



# RADIO TEST REPORT

**Test Report No. : 11232774H-C-R1**

**Applicant** : **silex technology, Inc.**  
**Type of Equipment** : **Wireless LAN PCI Express Mini Card Module**  
**Model No.** : **SX-PCEAN**  
**FCC ID** : **N6C-SXPCEAN**  
**Test regulation** : **FCC Part 15 Subpart E: 2015**  
**DFS test only**  
**(Class II permissive change)**  
\*This test report applies to Wireless LAN (5GHz W56 band (5500 MHz - 5700 MHz)) for Class II permissive change of W56 band addition.

**Test Result** : **Complied**

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.
6. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. This report is a revised version of 11232774H-C. 11232774H-C is replaced with this report.

**Date of test:** May 19 and 24, 2016

**Representative test engineer:**



Satofumi Matsuyama  
Engineer  
Consumer Technology Division

**Approved by:**



Tsubasa Takayama  
Engineer  
Consumer Technology Division



NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation.  
\*As for the range of Accreditation in NVLAP, you may refer to the WEB address,  
[http://japan.ul.com/resources/emc\\_accredited/](http://japan.ul.com/resources/emc_accredited/)

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<b>CONTENTS</b>	<b>PAGE</b>
<b>SECTION 1: Customer information.....</b>	<b>4</b>
<b>SECTION 2: Equipment under test (E.U.T.).....</b>	<b>4</b>
<b>SECTION 3: Scope of Report.....</b>	<b>5</b>
<b>SECTION 4: Test specification, procedures &amp; results.....</b>	<b>5</b>
<b>SECTION 5: Operation of E.U.T. during testing.....</b>	<b>10</b>
<b>SECTION 6: U-NII Detection Bandwidth.....</b>	<b>18</b>
<b>SECTION 7: Initial Channel Availability Check Time .....</b>	<b>20</b>
<b>SECTION 8: Radar Burst at the Beginning of the Channel Availability Check Time.....</b>	<b>21</b>
<b>SECTION 9: Radar Burst at the End of the Channel Availability Check Time .....</b>	<b>23</b>
<b>SECTION 10: Channel Move Time, Channel Closing Transmission Time.....</b>	<b>25</b>
<b>SECTION 11: Non-Occupancy Period .....</b>	<b>27</b>
<b>SECTION 12: In-Service Monitoring(Statistical Performance Check) .....</b>	<b>29</b>
<b>APPENDIX 1: Data of DFS test .....</b>	<b>31</b>
<b>APPENDIX 2: Test instruments .....</b>	<b>86</b>
<b>APPENDIX 3: Photographs of test setup .....</b>	<b>87</b>

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## **SECTION 1: Customer information**

Company Name : silex technology, Inc.  
Address : 2-3-1 Hikaridai, Seika-cho, Kyoto 619-0237, Japan  
Telephone Number : +81-774-98-3878  
Facsimile Number : +81-774-98-3758  
Contact Person : Toshiro Kometani

## **SECTION 2: Equipment under test (E.U.T.)**

### **2.1 Identification of E.U.T.**

Type of Equipment : Wireless LAN PCI Express Mini Card Module  
Model No. : SX-SDMAN  
Serial No. : Refer to Section 4, Clause 4.2  
Rating : DC 3.3 V  
Receipt Date of Sample : April 12, 2016  
Country of Mass-production : Japan  
Condition of EUT : Production model  
Modification of EUT : No Modification by the test lab

### **2.2 Product Description**

#### **General Specification**

Clock frequency(ies) in the system : 40MHz

#### **Radio Specification**

Radio Type : Transceiver  
Method of Frequency Generation : Synthesizer  
Power Supply (inner) : DC1.2V

#### **Specification of Wireless LAN (IEEE802.11b/g/a/n-20/n-40)**

	IEEE802.11b	IEEE802.11g	IEEE802.11a	IEEE802.11n (20 M band)	IEEE802.11n (40 M band)
Frequency of operation	2412-2462MHz	2412-2462MHz	5180-5320MHz 5500-5700 MHz*1) 5745-5825MHz	2412 - 2462MHz 5180-5320MHz 5500-5700 MHz*1) 5745-5825MHz	2422 - 2452MHz 5190 - 5310MHz 5510-5670MHz*1) 5755 - 5795MHz
Type of modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	OFDM (64QAM, 16QAM, QPSK, BPSK)		
Channel spacing	5MHz		20MHz	2.4GHz band 5MHz 5GHz band 20MHz	2.4GHz band 5MHz 5GHz band 40MHz
Antenna type	Sleeve antenna (Omni-Directional)				
Antenna Gain: G <sub>ANT</sub>	1.5dBi@2.4GHz Band, 2.1dBi@5GHz Band				
Directional Gain	4.51dBi@2.4GHz Band, 5.11dBi@5GHz Band (G <sub>ANT</sub> + 10log2)				
Antenna Connector type	U.FL Alternative connector				

\*1) W56 band is applied for this report.

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### **SECTION 3: Scope of Report**

This report only covers DFS requirement, as specified by the following referenced procedures.

### **SECTION 4: Test specification, procedures & results**

#### **4.1 Test Specification**

Test Specification	:	FCC Part 15 Subpart E: 2015, final revised on November 23, 2015 *Some parts are effective on and after December 17, 2015 or December 23, 2015. The revision does not affect the test specification applied to the EUT.
Title	:	FCC 47CFR Part15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements
Test Specification	:	KDB905462 D02 UNII DFS Compliance Procedures New Rules v02
Title	:	COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED- NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350MHz AND 5470-5725MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION
Test Specification	:	KDB905462 D04 Operational Modes for DFS Testing New Rules v01
Title	:	OPERATIONAL MODES SUGGESTED FOR DFS TESTING

#### **FCC 15.31 (e)**

The RF Module has own regulator.

The RF Module is constantly provided voltage through own regulator regardless of input voltage (DC1.2V).

Therefore, this EUT complies with the requirement.

#### **FCC Part 15.203/212 Antenna requirement**

The EUT has a unique antenna connector (U.FL on the Module and Reverse SMA for Antenna itself).

Therefore the equipment complies with the requirement of 15.203/212.

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## 4.2 Procedures and results

**Table 1: Applicability of DFS Requirements**

<Master mode>

Requirement	Operating Mode	Test Procedures	Limits	Deviation	Results
	Master				
U-NII Detection Bandwidth	Yes	FCC/IC: KDB905462 D02 7.8.1	FCC/IC:KDB905462 D02 5.3	N/A	Complied
Initial Channel Availability Check Time	Yes	FCC/IC: KDB905462 D02 7.8.2.1	FCC:FCC15.407(h)(2)(ii) IC:RSS-247 6.3(2)(ii)	N/A	Complied
Radar Burst at the Beginning of the Channel Availability Check Time	Yes	FCC/IC: KDB905462 D02 7.8.2.2	FCC:FCC15.407(h)(2)(ii) IC:RSS-247 6.3(2)(ii)	N/A	Complied
Radar Burst at the End of the Channel Availability Check Time	Yes	FCC/IC: KDB905462 D02 7.8.2.3	FCC:FCC15.407(h)(2)(ii) IC:RSS-247 6.3(2)(ii)	N/A	Complied
In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time	Yes	FCC/IC: KDB905462 D02 7.8.3	FCC:FCC15.407(h)(2)(iii) IC:RSS-247 6.3(2)(iii)(iv)	N/A	Complied
In-Service Monitoring for Non-Occupancy period	Yes	FCC/IC: KDB905462 D02 7.8.3	FCC: FCC15.407(h)(2)(iv) IC:RSS-247 6.3(2)(v)	N/A	Complied
Statistical Performance Check	Yes	FCC/IC: KDB905462 D02 7.8.4	FCC/IC:KDB905462 D02 6.1,6.2,6.3	N/A	Complied
Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0422.					

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**Table 2 DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection**

Maximum Transmit Power	Value (See Notes 1,2, and 3)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt and power spectral density < 10dBm/MHz	-62 dBm
< 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
<p>Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p>Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.</p> <p>Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>	

**Table 3 DFS Response Requirement Values**

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth See Note 3
<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 signal 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>	

**Table 4 Short Pulse Radar Test Waveform**

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 $\{(1/360) * (19 * 10^6 / \text{PRI}_{\text{μsec}})\}$	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 (Rader Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

**Table 5 Long Pulse Radar Test Waveform**

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

**Table 6 Frequency Hopping Radar Test Waveform**

Radar Type	Pulse Width (μsec)	PRI (μsec)	Pulse per Hop (kHz)	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

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### 4.3 Test Location

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	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	2973C-1	19.2 x 11.2 x 7.7m	7.0 x 6.0m	No.1 Power source room
No.2 semi-anechoic chamber	2973C-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 semi-anechoic chamber	2973C-3	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.3 Preparation room
No.3 shielded room	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 semi-anechoic chamber	2973C-4	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.4 Preparation room
No.4 shielded room	-	4.0 x 6.0 x 2.7m	N/A	-
No.5 semi-anechoic chamber	-	6.0 x 6.0 x 3.9m	6.0 x 6.0m	-
No.6 shielded room	-	4.0 x 4.5 x 2.7m	4.0 x 4.5 m	-
No.6 measurement room	-	4.75 x 5.4 x 3.0m	4.75 x 4.15 m	-
No.7 shielded room	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.8 measurement room	-	3.1 x 5.0 x 2.7m	N/A	-
No.9 measurement room	-	8.0 x 4.6 x 2.8m	2.4 x 2.4m	-
No.11 measurement room	-	6.2 x 4.7 x 3.0m	4.8 x 4.6m	-

\* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

### 4.4 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.  
Time Measurement uncertainty for this test was: (±) 0.012%

### 4.5 Data of DFS test, Test instruments of DFS, Test set up

Refer to APPENDIX.

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## **SECTION 5: Operation of E.U.T. during testing**

### **5.1 Operating Modes**

The EUT, which is a Master Device, operates over the 5500-5700MHz range.

Power level(EIRP) of the EUT[dBm]

5500-5700MHz Band*	
Output Power (Max)	
11n-20	11n-40
18.43	16.27

\*Refer to 11232774H-A, FCC Part 15E (FCC 15.407) report for other parts than DFS.

The channel-loading of approximately 17% or greater was used for testing, and its test data was transferred from the Master Device to the Client Device for all test configurations.

The EUT utilizes the 802.11n architecture, with a 20MHz and 40MHz channel bandwidth.

WLAN traffic is generated by streaming the MPEG Test file “6 ½ Magic Hours” from the Master to the Client in full motion video mode.

#### 1. In case of Master mode

The rated output power of the Master Device is <200mW(23dBm) and power spectral density of the Master Device is <10dBm/MHz. However, worst condition was selected for interference threshold level and antenna gain according to the customer’s request. Therefore the required interference threshold level is -63 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is  $-64 + 1 + 0 = -63$  dBm (threshold level + additional 1dB + antenna gain).

It is impossible for users to change DFS control, because the DFS function is written on the firmware and users cannot access it.

The EUT was set by the software as follows:

Software name & version: LSDK 9.2

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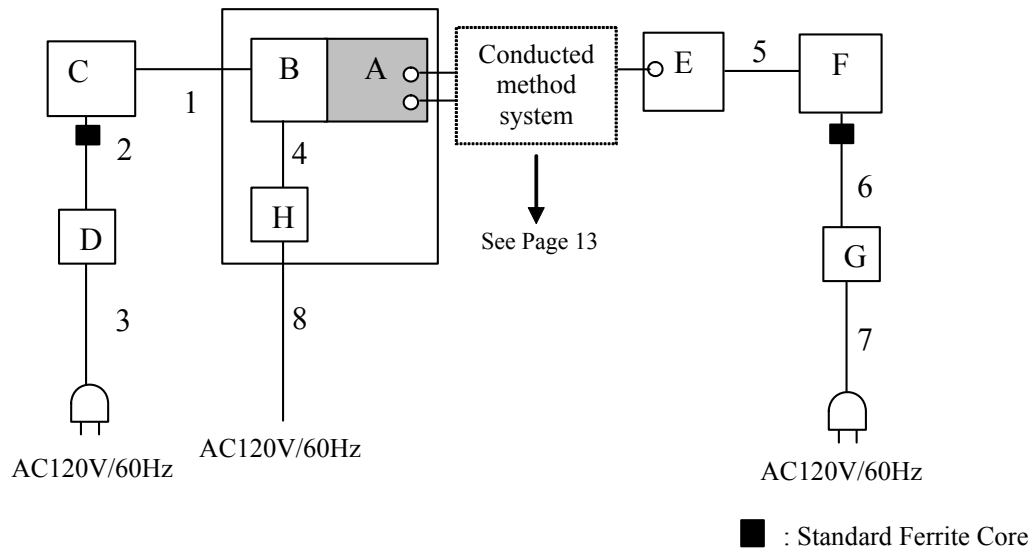
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## 5.2 Configuration and peripherals



### Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Wireless LAN PCI Express Mini Card Module	SX-PCEAN	0080925C4F4E	silex technology, Inc.	EUT
B	Jig Board	W-L02686	0080925BBD24	silex technology, Inc.	-
C	Laptop PC	7661CB9	L3K0730	Lenovo	-
D	AC Adaptor	42T4418	11S42T4418Z1ZWG0 CA8D9	Lenovo	-
E	USB wi-fi dongle	WI-U3-866D	A40707	Buffalo	-
F	Laptop PC	1952D65	L3DM302	Lenovo	-
G	AC Adaptor	92P1160	11S92P2P1160Z1ZBG H6B6DKV	Lenovo	-
H	DC Power	ZWS10B-12/A	-	TDK Lambda	-

### List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	LAN Cable	5.60	Shielded	Shielded	-
2	DC Cable	1.80	Unshielded	Unshielded	-
3	AC Cable	2.00	Unshielded	Unshielded	-
4	DC Cable	0.20	Unshielded	Unshielded	-
5	USB Cable	0.60	Shielded	Shielded	-
6	DC Cable	1.80	Unshielded	Unshielded	-
7	AC Cable	1.00	Unshielded	Unshielded	-
8	AC Cable	6.50	Unshielded	Unshielded	-

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## 5.3 Test and Measurement System

### SYSTEM OVERVIEW

The measurement system is based on a conducted test method.

The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution. The short pulse types 1, 2, 3, and 4, the long pulse type 5, and the frequency hopping type 6 parameters are randomized at run-time.

The signal monitoring equipment consists of a spectrum analyzer with the capacity to display 8001 bins on the horizontal axis. A time-domain resolution of 2 msec/bin is achievable with a 16 second sweep time, meeting the 10 seconds short pulse reporting criteria. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection.

