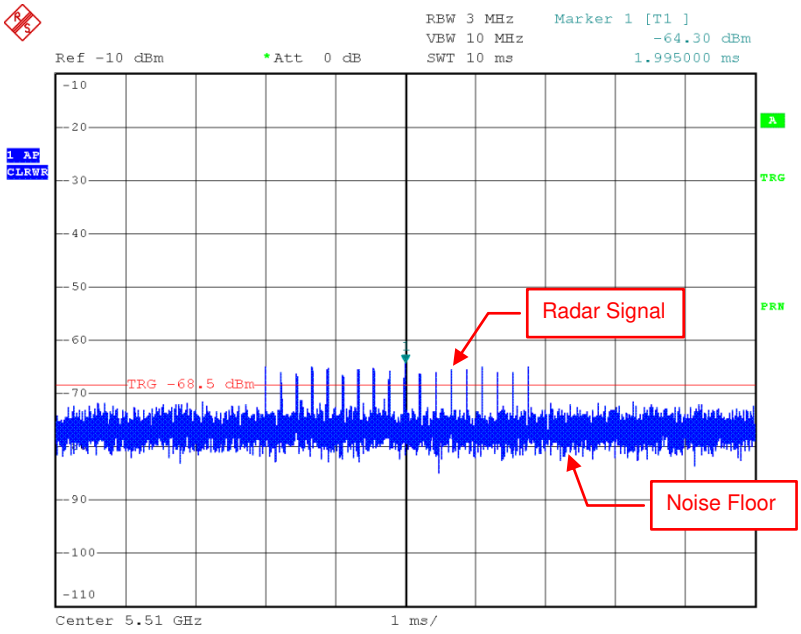
Radar Signal 1 (Test A)



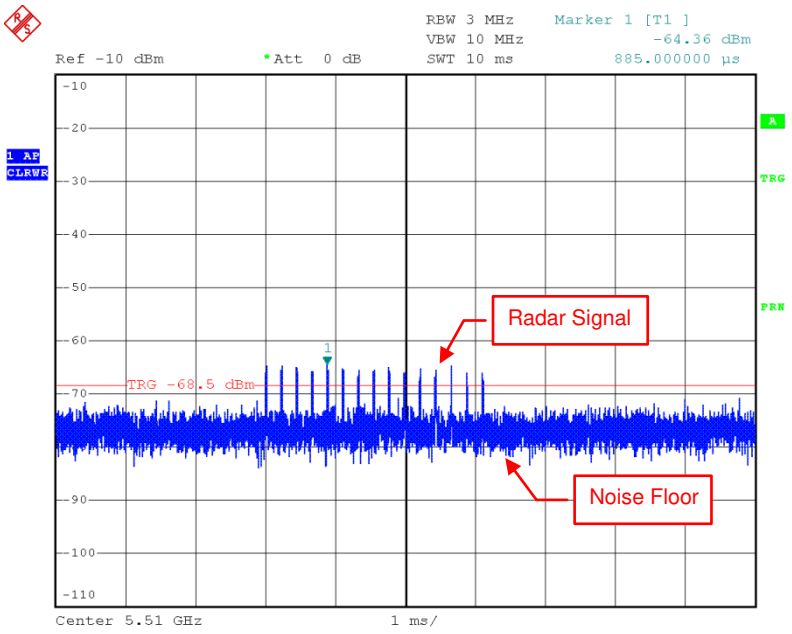
Radar Signal 1 (Test B)



