



# FCC Part15 E DFS TEST REPORT No.I20Z61602-IOT11

for

**Wingtech Group (Hong Kong) Limited**

**4G Mobile Broadband Router**

**TMOHS1**

**With**

**FCC ID: 2APXW-TMOHS1**

**Hardware Version: 89527\_1\_11**

**Software Version: TMOHS1\_0.01.16**

**Issued Date: 2020-11-26**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S.Government.

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I120Z61602-IOT11	Rev.0	1st edition	2020-11-12
I120Z61602-IOT11	Rev.1	Update testing of all BW modes (20, 40) and include the data from all the trials for each radar type.	2020-11-26

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## **1. TEST LABORATORY**

### **1.1. Introduction & Accreditation**

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

### **1.2. Testing Location**

Location 1:CTTL(huayuan North Road)

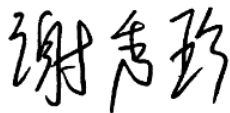
Address: No. 52, Huayuan North Road, Haidian District, Beijing,  
P. R. China100191

### **1.3. Project date**

Testing Start Date: 2020-09-23

Testing End Date: 2020-11-25

### **1.4. Signature**



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Xie Xiuzhen

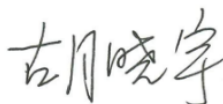
( Prepared this test report )



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Zheng Wei

(Reviewed this test report)



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Hu Xiaoyu

(Approved this test report)

## **2. CLIENT INFORMATION**

### **2.1. Applicant Information**

Company Name: Wingtech Group (Hong Kong) Limited  
Address: Flat/RM 1903, 19/F, Podium Plaza 5 Hanoi Road, Tsim Sha Tsui  
Kowloon, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: /  
Fax: /

### **2.2. Manufacturer Information**

Company Name: Wingtech Group (Hong Kong) Limited  
Address: Flat/RM 1903, 19/F, Podium Plaza 5 Hanoi Road, Tsim Sha Tsui  
Kowloon, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: /  
Fax: /

### **3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY**

#### **EQUIPMENT(AE)**

##### **3.1. About EUT**

Description	4G Mobile Broadband Router
Model name	TMOHS1
FCC ID	2APXW-TMOHS1
WLAN Frequency Band	ISM Band: 5250MHz~5350MHz 5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Extreme vol. Limits	3.85V
Device Type (DFS)	Master
Antenna gain	2.31dBi

##### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>S/N</b>	<b>HW Version</b>	<b>SW Version</b>
EUT1	862448013593650	89527_1_11	TMOHS1_0.01.16

\*EUT ID: is used to identify the test sample in the lab internally.

##### **3.3. General Description**

The Equipment Under Test (EUT) is a model of 4G Mobile Broadband Router with WLAN with internal antenna. It consists of normal options: AC power line charger. Manual and specifications of the EUT were provided to fulfil the test.

## 4. REFERENCE DOCUMENTS

### 4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

### 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

905462 D02	COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION	2016
FCC Part15 E	Title 47 of the Code of Federal Regulations; Chapter I Part 15.407	2020

Note: This report is only for DFS

## 5. LABORATORY ENVIRONMENT

Measurement is performed in shielding room.

## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	FCC Part 15.407	Verdict
Channel Availability Check	15.407(h)(2) (ii)	P
Channel move time and channel closing transmission time	15.407(h)(2) (iii)	P
DFS detection bandwidth	5.407(h)(2)	P
Non-Occupancy Period	15.407(h)(2) (iv)	P
Statistical Performance Check	5.407(h)(2)	P

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

### 6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of

this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

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

Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater.

#### Test Conditions

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage
V min	Low Voltage
V max	High Voltage
H nom	Norm Humidity
A nom	Norm Air Pressure

For this report, all the test case listed above is tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

Temperature	T nom	26°C
Voltage	V nom	3.85 V
Humidity	H nom	44%
Air Pressure	A nom	1010hPa



## 7. TEST EQUIPMENTS UTILIZED

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Date	Calibration Due Date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2021-05-06
2	Vector Signal Generator	SMU200A	103752	Rohde & Schwarz	1 year	2021-05-05
3	Vector Signal Generator	SMW200A	103421	Rohde & Schwarz	1 year	2021-02-26
4	Vector Signal Analyzer	E4440A	MY46186042	Agilent	1 year	2021-02-26
5	Power Splitter	ZN2PD-9G-S+	/	Mini-Circuits	/	/
6	Attenuator	30dB	/	Rosenberger	/	/
7	Shielding Room	S81	/	ETS-Lindgren	/	/

Software	Version	Manufacturer	Build	Rev
Pulse Sequencer	V1.10	Rohde & Schwarz	7324	3462

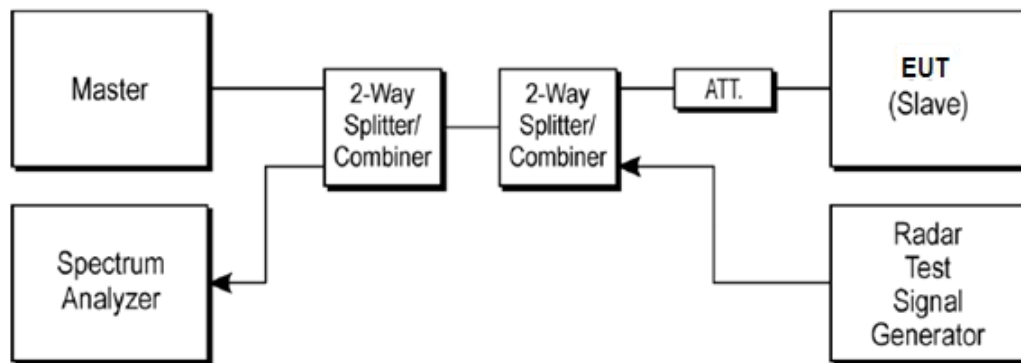
Instrument	Manufacturer	Serial Number
PC	DELL	GPL87W1

## ANNEX A: MEASUREMENT RESULTS

### A.1. Measurement Method

#### A.1.1. Conducted Measurements

The below figure shows the DFS setup, where the EUT is a WLAN device operating in slave mode, without Radar Interference Detection function. This setup also contains a device operating in master mode. The radar test signals are injected into the master device. The EUT (slave device) is associated with the master device. WLAN traffic is generated by streaming the mpeg file from the master to the slave in full monitor video mode using the media player.



Note:

- 1) All Measurements are performed with the EUT's narrowest channel bandwidth.
- 2) The master device information is as follows  
 Vendor: RUCKUS  
 Model: R600  
 FCC ID: S9GR600
- 3) The software of radar signal generator (R&S SMW200A) is completely designed based on KDB 905642 requirement.

#### A.1.2. Parameters of DFS test signal

- 1). Interference threshold values, master or client incorporation in service monitoring

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 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
<p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p><b>Note 2:</b> Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in</p>	

measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

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

2). DFS requirement values

Parameter	Value
Channel Availability Check Time	60 seconds (see note 1)
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.
Non-Occupancy Period	30 minutes
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.

## 3).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	$\text{Roundup} \left\{ \begin{array}{l} \left( \frac{1}{360} \right) \cdot \\ \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \end{array} \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
<b>Note 1:</b> Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

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

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).Measurement Uncertainty

Item	Measurement Uncertainty
Time	0.70 ms
Power	0.75 dBm

4). Operating Frequency and Channel List for this Report  
 802.11a/n-HT20/ac-VHT20

Channel	Frequency(MHz)	Channel	Frequency(MHz)	Channel	Frequency(MHz)
52	5260	108	5540	132	5660
56	5280	112	5560	136	5680
60	5300	116	5580	140	5700
64	5320	120	5600	144	5720
100	5500	124	5620	/	/
104	5520	128	5640	/	/

802.11n-HT40/ac-VHT40

Channel	Frequency(MHz)	Channel	Frequency(MHz)
54	5270	118	5590
62	5310	126	5630
102	5510	134	5670
110	5550	142	5710

802.11ac-VHT80

Channel	Frequency(MHz)	Channel	Frequency(MHz)
58	5290	122	5610
106	5530	138	5690

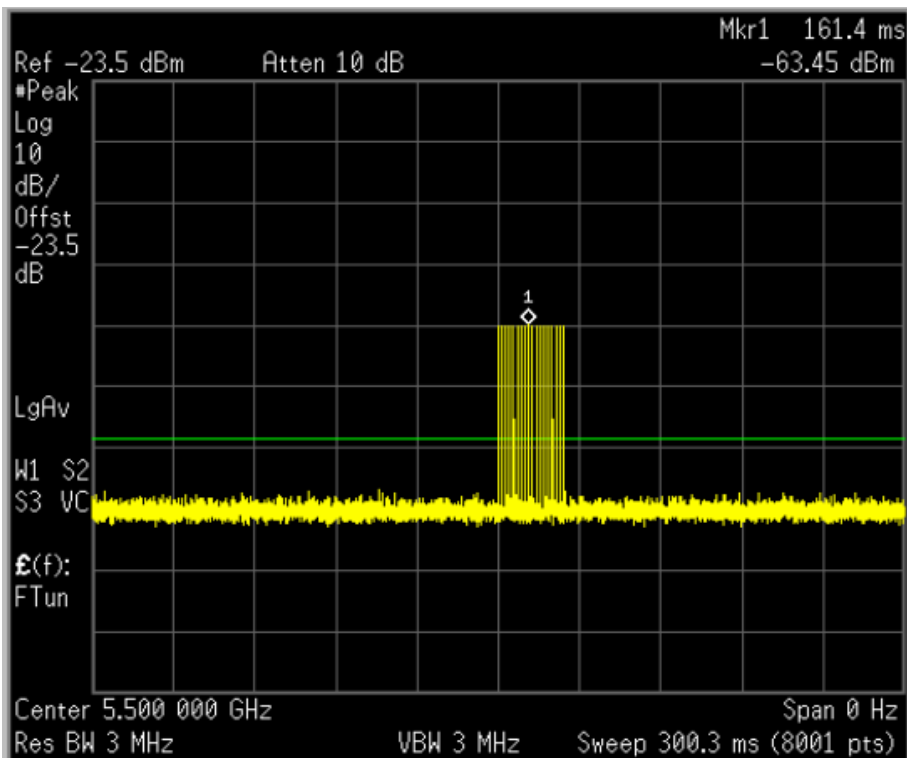
Test Channels for this Report

Test Mode	Test Channel	Test Frequency
802.11ac-VHT20	100	5500 MHz
802.11ac-VHT40	102	5510 MHz
802.11ac-VHT80	58	5290 MHz
802.11ac-VHT80	106	5530 MHz
802.11ac-VHT80	122	5610 MHz

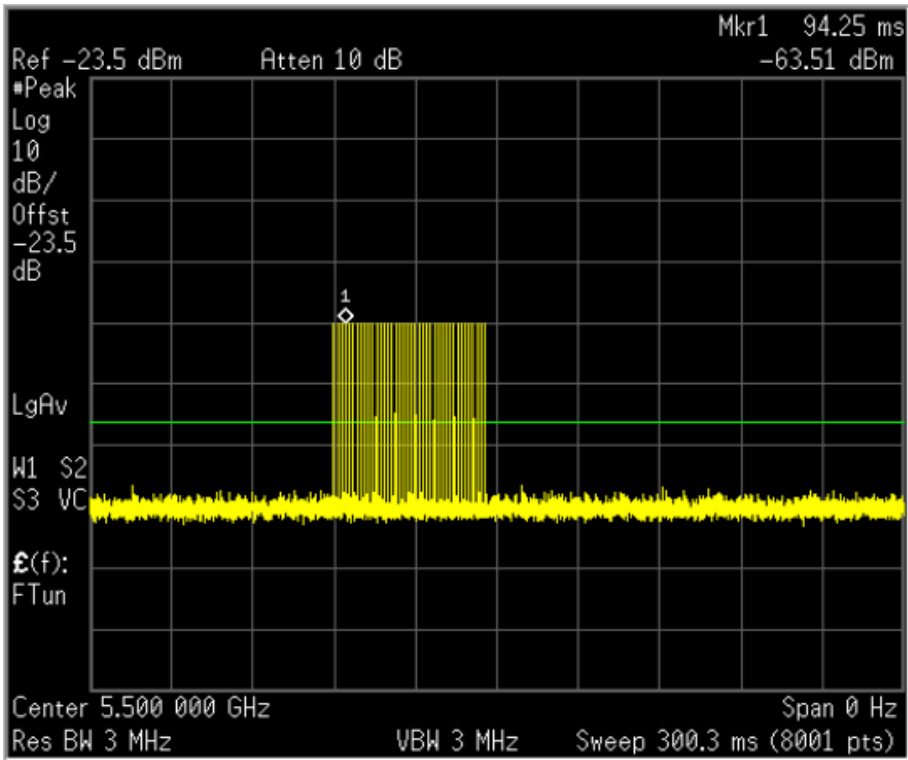
### A.1.3. Radar Waveform Calibration

The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

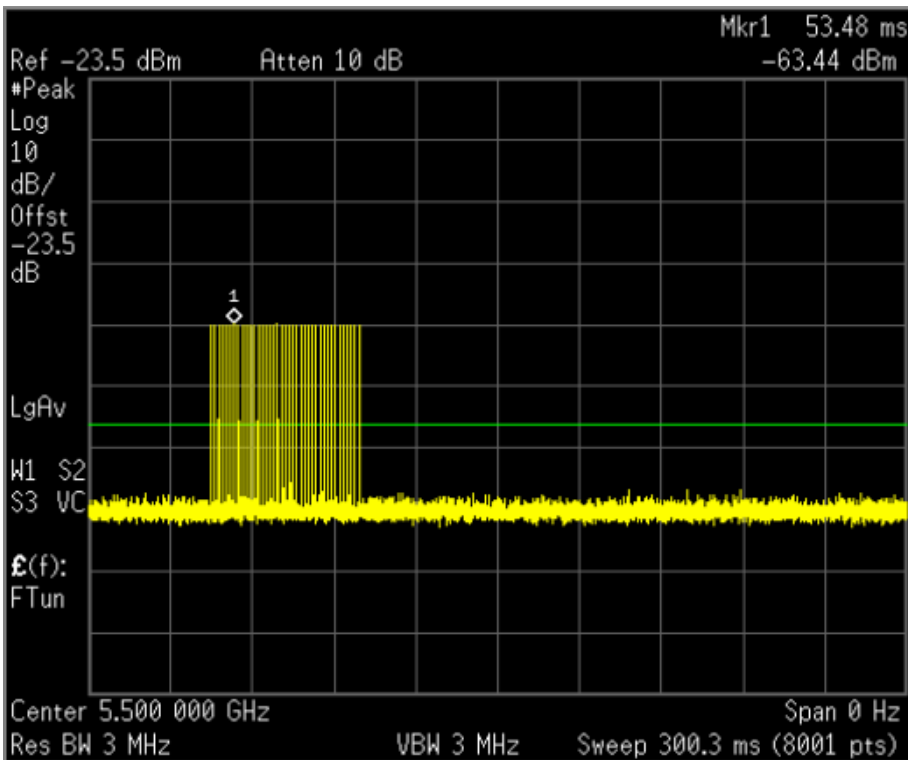
Radar #0



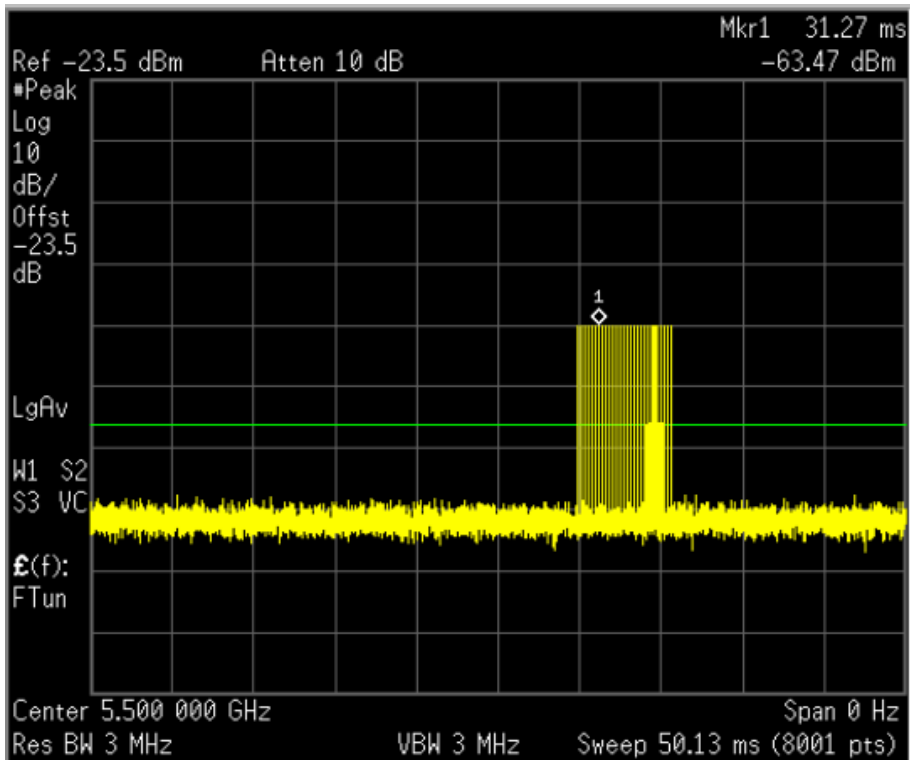
Radar #1(Test A)



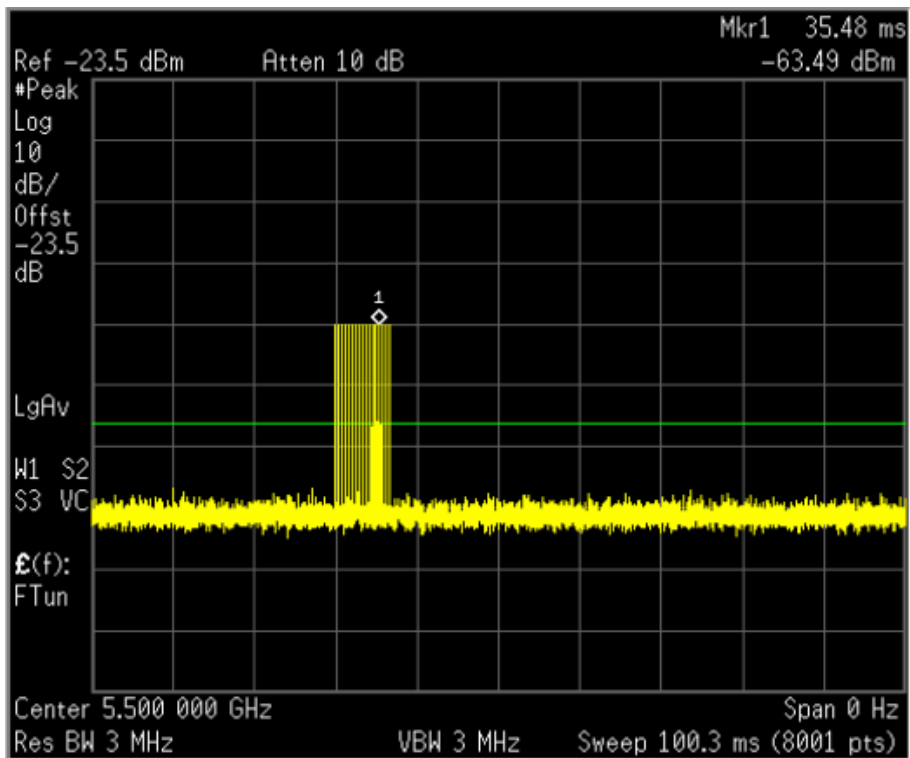
Radar #1(Test B)