### FREQUENCY HOPPING RADAR WAVEFORM GENERATING SUBSYSTEM

The first 100 frequencies are selected out of the hopping sequence of the randomized 475 hop frequencies. Only a *Burst* that has the frequency falling within the receiver bandwidth of the tested U-NII device is selected among those frequencies. (Frequency-domain simulation). The radar waveform generated at the start time of the selected *Burst* (Time-domain simulation) is download to the Signal Generator. If all of the randomly selected 100 frequencies do not fall within the receiver bandwidth of the U-NII device, the radar waveform is not used for the test.

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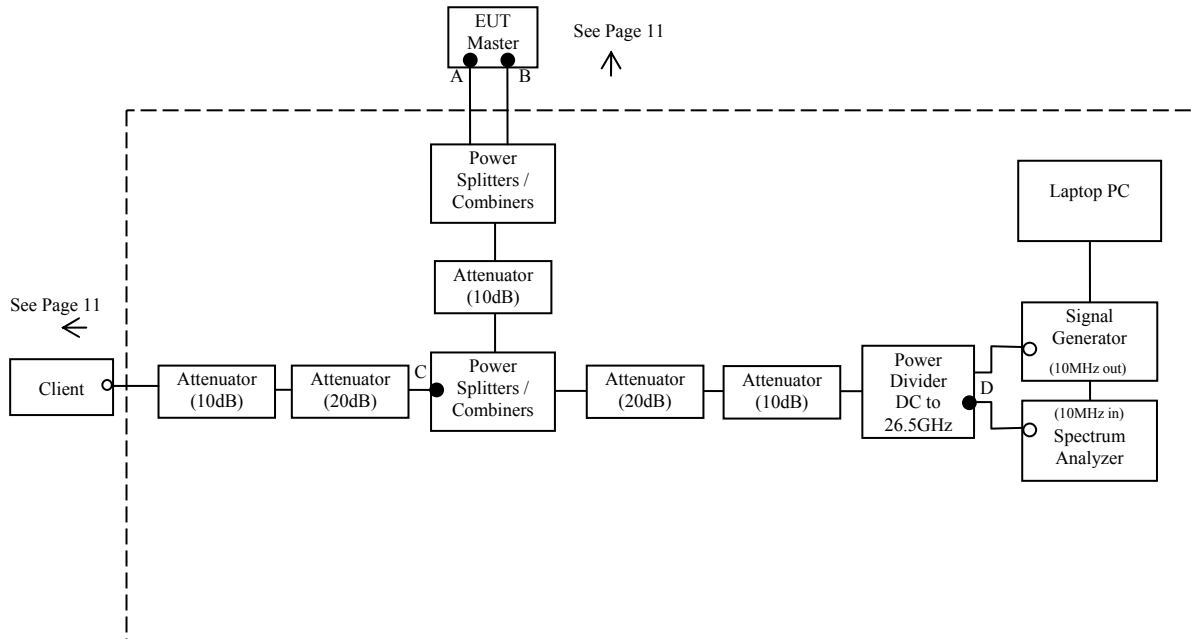
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**CONDUCTED METHODS SYSTEM BLOCK DIAGRAM**



**MEASUREMENT SYSTEM FREQUENCY REFERENCE**

Lock the signal generator and the spectrum analyzer to the same reference sources as follows: Connect the 10MHz OUT on the signal generator to the 10MHz IN on the spectrum analyzer and set the spectrum analyzer 10MHz In to On.

## **SYSTEM CALIBRATION**

<Master mode>

**Step 1:** Set the system as shown in Figure 2 of KDB905462 D02 7.2.1.

**Step 2:** Adjust each attenuator to fulfill the following three conditions:

- WLAN can be communicated, and
- Rader detection threshold level is bigger than Master Device traffic level on the spectrum analyzer, and
- Client Device traffic level is not displayed on the spectrum analyzer.

**Step 3:** Terminate 50 ohm at B, C, and D points, and connect the spectrum analyzer to the point A. (See the figure on page 13)

At the point A, adjust the signal generator and spectrum analyzer to the center frequency of the channel to be measured.

Download the applicable radar waveforms to the signal generator. Select the radar waveform, trigger a burst manually and measure the amplitude on the spectrum analyzer. Readjust the amplitude of the signal generator as required so that the peak level of the waveform is at a displayed level equal to the required or desired interference detection threshold.

Separate signal generator amplitude settings are determined as required for each radar type.

Terminate at the points A, C, and D and confirm at the point B if it has the same value as point A.

If necessary, add the attenuator to make the same level.

**Step 4:** Without changing any of the instrument settings, restore the system setting to Step 2 and adjust the Reference Level Offset of the spectrum analyzer to the level at Step 3.

By taking the above steps 1 to 4, the spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device.

See Clause 5.4 for Plots of Noise, Rader Waveforms, and WLAN signals.

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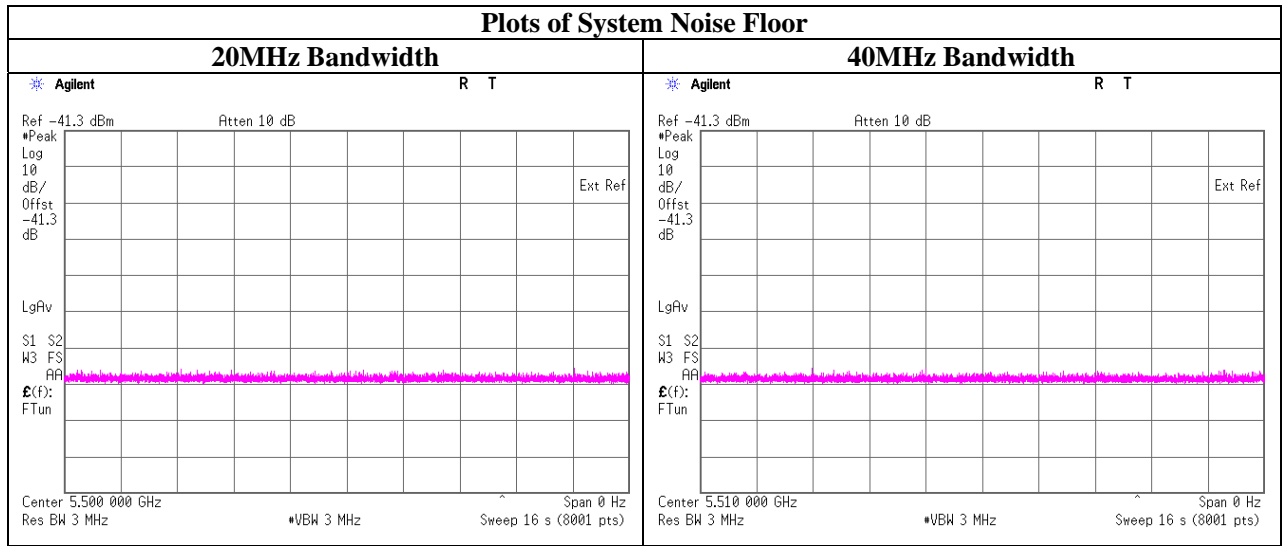
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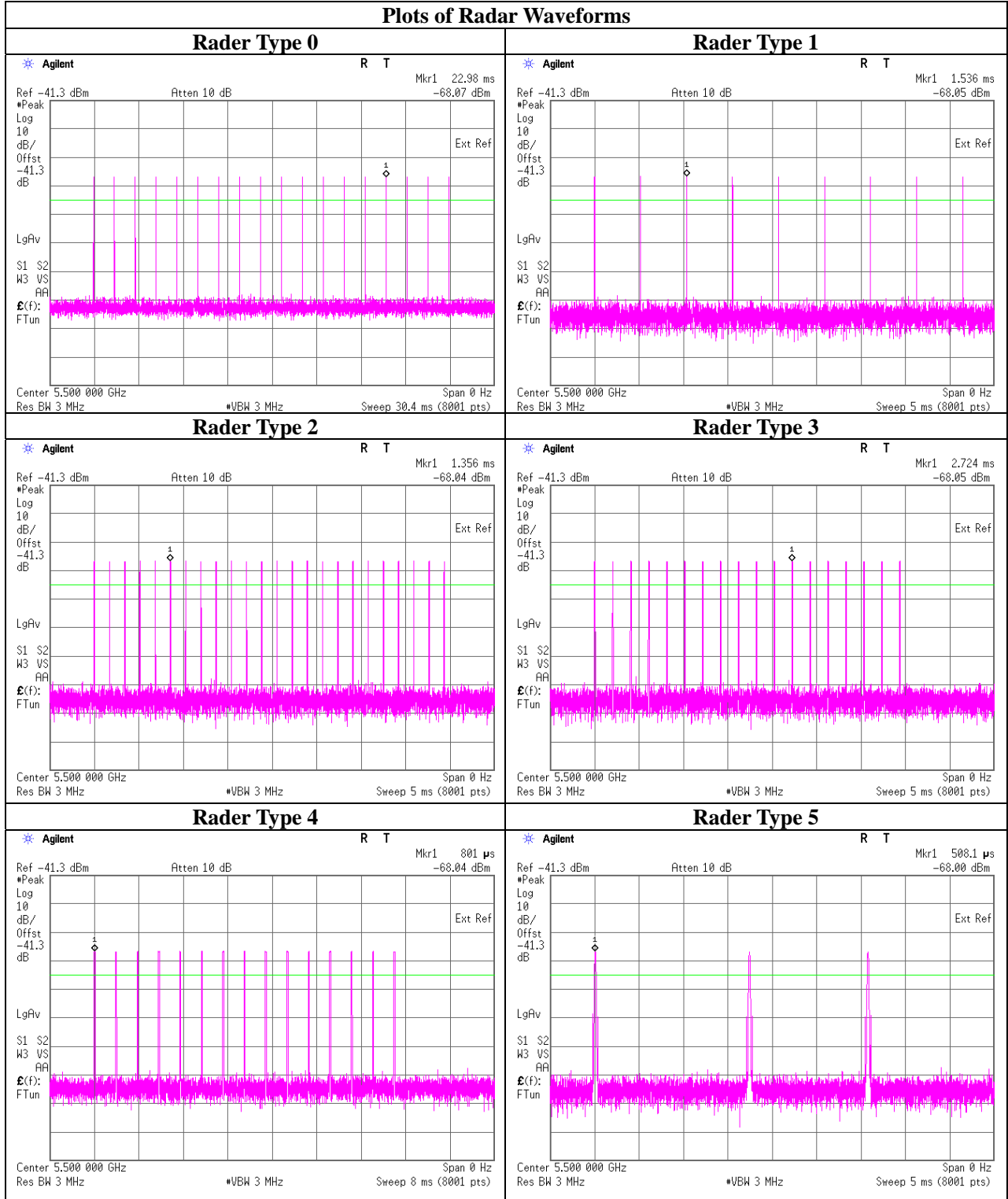
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5.4 Plots of Noise, Rader Waveforms, and WLAN signals



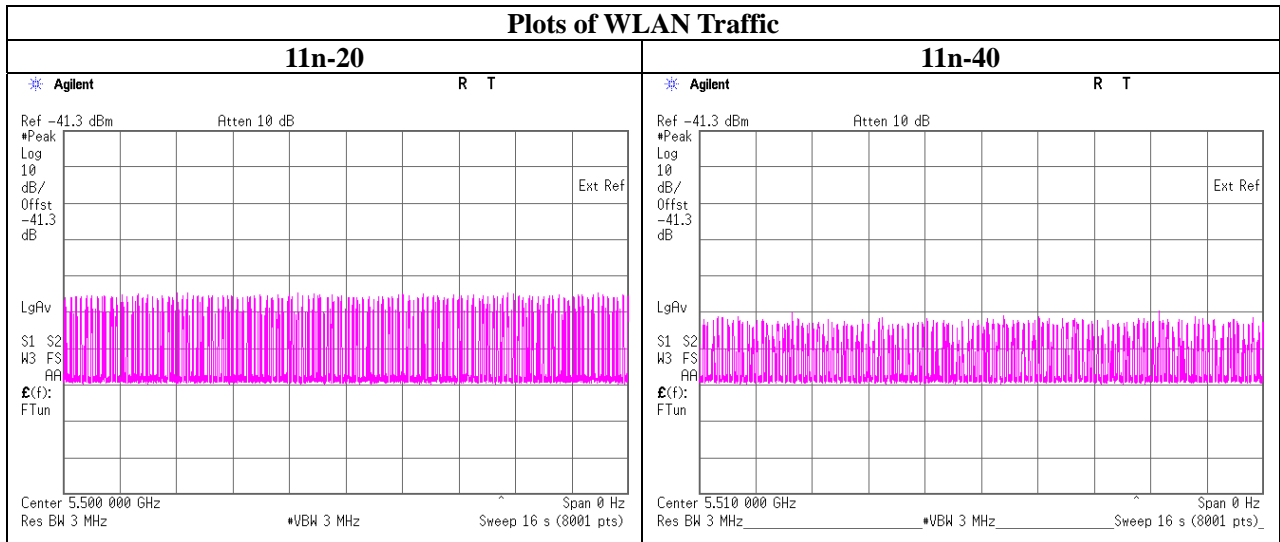
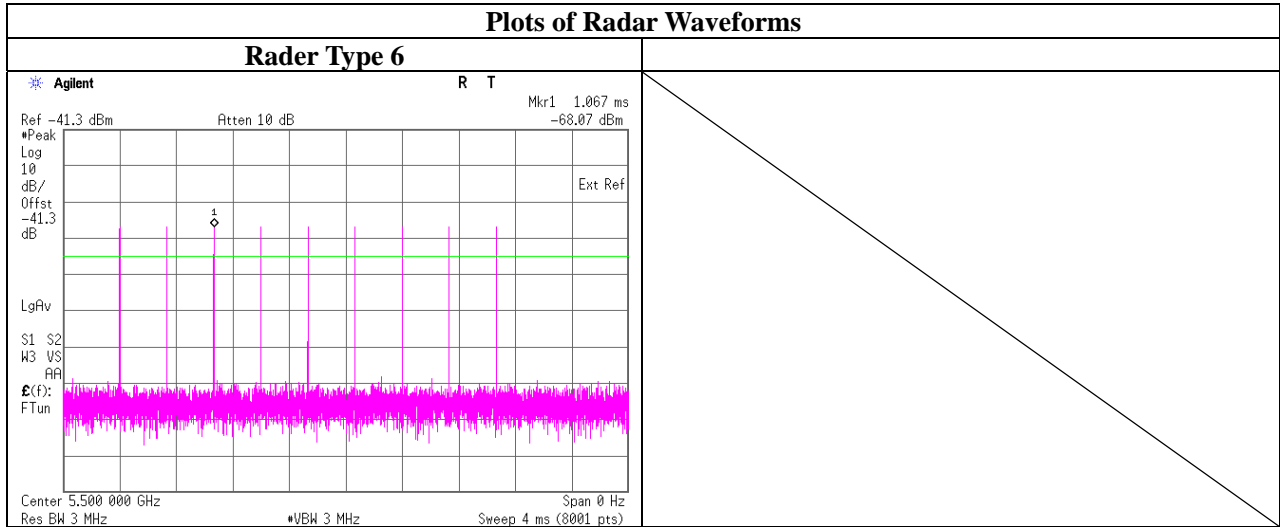
Plots of Radar Waveforms



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## **SECTION 6: U-NII Detection Bandwidth**

### **6.1 Operating environment**

Test place	Ise EMC Lab. No.6 measurement room
Date	05/24/2016
Temperature/ Humidity	23deg. C / 47% RH
Engineer	Satofumi Matsuyama

### **6.2 Test Procedure**

Adjust the equipment to produce a single Burst of the Short Pulse Radar Type 0 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.

