



# FCC PART 15 TEST REPORT No.I21Z61036-IOT09

for

**TCL Communication Ltd.**

**Vodafone Gigacube**

**HH500V**

**With**

**FCC ID: 2ACCJB157**

**Hardware Version: HH500\_MB\_C**

**Software Version: HH500V\_VDF\_V2.0.0B01**

**Issued Date: 2021-08-10**

**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.

**Test Laboratory:**

**CTTL-Telecommunication Technology Labs, CAICT**

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: [cttl\\_terminals@caict.ac.cn](mailto:cttl_terminals@caict.ac.cn), website: [www.caict.ac.cn](http://www.caict.ac.cn)



## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I21Z61036-IOT09	Rev.0	1st edition	2021-08-03
I21Z61036-IOT09	Rev.1	Add the modulation type of OFDMA.	2021-08-10

## **CONTENTS**

<b>CONTENTS</b> .....	<b>3</b>
<b>1. TEST LATORATORY</b> .....	<b>4</b>
1.1. INTRODUCTION & ACCREDITATION.....	4
1.2. TESTING LOCATION.....	4
1.3. TESTING ENVIRONMENT.....	4
1.4. PROJECT DATE.....	4
1.5. SIGNATURE.....	4
<b>2. CLIENT INFORMATION</b> .....	<b>5</b>
2.1. APPLICANT INFORMATION.....	5
2.2. MANUFACTURER INFORMATION.....	5
<b>3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)</b> .....	<b>6</b>
3.1. ABOUT EUT.....	6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST.....	6
3.3. GENERAL DESCRIPTION.....	6
<b>4. REFERENCE DOCUMENTS</b> .....	<b>7</b>
4.1. DOCUMENTS SUPPLIED BY APPLICANT.....	7
4.2. REFERENCE DOCUMENTS FOR TESTING.....	7
<b>5. LABORATORY ENVIRONMENT</b> .....	<b>7</b>
<b>6. SUMMARY OF TEST RESULTS</b> .....	<b>7</b>
6.1. SUMMARY OF TEST RESULTS.....	7
6.2. STATEMENTS.....	7
<b>7. TEST EQUIPMENTS UTILIZED</b> .....	<b>8</b>
<b>ANNEX A: MEASUREMENT RESULTS</b> .....	<b>9</b>
A.1. MEASUREMENT METHOD.....	9
A.1.3. RADAR WAVEFORM CALIBRATION.....	13
A.2. CHANNEL AVAILABILITY CHECK.....	17
A.3. CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME.....	21
A.4. NON-OCCUPANCY PERIOD.....	24
A.5. DFS DETECTION BANDWIDTH.....	27
A.6. STATISTICAL PERFORMANCE CHECK.....	35
<b>ANNEX B: PHOTOGRAPHS OF THE TEST SET-UP</b> .....	<b>129</b>
<b>ANNEX C: EUT PARAMETERS</b> .....	<b>130</b>
<b>ANNEX D: ACCREDITATION CERTIFICATE</b> .....	<b>130</b>

## 1. TEST LABORATORY

### 1.1. Introduction & Accreditation

**Telecommunication Technology Labs, CAICT** is an ISO/IEC 17025:2017 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 (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

### 1.2. Testing Location

Location 1:CTTL(Gaolizhang Road)

Address: Cuihu Cloud Center, No.1, Gaolizhang Road, Wenquan,  
Haidian District, Beijing, China

### 1.3. Testing Environment

Normal Temperature: 15-35°C

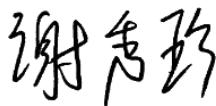
Relative Humidity: 20-75%

### 1.4. Project date

Testing Start Date: 2021-05-31

Testing End Date: 2021-08-02

### 1.5. Signature



---

Xie Xiuzhen  
(Prepared this test report)



---

Zheng Wei  
(Reviewed this test report)



---

Hu Xiaoyu  
(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1. Applicant Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science  
Park, Shatin, NT, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

### **2.2. Manufacturer Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science  
Park, Shatin, NT, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

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

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

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

Description	Vodafone Gigacube
Model name	HH500V
FCC ID	2ACCJB157
WLAN Frequency Band	ISM Band: -5250MHz~5350MHz -5470MHz~5725MHz
Type of modulation	OFDM/ OFDMA
Extreme vol. Limits	12V
Device Type (DFS)	Master
Antenna gain	2.7dBi

##### **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	350364240200085	HH500_MB_C	HH500V_VDF_V2.0.0B01

\*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 Vodafone Gigacube 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

## 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)	<b>P</b>
Channel move time and channel closing transmission time	15.407(h)(2) (iii)	<b>P</b>
DFS detection bandwidth	5.407(h)(2)	<b>P</b>
Non-Occupancy Period	15.407(h)(2) (iv)	<b>P</b>
Statistical Performance Check	5.407(h)(2)	<b>P</b>

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	12V
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	2022-05-24
2	Vector Signal Generator	SMU200A	103752	Rohde & Schwarz	1 year	2022-05-24
3	Vector Signal Generator	SMW200A	103421	Rohde & Schwarz	1 year	2022-03-23
4	Vector Signal Analyzer	E4440A	MY46186042	Agilent	1 year	2022-02-26
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

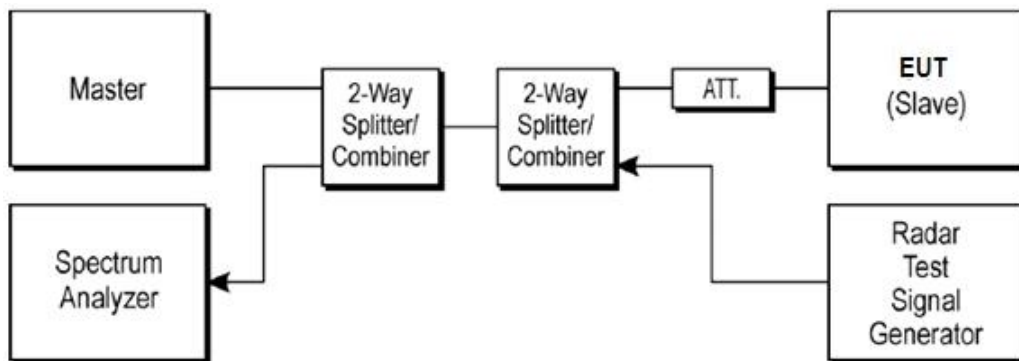


## ANNEX A: MEASUREMENT RESULTS

### 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 slave device information is as follows  
Vendor: Dell  
Model: Dell wireless card.
- 3) The software of radar signal generator (R&S SMU200A) is completely designed based on KDB 905462 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 measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.</p> <p><b>Note3:</b> EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>	

## 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.
<p><b>Note 1:</b> 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.</p> <p><b>Note 2:</b> 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.</p> <p><b>Note 3:</b> 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.</p>	

## 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	Roundup $\left\{ \begin{array}{l} \left( \frac{1}{360} \right) \\ \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \end{array} \right\}$	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

## 5). Operating Frequency and Channel List for this Report

## 802.11a/n-HT20/ac-VHT20/ax-HE20

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	/	/	/
100	5500	124	/	/	/
104	5520	128	/	/	/

## 802.11n-HT40/ac-VHT40/ax-HE40

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

## 802.11ac-VHT80/ax-HE80

Channel	Frequency(MHz)	Channel	Frequency(MHz)
58	5290	122	5610
106	5530	/	/

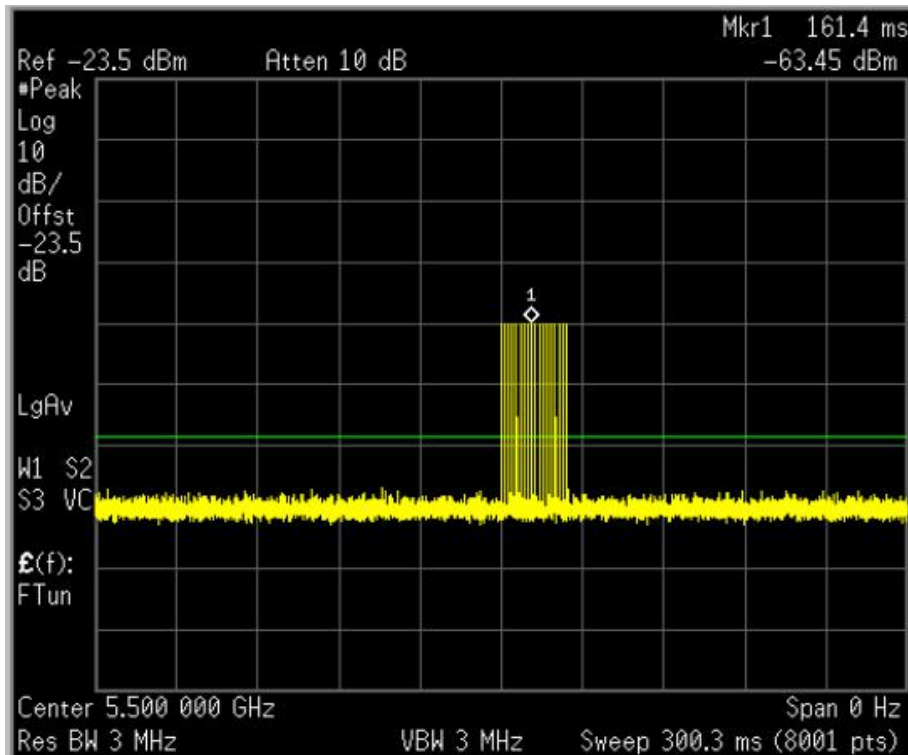
## Test Channels for this Report

Test Mode	Test Channel	Test Frequency
802.11ax-HE20	100	5500 MHz
802.11ax-HE40	102	5510 MHz
802.11ax-HE80	58	5290 MHz
802.11ax-HE80	106	5530 MHz
802.11ax-HE80	122	5610 MHz

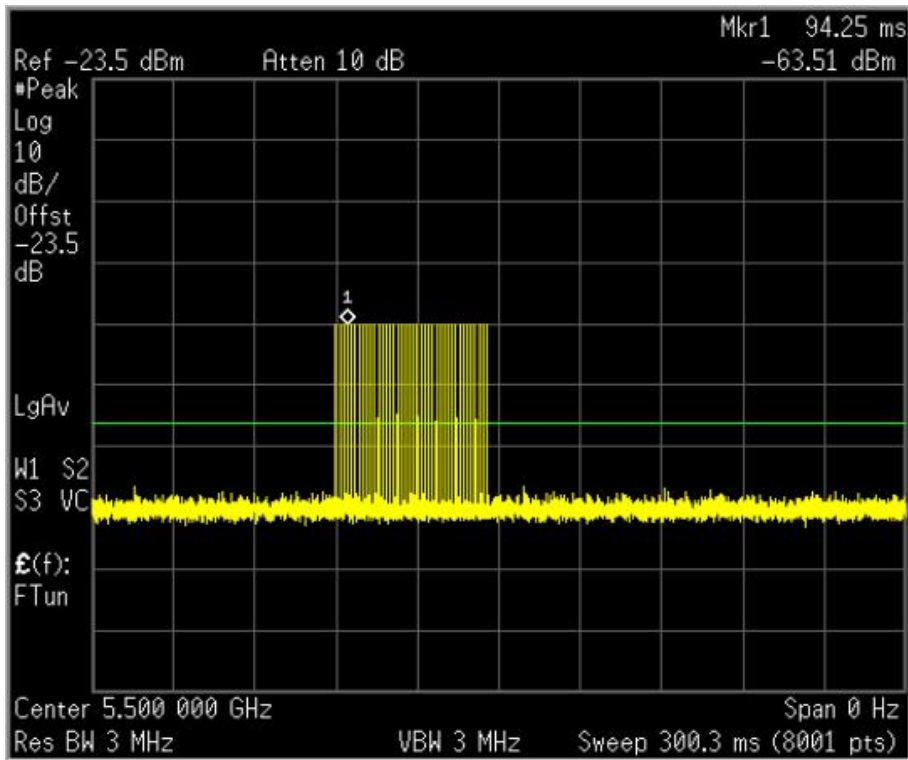
### A.1.3. Radar Waveform Calibration

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.

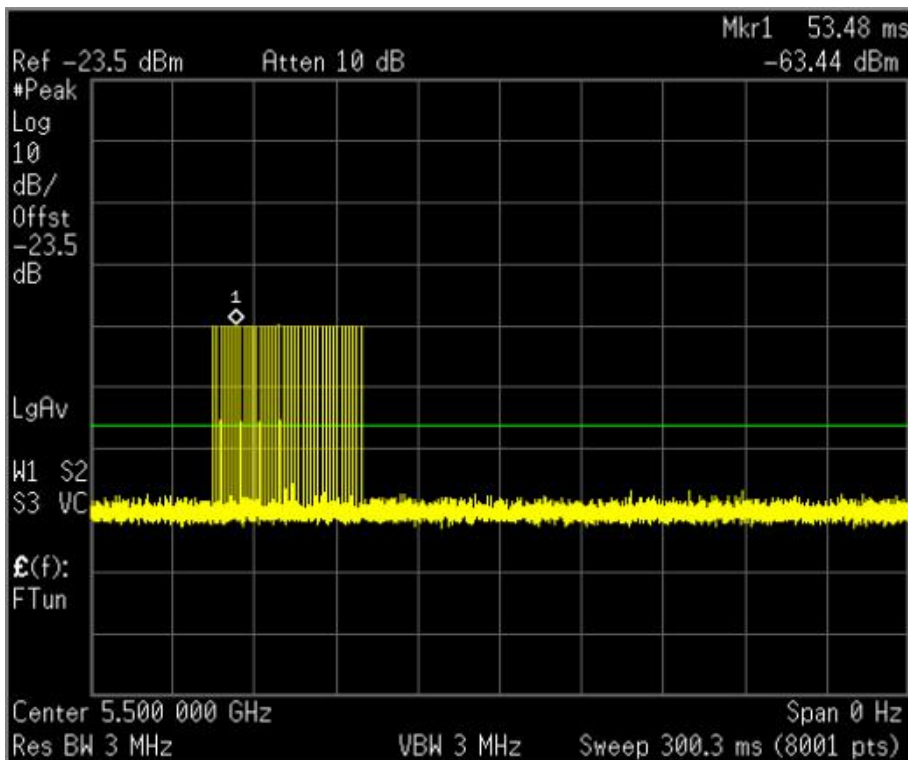
Radar #0



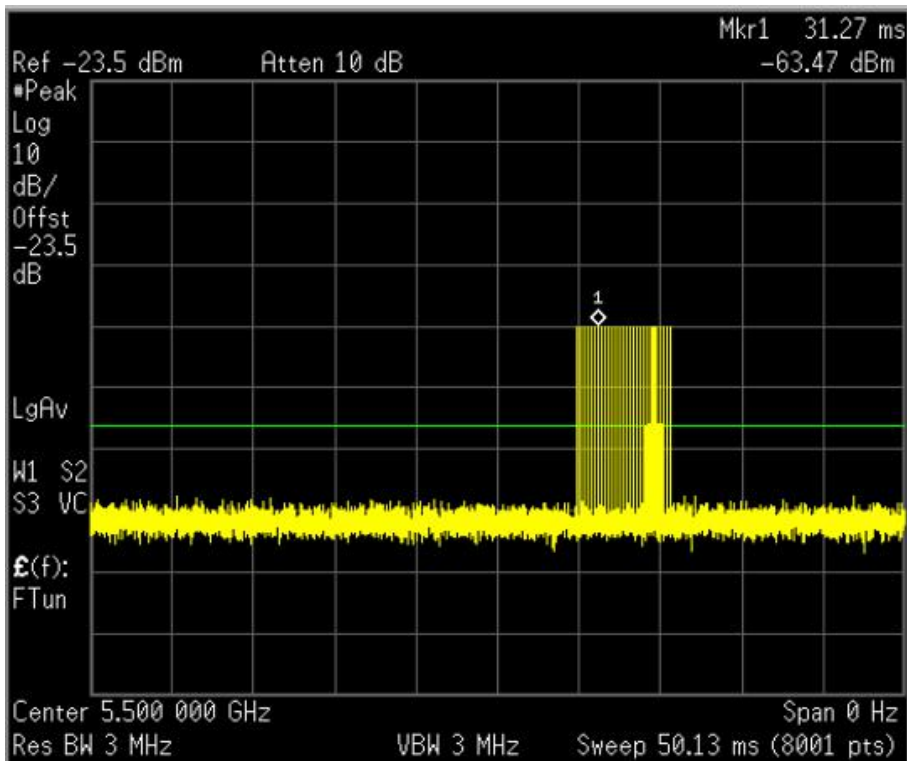
Radar #1(Test A)