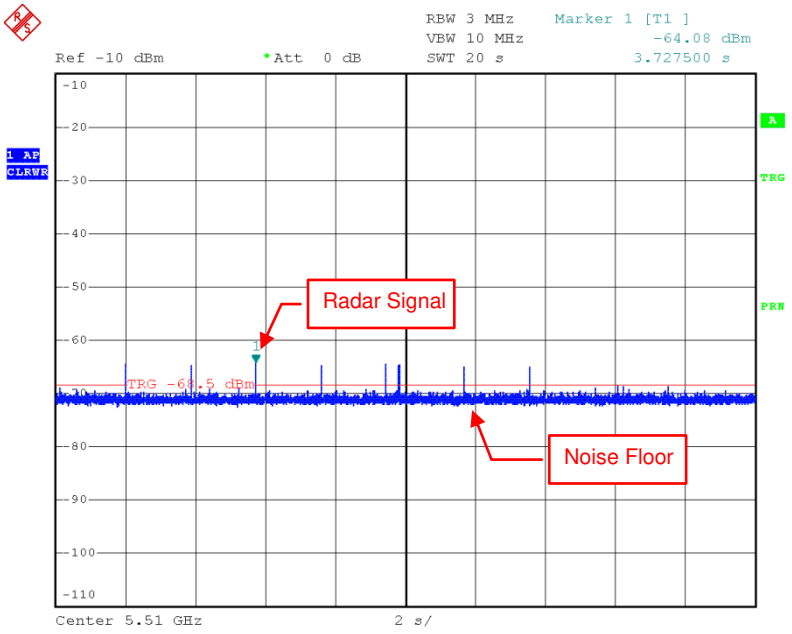
Radar Signal 2



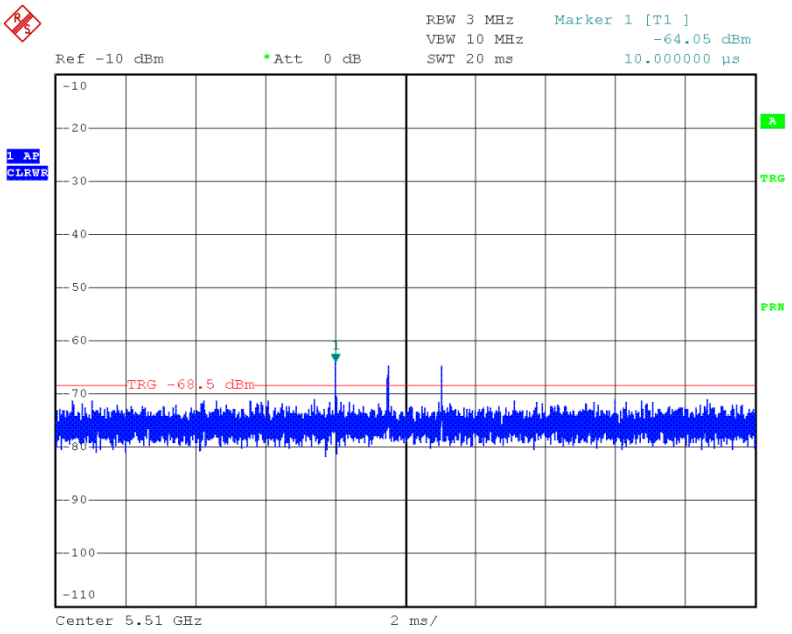
Radar Signal 3



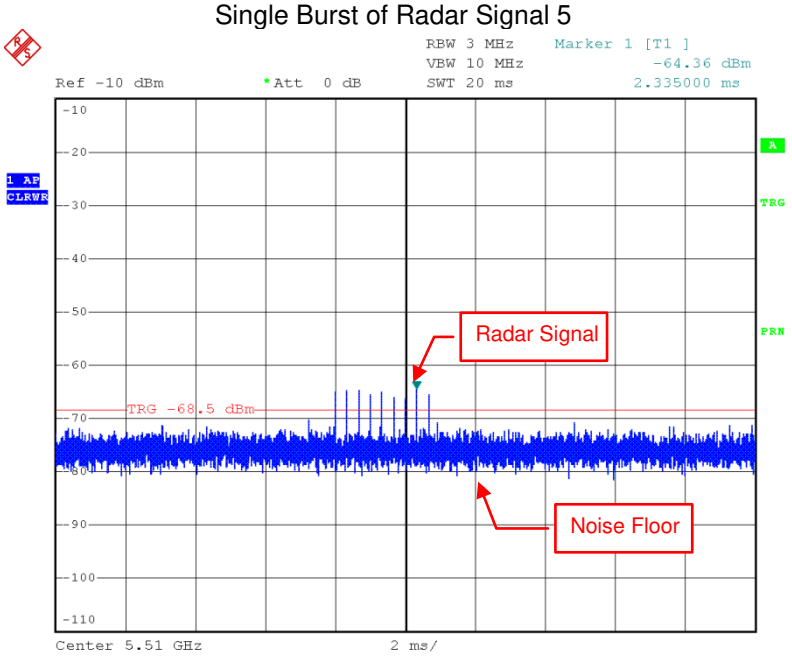
Single Burst of Radar Signal 4



Radar Signal 5



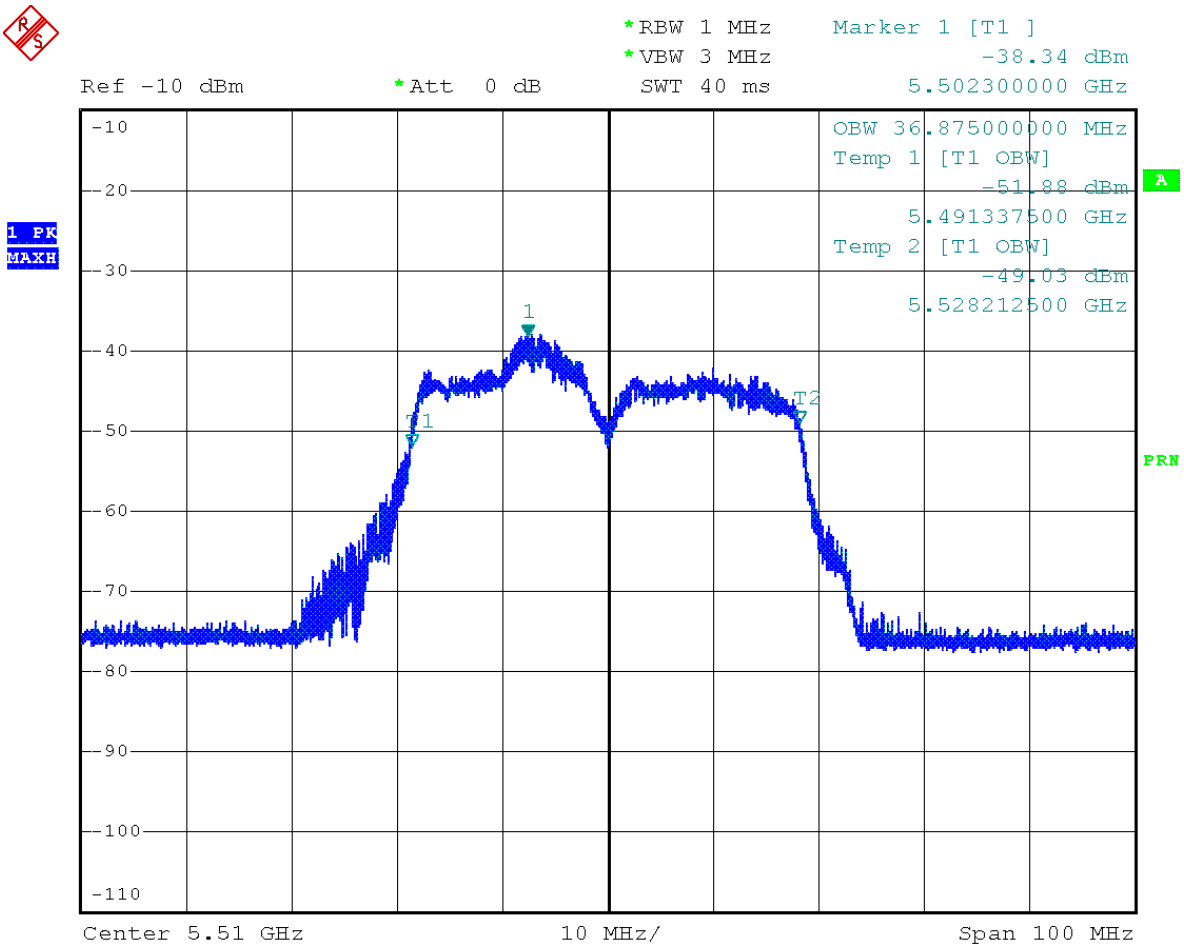
Single Burst of Radar Signal 5



Radar Signal 6

6.2.2 U-NII Detection Bandwidth

IEEE 802.11n HT40



U-NII 99% Channel bandwidth

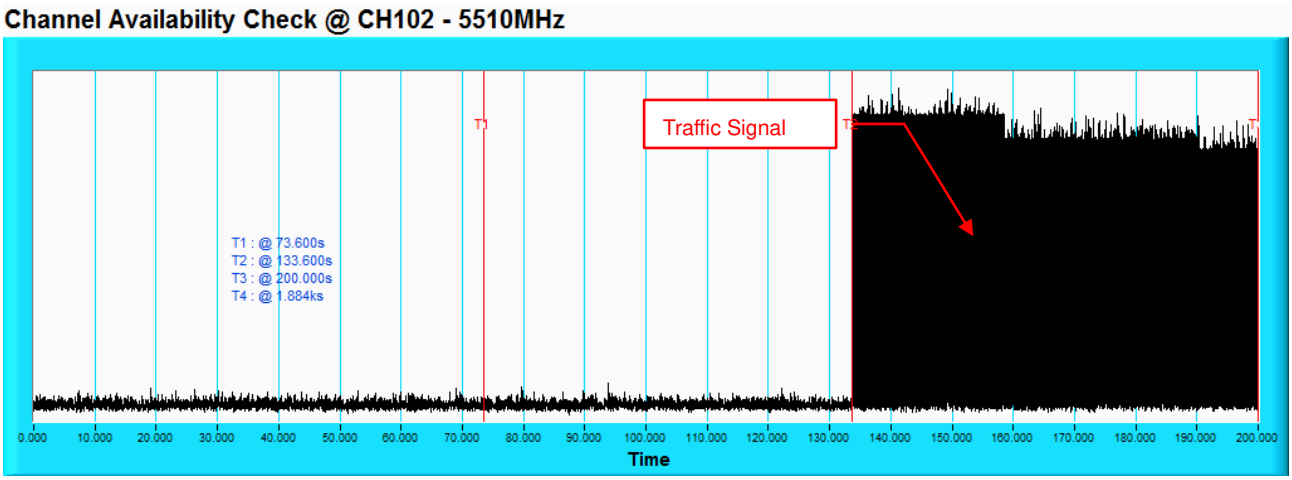
Detection Bandwidth Test - IEEE 802.11n HT40											
Radar Type 0 EUT Frequency: 5510MHz EUT 99% Power bandwidth: 36.875MHz Detection bandwidth limit (100% of EUT 99% Power bandwidth): 36.875MHz Detection bandwidth (5529(FH) – 5491(FL)) : 38MHz Test Result : PASS											
Radar Frequency (MHz)	Trial Number / Detection										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5.491G(FL)	Yes	Yes	Yes	Yes	Yes	Yes	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(FH)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100

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.

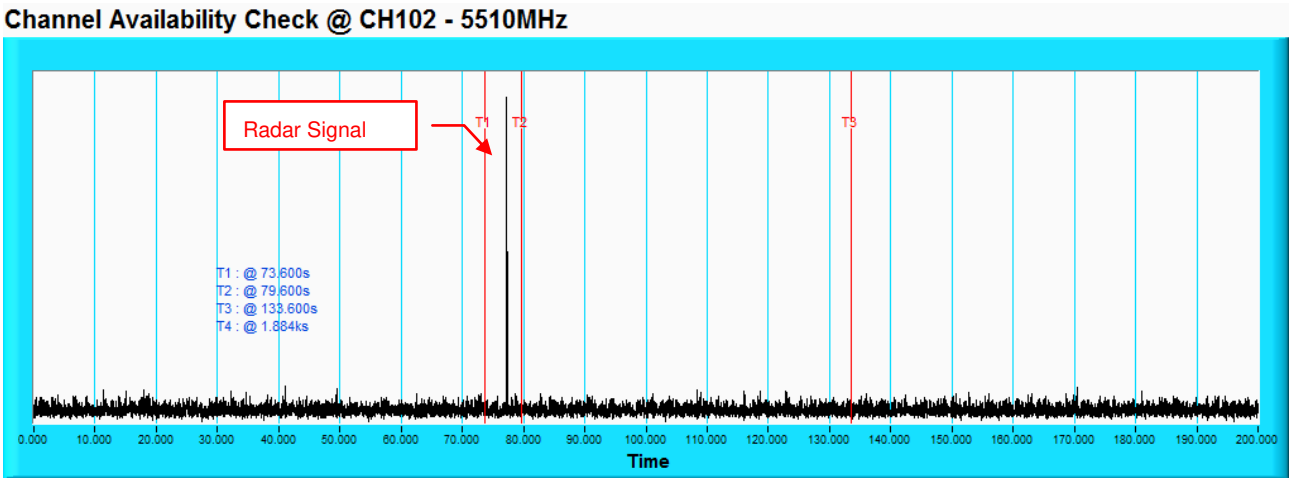
Timing of Radar Signal	Observation	
	EUT	Spectrum Analyzer
Within 1 to 6 second	Detected	No transmissions
Within 54 to 60 second	Detected	No transmissions

Initial Channel Availability Check Time



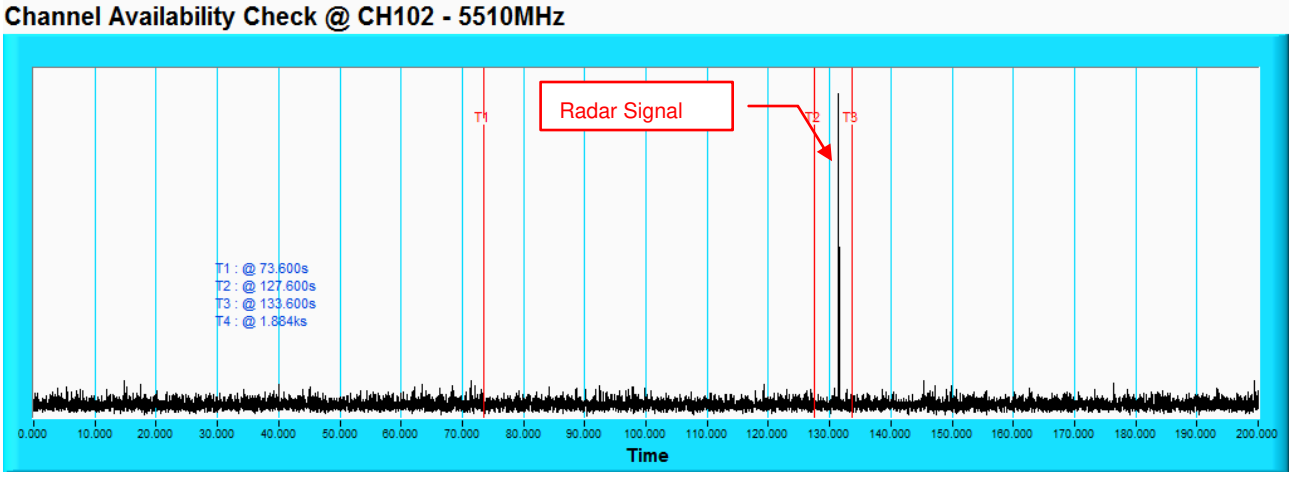
NOTE: T1 denotes the end of power-up time period is 73.6th second. T2 denotes the end of Channel Availability Check time is 133.6th second. Channel Availability Check time is equal to (T2 – T1) 60 seconds.

Radar Burst at the Beginning of the Channel Availability Check Time



NOTE: T1 denotes the end of power up time period is 73.6th second. T2 denotes 79.6^{h} second and the radar burst was commenced within a 6 second window starting from the end of power-up sequence. T3 denotes the 133.6th second.

Radar Burst at the End of the Channel Availability Check Time



NOTE: T1 denotes the end of power up time period is 73.6th second.T2 denotes 127.6th 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 133.6th second.