Set the EUT 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 EUT. Repeat for a minimum of 10 trials. The EUT 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 EUT 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. 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 EUT 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. 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

Radar detection is observed by two techniques.

- a). Monitoring LAN traffic with Spectrum Analyzer.
- b). Indicator of EUT and PC connected to EUT

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**6.3 Test data**

5500MHz (11n-20)

Waveform : Radar Type 0

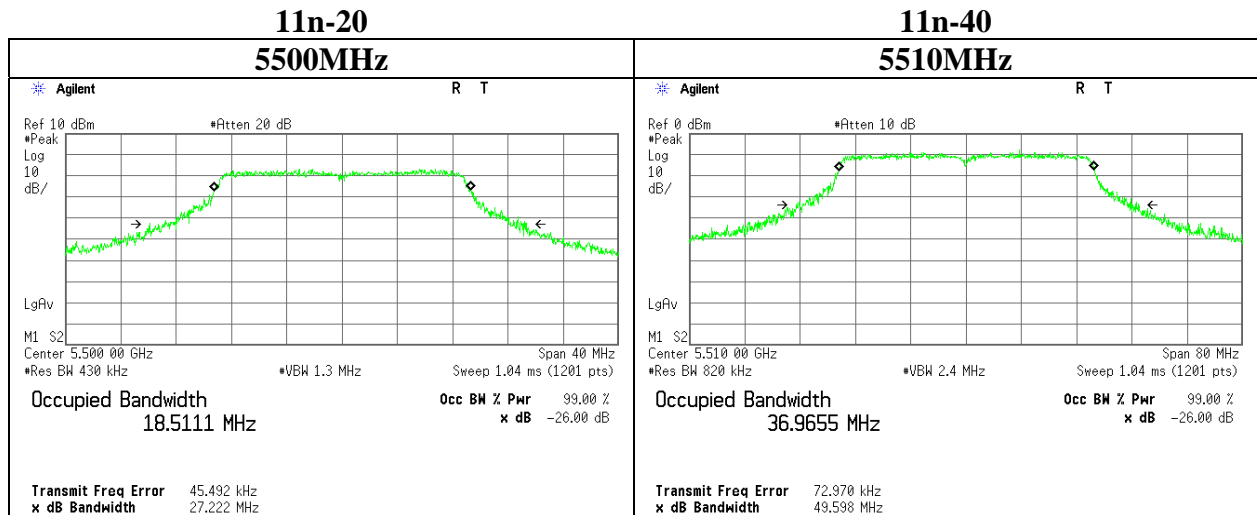
FL [MHz]	FH [MHz]	Detection Bandwidth [MHz]	99% Power Bandwidth [MHz]	Ratio of Detection BW to 99% Power BW [%]	Limit [%]	Results
5490	5510	20	18.5111	108.0	100	Pass

5510MHz (11n-40)

Waveform : Radar Type 0

FL [MHz]	FH [MHz]	Detection Bandwidth [MHz]	99% Power Bandwidth [MHz]	Ratio of Detection BW to 99% Power BW [%]	Limit [%]	Results
5490	5530	40	36.9655	108.2	100	Pass

**99% Occupied Bandwidth**



**6.4 Test result**

Test result: Pass

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## SECTION 7: Initial Channel Availability Check Time

### 7.1 Operating environment

Test place : Ise EMC Lab. No.6 measurement room  
Date : 05/24/2016  
Temperature/ Humidity : 23deg. C / 47% RH  
Engineer : Satofumi Matsuyama

### 7.2 Test Procedure

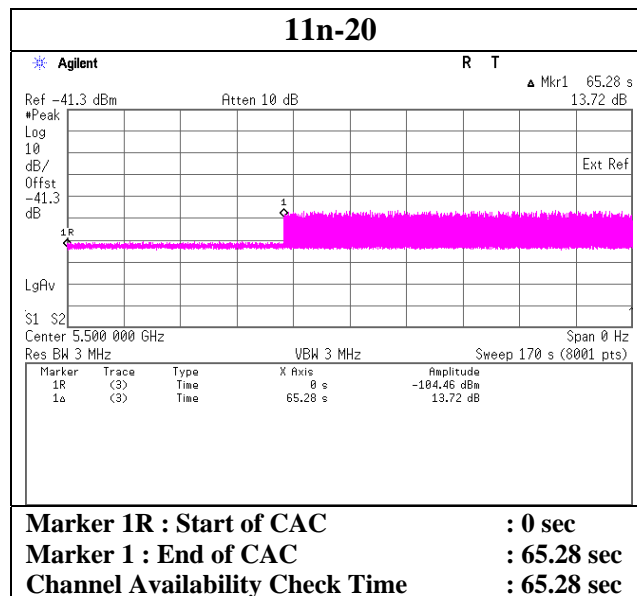
The Initial Channel Availability Check Time tests that the EUT does not emit beacon, control, or data signals on the test Channel until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel.

This test does not use any Radar Waveforms and only needs to be performed one time.

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 EUT 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.

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

### 7.3 Test data



### 7.4 Test result

Test result: Pass

**SECTION 8: Radar Burst at the Beginning of the Channel Availability Check Time**

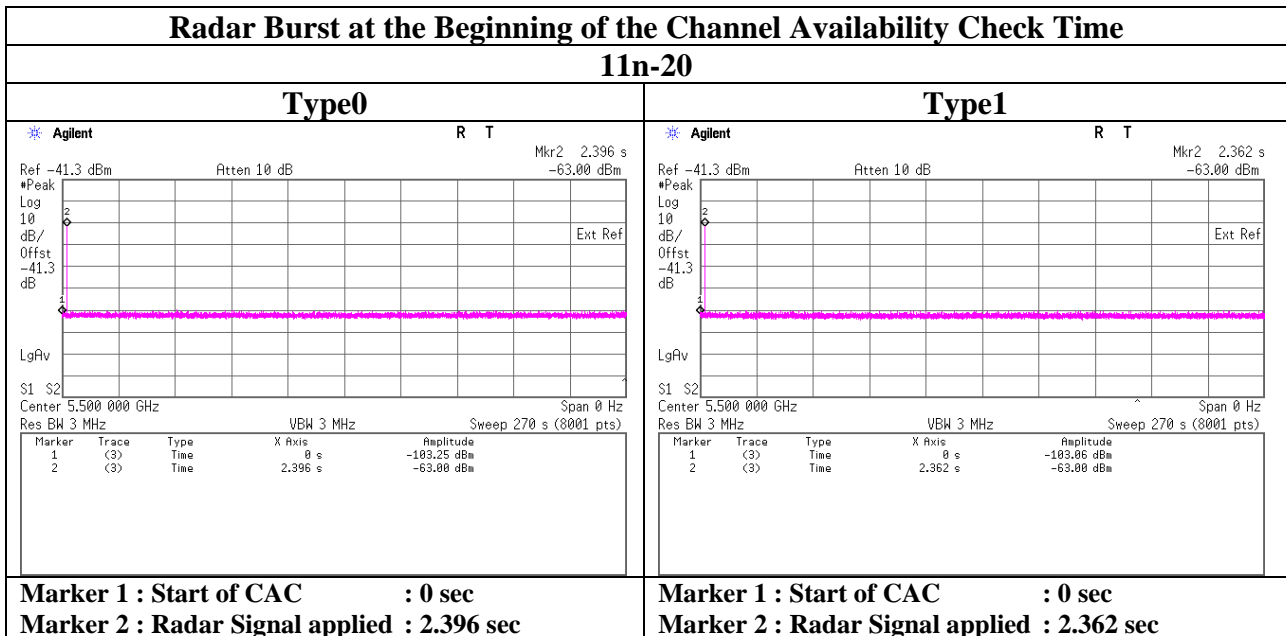
**8.1 Operating environment**

Test place : Ise EMC Lab. No.6 measurement room  
Date : 05/24/2016  
Temperature/ Humidity : 23deg. C / 47% RH  
Engineer : Satofumi Matsuyama

**8.2 Test Procedure**

A single Burst of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at Start of CAC. 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.  
Verify that during the 2.5 minute measurement window no EUT transmissions occurred on Chr.

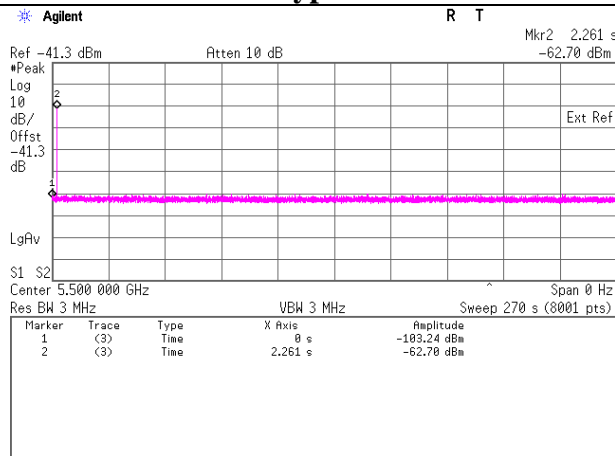
**8.3 Test data**



**Radar Burst at the Beginning of the Channel Availability Check Time**

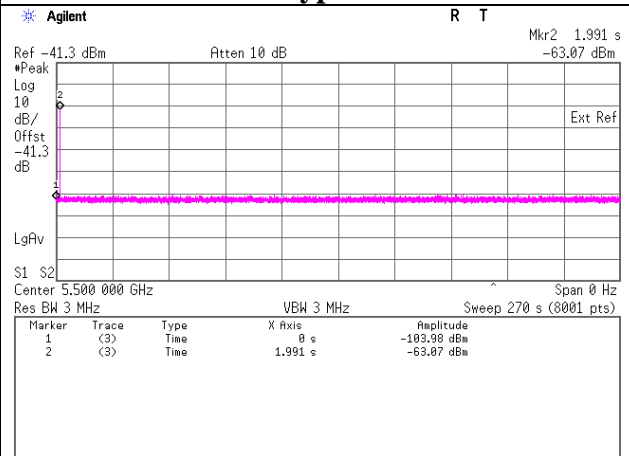
**11n-20**

**Type2**



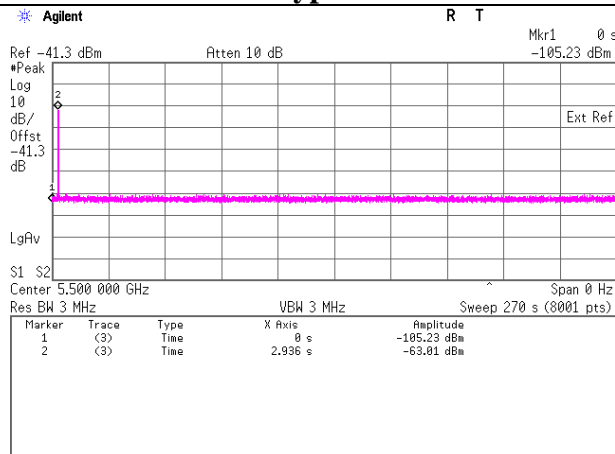
Marker 1 : Start of CAC : 0 sec  
Marker 2 : Radar Signal applied : 2.261 sec

**Type3**



Marker 1 : Start of CAC : 0 sec  
Marker 2 : Radar Signal applied : 1.991 sec

**Type4**



Marker 1 : Start of CAC : 0 sec  
Marker 2 : Radar Signal applied : 2.936 sec

**8.4 Test result**

Test result: Pass

## SECTION 9: Radar Burst at the End of the Channel Availability Check Time

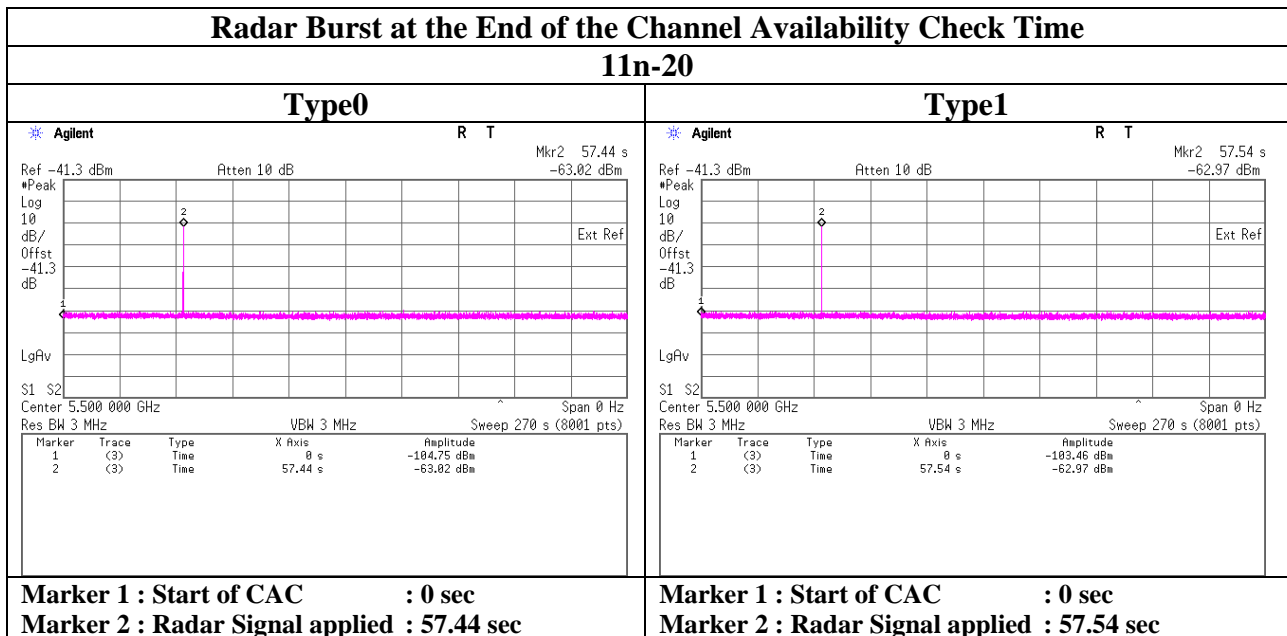
### 9.1 Operating environment

Test place : Ise EMC Lab. No.6 measurement room  
Date : 05/24/2016  
Temperature/ Humidity : 23deg. C / 47% RH  
Engineer : Satofumi Matsuyama

### 9.2 Test Procedure

A single Burst of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at Start of CAC + 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.  
Verify that during the 2.5 minute measurement window no EUT transmissions occurred on Chr.

