RADIO TEST REPORT

Test Report No. : 10604551H-C

Applicant	:	**silex technology, Inc.**
Type of Equipment	:	**PCI Express Half mini card WLAN module**
Model No.	:	**SX-PCEAN2**
FCC ID	:	**N6C-SXPCEAN2**
Test regulation	:	**FCC Part 15 Subpart E: 2015 (DFS test only)**
Test Result	:	**Complied**

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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)

Date of test: March 16 to 27, 2015

Representative test engineer:
Kazuya Yoshioka
Engineer
Consumer Technology Division

Approved by:
Takahiro Hatakeda
Leader
Consumer Technology Division

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http://www.ul.com/japan/jpn/pages/services/emc/about/mark1/index.jsp#nvlap

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REVISION HISTORY

Original Test Report No.: 10604551H-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	10604551H-C	April 2, 2015	-	-

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CONTENTS **PAGE**

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
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Contact Person	:	Toshiro Kometani

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

2.1 Identification of E.U.T.

Type of Equipment	:	PCI Express Half mini card WLAN module
Model No.	:	SX-PCEAN2
Serial No.	:	Refer to Clause 4.2
Rating	:	DC3.3V
Receipt Date of Sample	:	February 12, 2015
Country of Mass-production	:	Japan
Condition of EUT	:	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No Modification by the test lab

2.2 Product Description

Model No: SX-PCEAN2 (referred to as the EUT in this report) is the PCI Express Half mini card WLAN module.

General Specification

Clock frequency(ies) in the system	:	40MHz

Radio Specification

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

Radio Specification

	IEEE802.11b	IEEE802.11g/n (20 M band)	IEEE802.11a/n (20 M band)	IEEE802.11n (40 M band)
Frequency of operation	2412-2462MHz	2412-2462MHz	5180-5240MHz 5260-5320MHz *1) 5500-5700MHz *1) 5745-5825MHz	2422-2452MHz 5190-5230MHz 5270-5310MHz *1) 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: 5MHz 5GHz: 40MHz
Antenna type	WiFi Dual Band PCB antenna			
Antenna Gain	2.4GHz: 1.8dBi 5GHz: 3.9dBi			
Antenna Connector type	U.FL Alternative connector			

*1) 5260-5320MHz, 5270-5310MHz, 5500-5700MHz, and 5510-5670MHz are applied for this test report.

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 January 21, 2015
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 v01r01
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 D03 Client Without DFS New Rules v01r01
Title	:	U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY
Test Specification	:	KDB905462 D04 Operational Modes for DFS Testing New Rules v01
Title	:	OPERATIONAL MODES SUGGESTED FOR DFS TESTING

FCC Part 15.31 (e)
The RF Module has own regulator.
The RF Module is constantly provided voltage through own regulator regardless of input voltage (DC3.3V).
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).
Therefore the equipment complies with the requirement of 15.203/212.

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-210 A9.3(b)(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-210 A9.3(b)(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-210 A9.3(b)(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-210 A9.3(b)(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-210 A9.3(b)(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.					

< Client mode>

Requirement	Operating Mode ClientWithout Radar Detection	Test Procedures	Limits	Deviation	Results
U-NII Detection Bandwidth	No	FCC/IC: KDB905462 D02 7.8.1	FCC/IC: KDB905462 D02 5.3	N/A	N/A
Initial Channel Availability Check Time	No	FCC/IC: KDB905462 D02 7.8.2.1	FCC:FCC15.407(h)(2)(ii) IC:RSS-210 A9.3(b)(ii)	N/A	N/A
Radar Burst at the Beginning of the Channel Availability Check Time	No	FCC/IC: KDB905462 D02 7.8.2.2	FCC:FCC15.407(h)(2)(ii) IC:RSS-210 A9.3(b)(ii)	N/A	N/A
Radar Burst at the End of the Channel Availability Check Time	No	FCC/IC: KDB905462 D02 7.8.2.3	FCC:FCC15.407(h)(2)(ii) IC:RSS-210 A9.3(b)(ii)	N/A	N/A
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-210 A9.3(b)(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-210 A9.3(b)(v)	N/A	Complied
Statistical Performance Check	No	FCC/IC: KDB905462 D02 7.8.4	FCC/IC: KDB905462 D02 6.1,6.2,6.3	N/A	N/A
Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0422.					

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
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

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
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. **Note 2:** The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signal will not count quiet periods in between transmissions. **Note 3:** During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

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 Traials
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/PRI $_{usec}$)}	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

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.

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

5.1 Operating Modes

For FCC the EUT operates over the 5250-5350MHz and 5470-5725MHz ranges.
For IC the EUT operates over the 5250-5350MHz and 5470-5725MHz ranges, excluding the 5600-5650MHz range.

The EUT has the Master mode and the Client mode without Radar Detection.

The highest power level is 20.76dBm EIRP in the 5250-5350MHz band.

Power level(EIRP) of the EUT[dBm]

Output Power (Max)	
20Mband	40Mband
20.76	18.40

Power spectral density level of the EUT[dBm/MHz]

Output Power (Max)	
20Mband	40Mband
6.45	0.79

*Refer to 10604551H-B, 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 802.11a/n 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 using the media player with the V2.61 Codec package.

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 -64 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).

2. In case of Client mode without Radar Detection

The FCC ID for the Master Device used with EUT for DFS testing is LDK102061.

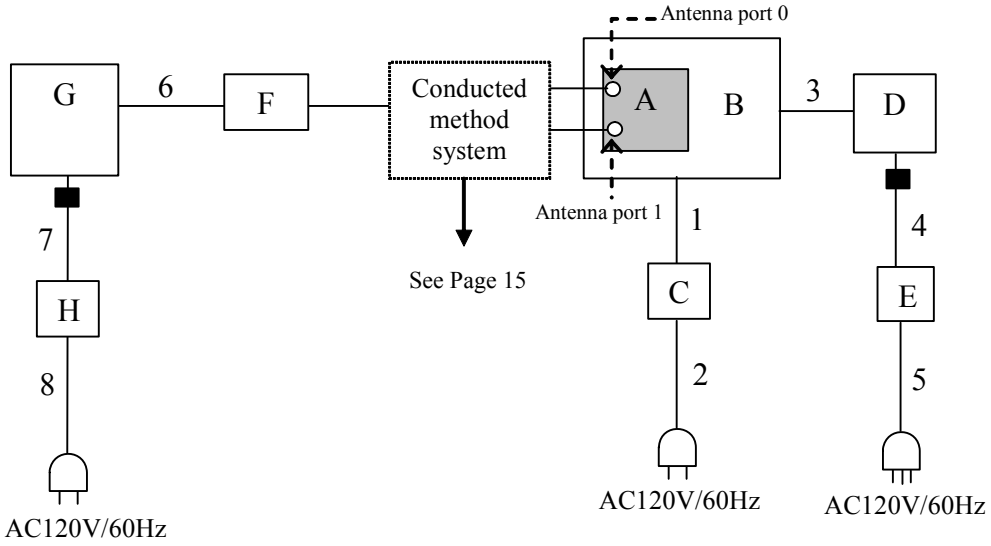
The rated output power of the Master unit is >200mW(23dBm). Therefore the required interference threshold level is -64 dBm. After correction for antenna gain and procedural adjustments, the required conducted threshold at the antenna port is -64 + 1 + 3.5 = -59.5 dBm (threshold level + additional 1dB + 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-10.2-00082-4

5.2 Configuration and peripherals

<Master mode>



■ : Standard Ferrite Core

* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.
* The test was performed using a typical evaluation board (Jig board).

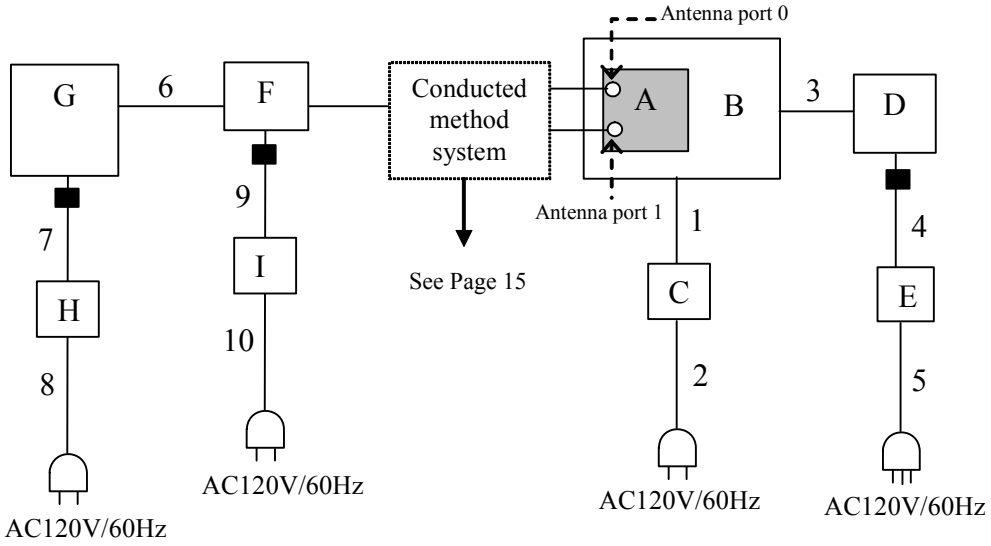
Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	PCI Express Half Mini Card WLAN Module	SX-PCEAN2	002	Silex	EUT
B	Jig board	-	-	-	-
C	AC Adapter	UI318-12	C07-0504976	UNIFIVE	-
D	Laptop PC	T60	L3-DM302	IBM	-
E	AC Adapter	92P1160	11S92P1160Z1ZBGH6B6D KV	IBM	-
F	Wireless LAN Adapter	WI-U3-866V	A40707	BUFFALO	-
G	Laptop PC	Latitude E6530	CUO1930	DELL	-
H	AC Adapter	PA-1900-32D2	CN-0Y4M8K-72438-2B Q-72B9-A00	DELL	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC Cable	1.8	Unshielded	Unshielded	-
2	AC Cable	1.0	Unshielded	Unshielded	-
3	LAN Cable	1.8	Unshielded	Unshielded	-
4	DC Cable	1.8	Unshielded	Unshielded	-
5	AC Cable	0.9	Unshielded	Unshielded	-
6	USB Cable	0.5	Shielded	Shielded	-
7	DC Cable	1.8	Unshielded	Unshielded	-
8	AC Cable	1.0	Unshielded	Unshielded	-

<Client mode>



* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.
* The test was performed using a typical evaluation board (Jig board).

Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	PCI Express Half Mini Card WLAN Module	SX-PCEAN2	002	Silex	EUT
B	Jig board	-	-	-	-
C	AC Adapter	UI318-12	CO7-0504976	UNIFIVE	-
D	Laptop PC	T60	L3-DM302	IBM	-
E	AC Adapter	92P1160	11S92P1160Z1ZBGH6B6D KV	IBM	-
F	Wireless LAN access point	AIR-AP1252AG-A-K9	FTX122391JU	Cisco Systems	-
G	Laptop PC	Latitube E6530	CUO1930	DELL	-
H	AC Adapter	PA-1900-32D2	CN-0Y4M8K-72438-2B Q-72B9-A00	DELL	-
I	AC Adapter	EADP-45BB	DTH11329086	DELTA ELECTRONICS,INC.	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC Cable	1.8	Unshielded	Unshielded	-
2	AC Cable	1.0	Unshielded	Unshielded	-
3	LAN Cable	1.8	Unshielded	Unshielded	-
4	DC Cable	1.8	Unshielded	Unshielded	-
5	AC Cable	0.9	Unshielded	Unshielded	-
6	LAN Cable	1.0	Unshielded	Unshielded	-
7	DC Cable	1.8	Unshielded	Unshielded	-
8	AC Cable	1.0	Unshielded	Unshielded	-
9	DC Cable	1.8	Unshielded	Unshielded	-
10	AC Cable	2.0	Unshielded	Unshielded	-

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.

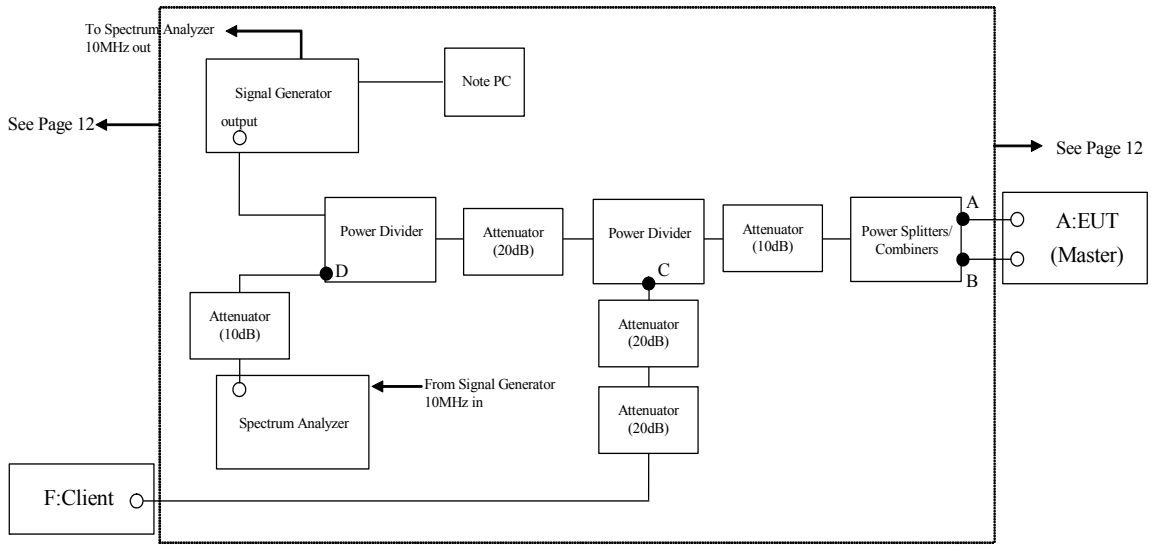
The signal monitoring equipment consists of a spectrum analyzer with the capacity to display 8001 bins on the horizontal axis. A time-domain resolution of 2 msec/bin is achievable with a 16 second sweep time, meeting the 10 seconds short pulse reporting criteria. The aggregate ON time is calculated by 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

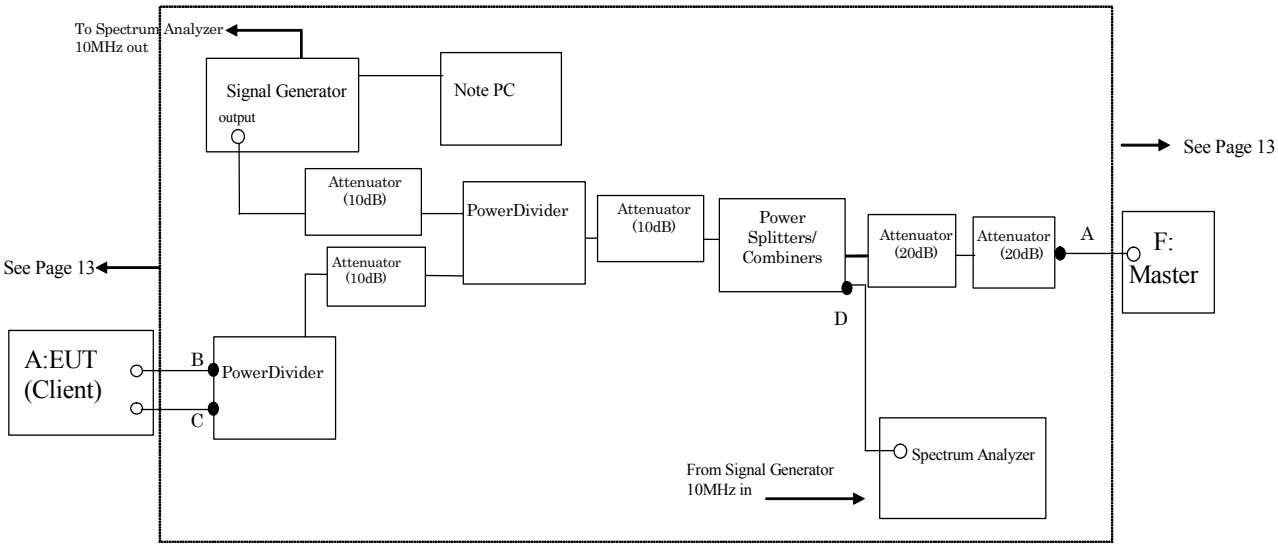
The first 100 frequencies are selected out of the hopping sequence of the randomized 475 hop frequencies.
Only a *Burst* that has the frequency falling within the receiver bandwidth of the tested U-NII device is selected among those frequencies. (Frequency-domain simulation). The radar waveform generated 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.

CONDUCTED METHODS SYSTEM BLOCK DIAGRM

<Master mode>



<Client mode>



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 15)
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.

<Client mode>
Step 1:Set the system as shown in Figure 3 of KDB905462 D02 7.2.2.
Step 2: Adjust each attenuator to fulfill the following three conditions:
- WLAN can be communicated, and
- Rader detection threshold level is bigger than Client Device traffic level on the spectrum analyzer, and
- Master 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 15)
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.

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.

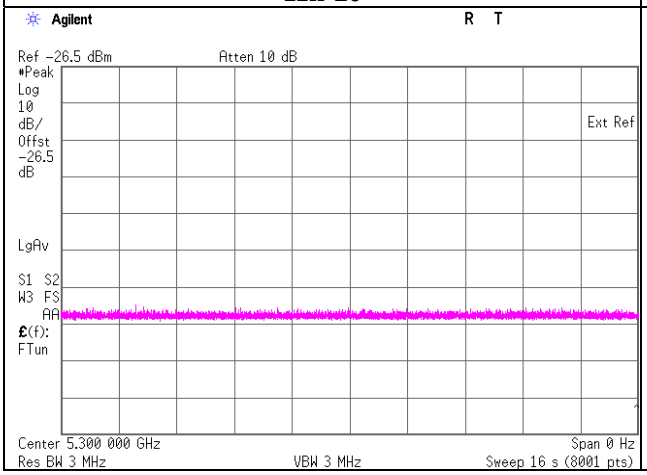
See Clause 5.4 for Plots of Noise, Rader Waveforms, and WLAN signals.