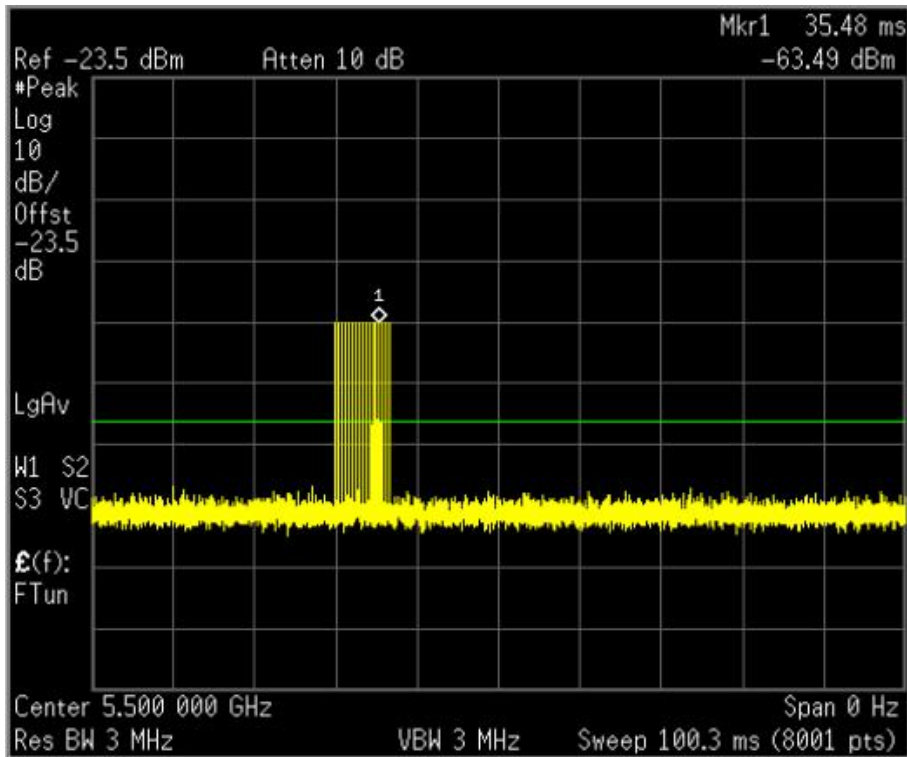
Radar #1(Test B)



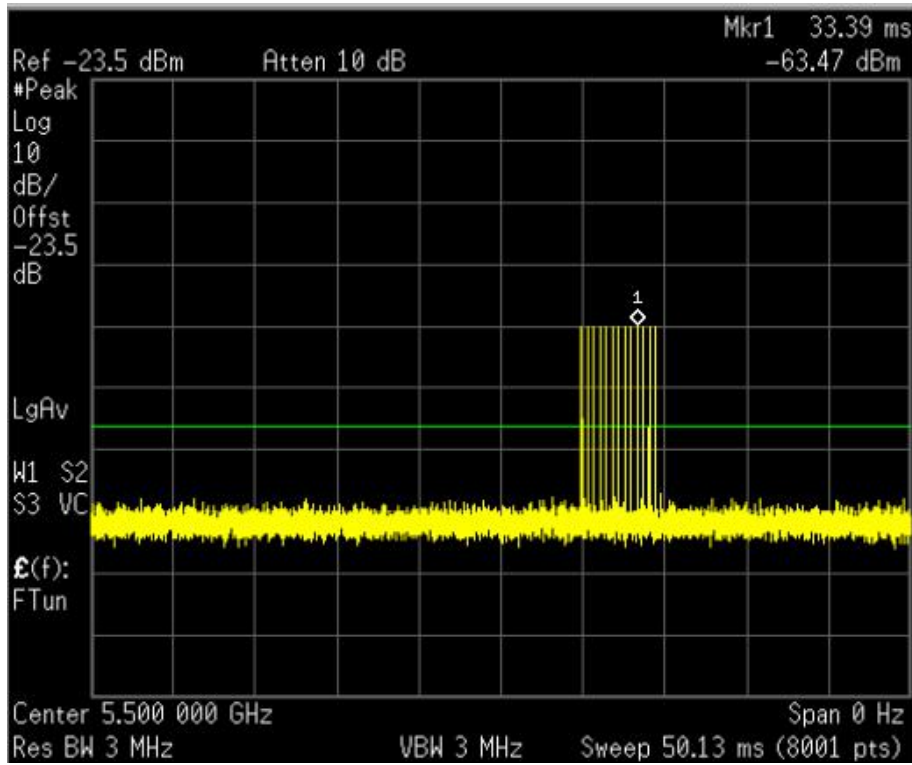
Radar #2



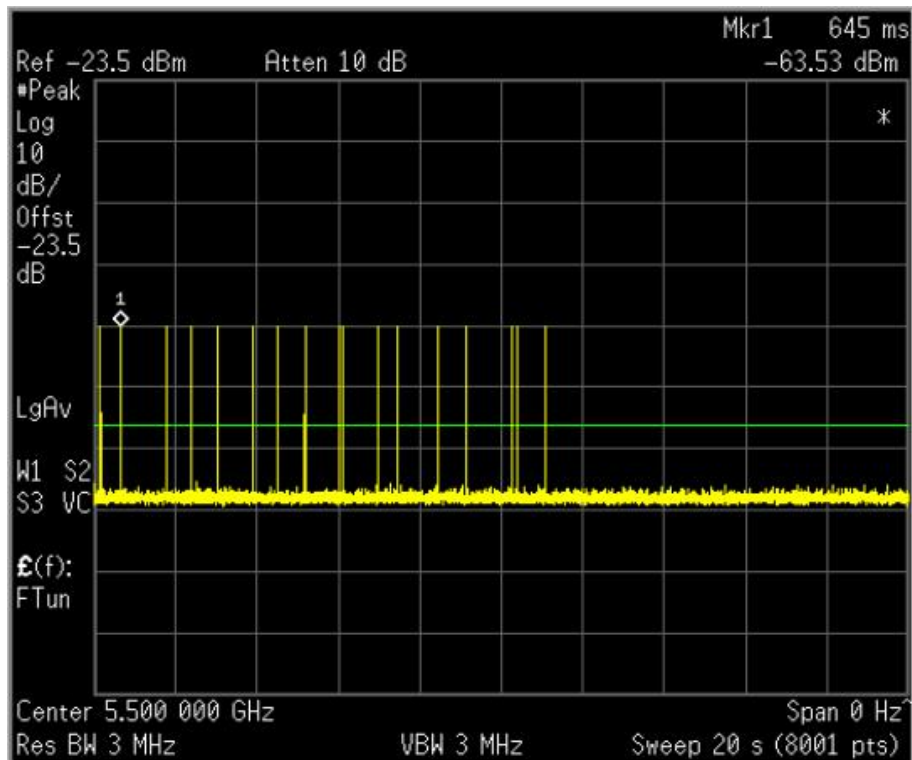
Radar #3



Radar #4

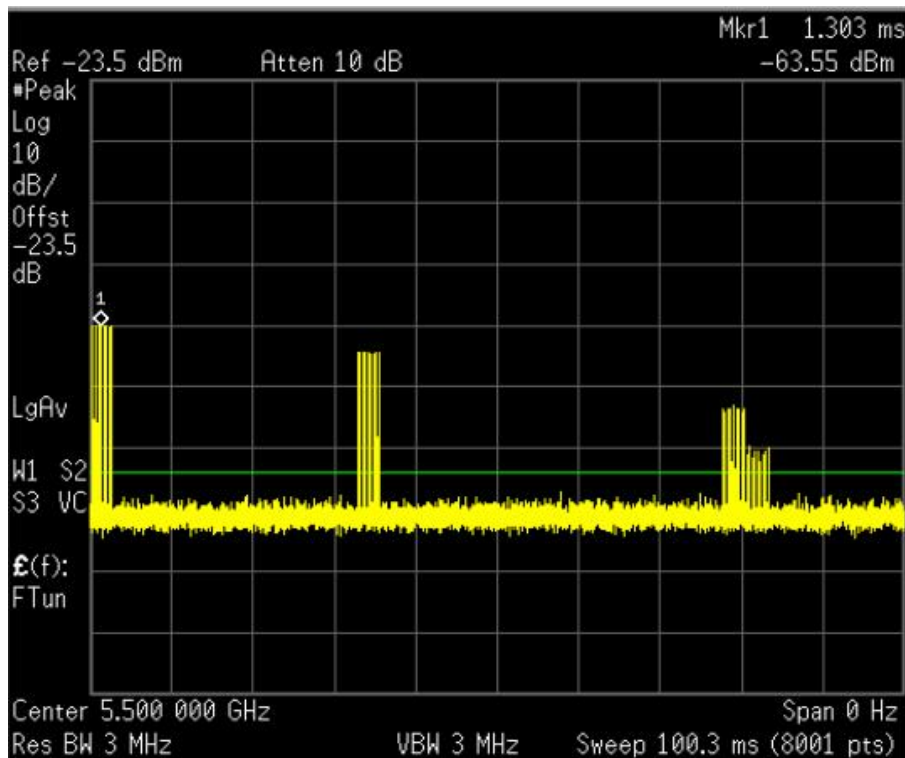


Radar #5





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.

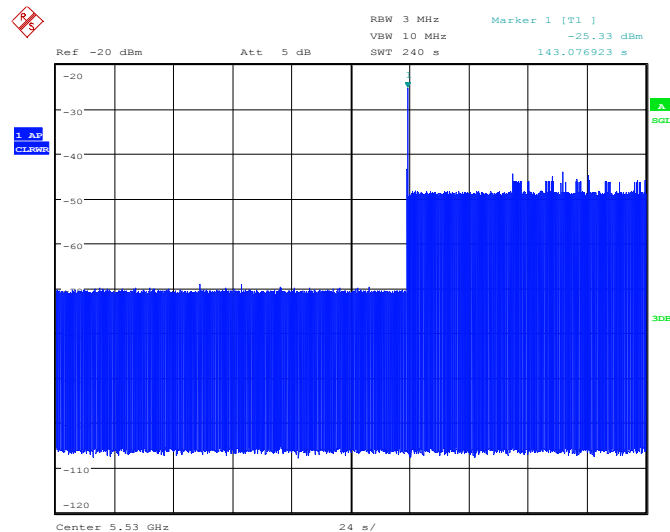
e) Verify that during the 2.5 minute measurement window no UUT transmissions occurred on Chr. The *Channel Availability Check* results will be recorded.

**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:**

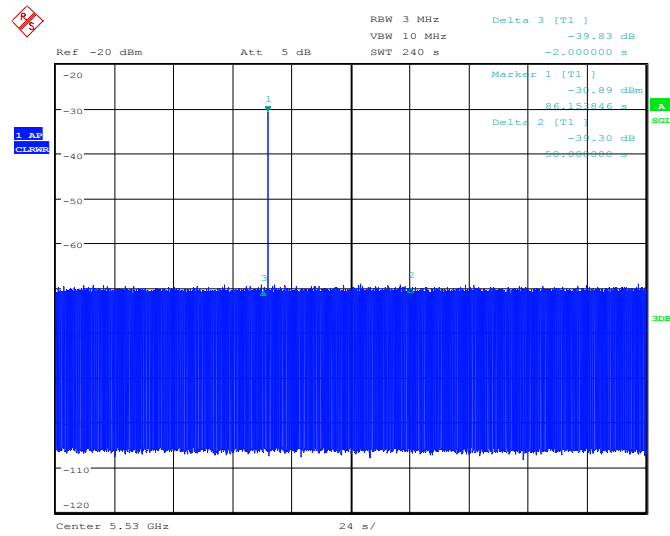
A. Initial Channel Availability Check Time  
802.11ax-HE80



Date: 17.JUL.2021 10:54:37

Note: The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (83.08 sec). Initial beacons/data transmissions are indicated by marker 1 (143.08 sec).

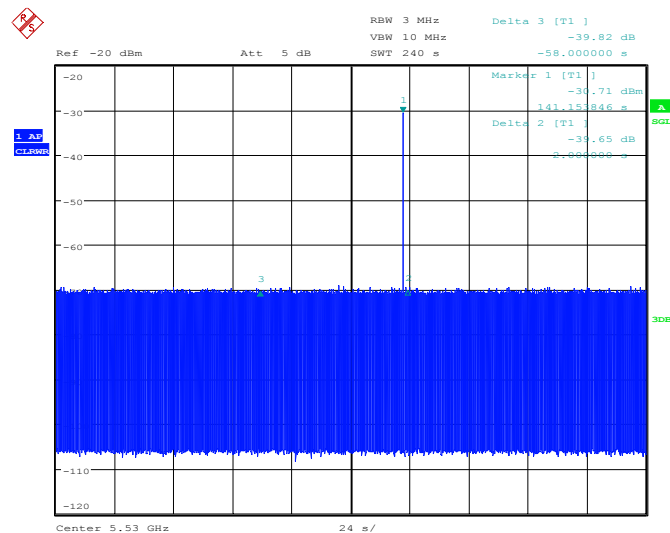
B. Tests with a radar burst at the beginning of the Channel Availability Check Time  
802.11ax-HE80



Date: 17.JUL.2021 11:06:02

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

C. Tests with radar burst at the end of the Channel Availability Check Time  
802.11ax-HE80



Date: 17.JUL.2021 11:14:31

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

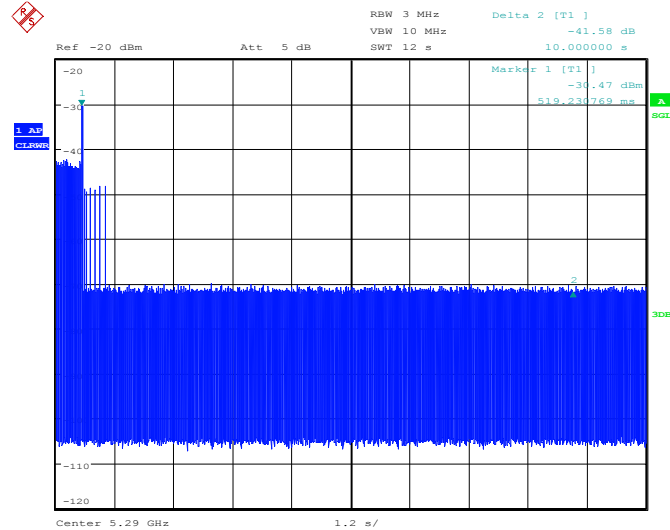
f) When operating as a *Master Device*, monitor the UUT for more than 30 minutes following instant T2 to verify that the UUT does not resume any transmissions on this *Channel*. Perform this test once and record the measurement result.

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:

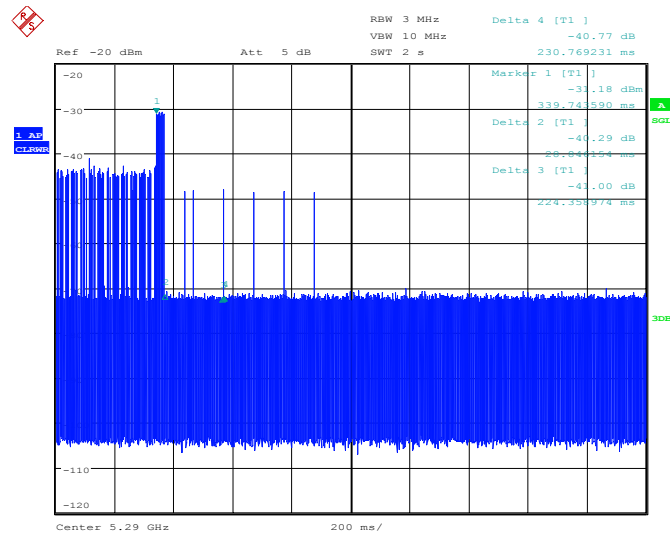
Test Items	Limit
Channel move time	10 s
Channel Closing Transmission Time	200 ms + 60 ms

**Measurement Results:**  
802.11ax-HE80 5290MHz



Date: 16.JUL.2021 16:41:28

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.

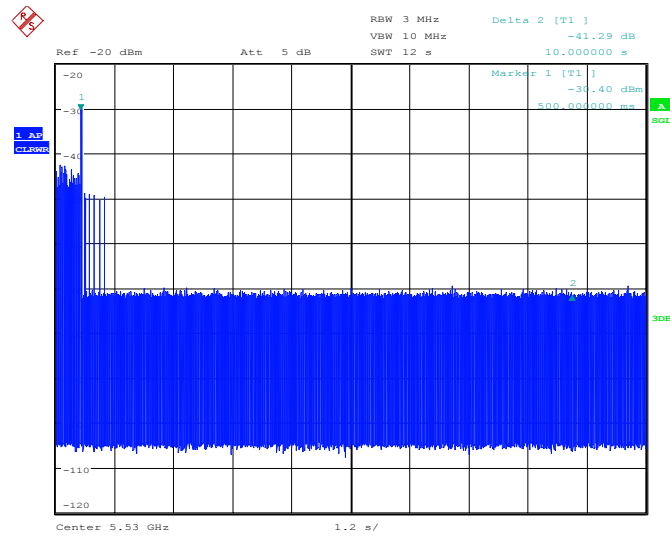


Date: 16.JUL.2021 16:11:52

The closing transmission time is as the figure, and the result  $67.37\text{ms} = \text{Delta}2 + (\text{Delta}4 - \text{Delta}3) * 6$ .

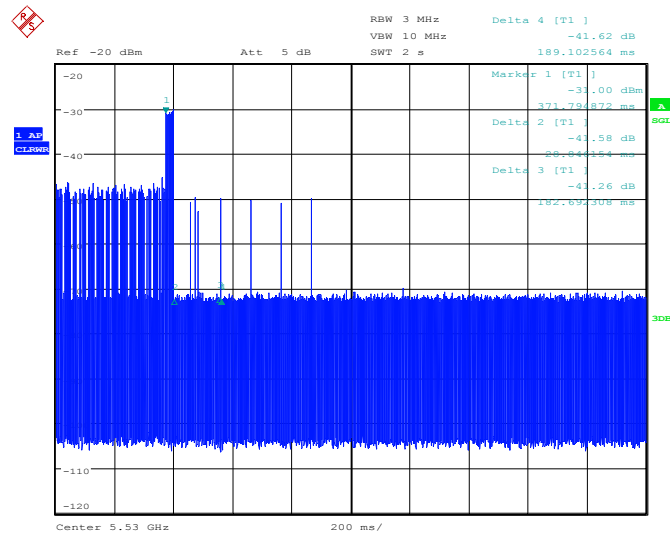
**Conclusion: PASS**

802.11ax-HE 5530MHz



Date: 16.JUL.2021 17:04:15

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: 16.JUL.2021 16:59:02

The closing transmission time is as the figure, and the result  $74.35\text{ms} = \text{Delta}2 + (\text{Delta}4 - \text{Delta}3) * 7$

**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:

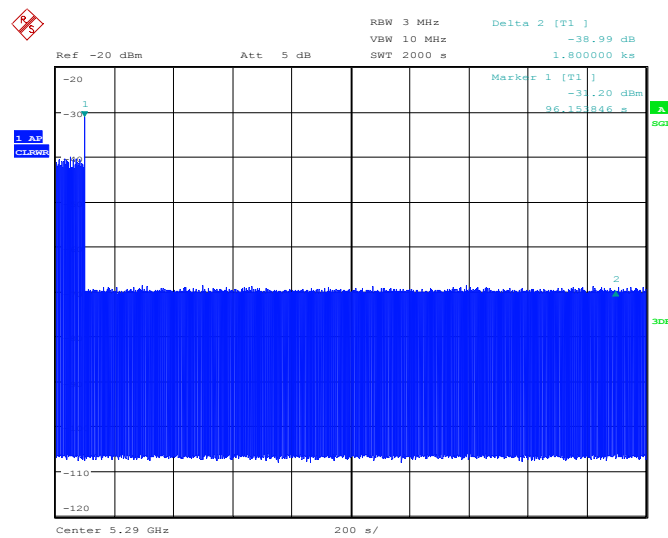
Test Items	Limit
Non-Occupancy Period	> 1800 s



**Measurement Results:**

802.11ax-HE80 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.