6.2.4 Channel Closing Transmission and Channel Move Time

Wireless Traffic Loading

IEEE 802.11ac VHT40

Duty Cycle

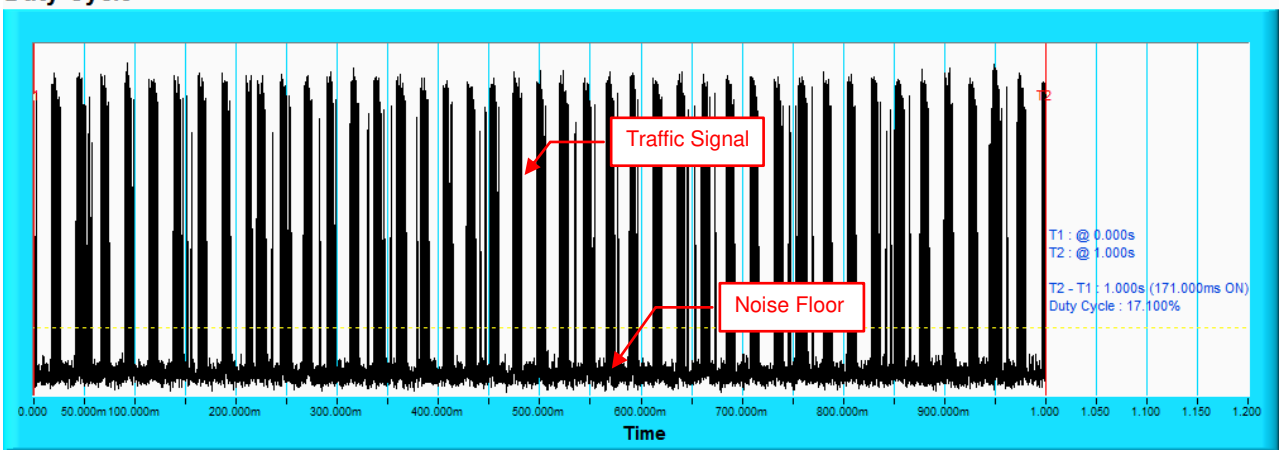


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Table 1: Short Pulse Radar Test Waveforms.

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	$\text{Roundup}\left\{\frac{1}{360}, \frac{19 \cdot 10^6}{\text{PRI}_{\mu\,\text{sec}}}\right\}$	18	30	93.3
2	1-5	150-230	23-29	30	90
3	6-10	200-500	16-18	30	80
4	11-20	200-500	12-16	30	70
Aggregate (Radar Types 1-4)				120	83.3

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	86.7

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

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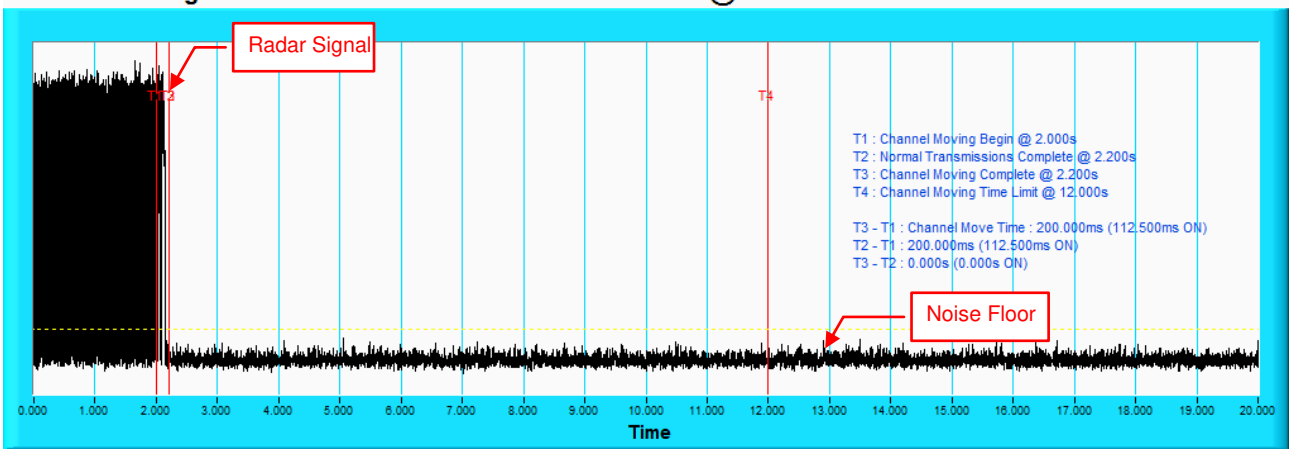
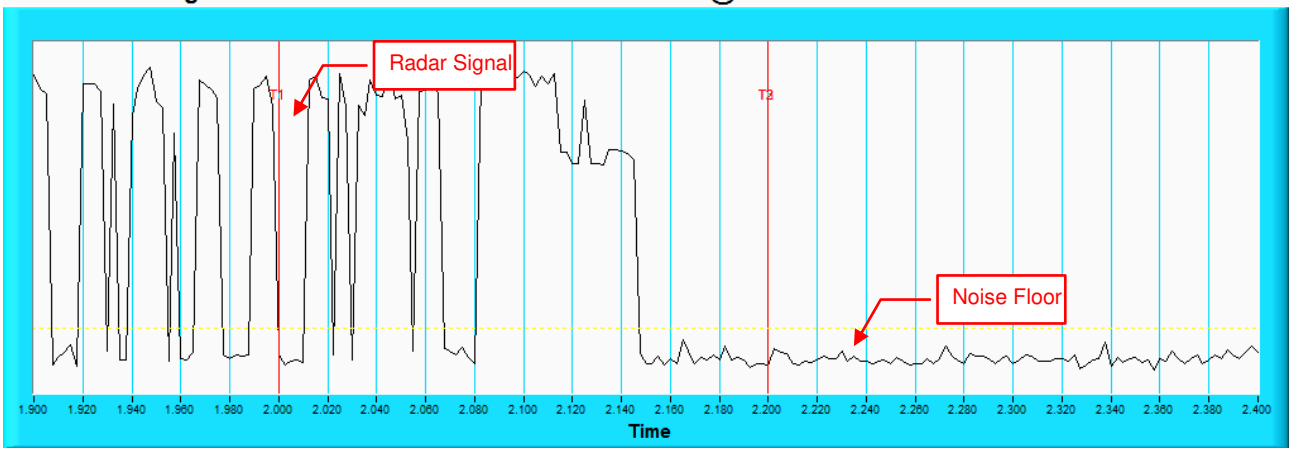
Channel Closing Transmission Time & Channel Move Time @ CH102 - 5510MHz



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.

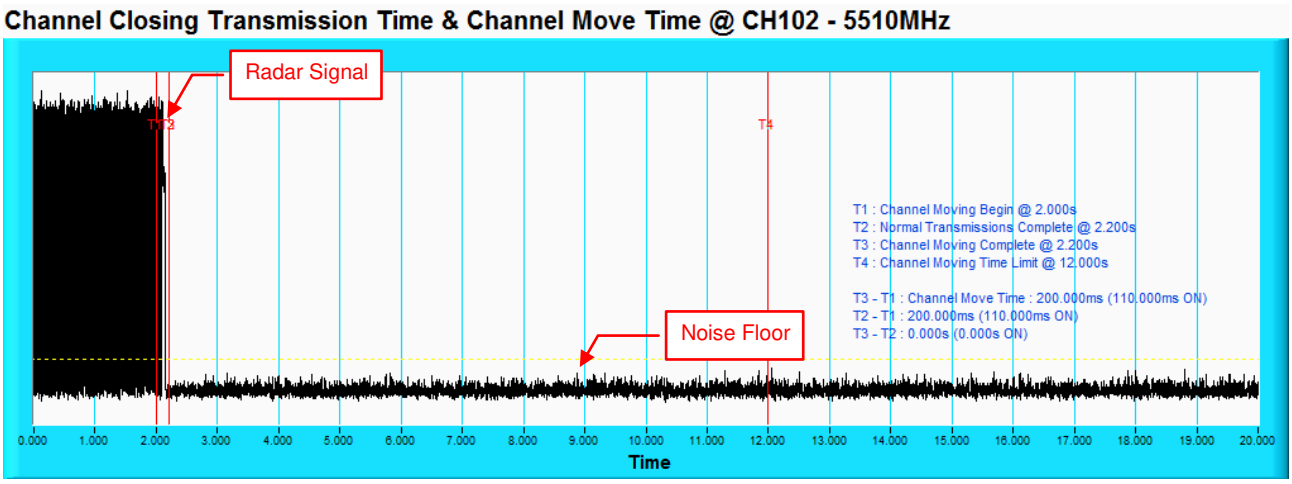
Channel Closing Transmission Time & Channel Move Time @ CH102 - 5510MHz



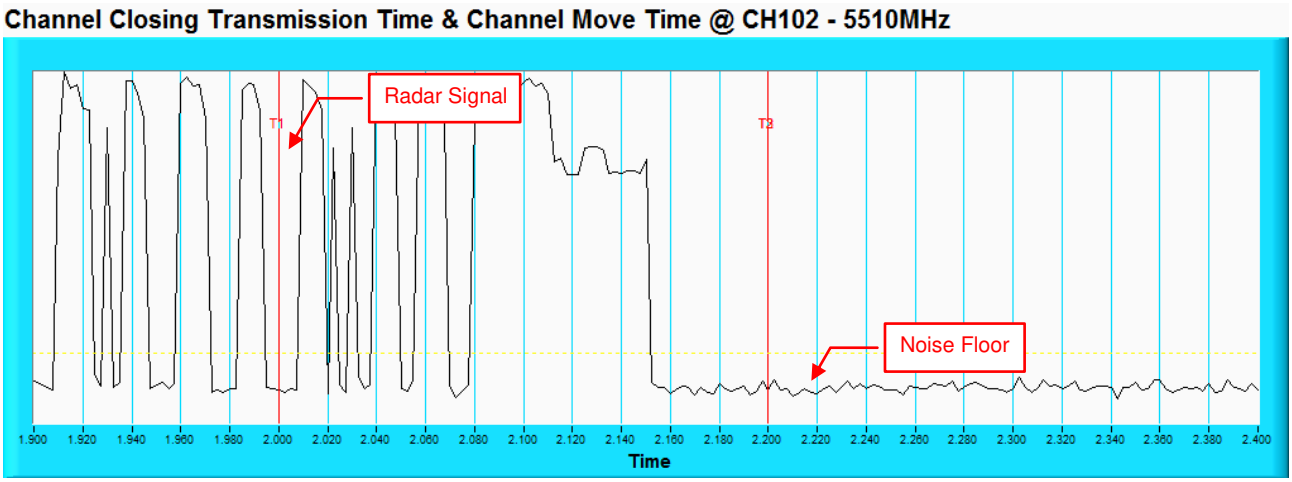
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 1