5.4 Plots of Noise, Rader Waveforms, and WLAN signals

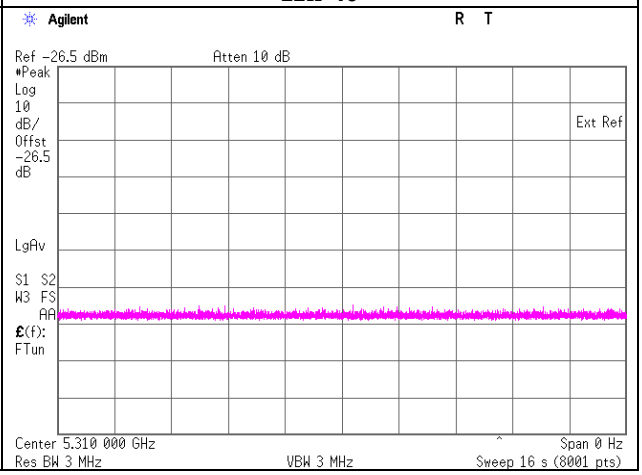
<Master mode>

Plots of System Noise Floor

11n-20

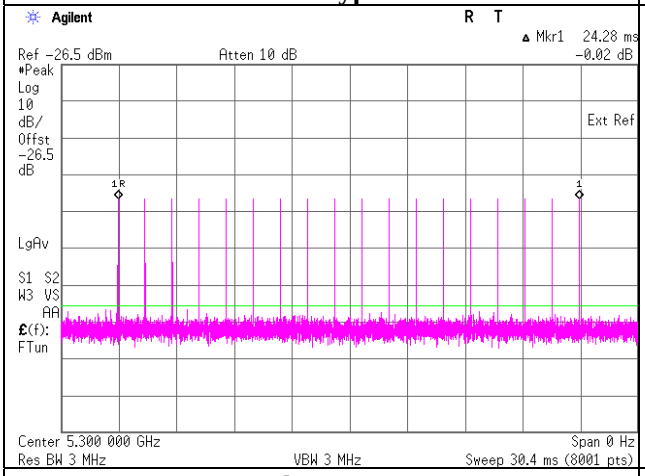


11n-40

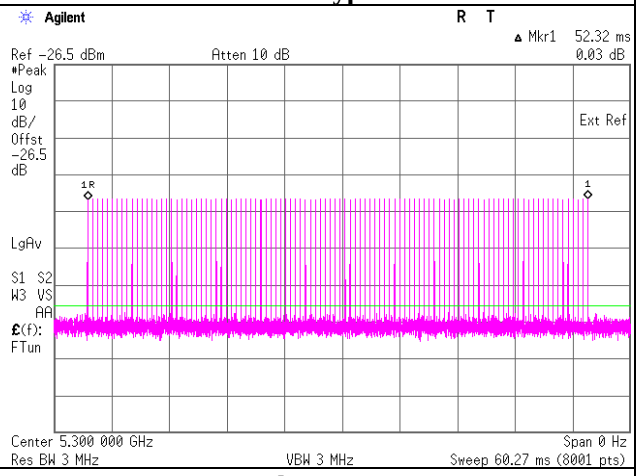


Plots of Radar Waveforms

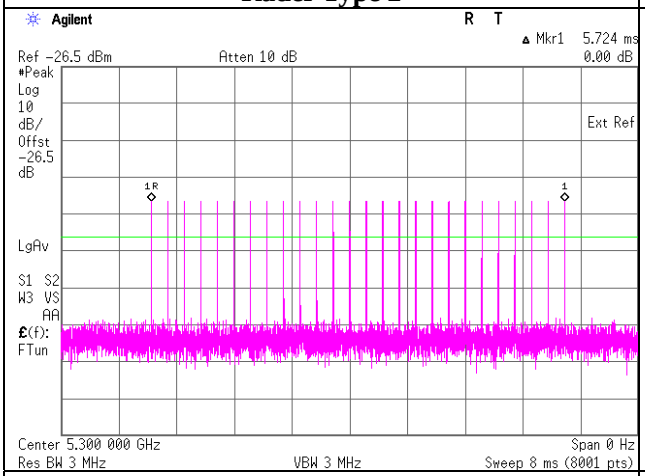
Rader Type 0



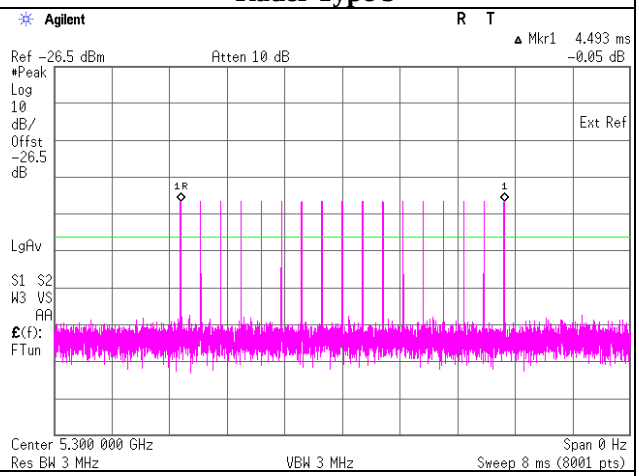
Rader Type 1



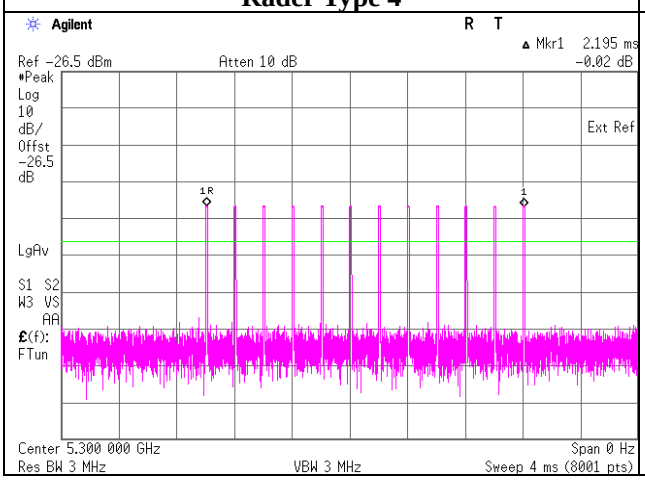
Rader Type 2



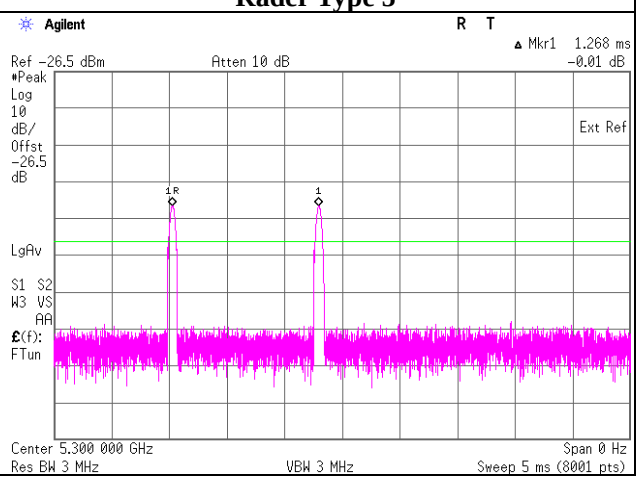
Rader Type 3



Rader Type 4

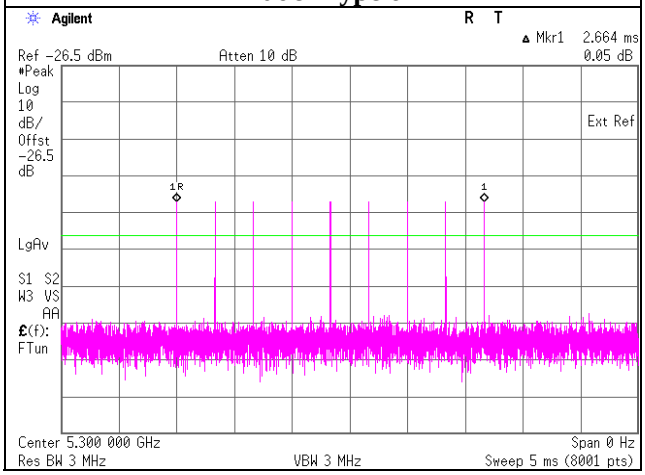


Rader Type 5



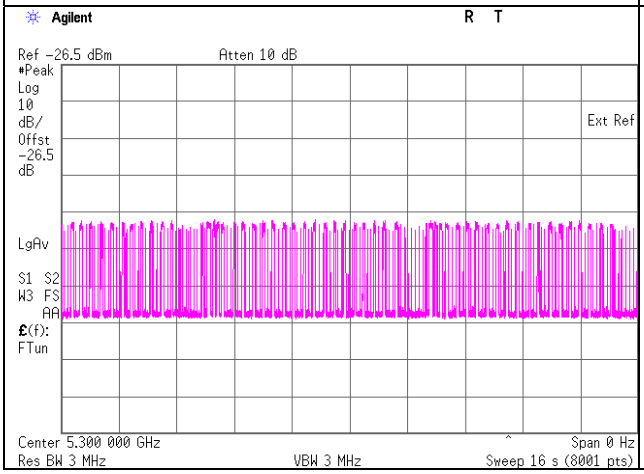
Plots of Radar Waveforms

Rader Type 6

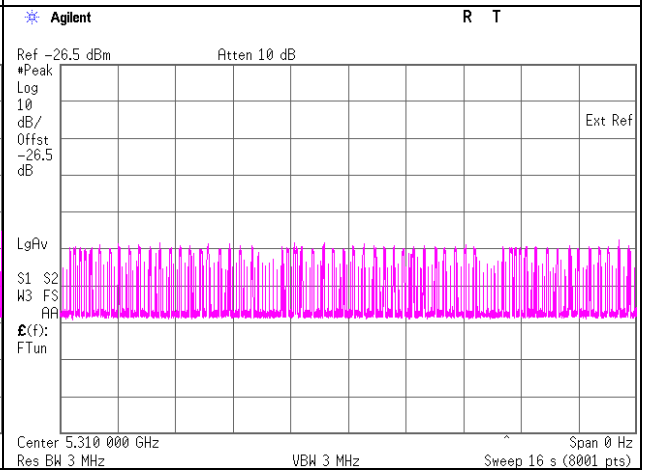


Plots of WLAN Traffic

11n-20

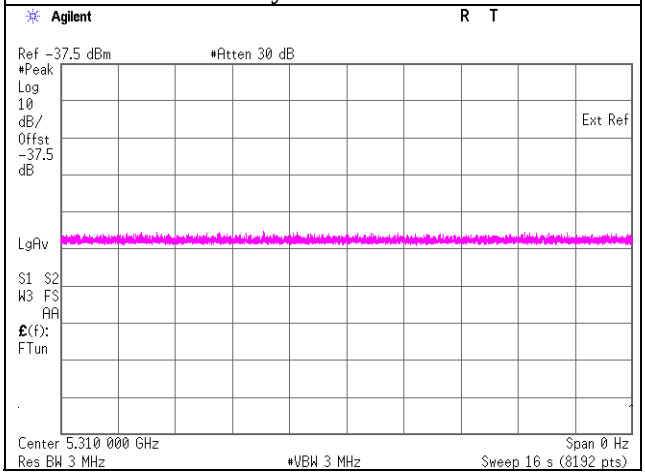


11n-40



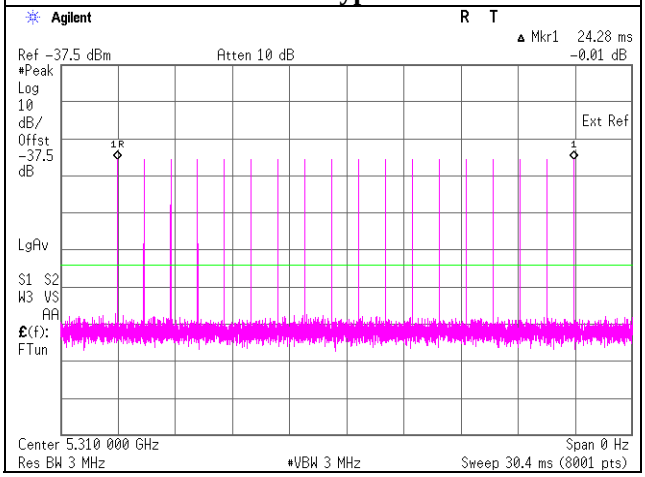
<Client mode>

Plots of System Noise Floor



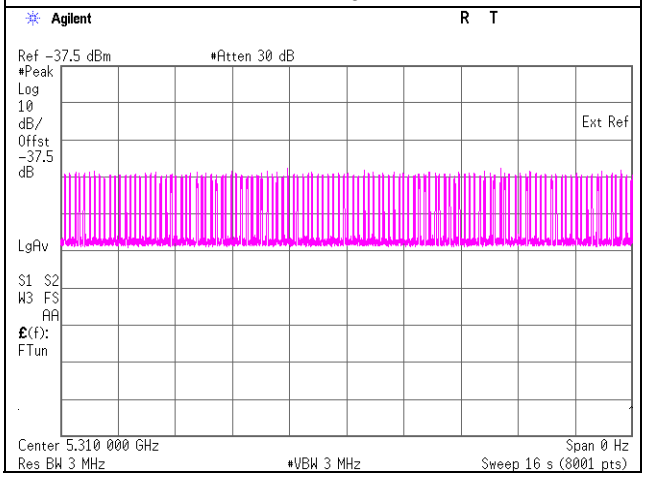
Plots of Radar Waveforms

Rader Type 0



Plots of WLAN Traffic

11n-40



SECTION 6: U-NII Detection Bandwidth

6.1 Operating environment

Test place	Ise EMC Lab. No.11 measurement room
Date	03/19/2015
Temperature/ Humidity	23deg. C / 42% RH
Engineer	Kazuya Yoshioka
Mode	11n-20 / 11n-40