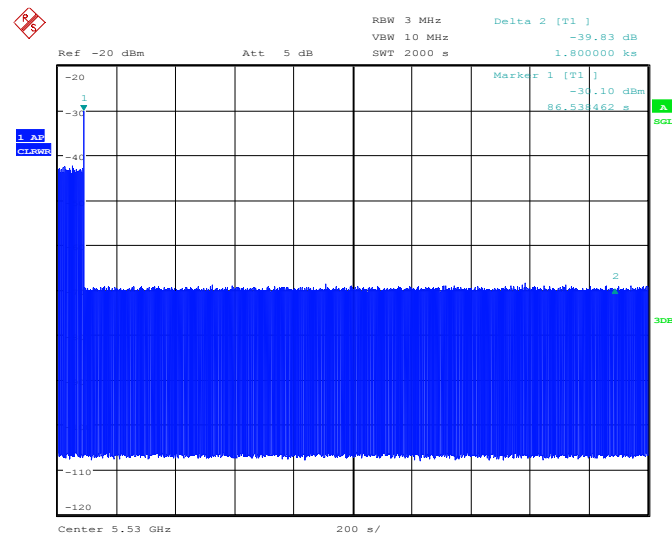


Date: 16.JUL.2021 16:07:08

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).

802.11ax-HE80 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.

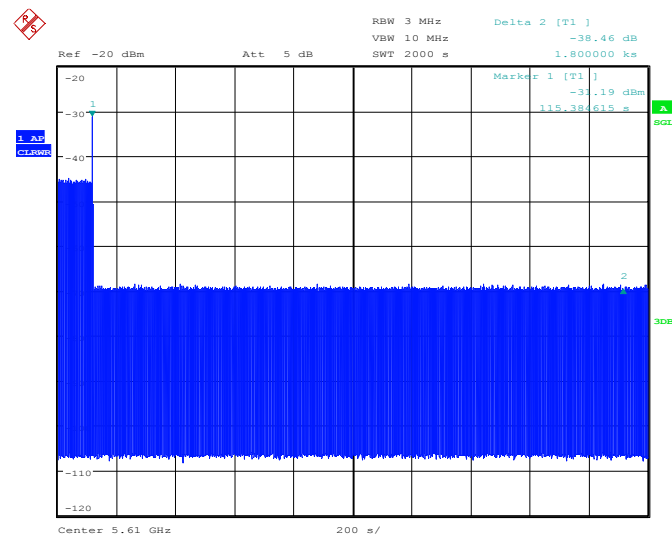


Date: 16.JUL.2021 18:11:46

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).

#### 802.11ax-HE80 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: 16.JUL.2021 19:21:20

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: 802.11ax-HE20 5500MHz											
Radar Frequency (MHz)	DFS Detection trials (1 Detection; 0 No Detection)										Detection Rate (%)
	5490	0	1	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	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth=F <sub>h</sub> -F <sub>l</sub> =5509.5-5490.5=19.0MHz											
the limit=EUT 99% bandwidthx100% =18.89MHz											

The test result: Pass

Test channel: 802.11ax-HE40 5510MHz											
Radar Frequency (MHz)	DFS Detection trials (1 Detection; 0 No Detection)										Detection Rate (%)
5490	1	0	0	0	0	0	1	0	0	0	20%
5490.5-F <sub>1</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%
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%
5529.5-F <sub>h</sub>	1	1	1	1	1	1	1	1	1	1	100%
5530	0	0	0	0	1	0	0	0	0	0	10%

Detection Bandwidth= $F_h - F_l = 5529.5 - 5490.5 = 39\text{MHz}$

the limit=EUT 99% bandwidthx100% =38.07MHz

The test result: Pass

Test channel: 802.11ax-HE80 5530MHz											
Radar Frequency (MHz)	DFS Detection trials (1 Detection; 0 No Detection)										Detection Rate (%)
	5490	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= $\text{EUT } 99\% \text{ bandwidth} \times 100\% = 76.89\text{MHz}$
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 T0 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:

802.11ax-HE20 5500MHz

## Radar Type 1 - Radar Statistical Performance

RADAR TYPE					Rohde & Schwarz K350 Pulse Sequencer DFS
1					
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	5490.4	33	1	1630	1
2	5491.1	28	1	1940	0
3	5491.6	30	1	1791	1
4	5492.2	22	1	2433	0
5	5492.9	57	1	927	1
6	5493.1	77	1	686	1
7	5493.9	63	1	849	1
8	5493.2	64	1	836	1
9	5493.8	91	1	580	1
10	5494.5	23	1	2342	1
11	5495.7	19	1	2870	0
12	5496.2	41	1	1304	0
13	5497.4	18	1	3033	1
14	5498.1	21	1	2618	1
15	5498.9	48	1	1103	1
16	5499.3	27	1	1959	1
17	5500.1	21	1	2538	1
18	5501.2	58	1	916	1
19	5501.9	53	1	1002	1
20	5502.3	24	1	2281	1
21	5502.8	50	1	1064	1
22	5503.6	24	1	2285	1
23	5504.2	25	1	2147	1
24	5505.1	42	1	1268	1
25	5505.7	22	1	2425	1
26	5506.1	44	1	1204	1
27	5506.7	18	1	2938	1
28	5508.2	51	1	1040	1
29	5508.9	19	1	2899	1
30	5509.6	29	1	1823	1
Detection Percentage (%)		86.67%			

## 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	5490.4	26	3.8	193	1
2	5491.1	26	4.2	191	1
3	5491.6	27	1.3	204	1
4	5492.2	28	3.9	152	1
5	5492.9	24	2.6	178	1
6	5493.1	26	3.4	199	1
7	5493.9	28	1.3	206	1
8	5493.2	24	4.8	160	0
9	5493.8	27	2.6	175	1
10	5494.5	25	4.6	160	1
11	5495.7	27	1.6	185	1
12	5496.2	28	4.8	173	1
13	5497.4	28	3	158	1
14	5498.1	26	4.6	214	1
15	5498.9	24	1.1	222	1
16	5499.3	27	3.2	215	1
17	5500.1	26	2.5	167	1
18	5501.2	25	1.1	227	1
19	5501.9	27	2.1	172	1
20	5502.3	24	3	208	1
21	5502.8	23	2.2	227	1
22	5503.6	27	2.8	216	0
23	5504.2	28	2.4	157	0
24	5505.1	27	1.1	184	1
25	5505.7	25	1.4	219	1
26	5506.1	26	2.6	206	1
27	5506.7	24	1.4	184	1
28	5508.2	25	4.9	198	1
29	5508.9	25	1.8	159	1
30	5509.6	25	3.3	174	1
Detection Percentage (%)		90.00%			

## 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	5490.4	18	7.5	343	1
2	5491.1	17	7.5	239	1
3	5491.6	17	8.4	373	1
4	5492.2	16	7.1	362	1
5	5492.9	16	9.8	400	1
6	5493.1	18	7.8	235	1
7	5493.9	18	8.5	413	1
8	5493.2	17	9.9	259	1
9	5493.8	18	9.7	228	0
10	5494.5	18	9.4	455	1
11	5495.7	17	7.3	260	1
12	5496.2	18	6.9	492	1
13	5497.4	16	7.9	466	1
14	5498.1	16	7.7	440	1
15	5498.9	16	9.3	351	0
16	5499.3	18	6.5	382	1
17	5500.1	17	7.2	244	1
18	5501.2	16	7.3	323	1
19	5501.9	17	7.9	237	1
20	5502.3	17	9.5	265	1
21	5502.8	17	8.8	411	1
22	5503.6	16	6.2	370	1
23	5504.2	17	7.7	452	1
24	5505.1	16	9.2	338	1
25	5505.7	17	7.5	212	1
26	5506.1	18	9.1	241	0
27	5506.7	16	6.8	465	1
28	5508.2	17	6.1	401	1
29	5508.9	16	6.4	490	1
30	5509.6	18	9.8	350	1
Detection Percentage (%)		90.00%			

## Radar Type 4 - Radar Statistical Performance

RADAR TYPE						Rohde & Schwarz K350 Pulse Sequencer DFS
4						
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)	
1	5490.4	13	13.2	346	1	
2	5491.1	14	12.2	295	1	
3	5491.6	14	18.8	424	1	
4	5492.2	12	14.1	272	0	
5	5492.9	14	13.8	256	1	
6	5493.1	12	19.7	366	1	
7	5493.9	13	11.1	261	1	
8	5493.2	15	15.9	406	1	
9	5493.8	15	13.4	452	1	
10	5494.5	12	16.3	444	1	
11	5495.7	13	19.8	395	1	
12	5496.2	15	18.5	308	1	
13	5497.4	14	14.6	422	0	
14	5498.1	14	12	367	1	
15	5498.9	13	15.4	335	1	
16	5499.3	13	13.6	345	0	
17	5500.1	13	15.7	476	1	
18	5501.2	14	14.7	365	1	
19	5501.9	14	15.8	302	1	
20	5502.3	14	15.1	243	1	
21	5502.8	14	19.2	320	1	
22	5503.6	15	17.8	341	1	
23	5504.2	14	11.9	304	1	
24	5505.1	14	17.8	293	0	
25	5505.7	15	16.7	211	1	
26	5506.1	14	18.5	327	1	
27	5506.7	16	18.6	269	1	
28	5508.2	16	12	287	1	
29	5508.9	15	17.6	379	1	
30	5509.6	13	18.2	273	1	
Detection Percentage (%)		86.67%				



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

$$\frac{p1+p2+p3+p4}{4} = (86.67\%+90.00\%+90.00\%+86.67\%)/4 = 88.34\% (>80\%).$$

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	5490.4	1	16	5499.3	1
2	5491.1	1	17	5500.1	1
3	5491.6	0	18	5501.2	1
4	5492.2	1	19	5501.9	1
5	5492.9	1	20	5502.3	1
6	5493.1	1	21	5502.8	0
7	5493.9	1	22	5503.6	1
8	5493.2	1	23	5504.2	1
9	5493.8	1	24	5505.1	1
10	5494.5	1	25	5505.7	1
11	5495.7	1	26	5506.1	1
12	5496.2	0	27	5506.7	1
13	5497.4	1	28	5508.2	1
14	5498.1	1	29	5508.9	1
15	5498.9	1	30	5509.6	1
Detection Percentage (%)					90.00%

<b>Trial Number :</b>						
1						
<b>Bursts in Trial:</b>						
14						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	59.5	7	1120		606.109



2	2	77.9	7	1196		399.557
3	3	65	7	1984	1154	161.734
4	3	53.2	7	1624	1738	546.371
5	3	85.9	7	1502	1190	275.139
6	3	52.4	7	1524	1584	38.596
7	3	81.1	7	1221	1142	63.983
8	2	79.4	7	1375		811.77
9	1	84.9	7			777.977
10	1	59.9	7			94.824
11	1	85.7	7			153.251
12	1	55.7	7			643.729
13	3	97.8	7	1657	1772	781.086
14	2	58.3	7	1877		286.243

<b>TYPE 5</b>	Rohde & Schwarz
<b>PARAMETER</b>	Pulse Sequencer
<b>SHEET</b>	

**Trial Number : 2**

**Bursts in Trial: 20**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	99.3	6	1375		147.942
2	1	67.6	6			17.97
3	3	61.6	6	1729	1363	191.97
4	2	62.1	6	1761		64.43
5	3	54.3	6	1996	1057	537.82
6	2	66.7	6	1917		333.16
7	2	76.7	6	1989		264.16
8	2	68.2	6	1912		347.01
9	2	63.4	6	1732		188.12
10	2	71.3	6	1174		269.08
11	2	53.9	6	1402		284.92
12	1	97.3	6			287.43
13	2	80.3	6	1480		294.71
14	2	68.7	6	1052		252.48
15	2	56.2	6	1811		287.88

16	2	97.5	6	1773		79.66
17	1	92	6			233.54
18	3	96.6	6	1828	1479	162.8
19	1	87.4	6			549.8
20	3	60.3	6	1589	1807	346.8

<b>TYPE 5</b>						
<b>PARAMETER</b>						Rohde & Schwarz
						Pulse Sequencer
<b>SHEET</b>						
<b>Trial Number : 3</b>						
<b>Bursts in Trial: 9</b>						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	80.3	12			1190.38
2	2	76.1	12	1084		1256.627
3	3	65.9	12	1782	1119	818.023
4	2	64.2	12	1888		584.4
5	2	93.7	12	1745		1324.537
6	2	90.9	12	1651		244.773
7	2	88.8	12	1319		1266.78
8	1	93.7	12			348.507
9	2	60.1	12	1801		242.033

<b>TYPE 5</b>						
<b>PARAMETER</b>						Rohde & Schwarz
						Pulse Sequencer
<b>SHEET</b>						
<b>Trial Number : 4</b>						
<b>Bursts in Trial: 9</b>						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)

1	1	89.9	18			1176.61
2	3	79.6	18	1418	1918	91.297
3	1	68.6	18			784.983
4	2	84	18	1414		975.81
5	3	98.7	18	1386	1711	1198.377
6	2	57.4	18	1732		737.983
7	1	91.8	18			437.43
8	2	56.7	18	1626		880.067
9	3	67.9	18	1292	1636	1275.033

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
 Pulse Sequencer

**Trial Number : 5**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	89.3	7	1622		305.636
2	3	64.8	7	1580	1277	501.29
3	3	97.5	7	1839	1364	80.64
4	3	86	7	1038	1429	672.41
5	2	74.9	7	1213		3.73
6	2	94.7	7	1185		215.87
7	1	85	7			793.14
8	3	70.1	7	1228	1583	126.03
9	1	77.9	7			695.91
10	1	55.7	7			501.85
11	1	92.5	7			732.5
12	1	74.1	7			235.38
13	2	51.5	7	1007		132.37
14	2	88.8	7	1885		68.2
15	2	56.5	7	1228		115.7

**TYPE 5**

Rohde & Schwarz  
 Pulse Sequencer

PARAMETER SHEET						
Trial Number : 6						
Bursts in Trial: 15						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	85.4	19	1546		316.65
2	3	63	19	1315	1573	431.6
3	3	82.7	19	1216	1101	666.08
4	2	70.6	19	1357		166.98
5	2	50.1	19	1399		161.99
6	3	94.4	19	1552	1263	343.44
7	3	82.9	19	1125	1521	718.51
8	1	87	19			493.76
9	1	51.1	19			350.89
10	1	79.1	19			53.71
11	3	97.9	19	1619	1487	151.35
12	2	70.3	19	1437		94.32
13	2	71.6	19	1851		136.19
14	2	66.3	19	1069		324.6
15	2	97.2	19	1082		496.1

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 7						
Bursts in Trial: 15						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	68.7	5	1160	1995	253.327
2	1	96.2	5			614.91

3	3	88.3	5	1095	1922	234.42
4	2	73.9	5	1822		769.36
5	1	76.4	5			484.92
6	1	99	5			225.82
7	2	65.7	5	1021		314.65
8	3	82.6	5	1963	1345	224.11
9	2	75.9	5	1301		80.03
10	3	95.3	5	1273	1763	71.22
11	2	68.6	5	1923		489.86
12	3	89	5	1308	1019	54.83
13	2	51.7	5	1183		780.4
14	3	66.7	5	1570	1881	495.4
15	3	74.6	5	1776	1709	706.6

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 8**

**Bursts in Trial: 14**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	91.3	17			140.347
2	2	67.7	17	1185		664.797
3	2	54.7	17	1614		709.404
4	1	94.3	17			558.031
5	2	76.1	17	1626		524.649
6	2	94.7	17	1249		61.916
7	2	51.6	17	1949		672.913
8	3	72.9	17	1232	1808	444.5
9	2	51.1	17	1598		406.057
10	1	80.7	17			282.554
11	3	89.1	17	1108	1871	807.041
12	2	55.3	17	1555		213.539
13	1	69.1	17			755.886
14	3	54.6	17	1889	1904	437.543

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 9**

**Bursts in Trial: 13**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	88.4	18	1903	1705	167.846
2	3	68	18	1644	1476	178.163
3	2	88.9	18	1424		891.246
4	3	95.2	18	1794	1531	846.109
5	1	58.9	18			28.732
6	1	93.6	18			55.895
7	2	93.3	18	1796		469.318
8	3	99.3	18	1230	1656	431.082
9	2	67.3	18	1141		856.875
10	1	68.3	18			440.188
11	2	72.6	18	1524		626.871
12	1	56.2	18			115.654
13	2	85.4	18	1967		868.877

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 10**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	82.4	17	1653	1829	556.486
2	1	50.8	17			574.558