IEEE 802.11n HT40



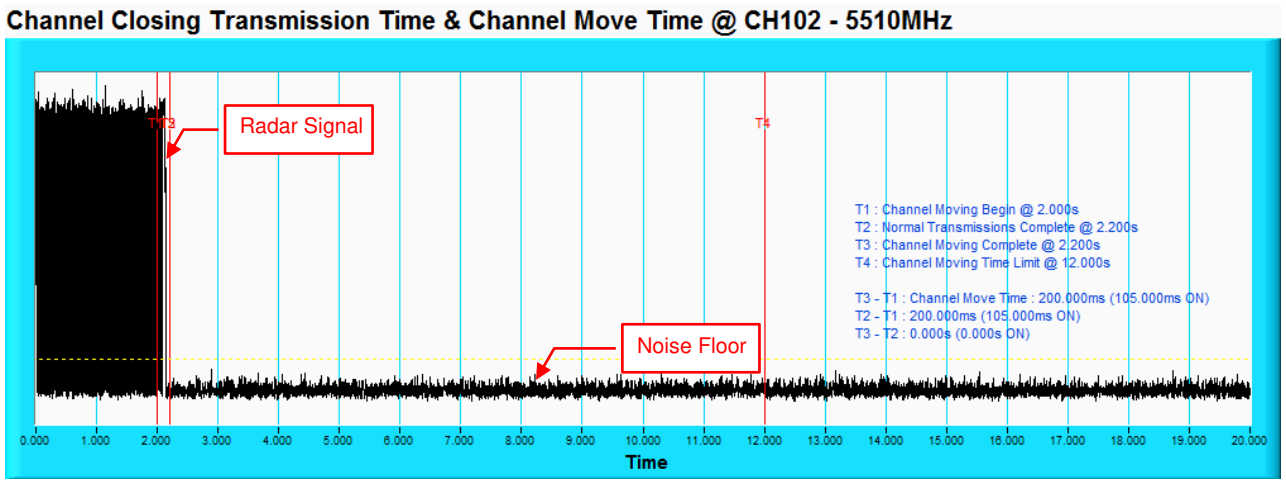
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



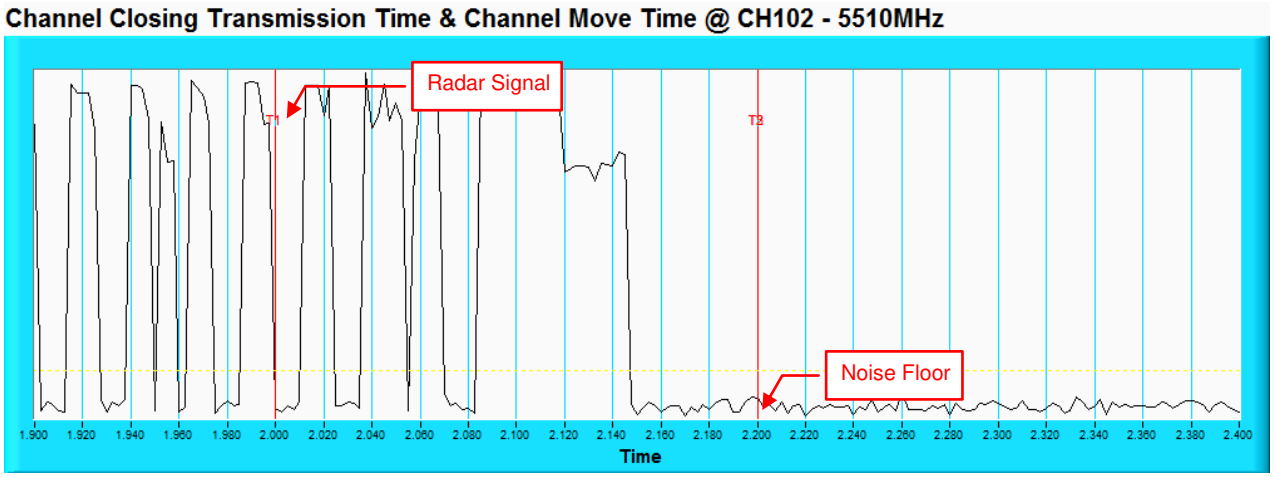
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 2

IEEE 802.11n HT40



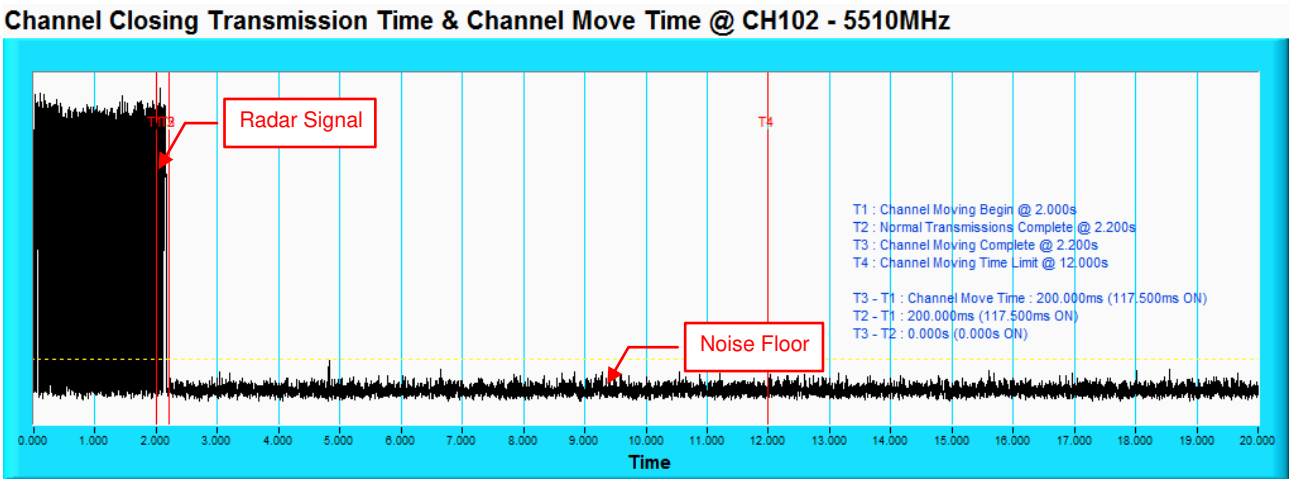
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



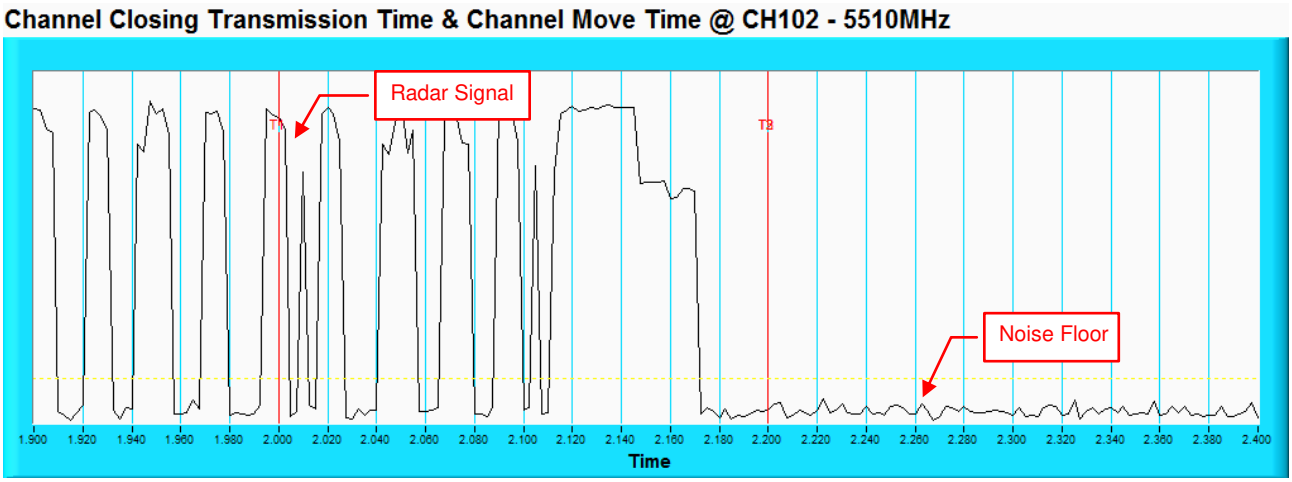
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 3

IEEE 802.11n HT40



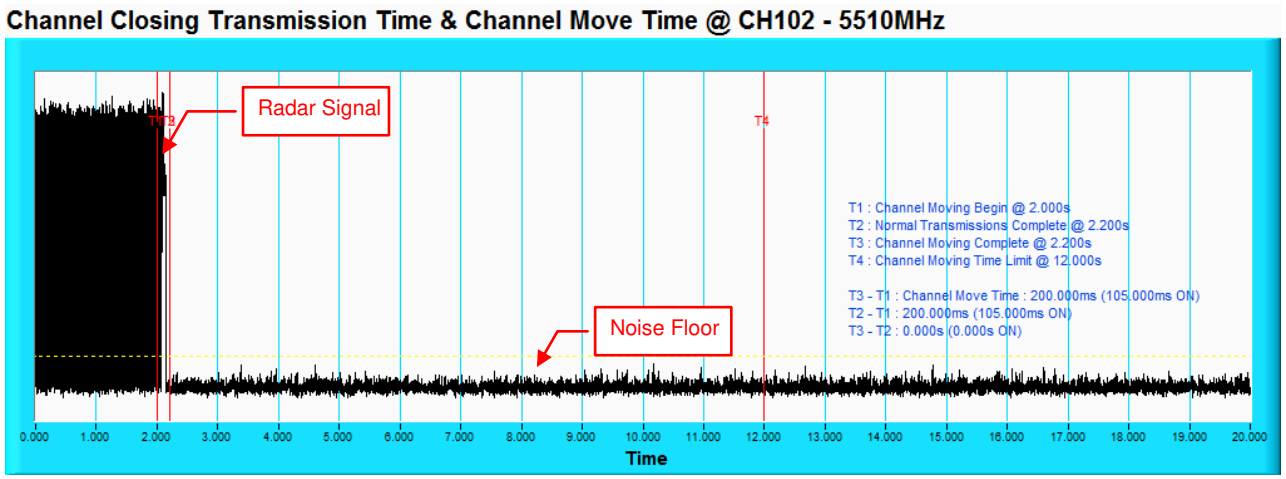
NOTE: T1 denotes the start of Channel Move Time upon the end of the last Radar burst. T2 denotes the data transmission time of 200ms from T1. T3 denotes the end of Channel Move Time. T4 denotes the 10 second from T1 to observe the aggregate duration of transmissions.