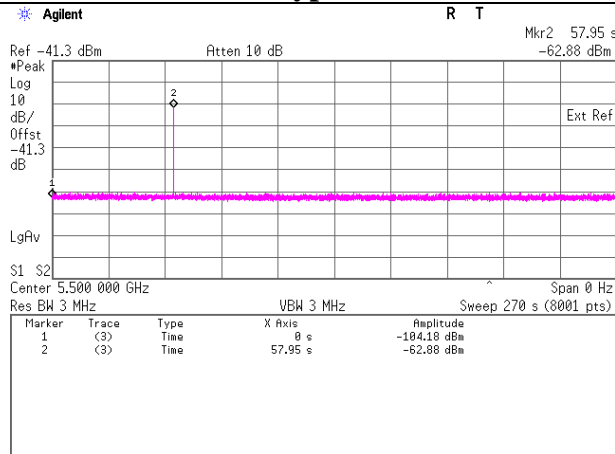
### 9.3 Test data



**Radar Burst at the End of the Channel Availability Check Time**

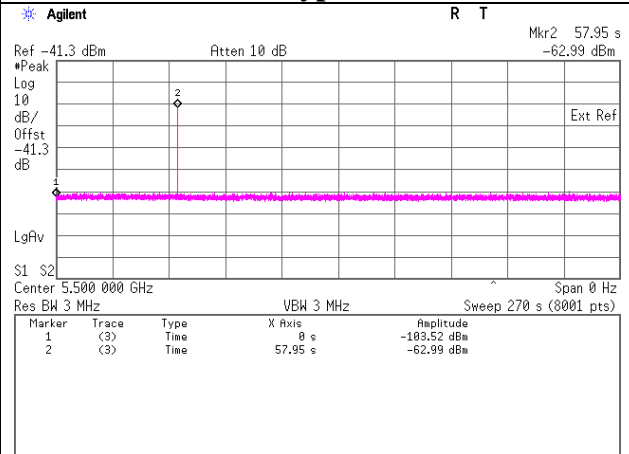
**11n-20**

**Type2**



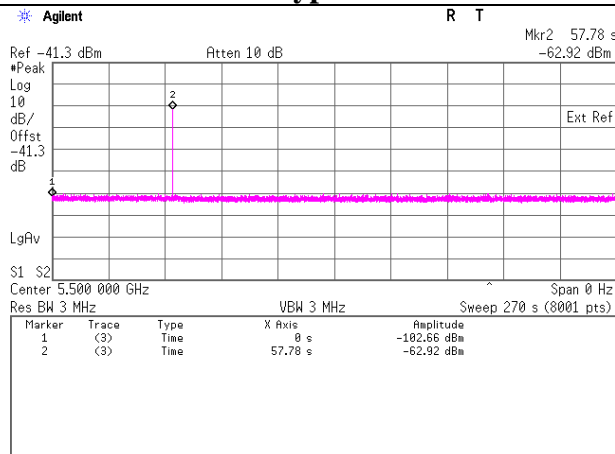
**Marker 1 : Start of CAC : 0 sec**  
**Marker 2 : Radar Signal applied : 57.95 sec**

**Type3**



**Marker 1 : Start of CAC : 0 sec**  
**Marker 2 : Radar Signal applied : 57.95 sec**

**Type4**



**Marker 1 : Start of CAC : 0 sec**  
**Marker 2 : Radar Signal applied : 57.78 sec**

**9.4 Test result**

Test result: Pass



## **SECTION 10: Channel Move Time, Channel Closing Transmission Time**

### **10.1 Operating environment**

Test place Ise EMC Lab. No.6 measurement room  
Date 05/20/2016  
Temperature/ Humidity 24deg. C / 51% RH  
Engineer Satofumi Matsuyama  
Mode 11n-40

### **10.2 Test Procedure**

Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.

The Radar Waveform generator sends a Burst of pulses for one of the Radar Types 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.

Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds.

### **10.3 Test data**

<Master Device>

11n-40

Test Item	Unit	Measurement Time	Limit	Results
Channel Move Time *1)	[sec]	0.022	10.000	Pass
Channel Closing Transmission Time *2)	[msec]	0	60	Pass

\*1) Channel Move Time is calculated as follows:

(Channel Move Time) = (End of Transmission) - (End of Burst) = 2.366-2.344

\*2) Channel Closing Transmission Time is calculated from (End of Burst + 200msec) to (End of Burst + 10sec )

(Channel Closing Transmission Time) = (Number of analyzer bins showing transmission) × (dwell time per bin)

= 0 × 2[msec]

---

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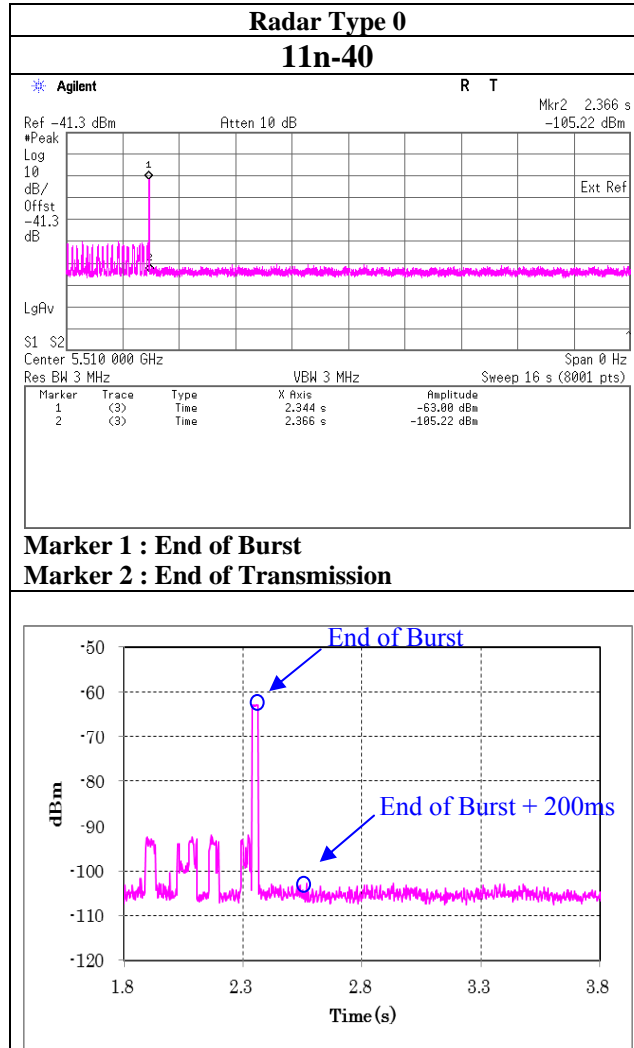
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<Master mode>



#### 10.4 Test result

Test result: Pass

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## **SECTION 11: Non-Occupancy Period**

### **11.1 Operating environment**

Test place	Ise EMC Lab. No.6 measurement room
Date	05/20/2016
Temperature/ Humidity	24deg. C / 51% RH
Engineer	Satofumi Matsuyama

### **11.2 Test Procedure**

The following two tests are performed:

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.

The Radar Waveform generator sends a Burst of pulses for one of the Radar Types 0-4(Master Device) or the Radar Types 0(Client Device) 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.

Observe the transmissions of the EUT after the Channel Move Time on the Operating Channel for duration greater than 30 minutes.

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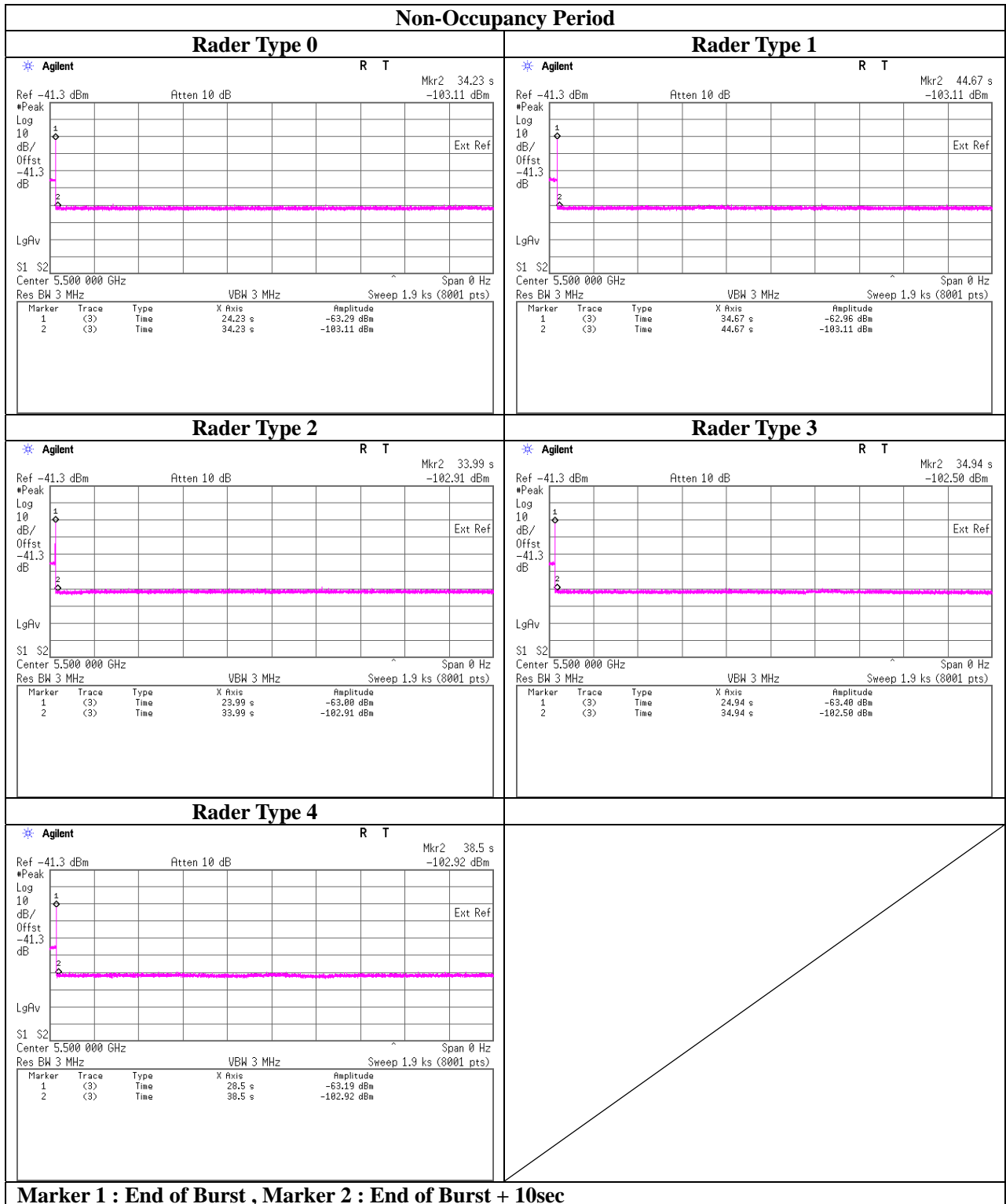
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11.3 Test data

<Master mode>



11.4 Test result

Test result: Pass

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## **SECTION 12: In-Service Monitoring(Statistical Performance Check)**

### **12.1 Operating environment**

Test place : Ise EMC Lab. No.6 measurement room  
Date : 05/23/2016  
Temperature/ Humidity : 26deg. C / 49% RH  
Engineer : Satofumi Matsuyama

### **12.2 Test Procedure**

Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.

Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels defined, on the Operating Channel. An additional 1dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.

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 1-4 and 6 to ensure detection occurs.

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.

Three subsets of trials has been performed with a minimum of ten trials per subset. The subset of trials differ in where the Long Pulse Type 5 Signal is tuned in frequency:

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

Each center frequency calculated by:

the low edge of the UUT Occupied Bandwidth  $+(0.4 * \text{Chirp Width [in MHz]})$

the high edge of the UUT Occupied Bandwidth  $-(0.4 * \text{Chirp Width [in MHz]})$

Radar detection is observed by two techniques.