3	1	88	17			508.765
4	1	92.7	17			30.823
5	3	75.1	17	1479	1990	370.761
6	2	55.1	17	1501		288.868
7	2	74.6	17	1849		104.626
8	2	76.2	17	1160		489.194
9	2	64	17	1739		67.821
10	2	91.7	17	1870		583.369
11	2	70.1	17	1368		666.606
12	1	91.9	17			677.214
13	2	50.3	17	1912		608.232
14	2	73.7	17	1671		244.859
15	2	72.3	17	1647		135.547
16	3	86.5	17	1801	1768	196.265
17	3	56.7	17	1835	1537	283.382

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 11						
Bursts in Trial: 16						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	57.4	8			429.722
2	1	69.6	8			232.059
3	1	67.7	8			330.35
4	3	56.3	8	1565	1319	378.47
5	2	74.3	8	1674		101.69
6	2	95	8	1521		341.2
7	3	52	8	1664	1043	204.82
8	3	90.1	8	1721	1741	85.83
9	2	53.9	8	1480		560.89
10	1	62	8			261.09
11	2	88.6	8	1411		234.79
12	2	59.3	8	1979		369.8
13	3	94.9	8	1250	1718	621.42

14	3	80.6	8	1691	1320	265.5
15	3	98.3	8	1986	1473	512.4
16	2	62.6	8	1845		580.1

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 12						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	78.1	11			901.877
2	2	68.3	11	1377		470.551
3	1	54.2	11			659.242
4	1	56.2	11			28.923
5	2	54.6	11	1113		122.684
6	1	84.1	11			647.015
7	2	95.3	11	1506		526.885
8	3	59.7	11	1041	1147	806.136
9	3	51.6	11	1458	1253	315.147
10	2	55.6	11	1094		954.918
11	2	98.7	11	1504		136.409

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 13						
Bursts in Trial: 14						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)



1	2	99.4	15	1142		129.722
2	2	84.7	15	1450		119.426
3	3	89.2	15	1462	1828	98.574
4	2	61.4	15	1048		308.021
5	2	89.9	15	1546		418.999
6	3	91.7	15	1280	1460	414.116
7	2	87.2	15	1803		489.033
8	3	70.3	15	1736	1092	65.75
9	1	57.4	15			617.307
10	1	78.7	15			618.644
11	2	59	15	1120		490.791
12	2	85.8	15	1498		676.629
13	2	63.1	15	1791		581.886
14	3	97.6	15	1617	1781	701.043

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 14						
Bursts in Trial: 18						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	80.8	16	1803		559.057
2	1	54.9	16			238.04
3	2	73.1	16	1683		213.377
4	2	88.3	16	1443		321.52
5	3	97	16	1080	1835	264.653
6	2	90.7	16	1578		508.897
7	2	90.5	16	1197		241.22
8	3	51.4	16	1936	1621	486.803
9	1	50	16			424.307
10	2	98.7	16	1401		657.49
11	3	74	16	1765	1240	189.203
12	3	79.3	16	1370	1300	138.417
13	2	55	16	1271		244.66
14	3	90.3	16	1898	1538	587.643

15	3	52.2	16	1199	1230	334.637
16	2	77	16	1617		65
17	1	84.8	16			252.233
18	3	80.9	16	1862	1383	632.567

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 15						
Bursts in Trial: 13						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	66.6	11			247.287
2	2	84	11	1367		329.783
3	1	61.3	11			77.986
4	3	54.3	11	1214	1094	576.709
5	2	51.4	11	1298		339.692
6	2	60.2	11	1028		679.435
7	2	96.1	11	1679		526.428
8	1	99.5	11			710.342
9	2	98.5	11	1587		516.595
10	1	57.6	11			704.788
11	1	58.4	11			474.561
12	1	95.3	11			412.154
13	3	79.8	11	1298	1191	674.977

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 16						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width	Chirp Width	Pulse 1-to-2 PRI	Pulse 2-to-3	Start Location

		( $\mu$ sec)	(MHz)	( $\mu$ sec)	PRI ( $\mu$ sec)	Within Interval (msec)
1	3	99.9	14	1230	1531	420.536
2	1	77.5	14			245.16
3	1	82.6	14			255.7
4	3	81.2	14	1820	1146	881.06
5	2	58.2	14	1423		425.76
6	1	87	14			19.46
7	3	92.7	14	1430	1627	271.2
8	3	90.5	14	1803	1278	129.96
9	3	83.1	14	1036	1205	705.03
10	3	65	14	1911	1193	587.85
11	3	50.8	14	1422	1987	712.8
12	3	59.3	14	1420	1050	281.2

TYPE 5						
PARAMETER						Rohde & Schwarz
SHEET						Pulse Sequencer
Trial Number : 17						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width ( $\mu$ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI ( $\mu$ sec)	Pulse 2-to-3 PRI ( $\mu$ sec)	Start Location Within Interval (msec)
1	2	84.1	11	1150		252.312
2	1	99	11			391.89
3	3	84.4	11	1366	1880	815.54
4	1	58.6	11			30.55
5	1	61.3	11			964.48
6	1	74.1	11			38.69
7	2	59.3	11	1831		291.65
8	3	65.3	11	1430	1720	733.24
9	2	77.8	11	1475		102.46
10	1	97.8	11			888.17
11	1	74	11			325.4
12	2	93.4	11	1368		374.5

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 18						
Bursts in Trial: 10						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	61.7	11	1828		178.063
2	3	64.9	11	1248	1453	1062
3	2	78.2	11	1143		1048.04
4	1	86.9	11			125.03
5	2	57.5	11	1899		374.99
6	1	51.8	11			743.66
7	2	77	11	1514		559.64
8	3	79.3	11	1212	1616	771.32
9	3	65.4	11	1071	1528	755.3
10	2	62.3	11	1069		966

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 19						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	82	6	1866	1684	803.179
2	2	85.9	6	1383		677.551
3	3	78.9	6	1918	1964	230.402
4	3	77.4	6	1357	1939	539.483
5	2	51.8	6	1257		308.414

6	1	52.8	6			127.845
7	1	73.2	6			63.875
8	2	77.8	6	1406		43.886
9	3	99.2	6	1805	1608	413.367
10	1	71.4	6			440.318
11	3	57.3	6	1281	1995	130.509

**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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	65	10			98.377
2	2	96.9	10	1727		405.56
3	2	59.6	10	1061		199.21
4	3	56.6	10	1154	1028	117.34
5	2	66.7	10	1059		233.55
6	1	59.4	10			423.62
7	3	66.4	10	1402	1520	527.24
8	2	64.1	10	1448		272.78
9	2	85	10	1685		250.21
10	2	78.7	10	1450		61.59
11	3	97.4	10	1902	1514	364.36
12	2	74.3	10	1313		516.55
13	3	51.7	10	1394	1968	78.96
14	2	54.7	10	1361		89
15	2	59.8	10	1476		272.85
16	3	84.1	10	1538	1893	426.73
17	2	85.2	10	1852		114.23
18	3	53	10	1085	1444	421.2
19	3	52.5	10	1658	1330	514.5
20	2	62.9	10	1018		13.4

**TYPE 5**

**PARAMETER**

**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 21**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	94.3	6			69.576
2	1	92.7	6			577.321
3	2	95	6	1454		447.142
4	2	50.6	6	1136		477.093
5	2	52.9	6	1168		184.264
6	2	61.9	6	1067		254.785
7	2	77.7	6	1066		616.416
8	2	88	6	1591		221.167
9	2	75	6	1595		121.228
10	1	60.2	6			578.709
11	1	74.7	6			535.751
12	1	56.2	6			141.892
13	1	71.4	6			249.743
14	2	64.9	6	1727		242.424
15	3	91	6	1746	1493	612.375
16	2	89.8	6	1788		26.846
17	2	89.4	6	1216		547.837
18	3	70.1	6	1835	1838	237.158
19	1	93.8	6			321.979

**TYPE 5**

**PARAMETER**

**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 22**

**Bursts in Trial: 10**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	90.2	6	1342		790.875
2	2	98.3	6	1496		744.49
3	2	63.4	6	1975		991.57
4	2	69.5	6	1137		577.55
5	2	82.4	6	1558		1123.06
6	2	95.9	6	1896		87.11
7	2	74.2	6	1094		595.39
8	3	73.6	6	1457	1094	329.45
9	2	67.3	6	1921		1135.9
10	2	78.5	6	1514		550.5

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 23						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	57.4	5	1887		701.743
2	2	61.4	5	1924		895.861
3	1	70.5	5			270.802
4	1	68.5	5			1061.993
5	3	61.1	5	1006	1372	763.644
6	1	97.6	5			287.805
7	1	98	5			315.115
8	3	57.3	5	1474	1006	175.906
9	2	99.7	5	1024		936.337
10	3	61.2	5	1418	1502	741.718
11	3	65.8	5	1123	1311	886.309

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 24**

**Bursts in Trial: 14**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	60.1	18	1974		714.127
2	1	80.3	18			666.177
3	2	66	18	1352		744.044
4	1	96.9	18			257.071
5	3	85.3	18	1228	1403	578.639
6	2	94.2	18	1964		559.426
7	1	93.1	18			732.693
8	3	63.3	18	1859	1164	796.34
9	3	63.9	18	1783	1362	409.227
10	3	90.4	18	1371	1953	107.904
11	3	94.6	18	1415	1059	699.401
12	2	61.5	18	1506		637.829
13	1	93.8	18			402.286
14	2	93.7	18	1913		104.243

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 25**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	87.8	15	1688	1656	331.776



2	2	84.8	15	1791		264.65
3	1	54.8	15			687.04
4	3	77.6	15	1462	1865	294.92
5	1	92.3	15			556.91
6	2	70.6	15	1010		27.42
7	2	60.4	15	1059		239.29
8	2	85	15	1253		679.55
9	2	80.3	15	1172		536.65
10	1	68.8	15			364.5
11	2	95.2	15	1087		292.67
12	2	78.4	15	1064		715.62
13	2	98.8	15	1539		456.4
14	2	70.3	15	1261		402.9
15	1	94.6	15			630.2

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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	57.5	6			71.215
2	3	86.8	6	1867	1600	776.147
3	2	55.4	6	1371		309.064
4	2	93.5	6	1083		408.961
5	3	78	6	1643	1872	251.399
6	3	80.8	6	1851	1169	327.416
7	2	73.2	6	1916		505.833
8	1	78.9	6			152.16
9	3	70.4	6	1896	1251	762.037
10	1	76.3	6			124.374
11	2	52.8	6	1516		196.151
12	2	65.7	6	1763		374.039
13	1	89.4	6			820.886
14	2	70.1	6	1729		651.543

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 27						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	75.6	14	1916	1838	580.677
2	2	59.6	14	1934		565.56
3	2	53	14	1954		808.61
4	1	67.5	14			731.79
5	1	52.2	14			560.9
6	2	65.4	14	1395		633.9
7	2	66.1	14	1989		103.77
8	2	88.3	14	1955		587.56
9	1	92.1	14			238.19
10	3	84.5	14	1369	1634	100.86
11	2	77.2	14	1633		883.4
12	2	98.5	14	1069		745.9

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 28						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	70.6	13	1240	1442	306.716
2	3	62.7	13	1704	1980	872.521
3	3	50.4	13	1905	1985	803.812

4	2	75.4	13	1359		717.283
5	2	86.1	13	1300		461.474
6	3	98.1	13	1479	1216	846.335
7	2	58	13	1250		639.505
8	3	81	13	1798	1877	259.656
9	1	63.5	13			548.417
10	2	61.4	13	1226		636.718
11	2	70.8	13	1574		318.909

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 29**

**Bursts in Trial: 11**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	60.9	16			208.419
2	1	73.6	16			510.781
3	3	63.3	16	1953	1503	30.482
4	3	91.8	16	1544	1017	186.623
5	2	95.5	16	1471		469.504
6	3	92.9	16	1225	1240	914.095
7	1	70.6	16			1004.705
8	1	86.7	16			475.616
9	3	51.6	16	1589	1114	223.147
10	2	96.7	16	1697		801.918
11	3	75.8	16	1809	1459	37.309

**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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	89	12	1220		176.501
2	2	64.4	12	1630		593.373
3	2	58.5	12	1933		792.326
4	2	59.5	12	1230		387.809
5	2	77.9	12	1641		468.542
6	3	51.9	12	1875	1774	120.305
7	2	88.9	12	1638		0.918
8	1	88.5	12			711.642
9	1	98.2	12			258.165
10	2	87.1	12	1461		33.368
11	2	79.1	12	1269		710.451
12	3	56.4	12	1002	1115	857.254
13	2	63.8	12	1094		317.777

## 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	5490.4	1	16	5499.3	1
2	5491.1	1	17	5500.1	1
3	5491.6	1	18	5501.2	1
4	5492.2	0	19	5501.9	1
5	5492.9	1	20	5502.3	1
6	5493.1	1	21	5502.8	1
7	5493.9	1	22	5503.6	1
8	5493.2	0	23	5504.2	1
9	5493.8	1	24	5505.1	1
10	5494.5	1	25	5505.7	1
11	5495.7	1	26	5506.1	1
12	5496.2	1	27	5506.7	1

13	5497.4	1	28	5508.2	1
14	5498.1	1	29	5508.9	1
15	5498.9	1	30	5509.6	1
Detection Percentage (%)					93.33%

Trial Number : 1			Trial Number : 2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5490	42	13	5493	39
25	5491	75	23	5495	69
45	5492	135	34	5496	102
87	5494	261	64	5497	192
/	/	/	87	5498	261
/	/	/	57	5501	171
/	/	/	98	5502	294

Trial Number : 3			Trial Number : 4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5501	39	8	5505	24
45	5502	135	23	5491	69
67	5503	201	66	5494	198
88	5506	264	65	5492	195
/	/	/	53	5493	159
/	/	/	43	5496	129
/	/	/	85	5497	255
/	/	/	55	5499	165

Trial Number : 5			Trial Number : 6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
41	5490	123	42	5493	126
67	5492	201	35	5501	105
45	5494	135	58	5505	174
68	5496	204	78	5497	234
25	5498	75	57	5498	171
54	5500	162	40	5496	120
/	/	/	33	5506	99

Trial Number : 7			Trial Number : 8		
------------------	--	--	------------------	--	--

Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
51	5500	153	57	5501	171
65	5506	195	75	5503	225
56	5504	168	36	5493	108
67	5492	201	55	5491	165
58	5495	174	43	5505	129
63	5498	189	89	5496	267
/	/	/	58	5507	174

Trial Number : 9			Trial Number : 10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
36	5493	108	35	5491	105
24	5494	72	27	5490	81
26	5495	78	26	5492	78
30	5498	90	65	5496	195
/	/	/	34	5497	102
/	/	/	22	5501	66
/	/	/	58	5502	174

Trial Number : 11			Trial Number : 12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
36	5501	108	46	5492	138
46	5493	138	67	5508	201
11	5491	33	32	5509	96
34	5501	102	42	5496	126
/	/	/	35	5495	105
/	/	/	22	5504	66

Trial Number : 13			Trial Number : 14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5492	93	34	5491	102
56	5493	168	67	5504	201
88	5495	264	56	5505	168
67	5503	201	59	5494	177
/	/	/	68	5497	204
/	/	/	77	5502	231
/	/	/	39	5509	117

Trial Number : 15			Trial Number : 16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5496	63	35	5491	105
13	5491	39	54	5505	162
43	5503	129	88	5509	264
33	5506	99	66	5498	198
/	/	/	46	5499	138
/	/	/	68	5500	204
/	/	/	44	5501	132

Trial Number : 17			Trial Number : 18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
38	5501	114	33	5503	99
45	5502	135	25	5492	75
56	5505	168	36	5493	108
78	5504	234	89	5495	267
/	/	/	78	5499	234
/	/	/	57	5498	171

Trial Number : 19			Trial Number : 20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
55	5490	165	18	5500	54
56	5492	168	35	5501	105
97	5494	291	21	5505	63
27	5497	81	97	5507	291
/	/	/	34	5499	102
/	/	/	65	5498	195

Trial Number : 21			Trial Number : 22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
36	5500	108	18	5494	54
47	5502	141	26	5497	78
53	5491	159	68	5501	204
38	5503	114	89	5499	267
/	/	/	32	5503	96
/	/	/	57	5506	171

/	/	/	35	5508	105
---	---	---	----	------	-----

Trial Number : 23			Trial Number : 24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5492	42	75	5506	225
24	5495	72	25	5508	75
43	5496	129	78	5501	234
65	5499	195	36	5504	108
/	/	/	88	5507	264
/	/	/	37	5508	111

Trial Number : 25			Trial Number : 26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
26	5490	78	53	5491	159
11	5498	33	35	5503	105
22	5507	66	33	5508	99
35	5495	105	36	5502	108
/	/	/	56	5509	168
/	/	/	64	5506	192
/	/	/	37	5499	111

Trial Number : 27			Trial Number : 28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5491	36	27	5497	81
18	5495	54	57	5499	171
28	5502	84	46	5500	138
36	5504	108	27	5490	81
/	/	/	46	5492	138
/	/	/	68	5505	204

Trial Number : 29			Trial Number : 30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5501	63	35	5502	105
25	5492	75	65	5507	195
46	5495	138	52	5494	156
75	5498	225	89	5491	267
/	/	/	56	5501	168