Radar #2

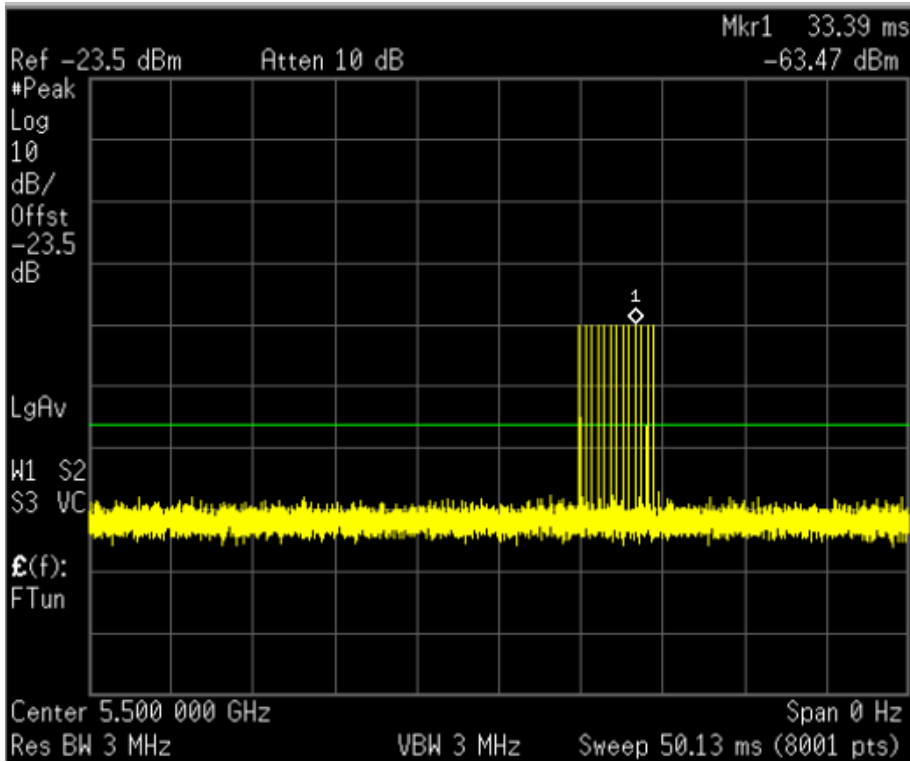


Radar #3

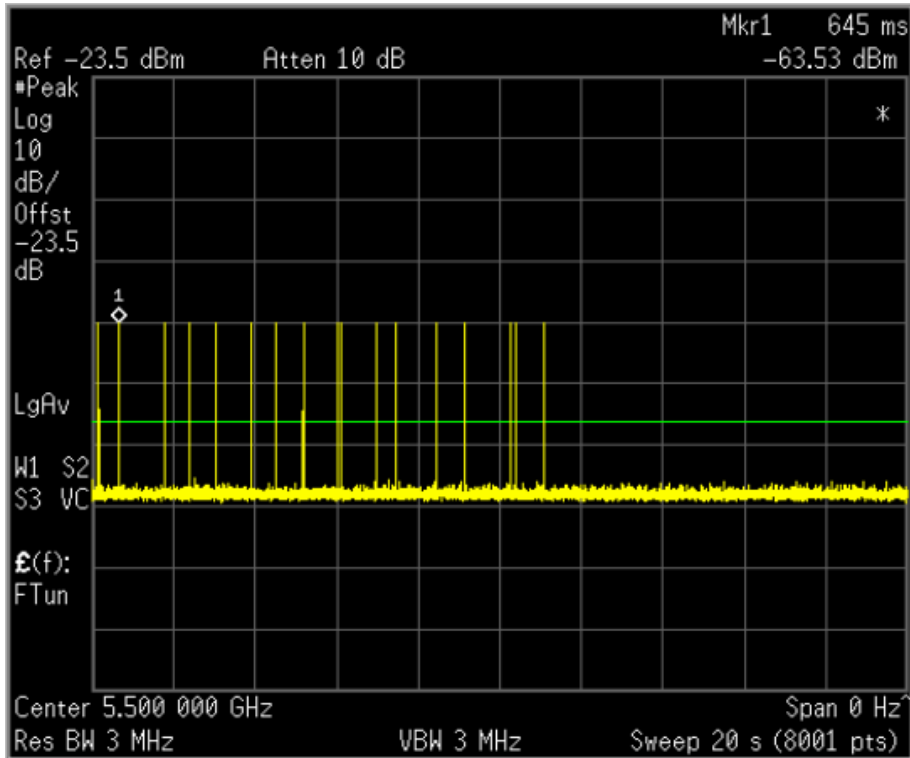




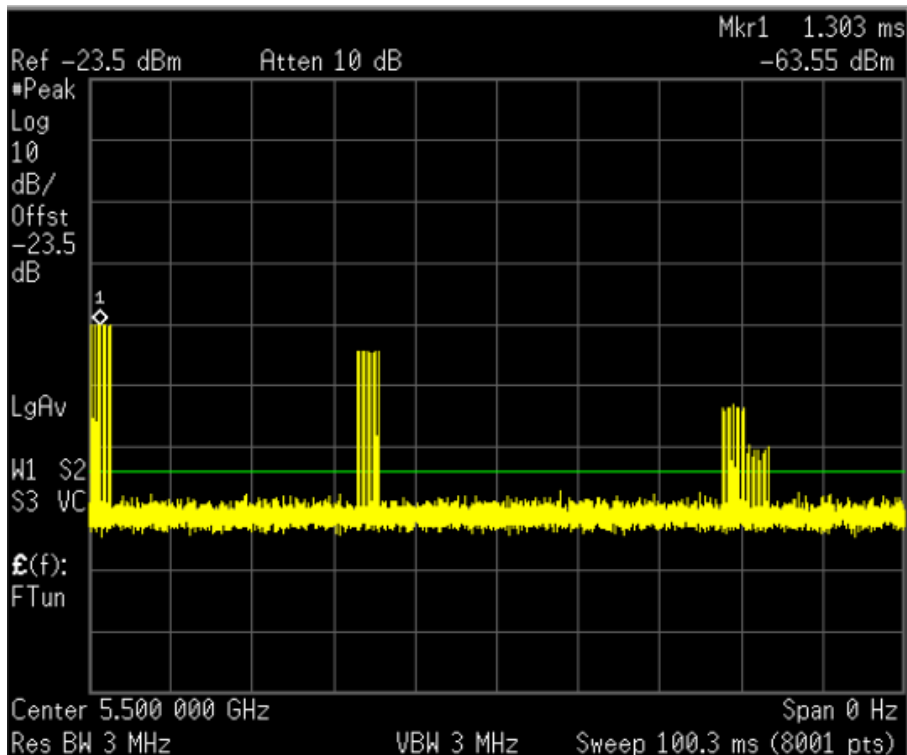
Radar #4



Radar #5



Radar #6



## A.2. Channel Availability Check

**Method of Measurement: See KDB 905462 7.8.2**

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

a) The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII *Channel* that must incorporate DFS functions. At the same time the UUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the *Channel* occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.

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

c) Confirm that the UUT initiates transmission on the channel

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

The steps below define the procedure to verify successful radar detection on the test *Channel* during a period equal to the *Channel Availability Check Time* and avoidance of operation on that

*Channel* when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1 dB occurs at the beginning of the *Channel Availability Check Time*.

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

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

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

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

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

The steps below define the procedure to verify successful radar detection on the test *Channel* during a period equal to the *Channel Availability Check Time* and avoidance of operation on that *Channel* when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB occurs at the end of the *Channel Availability Check Time*.

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

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

c) A single *Burst* of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T1 + 54 seconds. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

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

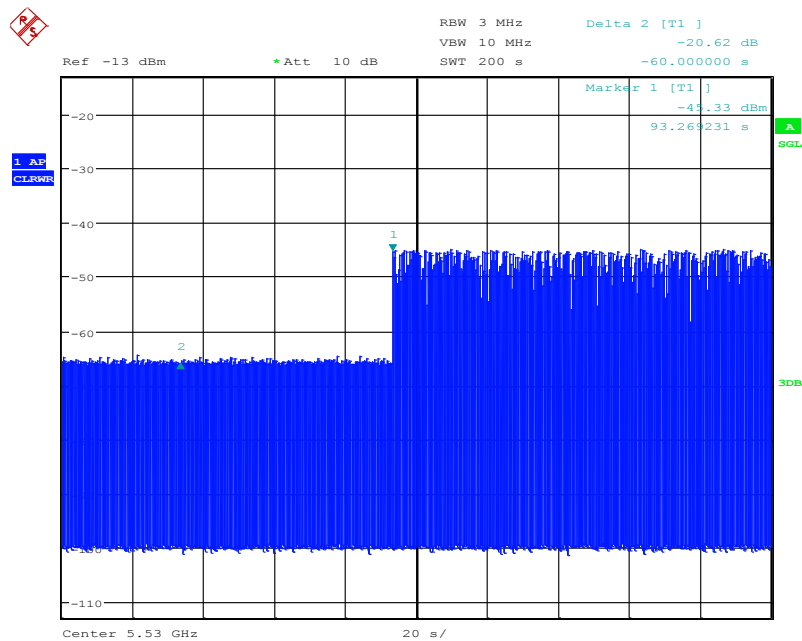
e) Verify that during the 2.5 minute measurement window no UUT transmissions occurred on Chr. The *Channel Availability Check* results will be recorded.

**Measurement Limit:**

Item	Limit
A. Initial Channel Availability Check Time	The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.
B. Tests with a radar burst at the beginning of the Channel Availability Check Time	Can detected.
C. Tests with radar burst at the end of the Channel Availability Check Time	Can Detected.

**Measurement Results:**

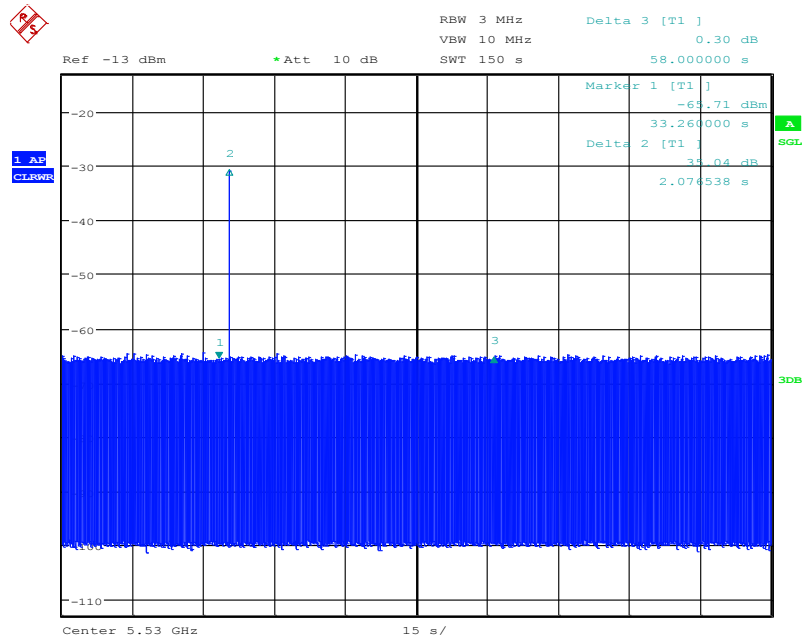
A. Initial Channel Availability Check Time  
802.11ac-VHT80



Date: 25.NOV.2020 03:36:10

Note: The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (33.27 sec). Initial beacons/data transmissions are indicated by marker 1 (93.27 sec).

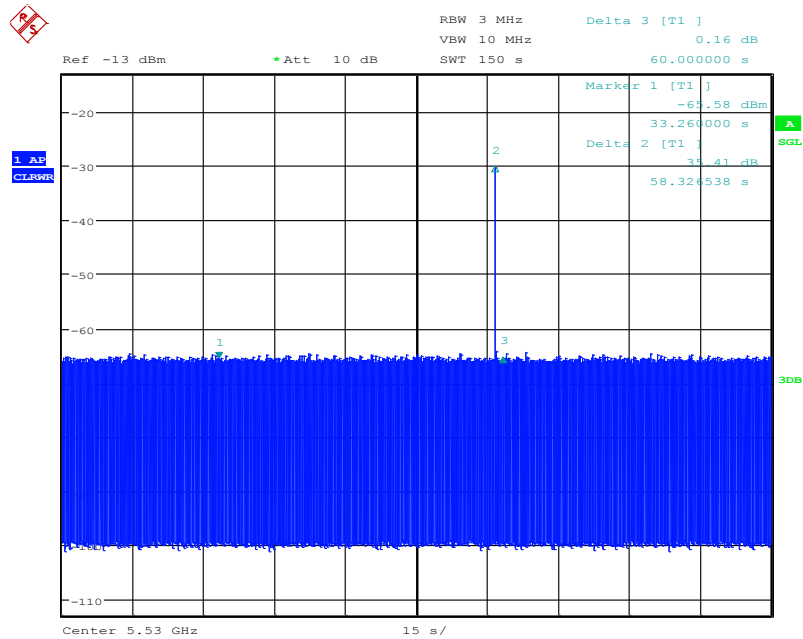
B. Tests with a radar burst at the beginning of the Channel Availability Check Time  
802.11ac-VHT80



Date: 25.NOV.2020 03:55:48

- Marker1: The completion of the power-on cycle
- Marker2: Add a radar burst at the beginning of the Channel Availability Check Time
- Marker3: The ending time of Channel Availability Check Time

B. Tests with radar burst at the end of the Channel Availability Check Time  
802.11ac-VHT80



Date: 25.NOV.2020 04:00:15

- Marker1: The completion of the power-on cycle
- Marker2: Add with radar burst at the end of the Channel Availability Check Time
- Marker3: The ending time of Channel Availability Check Time

### A.3. Channel move time and channel closing transmission time

#### Method of Measurement: See KDB 905462 7.8.3

The steps below define the procedure to determine the above mentioned parameters when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB is generated on the *Operating Channel* of the U-NII device (*In- Service Monitoring*).

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

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

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

d) At time T0 the *Radar Waveform* generator sends a *Burst* of pulses for one of the Radar Type 0 at levels defined, on the *Operating Channel*. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

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

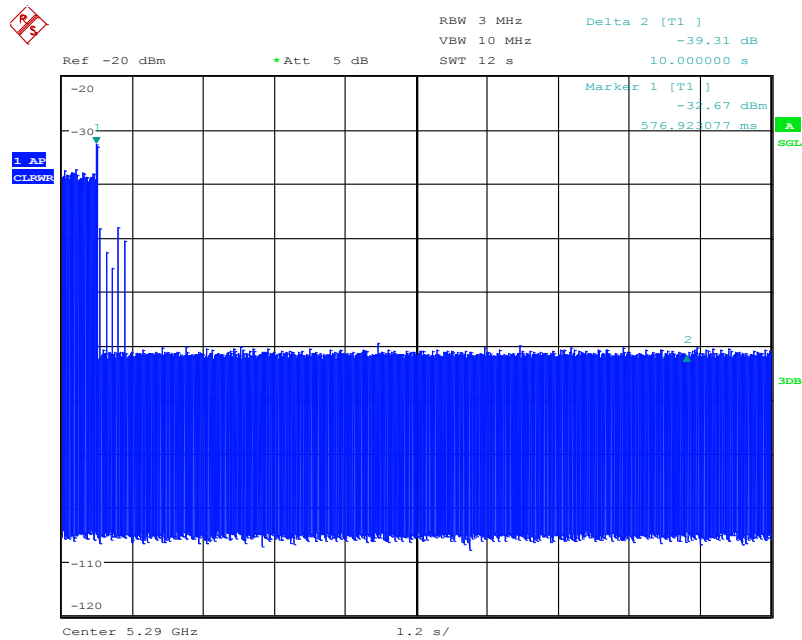
f) When operating as a *Master Device*, monitor the UUT for more than 30 minutes following instant T2 to verify that the UUT does not resume any transmissions on this *Channel*. Perform this test once and record the measurement result.

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

#### Measurement Limit:

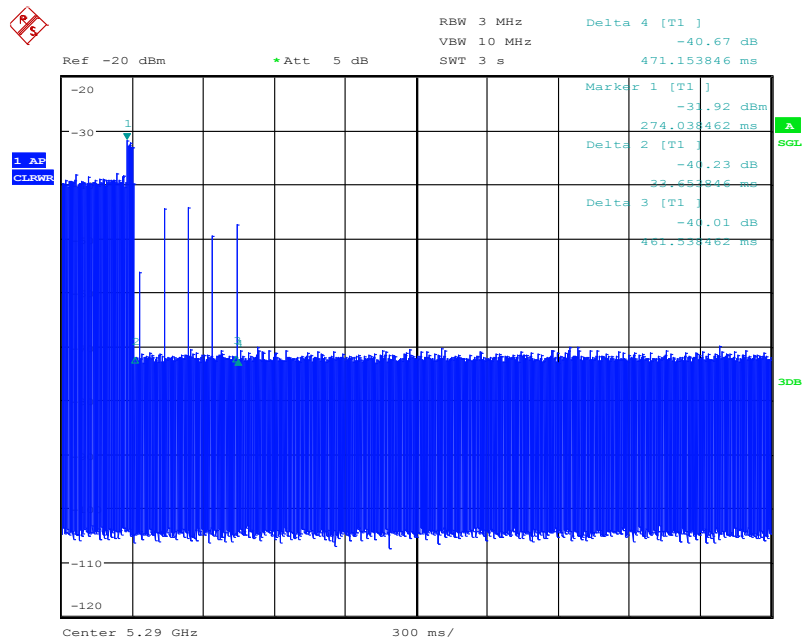
Test Items	Limit
Channel move time	10 s
Channel Closing Transmission Time	200 ms + 60 ms

**Measurement Results:**  
802.11ac-VHT80 5290MHz



Date: 22.OCT.2020 01:53:01

The channel move time is as the figure. It shows the time of the radar and the client pulses. The figure shows that the client stops transmission within 10 seconds, and no transmissions occur after 10 seconds later of the radar burst signal.