- a). Monitoring LAN traffic with Spectrum Analyzer.
- b). Indicator of PC connected to EUT

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### 12.3 Test data

#### 5500MHz (11n-20)

Radar Type	Number of Trials	Number of Successful Detections	Percentage of Successful Detections [%]	Limit [%]	Results	Remarks
1	30	27	90.00	60	Pass	
2	30	26	86.67	60	Pass	
3	30	28	93.33	60	Pass	
4	30	24	80.00	60	Pass	
Aggregate of 1 to 4	-	-	87.50	80	Pass	
5	30	30	100.00	80	Pass	
6	30	29	96.67	70	Pass	

#### 5510MHz (11n-40)

Radar Type	Number of Trials	Number of Successful Detections	Percentage of Successful Detections [%]	Limit [%]	Results	Remarks
1	30	28	93.33	60	Pass	
2	30	25	83.33	60	Pass	
3	30	20	66.67	60	Pass	
4	30	24	80.00	60	Pass	
Aggregate of 1 to 4	-	-	80.83	80	Pass	
5	30	30	100.00	80	Pass	
6	30	28	93.33	70	Pass	

### 12.4 Test result

Test result: Pass

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**APPENDIX 1: Data of DFS test**

**U-NII Detection Bandwidth**

**5500MHz (11n-20)**

Frequency [MHz]	Number of Trials [Times]	Number of Detected [Times]	Ratio of Detected [%]	Mark
5490	10	10	100	FL
5491	10	10	100	
5492	10	10	100	
5493	10	10	100	
5494	10	10	100	
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5506	10	10	100	
5507	10	10	100	
5508	10	10	100	
5509	10	10	100	
5510	10	10	100	FH

**5510MHz (11n-40)**

Frequency [MHz]	Number of Trials [Times]	Number of Detected [Times]	Ratio of Detected [%]	Mark
5490	10	10	100	FL
5491	10	10	100	
5492	10	10	100	
5493	10	10	100	
5494	10	10	100	
5495	10	10	100	
5500	10	10	100	
5505	10	10	100	
5510	10	10	100	
5515	10	10	100	
5520	10	10	100	
5525	10	10	100	
5526	10	10	100	
5527	10	10	100	
5528	10	10	100	
5529	10	10	100	
5530	10	10	100	FH

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**Statistical Performance Check**

**5500MHz (11n-20)**

Trial #	Radar Type1	Radar Type2	Radar Type3	Radar Type4	Radar Type5	Radar Type6
	Detection	Detection	Detection	Detection	Detection	Detection
	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
1	YES	NO	YES	YES	YES	YES
2	YES	YES	YES	YES	YES	YES
3	YES	YES	NO	YES	YES	YES
4	YES	NO	YES	YES	YES	YES
5	YES	NO	YES	YES	YES	YES
6	YES	YES	YES	YES	YES	YES
7	YES	YES	YES	NO	YES	YES
8	YES	YES	YES	YES	YES	YES
9	YES	YES	YES	YES	YES	YES
10	YES	YES	YES	YES	YES	YES
11	YES	NO	YES	NO	YES	YES
12	YES	YES	YES	YES	YES	YES
13	YES	YES	YES	NO	YES	YES
14	YES	YES	YES	YES	YES	YES
15	NO	YES	YES	NO	YES	YES
16	YES	YES	YES	NO	YES	YES
17	YES	YES	YES	YES	YES	YES
18	YES	YES	NO	YES	YES	YES
19	NO	YES	YES	YES	YES	YES
20	YES	YES	YES	YES	YES	YES
21	YES	YES	YES	YES	YES	YES
22	YES	YES	YES	YES	YES	YES
23	YES	YES	YES	NO	YES	YES
24	YES	YES	YES	YES	YES	YES
25	YES	YES	YES	YES	YES	YES
26	YES	YES	YES	YES	YES	YES
27	YES	YES	YES	YES	YES	YES
28	NO	YES	YES	YES	YES	NO
29	YES	YES	YES	YES	YES	YES
30	YES	YES	YES	YES	YES	YES

EUT Test Frequency:5500MHz  
Radar Frequency:5500MHz



**Statistical Performance Check**

**5510MHz (11n-40)**

Trial #	Radar Type1	Radar Type2	Radar Type3	Radar Type4	Radar Type5	Radar Type6
	Detection	Detection	Detection	Detection	Detection	Detection
	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
1	YES	YES	YES	YES	YES	YES
2	YES	YES	YES	NO	YES	YES
3	YES	YES	NO	YES	YES	YES
4	YES	YES	YES	YES	YES	YES
5	YES	NO	YES	YES	YES	YES
6	YES	YES	NO	YES	YES	YES
7	YES	YES	NO	NO	YES	YES
8	YES	YES	YES	YES	YES	YES
9	YES	NO	YES	YES	YES	YES
10	YES	YES	YES	YES	YES	YES
11	YES	YES	YES	YES	YES	YES
12	YES	YES	YES	YES	YES	YES
13	YES	NO	NO	NO	YES	YES
14	YES	YES	NO	YES	YES	YES
15	YES	YES	YES	YES	YES	YES
16	YES	YES	NO	NO	YES	YES
17	YES	NO	YES	YES	YES	YES
18	YES	YES	YES	NO	YES	NO
19	YES	YES	YES	YES	YES	NO
20	YES	YES	NO	NO	YES	YES
21	YES	YES	NO	YES	YES	YES
22	YES	YES	YES	YES	YES	YES
23	NO	NO	YES	YES	YES	YES
24	YES	YES	NO	YES	YES	YES
25	NO	YES	YES	YES	YES	YES
26	YES	YES	YES	YES	YES	YES
27	YES	YES	NO	YES	YES	YES
28	YES	YES	YES	YES	YES	YES
29	YES	YES	YES	YES	YES	YES
30	YES	YES	YES	YES	YES	YES

EUT Test Frequency:5510MHz

Radar Frequency:5510MHz

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**Parameter Data sheet for Radar Type 1**

**5500MHz (11n-20)**

Radar Type1				
Trial #	Pulse Repetition Frequency Number(1 to 23)	Pulse Repetition Frequency (Pulses Per Second)	Number of Pulses	Pulse Repetition Interval (Microseconds)
1	3	1792.1	95	558
2	2	1858.7	99	538
3	9	1474.9	78	678
4	15	1253.1	67	798
5	21	1089.3	58	918
6	1	1930.5	102	518
7	10	1432.7	76	698
8	14	1285.3	68	778
9	16	1222.5	65	818
10	5	1672.2	89	598
11	4	1730.1	92	578
12	7	1567.4	83	638
13	19	1139.0	61	878
14	17	1193.3	63	838
15	20	1113.6	59	898
16	-	916.6	49	1091
17	-	425.0	23	2353
18	-	1049.3	56	953
19	-	838.9	45	1192
20	-	569.2	31	1757
21	-	612.7	33	1632
22	-	485.0	26	2062
23	-	1321.0	70	757
24	-	731.0	39	1368
25	-	888.9	47	1125
26	-	394.8	21	2533
27	-	1466.3	78	682
28	-	349.7	19	2860
29	-	889.7	47	1124
30	-	448.4	24	2230

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**Parameter Data sheet for Radar Type 1**

**5510MHz (11n-40)**

Radar Type1				
Trial #	Pulse Repetition Frequency Number(1 to 23)	Pulse Repetition Frequency (Pulses Per Second)	Number of Pulses	Pulse Repetition Interval (Microseconds)
1	21	1089.3	58	918
2	6	1618.1	86	618
3	14	1285.3	68	778
4	7	1567.4	83	638
5	15	1253.1	67	798
6	3	1792.1	95	558
7	2	1858.7	99	538
8	4	1730.1	92	578
9	11	1392.8	74	718
10	10	1432.7	76	698
11	16	1222.5	65	818
12	23	326.2	18	3066
13	8	1519.8	81	658
14	12	1355.0	72	738
15	9	1474.9	78	678
16	-	481.0	26	2079
17	-	450.0	24	2222
18	-	1440.9	77	694
19	-	863.6	46	1158
20	-	386.8	21	2585
21	-	639.8	34	1563
22	-	637.3	34	1569
23	-	335.5	18	2981
24	-	1065.0	57	939
25	-	526.6	28	1899
26	-	535.6	29	1867
27	-	1124.9	60	889
28	-	648.9	35	1541
29	-	486.1	26	2057
30	-	404.9	22	2470

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**Parameter Data sheet for Radar Type 2**

**5500MHz (11n-20)**

Radar Type2			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	24	4.7	171
2	28	3.8	160
3	23	3.9	184
4	25	2.3	217
5	24	3.3	223
6	25	3.7	209
7	23	4.1	207
8	28	1.4	158
9	24	1.6	193
10	29	1.8	188
11	23	4.0	195
12	25	3.8	214
13	26	3.0	225
14	28	1.7	210
15	28	2.9	229
16	26	4.5	226
17	25	1.8	192
18	27	2.7	157
19	26	3.8	165
20	29	1.4	198
21	23	1.6	156
22	23	1.8	158
23	29	3.0	153
24	23	4.5	214
25	23	3.0	215
26	29	4.2	178
27	27	2.6	152
28	23	3.3	216
29	26	4.3	164
30	25	2.2	155

**Parameter Data sheet for Radar Type 2**

**5510MHz (11n-40)**

Radar Type2			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	24	2.7	201
2	29	3.6	178
3	28	4.5	221
4	28	1.0	203
5	26	4.6	225
6	27	4.1	157
7	25	1.3	206
8	26	2.7	190
9	29	1.0	161
10	26	2.7	202
11	29	3.2	219
12	27	4.2	197
13	23	2.5	200
14	24	4.8	225
15	23	2.8	203
16	24	3.7	215
17	26	2.3	205
18	28	3.9	188
19	29	3.5	185
20	23	4.7	192
21	23	4.7	195
22	27	1.6	159
23	24	2.4	206
24	23	1.8	230
25	29	4.5	171
26	24	3.9	163
27	29	1.8	156
28	23	4.4	201
29	24	4.4	152
30	25	4.2	194

**Parameter Data sheet for Radar Type 3**

**5500MHz (11n-20)**

Radar Type3			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	18	8.3	202
2	18	7.0	219
3	17	8.4	342
4	17	6.8	380
5	16	6.5	485
6	16	7.4	493
7	16	8.0	398
8	16	8.1	245
9	17	6.7	223
10	16	7.4	337
11	17	9.4	469
12	16	9.4	325
13	16	7.7	399
14	17	9.6	366
15	17	6.5	281
16	18	6.5	360
17	18	9.0	251
18	18	6.4	245
19	18	8.7	274
20	17	8.0	435
21	16	9.6	405
22	18	8.6	489
23	18	7.7	348
24	17	6.0	208
25	17	7.3	463
26	17	8.5	244
27	17	6.9	355
28	16	7.6	281
29	17	7.9	488
30	17	8.0	301

**Parameter Data sheet for Radar Type 3**

**5510MHz (11n-40)**

Radar Type3			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	16	7.1	411
2	17	6.7	467
3	18	7.1	479
4	16	9.5	341
5	17	9.1	455
6	16	6.4	260
7	17	9.3	473
8	16	8.0	281
9	16	7.1	446
10	18	8.9	467
11	18	9.2	274
12	17	9.2	206
13	18	7.6	484
14	16	7.0	363
15	18	8.2	422
16	18	7.4	346
17	18	9.3	344
18	17	8.2	236
19	18	7.7	240
20	18	9.3	500
21	16	7.8	402
22	17	8.7	366
23	18	9.9	311
24	17	9.6	398
25	17	7.5	353
26	16	7.1	354
27	16	7.1	399
28	18	8.6	469
29	16	6.6	318
30	17	6.7	431

**Parameter Data sheet for Radar Type 4**

**5500MHz (11n-20)**

Radar Type4			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	15	19.2	385
2	14	12.7	282
3	14	14.4	255
4	13	11.9	493
5	16	12.6	485
6	13	16.4	394
7	13	12.8	379
8	15	13.0	368
9	16	12.1	295
10	16	12.9	239
11	13	19.5	441
12	13	14.0	313
13	12	14.7	217
14	12	11.6	381
15	14	19.8	438
16	13	17.2	265
17	15	13.4	310
18	12	11.6	484
19	12	18.7	297
20	12	13.4	373
21	15	16.5	209
22	15	12.8	350
23	13	20.0	240
24	15	17.5	365
25	16	13.9	433
26	13	19.1	278
27	12	19.2	410
28	14	17.0	265
29	13	19.8	201
30	15	16.3	410



**Parameter Data sheet for Radar Type 4**

**5510MHz (11n-40)**

Radar Type4			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	15	12.3	333
2	15	12.0	443
3	15	11.2	481
4	12	17.8	302
5	16	16.3	498
6	12	17.8	407
7	13	16.0	379
8	13	14.3	360
9	16	18.3	228
10	13	16.9	302
11	12	19.6	211
12	16	16.3	430
13	15	19.9	473
14	13	15.7	498
15	12	17.6	319
16	13	16.9	496
17	16	13.9	309
18	12	14.6	349
19	15	11.2	283
20	14	18.2	490
21	14	14.7	375
22	13	12.6	350
23	15	17.3	427
24	16	13.4	377
25	16	19.6	219
26	12	17.4	235
27	13	12.8	242
28	16	17.9	390
29	13	19.1	259
30	15	13.6	407

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**Parameter Data sheet for Radar Type 5**

**5500MHz (11n-20)**

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
1	1	1	61	12			750	5500
	2	2	91	7	1378		48026	5500
	3	3	55	20	1061	1772	599080	5500
	4	2	58	15	1070		344082	5500
	5	1	70	10			639970	5500
	6	3	96	12	1800	1074	704434	5500
	7	1	71	9			352295	5500
	8	3	95	7	1810	1215	180503	5500
	9	3	63	16	1736	1335	493621	5500
	10	1	89	12			440679	5500
	11	1	72	10			791151	5500
	12	2	88	5	1121		190472	5500
	13	1	63	12			37682	5500
	14	2	92	8	1908		432633	5500

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
2	1	1	82	18			218	5500
	2	2	96	17	1298		107123	5500
	3	1	76	9			778517	5500
	4	2	92	19	1070		435502	5500
	5	3	55	14	1862	1343	343178	5500
	6	1	56	15			226975	5500
	7	2	82	12	1289		431877	5500
	8	2	95	14	1958		119075	5500
	9	3	62	6	1595	1378	422177	5500
	10	2	83	15	1127		745443	5500
	11	1	52	17			667561	5500
	12	1	58	10			282288	5500
	13	2	96	9	1017		226630	5500
	14	2	60	10	1140		389765	5500
	15	3	80	14	1674	1223	548004	5500

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
3	1	2	64	20	1000		405943	5500
	2	1	62	18			329570	5500
	3	2	79	16	1498		513617	5500
	4	3	92	19	1588	1126	759562	5500
	5	2	75	19	1944		748435	5500
	6	2	68	17	1397		537788	5500
	7	3	69	20	1645	1159	6398	5500
	8	3	79	16	1949	1043	775049	5500
	9	3	96	19	1194	1987	148105	5500
	10	3	92	16	1149	1099	721912	5500
	11	1	57	11			113344	5500
	12	3	85	9	1875	1012	158107	5500
	13	3	84	16	1245	1957	571938	5500
	14	2	68	7	1119		51846	5500
	15	1	82	15			231945	5500

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
4	1	2	60	18	1000		158392	5500
	2	1	93	7			822776	5500
	3	2	53	20	1927		675795	5500
	4	2	73	18	1109		806569	5500
	5	1	83	11			105139	5500
	6	2	66	20	1921		504163	5500
	7	3	52	8	1229	1137	628807	5500
	8	3	67	16	1735	1506	580204	5500
	9	2	72	12	1274		526599	5500
	10	2	87	20	1270		97349	5500
	11	2	84	11	1318		224819	5500
	12	2	79	20	1378		235660	5500
	13	2	87	7	1728		617692	5500
	14	1	67	12			183780	5500