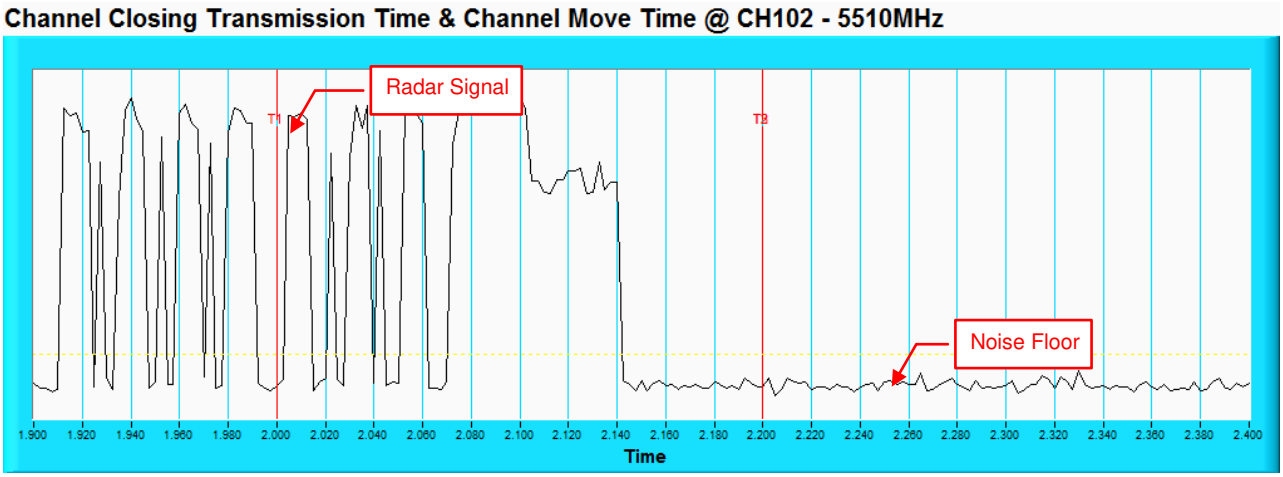
NOTE: Zoom in of the first 500ms after radar signal applied.

Radar signal 4

IEEE 802.11n HT40



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.

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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	7	1567.4	83	638	Yes
2	5520	8	1519.8	81	658	Yes
3	5500	11	1392.8	74	718	Yes
4	5500	3	1792.1	95	558	Yes
5	5522	6	1618.1	86	618	Yes
6	5516	2	1858.7	99	538	Yes
7	5509	21	1089.3	58	918	Yes
8	5519	20	1113.6	59	898	No
9	5517	19	1139	61	878	Yes
10	5524	17	1193.3	63	838	Yes
11	5518	13	1319.3	70	758	Yes
12	5511	5	1672.2	89	598	Yes
13	5510	10	1432.7	76	698	Yes
14	5494	15	1253.1	67	798	Yes
15	5526	18	1165.5	62	858	Yes
16	5519		405	22	2469	Yes
17	5527		575.7	31	1737	Yes
18	5496		373	20	2681	Yes
19	5499		435	23	2299	Yes
20	5493		1157.4	62	864	Yes
21	5497		368.2	20	2716	Yes
22	5495		1199	64	834	Yes
23	5500		588.9	32	1698	No
24	5516		521.6	28	1917	Yes
25	5501		375.4	20	2664	Yes
26	5506		1883.2	100	531	Yes
27	5518		355.2	19	2815	Yes
28	5493		499	27	2004	Yes
29	5500		915.8	49	1092	Yes
30	5528		485.9	26	2058	Yes
Detection Rate: 93.3 %						

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Type 2 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	23	1.1	180	Yes
2	5520	29	4.7	184	Yes
3	5500	26	3.2	201	Yes
4	5519	26	3.2	209	Yes
5	5517	26	3.1	214	Yes
6	5493	28	4.2	221	Yes
7	5523	24	1.7	200	Yes
8	5509	26	2.9	164	Yes
9	5516	27	3.9	178	Yes
10	5496	26	2.7	208	No
11	5505	27	3.4	203	Yes
12	5507	25	2.6	223	Yes
13	5501	24	2	230	Yes
14	5520	28	4	222	Yes
15	5499	28	4.2	226	Yes
16	5500	28	4.1	177	Yes
17	5527	28	4	162	Yes
18	5515	27	3.7	220	Yes
19	5493	23	1.2	163	Yes
20	5525	28	4	212	Yes
21	5509	27	3.7	181	No
22	5505	24	2.1	165	Yes
23	5494	25	2.4	198	Yes
24	5493	29	4.7	219	No
25	5510	23	1.2	228	Yes
26	5515	26	3.1	205	Yes
27	5526	29	4.9	161	Yes
28	5492	25	2.4	176	Yes
29	5497	25	2.6	215	Yes
30	5523	25	2.4	213	Yes
					Detection Rate: 90 %

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Type 3 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	16	6.1	356	Yes
2	5520	18	9.7	258	Yes
3	5500	17	8.2	324	Yes
4	5521	17	8.2	308	Yes
5	5504	17	8.1	257	Yes
6	5522	18	9.2	277	Yes
7	5495	16	6.7	269	Yes
8	5511	17	7.9	425	No
9	5496	18	8.9	373	Yes
10	5492	17	7.7	434	Yes
11	5512	17	8.4	379	Yes
12	5504	17	7.6	276	Yes
13	5514	16	7	322	Yes
14	5504	18	9	321	Yes
15	5510	18	9.2	420	No
16	5504	18	9.1	235	Yes
17	5514	18	9	301	Yes
18	5519	18	8.7	279	Yes
19	5509	16	6.2	412	Yes
20	5520	18	9	415	Yes
21	5516	18	8.7	474	No
22	5494	16	7.1	414	Yes
23	5496	17	7.4	254	No
24	5519	18	9.7	230	No
25	5508	16	6.2	365	Yes
26	5497	17	8.1	384	Yes
27	5507	18	9.9	399	Yes
28	5494	17	7.4	383	Yes
29	5492	17	7.6	296	Yes
30	5523	17	7.4	374	No
					Detection Rate: 80 %

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Type 4 Radar Statistical Performances					
Trial #	Test Frequency (MHz)	Pulses per Burst	Pulse Width(us)	PRI(us)	Detection
1	5510	12	11.3	356	No
2	5520	16	19.4	258	Yes
3	5500	14	16	324	Yes
4	5516	14	15.9	308	Yes
5	5503	14	15.7	257	No
6	5509	15	18.2	277	No
7	5503	12	12.6	269	Yes
8	5519	14	15.2	425	Yes
9	5505	15	17.4	373	Yes
10	5523	14	14.9	434	No
11	5522	15	16.5	379	Yes
12	5496	13	14.6	276	Yes
13	5493	13	13.3	322	Yes
14	5526	15	17.8	321	Yes
15	5496	15	18.1	420	Yes
16	5502	15	18	235	Yes
17	5502	15	17.8	301	No
18	5509	15	17.1	279	Yes
19	5496	12	11.5	412	Yes
20	5515	15	17.6	415	No
21	5510	15	17.1	474	Yes
22	5517	13	13.5	414	No
23	5528	13	14.2	254	Yes
24	5526	16	19.4	230	Yes
25	5493	12	11.6	365	Yes
26	5516	14	15.8	384	No
27	5497	16	19.8	399	Yes
28	5519	13	14.2	383	Yes
29	5503	14	14.7	296	Yes
30	5519	13	14.2	374	No
					Detection Rate: 70 %

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Type 5 Radar Statistical Performances			
Trial #	Chirp Center Frequency(MHz)	Test Signal Name	Detection
1	5510	LP_Signal_01	Yes
2	5520	LP_Signal_02	Yes
3	5500	LP_Signal_03	Yes
4	5512	LP_Signal_04	No
5	5509	LP_Signal_05	Yes
6	5518	LP_Signal_06	Yes
7	5523	LP_Signal_07	Yes
8	5522	LP_Signal_08	Yes
9	5499	LP_Signal_09	Yes
10	5506	LP_Signal_10	Yes
11	5524	LP_Signal_11	Yes
12	5515	LP_Signal_12	Yes
13	5502	LP_Signal_13	Yes
14	5500	LP_Signal_14	Yes
15	5501	LP_Signal_15	Yes
16	5504	LP_Signal_16	Yes
17	5498	LP_Signal_17	Yes
18	5502	LP_Signal_18	Yes
19	5504	LP_Signal_19	Yes
20	5520	LP_Signal_20	No
21	5505	LP_Signal_21	Yes
22	5497	LP_Signal_22	No
23	5510	LP_Signal_23	Yes
24	5506	LP_Signal_24	Yes
25	5503	LP_Signal_25	No
26	5511	LP_Signal_26	Yes
27	5514	LP_Signal_27	Yes
28	5524	LP_Signal_28	Yes
29	5504	LP_Signal_29	Yes
30	5516	LP_Signal_30	Yes
			Detection Rate: 86.7%