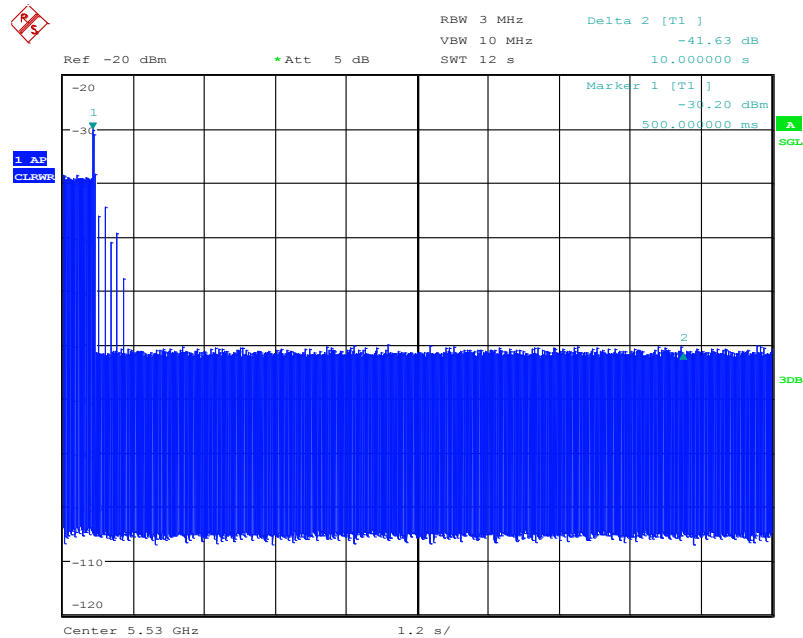
Date: 22.OCT.2020 01:57:21



The closing transmission time is as the figure, and the result  $81.73\text{ms} = \Delta 2 + (\Delta 4 - \Delta 3) * 5$ .

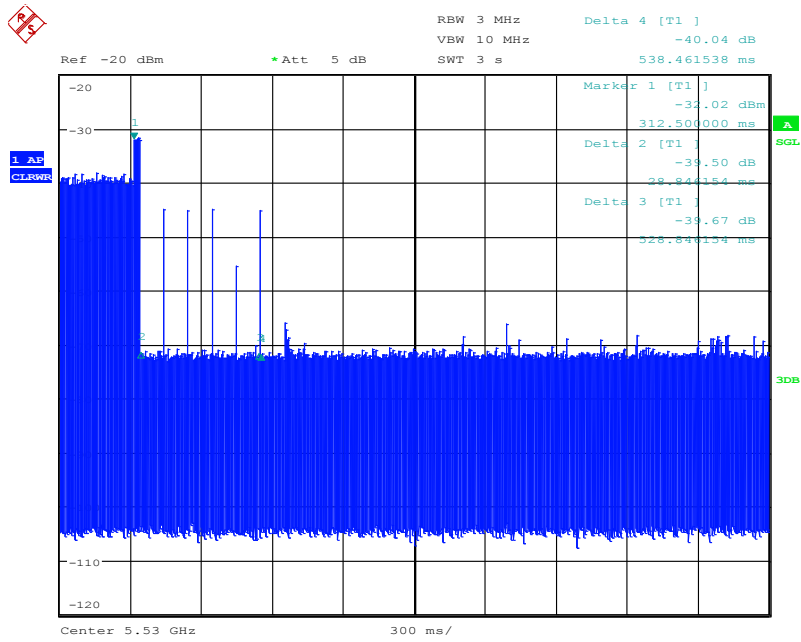
**Conclusion: PASS**

802.11ac-VHT80 5530MHz



Date: 22.OCT.2020 05:07:36

The channel move time is as the figure. It shows the time of the radar and the client pulses. The figure shows that the client stops transmission within 10 seconds, and no transmissions occur after 10 seconds later of the radar burst signal.



Date: 22.OCT.2020 04:39:45

The closing transmission time is as the figure, and the result  $76.92\text{ms} = \text{Delta}2 + (\text{Delta}4 - \text{Delta}3) * 5$

**Conclusion: PASS**

#### A.4. Non-Occupancy Period

##### Method of Measurement: See KDB 905462 7.8.3

The steps below define the procedure to determine the above mentioned parameters when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB is generated on the *Operating Channel* of the U-NII device (*In- Service Monitoring*).

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

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

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

d) At time T0 the *Radar Waveform* generator sends a *Burst* of pulses for one of the Radar Type 0 at levels defined, on the *Operating Channel*. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

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

f) When operating as a *Master Device*, monitor the UUT for more than 30 minutes following instant T2 to verify that the UUT does not resume any transmissions on this *Channel*. Perform this test once and record the measurement result.

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

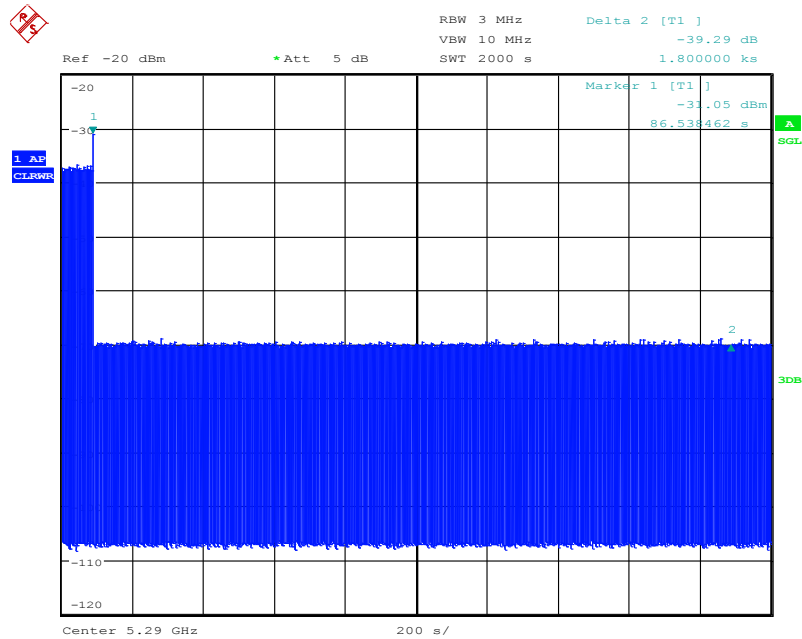
##### Measurement Limit:

Test Items	Limit
Non-Occupancy Period	> 1800 s

**Measurement Results:**

802.11ac-VHT80 5290MHz

Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.

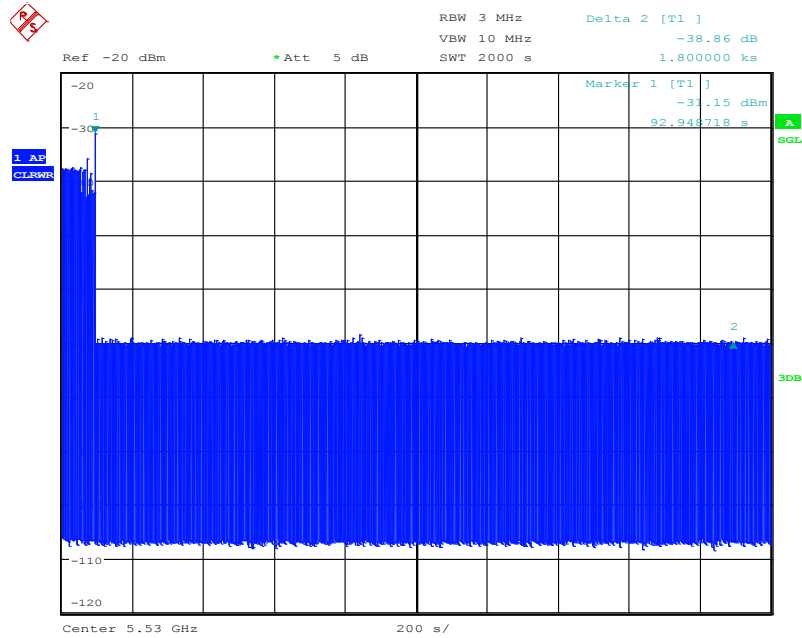


Date: 22.OCT.2020 02:45:43

The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of “stop transmits” from the DFS master (access point).

### 802.11ac-VHT80 5530MHz

Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.

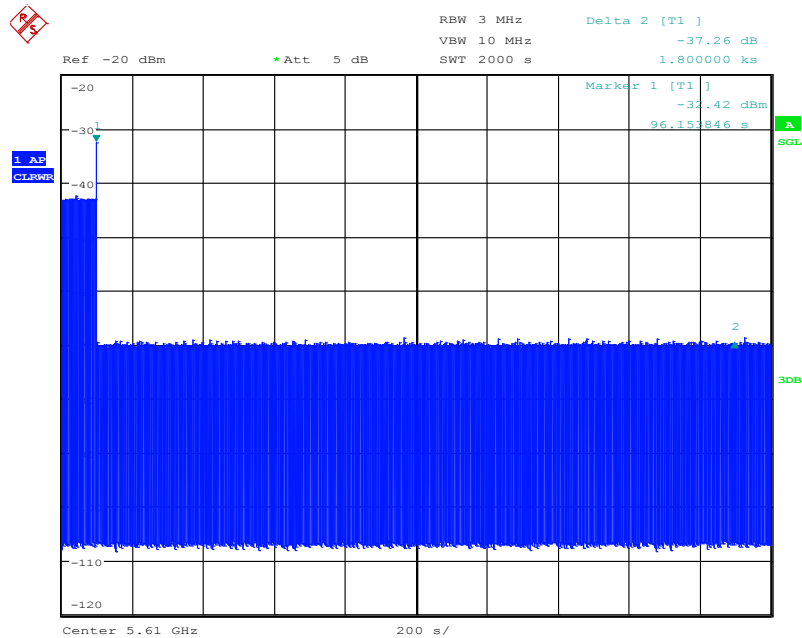


Date: 22.OCT.2020 06:03:25

The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of “stop transmits” from the DFS master (access point).

802.11ac-VHT80 5610MHz

Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.



Date: 22.OCT.2020 22:35:22

The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of “stop transmits” from the DFS master (access point).

**Conclusion: PASS**

## A.5. DFS detection bandwidth

### Method of Measurement: See KDB 905462 7.8.1

Set up the generating equipment, or equivalent. Set up the DFS timing monitoring equipment. Set up the overall system for either radiated or conducted coupling to the UUT.

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

Set the UUT up as a standalone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.

Generate a single radar *Burst*, and note the response of the UUT. Repeat for a minimum of 10 trials. The UUT must detect the *Radar Waveform* within the DFS band using the specified *U-NII Detection Bandwidth* criterion. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.

Starting at the center frequency of the UUT operating *Channel*, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the *U-NII Detection Bandwidth* criterion specified. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the *U-NII Detection Bandwidth* criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.

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

The *U-NII Detection Bandwidth* is calculated as follows:

$$U-NII\ Detection\ Bandwidth = FH - FL$$

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



**Measurement Limit:**

<b>Test Items</b>	<b>Limit</b>
DFS detection bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth.

**Measurement Results:**



Test channel: 802.11ac-VHT20 5500MHz											
Radar Frequency (MHz)	DFS Detection trials (1 Detection; 0 No Detection)										Detection Rate (%)
5490	0	0	0	0	0	0	0	0	0	0	0%
5490.5-F <sub>l</sub>	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5509.5-F <sub>h</sub>	1	1	1	1	1	1	1	1	1	1	100%
5510	0	1	0	0	0	0	0	0	0	0	10%
Detection Bandwidth=F <sub>h</sub> -F <sub>l</sub> =5509.5-5490.5=19.0MHz											

the limit=EUT 99% bandwidthx100% =16.53MHz

The test result: Pass

Test channel: 802.11ac-VHT40 5510MHz											
Radar Frequency (MHz)	DFS Detection trials (1 Detection; 0 No Detection)										Detection Rate (%)
5490	0	0	0	0	0	0	1	0	0	0	10%
5491-F <sub>1</sub>	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%

5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529-F <sub>h</sub>	1	1	1	1	1	1	1	1	1	1	100%
5530	0	0	0	0	0	0	0	0	0	0	0%

Detection Bandwidth= $F_h - F_l = 5529 - 5491 = 38\text{MHz}$

the limit=EUT 99% bandwidthx100% =35.87MHz

The test result: Pass

Test channel: 802.11ac-VHT80 5530MHz											
Radar Frequency (MHz)	DFS Detection trials (1 Detection; 0 No Detection)										Detection Rate (%)
5490	0	0	0	0	0	0	0	0	0	0	0%
5491-F <sub>1</sub>	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%

5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5531	1	1	1	1	1	1	1	1	1	1	100%
5532	1	1	1	1	1	1	1	1	1	1	100%
5533	1	1	1	1	1	1	1	1	1	1	100%
5534	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5536	1	1	1	1	1	1	1	1	1	1	100%
5537	1	1	1	1	1	1	1	1	1	1	100%
5538	1	1	1	1	1	1	1	1	1	1	100%
5539	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5541	1	1	1	1	1	1	1	1	1	1	100%

5542	1	1	1	1	1	1	1	1	1	1	100%
5543	1	1	1	1	1	1	1	1	1	1	100%
5544	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5546	1	1	1	1	1	1	1	1	1	1	100%
5547	1	1	1	1	1	1	1	1	1	1	100%
5548	1	1	1	1	1	1	1	1	1	1	100%
5549	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5551	1	1	1	1	1	1	1	1	1	1	100%
5552	1	1	1	1	1	1	1	1	1	1	100%
5553	1	1	1	1	1	1	1	1	1	1	100%
5554	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5556	1	1	1	1	1	1	1	1	1	1	100%
5557	1	1	1	1	1	1	1	1	1	1	100%
5558	1	1	1	1	1	1	1	1	1	1	100%
5559	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5561	1	1	1	1	1	1	1	1	1	1	100%
5562	1	1	1	1	1	1	1	1	1	1	100%
5563	1	1	1	1	1	1	1	1	1	1	100%
5564	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569-F <sub>h</sub>	1	1	1	1	1	1	1	1	1	1	100%

5570	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth= $F_h - F_l = 5569 - 5491 = 78\text{MHz}$											
the limit=EUT 99% bandwidth $\times 100\% = 74.96\text{MHz}$											
The test result: Pass											

## A.6. Statistical Performance Check

### Method of Measurement: See KDB 905462 7.8.4

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. At time  $T_0$  the Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels equal to the DFS Detection Threshold + 1dB, on the Operating Channel.
3. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 0 to ensure detection occurs.
4. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
6. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table.

### Measurement Limit:

Radr Type	Number of Trails	Detection Probability
1	30	>60%
2	30	>60%
3	30	>60%
4	30	>60%
Aggregate (Radar Types 1-4)	120	>80%
5	30	>80%
6	30	>70%

**Measurement Results:**

802.11ac-VHT20 5500MHz

Radar Type 1 - Radar Statistical Performance

RADAR TYPE 1					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5490.5	99	1	631	1
2	5491.0	80	1	609	1
3	5491.7	79	1	711	1
4	5492.5	69	1	888	1
5	5493.2	90	1	769	1
6	5493.8	99	1	815	1
7	5494.3	75	1	677	1
8	5494.9	98	1	518	1
9	5495.4	69	1	587	1
10	5495.8	53	1	549	0
11	5496.5	76	1	615	1
12	5497.4	59	1	792	1
13	5498.0	93	1	709	1
14	5498.7	79	1	622	1
15	5499.4	81	1	714	1
16	5500.0	80	1	579	1
17	5501.4	62	1	736	1
18	5501.8	57	1	749	1
19	5502.4	80	1	581	1
20	5503.0	81	1	626	0
21	5503.6	70	1	749	1
22	5504.2	69	1	805	1
23	5504.8	88	1	845	1
24	5505.6	71	1	905	1
25	5506.1	80	1	812	1
26	5506.8	73	1	772	1
27	5507.6	84	1	639	0
28	5508.2	72	1	640	1
29	5508.9	86	1	751	1
30	5509.5	92	1	668	1
Detection Percentage (%)					90.0%



## Radar Type 2 - Radar Statistical Performance

RADAR TYPE 2					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5490.5	25	2.4	195	1
2	5491.0	27	4	225	1
3	5491.7	27	3.8	178	1
4	5492.5	24	1.1	180	1
5	5493.2	24	4.6	162	1
6	5493.8	23	3.9	164	1
7	5494.3	24	3.8	172	1
8	5494.9	28	1.6	216	1
9	5495.4	29	1.8	188	1
10	5495.8	28	4.8	219	1
11	5496.5	28	3.4	200	0
12	5497.4	24	2.5	213	1
13	5498.0	29	3.8	202	1
14	5498.7	26	3.9	203	1
15	5499.4	26	5	162	1
16	5500.0	23	4.5	188	0
17	5501.4	26	4.9	184	1
18	5501.8	27	1.7	170	1
19	5502.4	28	4.3	190	1
20	5503.0	26	3.3	212	1
21	5503.6	23	2	180	1
22	5504.2	29	2	206	1
23	5504.8	26	4.7	163	1
24	5505.6	26	4.8	216	1
25	5506.1	28	4.2	222	1
26	5506.8	27	2.8	166	1
27	5507.6	25	3.9	170	1
28	5508.2	26	3.5	185	1
29	5508.9	24	4.9	228	1
30	5509.5	26	3.3	194	1
Detection Percentage (%)					93.3%

## Radar Type 3 - Radar Statistical Performance

RADAR TYPE 3					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5490.5	18	6.8	467	1
2	5491.0	17	9.3	285	1
3	5491.7	18	8.3	292	1
4	5492.5	18	7	223	1
5	5493.2	17	8.1	305	1
6	5493.8	17	8.4	482	1
7	5494.3	17	8.6	456	1
8	5494.9	16	6	470	1
9	5495.4	17	8.8	455	1
10	5495.8	17	8.3	287	1
11	5496.5	17	7.2	314	1
12	5497.4	18	8.2	351	1
13	5498.0	17	6.6	226	1
14	5498.7	18	8.9	473	0
15	5499.4	16	6.4	262	1
16	5500.0	17	9.1	410	1
17	5501.4	18	6	419	1
18	5501.8	18	10	460	1
19	5502.4	16	8.9	258	1
20	5503.0	18	9	384	1
21	5503.6	17	7.5	467	1
22	5504.2	18	9.3	433	1
23	5504.8	17	9	369	0
24	5505.6	18	8.3	315	1
25	5506.1	17	6.4	391	1
26	5506.8	16	8.4	208	1
27	5507.6	17	7	497	1
28	5508.2	17	8.1	329	1
29	5508.9	18	6.6	307	1
30	5509.5	16	9.4	383	1
Detection Percentage (%)					93.3%