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
5	1	2	89	17	1000		139197	5500
	2	3	84	13	1034	1546	875793	5500
	3	1	60	14			91402	5500
	4	1	68	17			387185	5500
	5	3	56	11	1327	1496	1056946	5500
	6	1	66	20			334650	5500
	7	3	78	20	1516	1107	965714	5500
	8	1	96	14			283072	5500
	9	3	61	15	1798	1808	962468	5500
	10	2	56	8	1140		1002259	5500

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
6	1	3	69	16	1287	1582	623021	5500
	2	1	79	18			142624	5500
	3	1	93	17			519544	5500
	4	3	50	20	1969	1454	93019	5500
	5	2	81	12	2000		302176	5500
	6	3	77	14	1414	1355	490580	5500
	7	1	96	11			584321	5500
	8	3	77	20	1992	1311	276486	5500
	9	2	63	5	1096		531792	5500
	10	2	61	18	1915		603253	5500
	11	1	55	9			731119	5500
	12	2	99	20	1411		728728	5500
	13	1	77	9			141613	5500
	14	2	68	18	1922		170743	5500
	15	1	88	20			98132	5500
	16	2	63	15	1625		648535	5500

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
7	1	3	68	16	1155	1077	1015033	5500
	2	1	76	10			436586	5500
	3	1	69	20			890562	5500
	4	3	78	7	1879	1944	23317	5500
	5	2	80	8	1149		504927	5500
	6	2	56	16	1190		135605	5500
	7	3	68	20	1278	1944	52078	5500
	8	2	80	13	1023		1069464	5500
	9	1	86	10			681750	5500
	10	2	73	16	1218		186970	5500
	11	1	75	17			469371	5500

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
8	1	1	58	12			599	5500
	2	2	64	10	1366		453006	5500
	3	2	95	9	1942		709308	5500
	4	1	86	13			465769	5500
	5	2	72	14	1272		387302	5500
	6	3	55	13	1389	1815	359922	5500
	7	1	70	15			660734	5500
	8	1	62	7			667432	5500
	9	3	55	20	1411	1516	777093	5500
	10	1	61	12			17491	5500
	11	2	93	7	1362		400789	5500
	12	1	66	13			57616	5500
	13	1	59	6			186221	5500

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
9	1	3	67	5	1129	1101	661564	5500
	2	1	68	15			289553	5500
	3	2	89	6	1971		193511	5500
	4	2	62	12	1347		584939	5500
	5	2	88	5	1608		303869	5500
	6	3	80	6	1892	1463	296316	5500
	7	3	62	17	1054	1091	450330	5500
	8	1	96	15			695232	5500
	9	1	66	14			676981	5500
	10	3	90	10	1057	1735	315928	5500
	11	1	82	18			495302	5500
	12	1	75	15			427507	5500
	13	1	82	19			296153	5500

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
10	1	2	62	11	1000		250302	5500
	2	2	69	14	1024		66413	5500
	3	2	81	13	1753		28181	5500
	4	2	74	17	1759		650363	5500
	5	1	54	18			515383	5500
	6	2	84	13	1255		398076	5500
	7	3	56	5	1075	1359	7659	5500
	8	2	85	10	1276		481996	5500
	9	2	90	5	1985		474385	5500
	10	3	63	20	1435	1901	277052	5500
	11	1	84	15			632041	5500
	12	3	94	8	1992	1160	374717	5500
	13	2	69	8	1392		256378	5500
	14	1	76	6			254914	5500

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
11	1	3	86	19	1647	1017	784161	5499
	2	3	93	8	1205	1878	1231913	5494
	3	3	96	7	1168	1980	1470270	5494
	4	3	96	6	1351	1522	1428842	5494
	5	2	54	11	1198		679037	5496
	6	2	87	8	1359		905916	5494
	7	2	92	9	1989		677762	5495
	8	2	53	14	1163		254006	5497

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
12	1	2	81	14	1000		47301	5497
	2	1	59	11			221676	5496
	3	3	57	16	1405	1563	531838	5498
	4	1	54	15			346095	5497
	5	1	51	7			87918	5494
	6	2	98	13	1554		40872	5496
	7	2	58	9	1471		410576	5495
	8	2	98	7	1749		136269	5494
	9	3	54	5	1411	1056	101703	5493
	10	3	91	7	1775	1307	162685	5494
	11	2	64	19	1043		474577	5499
	12	2	95	20	1671		284199	5499
	13	1	68	16			144395	5498
	14	1	74	7			441457	5494
	15	3	86	17	1793	1843	495762	5498
	16	3	76	6	1445	1374	517613	5494
	17	3	75	12	1186	1610	180262	5496
	18	3	89	15	1806	1361	316242	5497
	19	3	84	20	1517	1949	444265	5499
	20	1	55	12			244574	5496

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
13	1	1	97	11			499	5496
	2	3	66	7	1908	1086	321822	5494
	3	2	80	8	1866		105619	5494
	4	1	93	12			249390	5496
	5	1	84	20			311308	5499
	6	1	83	14			546402	5497
	7	1	65	19			535195	5499
	8	1	71	11			678066	5496
	9	1	95	9			95467	5495
	10	3	62	19	1787	1587	171066	5499
	11	3	96	8	1987	1713	472368	5494
	12	3	100	10	1472	1232	682631	5495
	13	2	68	14	1288		131608	5497

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
14	1	1	78	19			81	5499
	2	1	71	10			829078	5495
	3	1	58	20			1000917	5499
	4	2	69	14	1192		1164886	5497
	5	2	70	5	1582		723311	5493
	6	2	90	13	1846		761840	5496
	7	2	59	18	1496		1132478	5498
	8	3	64	14	1775	1531	1012143	5497
	9	3	50	5	1181	1386	180574	5493
	10	1	68	10			470112	5495

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
15	1	2	96	7	1000		911879	5494
	2	1	70	12			545087	5496
	3	3	75	18	1985	1608	802780	5498
	4	1	89	20			889721	5499
	5	1	59	13			912431	5496
	6	2	71	16	1573		548023	5498
	7	2	86	7	1124		1241708	5494
	8	3	60	16	1579	1959	159319	5498

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
16	1	2	57	17	1000		730863	5498
	2	2	99	15	1797		79971	5497
	3	2	76	11	1291		512824	5496
	4	3	94	14	1265	1984	306345	5497
	5	1	89	5			840583	5493
	6	2	77	16	1579		533943	5498
	7	1	52	17			70313	5498
	8	2	81	15	1269		62995	5497
	9	3	52	6	1006	1661	804683	5494
	10	1	77	16			637185	5498
	11	3	70	15	1140	1290	798926	5497
	12	2	67	19	1947		711082	5499
	13	2	64	8	1779		870875	5494

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
17	1	2	91	10	1000		420179	5495
	2	1	71	19			348389	5499
	3	3	62	15	1214	1026	523473	5497
	4	1	96	11			203904	5496
	5	1	82	16			482486	5498
	6	1	91	17			98827	5498
	7	1	77	19			592421	5499
	8	2	56	7	1956		618308	5494
	9	2	54	7	1835		586580	5494
	10	1	54	17			191496	5498
	11	1	70	10			79357	5495
	12	3	58	16	1685	1699	397916	5498
	13	2	66	15	1556		360743	5497
	14	2	57	19	1585		567207	5499
	15	3	58	16	1465	1179	486580	5498
	16	2	58	17	1020		631941	5498

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
18	1	2	67	13	1000		398851	5496
	2	3	95	20	1045	1868	378141	5499
	3	3	50	9	1339	1170	357392	5495
	4	1	91	10			541844	5495
	5	1	72	12			464211	5496
	6	3	56	19	1016	1324	214194	5499
	7	1	66	9			17782	5495
	8	2	68	7	1097		346593	5494
	9	3	58	18	1596	1860	469747	5498
	10	2	57	19	1511		159358	5499
	11	1	68	5			243967	5493
	12	3	67	9	1468	1458	524176	5495
	13	2	91	13	1217		327487	5496
	14	3	85	8	1483	1370	234369	5494
	15	3	67	10	1529	1110	94531	5495
	16	3	67	11	1994	1852	326111	5496
	17	3	87	8	1038	1656	284052	5494
	18	1	73	20			493727	5499

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
19	1	3	92	15	1154	1949	391303	5497
	2	3	90	14	1923	1690	201670	5497
	3	3	58	15	1495	1939	549444	5497
	4	1	88	6			332660	5494
	5	2	67	5	1641		599516	5493
	6	2	60	12	1351		14387	5496
	7	2	82	19	1490		385479	5499
	8	1	66	20			524897	5499
	9	3	98	14	1683	1715	515942	5497
	10	1	98	13			113493	5496
	11	1	59	20			60018	5499
	12	2	100	7	1111		47164	5494
	13	3	89	19	1613	1969	328553	5499
	14	1	59	17			518980	5498
	15	2	51	8	1895		551676	5494
	16	2	67	16	1207		368282	5498
	17	1	80	14			502662	5497
	18	2	60	17	1503		234909	5498
	19	1	89	12			92415	5496

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
20	1	3	85	14	1406	1478	1246808	5497
	2	3	92	11	1439	1139	1314064	5496
	3	1	60	20			1257031	5499
	4	2	98	9	1970		190078	5495
	5	2	100	16	1399		1190594	5498
	6	1	82	13			607665	5496
	7	2	78	6	1027		575659	5494
	8	2	51	16	1516		14264	5498
	9	3	87	15	1600	1308	378946	5497

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
21	1	3	55	19	1251	1023	339102	5501
	2	3	94	20	1642	1458	443778	5501
	3	2	90	15	1392		936899	5503
	4	3	64	13	1705	1547	129856	5504
	5	3	97	12	1174	1829	529593	5504
	6	3	99	17	1885	1962	56954	5502
	7	3	96	11	1747	1276	340713	5504
	8	3	90	7	1693	1687	954979	5506
	9	1	68	7			631673	5506
	10	3	74	7	1944	1460	743676	5506
	11	3	82	20	1697	1701	659084	5501
	12	1	67	16			548548	5502

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
22	1	3	67	18	1745	1114	725998	5502
	2	3	54	19	1313	1133	439044	5501
	3	3	67	11	1597	1848	380423	5504
	4	3	81	16	1935	1841	276203	5502
	5	3	81	14	1854	1119	758409	5503
	6	2	52	19	1631		805691	5501
	7	3	91	8	1854	1032	794809	5506
	8	3	65	16	1558	1337	316670	5502
	9	3	76	18	1003	1723	822588	5502
	10	1	93	20			540638	5501
	11	1	66	19			494293	5501
	12	3	52	10	1787	1708	324736	5505
	13	1	92	15			671168	5503
	14	2	56	19	1810		629648	5501

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
23	1	2	70	20	1000		440502	5501
	2	2	68	8	1072		19600	5506
	3	1	51	5			13049	5507
	4	3	81	15	1044	1895	412085	5503
	5	2	50	19	1744		503075	5501
	6	1	75	9			361265	5505
	7	3	52	6	1186	1778	284592	5506
	8	1	78	6			182345	5506
	9	2	77	9	1480		564237	5505
	10	1	57	6			21663	5506
	11	2	95	5	1541		135882	5507
	12	2	50	18	1106		550021	5502
	13	2	91	14	1208		239983	5503
	14	3	72	18	1193	1870	551028	5502
	15	1	74	5			201689	5507
	16	2	75	18	1982		207102	5502
	17	3	91	12	1936	1961	183560	5504
	18	3	92	14	1181	1478	173416	5503
	19	1	89	6			475127	5506
	20	3	80	12	1633	1273	151614	5504

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
24	1	3	72	10	1860	1552	997971	5505
	2	1	90	10			239805	5505
	3	3	52	5	1135	1159	519059	5507
	4	3	90	10	1611	1053	1011723	5505
	5	3	88	17	1180	1468	577712	5502
	6	1	72	9			48322	5505
	7	2	71	17	1097		757448	5502
	8	2	57	15	1048		353619	5503
	9	2	60	17	1665		24782	5502
	10	2	91	6	1197		773989	5506
	11	1	62	19			495448	5501

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
25	1	1	60	10			294	5505
	2	3	65	5	1563	1740	452908	5507
	3	3	77	13	1520	1959	237217	5504
	4	3	86	10	1449	1461	121394	5505
	5	2	51	16	1190		436733	5502
	6	2	94	9	1168		78316	5505
	7	3	65	6	1734	1397	147071	5506
	8	3	68	9	1709	1129	530734	5505
	9	3	74	9	1210	1237	63635	5505
	10	3	83	19	1261	1997	449314	5501
	11	1	70	6			494861	5506
	12	1	71	12			139234	5504
	13	1	67	16			238444	5502
	14	1	72	12			275247	5504
	15	3	81	7	1764	1457	527655	5506
	16	2	76	15	1014		223586	5503
	17	2	63	13	1937		15827	5504
	18	2	57	15	1451		463597	5503
	19	3	93	10	1690	1167	524388	5505
	20	1	99	15			586711	5503

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
26	1	3	55	10	1498	1331	707845	5505
	2	1	91	17			420216	5502
	3	2	83	14	1882		307327	5503
	4	1	82	19			378323	5501
	5	1	80	16			938618	5502
	6	2	89	12	1858		401130	5504
	7	2	72	18	1702		613010	5502
	8	1	77	13			992455	5504
	9	3	86	19	1340	1113	390273	5501
	10	3	83	12	1553	1989	217203	5504

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
27	1	1	99	15			284	5503
	2	3	74	11	1911	1987	936473	5504
	3	2	97	14	1435		319093	5503
	4	2	61	10	1907		1112104	5505
	5	3	83	20	1264	1225	131821	5501
	6	1	51	6			351420	5506
	7	3	69	7	1061	1832	848090	5506
	8	1	57	18			319615	5502
	9	3	64	19	1113	1761	460842	5501

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
28	1	3	58	20	1173	1716	321784	5501
	2	2	57	17	1268		697202	5502
	3	3	58	16	1945	1605	235039	5502
	4	1	58	8			632320	5506
	5	3	83	17	1785	1602	661553	5502
	6	1	80	15			607014	5503
	7	1	68	11			496640	5504
	8	3	82	10	1431	1738	543181	5505
	9	1	52	11			230059	5504
	10	3	72	12	1816	1738	419053	5504
	11	3	98	5	1267	1207	8455	5507
	12	1	70	12			859663	5504
	13	1	85	16			92738	5502

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
29	1	3	56	13	1758	1162	797476	5504
	2	1	80	12			425366	5504
	3	2	99	14	1463		1097251	5503
	4	2	95	11	1396		139789	5504
	5	2	70	5	1352		715600	5507
	6	3	82	16	1454	1155	1453713	5502
	7	1	90	12			1039321	5504
	8	3	82	13	1683	1022	1118154	5504