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

6.3 Test data

5300MHz (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
5291	5310	19	17.6110	107.9	100	Pass

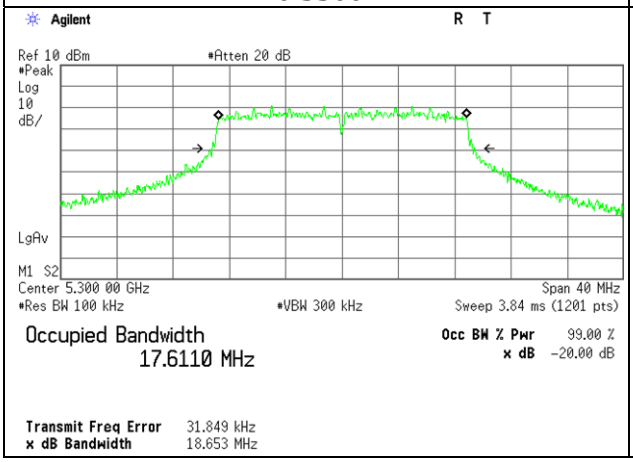
5310MHz (11n-40)
Waveform : Radar Type 0

FL [MHz]	FH [MHz]	Detection Bandwidth [MHz]	99% Power Bandwidth [MHz]	Ratio of Detection BW to 99% Power BW [%]	Limit [%]	Results
5290	5330	40	36.1193	110.7	100	Pass

99% Occupied Bandwidth

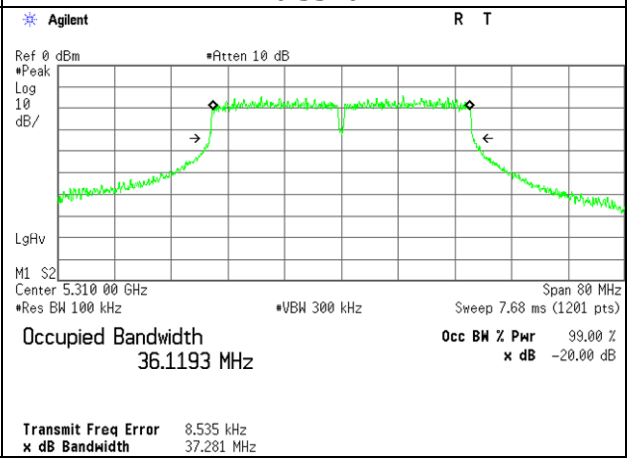
20MHz Bandwidth

11n-20 5300MHz



40MHz Bandwidth

11n-40 5310MHz



6.4 Test result

Test result: Pass

SECTION 7: Initial Channel Availability Check Time

7.1 Operating environment

Test place	Ise EMC Lab. No.11 measurement room
Date	03/20/2015
Temperature/ Humidity	23deg. C / 45% RH
Engineer	Kazuya Yoshioka
Mode	11n-20

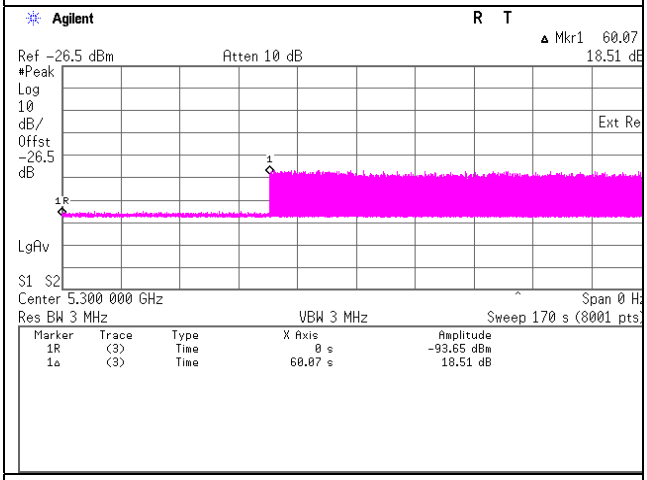
7.2 Test Procedure

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

Initial Channel Availability Check Time

11n-20



Marker 1R : Start of CAC	**: 0 sec**
Marker 1 : End of CAC	**: 60.07 sec**
Channel Availability Check Time	**: 60.07 sec**

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.11 measurement room
Date	03/20/2015
Temperature/ Humidity	23deg. C / 45% RH
Engineer	Kazuya Yoshioka
Mode	11n-20

8.2 Test Procedure

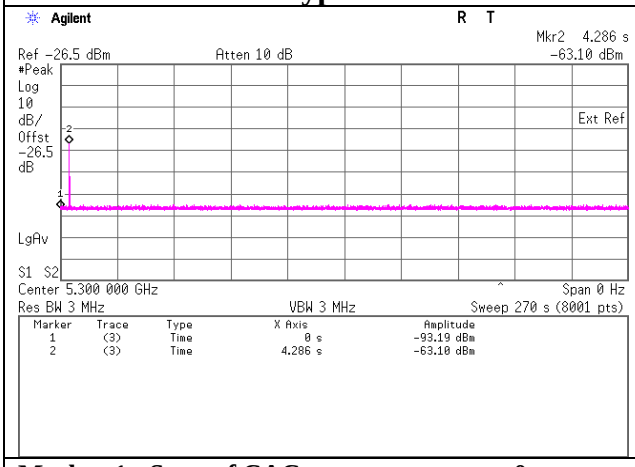
A single Burst of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at Start of CAC. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
Verify that during the 2.5 minute measurement window no EUT transmissions occurred on Chr.

8.3 Test data

Radar Burst at the Beginning of the Channel Availability Check Time

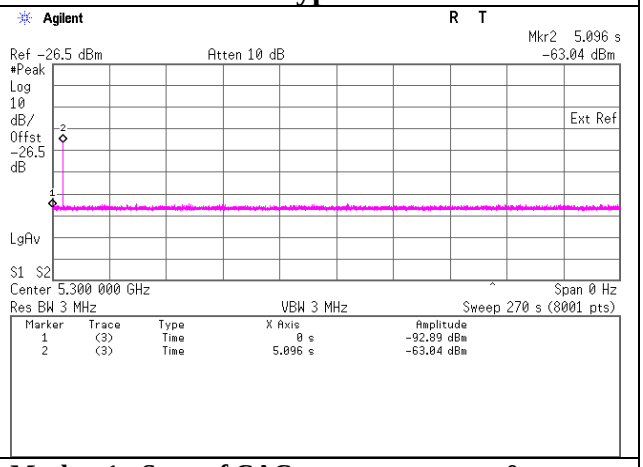
11n-20

Type0

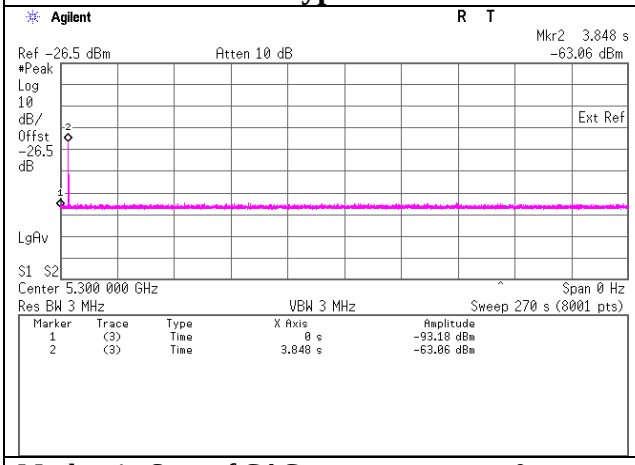
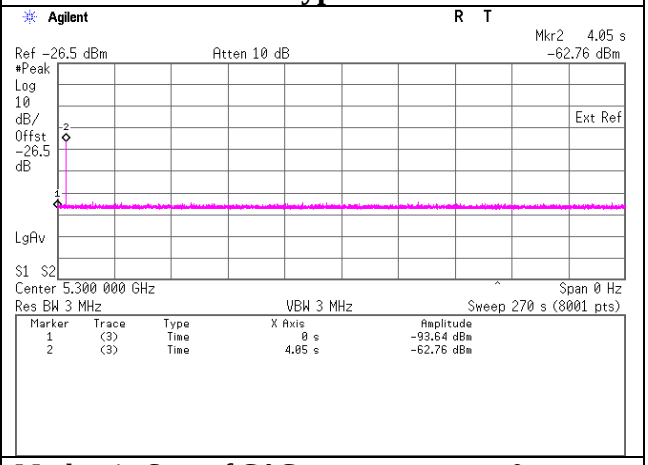
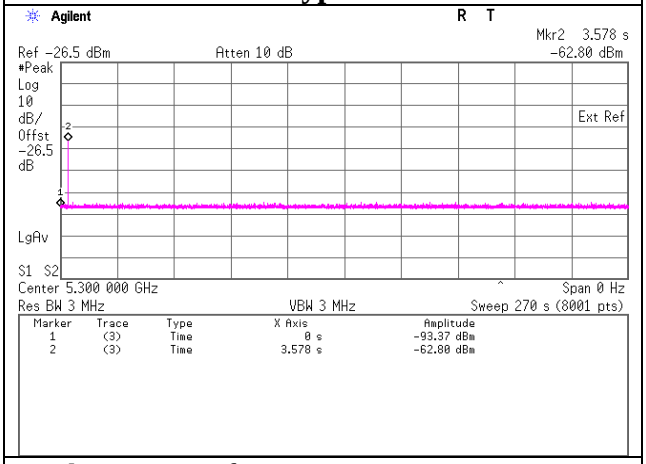


Marker 1 : Start of CAC : 0 sec
Marker 2 : Radar Signal(Type 0) applied : 4.286 sec

Type1



Marker 1 : Start of CAC : 0 sec
Marker 2 : Radar Signal(Type 1) applied : 5.096 sec