## Radar Type 4 - Radar Statistical Performance

RADAR TYPE 4					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5490.5	15	16.8	336	1
2	5491.0	15	15.9	445	1
3	5491.7	14	13.6	478	1
4	5492.5	12	13.6	450	1
5	5493.2	13	12.2	497	1
6	5493.8	15	13.4	414	1
7	5494.3	13	12.4	376	1
8	5494.9	15	12.2	239	0
9	5495.4	12	15.6	484	1
10	5495.8	13	11.5	206	1
11	5496.5	13	17.2	201	1
12	5497.4	15	12.4	445	1
13	5498.0	13	14.2	385	1
14	5498.7	15	11.6	397	1
15	5499.4	16	16.6	426	1
16	5500.0	14	15.6	287	1
17	5501.4	14	11.5	301	0
18	5501.8	16	17.2	366	1
19	5502.4	13	15.2	475	1
20	5503.0	13	19.8	316	1
21	5503.6	13	18	436	1
22	5504.2	14	13.7	275	1
23	5504.8	15	13.8	344	1
24	5505.6	13	14.8	393	1
25	5506.1	13	18.7	214	1
26	5506.8	16	16.7	323	0
27	5507.6	14	17.3	301	1
28	5508.2	12	11.2	499	1
29	5508.9	13	17.7	284	1
30	5509.5	16	12.6	282	1
Detection Percentage (%)					93.3%

Note: In addition an average minimum percentage of successful detection across all four Short pulse

radar test waveforms is as follows:  $\frac{p1+p2+p3+p4}{4}=(90.0\%+93.3\%+93.3\%+93.3\%)/4=92.5\%(>80\%).$

## Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5490.5	1	16	5500.0	1
2	5491.0	1	17	5501.4	1
3	5491.7	1	18	5501.8	0
4	5492.5	1	19	5502.4	1
5	5493.2	0	20	5503.0	1
6	5493.8	1	21	5503.6	1
7	5494.3	1	22	5504.2	1
8	5494.9	1	23	5504.8	1
9	5495.4	1	24	5505.6	1
10	5495.8	1	25	5506.1	1
11	5496.5	1	26	5506.8	1
12	5497.4	1	27	5507.6	1
13	5498.0	1	28	5508.2	1
14	5498.7	1	29	5508.9	1
15	5499.4	1	30	5509.5	1
Detection Percentage (%)					93.3%

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 1						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	59.1	12	944		300.71
2	1	57.9	6			791.441
3	3	71.7	7	1021	1576	383.872

4	3	63	16	1361	1635	415.203
5	1	50.8	19			853.144
6	2	68.7	9	1483		512.935
7	2	67.5	10	1330		191.245
8	2	76.6	14	1057		911.206
9	2	55.8	9	1171		583.427
10	2	71.8	8	1508		129.628
11	1	82.4	10			569.109

## TYPE 5 PARAMETER

Rohde &amp; Schwarz

## SHEET

Pulse Sequencer

Trial Number : 2

Bursts in Trial: 10

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	56.7	16	1106		1092.47
2	1	53.5	13			507.26
3	1	56.1	9			899.82
4	3	52.1	11	968	1160	206.15
5	1	59.8	20			960.41
6	2	63.4	17	987		652.86
7	3	67.7	11	1305	1383	948.27
8	2	55.8	7	1892		214.75
9	3	98.6	19	1177	1767	1013.3
10	3	87.8	7	924	1249	232.4

## TYPE 5 PARAMETER

Rohde &amp; Schwarz

## SHEET

Pulse Sequencer

Trial Number : 3

Bursts in Trial: 14

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	59.8	11	1845	1891	167.441

2	2	70.6	7	1264		437.667
3	2	83.3	9	1500		723.704
4	2	59.3	11	1890		521.721
5	2	92	10	1792		93.449
6	2	55.4	8	1760		0.496
7	2	77.4	14	1093		672.263
8	2	65.8	11	1323		154.31
9	2	61.5	15	1669		296.177
10	3	84.3	12	939	1768	124.524
11	2	85.5	20	1141		550.801
12	3	84.5	8	1471	1601	427.779
13	2	56.4	5	1057		499.886
14	1	70.5	18			584.043

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 4

Bursts in Trial: 10

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	53	14	1275		1056.9
2	1	58.7	18			1102.17
3	3	95.5	9	1564	1863	143.34
4	3	88.5	8	1528	1083	200.67
5	1	92.3	15			133.13
6	2	90.9	9	1065		892.49
7	3	90.6	12	1817	1611	914.41
8	3	94.4	20	1023	1379	888.13
9	2	78.7	13	968		348.29
10	2	60.2	17	1475		795.1

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 5**

**Bursts in Trial: 9**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	72.2	7	1445		1201.32
2	3	67.3	18	1386	1484	555.337
3	1	50.8	16			1187.843
4	1	78.8	19			1322.27
5	3	88.3	11	931	1336	93.447
6	2	87.1	19	1440		811.853
7	1	57.8	15			998.61
8	2	86.9	7	1688		1089.767
9	1	86.9	5			326.133

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 6**

**Bursts in Trial: 10**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	62.2	20	1133		842.327
2	2	83.4	17	1713		781.91
3	2	83.9	19	1442		931.37
4	1	96.9	16			77.74
5	1	78.3	17			1116.02
6	1	71.4	18			1120.9
7	2	62.6	8	1412		381.22
8	2	75.7	7	1060		660.15
9	1	78.7	20			143.26
10	1	67	11			834.2

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 7						
Bursts in Trial: 18						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	86.6	15			610.372
2	2	86.4	19	1403		358.763
3	2	83.8	8	1830		385.747
4	1	50.6	9			207.76
5	3	82.2	14	1553	1318	501.793
6	2	89.1	11	1138		155.987
7	1	62.2	5			279.67
8	2	62	11	1742		435.993
9	2	88.9	17	1537		159.967
10	1	87.1	5			493.2
11	2	55.9	7	1590		536.903
12	3	92.1	20	1811	1100	401.897
13	2	56.9	5	1084		306.71
14	3	61.4	6	1711	1168	127.563
15	2	86	8	1793		436.407
16	2	78.9	10	1014		1.1
17	3	87.7	17	1282	1878	78.233
18	2	54.1	7	1868		568.267

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 8						
Bursts in Trial: 19						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	93.7	15	1002	1322	566.731
2	2	84.8	5	1778		44.243



3	1	85.1	20			467.762
4	1	75.6	18			437.263
5	2	96.7	17	1018		308.134
6	2	64	8	1764		414.365
7	1	77.7	10			342.146
8	2	74	9	986		535.927
9	2	64.7	15	983		450.508
10	2	73.5	15	1842		214.559
11	2	81.8	19	1650		101.491
12	2	94.8	12	928		97.122
13	2	65.3	20	1526		192.993
14	2	96.1	14	1405		393.984
15	1	60	9			507.865
16	2	94	13	1338		452.116
17	1	56.8	11			17.537
18	1	59.6	14			44.158
19	2	94.9	5	1360		150.179

## TYPE 5 PARAMETER SHEET

 Rohde & Schwarz  
 Pulse Sequencer

**Trial Number : 9**
**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	55.1	9	1100		330.103
2	1	89.8	20			524.168
3	3	58.2	11	1137	1362	659.625
4	3	99.2	15	1294	1751	61.593
5	2	88.5	13	1511		664.981
6	3	77.2	7	1329	1395	145.928
7	2	91.2	14	1720		297.636
8	2	66	16	1600		158.424
9	1	79.9	17			608.851
10	2	78.8	12	1501		404.009
11	3	89.9	19	1641	1431	137.796
12	3	74.9	8	1890	1296	0.184
13	3	51.3	17	1073	1362	244.122

14	3	89.1	9	1377	919	612.939
15	1	53.1	7			557.047
16	2	98.3	20	1557		529.665
17	2	85.9	20	949		437.882

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 10						
Bursts in Trial: 13						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	50.5	11	1456		168.841
2	1	72.2	19			428.983
3	2	74.6	12	1682		439.726
4	2	60.4	8	1436		212.599
5	3	86.8	18	1464	1769	352.002
6	3	51	12	1000	1413	774.845
7	2	93.7	17	963		766.798
8	2	75.1	13	1275		884.212
9	1	62.2	9			409.825
10	3	54.1	6	1939	1012	617.288
11	2	89.9	10	1687		521.471
12	2	97	11	907		740.454
13	2	72.9	5	1802		722.077

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 11						
Bursts in Trial: 16						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	96.7	17	1125		508.724
2	1	68.3	16			392.55

3	1	62.8	14			364.47
4	1	51.4	10			139.31
5	2	77.3	12	1253		569.3
6	1	92.1	5			455.67
7	2	72.3	19	1602		391.9
8	2	78.1	18	1358		674.49
9	1	71.1	16			113.49
10	2	96.8	20	987		114.63
11	1	88.7	12			128.54
12	1	60.6	15			541.64
13	2	81.9	16	1710		554.77
14	3	51.9	20	1791	1398	563.9
15	2	80	8	1433		155.8
16	2	88.9	18	1216		38.8

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 12

Bursts in Trial: 14

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	94.7	16	1145	1240	123.358
2	1	86.3	8			775.067
3	3	61.3	16	1212	1851	667.894
4	2	81.3	17	1439		449.851
5	3	52.7	9	1396	1278	780.889
6	2	94.1	9	1806		323.936
7	2	60.5	20	1680		506.863
8	1	85.4	15			676.72
9	1	85.4	11			49.677
10	2	55.9	14	1355		549.064
11	2	73.8	14	1442		191.971
12	2	98.3	7	1167		597.129
13	2	75.7	15	1315		181.486
14	1	88.5	18			46.143

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 13**

**Bursts in Trial: 13**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	74.4	17	1269	1672	593.58
2	3	76.7	13	1156	1795	59.768
3	2	66.4	7	1365		630.616
4	2	69.7	9	1606		282.949
5	1	89.4	8			161.702
6	2	90.6	7	1549		704.375
7	2	97	13	1197		244.128
8	3	84	16	1135	1763	449.792
9	2	78.2	13	1421		640.515
10	3	67.1	11	1878	943	289.248
11	1	72.3	7			808.731
12	2	75.9	20	1131		14.054
13	2	91.3	5	980		721.077

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 14**

**Bursts in Trial: 18**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	55	11	1321		495.129
2	2	68.5	11	1431		394.413
3	3	53.5	5	1509	1717	132.307
4	2	82	17	1141		501.6
5	2	75.4	12	1063		270.353
6	2	94.4	18	1406		165.557
7	1	86.2	8			103.79

8	1	95.8	7			496.953
9	1	91	13			405.347
10	1	58.5	11			511.74
11	3	72.7	20	1592	1312	489.633
12	2	62.3	15	1815		155.817
13	1	91	6			112.61
14	2	57.4	18	1071		521.423
15	2	73.2	10	1516		659.377
16	3	71.9	7	1350	1766	25.9
17	3	91.3	7	1852	1677	101.333
18	2	56.6	8	1500		405.267

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 15**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	65.4	11	1544	1023	577.538
2	2	66.9	8	1406		595.728
3	2	59.4	12	1322		446.585
4	2	96.3	10	1247		369.753
5	1	50.2	14			590.071
6	2	61.8	12	1355		686.298
7	3	64.4	9	1742	1133	646.546
8	2	81.5	13	1172		455.624
9	2	53.1	13	1350		362.981
10	2	91	5	1058		139.349
11	1	82.1	15			118.146
12	2	61.5	14	1113		63.664
13	1	53.2	15			170.082
14	2	63.3	10	1545		632.559
15	2	60.5	16	1286		212.847
16	3	90.5	11	1580	1537	182.165
17	3	77.1	18	954	1746	675.782

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 16**

**Bursts in Trial: 9**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	51.9	15	1901		741.893
2	2	70.7	17	1698		1063.547
3	3	88.4	17	1150	1436	1130.293
4	2	83.9	5	1376		616.42
5	3	79.1	5	1446	1195	386.497
6	2	57.6	18	1184		568.963
7	2	51.1	6	1276		1117.31
8	2	63.7	10	1751		899.967
9	2	84.2	18	1764		702.333

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 17**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	75.7	18	1411	1538	591.054
2	3	69.9	16	1571	930	221
3	2	65.7	13	1296		765.29
4	2	89.7	7	915		269.71
5	2	68.3	17	1406		585.47
6	3	71.6	15	946	1052	616.06
7	2	95.1	15	1643		68.2
8	2	58.5	10	1793		591.98
9	2	98.8	11	1683		344.76
10	2	56.5	10	960		330.61
11	3	92	18	1114	1027	368.83

12	2	96.7	11	1605		490.84
13	2	67	20	1854		208.15
14	2	55	17	1699		485.9
15	2	60.6	15	1586		679.4

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 18

Bursts in Trial: 11

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	96.9	14	1847		727.335
2	3	60.4	17	1917	1309	74.591
3	3	92.2	10	1196	1671	482.952
4	3	61.6	18	1748	1772	586.263
5	2	89.5	14	1301		1076.764
6	3	86.1	14	1510	1167	1034.065
7	3	73.1	9	1302	1507	652.565
8	1	56.5	13			649.016
9	2	72.4	18	1751		814.957
10	3	85.7	14	1473	1079	1073.718
11	2	88.5	12	933		352.109

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 19

Bursts in Trial: 15

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	81.9	19	1120		332.667
2	1	89.5	16			477.37
3	1	97.8	9			27.3
4	1	96.6	20			201.7

5	1	98.6	8			171.67
6	2	55.5	10	1430		241.77
7	2	62.1	5	1001		598.4
8	2	77.6	19	1596		272.03
9	3	54.4	20	1905	1343	78.28
10	3	64.4	16	1127	1913	36.51
11	2	65.5	8	1043		343.43
12	2	66	19	1650		448.65
13	2	51.8	9	1398		563.5
14	2	94.4	17	983		289.5
15	3	55.1	13	1204	1740	278.8

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 20

Bursts in Trial: 20

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	54.6	20	1750		179.268
2	2	86.1	19	1226		548.66
3	2	54.1	7	1288		516.18
4	3	66.9	13	1071	1524	268.72
5	3	71.8	11	1450	1156	464.85
6	2	50.7	7	1682		379.19
7	3	50.8	19	1003	1552	279.59
8	1	99.9	5			339.01
9	2	87.7	6	1557		368.8
10	1	67	6			312.36
11	3	57.3	17	1772	1724	158.67
12	2	76.8	19	1706		144.81
13	1	52.9	19			418.9
14	2	80.9	14	1187		71.84
15	2	55.1	19	1429		437.44
16	2	89.2	17	1111		58.15
17	2	92	6	1179		218.29
18	2	85.7	9	1350		196.5
19	3	89.7	9	1830	1562	416.4



20	1	90.3	15			574
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<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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<b>Trial Number : 21</b>
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<b>Bursts in Trial: 14</b>
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Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	87.3	20	1815	1100	544
2	1	82.4	12			441.617
3	2	92.7	7	963		152.684
4	3	59.7	15	1109	1774	410.191
5	2	72	8	1505		438.269
6	2	88.9	16	1054		757.376
7	2	62.2	17	1767		316.863
8	3	86.3	7	1849	1848	697.56
9	2	94.4	15	1143		764.067
10	2	89.4	7	932		726.204
11	1	72.2	19			96.001
12	2	62.2	15	1232		246.939
13	2	93.3	5	1175		670.986
14	1	69.6	8			841.243

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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<b>Trial Number : 22</b>
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<b>Bursts in Trial: 18</b>
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Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	83.9	12	1749		528.566
2	2	55.6	13	1326		420.543
3	2	54.7	13	1435		552.717
4	2	67	7	1542		288.57

5	1	79.8	18			339.843
6	2	66.9	16	988		163.197
7	2	75.3	13	1209		275.14
8	3	88.7	15	1282	1499	376.863
9	3	54.9	6	997	1119	194.897
10	1	92.4	11			287.37
11	2	91.9	12	1132		565.853
12	2	71.1	16	1418		512.257
13	2	61.1	6	1076		4.91
14	2	53.2	9	1726		78.643
15	2	94.6	7	1254		182.397
16	2	56.5	18	1887		11.4
17	3	98.2	19	1251	1366	38.733
18	2	87.7	8	1269		590.867

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 23**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	84	7	1563	1525	563.637
2	3	78.4	16	1502	1735	655.55
3	2	55	17	1277		553.98
4	2	57	9	1449		19.06
5	3	99.3	15	1708	1835	221.89
6	3	61.7	19	1872	1934	54.33
7	1	92.8	6			640.93
8	2	94.1	20	1106		23.15
9	2	52.4	7	1919		496.27
10	2	61.5	19	1474		113.15
11	3	69.3	18	1052	1703	392.12
12	2	81	8	1102		463.01
13	1	67.4	18			164.8
14	1	66.1	5			415.2
15	2	70.7	7	1839		531.2

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 24**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	91	11	1518		415.633
2	2	71.4	16	964		29.403
3	2	50.7	6	1781		120.33
4	2	88.7	16	928		550.94
5	2	69.9	8	1901		326.6
6	1	85.2	19			567.85
7	3	59.8	20	1089	986	439.49
8	1	81.9	7			625.84
9	1	72.7	17			743.53
10	2	88.2	14	1667		388.12
11	3	57.5	16	1235	1851	504.25
12	2	96.9	10	1452		57.32
13	1	80.7	13			580.9
14	1	84.3	8			180
15	2	98.2	19	1394		469.2

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 25**

**Bursts in Trial: 12**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	71.1	7	1040		66.905
2	2	78.7	6	1684		160.3
3	3	75	15	1588	1012	306.89
4	3	52.6	13	1904	1445	109.86
5	1	57.5	20			553.57

6	1	58.1	6			865.01
7	2	54.1	9	1806		410.31
8	3	66	5	1511	1451	764.17
9	2	93.5	5	1413		303.75
10	2	52.9	7	1428		634.51
11	2	55	20	1438		524.6
12	2	83.7	16	1138		127.1

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 26

Bursts in Trial: 14

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	83	16	1886		317.207
2	1	65.8	10			147.077
3	2	79.1	10	926		153.854
4	3	92.2	9	1793	1424	802.981
5	3	71.3	7	931	933	256.629
6	2	81.6	9	1523		773.206
7	2	50.4	16	1592		175.113
8	1	86.9	14			637.78
9	2	60.1	11	1241		304.717
10	1	85.9	13			790.314
11	2	66.8	10	1895		466.771
12	2	69.9	20	996		45.789
13	2	67.3	15	1075		503.686
14	2	80.5	11	1520		768.243

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 27**

**Bursts in Trial: 14**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	99.8	9	1481		615.348
2	1	53.6	14			591.077
3	1	98.8	12			502.844
4	2	61.1	13	1345		280.261
5	1	75.3	17			788.279
6	1	92.6	18			489.996
7	1	61.7	20			543.823
8	2	77.6	13	1691		421.81
9	2	78.4	14	1763		251.957
10	2	71.4	5	1796		393.004
11	2	59.9	18	975		300.361
12	2	66.8	9	1909		733.229
13	2	90.8	17	1273		522.786
14	2	79.4	17	1657		287.943