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
30	1	2	55	14	1000		598840	5503
	2	3	67	20	1808	1134	523187	5501
	3	3	95	20	1936	1307	556733	5501
	4	2	61	12	1000		370177	5504
	5	2	83	15	1970		46954	5503
	6	2	54	15	1068		374096	5503
	7	2	58	7	1694		458473	5506
	8	1	82	19			103777	5501
	9	2	52	12	1464		642061	5504
	10	3	66	9	1814	1051	20764	5505
	11	3	81	20	1244	1244	27585	5501
	12	2	71	5	1373		426123	5507
	13	3	81	20	1678	1896	621619	5501
	14	1	58	7			435293	5506
	15	3	92	10	1962	1602	355013	5505
	16	2	93	14	1407		515660	5503
	17	1	91	8			445259	5506
	18	3	69	10	1905	1265	473468	5505

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**Parameter Data sheet for Radar Type 5**

**5510MHz (11n-40)**

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
1	1	3	56	13	1484	1321	646023	5510
	2	2	52	20	1456		500181	5510
	3	1	94	8			570743	5510
	4	1	91	12			318158	5510
	5	3	54	13	1904	1506	156501	5510
	6	2	99	8	1959		95198	5510
	7	1	64	18			209852	5510
	8	1	73	20			259316	5510
	9	1	56	10			265789	5510
	10	2	75	5	1859		483447	5510
	11	1	55	12			192129	5510
	12	1	81	16			444429	5510
	13	1	58	18			418809	5510
	14	1	72	6			83655	5510
	15	2	94	19	1117		365919	5510
	16	2	72	19	1321		127051	5510
	17	2	93	12	1798		54264	5510
	18	3	67	15	1178	1549	487757	5510

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
2	1	1	53	6			224	5510
	2	3	94	10	1448	1781	472625	5510
	3	1	77	11			265299	5510
	4	3	96	11	1509	1930	447910	5510
	5	1	86	17			725704	5510
	6	3	56	16	1313	1657	257782	5510
	7	3	74	19	1254	1723	141758	5510
	8	3	83	14	1847	1581	484257	5510
	9	3	89	18	1351	1960	638721	5510
	10	2	70	11	1715		713039	5510
	11	2	56	20	1606		441011	5510
	12	2	52	17	1066		239876	5510
	13	1	56	14			503484	5510
	14	3	90	5	1412	1039	131105	5510
	15	3	52	14	1626	1268	205821	5510
	16	2	75	15	1618		206463	5510

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
3	1	3	70	19	1578	1129	237486	5510
	2	1	50	19			666775	5510
	3	3	69	13	1543	1668	700443	5510
	4	1	84	6			261964	5510
	5	3	54	9	1282	1124	750084	5510
	6	2	51	18	1048		731459	5510
	7	3	78	11	1233	1090	251403	5510
	8	1	96	20			454066	5510
	9	1	83	15			518283	5510
	10	3	51	7	1633	1541	430584	5510
	11	1	53	16			60545	5510
	12	2	58	17	1042		447625	5510
	13	2	58	18	1158		56736	5510
	14	3	74	14	1823	1295	324694	5510
	15	1	98	6			222452	5510

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
4	1	2	61	19	1000		93755	5510
	2	3	70	5	1994	1027	16000	5510
	3	1	70	16			558054	5510
	4	1	70	11			85038	5510
	5	3	55	5	1057	2000	30339	5510
	6	1	59	16			463509	5510
	7	3	85	6	1739	1832	601545	5510
	8	3	64	20	1375	1213	194023	5510
	9	3	66	18	1466	1946	478849	5510
	10	2	81	19	1764		613525	5510
	11	1	56	20			578235	5510
	12	3	77	8	1226	1061	336557	5510
	13	2	80	10	1952		61456	5510
	14	2	93	17	1432		170753	5510
	15	1	83	8			651221	5510
	16	1	62	11			457935	5510
	17	3	83	9	1948	1077	32240	5510
	18	1	99	7			342082	5510

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
5	1	2	98	7	1000		546539	5510
	2	1	87	10			1342480	5510
	3	3	56	17	1583	1987	1463814	5510
	4	3	95	5	1588	1332	609253	5510
	5	2	88	7	1229		130154	5510
	6	1	64	17			1444170	5510
	7	2	93	7	1904		882935	5510
	8	1	72	16			141832	5510

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
6	1	2	55	15	1000		215380	5510
	2	1	74	16			204067	5510
	3	1	65	6			111004	5510
	4	3	80	8	1660	1436	408552	5510
	5	1	84	15			508887	5510
	6	1	62	18			768363	5510
	7	2	84	10	1514		637129	5510
	8	2	66	16	1387		20544	5510
	9	1	98	7			149755	5510
	10	1	64	10			17411	5510
	11	1	75	12			343020	5510
	12	2	95	6	1960		573669	5510
	13	2	90	7	1043		359631	5510
	14	1	77	12			336366	5510
	15	3	94	12	1604	1829	73975	5510

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
7	1	1	63	15			693	5510
	2	2	92	16	1443		416173	5510
	3	1	62	13			73925	5510
	4	2	86	15	1122		1064144	5510
	5	3	56	12	1604	1217	491259	5510
	6	3	52	8	1579	1469	222275	5510
	7	1	71	15			139270	5510
	8	3	95	15	1578	1541	270426	5510
	9	3	99	8	1824	1917	419095	5510
	10	1	59	17			941580	5510
	11	1	93	11			514357	5510

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
8	1	2	61	8	1000		1080713	5510
	2	1	55	18			88817	5510
	3	2	71	7	1554		901462	5510
	4	1	78	9			771692	5510
	5	1	79	20			1250556	5510
	6	3	60	5	1296	1463	490373	5510
	7	3	72	16	1790	1442	469541	5510
	8	2	64	12	1757		613893	5510
	9	2	62	6	1113		392619	5510

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
9	1	1	98	18			39	5510
	2	2	92	11	1270		1218548	5510
	3	3	72	16	1261	1975	764761	5510
	4	3	70	6	1593	1090	740446	5510
	5	1	51	6			250783	5510
	6	2	51	15	1537		54017	5510
	7	1	75	20			1336179	5510
	8	1	83	6			1250411	5510

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
10	1	3	77	14	1959	1439	496544	5510
	2	3	98	10	1613	1736	495566	5510
	3	3	80	10	1826	1247	790360	5510
	4	2	55	12	1011		1293490	5510
	5	3	100	12	1520	1906	176516	5510
	6	2	52	12	1576		374318	5510
	7	2	93	14	1108		424987	5510
	8	1	53	8			735226	5510
	9	2	80	8	1799		472068	5510

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
11	1	2	64	11	1000		605321	5496
	2	2	62	9	1261		419349	5495
	3	1	80	5			202852	5494
	4	3	88	7	1009	1219	479385	5495
	5	2	94	5	1657		327076	5494
	6	3	92	10	1436	1728	674472	5496
	7	1	64	15			430023	5498
	8	2	76	10	1019		478710	5496
	9	1	94	15			366723	5498
	10	3	73	11	1211	1909	24565	5496
	11	1	77	14			383120	5497
	12	2	74	11	1403		566422	5496
	13	3	58	11	1256	1122	70248	5496
	14	2	91	11	1006		267925	5496
	15	1	92	13			328211	5497
	16	2	69	6	1721		569500	5494

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
12	1	2	56	11	1000		742949	5496
	2	3	81	15	1420	1784	284187	5498
	3	2	94	12	1150		285988	5497
	4	3	51	5	1278	1903	364352	5494
	5	3	82	17	1897	1731	348544	5499
	6	3	89	18	1049	1759	575999	5499
	7	1	53	12			817527	5497
	8	2	63	17	1606		952873	5499
	9	3	87	14	1401	1656	374829	5497
	10	2	51	20	1430		596962	5500
	11	1	73	7			148698	5495

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
13	1	3	57	8	1298	1590	1157084	5495
	2	3	88	8	1104	1890	1018967	5495
	3	1	79	11			811132	5496
	4	3	64	11	1633	1245	437344	5496
	5	3	57	6	1739	1735	1158590	5494
	6	2	96	17	1463		1224313	5499
	7	2	84	20	1587		1040926	5500
	8	3	96	12	1328	1982	1272846	5497
	9	1	75	17			685734	5499

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
14	1	1	75	12			706	5497
	2	2	61	15	1072		178693	5498
	3	3	73	20	1598	1113	598174	5500
	4	1	95	7			103908	5495
	5	1	52	20			559348	5500
	6	1	57	6			161921	5494
	7	1	50	7			343418	5495
	8	1	96	15			571580	5498
	9	1	56	5			692411	5494
	10	2	73	15	1144		630726	5498
	11	3	74	8	1885	1792	70339	5495
	12	2	87	13	1967		491202	5497
	13	3	61	11	1810	1345	245913	5496
	14	3	69	9	1236	1993	439653	5495
	15	3	91	14	1361	1115	398454	5497
	16	3	52	8	1177	1740	540712	5495

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
15	1	2	66	13	1000		729282	5497
	2	2	94	18	1707		775139	5499
	3	1	73	10			576364	5496
	4	2	66	6	1988		549405	5494
	5	1	92	8			563013	5495
	6	2	52	20	1364		101300	5500
	7	2	87	11	1187		144648	5496
	8	1	85	12			624576	5497
	9	1	57	6			655414	5494
	10	2	66	17	1706		379501	5499
	11	2	95	12	1622		186423	5497
	12	2	55	17	1381		725653	5499

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
16	1	3	97	5	1202	1224	187491	5494
	2	1	65	5			153934	5494
	3	2	80	11	1178		411254	5496
	4	1	64	8			508594	5495
	5	3	67	11	1240	1879	334476	5496
	6	3	75	5	1803	1931	246611	5494
	7	2	62	16	1713		818563	5498
	8	2	68	17	1892		621114	5499
	9	1	55	13			238930	5497

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
17	1	2	59	11	1000		112691	5496
	2	3	66	17	1880	1243	549982	5499
	3	3	70	7	1220	1393	396750	5495
	4	2	91	18	1895		240058	5499
	5	2	95	18	1068		646329	5499
	6	1	57	5			6377	5494
	7	1	92	12			278154	5497
	8	3	62	13	1804	1463	275287	5497
	9	1	54	18			139794	5499
	10	2	79	5	1718		254683	5494
	11	3	74	8	1484	1418	18377	5495
	12	2	92	18	1476		64990	5499
	13	3	98	15	1109	1097	464286	5498
	14	2	72	9	1855		282634	5495
	15	2	72	12	1991		79860	5497
	16	3	82	13	1431	1764	391013	5497
	17	1	72	15			183221	5498
	18	2	58	11	1727		316729	5496

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
18	1	2	67	19	1000		36628	5499
	2	2	93	20	1377		603168	5500
	3	3	66	18	1959	1960	583151	5499
	4	3	58	16	1453	1292	722581	5498
	5	3	87	18	1579	1256	771224	5499
	6	3	71	14	1267	1778	744615	5497
	7	1	98	16			218337	5498
	8	2	85	16	1154		318232	5498
	9	2	99	17	1256		537510	5499
	10	2	89	14	1646		484187	5497
	11	2	57	11	1439		176970	5496
	12	1	88	5			195	5494
	13	3	84	7	1785	1887	337766	5495
	14	3	62	16	1585	1097	270750	5498
	15	2	69	16	1475		89020	5498

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
19	1	3	64	13	1990	1197	86287	5497
	2	2	69	9	1055		536458	5495
	3	2	59	9	1169		395357	5495
	4	2	60	16	1451		928928	5498
	5	3	59	10	1654	1032	76966	5496
	6	3	80	17	1695	1949	1159336	5499
	7	1	84	7			410147	5495
	8	2	80	10	1722		271347	5496
	9	3	58	19	1736	1728	1060237	5499
	10	3	60	15	1989	1701	29055	5498

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
20	1	1	68	10			362	5496
	2	2	95	17	1227		24631	5499
	3	3	57	14	1993	1382	107383	5497
	4	3	65	8	1733	1165	114400	5495
	5	3	72	12	1976	1616	62459	5497
	6	3	51	16	1298	1271	128380	5498
	7	3	75	17	1131	1854	214092	5499
	8	1	82	20			524590	5500
	9	1	68	15			411627	5498
	10	1	56	7			304060	5495
	11	3	77	17	1761	1584	529662	5499
	12	2	82	13	1161		150868	5497
	13	3	60	19	1144	1534	569909	5499
	14	2	80	10	1555		326083	5496
	15	2	57	11	1520		42623	5496
	16	3	71	5	1399	1779	143712	5494
	17	2	74	12	1911		365622	5497
	18	2	81	10	1209		513011	5496
	19	2	76	8	1397		37220	5495
	20	3	81	13	1382	1249	277524	5497

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
21	1	3	62	16	1198	1199	104965	5522
	2	3	76	16	1585	1014	249648	5522
	3	2	64	8	1646		616141	5525
	4	1	97	9			262256	5525
	5	1	92	12			146884	5523
	6	2	72	11	1743		716802	5524
	7	2	68	11	1611		315556	5524
	8	2	61	19	1490		131198	5521
	9	2	60	6	1219		964635	5526
	10	1	97	12			596483	5523
	11	3	52	18	1132	1526	824109	5521

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
22	1	2	60	16	1000		1008216	5522
	2	3	75	12	1340	1860	470962	5523
	3	3	73	19	1620	1692	1235330	5521
	4	2	92	9	1137		995855	5525
	5	1	84	16			726921	5522
	6	3	83	14	1791	1409	632983	5523
	7	1	89	9			169877	5525
	8	1	93	11			62128	5524
	9	3	73	11	1331	1782	206602	5524

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
23	1	1	99	11			116	5524
	2	2	100	6	1878		576577	5526
	3	2	83	10	1680		226191	5524
	4	3	76	10	1807	1352	678266	5524
	5	1	84	8			62748	5525
	6	3	82	14	1089	1527	351654	5523
	7	1	60	19			666537	5521
	8	1	84	10			412245	5524
	9	1	54	6			672525	5526
	10	2	72	8	1661		502597	5525
	11	3	55	13	1453	1924	702981	5523
	12	3	95	13	1279	1591	652833	5523
	13	2	87	9	1236		552475	5525

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
24	1	2	76	6	1000		272328	5526
	2	3	79	6	1988	1152	209652	5526
	3	1	58	17			657923	5521
	4	2	62	5	1868		593170	5526
	5	3	100	11	1722	1612	619755	5524
	6	2	84	12	1742		476606	5523
	7	2	66	17	1777		649459	5521
	8	2	53	10	1246		502193	5524
	9	3	66	8	1326	1687	390489	5525
	10	2	60	7	1907		254551	5525
	11	3	62	11	1089	1174	3336	5524
	12	3	72	18	1463	1186	90498	5521
	13	2	94	5	1017		464178	5526
	14	3	87	7	1391	1076	214057	5525
	15	3	60	14	1497	1500	427389	5523
	16	1	93	8			413349	5525