Radar Burst at the Beginning of the Channel Availability Check Time	
11n-20	
Type2	Type3
	
Marker 1 : Start of CAC : 0 sec **Marker 2 : Radar Signal(Type 2) applied : 3.848 sec**	**Marker 1 : Start of CAC : 0 sec** **Marker 2 : Radar Signal(Type 3) applied : 4.05 sec**
Type4	
	
Marker 1 : Start of CAC : 0 sec **Marker 2 : Radar Signal(Type 4) applied : 3.578 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.11 measurement room
Date	03/20/2015
Temperature/ Humidity	23deg. C / 45% RH
Engineer	Kazuya Yoshioka
Mode	11n-20

9.2 Test Procedure

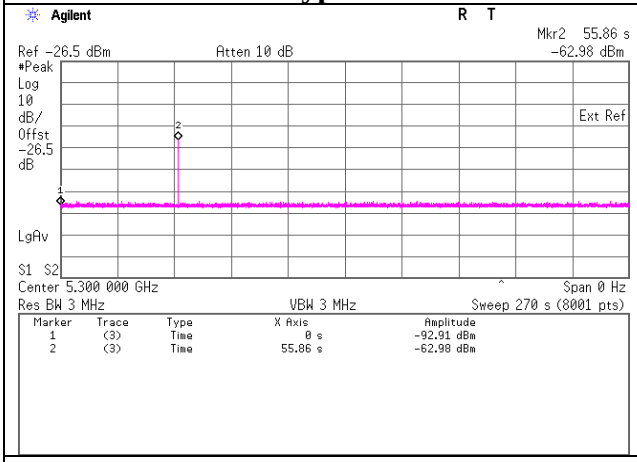
A single Burst of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at Start of CAC + 54 seconds. An additional 1 dB is added to the radar test signal to ensure it is at or above the DFS Detection Threshold, accounting for equipment variations/errors.
Verify that during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

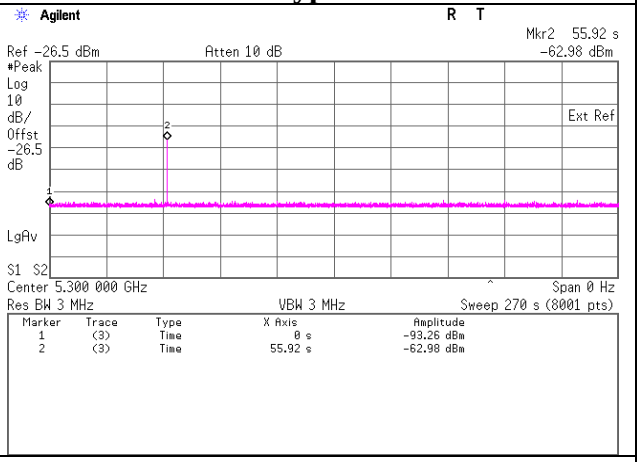
11n-20

Type0

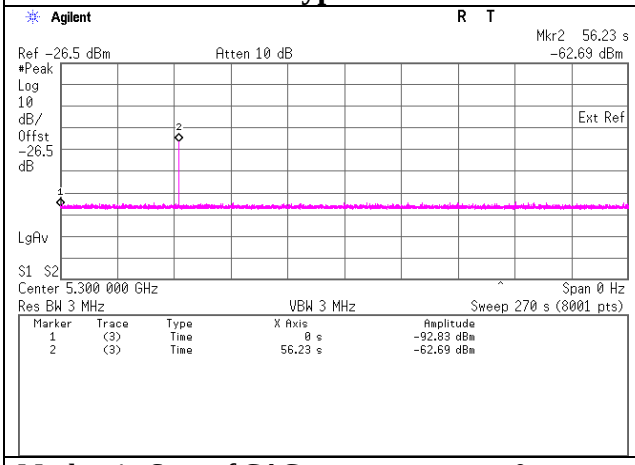
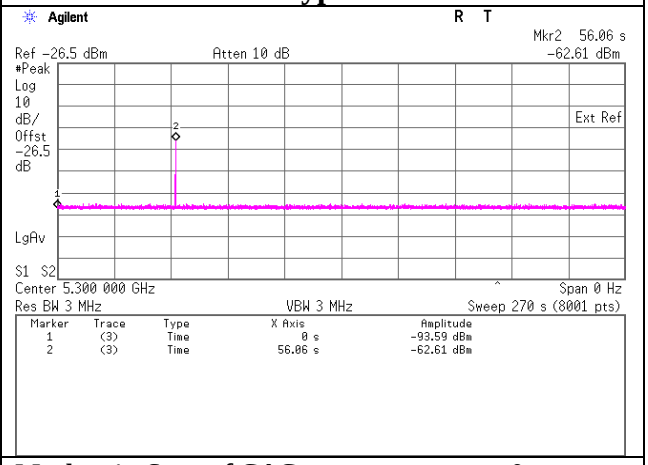
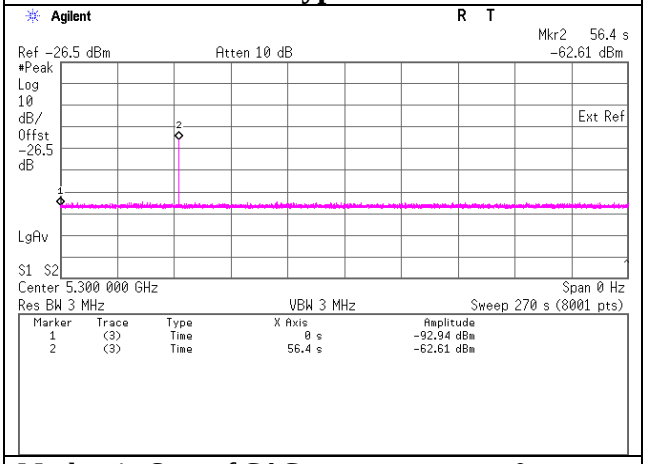


Marker 1 : Start of CAC : 0 sec
Marker 2 : Radar Signal(Type 0) applied : 55.86 sec

Type1



Marker 1 : Start of CAC : 0 sec
Marker 2 : Radar Signal(Type 1) applied : 55.92 sec

Radar Burst at the End of the Channel Availability Check Time	
11n-20	
Type2	Type3
	
Marker 1 : Start of CAC : 0 sec **Marker 2 : Radar Signal(Type 2) applied : 56.23 sec**	**Marker 1 : Start of CAC : 0 sec** **Marker 2 : Radar Signal(Type 3) applied : 56.06 sec**
Type4	
	
Marker 1 : Start of CAC : 0 sec **Marker 2 : Radar Signal(Type 4) applied : 56.4 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.11 measurement room and No.7 shielded room	
Date	03/20/2015	03/27/2015
Temperature/ Humidity	23deg. C / 45% RH	22deg. C / 36% RH
Engineer	Kazuya Yoshioka	Takumi Shimada
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]	0.502	10.000	Pass
Channel Closing Transmission Time *2)	[msec]	6	60	Pass

*1) Channel Move Time is calculated as follows:
(Channel Move Time) = (End of Transmission) - (End of Burst) = 2.392-1.89
*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)
= 3 × 2[msec]

<Client Device>

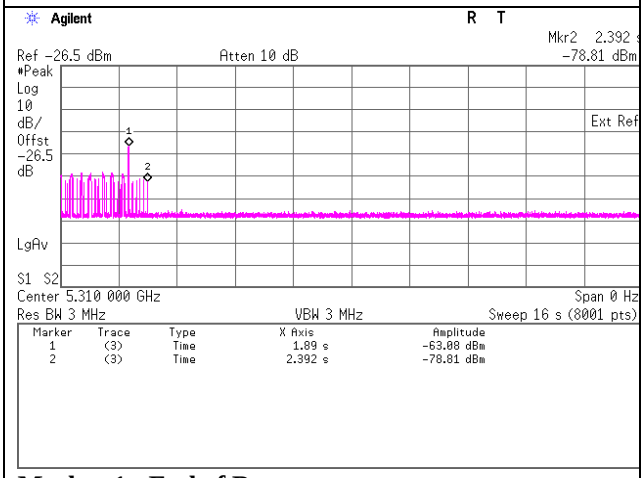
11n-40

Test Item	Unit	Measurement Time	Limit	Results
Channel Move Time *1)	[sec]	0.020	10.000	Pass
Channel Closing Transmission Time *2)	[msec]	0	60	Pass

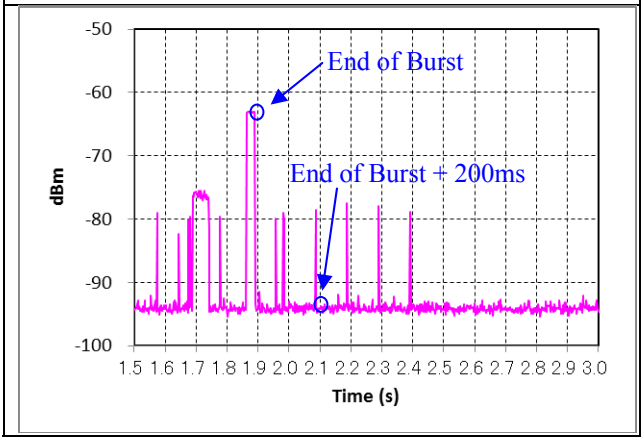
*1) Channel Move Time is calculated as follows:
(Channel Move Time) = (End of Transmission) - (End of Burst) = 2.112-2.092
*2) Channel Closing Transmission Time is calculated from (End of Burst + 200msec) to (End of Burst + 10sec)
(Channel Closing Transmission Time) = (Number of analyzer bins showing transmission) × (dwell time per bin)
= 0 × 2[msec]

<Master mode>

Radar Type 0
11n-40



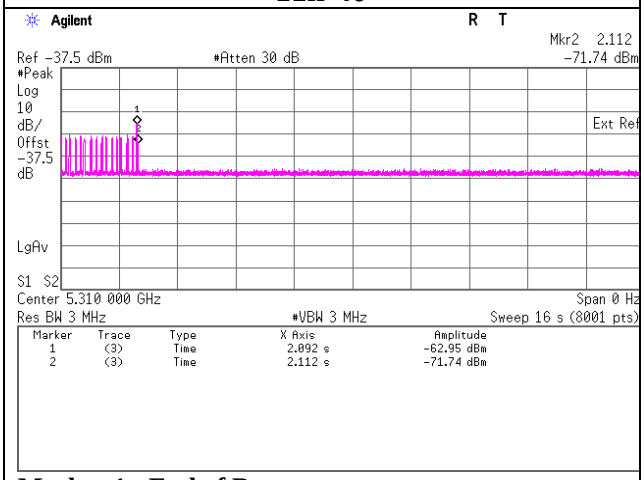
Marker 1 : End of Burst
Marker 2 : End of Transmission