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 28**

**Bursts in Trial: 8**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	67.5	19	1041		702.83
2	2	87.4	13	1394		458.81
3	1	68	14			1426.39
4	3	90.1	16	1629	1638	462.08
5	2	62.1	10	1347		473.38
6	2	68.5	5	1397		121.35

7	2	90.8	17	1204		1215.7
8	2	90.4	6	1796		1291.7

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 29						
Bursts in Trial: 13						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	89.7	6	1402	1858	263.506
2	2	94	19	971		168.103
3	2	93.7	18	1660		802.386
4	3	80.1	8	1543	1556	879.709
5	3	90.2	17	1662	1191	687.272
6	2	55.2	19	1114		71.855
7	1	90.2	6			403.638
8	2	69.9	14	1801		393.712
9	3	91.2	13	1176	991	530.205
10	2	63.6	19	1925		881.718
11	2	66.8	18	1354		0.921
12	3	82.6	18	1904	1145	102.654
13	3	53.3	11	1278	1414	219.677

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 30						
Bursts in Trial: 19						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	99.1	8			468.977
2	3	94.6	5	1595	1849	623.501
3	2	71.1	12	1066		587.122
4	2	85.4	9	1044		404.963

5	2	85.5	6	1770		596.244
6	3	88.2	6	1622	1369	477.285
7	3	66.9	15	1911	1789	154.256
8	2	72.3	13	1886		240.837
9	2	75.1	9	1411		560.578
10	2	53.3	12	1266		265.989
11	2	74.1	18	1492		421.291
12	2	92.1	7	1207		576.852
13	3	65.5	14	1170	1265	479.343
14	1	51.5	10			536.044
15	2	81.9	8	1255		309.265
16	1	50.7	15			253.316
17	3	57.3	7	1187	1122	36.037
18	3	75.9	18	1323	1749	352.158
19	3	79.3	15	961	1453	538.879

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5490.5	1	16	5500.0	1
2	5491.0	1	17	5501.4	1
3	5491.7	1	18	5501.8	1
4	5492.5	1	19	5502.4	1
5	5493.2	1	20	5503.0	1
6	5493.8	1	21	5503.6	1
7	5494.3	1	22	5504.2	0
8	5494.9	1	23	5504.8	1
9	5495.4	1	24	5505.6	1
10	5495.8	1	25	5506.1	1
11	5496.5	1	26	5506.8	1
12	5497.4	1	27	5507.6	1
13	5498.0	1	28	5508.2	1
14	5498.7	1	29	5508.9	1
15	5499.4	1	30	5509.5	1

Detection Percentage (%)	96.7%
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Trial Number : 1			Trial Number : 2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
24	5498	72	32	5485	96
44	5496	132	35	5502	105
75	5506	225	78	5506	234
91	5502	273	79	5510	237
/	/	/	75	5497	225
/	/	/	64	5503	192
/	/	/	91	5504	273

Trial Number : 3			Trial Number : 4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5502	45	4	5504	12
24	5504	72	21	5500	63
47	5498	141	54	5497	162
58	5508	174	32	5496	96
/	/	/	57	5502	171
/	/	/	37	5508	111
/	/	/	78	5501	234
/	/	/	24	5497	72

Trial Number : 5			Trial Number : 6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5502	12	24	5510	72
52	5504	156	36	5503	108
37	5503	111	57	5502	171
56	5498	168	72	5498	216
24	5496	72	34	5502	102
36	5500	108	28	5497	84
/	/	/	24	5498	72



Trial Number : 7			Trial Number : 8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
57	5497	171	45	5497	135
43	5496	129	35	5495	105
51	5494	153	24	5502	72
22	5502	66	22	5503	66
35	5503	105	55	5508	165
36	5501	108	78	5497	234
/	/	/	67	5503	201

Trial Number : 9			Trial Number : 10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
48	5502	144	45	5503	135
39	5498	117	26	5502	78
29	5496	87	22	5498	66
33	5403	99	56	5508	168
/	/	/	37	5497	111
/	/	/	24	5495	72
/	/	/	56	5499	168

Trial Number : 11			Trial Number : 12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5495	69	44	5502	132
49	5498	147	5501	5498	189
13	5496	39	265497	5501	78
47	5500	141	585403	5504	174
/	/	/	25	5497	75
/	/	/	27	5494	81

Trial Number : 13			Trial Number : 14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
34	5502	102	43	5503	129
25	5503	75	23	5498	69
78	5506	234	42	5497	126

65	5498	195	63	5501	189
/	/	/	75	5502	225
/	/	/	72	5497	216
/	/	/	34	5496	102

Trial Number : 15			Trial Number : 16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
47	5503	141	45	5498	135
87	5502	261	65	5502	195
65	5497	195	34	5501	102
42	5498	126	22	5507	66
/	/	/	55	5496	165
/	/	/	78	5493	234
/	/	/	33	5504	135

Trial Number : 17			Trial Number : 18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
32	5504	96	43	5492	129
52	5502	156	16	5501	48
34	5497	102	47	5507	141
58	5496	174	78	5503	234
/	/	/	43	5497	129
/	/	/	65	5493	195

Trial Number : 19			Trial Number : 20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
35	5497	105	24	5493	72
67	5492	201	22	5494	66
78	5501	234	14	5503	42
37	5503	111	78	5508	234
/	/	/	35	5495	105
/	/	/	27	5497	81

Trial Number : 21			Trial Number : 22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
32	5502	96	23	5503	69
54	5503	162	34	5504	102
44	5498	132	55	5502	165
38	5493	114	64	5498	192
/	/	/	38	5493	114
/	/	/	49	5497	147
/	/	/	27	5506	81

Trial Number : 23			Trial Number : 24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5501	39	35	5501	105
27	5502	81	37	5503	111
46	5496	138	64	5498	192
48	5498	144	48	5496	144
/	/	/	65	5493	195
/	/	/	24	5507	72

Trial Number : 25			Trial Number : 26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
24	5497	72	12	5509	36
22	5499	66	35	5497	105
37	5501	111	32	5492	96
48	5504	144	26	5493	78
/	/	/	43	5502	129
/	/	/	68	5505	204
/	/	/	48	5506	144

Trial Number : 27			Trial Number : 28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5498	69	33	5407	99
28	5502	84	36	5402	108

49	5508	147	45	5498	135
55	5496	165	58	5497	174
/	/	/	24	5492	72
/	/	/	43	5503	129

Trial Number : 29			Trial Number : 30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5508	93	53	5503	159
42	5501	126	24	5505	72
35	5497	105	43	5497	129
21	5492	63	75	5493	225
/	/	/	43	5506	129
/	/	/	45	5509	135

802.11ac-VHT40-5510MHz

Radar Type 1 - Radar Statistical Performance

RADAR TYPE 1					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	99	1	613	1
2	5492.2	80	1	522	1
3	5493.3	79	1	590	1
4	5494.1	69	1	543	1
5	5495.5	90	1	561	1
6	5496.4	99	1	628	1
7	5497.6	75	1	533	0
8	5498.2	98	1	670	1
9	5499.3	69	1	611	1
10	5500.5	53	1	708	1
11	5501.8	76	1	650	1
12	5503.0	59	1	621	1
13	5504.5	93	1	570	0
14	5506.2	79	1	657	1
15	5507.6	81	1	588	1
16	5508.7	80	1	616	1
17	5509.7	62	1	709	1
18	5510.0	57	1	564	1
19	5511.0	80	1	826	1

20	5512.1	81	1	836	1
21	5513.5	70	1	757	1
22	5515.5	69	1	619	1
23	5517.0	88	1	735	0
24	5518.6	71	1	834	1
25	5520.9	80	1	641	0
26	5522.6	73	1	740	1
27	5524.1	84	1	849	1
28	5525.8	72	1	767	1
29	5527.6	86	1	699	1
30	5529.0	92	1	869	1
Detection Percentage (%)					86.7%

## Radar Type 2 - Radar Statistical Performance

RADAR TYPE 2					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	24	1.5	199	1
2	5492.2	27	4.6	161	1
3	5493.3	26	2.2	180	1
4	5494.1	24	1.8	214	1
5	5495.5	23	1.2	191	1
6	5496.4	25	3.3	200	1
7	5497.6	27	4.9	190	0
8	5498.2	28	3.8	229	1
9	5499.3	25	3.6	217	1
10	5500.5	25	3.6	211	1
11	5501.8	27	3.6	198	1
12	5503.0	26	1.4	188	1
13	5504.5	24	3.1	191	1
14	5506.2	27	2.4	179	1
15	5507.6	28	3	177	1
16	5508.7	23	2	215	1
17	5509.7	23	1.2	200	1
18	5510.0	29	2	197	1
19	5511.0	28	1.5	187	1
20	5512.1	28	3.1	188	1
21	5513.5	26	2.2	166	1
22	5515.5	28	1.1	196	0
23	5517.0	29	3.9	227	1

24	5518.6	24	1.9	179	1
25	5520.9	28	2.9	167	1
26	5522.6	24	3.8	173	1
27	5524.1	27	2.5	186	1
28	5525.8	24	2.3	191	1
29	5527.6	23	1.3	223	1
30	5529.0	24	3.8	156	1
Detection Percentage (%)					93.3%

## Radar Type 3 - Radar Statistical Performance

RADAR TYPE 3					
Rohde & Schwarz K350 Pulse Sequencer DFS					
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	17	9.6	359	1
2	5492.2	17	9.5	428	1
3	5493.3	17	8.8	336	1
4	5494.1	17	6.9	351	0
5	5495.5	17	7.8	452	1
6	5496.4	17	8.3	408	1
7	5497.6	17	6.1	200	1
8	5498.2	17	9	339	1
9	5499.3	17	9.1	406	1
10	5500.5	18	7.1	442	1
11	5501.8	18	7.1	488	0
12	5503.0	17	8.5	380	1
13	5504.5	16	7.6	255	1
14	5506.2	17	9.6	203	1
15	5507.6	17	7	375	1
16	5508.7	17	6	490	1
17	5509.7	16	8.3	351	1
18	5510.0	17	7.9	338	1
19	5511.0	18	6.9	305	0
20	5512.1	18	6.9	216	1
21	5513.5	18	6.5	297	1
22	5515.5	17	6.4	397	1
23	5517.0	18	7.7	240	1
24	5518.6	17	6.2	392	1
25	5520.9	18	8.1	270	1
26	5522.6	17	6.4	452	1
27	5524.1	18	7.2	323	1

28	5525.8	17	9.7	418	1
29	5527.6	17	10	429	1
30	5529.0	18	8.7	419	1
Detection Percentage (%)					90.0%

## Radar Type 4 - Radar Statistical Performance

RADAR TYPE 4					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	15	12	386	1
2	5492.2	15	15.6	409	1
3	5493.3	13	12.8	300	1
4	5494.1	16	18.5	347	1
5	5495.5	13	11.9	262	1
6	5496.4	14	16.1	281	1
7	5497.6	13	11.9	221	1
8	5498.2	13	13.9	258	1
9	5499.3	14	19.2	428	1
10	5500.5	15	12.8	426	1
11	5501.8	14	19.4	208	1
12	5503.0	15	20	464	0
13	5504.5	14	15.2	331	1
14	5506.2	15	11.3	312	1
15	5507.6	13	16.1	350	1
16	5508.7	14	17	361	0
17	5509.7	16	15.8	403	1
18	5510.0	14	18.3	209	1
19	5511.0	15	12	375	1
20	5512.1	15	18.8	316	1
21	5513.5	16	14.9	286	1
22	5515.5	13	11.9	313	1
23	5517.0	14	18.2	358	1
24	5518.6	16	14.4	298	1
25	5520.9	15	13.8	288	1
26	5522.6	15	12.4	336	1
27	5524.1	13	18.5	216	1
28	5525.8	15	11	490	1
29	5527.6	14	14.9	379	1
30	5529.0	13	17.7	439	1
Detection Percentage (%)					93.3%



Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows:  $\frac{p1+p2+p3+p4}{4}=(86.7\%+93.3\%+90.0\%+93.3\%)/4=90.8\%(>80\%).$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491.0	1	16	5508.7	1
2	5492.2	1	17	5509.7	1
3	5493.3	1	18	5510.0	1
4	5494.1	1	19	5511.0	1
5	5495.5	1	20	5512.1	1
6	5496.4	1	21	5513.5	1
7	5497.6	1	22	5515.5	1
8	5498.2	1	23	5517.0	1
9	5499.3	1	24	5518.6	1
10	5500.5	1	25	5520.9	1
11	5501.8	0	26	5522.6	1
12	5503.0	1	27	5524.1	1
13	5504.5	1	28	5525.8	1
14	5506.2	1	29	5527.6	1
15	5507.6	1	30	5529.0	1
Detection Percentage (%)					96.7%



TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 1							
Bursts in Trial: 11							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	2	77	17	1432		575.608	
2	2	79.4	20	1012		1058.521	
3	2	86	18	1316		512.602	
4	3	70.7	5	977	1304	652.413	
5	2	91.4	5	1241		795.504	
6	2	90	13	1901		380.855	
7	2	69.4	8	1008		355.705	
8	1	67.7	7			335.936	
9	3	79.3	11	1228	1762	667.317	
10	2	66.6	16	1337		564.518	
11	3	92.4	19	1405	1852	475.709	

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 2							
Bursts in Trial: 17							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	1	67	13			630.818	
2	2	68.1	14	1392		51.757	
3	2	95.1	18	1515		694.415	
4	1	51	8			109.203	
5	3	91.5	7	1503	1906	516.951	
6	1	88.3	19			357.978	
7	2	63	7	969		350.746	
8	2	88.9	14	998		535.164	
9	2	54.3	8	1404		572.341	



10	2	64.9	19	1590		392.599
11	2	63.3	10	1388		19.166
12	2	50.8	9	956		519.994
13	1	73.9	11			577.532
14	2	57.4	19	1000		516.769
15	1	96.9	6			173.547
16	1	55.1	8			75.965
17	3	86	8	1623	940	299.282

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 3**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	90.2	8	1801	926	536.688
2	1	95.4	5			95.07
3	2	84.2	16	1640		248.962
4	2	64.4	15	1782		276.983
5	2	93.2	9	1403		432.554
6	3	92.3	19	1176	1408	369.705
7	3	95.2	7	1256	1861	357.516
8	2	73.5	7	984		405.297
9	1	76.3	19			482.258
10	2	81.4	15	1029		539.579
11	1	73.7	5			135.261
12	1	98.1	6			93.582
13	3	61.6	13	1530	1575	56.553
14	2	65.1	9	1437		341.154
15	2	66	7	1209		79.215
16	3	70.6	5	1008	1877	192.516
17	2	53.6	12	1271		466.037
18	1	50.9	5			477.558
19	2	54.7	10	1382		480.079

# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 4

Bursts in Trial: 18

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	75.8	12			515.523
2	3	51.1	13	980	1082	235.447
3	1	63.5	20			65.527
4	1	97.7	7			386.29
5	2	91.3	10	1224		327.943
6	3	70.2	17	943	1643	360.447
7	1	91.3	10			538.87
8	3	82.8	13	1236	1204	655.083
9	3	98.4	13	1844	1288	326.607
10	1	69.1	8			622.02
11	1	50	12			242.093
12	1	77.1	11			485.247
13	1	71.9	13			175.42
14	1	95.1	8			18.313
15	3	92.8	15	1073	914	450.057
16	2	59.6	10	1483		414.3
17	2	99.8	7	1184		647.433
18	2	68.6	6	944		442.367

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 5**

**Bursts in Trial: 16**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	97.7	15	1604		67.3
2	3	70	10	1008	1363	219.601
3	1	58.9	16			282.82
4	2	62.4	11	1684		368.96
5	2	51.2	8	1758		598.04
6	2	72.8	19	1233		292.52
7	2	81.1	18	1032		617.2
8	1	63.9	5			649.79
9	3	57.3	13	1359	1899	263.43
10	3	91.1	6	1222	1370	429.7
11	1	91.3	18			156.92
12	2	68.4	18	1039		556.8
13	1	70.8	12			91.23
14	2	92.1	13	1798		639.7
15	3	64.5	20	1874	1560	371.5
16	2	55.3	11	1022		629

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 6**

**Bursts in Trial: 18**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	72.1	8	1051		90.797
2	1	62.2	7			206.575
3	2	52.4	20	1564		598.197
4	2	62.8	9	1507		289.58

5	2	60.7	20	1430		550.833
6	2	54.3	14	1310		220.817
7	2	80	8	1808		190.85
8	2	95.8	13	1885		557.883
9	3	98.9	13	1127	1218	371.577
10	3	96.1	10	1761	1249	545.37
11	2	75.8	8	1184		249.283
12	1	97.3	13			499.217
13	2	84.6	9	1630		603.48
14	1	80	5			46.633
15	2	56.5	10	1825		273.777
16	2	69.1	18	1513		210.8
17	1	86	13			657.833
18	2	88.9	17	1399		395.267

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 7

Bursts in Trial: 20

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	84.4	11	1610	929	140.845
2	3	87.9	6	1168	1191	330.09
3	1	74.5	5			35.03
4	1	98.7	8			405.43
5	3	97.7	17	1859	1040	123.42
6	2	93.1	20	1103		504.56
7	1	93.6	9			332.27
8	2	73.3	11	1024		396.19
9	3	57.5	12	1714	992	82.95
10	2	55.6	12	1183		108.53
11	2	83.8	6	1791		577.4
12	1	95.1	10			390.19
13	2	99.3	5	973		82.48
14	2	76.3	20	1912		571.06
15	3	69.7	11	1041	1130	80.36
16	2	71.6	18	1454		172.03

17	3	90.6	6	1048	1587	342.4
18	2	65.9	18	1299		155.5
19	3	62.5	13	1595	1652	152.1
20	3	90.4	10	1832	1753	592.8

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 8						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	63.7	14	953		174.772
2	2	55.3	12	1172		641.06
3	3	58.4	17	1819	1686	982.7
4	2	50	18	1152		124.26
5	2	73.6	13	1493		444.4
6	1	67.7	12			524.41
7	2	52.7	7	1871		579.67
8	2	76.1	9	1354		354.57
9	2	57.8	19	1296		805.61
10	3	58.9	6	1265	1478	243.41
11	2	92.1	14	1349		346.9
12	1	50.7	20			61.8

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 9						
Bursts in Trial: 15						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	76.3	13	1569		703.179
2	1	83.2	19			400.02
3	2	66.1	18	952		396.09

4	2	80.7	6	1894		119.78
5	2	80.8	19	1131		327.44
6	1	94.5	19			301.48
7	3	93.3	5	1032	912	97.57
8	3	87.2	10	1109	1856	498
9	2	77.8	20	1041		297.23
10	3	98.9	5	1144	956	721.21
11	2	64.6	11	1624		200.34
12	1	99.5	18			693.12
13	1	70.8	17			534.8
14	2	91.3	13	1661		782.9
15	3	98.3	5	1122	1629	350