/	/	/	43	5506	129
---	---	---	----	------	-----

802.11ax-HE40-5510MHz

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	5491.1	18	1	3000	1
2	5492.3	26	1	2056	1
3	5494.4	29	1	1863	1
4	5495.9	18	1	3005	1
5	5496.4	26	1	2092	0
6	5497.8	37	1	1426	1
7	5498.6	22	1	2412	1
8	5499.8	102	1	520	1
9	5502.7	26	1	2042	1
10	5503.2	23	1	2304	1
11	5504.3	77	1	692	1
12	5505.9	26	1	2090	0
13	5506.2	27	1	1968	1
14	5508.5	46	1	1171	1
15	5509.6	44	1	1202	1
16	5511.2	47	1	1135	1
17	5513.2	21	1	2572	1
18	5514.5	24	1	2215	1
19	5515.5	24	1	2213	1
20	5516.8	28	1	1942	1
21	5517.5	19	1	2848	1
22	5518.4	62	1	855	1
23	5519.9	62	1	851	0
24	5521.3	20	1	2679	1
25	5522.7	57	1	938	1
26	5524.6	91	1	584	1
27	5526.4	20	1	2681	1
28	5527.4	28	1	1918	1
29	5528.3	29	1	1882	1
30	5529.8	18	1	3065	1

Detection Percentage (%)	90.00%
--------------------------	--------

## 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	5491.1	28	2.6	184	1
2	5492.3	27	2.8	159	1
3	5494.4	27	4.7	190	1
4	5495.9	24	3.2	200	1
5	5496.4	24	2.7	180	1
6	5497.8	25	4.6	203	1
7	5498.6	24	4.4	226	1
8	5499.8	27	1	217	0
9	5502.7	27	1.1	183	1
10	5503.2	24	2.7	151	1
11	5504.3	28	2.7	172	1
12	5505.9	26	3.4	163	1
13	5506.2	29	4.5	171	1
14	5508.5	25	1.1	151	1
15	5509.6	27	3.3	191	1
16	5511.2	27	2.6	216	1
17	5513.2	28	1.7	226	0
18	5514.5	28	3.3	178	1
19	5515.5	28	4.8	185	1
20	5516.8	26	4.8	173	1
21	5517.5	24	2.4	169	1
22	5518.4	26	2.5	177	1
23	5519.9	23	3.5	159	1
24	5521.3	28	4.6	161	1
25	5522.7	25	1.8	195	1
26	5524.6	25	1.8	218	1
27	5526.4	26	4	224	1
28	5527.4	28	3	175	1
29	5528.3	24	3.4	182	0

30	5529.8	28	4.3	221	1
Detection Percentage (%)	90.00%				

## 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	5491.1	16	7.1	336	1
2	5492.3	17	9.8	234	1
3	5494.4	17	8.3	422	1
4	5495.9	17	9.2	430	0
5	5496.4	17	8.4	356	1
6	5497.8	17	8.8	244	1
7	5498.6	17	6.8	440	1
8	5499.8	18	9.2	326	1
9	5502.7	17	6.8	242	1
10	5503.2	16	7.3	233	1
11	5504.3	16	9.3	455	1
12	5505.9	17	8	285	0
13	5506.2	17	9.7	423	1
14	5508.5	18	9.8	272	1
15	5509.6	17	6.8	370	1
16	5511.2	17	7.2	224	1
17	5513.2	17	7.4	258	1
18	5514.5	16	8.9	468	0
19	5515.5	18	9.6	359	1
20	5516.8	17	7.6	487	1
21	5517.5	17	7.3	272	0
22	5518.4	18	9.5	304	1
23	5519.9	17	6.3	234	1
24	5521.3	17	7.7	264	1
25	5522.7	17	8.9	398	1
26	5524.6	16	6.1	208	1
27	5526.4	16	7.8	429	1
28	5527.4	18	6.6	316	1

29	5528.3	16	9.4	206	1
30	5529.8	17	7.7	301	1
Detection Percentage (%)	86.67%				

## Radar Type 4 - Radar Statistical Performance

RADAR TYPE						Rohde & Schwarz K350 Pulse Sequencer DFS
4						
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)	
1	5491.1	12	11.2	348	1	
2	5492.3	15	12.1	400	1	
3	5494.4	14	13.1	299	0	
4	5495.9	15	19.6	494	1	
5	5496.4	14	18.8	405	1	
6	5497.8	15	11.6	381	1	
7	5498.6	13	11.1	233	1	
8	5499.8	15	11.5	474	1	
9	5502.7	16	14.1	401	1	
10	5503.2	14	14.8	282	0	
11	5504.3	13	15.8	284	1	
12	5505.9	15	12.1	312	1	
13	5506.2	15	14.5	267	1	
14	5508.5	13	13.2	415	1	
15	5509.6	12	13.2	491	1	
16	5511.2	13	14.6	470	1	
17	5513.2	15	11	430	1	
18	5514.5	15	13.6	233	1	
19	5515.5	14	18.5	370	1	
20	5516.8	13	14.5	408	0	
21	5517.5	14	13.1	232	0	
22	5518.4	14	12.7	382	1	
23	5519.9	13	12.1	493	1	
24	5521.3	14	12.9	268	1	
25	5522.7	16	13.5	403	1	
26	5524.6	14	18.7	202	1	
27	5526.4	14	18.7	435	1	

28	5527.4	14	13.6	439	1
29	5528.3	15	13.7	207	1
30	5529.8	16	14.8	317	1
Detection Percentage (%)		86.67%			

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

$$\frac{p1+p2+p3+p4}{4} = (90.00\%+90.00\%+86.67\%+86.67\%)/4 = 88.34\% (>80\%).$$

#### 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	5491.1	1	16	5511.2	1
2	5492.3	1	17	5513.2	1
3	5494.4	1	18	5514.5	1
4	5495.9	1	19	5515.5	1
5	5496.4	1	20	5516.8	1
6	5497.8	1	21	5517.5	1
7	5498.6	1	22	5518.4	1
8	5499.8	1	23	5519.9	0
9	5502.7	1	24	5521.3	1
10	5503.2	1	25	5522.7	1
11	5504.3	0	26	5524.6	1
12	5505.9	1	27	5526.4	1
13	5506.2	1	28	5527.4	1
14	5508.5	1	29	5528.3	1
15	5509.6	1	30	5529.8	1
Detection Percentage (%)					93.33%

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 1**

**Bursts in Trial: 8**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	96.2	19			951.805
2	2	74	19	1837		1174.73
3	2	89.2	19	1582		674.27
4	2	97.4	19	1646		1314.09
5	3	83.2	19	1780	1384	266.27
6	3	74.3	19	1715	1208	487.21
7	2	78.5	19	1142		625.78
8	1	54.4	19			870.8

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 2**

**Bursts in Trial: 12**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	96.7	17	1520		369.18
2	2	65	17	1300		626.41
3	2	71.6	17	1936		516.59
4	1	72.6	17			746.02
5	2	97.5	17	1833		216.97
6	1	56.5	17			508.66
7	2	96.7	17	1206		720.29

8	3	56.5	17	1893	1330	188.55
9	2	86.8	17	1112		373.57
10	1	70.2	17			161.83
11	3	50.9	17	1626	1164	260.2
12	2	86.6	17	1935		442.6

<b>TYPE 5</b>						
<b>PARAMETER</b>						Rohde & Schwarz
						Pulse Sequencer
<b>SHEET</b>						
<b>Trial Number : 3</b>						
<b>Bursts in Trial: 9</b>						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	57.8	7			184.126
2	1	68.1	7			459.147
3	3	90.1	7	1431	1397	1326.623
4	2	92.1	7	1832		316.28
5	2	80.2	7	1661		464.157
6	1	69.9	7			381.223
7	2	89.2	7	1954		810.91
8	3	74.8	7	1165	1337	747.267
9	3	53.9	7	1510	1923	593.533

<b>TYPE 5</b>						
<b>PARAMETER</b>						Rohde & Schwarz
						Pulse Sequencer
<b>SHEET</b>						
<b>Trial Number : 4</b>						
<b>Bursts in Trial: 14</b>						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)

1	2	60.8	14	1797		347.48
2	2	93.6	14	1506		243.787
3	2	66.6	14	1594		373.604
4	2	83.2	14	1528		165.071
5	1	65.4	14			449.209
6	2	57.9	14	1601		685.926
7	2	90.9	14	1827		281.263
8	2	67.9	14	1198		674.83
9	2	75.1	14	1618		496.257
10	2	94.7	14	1108		546.544
11	2	94.2	14	1659		35.291
12	2	63.7	14	1913		45.449
13	2	59.6	14	1169		231.186
14	3	80.4	14	1976	1745	538.143

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 5**

**Bursts in Trial: 12**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	97.9	12	1903	1186	426.676
2	1	74.7	12			286.84
3	2	59.8	12	1500		627.27
4	1	81.8	12			100.95
5	2	94.2	12	1015		178.64
6	1	93.7	12			129.8
7	1	94.4	12			481.85
8	1	68.7	12			69.03
9	1	89	12			842.35
10	1	64.7	12			50.09
11	2	98.9	12	1030		176.9
12	2	74.4	12	1104		292



**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 6**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	65.4	9	1677		147.34
2	1	59.3	9			396.971
3	3	72.6	9	1450	1013	293.972
4	2	89.5	9	1454		161.533
5	3	58	9	1315	1070	345.244
6	2	74.7	9	1134		350.815
7	3	68.4	9	1423	1311	600.816
8	2	90.5	9	1872		162.307
9	3	62.3	9	1689	1363	573.738
10	2	94	9	1327		519.019
11	2	88.3	9	1854		409.001
12	2	91.6	9	1624		259.452
13	2	51.2	9	1811		32.273
14	3	79.8	9	1897	1013	36.554
15	3	68.6	9	1960	1188	342.925
16	1	87.1	9			590.116
17	2	80.2	9	1913		454.937
18	2	82.1	9	1192		36.358
19	3	89.9	9	1372	1024	546.079

**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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	82.3	6	1552		93.447
2	2	71.4	6	1575		165.943
3	2	67.7	6	1964		15.057
4	2	51.3	6	1936		491.45
5	1	94.3	6			201.893
6	2	95.9	6	1308		131.377
7	3	57.4	6	1297	1142	660.06
8	1	64	6			374.363
9	3	52.3	6	1619	1730	312.937
10	2	81.9	6	1652		264.43
11	2	86.7	6	1723		302.273
12	2	78.1	6	1267		71.577
13	2	71.3	6	1192		211.55
14	3	89.3	6	1773	1007	392.643
15	2	69.2	6	1388		82.697
16	3	57.2	6	1680	1209	140.6
17	1	77.6	6			468.033
18	3	99.3	6	1518	1362	423.267

## TYPE 5

## PARAMETER

## SHEET

 Rohde & Schwarz  
 Pulse Sequencer

**Trial Number : 8**
**Bursts in Trial: 9**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	71.7	11	1274		1163.23
2	1	96.5	11			3.717
3	1	94.2	11			249.723
4	3	63.8	11	1885	1059	736.93
5	1	83.8	11			1.547

6	2	77.6	11	1836		101.033
7	2	85.5	11	1909		973.17
8	2	98.1	11	1846		475.817
9	2	80.3	11	1361		377.933

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 9						
Bursts in Trial: 10						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	54.9	11	1640	1790	325.556
2	2	52.2	11	1287		549.28
3	2	96.3	11	1495		619.3
4	1	81.1	11			109.14
5	1	58.9	11			394.49
6	3	95.8	11	1582	1780	750.25
7	1	67.5	11			922.52
8	2	91.4	11	1141		556.58
9	3	55.4	11	1696	1723	1122.9
10	2	57.1	11	1766		338.9

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 10						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)

1	1	53.7	5			929.92
2	2	74.2	5	1211		52.471
3	2	52.9	5	1568		53.132
4	1	80.2	5			1052.103
5	1	68	5			555.204
6	2	89.8	5	1236		5.815
7	2	96	5	1208		405.925
8	3	68.2	5	1941	1407	390.666
9	1	55.6	5			152.857
10	2	53.1	5	1946		93.148
11	1	90.4	5			324.809

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 11**

**Bursts in Trial: 18**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	75.2	9	1262		497.972
2	1	66.2	9			251.781
3	1	64.3	9			311.597
4	1	54.9	9			390.76
5	2	93.4	9	1150		557.253
6	2	94.4	9	1198		349.617
7	2	77.2	9	1398		298.16
8	3	90.3	9	1830	1943	116.033
9	2	62.1	9	1935		174.857
10	2	82.3	9	1158		638.27
11	2	77.8	9	1931		195.933
12	2	83.8	9	1308		342.567
13	3	88.5	9	1292	1899	5.17
14	1	64.7	9			143.913
15	1	59.2	9			637.887
16	2	54	9	1187		192.3
17	2	88.9	9	1050		311.933

18	3	75.9	9	1642	1450	204.167
----	---	------	---	------	------	---------

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 12**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	72.3	7	1120		696.188
2	3	63.1	7	1328	1054	59.717
3	1	62.3	7			114.96
4	2	86.3	7	1075		16.66
5	2	74.4	7	1066		377.8
6	3	84.9	7	1302	1082	453.76
7	1	89	7			352.74
8	1	75	7			710.09
9	2	82.1	7	1770		766.57
10	1	59	7			8.76
11	2	56.9	7	1211		139.53
12	2	87.5	7	1116		256.6
13	3	69.4	7	1189	1246	223.15
14	2	67.9	7	1857		374.4
15	2	72.5	7	1134		97.2

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 13**

**Bursts in Trial: 16**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI	Start Location Within
-------	------------------	--------------------	-------------------	-------------------------	------------------	-----------------------

					( $\mu$ sec)	Interval (msec)
1	3	56.1	19	1408	1991	31.732
2	1	92.7	19			257.39
3	3	95	19	1221	1173	147.12
4	2	94.4	19	1841		54.23
5	1	79.4	19			59.58
6	1	82.5	19			334.61
7	2	85	19	1053		30.3
8	3	65	19	1687	1119	281.78
9	3	59.4	19	1512	1661	218.69
10	2	88.8	19	1010		608.58
11	2	59.2	19	1858		252.29
12	1	82.6	19			421.54
13	3	53	19	1920	1769	480.24
14	3	73.1	19	1357	1849	80.33
15	1	82.2	19			270
16	3	82.7	19	1315	1430	381.4

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 14						
Bursts in Trial: 18						
Burst	Number of Pulses	Pulse Width ( $\mu$ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI ( $\mu$ sec)	Pulse 2-to-3 PRI ( $\mu$ sec)	Start Location Within Interval (msec)
1	2	59.5	12	1975		474.159
2	3	86	12	1806	1998	526.783
3	3	98.7	12	1099	1250	279.777
4	3	95.8	12	1653	1897	209.75
5	3	75.8	12	1389	1096	30.933
6	3	61.3	12	1859	1760	106.837
7	3	54.7	12	1108	1811	276.26
8	2	96.1	12	1699		448.143
9	3	89.4	12	1296	1084	611.907
10	3	78.2	12	1931	1420	304.31

11	1	52.2	12			385.593
12	2	72.1	12	1993		56.387
13	2	90.5	12	1385		533.61
14	1	72.2	12			204.473
15	2	79.3	12	1893		130.957
16	1	51.3	12			4.6
17	3	74.8	12	1428	1739	241.133
18	3	91.1	12	1010	1331	159.967

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 15						
Bursts in Trial: 18						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	52.1	9	1665	1922	369.719
2	3	65	9	1517	1264	356.613
3	2	84.3	9	1136		67.767
4	2	87.9	9	1516		470.41
5	1	66.2	9			332.713
6	1	57.7	9			557.227
7	2	65.3	9	1493		237.6
8	3	82.5	9	1904	1047	416.483
9	2	68.1	9	1653		123.937
10	2	88	9	1067		45.11
11	2	90.7	9	1630		492.273
12	3	56.4	9	1377	1679	14.997
13	2	96.3	9	1408		156.32
14	2	74.9	9	1320		27.143
15	3	51.2	9	1850	1542	639.157
16	2	74.8	9	1044		428.5
17	2	64.9	9	1359		296.733
18	2	93.3	9	1171		124.967

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 16**

**Bursts in Trial: 12**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	58.3	16			112.089
2	2	75.3	16	1561		805.9
3	2	98.6	16	1037		773.68
4	3	88.5	16	1657	1264	73.06
5	2	66.5	16	1959		814.21
6	1	84.3	16			729.75
7	3	87.3	16	1843	1342	646.17
8	2	78	16	1611		977.74
9	2	88.9	16	1928		724.23
10	2	88.3	16	1936		460.73
11	3	65.6	16	1453	1934	234.7
12	2	51.4	16	1881		110.9

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 17**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	63.6	10	1898		209.443
2	1	75.8	10			38.343
3	3	59.3	10	1742	1068	207.23



4	2	68.5	10	1695		214.03
5	2	85.3	10	1971		789.03
6	1	88.9	10			558.54
7	1	77.2	10			495.9
8	2	76	10	1487		734.41
9	2	62.8	10	1081		500.77
10	2	54.1	10	1868		725.27
11	2	98.8	10	1388		157.44
12	2	98.7	10	1268		194.33
13	2	62.9	10	1294		430.2
14	2	93.9	10	1873		676
15	2	74.7	10	1008		89.7

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 18						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	51.1	7	1466	1299	588.699
2	2	72.4	7	1721		221.03
3	2	50.7	7	1137		686.39
4	2	67.4	7	1817		770.59
5	1	96.9	7			455.2
6	1	98.1	7			378.27
7	2	82.9	7	1702		629.77
8	2	79.4	7	1859		285.57
9	1	81.2	7			752.26
10	3	66.4	7	1333	1419	700.81
11	2	78.8	7	1716		907.4
12	1	82.1	7			662.2

**TYPE 5**

**PARAMETER**

**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 19**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	78.6	17			356.558
2	1	93.1	17			554.138
3	3	93	17	1211	1099	247.215
4	3	61.3	17	1830	1079	23.443
5	2	82.1	17	1228		419.871
6	1	58.6	17			655.628
7	2	87.8	17	1284		439.706
8	2	86.1	17	1425		268.474
9	2	94.9	17	1840		442.871
10	1	93.1	17			94.729
11	2	79.1	17	1785		588.496
12	3	56.2	17	1015	1755	318.534
13	1	79.9	17			346.862
14	2	71.2	17	1440		196.019
15	1	78	17			413.847
16	2	55.1	17	1709		413.965
17	1	51.9	17			401.082