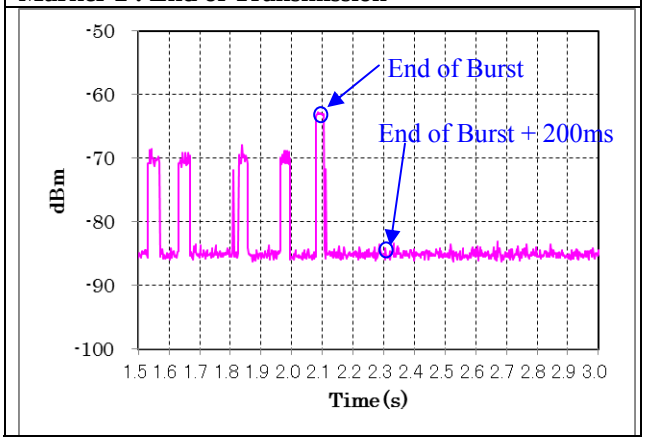
<Client mode>

Radar Type 0

11n-40



Marker 1 : End of Burst
Marker 2 : End of Transmission



10.4 Test result

Test result: Pass

SECTION 11: Non-Occupancy Period

11.1 Operating environment

Test place	I Ise EMC Lab. No.11 measurement room and No.7 shielded room	
Date	03/20/2015	03/27/2015
Temperature/ Humidity	23deg. C / 45% RH	22deg. C / 36% RH
Engineer	Kazuya Yoshioka	Takumi Shimada
Mode	11n-20	

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.

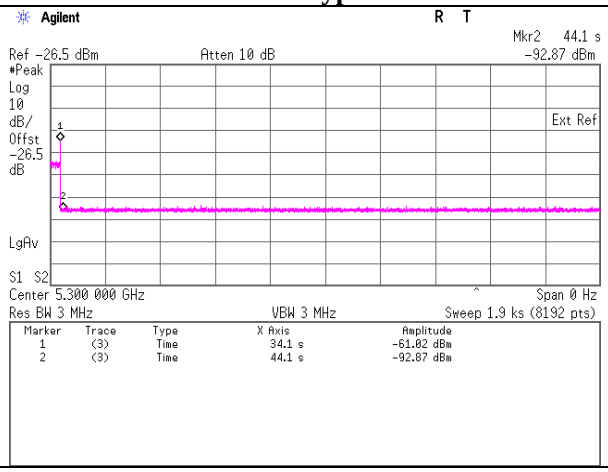
<Client mode only>
2). Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
Observe the transmissions of the EUT on the Operating Channel for duration greater than 30 minutes
after the Master Device is shut off.

11.3 Test data

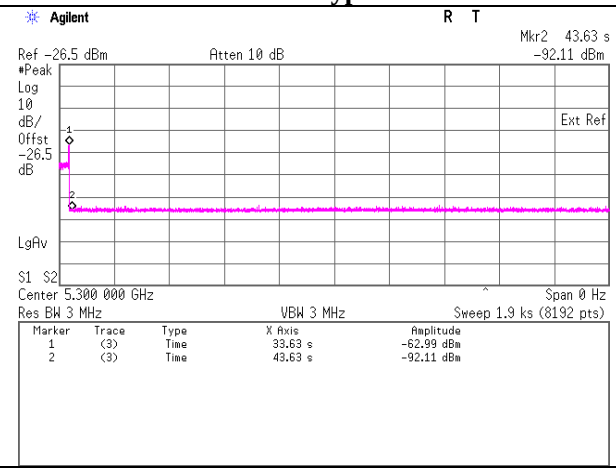
<Master mode>

Non-Occupancy Period

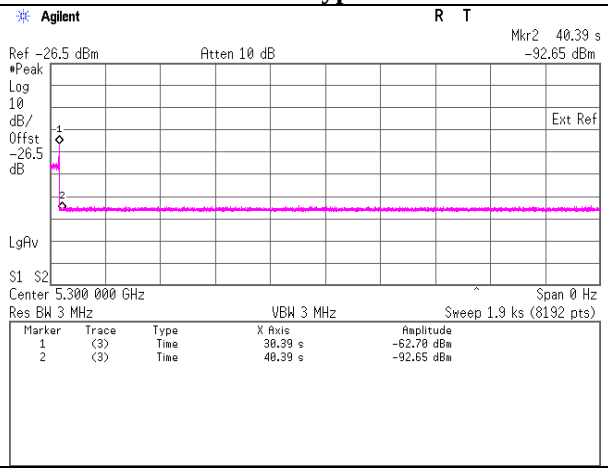
Rader Type 0



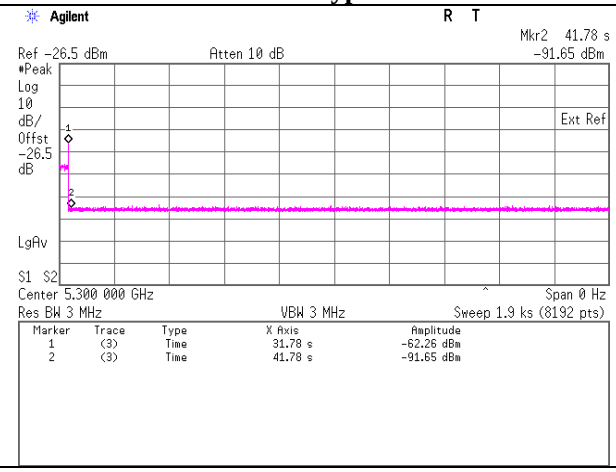
Rader Type 1



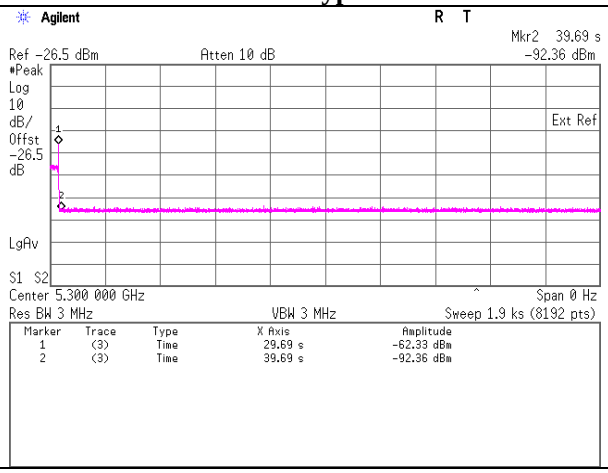
Rader Type 2

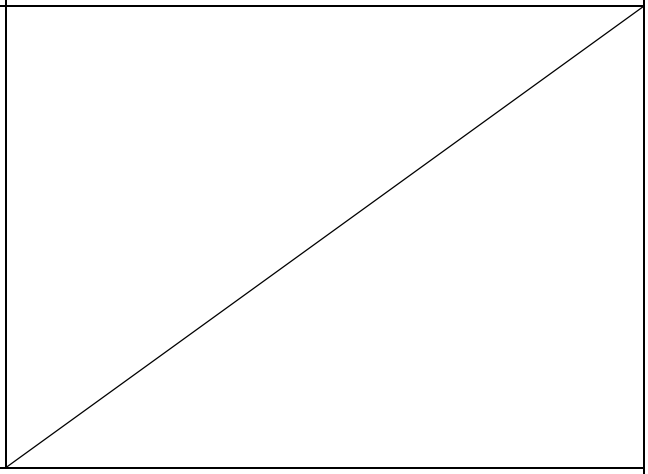


Rader Type 3



Rader Type 4



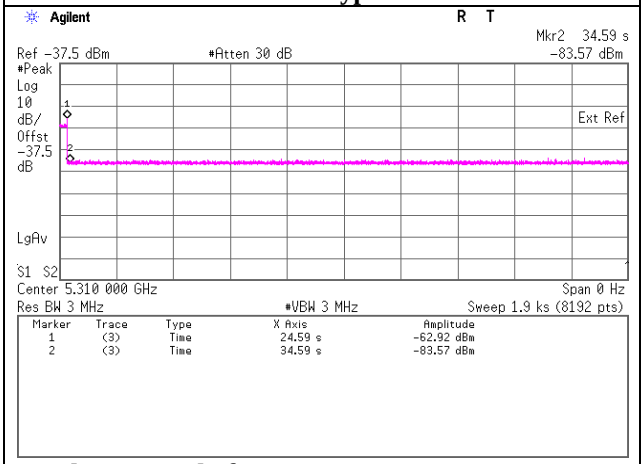


Marker 1 : End of Burst , Marker 2 : End of Burst + 10sec

<Client mode>

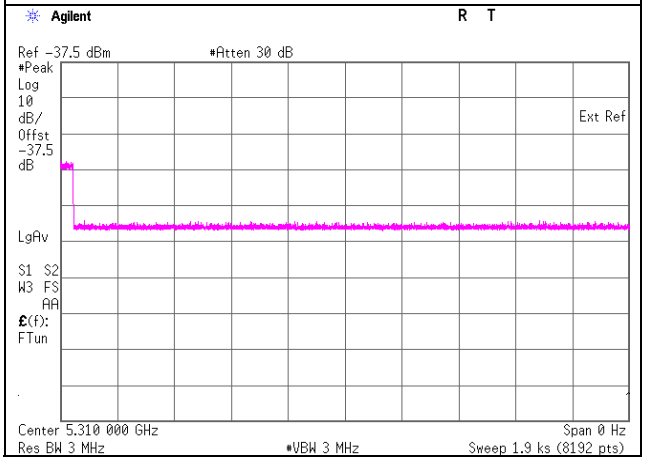
Non-Occupancy Period

Radar Type 0



Marker 1 : End of Burst
Marker 2 : End of Burst + 10sec

Master is shut off



11.4 Test result

Test result: Pass

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

12.1 Operating environment

Test place	Ise EMC Lab. No.7 shielded room and No.11 measurement room		
Date	03/16/2015	03/18/2015	03/19/2015
Temperature/ Humidity	23deg. C / 45% RH	24deg. C / 39% RH	23deg. C / 42% RH
Engineer	Kazuya Yoshioka	Kazuya Yoshioka	Kazuya Yoshioka
Mode	11n-20 / 11n-40		

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.