The Long Pulse Radar pattern shown in Appendix A.1

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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	No
14	9	1	333.3	Yes
15	9	1	333.3	Yes
16	9	1	333.3	No
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	Yes
25	9	1	333.3	Yes
26	9	1	333.3	No
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 %

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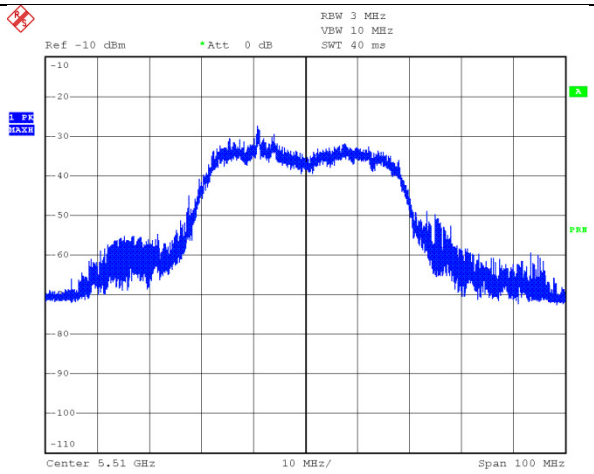
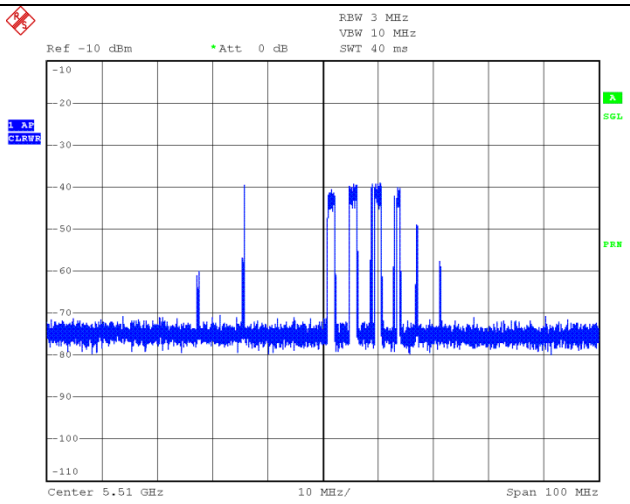
Type 6 Radar Statistical Performances		
Trial #	Hopping Frequency Sequence Name	Detection
1	HOP_FREQ_SEQ_01	Yes
2	HOP_FREQ_SEQ_02	Yes
3	HOP_FREQ_SEQ_03	Yes
4	HOP_FREQ_SEQ_04	Yes
5	HOP_FREQ_SEQ_05	Yes
6	HOP_FREQ_SEQ_06	Yes
7	HOP_FREQ_SEQ_07	Yes
8	HOP_FREQ_SEQ_08	Yes
9	HOP_FREQ_SEQ_09	Yes
10	HOP_FREQ_SEQ_10	Yes
11	HOP_FREQ_SEQ_11	Yes
12	HOP_FREQ_SEQ_12	Yes
13	HOP_FREQ_SEQ_13	No
14	HOP_FREQ_SEQ_14	Yes
15	HOP_FREQ_SEQ_15	Yes
16	HOP_FREQ_SEQ_16	No
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	Yes
25	HOP_FREQ_SEQ_25	Yes
26	HOP_FREQ_SEQ_26	No
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 %

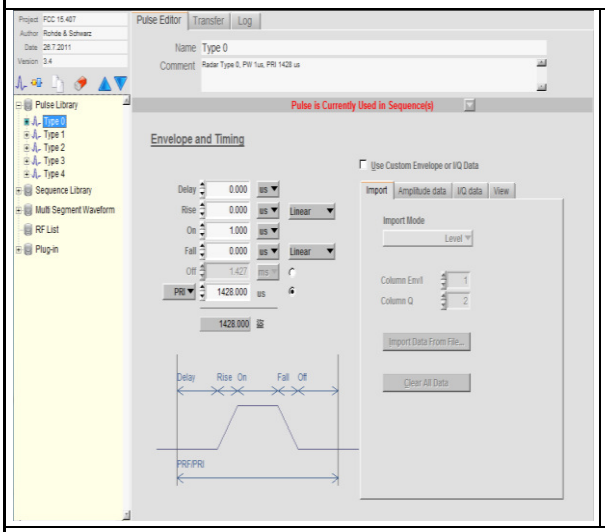
The Frequency Hopping Radar pattern shown in Appendix A.2

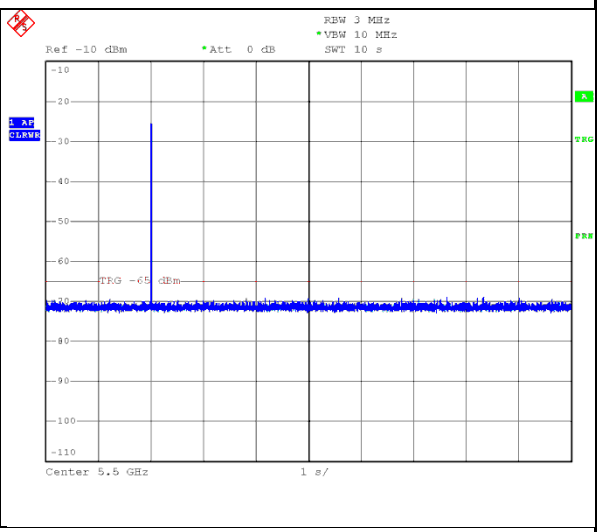
6.2.5 Non- Occupancy Period

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

EUT (master) links with Client on 5510MHz

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.





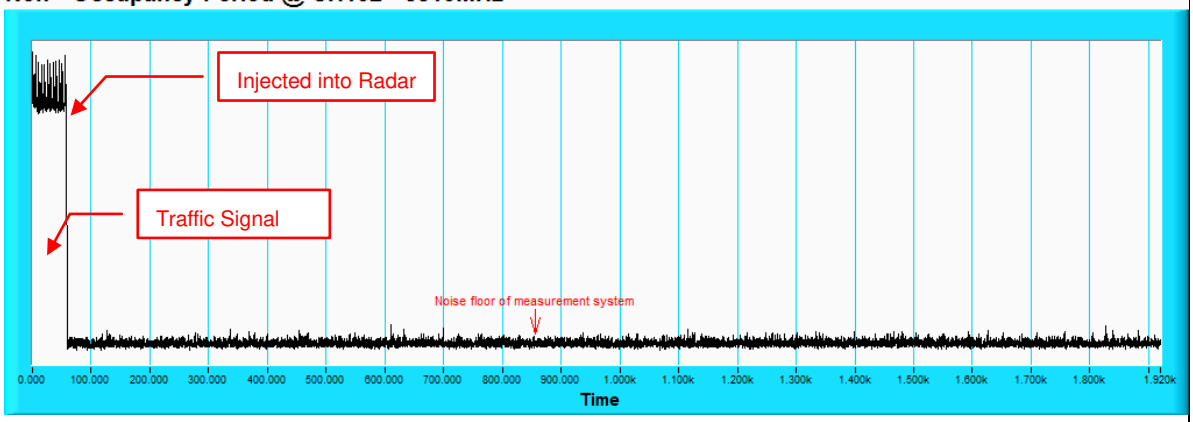
Radar 0 is used to test during DFS testing.

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 @ CH102 - 5510MHz



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:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Lab:
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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: 8						
Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	5	52	1534	-	-
2	3	19	96.3	1106	1564	1008
3	2	13	77.7	1133	1623	-
4	2	13	77.3	1317	1509	-
5	2	13	76.3	1535	1130	-
6	3	17	89.7	1029	1560	1751
7	1	7	58.9	1092	-	-
8	2	12	73.3	1255	2000	-
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_02 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	16	85.5	1489	1819	1013
2	2	11	71.8	1166	1095	-
3	2	14	80.3	1348	1294	-
4	2	11	69.9	1028	1309	-
5	1	9	62.8	1910	-	-
6	3	17	87.7	1705	1405	1314
7	3	17	89.1	1714	1453	1385
8	3	17	88.7	1139	1530	1068
9	3	16	87.4	1588	1059	1846
10	3	15	83.8	1233	1543	1308
11	1	5	52.8	1114	-	-
12	3	16	86.8	1072	1596	1441
13	3	15	83.9	1860	1057	1220
14	1	9	64.1	1098	-	-
15	2	10	67.9	1614	1257	-
16	3	19	96.2	1376	1446	1730
17	1	6	53.6	1439	-	-
18	2	13	76.5	1814	1789	-
19	3	20	98.6	1716	1077	1968
20	2	10	68.1	1867	1104	-

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_03 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	11	70.7	1221	1418	-
2	2	10	67.8	1578	1428	-
3	2	10	67.8	1865	1187	-
4	1	7	57	1412	-	-
5	3	19	96.4	1683	1226	1033
6	2	10	67	1625	1234	-
7	2	13	76.6	1475	1434	-
8	2	10	68.5	1451	1853	-
9	2	15	81.4	1738	1307	-
10	3	19	96.1	1702	1457	1330
11	3	16	87.1	1941	1664	1344
12	3	19	95.4	1052	1345	1020
13	1	9	62.6	1267	-	-
14	2	14	80.3	1931	1204	-
15	1	7	56.4	1146	-	-
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_04 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	18	92.9	1656	1271	1266
2	1	9	64.4	1248	-	-
3	1	6	56.1	1495	-	-
4	1	6	55	1184	-	-
5	3	15	83.8	1284	1343	1074
6	2	13	75.7	1943	1205	-
7	1	6	53.5	1339	-	-
8	1	5	51.8	1608	-	-
9	1	5	51.4	1863	-	-
10	3	17	89.8	1628	1115	1382
11	2	10	67	1050	1521	-
12	3	20	100	1214	1742	1201
13	3	17	87.9	1473	1933	1613
14	2	14	78.4	1338	1206	-
15	2	15	81.5	1768	1696	-
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_05 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	12	73.7	1838	1341	-
2	3	20	99.8	1416	1842	1203
3	3	18	91.2	1611	1621	1518
4	3	18	90.9	1173	1240	1118
5	1	5	52.6	1976	-	-
6	2	10	67.7	1170	1737	-
7	1	6	54	1394	-	-
8	2	12	73.3	1802	1407	-
9	2	12	73.5	1627	1442	-
10	3	19	95.9	1023	1779	1300
11	1	8	61.1	1022	-	-
12	2	11	70.6	1355	1328	-
13	1	7	57.3	1099	-	-
14	3	18	91.3	1331	1577	1380
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_06 Number of Bursts in Trial: 18						
Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	19	96.8	1105	1866	1520
2	1	7	57.4	1192	-	-
3	2	12	74.1	1021	1425	-
4	1	6	53.5	1759	-	-
5	1	7	57.7	1679	-	-
6	2	13	75	1431	1256	-
7	2	15	81.8	1041	1261	-
8	3	20	97.5	1624	1227	1334
9	2	11	71.5	1014	1167	-
10	1	9	64.7	1856	-	-
11	3	18	92.4	1616	1147	1684
12	2	10	67.1	1969	1632	-
13	1	10	66	1393	-	-
14	1	10	66.3	1316	-	-
15	2	10	67.3	1156	1589	-
16	2	14	79.3	1350	1546	-
17	2	10	67.1	1672	1665	-
18	3	17	88.7	1993	1871	1528
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_07