**TYPE 5**

**PARAMETER**

**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 20**

**Bursts in Trial: 15**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI	Start Location Within
-------	------------------	--------------------	-------------------	-------------------------	------------------	-----------------------

					( $\mu$ sec)	Interval (msec)
1	1	58.2	14			637.409
2	1	86.2	14			602
3	1	56.4	14			683.08
4	2	52.4	14	1929		695.75
5	1	77.4	14			137.73
6	1	71.8	14			372.28
7	1	62.1	14			541.38
8	2	75.8	14	1399		83.62
9	2	96.6	14	1906		529.66
10	2	79.3	14	1423		503.59
11	2	65.3	14	1942		735.31
12	2	90	14	1127		567.76
13	2	96.5	14	1394		315.93
14	1	56.2	14			421.1
15	1	89.8	14			464.3

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 21**

**Bursts in Trial: 9**

Burst	Number of Pulses	Pulse Width ( $\mu$ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI ( $\mu$ sec)	Pulse 2-to-3 PRI ( $\mu$ sec)	Start Location Within Interval (msec)
1	1	65.8	15			1292.29
2	3	63.4	15	1360	1302	304.857
3	2	55.1	15	1081		603.303
4	2	96	15	1342		1275.17
5	3	78.6	15	1633	1103	687.437
6	1	51.8	15			600.603
7	2	56.9	15	1185		897.83
8	3	90.4	15	1656	1490	833.767
9	2	88.3	15	1258		1269.333

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 22**

**Bursts in Trial: 18**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	50	18	1961	1990	107.428
2	3	58.2	18	1450	1446	589.963
3	3	83.2	18	1047	1026	424.527
4	2	62.5	18	1322		596.59
5	3	98.3	18	1588	1824	295.913
6	2	58.3	18	1383		589.927
7	1	92.6	18			379.74
8	3	74.1	18	1606	1447	188.903
9	3	54.8	18	1757	1101	520.447
10	2	90.8	18	1867		608.32
11	2	83.9	18	1929		610.053
12	3	54.5	18	1585	1157	643.017
13	1	97.9	18			243.57
14	2	87.5	18	1096		45.713
15	1	70.7	18			464.077
16	2	56.3	18	1451		562.5
17	1	99.5	18			97.233
18	2	87.7	18	1700		130.367

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 23**

**Bursts in Trial: 16**

Burst	Number of Pulses	Pulse Width	Chirp Width	Pulse 1-to-2 PRI	Pulse 2-to-3	Start Location
-------	------------------	-------------	-------------	------------------	--------------	----------------

		( $\mu$ sec)	(MHz)	( $\mu$ sec)	PRI ( $\mu$ sec)	Within Interval (msec)
1	2	68.3	7	1938		655.644
2	2	63.6	7	1396		692.09
3	1	67.1	7			233.08
4	2	83	7	1842		629.18
5	2	55.1	7	1220		97.41
6	1	60.8	7			716.99
7	2	58.3	7	1490		642.64
8	3	54.1	7	1831	1251	4.76
9	2	93.8	7	1277		62.08
10	3	66.2	7	1616	1102	349.29
11	3	97.5	7	1654	1257	64.96
12	2	61.5	7	1922		412.9
13	1	87.8	7			542.84
14	2	64.5	7	1480		264.6
15	2	79	7	1434		441.3
16	2	58.7	7	1128		152.3

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 24						
Bursts in Trial: 17						
Burst	Number of Pulses	Pulse Width ( $\mu$ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI ( $\mu$ sec)	Pulse 2-to-3 PRI ( $\mu$ sec)	Start Location Within Interval (msec)
1	1	65.7	5			302.966
2	2	82	5	1149		294.798
3	2	86.7	5	1454		505.975
4	2	88.3	5	1220		55.953
5	3	54.5	5	1592	1530	331.631
6	2	58.7	5	1177		577.188
7	2	58.5	5	1583		228.856
8	2	84.4	5	1151		628.154
9	1	82.3	5			410.371

10	1	96.4	5			375.109
11	2	70.8	5	1094		145.516
12	1	81.2	5			207.434
13	2	73.1	5	1214		360.432
14	2	57.9	5	1501		539.779
15	3	72.4	5	1047	1988	604.647
16	2	79.6	5	1718		30.365
17	2	81.8	5	1954		179.482

<b>TYPE 5</b>						
<b>PARAMETER</b>						Rohde & Schwarz
						Pulse Sequencer
<b>SHEET</b>						
<b>Trial Number : 25</b>						
<b>Bursts in Trial: 9</b>						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	59.7	16	1269		75.044
2	3	88.5	16	1738	1515	268.567
3	1	91.5	16			110.273
4	3	77.5	16	1809	1927	915.6
5	1	87.3	16			161.377
6	3	84.2	16	1037	1083	716.233
7	1	79.7	16			345.82
8	2	59.1	16	1444		1196.967
9	3	86.1	16	1338	1238	1260.733

<b>TYPE 5</b>						
<b>PARAMETER</b>						Rohde & Schwarz
						Pulse Sequencer
<b>SHEET</b>						
<b>Trial Number : 26</b>						
<b>Bursts in Trial: 19</b>						
Burst	Number of Pulses	Pulse Width	Chirp Width	Pulse 1-to-2 PRI	Pulse 2-to-3	Start Location

		( $\mu$ sec)	(MHz)	( $\mu$ sec)	PRI ( $\mu$ sec)	Within Interval (msec)
1	1	64.4	13			623.013
2	3	79.7	13	1194	1205	384.891
3	1	67.3	13			296.182
4	2	93.2	13	1606		486.723
5	3	96.1	13	1623	1014	267.784
6	2	73.4	13	1728		420.235
7	3	92.8	13	1970	1015	237.196
8	1	77.2	13			4.267
9	2	95.3	13	1573		520.518
10	1	86.9	13			481.699
11	2	62.7	13	1970		507.051
12	2	56.3	13	1808		323.112
13	2	75.1	13	1414		478.793
14	1	84.6	13			119.904
15	2	96	13	1727		9.045
16	2	88.5	13	1404		515.826
17	3	53.7	13	1125	1062	465.237
18	3	63	13	1338	1687	87.958
19	2	89.9	13	1888		379.179

## TYPE 5

## PARAMETER

## SHEET

 Rohde & Schwarz  
 Pulse Sequencer

**Trial Number : 27**
**Bursts in Trial: 11**

Burst	Number of Pulses	Pulse Width ( $\mu$ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI ( $\mu$ sec)	Pulse 2-to-3 PRI ( $\mu$ sec)	Start Location Within Interval (msec)
1	2	63.3	8	1477		665.8
2	2	62.7	8	1382		769.411
3	1	57.3	8			950.712
4	3	92	8	1766	1715	757.333
5	3	52.4	8	1018	1636	169.934
6	2	79.6	8	1368		734.585

7	2	52.5	8	1026		442.165
8	3	51.7	8	1493	1190	757.766
9	2	90	8	1941		953.537
10	2	65.1	8	1608		153.568
11	1	66.4	8			849.809

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 28**

**Bursts in Trial: 17**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	79	14	1484		477.653
2	1	70.4	14			234.85
3	3	78.8	14	1121	1562	627.365
4	1	53.2	14			541.853
5	1	89.8	14			631.721
6	1	59	14			367.238
7	3	56	14	1606	1016	167.996
8	1	74	14			181.344
9	3	68.3	14	1038	1202	374.801
10	2	77.6	14	1964		674.099
11	1	94.7	14			47.016
12	2	52.6	14	1952		178.654
13	2	83.5	14	1715		449.002
14	1	50.1	14			600.179
15	1	76.3	14			156.147
16	2	65.5	14	1223		385.365
17	2	90.9	14	1800		439.482

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer



SHEET						
Trial Number : 29						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	80.9	16	1395	1184	44.162
2	1	99	16			306.821
3	2	64.1	16	1632		117.752
4	3	53.2	16	1707	1665	1027.723
5	2	91.9	16	1758		100.244
6	1	59.6	16			350.365
7	2	65.1	16	1720		711.305
8	2	99.7	16	1826		131.056
9	1	82.8	16			243.687
10	2	94.9	16	1272		954.018
11	2	61.9	16	1135		722.009

TYPE 5						
PARAMETER						
SHEET						
Trial Number : 30						
Bursts in Trial: 19						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	72.8	18	1756	1131	140.495
2	2	92.4	18	1582		492.131
3	3	91.1	18	1667	1668	48.282
4	2	76.3	18	1233		148.123
5	1	93.7	18			623.564
6	2	65.4	18	1023		272.755
7	3	54.6	18	1521	1760	497.966
8	2	78.5	18	1455		110.397

 Rohde & Schwarz  
 Pulse Sequencer



9	3	59.1	18	1573	1616	329.338
10	1	85	18			343.219
11	2	62.9	18	1857		142.741
12	1	64.5	18			448.982
13	3	74	18	1916	1502	161.933
14	3	73.6	18	1197	1978	110.634
15	2	79.1	18	1992		374.885
16	1	83	18			16.586
17	2	50.5	18	1277		612.437
18	2	78.9	18	1252		358.558
19	3	91.3	18	1706	1715	342.479

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	5491.1	1	16	5511.2	1
2	5492.3	1	17	5513.2	1
3	5494.4	1	18	5514.5	1
4	5495.9	1	19	5515.5	1
5	5496.4	1	20	5516.8	1
6	5497.8	1	21	5517.5	0
7	5498.6	1	22	5518.4	1
8	5499.8	1	23	5519.9	1
9	5502.7	1	24	5521.3	1
10	5503.2	1	25	5522.7	1
11	5504.3	1	26	5524.6	1
12	5505.9	0	27	5526.4	1
13	5506.2	1	28	5527.4	1
14	5508.5	1	29	5528.3	1
15	5509.6	1	30	5529.8	1
Detection Percentage (%)					93.33%

Trial Number : 1			Trial Number : 2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
25	5521.1	75	47	5496.4	141
34	5492.3	102	74	5527.8	222
65	5504.4	195	64	5498.6	192
87	5495.9	261	43	5499.8	129
/	/	/	79	5502.7	237
/	/	/	22	5513.2	66
/	/	/	56	5504.3	168

Trial Number : 3			Trial Number : 4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5495.9	45	63	5511.2	189
42	5506.2	126	56	5493.2	168
54	5528.5	162	46	5514.5	138
63	5509.6	189	36	5525.5	108
/	/	/	53	5526.8	159
/	/	/	32	5517.5	96
/	/	/	89	5518.4	267

Trial Number : 5			Trial Number : 6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5499.9	93	24	5526.4	72
45	5501.3	135	34	5497.4	102
25	5492.7	75	53	5508.8	159
53	5524.6	159	36	5529.8	108
/	/	/	35	5493.6	105
/	/	/	37	5517.9	111
/	/	/	78	5499.5	234

Trial Number : 7			Trial Number : 8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
26	5499.8	78	23	5493.2	69
35	5512.6	105	43	5514.5	129
67	5503.2	201	35	5495.6	105
77	5524.3	231	78	5516.8	234
/	/	/	36	5507.5	108

/	/	/	37	5518.8	111
/	/	/	38	5529.3	114

Trial Number : 9			Trial Number : 10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
35	5494.4	105	21	5513.2	63
57	5525.7	171	14	5504.3	42
48	5496.4	144	53	5525.7	159
89	5507.8	267	27	5506.1	81
/	/	/	89	5498.5	267
/	/	/	36	5509.4	108
/	/	/	25	5491.3	75

Trial Number : 11			Trial Number : 12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
36	5513.3	108	26	5498.5	78
46	5501.2	138	36	5499.6	108
56	5513.7	168	89	5501.3	267
76	5524.5	228	75	5522.5	225
/	/	/	57	5524.6	171
/	/	/	63	5496.3	189
/	/	/	27	5527.4	81

Trial Number : 13			Trial Number : 14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
24	5492.3	72	32	5498.6	96
56	5524.4	168	37	5499.8	111
67	5495.7	201	43	5502.2	129
76	5506.3	228	36	5523.5	108
/	/	/	59	5504.3	177
/	/	/	57	5505.3	171
/	/	/	44	5516.2	132

Trial Number : 15			Trial Number : 16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
32	5499.9	96	46	5496.4	138
56	5501.3	168	36	5507.8	108

33	5492.7	99	54	5498.6	162
65	5524.6	195	57	5509.8	171
/	/	/	47	5522.7	141

Trial Number : 17			Trial Number : 18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
24	5499.9	72	37	5496.4	111
53	5501.3	159	46	5497.8	138
56	5492.7	168	37	5518.6	111
35	5524.6	105	64	5499.8	192
64	5496.4	192	58	5522.7	174
76	5527.1	228	98	5503.2	294
/	/	/	47	5504.3	141
/	/	/	37	5525.9	111
/	/	/	74	5526.2	222

Trial Number : 19			Trial Number : 20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5506.4	36	25	5494.5	75
45	5497.8	135	36	5495.1	108
64	5498.6	192	26	5506.8	78
36	5499.8	108	36	5517.5	108
35	5512.7	105	42	5518.4	126
25	5503.2	75	57	5519.9	171
27	5524.3	81	63	5501.3	189
88	5505.9	264	74	5522.7	222
/	/	/	98	5514.1	294

Trial Number : 21			Trial Number : 22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5496.4	39	35	5494.4	105
31	5527.8	93	26	5505.9	78
35	5498.6	105	16	5496.4	48
36	5519.8	108	20	5507.8	60
74	5502.7	222	26	5498.6	78
31	5503.2	93	32	5529.8	96
35	5504.3	105	47	5502.7	141
56	5495.9	168	48	5513.2	144

78	5506.2	234	89	5504.3	267
----	--------	-----	----	--------	-----

Trial Number : 23			Trial Number : 24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5493	39	12	5495	36
24	5501	72	22	5507	66
37	5513	111	36	5504	108
48	5491	144	57	5493	171
45	5511	135	64	5499	192
59	5504	177	67	5502	201
80	5499	240	75	5519	225
/	/	/	79	5524	237
/	/	/	80	5525	240

Trial Number : 25			Trial Number : 26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
35	5491	78	31	5499	93
26	5494	108	42	5520	126
36	5496	105	26	5519	78
35	5503	78	47	5525	141
26	5505	108	27	5505	81
36	5518	177	45	5495	135
59	5512	141	76	5491	228
47	5518	174	/	/	/
58	5525	78	/	/	/

Trial Number : 27			Trial Number : 28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5495	69	25	5492	75
45	5502	135	37	5499	111
25	5515	75	27	5519	81
16	5523	48	36	5521	108
25	5491	75	63	5495	189
37	5495	111	78	5529	234
56	5524	168	79	5499	237
79	5496	237	/	/	/
98	5499	294	/	/	/

Trial Number : 29			Trial Number : 30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5495	48	37	5513	111
24	5498	72	26	5508	78
42	5502	126	35	5516	105
58	5505	174	53	5520	159
74	5513	222	38	5496	114
97	5518	291	47	5529	141
/	/	/	48	5519	144
/	/	/	58	5517	174
/	/	/	79	5522	237

802.11ax-HE80-5530MHz

Radar Type 1 - Radar Statistical Performance

RADAR TYPE						Rohde & Schwarz K350 Pulse Sequencer DFS
1						
Trial #	Test Freq. (MHz)	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)	
1	5491.5	39	1	1354	1	
2	5493.7	30	1	1813	1	
3	5495.3	19	1	2844	1	
4	5497.2	27	1	2016	1	
5	5499.5	29	1	1834	0	
6	5501.6	35	1	1526	1	
7	5503.7	58	1	921	1	
8	5505.2	18	1	3014	1	
9	5507.6	21	1	2575	1	
10	5509.2	54	1	988	1	
11	5513.6	32	1	1656	0	
12	5515.2	47	1	1143	1	
13	5517.6	22	1	2509	1	
14	5519.3	24	1	2235	0	
15	5521.7	32	1	1658	1	
16	5524.5	18	1	2956	1	
17	5527.6	59	1	907	1	
18	5529.4	19	1	2823	1	

19	5533.6	20	1	2670	1
20	5536.9	49	1	1090	1
21	5539.1	42	1	1258	1
22	5543.2	67	1	787	1
23	5547.5	22	1	2490	1
24	5550.1	25	1	2152	1
25	5553.9	21	1	2568	1
26	5557.2	18	1	3023	1
27	5559.1	68	1	775	1
28	5563.2	65	1	822	0
29	5566.7	20	1	2770	1
30	5569.6	37	1	1429	1
Detection Percentage (%)	86.67%				

## 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	5491.5	28	3.3	218	1
2	5493.7	28	1.8	153	1
3	5495.3	27	4.9	204	0
4	5497.2	29	4.2	180	1
5	5499.5	27	3.6	223	1
6	5501.6	29	3.7	182	1
7	5503.7	23	4.3	226	1
8	5505.2	26	3.6	220	1
9	5507.6	25	1.4	178	1
10	5509.2	26	2.5	206	1
11	5513.6	29	1.3	204	0
12	5515.2	29	4.9	187	1



13	5517.6	29	4.5	224	1
14	5519.3	27	4.8	195	1
15	5521.7	28	3.8	166	0
16	5524.5	24	1.5	192	1
17	5527.6	25	2.7	177	1
18	5529.4	28	2.8	155	1
19	5533.6	27	3.3	189	1
20	5536.9	23	1.9	209	1
21	5539.1	27	4.7	181	1
22	5543.2	24	2.7	162	0
23	5547.5	28	1.9	219	1
24	5550.1	25	4.5	202	1
25	5553.9	24	3.4	220	1
26	5557.2	27	1.7	187	1
27	5559.1	27	2.1	153	1
28	5563.2	26	1.4	221	1
29	5566.7	28	1.5	212	1
30	5569.6	28	4.2	216	1
Detection Percentage (%)	86.67%				