Radar detection is observed by two techniques.
a). Monitoring LAN traffic with Spectrum Analyzer.
b). Indicator of PC connected to EUT

12.3 Test data

5300MHz (11n-20)

Radar Type	Number of Trials	Number of Successful Detections	Percentage of Successful Detections [%]	Limit [%]	Results
1	30	27	90.00	60	Pass
2	30	24	80.00	60	Pass
3	30	23	76.67	60	Pass
4	30	24	80.00	60	Pass
Aggregate of 1 to 4	-	-	81.67	80	Pass
5	30	30	100.00	80	Pass
6	30	29	96.67	70	Pass

5310MHz (11n-40)

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

12.4 Test result

Test result: Pass

APPENDIX 1: Data of DFS test

U-NII Detection Bandwidth

5300MHz (11n-20)

Frequency [MHz]	Number of Trials [Times]	Number of Detected [Times]	Ratio of Detected [%]	Mark
5290	10	8	80	
5291	10	10	100	FL
5292	10	10	100	
5293	10	10	100	
5294	10	10	100	
5295	10	10	100	
5300	10	10	100	
5305	10	10	100	
5310	10	10	100	FH
5311	10	7	70	
5315	10	1	10	

5310MHz (11n-40)

Frequency [MHz]	Number of Trials [Times]	Number of Detected [Times]	Ratio of Detected [%]	Mark
5285	10	0	0	
5289	10	0	0	
5290	10	10	100	FL
5295	10	10	100	
5300	10	10	100	
5305	10	10	100	
5310	10	10	100	
5315	10	10	100	
5320	10	10	100	
5325	10	10	100	
5330	10	10	100	FH
5331	10	0	0	
5335	10	0	0	

Statistical Performance Check

5300MHz (11n-20)

Trial #	Radar Type1	Radar Type2	Radar Type3	Radar Type4	Radar Type5	Radar Type6
	Dectection	Dectection	Dectection	Dectection	Dectection	Dectection
	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
1	Yes	Yes	Yes	Yes	Yes	Yes
2	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes
4	Yes	No	Yes	No	Yes	Yes
5	Yes	Yes	Yes	No	Yes	Yes
6	Yes	Yes	Yes	No	Yes	Yes
7	Yes	Yes	Yes	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes	Yes	Yes
9	No	Yes	No	Yes	Yes	Yes
10	Yes	No	Yes	Yes	Yes	Yes
11	Yes	Yes	Yes	No	Yes	Yes
12	Yes	Yes	Yes	Yes	Yes	Yes
13	Yes	Yes	No	Yes	Yes	Yes
14	No	No	Yes	Yes	Yes	Yes
15	Yes	Yes	No	Yes	Yes	Yes
16	Yes	Yes	Yes	Yes	Yes	Yes
17	Yes	Yes	Yes	Yes	Yes	Yes
18	Yes	No	No	Yes	Yes	Yes
19	Yes	Yes	Yes	Yes	Yes	No
20	Yes	No	No	Yes	Yes	Yes
21	Yes	Yes	Yes	Yes	Yes	Yes
22	Yes	Yes	Yes	No	Yes	Yes
23	No	Yes	Yes	No	Yes	Yes
24	Yes	Yes	No	Yes	Yes	Yes
25	Yes	No	No	Yes	Yes	Yes
26	Yes	Yes	Yes	Yes	Yes	Yes
27	Yes	Yes	Yes	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:5300MHz Radar Frequency:5300MHz						

Statistical Performance Check

5310MHz (11n-40)

Trial #	Radar Type1	Radar Type2	Radar Type3	Radar Type4	Radar Type5	Radar Type6
	Dectection	Dectection	Dectection	Dectection	Dectection	Dectection
	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
1	Yes	Yes	Yes	No	Yes	Yes
2	Yes	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes	Yes
4	Yes	Yes	Yes	No	Yes	Yes
5	Yes	Yes	Yes	Yes	Yes	Yes
6	Yes	Yes	Yes	Yes	Yes	Yes
7	Yes	Yes	Yes	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes	Yes	Yes
9	Yes	Yes	Yes	Yes	Yes	Yes
10	Yes	Yes	No	Yes	Yes	Yes
11	Yes	Yes	Yes	Yes	Yes	Yes
12	Yes	No	No	Yes	Yes	Yes
13	Yes	Yes	Yes	Yes	Yes	Yes
14	Yes	Yes	Yes	Yes	Yes	Yes
15	Yes	No	Yes	Yes	Yes	Yes
16	Yes	Yes	Yes	Yes	Yes	Yes
17	Yes	Yes	Yes	Yes	Yes	Yes
18	Yes	Yes	Yes	Yes	Yes	Yes
19	Yes	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	No	No	Yes	Yes	Yes	Yes
24	Yes	No	No	No	Yes	Yes
25	Yes	Yes	Yes	Yes	Yes	Yes
26	Yes	Yes	Yes	Yes	Yes	Yes
27	Yes	Yes	Yes	Yes	No	Yes
28	Yes	Yes	Yes	Yes	Yes	Yes
29	Yes	Yes	Yes	Yes	Yes	Yes
30	Yes	Yes	No	Yes	Yes	Yes
EUT Test Frequency:5310MHz Radar Frequency:5310MHz						

Parameter Data sheet for Radar Type 1

5300MHz (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	12	1355.0	72	738
2	10	1432.7	76	698
3	3	1792.1	95	558
4	22	1066.1	57	938
5	19	1139.0	61	878
6	6	1618.1	86	618
7	16	1222.5	65	818
8	1	1930.5	102	518
9	5	1672.2	89	598
10	18	1165.6	62	858
11	14	1285.3	68	778
12	23	326.2	18	3066
13	11	1392.8	74	718
14	7	1567.4	83	638
15	20	1113.6	59	898
16	-	1236.1	66	809
17	-	1841.6	98	543
18	-	1472.8	78	679
19	-	1503.8	80	665
20	-	1071.8	57	933
21	-	1297.0	69	771
22	-	1175.1	63	851
23	-	1712.3	91	584
24	-	1510.6	80	662
25	-	1172.3	62	853
26	-	1230.0	65	813
27	-	1287.0	68	777
28	-	1834.9	97	545
29	-	1721.2	91	581
30	-	1073.0	57	932

Parameter Data sheet for Radar Type 1

5310MHz (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	5	1672.2	89	598
2	11	1392.8	74	718
3	13	1319.3	70	758
4	8	1519.8	81	658
5	21	1089.3	58	918
6	22	1066.1	57	938
7	14	1285.3	68	778
8	6	1618.1	86	618
9	9	1474.9	78	678
10	1	1930.5	102	518
11	19	1139.0	61	878
12	17	1193.3	63	838
13	10	1432.7	76	698
14	20	1113.6	59	898
15	16	1222.5	65	818
16	-	1237.6	66	808
17	-	1845.0	98	542
18	-	1477.1	78	677
19	-	1506.0	80	664
20	-	1073.0	57	932
21	-	1298.7	69	770
22	-	1173.7	62	852
23	-	1715.3	91	583
24	-	1342.3	71	745
25	-	1766.8	94	566
26	-	1848.4	98	541
27	-	1234.6	66	810
28	-	327.1	18	3057
29	-	1724.1	91	580
30	-	1555.2	83	643

Parameter Data sheet for Radar Type 2

5300MHz (11n-20)

Radar Type2			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	26	3.8	229
2	29	3.4	209
3	26	4.4	183
4	27	2.3	201
5	28	3.9	195
6	26	1.6	164
7	29	1.2	185
8	23	1.1	170
9	25	3.9	160
10	28	2.8	166
11	27	4.6	151
12	28	2.0	228
13	28	3.5	212
14	25	4.0	173
15	23	5.0	156
16	24	3.2	206
17	28	1.2	152
18	23	4.7	176
19	29	3.7	156
20	27	3.7	165
21	27	3.7	176
22	26	4.7	156
23	29	2.6	198
24	26	4.5	215
25	29	4.6	228
26	27	3.6	167
27	23	4.8	208
28	29	2.4	199
29	25	4.2	228
30	28	1.2	167

Parameter Data sheet for Radar Type 2

5310MHz (11n-40)

Radar Type2			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	28	4.6	184
2	23	2.8	196
3	23	3.4	217
4	29	1.0	163
5	23	4.7	163
6	29	2.1	174
7	24	1.3	155
8	24	3.9	211
9	29	3.4	190
10	24	1.0	195
11	26	1.5	225
12	23	2.3	207
13	24	1.5	181
14	25	4.2	175
15	28	4.2	162
16	26	2.3	174
17	26	1.4	217
18	25	2.4	190
19	28	3.5	173
20	24	2.0	168
21	25	2.1	189
22	23	4.6	195
23	28	1.1	196
24	25	1.0	213
25	25	2.3	210
26	26	1.0	163
27	29	1.1	152
28	26	2.3	230
29	25	4.8	193
30	28	3.0	187

Parameter Data sheet for Radar Type 3

5300MHz (11n-20)

Radar Type3			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	17	7.0	281
2	16	9.0	221
3	16	9.2	266
4	17	6.4	211
5	16	6.5	250
6	18	7.7	269
7	16	6.9	334
8	17	9.4	409
9	17	9.2	270
10	18	6.4	261
11	17	9.7	377
12	17	7.2	261
13	17	8.9	258
14	18	6.8	363
15	17	9.9	291
16	16	7.9	448
17	17	6.7	345
18	16	6.5	232
19	18	9.0	450
20	16	9.7	455
21	17	9.8	277
22	18	6.5	367
23	18	6.9	459
24	17	8.2	339
25	18	8.5	274
26	16	6.8	216
27	17	8.9	360
28	17	9.6	449
29	16	6.9	448
30	18	6.0	261

Parameter Data sheet for Radar Type 3

5310MHz (11n-40)

Radar Type3			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	17	9.6	317
2	18	8.9	410
3	18	6.4	277
4	16	7.1	407
5	16	6.0	224
6	17	8.7	486
7	17	7.6	414
8	17	9.3	389
9	17	8.6	291
10	18	7.6	425
11	18	7.1	476
12	18	9.2	398
13	18	8.9	221
14	17	9.7	341
15	18	7.0	485
16	16	7.6	470
17	17	6.2	473
18	16	9.6	344
19	16	6.4	239
20	17	7.6	221
21	18	9.6	265
22	16	8.8	301
23	16	6.0	250
24	17	6.8	329
25	16	6.1	460
26	16	10.0	463
27	17	7.6	498
28	18	8.4	213
29	18	8.7	328
30	17	9.6	499

Parameter Data sheet for Radar Type 4

5300MHz (11n-20)