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 10

Bursts in Trial: 13

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	81.8	9	1853		534.487
2	2	91.4	12	1472		15.026
3	1	85.5	6			194.796
4	1	98.1	9			807.749
5	2	75	17	1068		121.172
6	2	72.2	12	1671		548.285
7	2	96.2	16	1546		916.068
8	3	64.5	15	1640	1833	880.582
9	2	94	5	1546		335.145
10	2	95.8	19	1605		679.828
11	2	95.8	20	1042		543.251
12	3	59.3	8	1777	1456	86.754
13	3	98.1	15	909	1386	755.277

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 11**

**Bursts in Trial: 10**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	69.5	19	1660		799.827
2	3	86.4	10	1049	1592	1046.75
3	2	91.7	12	1797		53.05
4	3	66	8	1272	1537	538.03
5	1	59.5	8			804.96
6	3	56.1	20	1427	1651	188.53
7	1	67.4	10			478.02
8	2	82.9	14	1902		406.58
9	2	97.1	14	1288		840.2
10	1	66.3	8			1105.2

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 12**

**Bursts in Trial: 12**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	91.8	13	1574	1207	605.503
2	2	79.9	8	1694		49.68
3	2	81.9	20	981		883.57
4	1	85.6	18			589.6
5	2	89.7	6	1871		663.22
6	1	83.6	18			843.84
7	2	79.7	5	1499		237.5
8	2	62.5	10	1864		890.94
9	2	55.7	8	1830		738.06
10	2	78.3	14	1422		180.66



11	1	58	12			44.4
12	3	67.2	19	1017	1324	704.9

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 13						
Bursts in Trial: 13						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	52.8	17			377.721
2	3	50.1	12	1173	1126	296.003
3	2	60	20	1084		77.166
4	3	65.1	8	1495	1090	280.439
5	2	92.9	11	1230		452.872
6	2	53.9	12	1378		835.915
7	1	92.9	18			222.818
8	1	95.9	7			495.102
9	2	97	14	1427		390.905
10	2	81.4	10	1917		110.598
11	2	86.9	9	1804		232.711
12	2	64.8	18	1526		22.754
13	2	73.7	19	1092		451.477

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 14						
Bursts in Trial: 8						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	75.3	11			568.603
2	1	62	9			992.2
3	1	55	17			1221.22
4	3	72.5	10	1632	1640	1183.84

5	2	52	20	1197		393.97
6	1	53.3	10			1387.16
7	3	94.5	13	1831	1035	173.87
8	3	79.7	18	1275	1628	114.8

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 15**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	96.6	10	1582		478.95
2	2	58.6	19	1880		77.665
3	3	94.6	16	1656	1706	417.172
4	3	78.7	5	1128	1560	505.953
5	3	60.4	17	1651	1898	137.724
6	2	62.2	20	1538		501.005
7	2	64.7	11	1176		302.916
8	2	92.4	20	1522		109.817
9	1	55	14			140.568
10	3	95.1	14	1598	934	513.219
11	2	73.5	12	1237		11.961
12	1	60.4	8			539.612
13	2	50.6	13	1869		357.333
14	1	50.6	8			552.494
15	1	82.9	9			192.185
16	2	98.5	7	1074		434.966
17	3	66	7	1536	1451	492.037
18	2	54.2	16	1907		615.958
19	2	89.7	8	1360		221.179

# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 16**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	62.9	11			503.428
2	3	69.8	5	1085	1385	188.116
3	2	66.9	5	1807		190.122
4	2	94.8	9	1072		214.573
5	2	92.8	10	1553		362.854
6	2	97.4	14	1577		621.905
7	1	60.2	16			142.806
8	2	89.5	16	960		565.627
9	2	50.4	13	1260		620.728
10	1	72.7	8			150.249
11	2	68.9	5	1186		369.381
12	3	93.1	16	1709	1098	549.102
13	1	99.4	9			322.633
14	1	76.1	10			540.784
15	2	80.5	11	1088		616.635
16	3	68	19	1607	1072	363.086
17	2	83.3	17	1107		555.137
18	2	60.5	19	1298		347.458
19	3	61.6	9	1897	1288	620.079

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 17**

**Bursts in Trial: 16**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	85.9	15			702.056
2	1	74.8	10			187.913
3	2	68.6	19	1598		674.42
4	2	67	6	938		359.42
5	2	94.8	18	1668		46.57
6	2	74.2	5	1719		247.33
7	3	53	10	1230	1628	425.15
8	2	94.7	19	1151		77.73
9	2	82.8	12	1557		577.36
10	3	56.6	16	1227	1303	456.08
11	2	51.7	18	1547		417.61
12	3	89.9	12	1267	1114	117.14
13	2	91.2	20	1887		122.59
14	2	59	6	1168		148.28
15	3	67.2	10	1154	1159	699.1
16	3	55.1	8	1804	1132	275.5

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 18**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	58.3	10			684.995
2	1	99.6	20			503.248
3	2	90.3	6	1575		648.535
4	3	72.2	9	1071	1440	215.693

5	1	92.7	5			348.001
6	2	76.1	14	1039		116.418
7	2	54.2	12	1014		322.986
8	2	75.4	10	1905		274.944
9	2	80.1	11	1780		605.771
10	3	65.2	15	1792	1308	417.689
11	3	53.2	8	1573	1685	248.906
12	2	67.6	6	1126		607.674
13	2	63.4	5	1898		107.102
14	1	92.3	10			12.359
15	2	63.9	6	1226		417.847
16	1	55.2	6			452.865
17	2	56.4	11	1482		427.482

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 19**

**Bursts in Trial: 10**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	86.5	12	1078	1834	231.993
2	1	74.3	16			797.25
3	2	63.5	18	1931		943.85
4	2	84.9	13	1270		900.69
5	3	77.4	11	1443	1452	885.71
6	1	83.5	10			173.99
7	1	81.7	17			1018.06
8	2	61.9	6	1932		495.8
9	3	70.1	10	1487	1863	167.51
10	1	62.4	17			931.4

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 20							
Bursts in Trial: 17							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	2	82.1	11	1665		42.345	
2	2	78.6	11	1062		359.838	
3	3	57	16	1902	1551	79.615	
4	1	58.1	15			216.443	
5	3	91	11	1486	1471	681.261	
6	2	99.8	6	1105		143.428	
7	1	71.2	12			318.946	
8	2	80.6	18	1601		474.284	
9	1	63.1	13			687.101	
10	1	64.9	17			561.039	
11	3	69.5	11	1567	1855	111.306	
12	1	64.9	19			697.674	
13	2	65.5	15	999		551.532	
14	3	64.6	6	1828	1349	642.089	
15	1	72.6	6			204.747	
16	3	63.5	20	1528	1587	422.665	
17	1	54.5	6			100.082	

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 21							
Bursts in Trial: 15							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	2	92.4	8	1189		779.8	
2	2	95	5	1264		704.61	
3	2	79.1	16	1850		222.1	

4	2	76.5	11	1778		775.07
5	1	60.4	9			270.59
6	3	76.4	14	1190	1720	673.08
7	2	83	17	1332		129.64
8	3	90.6	11	1474	1181	561
9	3	91.7	12	1118	1200	235.47
10	2	92	18	1061		605.16
11	2	98	20	1141		109.84
12	2	61.6	5	1514		134.28
13	2	53.1	17	1777		59.03
14	2	90.5	13	1395		61.2
15	1	62.5	19			415.7

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 22

Bursts in Trial: 15

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	85.2	15	1013	1726	654.735
2	1	66.4	16			732.99
3	2	50.6	17	1227		204.38
4	2	51.4	15	1063		303.85
5	2	64.3	17	1924		193.48
6	1	96.7	15			541.46
7	2	68.1	15	1930		217.95
8	1	78.1	5			424.84
9	2	89.3	15	1754		538.54
10	3	60.9	9	1689	971	234.73
11	1	88.2	15			710.35
12	2	66.1	17	1220		27.45
13	2	87.8	20	1531		469.7
14	2	79.9	14	942		294.2
15	1	65.4	7			426.8

# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 23

Bursts in Trial: 20

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	74.5	20	1169	1522	173.321
2	3	59	7	1773	1641	166.815
3	2	63.3	20	1157		202.22
4	2	81.2	12	1298		443.57
5	2	54.7	7	1326		580.88
6	3	51.3	6	1006	1007	453.75
7	2	72.9	6	1906		161.07
8	2	68.6	15	1195		436.8
9	2	73.6	5	1650		132.57
10	2	67.3	7	1755		491.62
11	2	72.9	8	1894		113.82
12	3	69.6	19	1021	1781	88.65
13	2	92	20	1260		492.09
14	2	51.1	14	1783		9.58
15	3	94.2	5	1041	999	442.61
16	1	71.4	12			316.22
17	3	99	6	1502	1503	159.58
18	3	61.4	13	1143	1333	506
19	3	86.6	18	1740	948	200.1
20	3	94.4	6	1871	1015	230.7



<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 24**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	60.7	7	1007		338.441
2	2	84.2	20	1593		17.07
3	2	74.4	19	1301		403.16
4	2	58.6	14	1802		274.49
5	1	50.9	7			84.09
6	3	68.8	10	1323	1607	7.87
7	1	61.4	8			218.5
8	2	91.5	11	1376		500.55
9	1	90.9	19			737.92
10	2	81.3	20	1465		508.58
11	2	72.8	14	1782		309.99
12	3	64	11	1213	1630	363.88
13	2	59.3	5	1145		546.5
14	1	77.8	10			442.8
15	1	67.2	5			768

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 25**

**Bursts in Trial: 12**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	78.6	15	1774		655.187
2	3	75.3	8	976	1042	396.58
3	3	95.3	18	1161	1031	654.77
4	1	94.9	20			901.21
5	2	55.2	11	1691		893.79

6	3	89.8	14	1129	1018	904.91
7	2	69	11	1531		20.94
8	1	85.4	5			537.82
9	1	68.5	18			137.33
10	2	66.5	15	1442		289.38
11	1	57	7			958.5
12	3	63.1	6	1567	1703	313.2

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 26**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	65.3	20	1159	1378	736.583
2	3	62.5	18	1547	1420	109.156
3	1	64.2	12			779.71
4	2	52.8	20	1252		647.85
5	1	72.6	9			319.78
6	3	55.7	18	1846	1241	700.24
7	3	94.4	19	1177	1156	247.36
8	2	57.4	13	1117		485.57
9	2	78.4	13	1211		711.68
10	2	84.9	9	1183		11.64
11	1	90.5	15			298.63
12	3	91.4	12	1292	1909	524.47
13	2	67.6	11	1108		75.84
14	1	57.6	5			406.4
15	3	77	10	1440	1323	275.2

# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 27

Bursts in Trial: 20

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	82.1	11			207.903
2	3	63.7	14	1397	1839	533.84
3	3	67.8	11	1551	1893	148.65
4	1	76.6	15			339.65
5	1	68.6	7			250.66
6	2	71	5	1191		262.52
7	1	77.1	17			415.64
8	3	56.1	18	1604	1901	99.24
9	2	96.8	16	919		299.16
10	3	50.6	14	973	1158	498.39
11	1	97.4	15			456.72
12	2	63.5	20	1171		323.27
13	2	63.9	18	1536		371.66
14	3	82	15	1769	1295	532.69
15	2	53.2	12	972		409.84
16	1	50.4	8			524.51
17	1	92.4	17			52.85
18	3	65.6	20	1589	1401	192
19	1	69.9	7			276.9
20	2	67.9	12	1340		553.6

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 28**

**Bursts in Trial: 10**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	73.2	18	1201		300.917
2	3	95.4	14	1236	1754	250.1
3	2	56.3	6	1030		681.04
4	2	60.6	15	1025		605.37
5	3	68.8	7	1703	1078	878.31
6	3	82.5	15	1056	1199	781.6
7	1	90.1	19			283.2
8	1	96.7	9			276.39
9	2	52.6	18	1507		595.6
10	3	50.4	19	1205	1946	1123.9

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 29**

**Bursts in Trial: 8**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	93.9	16	1230		91.033
2	3	92.8	9	1072	1285	568.93
3	2	78.7	15	1457		457.48
4	2	90.8	17	1313		969.84
5	2	71	7	1541		1190.44
6	3	50.4	20	1790	1566	1219.79
7	2	90.5	20	1020		293.37
8	2	75.7	19	1409		1260.2

# TYPE 5 PARAMETER SHEET

 Rohde & Schwarz  
 Pulse Sequencer

Trial Number : 30

Bursts in Trial: 13

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	64.6	5	1442		227.221
2	2	59.7	20	1782		17.303
3	3	58.6	18	1498	1919	624.126
4	2	93.7	17	1697		9.309
5	1	87.7	20			74.492
6	1	79.2	9			616.255
7	3	77.8	7	1092	960	99.498
8	2	73.5	16	1807		561.612
9	2	86.5	7	1371		617.105
10	3	52.8	8	1141	1547	583.748
11	2	75.2	15	1560		520.941
12	2	74	11	1451		284.454
13	2	67.8	9	1603		557.177

## Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491.0	1	16	5508.7	1
2	5492.2	1	17	5509.7	1
3	5493.3	1	18	5510.0	1
4	5494.1	1	19	5511.0	1
5	5495.5	1	20	5512.1	1
6	5496.4	1	21	5513.5	1
7	5497.6	1	22	5515.5	1
8	5498.2	1	23	5517.0	1
9	5499.3	1	24	5518.6	1
10	5500.5	1	25	5520.9	0

11	5501.8	1	26	5522.6	1
12	5503.0	1	27	5524.1	1
13	5504.5	1	28	5525.8	1
14	5506.2	1	29	5527.6	1
15	5507.6	1	30	5529.0	1
Detection Percentage (%)					96.7%

Trial Number : 1			Trial Number : 2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5491.0	63	35	5495.5	105
24	5492.2	72	47	5496.4	141
34	5493.3	102	54	5517.0	162
56	5494.1	168	23	5518.6	69
/	/	/	63	5520.9	189
/	/	/	46	5522.6	138
/	/	/	78	5508.7	234

Trial Number : 3			Trial Number : 4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5498.2	39	43	5498.3	129
22	5497.8	66	24	5503.4	72
42	5510.2	126	33	5510.4	99
56	5515.9	168	26	5521.2	78
/	/	/	34	5498.3	102
/	/	/	62	5499.5	186
/	/	/	74	5510.8	222

Trial Number : 5			Trial Number : 6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5499.2	63	15	5510,7	45
25	5497.3	75	18	5512.4	54

46	5502.4	138	43	5532.6	129
58	5522.6	174	37	5497.3	111
/	/	/	43	5498.7	129
/	/	/	58	5497.2	174
/	/	/	61	5513.8	183

Trial Number : 7			Trial Number : 8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
32	5497.6	96	13	5500.3	39
25	5499.2	75	25	5510.2	75
33	5500.4	99	63	5524.9	189
59	5520.3	177	75	5517.3	225
/	/	/	34	5498.2	102
/	/	/	52	5493.8	156
/	/	/	29	5510.7	87

Trial Number : 9			Trial Number : 10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
24	5499.3	72	34	5510.3	102
39	5502.2	117	26	5512.8	78
64	5507.6	192	43	5520.4	129
80	5509.3	240	15	5499.6	45
/	/	/	71	5500.7	213
/	/	/	43	5513.4	129
/	/	/	34	5516.9	102

Trial Number : 11			Trial Number : 12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
27	5519.3	81	13	5499.1	39
35	5498.3	105	35	5498.9	105
46	5520.7	138	77	5506.7	231
75	5517.6	225	63	5512.4	189
/	/	/	58	5518.1	174
/	/	/	35	5528.5	105
/	/	/	56	5519.6	168

Trial Number : 13			Trial Number : 14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
32	5497.3	96	24	5498.5	72
45	5498.2	135	35	5510.2	105
39	5510.7	117	37	5518.4	111
49	5521.5	147	46	5537.4	138
/	/	/	58	5529.5	174
/	/	/	39	5497.6	117
/	/	/	54	5500.7	162

Trial Number : 15			Trial Number : 16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5499.8	69	23	5492	69
45	5510.3	135	29	5499	87
37	5528.3	111	33	5509	99
54	5507.6	162	40	5513	120
/	/	/	55	5520	165

Trial Number : 17			Trial Number : 18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5521	21	10	5517	30
16	5517	48	22	5519	66
22	5529	66	37	5526	111
33	5520	99	42	5528	126
40	5509	120	53	5506	159
49	5522	147	59	5507	177
/	/	/	62	5513	186
/	/	/	69	5518	207
/	/	/	70	5520	210



Trial Number : 19			Trial Number : 20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5513	18	11	5520	33
11	5509	33	19	5522	57
17	5519	51	26	5511	78
22	5499	66	37	5517	111
27	5503	81	45	5519	135
35	5508	105	50	5528	150
42	5514	126	56	5500	168
50	5522	150	60	5503	180
/	/	/	69	5514	207

Trial Number : 21			Trial Number : 22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5491	21	22	5512	66
11	5509	33	33	5506	99
19	5511	57	50	5501	150
22	5518	66	59	5493	177
29	5522	87	60	5521	180
30	5514	90	66	5507	198
40	5505	120	73	5502	219
55	5498	165	78	5494	234
59	5515	177	86	5499	258

Trial Number : 23			Trial Number : 24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
19	5503	57	15	5512	45
33	5509	99	19	5495	57
49	5518	147	22	5516	66
55	5511	165	29	5498	87
59	5521	177	36	5520	108
63	5517	189	45	5527	135
70	5501	210	52	5511	156
/	/	/	62	5517	186
/	/	/	69	5528	207

Trial Number : 25			Trial Number : 26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5504	33	21	5492	63
19	5509	57	33	5518	99
25	5521	75	38	5520	114
34	5512	102	45	5516	135
42	5503	126	53	5511	159
50	5495	150	58	5509	174
57	5499	171	65	5501	195
60	5526	180	/	/	/
67	5528	201	/	/	/

Trial Number : 27			Trial Number : 28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5510	18	11	5503	33
17	5516	51	18	5511	54
20	5508	60	25	5519	75
28	5521	84	33	5520	99
33	5520	99	45	5527	135
40	5496	120	56	5504	168
49	5503	147	64	5517	192
57	5511	171	/	/	/
67	5519	201	/	/	/

Trial Number : 29			Trial Number : 30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5494	39	13	5502	39
21	5506	63	19	5511	57
29	5513	87	22	5524	66
33	5521	99	28	5517	84
45	5529	135	35	5499	105
57	5509	171	43	5526	129
/	/	/	52	5504	156
/	/	/	58	5515	174
/	/	/	70	5521	210