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	3	17	90.2	1652	1507	1222
2	3	20	99.9	1901	1123	1978
3	2	12	72.4	1654	1764	-
4	3	16	87.3	1155	1073	1594
5	1	6	54.2	1161	-	-
6	2	11	71.8	1245	1519	-
7	2	13	77.7	1963	1676	-
8	3	17	88.8	1150	1141	1801
9	3	17	88.9	1960	1522	1423
10	3	18	91.2	1582	1138	1586
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_08

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	15	82.7	1948	1598	-
2	1	7	59.1	1886	-	-
3	2	12	72.7	1358	1364	-
4	1	6	55.1	1915	-	-
5	3	19	96.3	1845	1970	1024
6	1	8	60.5	1708	-	-
7	1	6	54.7	1980	-	-
8	2	15	82.3	1884	1414	-
9	3	18	92.9	1083	1648	1009
10	3	19	96.4	1680	1831	1704
11	2	14	80.2	1760	1448	-
12	1	6	53.3	1378	-	-
13	3	20	99.8	1478	1796	1091
14	2	13	76.3	1038	1419	-
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_09 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	14	78.3	1717	1230	-
2	2	13	76.4	1246	1462	-
3	3	20	98.5	1807	1163	1799
4	3	16	85.5	1777	1573	1755
5	1	5	51.6	1159	-	-
6	3	17	87.7	1370	1896	1379
7	1	6	55.9	1936	-	-
8	3	19	94.2	1855	1460	1637
9	2	14	78.8	1396	1492	-
10	2	12	72.4	1870	1525	-
11	2	14	80.5	1718	1143	-
12	1	7	57.4	1017	-	-
13	2	11	68.9	1781	1390	-
14	1	8	59.5	1575	-	-
15	1	6	53.2	1408	-	-
16	1	5	52.3	1711	-	-
17	2	13	75.9	1551	1733	-
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_10

Number of Bursts in Trial: 13

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	11	68.9	1826	1601	-
2	3	16	86.2	1538	1212	1516
3	3	17	90.6	1956	1476	1132
4	1	9	64.7	1591	-	-
5	1	8	62.4	1145	-	-
6	3	18	92	1630	1723	1533
7	3	16	87.3	1007	1232	1100
8	2	11	70.8	1247	1893	-
9	1	6	55.4	1707	-	-
10	1	8	61.6	1071	-	-
11	3	16	85.1	1045	1618	1964
12	3	16	86.5	1438	1081	1432
13	2	11	70.7	1110	1254	-
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_11

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	1	7	58.5	1924	-	-
2	3	16	86.8	1882	1785	1193
3	1	5	50	1251	-	-
4	3	19	96.1	1816	1818	1151
5	1	7	58.9	1349	-	-
6	2	13	77.8	1128	1957	-
7	2	12	73.4	1572	1633	-
8	3	18	92.2	1579	1833	1811
9	3	16	87.1	1445	1196	1975
10	1	5	51.1	1629	-	-
11	3	16	85.3	1087	1064	1375
12	3	17	88.5	1119	1298	1653
13	2	14	80.3	1471	1225	-
14	1	5	50.3	1570	-	-
15	2	12	74.6	1959	1514	-
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_12

Number of Bursts in Trial: 13

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	17	88.8	1658	1195	1269
2	3	18	91.7	1481	1736	1786
3	3	19	95.2	1869	1437	1342
4	2	14	79	1812	1359	-
5	3	17	90.6	1727	1483	1809
6	2	11	70.4	1477	1486	-
7	1	8	61.2	1347	-	-
8	2	10	67.2	1004	1153	-
9	1	7	59.1	1188	-	-
10	1	8	61.5	1790	-	-
11	1	10	65.9	1320	-	-
12	3	16	84.5	1542	1606	1555
13	1	8	61.2	1576	-	-
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_13

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	9	64.6	1216	-	-
2	3	19	96.3	1129	1649	1011
3	2	13	76	1724	1069	-
4	2	11	70.8	1470	1788	-
5	1	7	57.7	1927	-	-
6	1	7	58	1250	-	-
7	1	9	63.9	1417	-	-
8	3	18	93.7	1026	1774	1249
9	1	7	57.4	1815	-	-
10	2	12	72.8	1018	1634	-
11	1	5	50.5	1947	-	-
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_14

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	13	75.5	1357	1953	-
2	2	14	79	1305	1568	-
3	3	15	83.7	1354	1164	1372
4	2	15	81.8	1037	1424	-
5	3	16	85	1395	1932	1609
6	1	6	55.3	1391	-	-
7	2	13	76.3	1840	1787	-
8	2	15	82.1	1861	1158	-
9	3	18	91.7	1887	1908	1090
10	1	9	62.6	1303	-	-
11	2	15	82.1	1427	1333	-
12	1	9	63.7	1549	-	-
13	1	10	66.4	1604	-	-
14	1	6	56.1	1895	-	-
15	3	19	95.9	1719	1433	1610
16	1	5	50.3	1285	-	-
17	3	20	97.3	1557	1420	1399
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_15

Number of Bursts in Trial: 18

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	2	11	69.6	1496	1280	-
2	3	18	90.9	1635	1404	1452
3	3	16	84.5	1410	1547	1569
4	3	18	93.1	1400	1722	1511
5	3	18	93.4	1847	1421	1750
6	1	8	62.1	1581	-	-
7	2	13	77.5	1327	1938	-
8	3	18	90.8	1739	1849	1177
9	2	13	75.2	1923	1276	-
10	1	9	64.4	1883	-	-
11	2	14	80.8	1392	1374	-
12	2	12	72.3	1286	1721	-
13	3	16	86.4	1352	1693	1823
14	2	14	81	1877	1593	-
15	2	15	81.4	1574	1762	-
16	2	11	68.9	1824	1875	-
17	3	19	94.7	1561	1049	1806
18	1	6	53.4	1858	-	-
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_16

Number of Bursts in Trial: 18

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	1	8	61.6	1926	-	-
2	3	16	86.7	1176	1002	1497
3	2	14	79.5	1066	1474	-
4	2	15	82.2	1210	1709	-
5	1	6	53.8	1524	-	-
6	3	16	85.3	1137	1553	1056
7	3	15	83.8	1140	1498	1381
8	3	18	92.8	1918	1885	1640
9	3	20	98.6	1025	1304	1362
10	2	15	82.6	1920	1749	-
11	2	15	82.5	1771	1545	-
12	1	8	59.5	1467	-	-
13	1	9	64.7	1403	-	-
14	1	8	61.8	1636	-	-
15	1	7	57.7	1491	-	-
16	2	10	66.7	1501	1505	-
17	2	12	74.1	1162	1229	-
18	1	10	66.5	1329	-	-
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_17

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	3	17	88.3	1706	1500	1042
2	1	7	57.4	1643	-	-
3	2	15	82.2	1035	1012	-
4	2	10	66.8	1268	1597	-
5	1	6	56.1	1199	-	-
6	3	18	91	1502	1775	1548
7	1	8	59.8	1278	-	-
8	3	18	91	1318	1691	1780
9	3	19	95.5	1321	1198	1172
10	1	8	59.7	1469	-	-
11	1	6	55.2	1527	-	-
12	2	15	81.7	1503	1076	-
13	1	5	50.6	1822	-	-
14	3	19	94.9	1237	1567	1311
15	2	11	71.8	1512	1794	-
16	1	5	52.6	1323	-	-
17	3	15	84.3	1097	1219	1182
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_18 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	9	63.6	1060	-	-
2	2	10	67.8	1353	1697	-
3	3	16	87.4	1642	2000	1699
4	3	16	87.1	1728	1120	1126
5	3	20	99.3	1015	1617	1070
6	1	7	59.2	1757	-	-
7	1	5	50.5	1782	-	-
8	1	9	63.5	1019	-	-
9	3	19	95	1725	1677	1485
10	1	7	58.3	1872	-	-
11	1	9	65.6	1031	-	-
12	3	20	99.7	1464	1795	1626
13	2	11	68.9	1371	1954	-
14	1	9	64.5	1178	-	-
15	2	11	69.7	1837	1783	-
16	1	7	56.8	1641	-	-
17						
18						
19						
20						

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	9	64.9	1645	-	-
2	2	14	80.6	1558	1051	-
3	3	16	87.2	1288	1134	1185
4	2	11	71.3	1293	1940	-
5	3	19	94.8	1988	1493	1398
6	2	14	80.5	1890	1602	-
7	3	17	88.5	1985	1484	1772
8	2	12	72.4	1270	1010	-
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_20 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	9	62.8	1666	-	-
2	3	17	89.8	1556	1297	1905
3	2	12	74.1	1197	1189	-
4	3	17	87.6	1413	1157	1929
5	2	10	66.9	1078	1650	-
6	2	15	82	1669	1003	-
7	3	17	87.7	1854	1620	1984
8	3	17	87.8	1005	1337	1238
9	1	8	62.1	1461	-	-
10	2	13	77.5	1016	1776	-
11	3	19	94.2	1244	1459	1566
12	3	20	98.9	1361	1647	1218
13	3	16	86.8	1174	1336	1805
14	2	14	79.4	1290	1951	-
15	3	17	89.1	1913	1784	1971
16	3	20	98.2	1122	1999	1085
17	2	15	81.7	1179	1541	-
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_21