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
25	1	1	69	19			360	5521
	2	1	54	17			95131	5521
	3	3	82	11	1400	1948	565541	5524
	4	3	68	12	1537	1996	157676	5523
	5	1	77	7			24057	5525
	6	2	63	14	1457		51014	5523
	7	2	63	12	1544		3060	5523
	8	2	89	20	1800		325775	5520
	9	2	63	18	1719		478296	5521
	10	3	86	18	1017	1455	337116	5521
	11	3	69	10	1590	1169	510563	5524
	12	2	88	10	1099		277362	5524
	13	3	88	14	1149	1108	344312	5523
	14	2	91	13	1183		353653	5523
	15	1	84	20			23658	5520
	16	1	54	11			545856	5524
	17	1	93	17			202399	5521
	18	2	99	12	1375		168111	5523
	19	3	65	9	1035	1960	384121	5525
	20	1	75	11			472910	5524

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
26	1	2	53	17	1000		79888	5521
	2	3	95	10	1270	1413	285649	5524
	3	1	81	16			542673	5522
	4	3	79	17	1767	1436	436175	5521
	5	1	76	11			284557	5524
	6	2	78	11	1485		201890	5524
	7	3	75	17	1431	1422	235646	5521
	8	2	70	14	1089		497553	5523
	9	3	74	7	1334	1235	565636	5525
	10	2	74	13	1748		420261	5523
	11	2	64	12	1082		362898	5523
	12	2	61	17	1257		195402	5521
	13	3	71	8	1763	1841	17690	5525
	14	1	85	9			363273	5525
	15	2	87	6	1985		564206	5526
	16	2	73	9	1316		168741	5525
	17	3	67	10	1910	1628	265949	5524
	18	1	95	8			641785	5525

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
27	1	3	90	12	1605	1537	248099	5523
	2	2	54	17	1712		252196	5521
	3	2	77	7	1788		23587	5525
	4	1	90	18			584186	5521
	5	3	99	6	1538	1703	418817	5526
	6	2	61	16	1453		221822	5522
	7	3	57	16	1156	1150	609775	5522
	8	2	64	18	1808		741847	5521
	9	2	81	13	1420		192644	5523
	10	2	65	5	1155		64590	5526
	11	1	77	5			474689	5526
	12	2	67	10	1751		262759	5524
	13	2	64	14	1949		778381	5523
	14	3	58	7	1586	1997	97259	5525

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
28	1	2	62	7	1000		606646	5525
	2	1	88	11			52072	5524
	3	1	50	8			295698	5525
	4	1	98	14			93975	5523
	5	2	90	9	1071		706232	5525
	6	2	62	19	1168		634929	5521
	7	1	100	20			663935	5520
	8	2	84	17	1668		440997	5521
	9	1	50	12			344911	5523
	10	1	86	13			453693	5523
	11	3	62	5	1350	1032	203095	5526
	12	1	61	19			198900	5521
	13	2	63	11	1532		84149	5524

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Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
29	1	1	77	20			53	5520
	2	2	75	13	1042		188103	5523
	3	3	56	10	1557	1359	540489	5524
	4	1	95	19			439663	5521
	5	1	53	10			359144	5524
	6	1	73	6			1039906	5526
	7	3	54	11	1583	1137	811423	5524
	8	2	64	15	1221		318435	5522
	9	3	75	15	1102	1560	151106	5522

Trial #	Burst Number	Number of Pulses	Pulse Width [usec]	Chirp Width [MHz]	Pulse 1-to-2 Spacing [usec]	Pulse 2-to-3 Spacing [usec]	Starting Location Within Interval [usec]	Center Frequency [MHz]
30	1	1	93	19			327	5521
	2	3	58	9	1514	1120	437688	5525
	3	3	89	11	1096	1662	462273	5524
	4	2	92	7	1273		607354	5525
	5	2	61	6	1210		419675	5526
	6	2	83	18	1854		373443	5521
	7	1	56	18			160524	5521
	8	1	79	14			415547	5523
	9	1	66	20			273586	5520
	10	1	52	19			282032	5521
	11	2	63	17	1641		379818	5521
	12	3	97	12	1042	1828	179722	5523
	13	1	80	14			277390	5523
	14	3	96	5	1640	1619	317944	5526
	15	2	99	20	1611		526463	5520
	16	2	81	15	1808		362420	5522
	17	2	61	7	1998		297232	5525
	18	3	78	14	1878	1892	559478	5523
	19	2	98	5	1429		383594	5526

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**Parameter Data sheet for Radar Type 6**

**5500MHz (11n-20)**

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
1	4	9	5509
	23	66	5495
	28	81	5508
	40	117	5497

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
2	37	108	5490
	41	120	5507
	52	153	5500
	58	171	5505
	62	183	5492
	67	198	5491
	70	207	5506

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
3	2	3	5493
	24	69	5491

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
4	3	6	5508
	11	30	5502
	43	126	5501
	56	165	5506
	71	210	5496



Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
5	11	30	5490
	23	66	5493
	54	159	5496
	63	186	5509
	82	243	5491
	88	261	5501
	92	273	5510

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
6	16	45	5492
	30	87	5499
	56	165	5508
	95	282	5506

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
7	9	24	5507
	36	105	5494
	85	252	5498

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
8	3	6	5509
	49	144	5498
	67	198	5510
	89	264	5500

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
9	43	126	5493
	78	231	5490

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
10	26	75	5494
	58	171	5496
	86	255	5495
	98	291	5502

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
11	7	18	5508
	68	201	5492
	73	216	5504
	86	255	5494
	88	261	5501
	96	285	5491

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
12	8	21	5507
	35	102	5503

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
13	14	39	5497
	32	93	5506
	63	186	5500
	71	210	5508

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
14	9	24	5490
	14	39	5505
	25	72	5506
	61	180	5491
	85	252	5499
	90	267	5509

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
15	36	105	5501
	61	180	5500

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
16	41	120	5498

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
17	38	111	5492
	39	114	5491
	54	159	5509

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
18	59	174	5504

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
19	2	3	5507
	14	39	5498
	35	102	5492
	37	108	5501
	48	141	5510
	64	189	5495
	76	225	5493

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
20	10	27	5504
	11	30	5505
	18	51	5501
	23	66	5496
	28	81	5493
	38	111	5495
	54	159	5510
	63	186	5490
	76	225	5502

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
21	2	3	5509
	16	45	5510
	21	60	5494
	23	66	5502
	85	252	5491

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
22	9	24	5491
	33	96	5496
	37	108	5494
	48	141	5497
	52	153	5502
	53	156	5495
	59	174	5504
	60	177	5490
	75	222	5508
82	243	5507	

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Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
23	3	6	5505
	24	69	5506
	29	84	5510
	37	108	5499
	52	153	5490
	55	162	5508
	68	201	5491
	87	258	5502

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
24	8	21	5504
	13	36	5502
	48	141	5508
	76	225	5510

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
25	22	63	5493
	45	132	5510
	67	198	5505
	69	204	5498
	89	264	5507

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
26	5	12	5503
	14	39	5491
	25	72	5494
	39	114	5493
	42	123	5500
	75	222	5492
	96	285	5496
	99	294	5498

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
27	5	12	5490
	13	36	5502
	69	204	5510
	80	237	5501

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
28	20	57	5492
	37	108	5495
	48	141	5496
	74	219	5500
	77	228	5505

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
29	60	177	5498
	66	195	5509
	68	201	5508
	87	258	5507

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
30	39	114	5508
	81	240	5493
	91	270	5505

**Parameter Data sheet for Radar Type 6**

**5510MHz (11n-40)**

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
1	2	3	5528
	4	9	5525
	9	24	5501
	18	51	5494
	23	66	5521
	33	96	5500
	76	225	5506
	95	282	5518

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
2	10	27	5525
	14	39	5507
	53	156	5495
	61	180	5502
	74	219	5496

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
3	28	81	5516
	32	93	5503
	41	120	5528
	50	147	5521
	66	195	5490
	94	279	5493

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
4	17	48	5519
	47	138	5518
	48	141	5509
	49	144	5517
	85	252	5491
	93	276	5503
	96	285	5527

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
5	13	36	5510
	16	45	5494
	27	78	5496
	30	87	5492
	45	132	5502
	51	150	5519
	59	174	5504
	60	177	5518
	69	204	5520
	78	231	5516
	80	237	5523
	88	261	5511
89	264	5498	

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
6	5	12	5497
	11	30	5510
	18	51	5522
	32	93	5500
	43	126	5495
	54	159	5518
	60	177	5491
	75	222	5509
	84	249	5503
	87	258	5526
	91	270	5490
	98	291	5511
100	297	5516	

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
7	8	21	5504
	26	75	5519
	28	81	5521
	33	96	5518
	46	135	5514
	92	273	5529

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
8	16	45	5510
	52	153	5494
	60	177	5522
	66	195	5491
	79	234	5515
	80	237	5525
	81	240	5495
	91	270	5508

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
9	13	36	5518
	22	63	5492
	33	96	5529
	57	168	5513
	66	195	5495
	91	270	5510
	96	285	5524

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
10	13	36	5504
	25	72	5511
	34	99	5507
	59	174	5512
	60	177	5509
	61	180	5517
	68	201	5528
	76	225	5500
	77	228	5513
	81	240	5520

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
11	15	42	5530
	24	69	5521
	32	93	5512
	50	147	5525
	72	213	5498



Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
12	7	18	5508
	11	30	5504
	13	36	5515
	38	111	5496
	63	186	5503
	68	201	5530
	72	213	5525
	75	222	5497
	85	252	5517
	94	279	5521
	95	282	5509
98	291	5500	

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
13	17	48	5490
	41	120	5497
	61	180	5503
	73	216	5508
	75	222	5512
	84	249	5529
	92	273	5509

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
14	10	27	5490
	16	45	5497
	21	60	5527
	30	87	5505
	41	120	5501
	49	144	5512
	77	228	5520
	87	258	5523
	91	270	5521

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
15	33	96	5513
	50	147	5509
	87	258	5525
	91	270	5516
	99	294	5530

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
16	7	18	5492
	49	144	5524
	89	264	5503
	92	273	5498

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
17	9	24	5496
	18	51	5512
	26	75	5502
	30	87	5513
	35	102	5508
	59	174	5522
	60	177	5509
	75	222	5518

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
18	11	30	5517
	15	42	5507
	20	57	5515
	24	69	5496
	31	90	5497
	41	120	5503
	49	144	5530
	51	150	5513
	78	231	5508
	94	279	5500

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
19	4	9	5491
	9	24	5514
	18	51	5494
	41	120	5501
	42	123	5507
	47	138	5495
	56	165	5530
	57	168	5512
	84	249	5505
	92	273	5527
	97	288	5502

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
20	12	33	5526
	14	39	5529
	39	114	5527
	42	123	5499
	49	144	5490
	50	147	5524
	69	204	5511
	76	225	5514
	80	237	5504
	92	273	5523
	100	297	5493

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
21	17	48	5492
	18	51	5494
	28	81	5520
	42	123	5526
	53	156	5507
	60	177	5510
	67	198	5496
	74	219	5491
	75	222	5527
	83	246	5498
	86	255	5495
	96	285	5523

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
22	12	33	5519
	22	63	5520
	43	126	5495
	51	150	5510

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
23	3	6	5517
	23	66	5498
	37	108	5519
	49	144	5507
	50	147	5505
	73	216	5497
	78	231	5526
	84	249	5491
	85	252	5514

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Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
24	41	120	5496
	68	201	5516
	74	219	5497
	94	279	5519

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
25	24	69	5523
	46	135	5514
	50	147	5504
	59	174	5516
	70	207	5506
	74	219	5513
	100	297	5502

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
26	2	3	5507
	15	42	5502
	26	75	5517
	34	99	5512

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
27	8	21	5501
	60	177	5511
	82	243	5520
	91	270	5504

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
28	30	87	5510
	39	114	5504
	43	126	5506
	62	183	5501

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
29	44	129	5504
	69	204	5500
	73	216	5502
	99	294	5503

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
30	33	96	5500
	52	153	5514
	83	246	5511

## **APPENDIX 2: Test instruments**

### **EMI Test Equipment**

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MOS-14	Thermo-Hygrometer	Custom	CTH-201	1401	DFS	2016/01/21 * 12
MSA-15	Spectrum Analyzer	Agilent	E4440A	MY46187105	DFS	2015/11/11 * 12
EST-48	Signal Generator	Agilent	E4438C	MY45090353	DFS	2015/12/30 * 12
COTS-MDFS-01	Signal Studio Software for DFS	Agilent	N7620A-101	5010-7739	DFS	-
COTS-MDFS-02	Radar Generating Software for DFS	Agilent	-	-	DFS	-
MCC-67	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28635/2	DFS	2016/04/18 * 12
MCC-190	Microwave Cable	Junkosha	MWX-221-02000DMSDMS	1507S109	DFS	Pre Check
MPSC-04	Power Splitters/Combiners	Mini-Circuit	ZFSC-2-10G	0326	DFS	2015/09/18 * 12
MAT-57	Attenuator(10dB)	Suhner	6810.19.A	-	DFS	2016/01/18 * 12
MAT-60	Attenuator(20dB)	Suhner	6820.19.A	-	DFS	Pre Check
MPSC-06	Power Splitters/Combiners	Pasternack Enterprises	ZFRSC-123-S+	ZFRSC-123-00231	DFS	Pre Check
MAT-56	Attenuator(10dB)	Suhner	6810.19.A	-	DFS	2016/01/18 * 12
MCC-163	Microwave Cable	Murata	MXGS83RK3000	-	DFS	2015/11/10 * 12
MCC-66	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28636/2	DFS	2016/04/18 * 12
MAT-23	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	DFS	2016/03/18 * 12
MPS-03	Power Splitter	Mini-Circuits	ZN4PD1-63-S+	002	DFS	2015/06/02 * 12
MCC-94	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	30815/2	DFS	-
MCC-100	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	30821/2	DFS	-
MAT-59	Attenuator(20dB)	Suhner	6820.19.A	-	DFS	Pre Check

**\*1) Signal generator is only used to generate radar test signal, and the wave form is confirmed with spectrum analyzer every time before the test.**

**The expiration date of the calibration is the end of the expired month.**

**All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.**

**As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.**

**DFS: Dynamic Frequency Selection**

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