802.11ac-VHT80-5530MHz

Radar Type 1 - Radar Statistical Performance

RADAR TYPE 1					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	99	1	409	1
2	5493.0	80	1	511	1
3	5495.1	79	1	549	1
4	5497.5	69	1	636	1
5	5499.4	90	1	479	1
6	5502.2	99	1	533	1
7	5504.3	75	1	498	1
8	5506.4	98	1	539	1
9	5508.7	69	1	626	1
10	5510.6	53	1	470	0
11	5513.0	76	1	558	1
12	5515.8	59	1	514	1
13	5518.9	93	1	609	1
14	5521.6	79	1	499	1
15	5524.1	81	1	561	1
16	5527.2	80	1	741	1
17	5530.0	62	1	662	1
18	5532.6	57	1	589	1
19	5534.5	80	1	590	1
20	5537.8	81	1	646	1
21	5541.3	70	1	751	0
22	5545.4	69	1	723	1
23	5549.1	88	1	637	1
24	5553.0	71	1	680	1
25	5555.4	80	1	725	1
26	5558.3	73	1	531	1
27	5561.1	84	1	683	1
28	5563.2	72	1	659	1
29	5566.4	86	1	701	1
30	5569.0	92	1	653	1
Detection Percentage (%)					93.3%

Radar Type 2 - Radar Statistical Performance

RADAR TYPE 2					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	26	1.5	184	1
2	5493.0	29	1.1	192	1
3	5495.1	25	3.9	173	0
4	5497.5	29	3.6	185	1
5	5499.4	26	3.6	168	1
6	5502.2	26	4	162	1
7	5504.3	24	2.5	194	1
8	5506.4	25	4	151	1
9	5508.7	27	4.6	219	1
10	5510.6	26	1.2	158	1
11	5513.0	28	3.5	167	1
12	5515.8	28	2.9	213	0
13	5518.9	27	3.2	223	1
14	5521.6	29	5	230	1
15	5524.1	25	1.9	184	1
16	5527.2	25	3.5	175	1
17	5530.0	24	1.4	197	1
18	5532.6	28	4.8	181	1
19	5534.5	25	2.9	182	1
20	5537.8	29	2.9	210	1
21	5541.3	24	4.9	162	1
22	5545.4	23	2.8	157	1
23	5549.1	25	4	227	1
24	5553.0	24	1.9	213	1
25	5555.4	27	5	195	1
26	5558.3	28	1	216	1
27	5561.1	24	4	170	1
28	5563.2	28	3.9	160	1
29	5566.4	26	2.3	158	1
30	5569.0	25	3.4	195	1
Detection Percentage (%)					93.3%

## Radar Type 3 - Radar Statistical Performance

RADAR TYPE 3					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	16	8.6	411	1
2	5493.0	17	7.4	315	1
3	5495.1	18	6.3	226	1
4	5497.5	17	7.3	352	1
5	5499.4	18	6.4	325	1
6	5502.2	18	9.9	350	0
7	5504.3	17	7.7	368	1
8	5506.4	16	6	208	1
9	5508.7	17	6.4	497	1
10	5510.6	17	7.7	314	1
11	5513.0	17	8	422	1
12	5515.8	16	6.5	324	1
13	5518.9	17	7.6	389	1
14	5521.6	18	7.2	368	1
15	5524.1	18	9.4	387	1
16	5527.2	17	8.9	395	1
17	5530.0	16	7.9	297	0
18	5532.6	17	9.4	481	1
19	5534.5	16	8.7	336	1
20	5537.8	18	8.1	282	1
21	5541.3	16	8.9	464	1
22	5545.4	18	7.6	304	1
23	5549.1	18	6.6	421	1
24	5553.0	16	6.6	292	1
25	5555.4	16	6.5	228	1
26	5558.3	17	6.2	249	1
27	5561.1	16	8.1	294	0
28	5563.2	16	7.3	207	1
29	5566.4	16	8.4	377	1
30	5569.0	17	8.9	440	1
Detection Percentage (%)					90.0%

## Radar Type 4 - Radar Statistical Performance

RADAR TYPE 4					Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5491.0	15	15.1	400	1
2	5493.0	13	18.3	463	1
3	5495.1	15	17.9	307	1
4	5497.5	13	14.3	294	1
5	5499.4	14	17.4	413	1
6	5502.2	13	16.9	214	1
7	5504.3	15	12.6	327	0
8	5506.4	13	16.8	493	1
9	5508.7	16	15.2	264	1
10	5510.6	14	15	246	1
11	5513.0	13	17.3	328	1
12	5515.8	16	11.2	412	1
13	5518.9	14	19	300	1
14	5521.6	12	11.7	418	1
15	5524.1	14	13.3	395	1
16	5527.2	13	12.2	355	1
17	5530.0	14	15.3	481	0
18	5532.6	16	16.2	352	1
19	5534.5	16	14.2	213	1
20	5537.8	12	17.4	249	1
21	5541.3	12	12.9	416	1
22	5545.4	12	18.2	268	1
23	5549.1	15	18.9	336	0
24	5553.0	15	14.2	258	1
25	5555.4	13	15.7	245	1
26	5558.3	12	16.8	400	1
27	5561.1	13	19.8	231	1
28	5563.2	16	14.8	453	1
29	5566.4	15	20	295	1
30	5569.0	16	17.9	400	1
Detection Percentage (%)					90.0%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows:

$$\frac{p1+p2+p3+p4}{4}=(93.3\%+93.3\%+90.0\%+90.0\%)/4=91.7\%(>80\%).$$



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491.0	1	16	5527.2	1
2	5493.0	1	17	5530.0	1
3	5495.1	1	18	5532.6	1
4	5497.5	1	19	5534.5	1
5	5499.4	1	20	5537.8	0
6	5502.2	1	21	5541.3	1
7	5504.3	1	22	5545.4	1
8	5506.4	0	23	5549.1	1
9	5508.7	1	24	5553.0	1
10	5510.6	1	25	5555.4	1
11	5513.0	1	26	5558.3	1
12	5515.8	1	27	5561.1	1
13	5518.9	1	28	5563.2	1
14	5521.6	1	29	5566.4	1
15	5524.1	1	30	5569.0	1
Detection Percentage (%)					93.3%

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 1						
Bursts in Trial: 9						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	82.2	7			183.472
2	2	77.9	19	1129		160.297
3	3	89.8	8	1140	1628	412.383

4	2	95	12	1347		390.85
5	2	74.9	8	1622		971.147
6	1	78.2	8			683.333
7	1	88.7	8			1061.75
8	3	87.3	17	1007	944	913.767
9	2	84.5	9	1230		933.333

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 2

Bursts in Trial: 14

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	87.1	16	1044	1510	249.745
2	2	98.4	8	1638		309.187
3	3	92.2	6	1831	1180	703.394
4	2	72	14	1405		86.331
5	2	86.2	11	979		165.659
6	2	63.9	6	1916		56.326
7	3	96	18	1131	1335	440.773
8	2	99.3	16	1312		436.65
9	1	79.5	11			800.057
10	2	52.9	17	1429		213.194
11	1	89.9	20			265.931
12	2	83.6	19	1745		277.999
13	1	99.6	7			682.986
14	2	90.2	19	1902		227.843



# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 3**

**Bursts in Trial: 20**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	93.8	19	1289		497.733
2	2	97.6	11	1169		323.622
3	1	75	11			450.54
4	2	87	17	1258		91.27
5	2	60.1	11	1563		297.52
6	1	85.8	11			355.71
7	2	94.8	14	1903		566.25
8	3	57.8	15	1105	1347	479.67
9	2	79.4	9	1309		172.8
10	2	81.9	5	956		158.79
11	2	78.7	13	1432		554.43
12	3	56.1	11	1188	1209	361.01
13	3	73	13	1070	1274	129.46
14	2	82.4	19	1583		201.02
15	2	70.7	13	1425		356.65
16	2	65.2	12	1335		545.93
17	2	56.3	12	1552		97.44
18	2	65.6	10	1929		540.9
19	3	64.6	17	1301	982	333.2
20	2	70.6	9	1677		324.2

<h1 style="margin: 0;">TYPE 5 PARAMETER SHEET</h1>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 4**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	79.4	12	1591		539.443
2	3	70.8	13	1919	1031	1.903
3	1	62.2	7			559.722
4	2	94.3	18	1356		308.253
5	1	83.2	19			484.714
6	2	76.9	15	1542		382.915
7	2	98	14	1135		291.116
8	3	84	20	1702	1241	548.327
9	2	85.1	11	1480		106.918
10	3	82.5	5	1343	1340	327.829
11	1	63.4	17			239.291
12	2	58.8	17	1863		109.662
13	2	87.8	12	1256		390.613
14	1	73.9	19			197.564
15	1	79.8	5			50.365
16	3	86.7	18	963	1572	447.206
17	2	56.2	11	1643		428.237
18	3	89.9	15	1318	1092	258.658
19	1	97.5	7			424.079

# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 5

Bursts in Trial: 19

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	63.8	14	1762	1578	619.595
2	1	95	13			179.901
3	2	59.3	16	962		329.392
4	1	50.7	9			546.793
5	1	84.6	14			183.924
6	2	66.4	5	1757		512.525
7	3	77.4	6	1560	1255	580.726
8	1	81.9	18			560.457
9	2	94.3	18	1071		18.438
10	3	84.6	19	1671	1371	393.089
11	2	80.3	14	1222		408.251
12	3	78	7	1028	1563	447.052
13	1	94.8	16			30.013
14	1	88.1	7			301.594
15	3	90.2	18	1449	1620	608.875
16	1	75	11			318.816
17	2	82.2	8	1690		475.837
18	2	79.4	19	1761		2.658
19	3	99.3	12	1751	1759	305.379

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 6**

**Bursts in Trial: 11**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	82.2	19	1161	1849	74.028
2	2	89	7	1781		851.441
3	2	84.6	19	916		687.512
4	2	87.1	8	1223		716.913
5	2	81.8	14	1355		969.974
6	2	95	19	1658		262.915
7	2	68.9	19	1602		749.745
8	2	67.1	13	972		766.506
9	3	94.3	17	1276	943	633.297
10	2	88	19	1165		190.818
11	3	69.7	20	1028	1624	0.609

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 7**

**Bursts in Trial: 20**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	73.7	14	1611	1681	65.491
2	3	53.4	12	1702	1354	142.326
3	2	99.7	7	1326		55.77
4	3	71.3	12	1100	960	237.67
5	1	77.3	12			68.73
6	1	52.9	9			572.72
7	1	86.9	13			287.39
8	1	65.5	16			593.27
9	1	79	5			81.96

10	3	65.2	8	1210	1579	30.19
11	3	65.5	15	1514	1116	23.8
12	2	72.2	13	1100		593.06
13	3	95.1	18	1042	1705	499.77
14	1	54.6	17			335.11
15	2	67.7	7	1832		368.52
16	3	98.7	14	1370	1591	557.01
17	1	99.5	18			589.6
18	1	59.4	10			4.9
19	1	61.6	13			542.8
20	3	75.9	15	1202	1071	397.4

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 8

Bursts in Trial: 10

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	62.8	8	1353		1043.18
2	3	61.7	16	1801	1315	850.44
3	1	77.9	14			770.81
4	2	78.4	7	1484		531.94
5	2	93.9	11	1603		630.22
6	1	75.5	8			1174.98
7	2	50.9	16	1050		879.8
8	3	56.6	5	1370	1136	918.7
9	3	82.7	15	1678	1198	46.98
10	3	88.6	16	1245	1548	383.5

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 9**

**Bursts in Trial: 9**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	61.5	19	1024		1096.69
2	2	73	8	1832		628.567
3	2	100	7	1528		894.753
4	2	59.7	8	1349		1081.65
5	2	77.5	19	1183		838.867
6	1	77	5			1075.703
7	3	65.8	19	1384	1077	885.6
8	2	69.7	10	1640		224.447
9	2	61.4	8	1279		432.033

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 10**

**Bursts in Trial: 18**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	67	6			286.71
2	3	96	13	1146	1399	579.243
3	2	81	5	1438		468.927
4	2	68.3	8	1200		512
5	3	88	18	1044	1445	65.073
6	3	59.4	10	1075	1351	423.867
7	1	92	15			567.9
8	2	62.7	13	1517		409.713
9	1	56	10			432.607
10	2	60.7	10	1635		593.6
11	1	71.3	6			26.893

12	2	92.2	6	1442		237.317
13	1	82	5			445.39
14	2	69.3	16	1364		290.783
15	1	56	20			236.017
16	1	90.7	13			97.6
17	3	74.8	14	1133	1254	347.433
18	3	92.8	18	1125	1873	295.867

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 11

Bursts in Trial: 20

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	82.7	8	1739		99.928
2	2	53.6	14	1579		382.679
3	2	96.8	19	1866		245.64
4	2	55.3	10	1620		79.16
5	3	72.3	7	1137	1001	175.74
6	2	62.2	10	1290		143.56
7	2	66.3	6	1386		536.96
8	1	99.5	5			553.63
9	1	50.6	19			446.44
10	2	85.7	16	1547		418.94
11	1	97.1	15			14.02
12	1	62.5	12			188.85
13	1	75.6	9			248.48
14	3	99.6	12	1486	1544	210.44
15	3	89.8	6	1176	1233	323.7
16	1	87.6	13			3.99
17	3	67.1	13	1218	1407	11.85
18	2	83.4	11	1292		16.6
19	3	69.8	20	1330	1293	122.5
20	1	98.5	17			400.4

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 12							
Bursts in Trial: 9							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	1	65.9	18			469.842	
2	1	80.9	19			388.907	
3	2	67.6	11	1853		312.863	
4	2	56.3	19	1870		578.52	
5	3	96	7	1330	1195	219.417	
6	2	83.4	16	1707		78.103	
7	3	53.5	14	1625	1447	841.04	
8	2	78.9	20	1523		287.327	
9	2	56.2	20	1494		586.433	

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 13							
Bursts in Trial: 12							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	2	70.5	20	1254		311.618	
2	3	57.2	16	1821	1626	473.88	
3	1	61.6	6			199.42	
4	2	59.4	14	1209		235.21	
5	1	89.4	11			39.21	
6	3	62.2	10	1816	1094	509.43	
7	1	76	10			318.28	
8	3	53.5	19	1532	1756	28.04	
9	2	75.7	18	1257		215.42	
10	2	56.2	9	1341		605.55	
11	1	83.5	12			225.6	





12	1	75.8	11			70.4
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<h2>TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 14**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	96.3	12	1779		480.187
2	3	75.7	14	1500	1665	285.654
3	1	57	9			526.202
4	2	90.8	15	1736		381.923
5	2	50.2	8	1247		517.754
6	2	85.1	19	936		270.055
7	2	70.8	16	1660		385.626
8	2	66.8	7	1069		73.427
9	2	89.7	8	1611		301.898
10	2	77.2	9	1234		32.509
11	2	60	7	1282		145.461
12	2	54.4	19	974		12.812
13	2	60.6	5	1756		384.613
14	3	86.2	19	1732	1140	522.324
15	1	53.5	20			80.955
16	1	88.2	7			113.926
17	2	88.3	10	1064		598.037
18	2	89.2	10	1495		393.458
19	2	68.4	8	994		469.379

# TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 15**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	97.3	17	1469		145.034
2	3	90.2	7	1670	1101	403.231
3	2	61.7	10	1491		527.762
4	3	56.4	18	1723	965	469.173
5	3	62.7	13	1678	1303	258.234
6	1	80.8	18			421.085
7	1	56.3	18			11.696
8	1	62.8	6			280.187
9	1	59.4	17			611.058
10	1	95.5	14			574.269
11	3	95	8	1081	1357	300.851
12	1	51.6	18			205.562
13	3	90.1	7	1323	1101	289.803
14	2	85.4	6	1047		310.904
15	3	75.7	18	1556	1296	118.775
16	1	58.4	7			345.876
17	2	69.8	20	1365		359.237
18	1	69.3	17			555.358
19	3	86.6	8	1789	944	52.879

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 16							
Bursts in Trial: 18							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	2	78.5	9	942		310.226	
2	1	78.4	7			399.993	
3	1	64.6	16			192.017	
4	2	90.9	15	1488		277.91	
5	2	61.7	17	1115		599.473	
6	2	64.8	18	1388		657.927	
7	3	98.1	18	1894	1188	80.26	
8	1	52.2	11			314.763	
9	2	68.6	18	1587		420.057	
10	1	93.9	13			440.17	
11	1	51.9	7			207.393	
12	3	85.5	16	1899	1070	361.737	
13	3	91.5	7	978	1512	507.01	
14	2	91.6	20	1104		135.463	
15	3	66.3	17	1070	1732	88.547	
16	2	93.1	11	1251		385.7	
17	2	60.4	18	1213		549.733	
18	2	80.2	16	1688		642.067	

TYPE 5 PARAMETER SHEET							Rohde & Schwarz Pulse Sequencer
Trial Number : 17							
Bursts in Trial: 14							
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)	
1	3	89.5	18	1302	1019	526.028	
2	2	52.3	17	1160		252.047	

3	1	56.8	18			577.004
4	3	58	10	1455	1041	398.761
5	3	68.2	9	1507	1214	119.869
6	3	50.3	10	1024	1766	262.726
7	2	81.9	19	1301		617.013
8	1	97.5	19			101.52
9	1	91.2	20			678.127
10	2	98.3	20	1867		373.584
11	2	61.8	20	1912		376.191
12	2	96.9	18	1381		232.299
13	2	71.1	20	1908		296.986
14	3	85.2	18	1241	1559	430.843

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 18

Bursts in Trial: 18

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	66.5	10			215.43
2	3	75.9	15	1302	960	562.873
3	1	71.2	6			393.617
4	2	84.5	18	1035		171.34
5	2	72.9	10	1444		76.793
6	1	75	8			561.617
7	2	79.2	11	1308		319.93
8	1	89.2	10			123.173
9	3	83.3	19	1469	955	378.047
10	2	87.9	11	1318		81.13
11	3	54.5	19	1327	1279	352.773
12	2	64.6	12	1699		253.167
13	3	83.2	9	1375	1065	367.72
14	2	65.4	7	1698		10.593
15	2	62.7	17	1065		495.617
16	2	91.4	10	1177		472.3
17	2	96.3	11	1301		481.233
18	2	96.5	10	1790		546.867

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 19						
Bursts in Trial: 13						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	59.1	19	1152		548.127
2	3	89.8	5	1358	1850	335.583
3	2	72.4	13	1664		188.106
4	1	63.5	20			534.379
5	2	85.3	14	1303		297.452
6	1	79.5	13			426.185
7	2	97.2	13	1082		669.338
8	2	94.2	9	1857		880.512
9	3	77.2	18	1382	1022	259.645
10	2	65.1	17	1072		845.318
11	2	80.7	13	1545		531.201
12	2	67.9	16	1396		337.154
13	3	99.1	8	1681	1889	701.177

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 20						
Bursts in Trial: 19						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	69.6	19	1063		336.457
2	1	54.4	13			116.042
3	1	69.1	14			188.712
4	3	71.7	7	1888	1633	207.823
5	3	73.2	20	970	1215	546.884
6	1	53.1	12			173.285