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	6	53.2	1713	-	-
2	1	8	61.2	1360	-	-
3	2	15	82.7	1490	1600	-
4	3	19	94.2	1080	1983	1040
5	3	18	91.3	1447	1694	1907
6	2	13	76.6	1001	1992	-
7	3	19	95.3	1710	1997	1912
8	3	16	85.5	1084	1965	1054
9	2	12	74.9	1792	1930	-
10	3	16	85.8	1793	1411	1088
11	1	9	64.3	1117	-	-
12	3	16	84.6	1283	1430	1526
13	2	15	81.4	1315	1668	-
14	3	17	89.6	1880	1116	1778
15	2	15	83.1	1765	1065	-
16	2	14	79.4	1928	1990	-
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_22

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	9	64.9	1121	-	-
2	2	12	74.2	1093	1868	-
3	1	8	59.4	1253	-	-
4	3	16	85.2	1127	1987	1228
5	1	9	62.9	1086	-	-
6	3	19	96.7	1426	1829	1191
7	1	9	63	1844	-	-
8	2	11	70.6	1942	1996	-
9	2	13	77.9	1532	1945	-
10	3	17	87.6	1695	1995	1821
11	3	18	91.5	1444	1682	1190
12						
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_23

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	2	11	70.4	1903	1436	-
2	2	11	70.9	1615	1864	-
3	2	11	70	1171	1089	-
4	3	16	85.5	1660	1659	1830
5	3	18	91.6	1340	1488	1389
6	3	17	89	1365	1571	1289
7	3	17	89.7	1346	1236	1180
8	3	18	91.6	1043	1744	1006
9	2	11	69.3	1688	1207	-
10	1	6	55.7	1047	-	-
11	2	14	78.2	1165	1827	-
12	2	11	71.6	1754	1644	-
13						
14						
15						
16						
17						
18						
19						
20						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_24

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	1	9	63.2	1857	-	-
2	2	14	78.8	1027	1124	-
3	1	5	52	1000	-	-
4	3	18	92.1	1258	1301	1325
5	3	19	96.2	1223	1094	1686
6	2	12	73.3	1767	1817	-
7	1	6	53.1	1735	-	-
8	2	14	80.8	1939	1657	-
9	3	17	88	1946	1367	1746
10	1	8	61	1810	-	-
11	2	11	69.5	1565	1747	-
12	2	11	71.8	1937	1282	-
13	1	6	55.2	1982	-	-
14	2	14	79.6	1406	1731	-
15	1	9	63	1102	-	-
16	2	10	68.7	1479	1879	-
17	1	7	56.6	1373	-	-
18	3	20	98.3	1061	1989	1046
19	1	8	62.1	1264	-	-
20	1	10	66.3	1455	-	-

Long Pulse Radar Test Signal Test Signal Name: LP_Signal_25 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	53.7	1961	-	-
2	3	16	85.1	1804	1369	1175
3	2	12	74.8	1584	1753	-
4	1	9	64.6	1734	-	-
5	1	6	54.8	1612	-	-
6	1	5	50.2	1703	-	-
7	2	12	72.8	1107	1740	-
8	3	19	95.6	1383	1108	1843
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_26

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	3	18	91.7	1674	1295	1998
2	3	20	98	1224	1898	1513
3	1	9	63.8	1720	-	-
4	2	12	73.6	1277	1169	-
5	3	16	86.7	1440	1082	1678
6	1	5	52.6	1949	-	-
7	3	19	96.3	1523	1726	1036
8	1	7	56.3	1729	-	-
9	1	8	60.8	1798	-	-
10	1	6	54.5	1681	-	-
11	2	10	66.8	1356	1583	-
12	3	20	97.4	1112	1384	1351
13	2	12	74.7	1851	1769	-
14	1	7	56.8	1991	-	-
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16						
17						
18						
19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_27

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	1	6	53.4	1539	-	-
2	1	7	59.3	1841	-	-
3	1	5	51.3	1631	-	-
4	3	20	98.3	1701	1039	1366
5	2	14	80.3	1552	1873	-
6	1	8	61.9	1544	-	-
7	2	13	76	1030	1590	-
8	2	11	70.9	1387	1835	-
9	3	16	85	1480	1834	1922
10	2	11	71	1919	1058	-
11	3	18	93.7	1208	1881	1067
12	1	8	61.9	1044	-	-
13	2	10	67.8	1053	1262	-
14	2	13	78.1	1103	1950	-
15	1	6	54	1944	-	-
16	3	16	87.5	1450	1111	1517
17	3	16	87.3	1319	1194	1079
18	3	19	96	1967	1800	1655
19	1	5	50.5	1550	-	-
20	1	7	57.5	1791	-	-

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_28

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	17	89.1	1692	1559	1899
2	3	17	90	1878	1313	1529
3	3	20	97.3	1599	1531	1862
4	3	19	96	1259	1741	1506
5	3	16	85.1	1363	1839	1986
6	1	5	52.5	1673	-	-
7	3	15	83.4	1135	1397	1752
8	1	7	56.6	1904	-	-
9	1	7	57.8	1974	-	-
10	1	5	52	1894	-	-
11	2	15	81.5	1848	1952	-
12	1	9	64.8	1324	-	-
13						
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19						
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Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_29

Number of Bursts in Trial: 13

Burst	Pulses per Burst	Chirp (MHz)	Pulse Width(us)	PRI-1 (us)	PRI-2 (us)	PRI-3 (us)
1	3	18	91.6	1109	1200	1292
2	3	20	97	1687	1897	1463
3	2	15	81.7	1732	1958	-
4	1	9	65.4	1125	-	-
5	1	9	63.3	1409	-	-
6	1	7	56.5	1808	-	-
7	2	11	70	1096	1302	-
8	1	8	60.8	1836	-	-
9	2	11	69.6	1607	1306	-
10	2	11	70.8	1142	1144	-
11	1	9	63	1745	-	-
12	3	18	92.9	1595	1743	1113
13	2	14	80	1160	1981	-
14						
15						
16						
17						
18						
19						

Long Pulse Radar Test Signal

Test Signal Name: LP_Signal_30

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	2	12	74.8	1449	1252	-
2	3	16	84.8	1832	1646	1231
3	2	10	68.1	1209	1909	-
4	1	5	52.3	1241	-	-
5	2	12	73.4	1265	1925	-
6	2	10	67.3	1554	1773	-
7	2	11	70.8	1055	1585	-
8	3	19	96.8	1242	1906	1761
9	2	10	67.2	1275	1667	-
10	2	10	67.7	1670	1715	-
11	1	9	63.4	1874	-	-
12	1	8	62.1	1820	-	-
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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

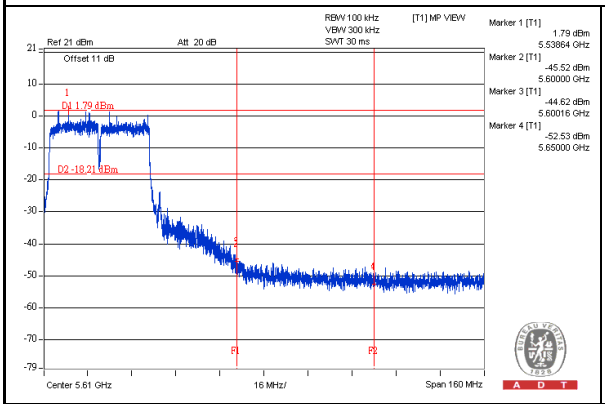
Hopping Frequency Sequence Name: HOP_FREQ_SEQ_29							
SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)	SEQ#	Frequency (Hz)
1	5.378G	2	5.707G	3	5.336G	4	5.533G
5	5.678G	6	5.692G	7	5.391G	8	5.491G
9	5.652G	10	5.662G	11	5.455G	12	5.627G
13	5.384G	14	5.721G	15	5.686G	16	5.649G
17	5.633G	18	5.682G	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

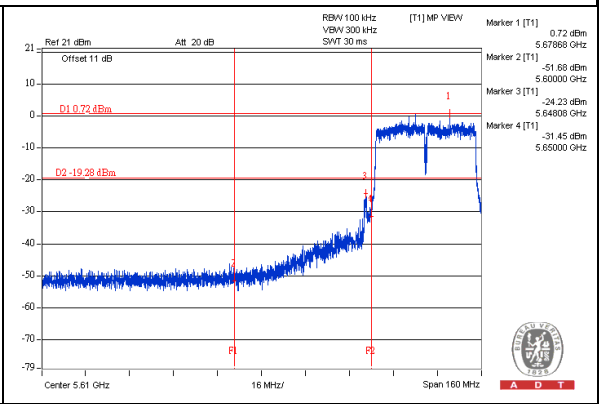
9. APPENDIX-B

NOTCH BAND IN 5600-5650MHZ

Verify that the 5600 – 5650 MHz band is notched.
Test results demonstrating last channel shall not exceed the band edge on 5600~5650MHz.

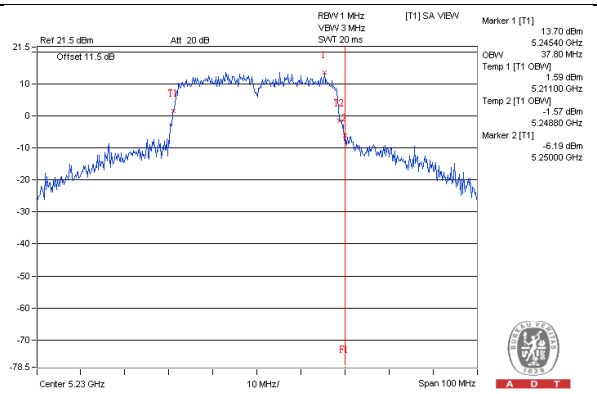


802.11n HT40 (CH 110: 5550MHz)



802.11n HT40 (CH 134: 5670MHz)

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 11n HT40 mode

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