## 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	5491.5	17	9.9	258	1
2	5493.7	17	6.5	256	1
3	5495.3	17	6.4	358	1
4	5497.2	17	7.7	267	1
5	5499.5	17	7.2	347	1
6	5501.6	17	7.8	260	1
7	5503.7	17	9.5	347	1
8	5505.2	17	6.3	433	1
9	5507.6	17	7.1	373	0
10	5509.2	16	9.3	424	1
11	5513.6	16	6.6	221	1

12	5515.2	16	7.4	426	1
13	5517.6	18	6	339	1
14	5519.3	16	9.5	225	0
15	5521.7	17	8.4	254	1
16	5524.5	18	9.7	457	1
17	5527.6	18	6.2	268	1
18	5529.4	17	7.3	289	1
19	5533.6	17	8.2	231	1
20	5536.9	16	7.5	251	0
21	5539.1	18	6.4	419	1
22	5543.2	18	6.4	479	1
23	5547.5	18	6.2	460	1
24	5550.1	18	7	243	1
25	5553.9	16	8.5	263	1
26	5557.2	17	9.8	237	0
27	5559.1	17	6.6	235	1
28	5563.2	17	8.4	346	1
29	5566.7	17	6.5	290	1
30	5569.6	16	9.7	433	1
Detection Percentage (%)	86.67%				

## 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	5491.5	15	19.1	360	1
2	5493.7	15	19.5	311	1
3	5495.3	16	17.2	453	1
4	5497.2	14	15.6	350	1
5	5499.5	14	11.5	371	1
6	5501.6	16	14.6	340	1
7	5503.7	16	11.6	213	1
8	5505.2	16	15.2	321	0
9	5507.6	16	11.8	291	1
10	5509.2	14	16.7	225	1

11	5513.6	13	17.6	217	1
12	5515.2	14	15.3	403	1
13	5517.6	12	19.2	208	1
14	5519.3	16	15.6	457	1
15	5521.7	15	11.2	367	1
16	5524.5	14	17.1	332	1
17	5527.6	16	17.8	332	1
18	5529.4	14	15.3	339	1
19	5533.6	14	12.2	239	0
20	5536.9	13	19	207	1
21	5539.1	15	15.4	352	1
22	5543.2	14	19.4	470	1
23	5547.5	16	12.4	304	1
24	5550.1	16	12.2	203	0
25	5553.9	14	17.3	341	1
26	5557.2	13	15.5	318	1
27	5559.1	13	13.9	496	1
28	5563.2	12	16.6	226	1
29	5566.7	14	17.5	421	1
30	5569.6	12	16.9	256	1
Detection Percentage (%)	90.00%				

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

$$\frac{p1+p2+p3+p4}{4} = (86.67\%+86.67\%+86.67\%+90.0\%)/4=87.50\%(>80\%).$$

#### 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: 20						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	89.8	19	1251		458.378
2	2	64.9	19	1312		270.494
3	2	79.3	19	1252		324.16
4	3	68.1	19	1302	1127	114.63
5	1	54	19			202.29
6	2	82.1	19	1425		532.54
7	2	88.8	19	1712		537.58
8	3	55.7	19	1948	1895	563.98
9	2	72.6	19	1827		518.14
10	2	57.4	19	1391		238.79
11	1	78.4	19			284.23
12	2	96	19	1388		103.04

13	3	79.7	19	1251	1397	150.94
14	1	50.8	19			154.63
15	1	78.4	19			436.53
16	3	59.1	19	1619	1742	354.2
17	3	69.4	19	1851	1320	371.78
18	2	57.2	19	1580		97.1
19	2	99.6	19	1986		97.5
20	2	97	19	1020		87.9

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 2**

**Bursts in Trial: 13**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	52.8	17	1852	1792	0.764
2	2	89.5	17	1900		912.663
3	3	92.3	17	1726	1807	827.056
4	2	63.3	17	1084		10.699
5	2	65.3	17	1540		696.992
6	3	77.8	17	1568	1942	599.375
7	2	98.6	17	1197		509.848
8	2	62.9	17	1000		698.232
9	2	73.8	17	1611		534.355
10	1	78.5	17			279.828
11	2	85.1	17	1490		708.801
12	2	56.2	17	1641		133.654
13	2	81.4	17	1235		81.577

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

Trial Number : 3						
Bursts in Trial: 13						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	82.3	7	1241	1957	798.859
2	2	51.8	7	1568		335.343
3	2	69.5	7	1007		178.476
4	2	63.4	7	1754		54.659
5	3	70.7	7	1662	1261	621.702
6	1	81.5	7			146.375
7	3	80.6	7	1292	1309	98.768
8	2	68.9	7	1857		250.332
9	1	72.4	7			223.575
10	1	70.5	7			703.448
11	1	65.9	7			205.431
12	2	60.3	7	1977		734.254
13	2	80.1	7	1389		682.877

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 4						
Bursts in Trial: 17						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	56.7	9	1270	1795	367.237
2	2	69.2	9	1942		476.708
3	3	63.5	9	1036	1892	419.645
4	2	74	9	1617		471.323
5	3	51.5	9	1695	1330	124.801
6	1	55.6	9			591.198
7	3	90.6	9	1926	1593	228.906
8	1	89.1	9			581.194

9	1	75.6	9			336.701
10	3	70.4	9	1099	1380	412.639
11	2	64.9	9	1546		2.496
12	3	92.1	9	1355	1116	697.544
13	2	63	9	1529		264.192
14	2	73.2	9	1941		347.459
15	3	93.2	9	1439	1389	84.637
16	1	62.7	9			118.965
17	1	96.7	9			70.482

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
 Pulse Sequencer

**Trial Number : 5**

**Bursts in Trial: 13**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	86.8	14	1144		200.582
2	3	80	14	1321	1386	810.823
3	2	64.7	14	1499		386.886
4	2	54.9	14	1010		837.749
5	2	99.9	14	1567		548.122
6	2	99.8	14	1471		736.435
7	3	60.7	14	1649	1388	748.408
8	3	99	14	1687	1829	626.062
9	2	82.3	14	1870		871.915
10	2	64.3	14	1625		323.068
11	2	72.6	14	1791		384.281
12	3	66	14	1641	1006	566.554
13	1	98.7	14			44.877

**TYPE 5**  
**PARAMETER**

Rohde & Schwarz  
 Pulse Sequencer

SHEET						
Trial Number : 6						
Bursts in Trial: 17						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	50.8	18	1129		548.412
2	1	62.4	18			580.178
3	2	96.5	18	1355		31.515
4	2	59	18	1383		441.093
5	1	81.9	18			189.581
6	1	54.6	18			235.038
7	2	74.5	18	1991		322.526
8	1	75.4	18			508.374
9	2	81.9	18	1333		355.611
10	3	98.4	18	1555	1021	104.299
11	1	63.9	18			124.156
12	3	77.2	18	1975	1599	384.284
13	2	55.4	18	1207		626.042
14	3	84.7	18	1505	1061	661.099
15	3	71.6	18	1462	1082	384.247
16	1	81.4	18			346.865
17	1	65.3	18			502.382

TYPE 5						
PARAMETER						Rohde & Schwarz
						Pulse Sequencer
SHEET						
Trial Number : 7						
Bursts in Trial: 17						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	56	14			629.103
2	2	98.3	14	1732		595.388



3	3	75.8	14	1312	1029	104.155
4	2	97.9	14	1129		178.393
5	1	52.4	14			192.381
6	2	99.4	14	1637		400.658
7	2	73.7	14	1862		332.636
8	2	62.5	14	1377		263.074
9	2	97	14	1447		405.481
10	2	93.3	14	1800		695.729
11	3	89	14	1569	1151	666.156
12	2	72.3	14	1733		329.894
13	2	73.7	14	1321		81.982
14	2	79.4	14	1791		29.009
15	3	63.8	14	1260	1141	316.947
16	2	85.9	14	1032		303.865
17	3	82.6	14	1217	1215	422.682

TYPE 5						
PARAMETER						Rohde & Schwarz
SHEET						Pulse Sequencer
Trial Number : 8						
Bursts in Trial: 18						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	84.4	13	1355	1759	406.895
2	2	72.4	13	1273		319.519
3	2	66.8	13	1593		510.117
4	2	57.6	13	1944		457.71
5	2	51.1	13	1683		62.863
6	1	55.8	13			166.417
7	2	53.1	13	1257		185.87
8	3	67.4	13	1784	1931	384.133
9	3	55	13	1395	1141	282.007
10	2	58.4	13	1305		78.45
11	2	83	13	1475		464.343
12	3	84.8	13	1684	1822	602.897
13	2	87.1	13	1918		38.59

14	1	85.6	13			135.193
15	2	73.2	13	1391		419.547
16	1	66.1	13			465
17	2	84.3	13	1487		244.833
18	1	88.5	13			255.267

**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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	91.8	13			601.442
2	2	69.4	13	1294		20.859
3	3	80.9	13	1217	1905	729.55
4	2	91.5	13	1904		750.28
5	2	66.2	13	1791		131.96
6	2	70.1	13	1045		145.5
7	2	94.9	13	1035		542.91
8	2	88.2	13	1421		559.95
9	2	54.5	13	1690		545.1
10	2	77.4	13	1008		115.66
11	3	90.5	13	1239	1873	753.31
12	3	95	13	1871	1591	337.25
13	2	58.4	13	1571		466.4
14	1	77.3	13			279.2
15	1	95.4	13			752.8

**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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	52.1	9			303.583
2	3	52.9	9	1943	1020	905.673
3	2	69.3	9	1212		727.506
4	2	67.5	9	1140		741.039
5	2	90.5	9	1305		611.212
6	3	78.1	9	1825	1246	204.835
7	3	75	9	1979	1280	206.888
8	2	50.2	9	1984		868.162
9	2	83.3	9	1796		297.535
10	1	77.1	9			463.888
11	2	95.3	9	1653		638.711
12	1	65.4	9			338.954
13	2	92.3	9	1247		494.377

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 11						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	99.3	6			667.929
2	1	68.6	6			800.971
3	2	54.4	6	1666		913.842
4	2	60.3	6	1431		974.303
5	2	52.5	6	1747		990.654
6	3	85.5	6	1830	1261	218.145
7	1	73.9	6			129.255
8	2	99.8	6	1669		535.206
9	2	61.3	6	1857		1.717

10	2	81.2	6	1082		898.518
11	1	55.5	6			386.609

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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	71.4	10	1870		685.899
2	2	94.1	10	1465		452.26
3	2	57.9	10	1760		234.33
4	1	62	10			495.89
5	3	70.7	10	1352	1209	860.74
6	2	85	10	1619		637.23
7	3	54.1	10	1534	1635	132.46
8	2	73.7	10	1196		276.96
9	1	99	10			250.08
10	3	67.5	10	1340	1669	469.15
11	2	65.8	10	1293		559.3
12	2	99.3	10	1681		895.8

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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)

1	2	72.2	12	1427		702.38
2	2	92.8	12	1977		158.19
3	1	94.5	12			540.18
4	1	62.6	12			504.89
5	2	50.7	12	1523		805.3
6	2	67.9	12	1472		540.88
7	2	88.8	12	1997		540.5
8	3	73.6	12	1966	1405	915.64
9	3	69.1	12	1262	1900	837.24
10	1	68.9	12			591.29
11	2	61.4	12	1051		396.5
12	3	87.5	12	1305	1448	3

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 14**

**Bursts in Trial: 19**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	90.5	19	1817		74.713
2	1	58.2	19			164.315
3	2	93.4	19	1614		382.502
4	3	60.6	19	1387	1949	327.563
5	3	64.6	19	1407	1498	196.024
6	2	54.9	19	1825		167.245
7	2	64.1	19	1309		389.496
8	2	94.1	19	1186		370.427
9	1	74.7	19			281.988
10	3	67.7	19	1786	1561	9.239
11	2	85.4	19	1380		557.471
12	2	57.6	19	1111		310.902
13	1	54.4	19			181.653
14	2	90.1	19	1254		81.374
15	2	79.7	19	1955		610.005
16	1	80.7	19			12.586

17	2	52.2	19	1974		33.937
18	2	96.2	19	1535		175.858
19	2	64.9	19	1312		514.579

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 15						
Bursts in Trial: 11						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	56.9	19	1615		742.298
2	2	54	19	1480		743.641
3	2	87.6	19	1129		216.602
4	3	88.8	19	1879	1660	968.553
5	3	74.5	19	1640	1400	938.634
6	3	79.4	19	1989	1490	26.365
7	2	66.4	19	1256		798.325
8	2	85.6	19	1831		531.006
9	3	97.2	19	1192	1204	19.127
10	2	63.3	19	1114		943.418
11	1	58.4	19			325.709

TYPE 5 PARAMETER SHEET						
						Rohde & Schwarz Pulse Sequencer
Trial Number : 16						
Bursts in Trial: 14						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)

1	2	69.7	10	1921		247.531
2	2	69.8	10	1729		296.997
3	1	75.3	10			613.114
4	2	62.2	10	1581		594.381
5	2	99.3	10	1370		351.479
6	1	96.1	10			74.016
7	1	69.6	10			429.203
8	3	76.6	10	1033	1758	323.77
9	2	57.6	10	1037		821.677
10	1	65.6	10			639.174
11	3	61.4	10	1463	1540	178.081
12	3	95.7	10	1658	1729	639.829
13	3	92.9	10	1087	1230	532.586
14	2	89.2	10	1877		518.843

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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	61.9	17	1100		431.333
2	3	94.4	17	1072	1143	280.627
3	3	54.4	17	1178	1947	837.444
4	3	68.9	17	1426	1687	41.641
5	3	90.3	17	1513	1415	272.709
6	2	77.7	17	1814		824.806
7	1	55.7	17			543.083
8	2	54	17	1931		22.76
9	3	52.7	17	1513	1560	265.437
10	3	67.6	17	1731	1515	500.854
11	2	80.7	17	1767		846.641
12	2	74.9	17	1140		57.219
13	1	80.2	17			258.586
14	2	83.7	17	1542		131.943

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 18**

**Bursts in Trial: 13**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	90.4	12	1477		504.072
2	2	91.4	12	1925		576.983
3	1	86.1	12			893.536
4	3	89.4	12	1185	1266	754.219
5	3	68.9	12	1531	1676	846.262
6	2	86.2	12	1648		457.855
7	2	90	12	1940		892.538
8	2	57.4	12	1121		87.442
9	2	63.6	12	1390		281.405
10	3	81.7	12	1829	1565	246.788
11	2	92.9	12	1766		94.461
12	2	71.9	12	1162		838.554
13	3	62.9	12	1211	1673	554.377

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 19**

**Bursts in Trial: 14**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	81.1	18	1223		383.202
2	1	70.7	18			715.887



3	3	60.4	18	1066	1296	720.994
4	2	68.5	18	1175		153.981
5	2	69.7	18	1053		410.909
6	2	59.1	18	1662		408.576
7	3	72.2	18	1145	1742	674.643
8	3	87.5	18	1327	1039	712.77
9	2	95.6	18	1895		356.737
10	2	88.2	18	1193		49.064
11	3	92.2	18	1310	1020	314.591
12	3	80.7	18	1753	1149	330.229
13	2	63.1	18	1778		233.286
14	3	84.2	18	1065	1598	497.043

<b>TYPE 5</b>	Rohde & Schwarz
<b>PARAMETER</b>	Pulse Sequencer
<b>SHEET</b>	

**Trial Number : 20**

**Bursts in Trial: 20**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	3	76.8	10	1252	1787	454.45
2	2	91.1	10	1823		183.473
3	2	67	10	1902		530.45
4	1	86.3	10			29.65
5	2	54.7	10	1891		405.38
6	2	72.7	10	1608		381.35
7	3	76.9	10	1080	1474	441.04
8	1	83.6	10			106.32
9	2	50.5	10	1227		166.4
10	3	99.6	10	1709	1050	99.25
11	1	64.5	10			507.81
12	1	62.7	10			535.07
13	2	53.8	10	1819		454.26
14	2	86.5	10	1658		68.16
15	1	94.8	10			176.63
16	1	74.2	10			551.2

17	2	68.7	10	1731		286.03
18	1	72.7	10			105.4
19	2	91.3	10	1089		255.5
20	2	59.8	10	1998		152.1

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 21**

**Bursts in Trial: 16**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	70.7	6	1889		461.366
2	1	83.4	6			468.68
3	2	54.2	6	1166		359.57
4	2	56	6	1891		263.91
5	2	91.9	6	1019		702.47
6	2	59.3	6	1398		69.13
7	2	65.1	6	1706		89.58
8	2	88	6	1380		703.8
9	1	92.3	6			402.46
10	2	75.3	6	1076		588.89
11	1	65.3	6			216.37
12	1	73.1	6			712.52
13	2	92.1	6	1678		738.22
14	3	53	6	1591	1698	46.85
15	3	93.5	6	1982	1558	471.1
16	2	51.3	6	1354		591.7

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 22**

Bursts in Trial: 14						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	97	13	1991		228.097
2	2	75.6	13	1194		734.237
3	1	73.3	13			749.404
4	3	81.3	13	1458	1657	669.001
5	3	85.5	13	1016	1534	0.749
6	2	83	13	1142		338.936
7	1	65.8	13			337.333
8	1	69	13			88.85
9	1	92.3	13			504.407
10	2	50.3	13	1575		728.814
11	3	70.8	13	1353	1264	203.921
12	2	81.6	13	1622		786.229
13	2	74.4	13	1927		244.686
14	1	85.5	13			636.443

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 23						
Bursts in Trial: 9						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	68.3	8			1209.76
2	1	98.8	8			833.887
3	2	51.2	8	1828		963.193
4	1	68.6	8			410.37
5	2	75.2	8	1966		805.487
6	1	75.8	8			826.883
7	1	82.5	8			1043.71