7	2	89.1	5	1310		23.696
8	1	77.5	19			341.387
9	2	61.2	16	1593		446.828
10	3	76.8	15	929	1336	110.799
11	3	89.8	11	1506	1610	177.561
12	2	54.7	6	1619		47.512
13	3	99.7	12	1465	904	19.093
14	3	66.1	16	1358	1546	243.554
15	1	73.7	10			591.545
16	1	76.3	5			212.516
17	2	67.9	15	1502		267.937
18	2	75.5	5	1745		338.258
19	2	74.5	14	1443		246.779

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 21**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	63.9	14	1899		175.434
2	2	94.1	5	1484		682.708
3	2	87.5	7	1804		687.355
4	1	96.6	11			84.723
5	3	97.8	10	1568	1830	139.171
6	2	55.2	11	1879		523.158
7	1	79.7	5			277.336
8	2	59.5	8	1493		508.054
9	2	74.9	19	1649		165.161
10	3	70.6	17	1724	1057	117.939
11	1	82.2	19			290.606
12	2	85	18	1317		208.354
13	1	90.4	13			156.762
14	2	86.8	11	1056		335.169
15	1	87.2	19			40.777
16	3	57.6	14	1814	1385	467.465
17	3	99.4	7	1482	1596	162.482

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 22						
Bursts in Trial: 17						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	3	55.7	6	1467	969	499.099
2	2	70.4	7	1398		327.158
3	2	61.7	15	1847		239.675
4	2	99.5	19	1822		600.923
5	1	84.7	11			135.291
6	2	91.7	5	939		17.508
7	2	62.4	6	1781		562.776
8	2	96.5	7	1535		130.164
9	2	68.2	5	1208		322.011
10	1	56.4	14			533.939
11	2	88.4	5	1090		677.366
12	3	56.7	10	1083	1528	601.374
13	3	81.8	5	1828	1112	538.232
14	3	97.5	7	1000	1308	638.889
15	3	82.5	15	1372	1348	324.847
16	3	90.5	20	1552	1627	680.865
17	3	82.6	9	1211	1913	633.282

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 23						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	80.7	15			50.127
2	1	94.8	17			916.08

3	1	81.7	13			434.74
4	2	83.5	9	968		851
5	3	75.5	16	981	1916	245.39
6	2	50.1	9	1086		275.17
7	2	89.5	10	1672		314.37
8	2	69.5	10	1511		680.54
9	2	78	11	959		431
10	3	89.7	8	1186	1477	86.89
11	2	98.8	16	1699		728.2
12	3	88.2	10	1118	1271	163.7

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 24

Bursts in Trial: 9

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	84.2	19			973.128
2	2	94.3	15	1844		1034.017
3	2	78.9	13	1364		1276.983
4	1	64	9			167.52
5	2	55.3	19	1819		50.607
6	1	52.5	20			821.813
7	2	86.7	6	1463		929.99
8	2	93	8	1024		734.367
9	3	87	5	1058	1766	114.333



**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 25**

**Bursts in Trial: 10**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	98.6	14			1117.53
2	2	73.4	16	1358		656.93
3	2	81.1	16	1124		1097.22
4	2	69.4	12	1517		676.72
5	2	66.3	11	983		764.47
6	1	84.6	15			251.65
7	2	53.7	13	1302		1125.91
8	3	77.5	20	1109	1482	299.48
9	2	88.2	14	1673		983.3
10	2	88	13	1271		90.8

**TYPE 5 PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 26**

**Bursts in Trial: 20**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	94.4	16			350.257
2	3	52.2	6	1347	1259	94.85
3	2	64	8	1341		234.24
4	2	55	11	1782		204.26
5	2	75.2	5	1261		503.07
6	2	78.7	12	1369		30.88
7	1	51.3	7			188.06
8	1	92.2	13			41.96
9	1	63.4	10			289.13
10	2	84.2	15	1880		8.59

11	1	50.2	19			338.28
12	2	80.1	15	1427		511.14
13	3	97.4	18	1337	1620	238.77
14	1	97.2	12			78.6
15	3	73.3	9	1886	1175	99.21
16	3	72.6	9	1429	1208	592.51
17	1	57.3	8			362.85
18	1	78.8	11			124.5
19	3	86.3	7	1712	1693	314.2
20	2	54.1	13	1264		104

## TYPE 5 PARAMETER SHEET

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 27

Bursts in Trial: 10

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	52.2	20	1668		975.296
2	2	63.9	16	1239		401.74
3	1	96.7	6			1028.64
4	1	53.6	8			824.29
5	2	75.5	9	1051		372.76
6	2	80.7	19	1502		567.93
7	2	60.2	14	1015		602.5
8	3	80.2	15	1004	1465	1166.85
9	2	87.3	15	1028		181.72
10	3	52.3	19	1494	1341	117.3

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 28**

**Bursts in Trial: 9**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	53	16	1017		1047.13
2	1	94	10			1098.037
3	1	71.9	14			1216.313
4	1	97.5	13			1132.6
5	2	72	16	1154		850.767
6	3	64.5	7	1508	1070	974.973
7	3	60.3	15	949	1640	631.37
8	2	64.9	9	1816		19.397
9	2	74.4	18	975		99.333

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 29**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	2	93.3	9	931		502.425
2	1	56.4	11			150.796
3	3	67.9	19	1555	1577	137.525
4	2	53.4	6	1080		104.543
5	1	80.9	9			403.461
6	2	59.3	9	1214		312.598
7	2	68.5	7	1523		622.246
8	3	66.1	11	992	1810	498.044
9	2	52.8	12	1519		156.301
10	2	92.5	13	1040		614.379
11	2	76.8	5	958		313.256

12	1	86.5	16			685.424
13	2	65	12	1301		291.502
14	3	75.3	13	1290	1265	372.179
15	3	50.8	11	1750	1735	138.947
16	3	60.9	5	1041	1807	75.665
17	3	76.2	5	1030	1127	159.782

<h2 style="margin: 0;">TYPE 5 PARAMETER SHEET</h2>	Rohde & Schwarz Pulse Sequencer
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**Trial Number : 30**

**Bursts in Trial: 14**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 Spacing (µsec)	Start Location Within Interval (msec)
1	1	50.9	9			346.167
2	2	93.1	15	1321		26.574
3	1	54.2	5			683.914
4	3	79.8	19	1582	1023	33.581
5	1	56.3	6			668.909
6	3	99.9	6	1731	1128	422.436
7	2	63.3	8	1157		724.353
8	2	50.2	8	1656		327.94
9	2	94.7	13	1484		260.237
10	2	85.3	6	1288		424.604
11	2	56.5	15	1505		316.091
12	1	58.4	6			281.709
13	1	73.1	17			817.486
14	2	61	6	1133		255.243

**Radar Type 6 - Radar Statistical Performance**

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491.0	1	16	5527.2	
2	5493.0	1	17	5530.0	1
3	5495.1	1	18	5532.6	1
4	5497.5	1	19	5534.5	0

5	5499.4	1	20	5537.8	1
6	5502.2	1	21	5541.3	1
7	5504.3	1	22	5545.4	1
8	5506.4	1	23	5549.1	1
9	5508.7	1	24	5553.0	1
10	5510.6	1	25	5555.4	1
11	5513.0	1	26	5558.3	1
12	5515.8	1	27	5561.1	1
13	5518.9	1	28	5563.2	1
14	5521.6	1	29	5566.4	1
15	5524.1	1	30	5569.0	1
Detection Percentage (%)					96.7%

Trial Number : 1			Trial Number : 2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5493	3	5	5533	15
9	5501	27	9	5549	27
33	5520	99	11	5550	33
29	5531	87	23	5557	69
49	5539	147	28	5560	84
66	5540	198	33	5520	99
71	5551	213	39	5519	117
89	5559	267	46	5539	138
93	5563	279	57	5522	171
/	/	/	62	5553	186
/	/	/	67	5517	201
/	/	/	79	5558	237

Trial Number : 3			Trial Number : 4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5503	12	7	5522	21
7	5521	21	13	5503	39

9	5514	27	18	5541	54
13	5530	39	19	5550	57
18	5527	54	22	5518	66
22	5535	66	25	5523	75
42	5540	126	30	5520	90
51	5550	153	37	5537	111
55	5532	165	45	5548	135
63	5541	189	50	5552	150
70	5549	210	52	5537	156
78	5538	234	57	5549	171
84	5561	252	62	5560	186
88	5551	264	70	5493	210
92	5549	276	76	5499	228
94	5502	282	81	5521	243
99	5557	297	89	5535	267

Trial Number : 5			Trial Number : 6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5500	51	3	5511	9
25	5520	75	7	5525	21
31	5517	93	13	5538	39
41	5531	123	19	5540	57
49	5546	147	22	5559	66
57	5526	171	26	5568	78
62	5535	186	30	5530	90
67	5549	201	37	5552	111
71	5558	213	29	5549	87
78	5567	234	36	5564	108
83	5561	249	42	5521	126
/	/	/	49	5525	147
/	/	/	55	5534	165
/	/	/	60	5539	180
/	/	/	73	5560	219
/	/	/	84	5557	252
/	/	/	90	5552	270

Trial Number : 7			Trial Number : 8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)

1	5512	3	5	5512	15
5	5531	15	19	5530	57
9	5540	27	26	5524	78
13	5543	39	33	5519	99
17	5552	51	39	5531	117
21	5549	63	44	5544	132
27	5521	81	51	5550	153
35	5553	105	58	5523	174
39	5567	117	65	5549	195
43	5598	129	70	5558	210
51	5534	153	75	5563	225
58	5520	174	88	5511	264
66	5513	198	80	5517	240
73	5539	219	77	5529	231
79	5541	237	61	5537	183
85	5553	255	59	5547	177
92	5544	276	78	5551	234
98	5561	294	90	5559	270
100	5540	300	83	5542	249

Trial Number : 9			Trial Number : 10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5511	9	6	5497	18
6	5513	18	9	5509	27
13	5524	39	15	5514	45
19	5536	57	19	5526	57
27	5539	81	24	5537	72
33	5546	99	29	5529	87
42	5551	126	33	5530	99
49	5520	147	38	5551	114
55	5533	165	47	5534	141
59	5557	177	56	5517	168
67	5529	201	63	5527	189
76	5519	228	69	5519	207
82	5514	246	72	5535	216
88	5494	264	78	5540	234
89	5509	267	86	5550	258
100	5559	300	97	5539	291

Trial Number : 11			Trial Number : 12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5531	9	2	5522	6
9	5543	27	4	5513	12
16	5550	48	7	5529	21
27	5557	81	11	5533	33
39	5495	117	16	5537	48
41	5569	123	19	5548	57
49	5523	147	21	5550	63
55	5519	165	29	5557	87
59	5511	177	33	5531	99
66	5499	198	41	5560	123
70	5516	210	47	5512	141
73	5530	219	52	5524	156
79	5541	237	59	5536	177
85	5558	255	60	5568	180
88	5561	264	67	5554	201
90	5540	270	/	/	/
93	5521	279	/	/	/
97	5547	291	/	/	/

Trial Number : 13			Trial Number : 14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5522	15	3	5511	9
9	5523	27	4	5519	12
13	5501	39	8	5523	24
17	5509	51	16	5528	48
22	5513	66	19	5530	57
27	5532	81	22	5537	66
34	5528	102	25	5542	75
40	5598	120	28	5547	84
43	5499	129	37	5551	111
48	5521	144	41	5557	123
52	5536	156	47	5560	141
55	5520	165	50	5513	150
59	5502	177	53	5517	159
63	5512	189	58	5520	174
67	5560	201	62	5536	186



69	5498	207	66	5540	198
72	5567	216	69	5549	207
75	5511	225	73	5559	219
78	5546	234	77	5541	231
82	5519	246	80	5515	240
87	5563	261	85	5568	255
90	5557	270	89	5516	267
/	/	/	92	5539	276
/	/	/	97	5544	291

Trial Number : 15			Trial Number : 16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5501	51	16	5550	48
22	5509	66	19	5548	57
27	5500	81	23	5549	69
33	5497	99	27	5530	81
39	5511	117	34	5539	102
40	5515	120	38	5521	114
46	5520	138	44	5499	132
50	5528	150	49	5527	147
53	5519	159	53	5529	159
56	5537	168	59	5537	177
64	5540	192	63	5542	189
69	5543	207	68	5549	204
/	/	/	75	5557	225
/	/	/	85	5567	255

Trial Number : 17			Trial Number : 18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5509	6	7	5513	21
6	5495	18	9	5540	27
9	5507	27	11	5509	33
13	5516	39	16	5526	48
16	5519	48	24	5530	72
19	5525	57	29	5549	87
22	5520	66	33	5557	99
29	5533	87	42	5561	126
36	5538	108	49	5568	147

40	5544	120	50	5523	150
47	5549	141	58	5539	174
49	5553	147	66	5551	198
51	5550	153	73	5543	219
58	5567	174	79	5510	237
62	5499	186	84	5516	252
66	5550	198	86	5552	258
69	5514	207	89	5550	267
73	5526	219	91	5560	273
78	5540	234	94	5531	282
80	5551	240	95	5519	285
83	5559	249	97	5554	291
86	5566	258	/	/	/
89	5524	267	/	/	/
93	5541	279	/	/	/

Trial Number : 19			Trial Number : 20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5523	15	3	5511	9
9	5530	27	8	5520	24
11	5541	33	15	5526	45
15	5549	45	22	5533	66
19	5550	57	29	5540	87
22	5558	66	33	5549	99
26	5565	78	50	5557	150
29	5516	87	69	5534	207
33	5520	99	73	5539	219
39	5527	117	78	5541	234
44	5539	132	83	5518	249
48	5547	144	88	5524	264
50	5553	150	90	5497	270
53	5559	159	91	5560	273
58	5568	174	93	5558	279
60	5543	180	95	5509	285
66	5555	198	97	5515	291
69	5499	207	/	/	/
83	5526	249	/	/	/
88	5552	264	/	/	/

Trial Number : 21			Trial Number : 22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5511	6	4	5566	12
7	5519	21	9	5550	27
13	5522	39	11	5546	33
17	5529	51	16	5499	48
22	5533	66	20	5520	60
28	5538	84	25	5516	75
31	5542	93	29	5533	87
37	5549	111	33	5548	99
40	5553	120	39	5556	117
51	5517	153	46	5563	138
59	5509	177	55	5551	165
64	5501	192	59	5549	177
69	5526	207	64	5541	192
70	5531	210	69	5527	207
75	5539	225	/	/	/
77	5499	231	/	/	/
82	5551	246	/	/	/
87	5555	261	/	/	/

Trial Number : 23			Trial Number : 24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5502	21	2	5530	6
9	5512	27	6	5544	18
16	5519	48	9	5563	27
22	5526	66	14	5498	42
31	5524	93	17	5536	51
39	5536	117	20	5502	60
44	5509	132	25	5509	75
50	5535	150	29	5543	87
58	5510	174	33	5555	99
63	5508	189	36	5527	108
69	5499	207	45	5517	135
74	5503	222	51	5538	153
79	5499	237	59	5533	177
82	5518	246	62	5514	186
88	5520	264	68	5516	204

90	5530	270	78	5492	234
93	5542	279	/	/	/
96	5557	288	/	/	/
99	5567	297	/	/	/

Trial Number : 25			Trial Number : 26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5516	12	1	5513	3
9	5541	27	5	5533	15
11	5505	33	9	5493	27
15	5532	45	12	5543	36
19	5509	57	16	5547	48
22	5551	66	19	5550	57
27	5526	81	22	5523	66
31	5498	93	26	5527	78
49	5507	147	29	5509	87
43	5534	129	33	5527	99
50	5529	150	37	5532	111
56	5441	168	49	5559	147
60	5448	180	52	5560	156
64	5503	192	57	5515	171
66	5547	198	60	5507	180
69	5550	207	64	5519	192
77	5560	231	73	5534	219
82	5556	246	76	5563	228
88	5567	264	89	5525	267
89	5490	267	/	/	/
93	5521	279	/	/	/
97	5546	291	/	/	/
99	5554	297	/	/	/
100	5500	300	/	/	/

Trial Number : 27			Trial Number : 28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5501	12	11	5522	33
9	5522	27	17	5509	51
14	5531	42	19	5546	57
18	5517	54	22	5498	66

22	5516	66	26	5531	78
27	5562	81	19	5526	57
34	5557	102	33	5499	99
39	5551	117	39	5508	117
44	5519	132	44	5533	132
49	5530	147	50	5514	150
52	5514	156	59	5525	177
58	5566	174	63	5536	189
62	5533	186	66	5540	198
66	5557	198	70	5549	210
69	5509	207	75	5511	225
72	5527	216	79	5568	237
75	5541	225	86	5570	258
79	5560	237	/	/	/
81	5511	243	/	/	/
85	5521	255	/	/	/
89	5549	267	/	/	/
90	5563	270	/	/	/



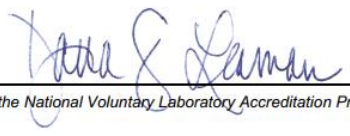
Trial Number : 29			Trial Number : 30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5509	48	2	5530	6
22	5518	66	6	5560	18
29	5549	87	10	5519	30
36	5509	108	15	5533	45
46	5528	138	19	5557	57
51	5542	153	22	5498	66
56	5547	168	26	5551	78
60	5550	180	30	5499	90
66	5509	198	36	5555	108
69	5533	207	40	5522	120
71	5519	213	49	5550	147
75	5534	225	55	5537	165
80	5526	240	59	5517	177
/	/	/	62	5538	186
/	/	/	69	5552	207
/	/	/	77	5566	231
/	/	/	86	5561	258

## ANNEX B: PHOTOGRAPHS OF THE TEST SET-UP

### Layout of Conducted Test



## ANNEX C: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> <div style="display: flex; justify-content: space-around; align-items: center;"><div style="font-size: 2em; font-weight: bold; letter-spacing: 0.5em;">NVLAP<sup>®</sup></div><div style="text-align: center;"></div></div> <hr/> <p style="font-size: 1.2em; font-weight: bold;">Certificate of Accreditation to ISO/IEC 17025:2017</p> <hr/> <p>NVLAP LAB CODE: 600118-0</p> <p style="font-weight: bold; text-align: center;">Telecommunication Technology Labs, CAICT</p> <p style="text-align: center;">Beijing China</p> <p style="text-align: center;"><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i></p> <p style="font-weight: bold; text-align: center;">Electromagnetic Compatibility &amp; Telecommunications</p> <p style="text-align: center;"><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"><div style="text-align: center;"><p>2020-09-29 through 2021-09-30</p><hr/><p><i>Effective Dates</i></p></div><div style="text-align: center;"></div><div style="text-align: center;"><hr/><p><i>For the National Voluntary Laboratory Accreditation Program</i></p></div></div>	
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