8	3	93.5	8	1732	1066	869.467
9	1	55.7	8			412.533

**TYPE 5**  
**PARAMETER**  
**SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 24**

**Bursts in Trial: 18**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	82.6	18	1083		130.758
2	3	63.4	18	1161	1790	455.483
3	1	75.6	18			141.037
4	3	68.7	18	1714	1785	352.86
5	1	56	18			322.083
6	3	81.2	18	1006	1444	571.567
7	2	62.2	18	1611		542.54
8	2	64.7	18	1136		337.713
9	3	68	18	1146	1511	4.717
10	1	90.8	18			300.07
11	2	53.6	18	1272		127.873
12	2	80.4	18	1622		390.757
13	2	91.3	18	1849		118.68
14	2	94	18	1894		177.753
15	2	58.7	18	1393		517.917
16	3	97.4	18	1168	1791	491.9
17	2	77.4	18	1631		16.233
18	2	66	18	1571		591.967

**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 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	90.7	13	1376		844.675
2	3	99.5	13	1007	1959	121.27
3	3	52.7	13	1755	1224	423.28
4	2	79.3	13	1042		521.66
5	2	99.3	13	1297		608.33
6	2	86	13	1469		171.07
7	1	69.5	13			367.17
8	3	73	13	1262	1150	909.23
9	2	54	13	1291		346.6
10	2	97.9	13	1809		53.61
11	1	67.5	13			662.8
12	1	75.5	13			599.7

TYPE 5						
PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 26						
Bursts in Trial: 16						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	56.8	10			226.656
2	2	99.5	10	1082		715.72
3	2	75.4	10	1395		149.6
4	1	77.4	10			119.85
5	2	58.6	10	1305		413.82
6	3	89	10	1823	1270	38.61

7	2	56.4	10	1778		283.19
8	1	69.8	10			120.21
9	2	76.2	10	1913		541.38
10	2	69.9	10	1269		35.34
11	2	78.9	10	1361		136.42
12	3	61	10	1797	1885	170.84
13	1	95.3	10			127.77
14	1	75.6	10			99.16
15	2	88.5	10	1960		84.5
16	2	61.7	10	1468		254.1

**TYPE 5**  
**PARAMETER SHEET**

Rohde & Schwarz  
 Pulse Sequencer

**Trial Number : 27**

**Bursts in Trial: 13**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	90.9	5	1057		787.509
2	2	50.9	5	1167		886.103
3	2	74.3	5	1003		22.806
4	2	51.5	5	1642		74.009
5	2	86.5	5	1520		198.412
6	2	80.7	5	1646		614.975
7	2	57.7	5	1710		775.058
8	2	74.8	5	1766		316.482
9	1	66.5	5			440.585
10	1	52.7	5			196.158
11	2	65.8	5	1146		361.241
12	2	98.7	5	1027		678.254
13	2	53.8	5	1192		237.477

**TYPE 5**  
**PARAMETER SHEET**

Rohde & Schwarz  
 Pulse Sequencer

SHEET						
Trial Number : 28						
Bursts in Trial: 12						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	91.5	5	1046		749.939
2	2	57.5	5	1657		78.56
3	2	84.6	5	1592		577.91
4	3	92.6	5	1535	1806	525.54
5	2	94.8	5	1481		40.38
6	3	53.7	5	1766	1559	690.86
7	2	65	5	1415		907.73
8	2	54.8	5	1739		200.96
9	3	74.7	5	1772	1331	47.82
10	2	80.3	5	1574		907.35
11	3	69.6	5	1896	1177	882.6
12	2	51.4	5	1457		886.6

TYPE 5						
PARAMETER						
SHEET						
Trial Number : 29						
Bursts in Trial: 8						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	67.6	7			1086.11
2	1	95.8	7			802.45
3	1	74	7			611.02
4	2	61.2	7	1149		905.46
5	2	96.1	7	1721		885.82
6	2	93.8	7	1875		365.18
7	3	92.6	7	1672	1866	1264

8	3	60.5	7	1167	1818	1003.9
---	---	------	---	------	------	--------

**TYPE 5**

**PARAMETER SHEET**

Rohde & Schwarz  
Pulse Sequencer

**Trial Number : 30**

**Bursts in Trial: 11**

Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	1	90.2	10			1043.51
2	3	83.9	10	1549	1869	672.291
3	1	78.1	10			590.252
4	2	62.1	10	1830		915.123
5	1	96	10			1044.634
6	1	62.6	10			631.795
7	3	65.9	10	1754	1271	432.075
8	2	88.6	10	1970		355.406
9	2	84.4	10	1521		338.487
10	1	84.9	10			569.718
11	3	56.6	10	1097	1614	77.309

**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)
24	5495	72	2	5497	6
21	5512	63	46	5499	138
25	5509	75	36	5511	108
31	5497	93	45	5503	135
35	5531	105	36	5535	108
65	5544	195	23	5507	69
65	5549	195	52	5509	156
86	5552	258	64	5523	192
89	5491	267	65	5555	195
34	5499	102	72	5517	216
/	/	/	74	5539	222
/	/	/	89	5561	267

Trial Number : 3			Trial Number : 4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5493	36	14	5497	42
14	5501	42	23	5519	69
16	5511	48	35	5493	105
35	5523	105	43	5495	129
36	5529	108	45	5528	135
46	5530	138	53	5533	159
56	5531	168	46	5550	138
58	5544	174	48	5547	144

63	5551	189	53	5558	159
66	5517	198	49	5492	147
71	5529	213	38	5567	114
74	5568	222	47	5499	141
76	5566	228	50	5497	150
80	5531	240	80	5493	240
83	5491	249	86	5499	258
90	5562	270	88	5501	264

Trial Number : 5			Trial Number : 6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5499	39	16	5501	48
23	5495	69	36	5493	108
25	5511	75	36	5497	108
46	5514	138	46	5501	138
58	5518	174	42	5507	126
66	5523	198	37	5525	111
72	5538	216	57	5522	171
74	5546	222	67	5534	201
84	5498	252	64	5555	192
89	5561	267	78	5550	234
90	5566	270	74	5560	222
30	5562	90	79	5568	237
43	5561	129	85	5563	255
/	/	/	69	5497	207
/	/	/	58	5495	174
/	/	/	95	5509	285
/	/	/	98	5548	294

Trial Number : 7			Trial Number : 8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
24	5492	72	14	5501	42
34	5536	102	24	5499	72
45	5533	135	32	5497	96
54	5553	162	23	5505	69
57	5561	171	42	5521	126
61	5494	183	49	5526	147
64	5510	192	50	5537	150
67	5496	201	57	5495	171
70	5482	210	60	5542	180

72	5556	216	65	5527	195
75	5541	225	70	5499	210
76	5501	228	74	5492	222
77	5505	231	79	5525	237
79	5509	237	88	5538	264
80	5525	240	79	5545	237
86	5529	258	89	5556	267
89	5536	267	94	5537	282
90	5566	270	97	5567	291
98	5556	294	90	5529	270

Trial Number : 9			Trial Number : 10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5495	18	14	5497	42
19	5501	57	17	5495	51
24	5521	72	19	5494	57
26	5496	78	22	5522	66
33	5519	99	25	5532	75
36	5526	108	28	5539	84
39	5531	117	31	5545	93
42	5566	126	36	5549	108
47	5554	141	40	5556	120
51	5541	153	47	5559	141
56	5539	168	48	5558	144
67	5559	201	57	5560	171
69	5493	207	66	5561	198
79	5491	237	75	5563	225
84	5494	252	79	5565	237
99	5499	297	89	5569	267

Trial Number : 11			Trial Number : 12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
		18			45
6	5491		15	5502	
15	5513	45	25	5543	75
23	5560	69	28	5569	84
25	5497	75	32	5547	96
28	5495	84	35	5538	105
35	5529	105	45	5526	135
33	5543	99	53	5509	159

37	5523	111	58	5518	174
39	5555	117	65	5527	195
42	5563	126	68	5555	204
45	5527	135	75	5557	225
57	5498	171	77	5548	231
59	5558	177	79	5559	237
63	5568	189	89	5539	267
68	5566	204	90	5566	270
74	5531	222	27	5560	81
79	5509	237	/	/	/
89	5499	267	/	/	/

Trial Number : 13			Trial Number : 14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5492	12	16	5492	48
6	5503	18	27	5495	81
27	5511	81	36	5498	108
31	5539	93	47	5501	141
35	5553	105	58	5507	174
37	5492	111	69	5524	207
46	5498	138	71	5527	213
45	5538	135	73	5529	219
47	5539	141	74	5539	222
48	5511	144	76	5533	228
50	5525	150	79	5493	237
51	5547	153	82	5546	246
56	5539	168	84	5555	252
62	5522	186	86	5561	258
64	5535	192	89	5549	267
69	5501	207	90	5499	270
70	5497	210	92	5498	276
79	5559	237	93	5501	279
89	5498	267	96	5509	288
91	5496	273	97	5500	291
93	5497	279	98	5529	294
97	5559	291	47	5521	141
/	/	/	75	5533	225
/	/	/	39	5559	117

Trial Number : 15			Trial Number : 16		
Hopping	Frequency	Pulse Start (ms)	Hopping	Frequency	Pulse Start

Number	(MHz)		Number	(MHz)	(ms)
18	5492	54	17	5495	51
25	5496	75	23	5500	69
32	5499	96	23	5503	69
37	5500	111	35	5510	105
38	5504	114	39	5525	117
41	5506	123	44	5529	132
43	5517	129	48	5432	144
48	5518	144	52	5539	156
57	5529	171	54	5546	162
59	5546	177	60	5557	180
62	5559	186	63	5566	189
70	5566	210	67	5499	201
/	/	/	72	5493	216
/	/	/	87	5569	261

Trial Number : 17			Trial Number : 18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5499	21	11	5496	33
22	5491	66	14	5499	42
29	5501	87	16	5512	48
32	5509	96	26	5515	78
39	5511	117	28	5519	84
46	5519	138	34	5526	102
48	5522	144	38	5531	114
53	5534	159	40	5537	120
59	5545	177	41	5549	123
63	5546	189	47	5556	141
68	5556	204	58	5561	174
72	5562	216	60	5563	180
75	5517	225	62	5490	186
79	5557	237	75	5495	225
80	5427	240	79	5500	237
81	5538	243	80	5511	240
83	5549	249	84	5524	252
85	5495	255	89	5528	267
87	5496	261	90	5538	270
90	5497	270	93	5549	279
93	5525	279	96	5558	288
95	5535	285	/	/	/
96	5555	288	/	/	/

98	5556	294	/	/	/
----	------	-----	---	---	---

Trial Number : 19			Trial Number : 20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5492	36	17	5491	51
16	5496	48	26	5494	78
19	5501	57	38	5495	114
21	5532	63	39	5520	117
25	5522	75	41	5511	123
29	5511	87	43	5519	129
31	5519	93	47	5530	141
35	5526	105	48	5535	144
39	5532	117	50	5541	150
41	5543	123	51	5544	153
48	5536	144	56	5552	168
49	5538	147	59	5558	177
51	5500	153	60	5451	180
53	5505	159	63	5559	189
57	5509	171	68	5560	204
62	5550	186	70	5561	210
69	5559	207	89	5566	267
78	5452	234	/	/	/
79	5562	237	/	/	/
98	5564	294	/	/	/

Trial Number : 21			Trial Number : 22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5491	45	7	5496	21
25	5496	75	26	5491	78
26	5502	78	25	5527	75
28	5519	84	26	5492	78
31	5501	93	35	5512	105
35	5504	105	36	5518	108
36	5507	108	37	5509	111
37	5511	111	38	5533	114
46	5514	138	45	5538	135
49	5517	147	52	5549	156
51	5519	153	56	5551	168
53	5522	159	59	5558	177
59	5526	177	61	5561	183

67	5533	201	65	5568	195
69	5544	207	/	/	/
70	5497	210	/	/	/
79	5558	237	/	/	/
89	5568	267	/	/	/

Trial Number : 23			Trial Number : 24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5491	42	14	5493	42
18	5494	54	17	5498	51
23	5499	69	21	5507	63
26	5500	78	23	5491	69
27	5504	81	26	5521	78
30	5506	90	32	5523	96
31	5512	93	35	5526	105
36	5516	108	37	5531	111
46	5519	138	43	5536	129
49	5521	147	47	5538	141
52	5425	156	52	5541	156
57	5541	171	56	5547	168
60	5532	180	57	5551	171
61	5543	183	65	5557	195
68	5555	204	72	5561	216
70	5565	210	79	5566	237
78	5562	234	/	/	/
89	5526	267	/	/	/
90	5538	270	/	/	/

Trial Number : 25			Trial Number : 26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5499	39	8	5495	24
14	5495	42	12	5491	36
12	5494	36	15	5502	45
16	5502	48	18	5509	54
21	5505	63	21	5511	63
24	5515	72	25	5529	75
30	5522	90	28	5525	84
33	5525	99	31	5534	93
35	5497	105	34	5537	102
41	5532	123	36	5541	108

46	5566	138	37	5549	111
51	5536	153	39	5551	117
57	5498	171	45	5559	135
60	5556	180	48	5561	144
62	5548	186	51	5566	153
65	5522	195	57	5526	171
71	5499	213	62	5516	186
75	5536	225	67	5500	201
77	5531	231	97	5502	291
81	5519	243	/	/	/
86	5537	258	/	/	/
90	5529	270	/	/	/
95	5562	285	/	/	/
98	5549	294	/	/	/

Trial Number : 27			Trial Number : 28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5493	36	6	5499	18
13	5496	39	11	5492	33
14	5520	42	15	5501	45
18	5519	54	19	5504	57
21	5533	63	27	5509	81
24	5542	72	36	5514	108
26	5556	78	44	5519	132
31	5566	93	46	5529	138
35	5529	105	49	5525	147
42	5516	126	62	5533	186
47	5532	141	68	5542	204
51	5539	153	72	5549	216
54	5529	162	78	5559	234
59	5491	177	79	5553	237
61	5498	183	82	5552	246
64	5524	192	86	5560	258
69	5526	207	98	5561	294
72	5533	216	66	5564	198
76	5519	228	29	5566	87
79	5555	237	/	/	/
83	5562	249	/	/	/
95	5566	285	/	/	/

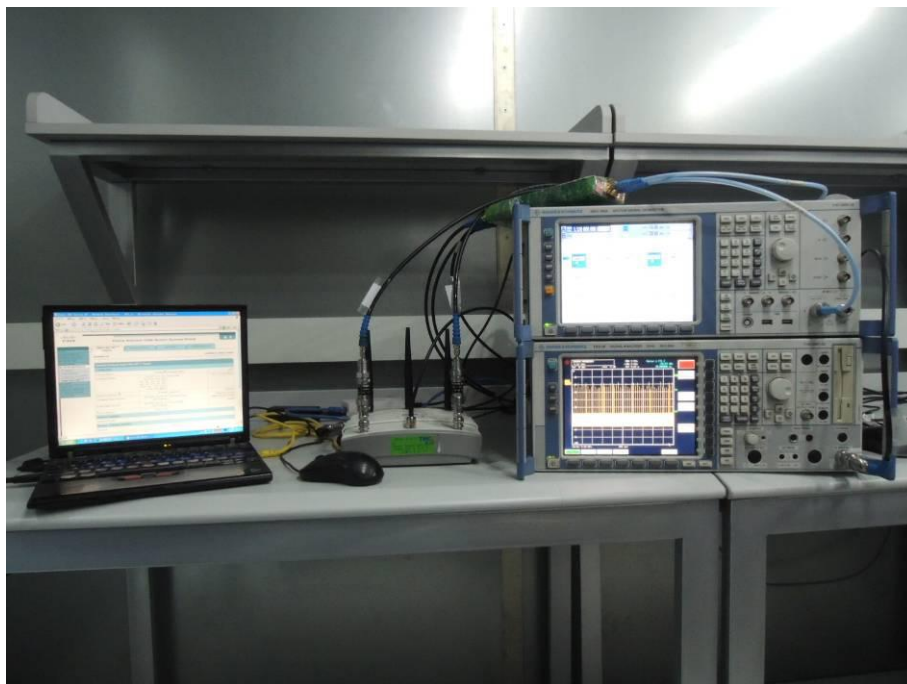
<b>Trial Number : 29</b>	<b>Trial Number : 30</b>
--------------------------	--------------------------



Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5499	36	14	5491	42
17	5492	51	24	5499	72
25	5502	75	28	5520	84
29	5513	87	35	5521	105
35	5518	105	38	5500	114
41	5522	123	47	5508	141
44	5529	132	52	5519	156
58	5532	174	58	5529	174
62	5539	186	62	5533	186
68	5545	204	71	5543	213
73	5555	219	78	5553	234
78	5567	234	82	5498	246
95	5569	285	83	5499	249
33	5537	99	89	5566	267
49	5546	147	92	5535	276
/	/	/	93	5569	279
/	/	/	96	5549	288

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




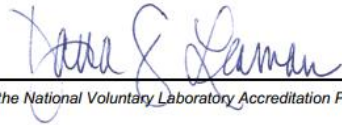
### Layout of Conducted Test



## ANNEX C: EUT parameters

Disclaimer: The antenna gain and rf cable(Customer declares that the line loss is 2dB) provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

## ANNEX D: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p>  	
<hr/> <b>Certificate of Accreditation to ISO/IEC 17025:2017</b> <hr/>	
NVLAP LAB CODE: 600118-0	
<b>Telecommunication Technology Labs, CAICT</b> Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
<b>Electromagnetic Compatibility &amp; Telecommunications</b>	
<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>	
2020-09-29 through 2021-09-30 <i>Effective Dates</i>	  <i>For the National Voluntary Laboratory Accreditation Program</i>

\*\*\* END OF REPORT BODY \*\*\*