Radar Type4			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	12	13.7	200
2	14	19.2	481
3	13	12.5	283
4	15	18.4	399
5	13	12.5	489
6	14	16.6	286
7	13	11.1	225
8	14	17.1	401
9	16	18.9	372
10	13	19.5	357
11	13	12.8	307
12	12	13.2	409
13	13	12.0	337
14	15	19.9	444
15	13	15.7	498
16	14	16.9	247
17	16	20.0	466
18	13	19.0	309
19	16	13.4	483
20	13	16.6	427
21	12	19.2	277
22	12	13.9	283
23	14	19.4	284
24	15	18.5	299
25	16	19.8	467
26	16	12.1	383
27	13	15.9	434
28	14	13.4	210
29	13	15.8	426
30	13	19.1	467

Parameter Data sheet for Radar Type 4

5310MHz (11n-40)

Radar Type4			
Trial #	Number Pulses per Burst	Pulse Width [us]	PRI [us]
1	15	18.0	409
2	12	14.3	364
3	13	17.1	281
4	14	18.8	470
5	13	19.4	308
6	12	11.9	400
7	16	12.4	436
8	14	20.0	276
9	16	11.5	225
10	13	15.0	361
11	14	15.7	426
12	16	16.7	429
13	16	14.4	201
14	12	19.9	330
15	13	18.4	464
16	12	18.1	365
17	15	11.3	270
18	12	13.4	346
19	16	11.7	303
20	16	11.3	211
21	16	13.1	486
22	15	19.8	317
23	16	17.5	434
24	14	17.8	334
25	14	12.9	275
26	12	19.7	418
27	12	19.6	397
28	15	15.0	484
29	15	18.7	432
30	14	11.4	305

Parameter Data sheet for Radar Type 5

5300MHz (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]
1	1	3	60	6	1227	1775	575084
	2	1	56	11			498635
	3	1	75	19			800953
	4	3	78	14	1902	1321	298734
	5	3	56	19	1565	1973	638971
	6	2	94	6	1966		943584
	7	1	96	19			454005
	8	3	58	16	1869	1737	976935
	9	1	87	14			109471
	10	1	68	18			129589
	11	1	50	10			97556
	12	2	86	7	1270		774950

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]
2	1	3	57	10	1821	1602	16504
	2	2	51	13	1612		514142
	3	1	99	15			324384
	4	3	61	10	1735	1260	175492
	5	3	74	14	1762	1842	537436
	6	3	88	11	1891	1361	36238
	7	3	57	6	1447	1738	473029
	8	3	55	14	1213	1698	344634
	9	3	100	14	1430	1589	308996
	10	2	56	14	1230		681781
	11	2	75	5	1394		55725
	12	2	65	11	1117		114161
	13	2	65	16	1542		435162
	14	1	64	15			156329
	15	3	99	19	1454	1179	169307
	16	3	72	16	1616	1139	346682
	17	2	99	17	1334		406625

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]
3	1	2	62	12	1000		1415338
	2	3	64	5	1587	1405	1018325
	3	2	96	11	1323		36610
	4	1	80	5			246644
	5	2	81	12	1748		721106
	6	1	86	10			507008
	7	2	59	16	1194		959579
	8	2	81	16	1472		519294

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]
4	1	3	71	7	1872	1110	239921
	2	2	85	9	1645		1045811
	3	2	53	12	1384		1003677
	4	3	73	16	1783	1735	693918
	5	2	87	10	1551		478750
	6	2	90	7	1710		466778
	7	3	62	19	1972	1474	556921
	8	2	52	5	1111		648863
	9	3	62	11	1970	1109	572323
	10	1	55	9			478210
	11	1	65	12			366420

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]
5	1	3	86	14	1113	1246	961334
	2	3	76	19	1079	1449	63541
	3	2	94	16	1039		1031982
	4	1	63	13			692688
	5	3	83	7	1703	1675	905722
	6	3	55	16	1744	1136	175114
	7	3	95	8	1374	1760	522173
	8	1	61	8			403005
	9	3	75	20	1832	1763	419522
	10	3	88	17	1622	1273	511657
	11	1	84	17			473476

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]
6	1	2	99	8	1000		460668
	2	2	56	19	1061		392369
	3	3	92	15	1026	1004	268707
	4	3	87	14	1828	1578	289366
	5	3	64	5	1713	1709	645143
	6	3	69	18	1408	1594	560124
	7	1	56	16			167040
	8	3	68	15	1195	1852	50137
	9	2	91	15	1127		257741
	10	3	81	15	1059	1663	99721
	11	2	66	20	1437		300478
	12	2	68	6	1518		211171
	13	3	85	12	1037	1519	427138
	14	1	89	14			423379
	15	1	95	17			100986
	16	3	77	16	1635	1256	484032

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]
7	1	1	91	10			88
	2	2	89	17	1956		14337
	3	3	68	9	1862	1291	342964
	4	2	72	15	1069		768133
	5	3	94	12	1802	1659	982833
	6	2	86	18	1919		780502
	7	3	95	8	1045	1010	298747
	8	2	71	18	1029		757244
	9	3	71	19	1176	1676	333091
	10	2	92	8	1981		548183
	11	2	67	10	1232		655699
	12	2	72	7	1164		304542

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]
8	1	1	63	6			1226
	2	3	55	20	1120	1908	1438324
	3	1	79	13			88362
	4	1	96	12			667931
	5	2	76	6	1827		350613
	6	2	79	5	1067		972588
	7	1	55	20			366240
	8	2	74	8	1332		351341

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]
9	1	2	90	13	1000		329192
	2	1	89	12			618104
	3	2	76	6	1881		722159
	4	1	56	10			764479
	5	3	56	19	1440	1238	579862
	6	1	84	20			413268
	7	2	55	12	1686		701586
	8	3	54	18	1727	1352	328932
	9	2	56	10	1317		836737
	10	3	68	11	1101	1979	223703
	11	1	96	14			823192
	12	1	61	11			900535
	13	1	59	6			92479

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]
10	1	1	96	10			685
	2	3	97	20	1463	1626	428232
	3	1	72	10			587879
	4	3	85	8	1266	1901	1048891
	5	3	81	6	1395	1951	510170
	6	1	80	19			1183495
	7	1	81	20			739061
	8	3	71	6	1476	1393	541141
	9	3	80	10	1875	1379	888272

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]
11	1	1	50	5			327
	2	2	72	5	1575		204682
	3	1	98	16			659266
	4	3	94	19	1851	1829	690271
	5	2	67	14	1708		125455
	6	3	76	17	1632	1231	266655
	7	1	66	11			468606
	8	3	52	17	1094	1991	237085
	9	1	85	20			386438
	10	3	98	16	1503	1806	258843
	11	1	65	15			253897
	12	2	91	9	1510		565476
	13	1	75	11			40154
	14	3	92	14	1931	1010	14731
	15	1	95	13			642708
	16	3	58	15	1728	1359	276730

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]
12	1	2	95	8	1000		605191
	2	1	52	6			1178113
	3	3	86	19	1098	1201	1224252
	4	1	53	18			198228
	5	3	89	5	1574	1538	1029048
	6	2	68	20	1299		1217328
	7	2	73	9	1071		1223938
	8	3	84	5	1548	1432	104441
	9	3	67	14	1172	1083	1113146

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]
13	1	2	83	15	1000		462632
	2	2	81	11	1467		360663
	3	3	73	14	1304	1224	566255
	4	1	71	5			747649
	5	2	53	10	1916		483034
	6	2	81	7	1200		328243
	7	1	88	12			284851
	8	2	100	15	1922		216397
	9	2	75	15	1631		78111
	10	2	72	8	1797		190143
	11	3	53	12	1828	1559	649214
	12	2	71	7	1286		161915
	13	1	62	11			315973
	14	1	76	10			249073
	15	3	80	5	1693	1013	244210

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]
14	1	3	64	9	1060	1389	1389247
	2	3	68	18	1857	1211	817897
	3	3	73	18	1298	1967	695974
	4	2	56	20	1324		1458722
	5	2	59	12	1921		564457
	6	1	92	19			1424226
	7	1	76	17			55187
	8	3	83	20	1225	1229	364467

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]
15	1	2	95	15	1000		310315
	2	1	89	7			418941
	3	3	69	16	1227	1303	404592
	4	3	55	13	1166	1666	392289
	5	1	84	8			384488
	6	1	61	11			330527
	7	2	64	5	1242		517674
	8	1	67	10			556078
	9	3	80	19	1696	1760	294198
	10	1	72	8			60910
	11	3	64	12	1857	1796	334038
	12	2	78	11	1803		324519
	13	2	52	18	1085		14714
	14	3	58	13	1342	1690	484704
	15	2	54	19	1840		48286
	18	1	75	9			158780
	19	3	58	15	1270	1114	398520
	20	2	64	7	1157		189980

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]
16	1	2	89	6	1000		49861
	2	2	60	16	1795		220732
	3	2	93	17	1753		336331
	4	3	54	12	1971	1127	490899
	5	3	60	20	1822	1948	566715
	6	1	62	5			534774
	7	1	66	13			432254
	8	3	69	9	1107	1599	458752
	9	1	92	8			13801
	10	2	56	16	1839		281767
	11	2	70	13	1781		257920
	12	3	98	7	1660	1756	564335
	13	3	89	16	1403	1250	452405
	14	1	80	10			595864
	15	2	63	5	1987		420168
	16	1	67	16			453152

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]
17	1	2	70	14	1000		253751
	2	2	54	11	1286		304950
	3	2	54	13	1177		46562
	4	3	53	20	1956	1940	764476
	5	1	73	9			823140
	6	1	56	5			110410
	7	2	66	10	1887		368179
	8	3	71	5	1176	1398	542129
	9	3	95	10	1062	1896	566987
	11	3	50	17	1584	1876	342659
	12	1	82	8			167811
	13	3	65	9	1827	1324	324282
	14	1	82	16			556103

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]
18	1	3	79	9	1578	1788	268637
	2	2	67	9	1514		357905
	3	3	92	15	1299	1871	52060
	4	2	59	10	1371		373698
	5	2	56	7	1305		388593
	6	2	60	12	1715		266850
	7	3	88	19	1839	1745	154789
	8	3	70	17	1542	1702	389165
	9	3	53	16	1594	1106	424209
	10	3	71	17	1758	1631	398851
	11	3	81	7	1588	1025	308396
	12	1	74	11			481019
	13	2	65	16	1024		57269
	14	2	83	15	1095		44095
	15	1	88	11			388804
	16	3	78	10	1394	1248	288447
	17	1	73	14			66630
	18	2	53	6	1994		380270

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]
19	1	2	71	19	1000		530435
	2	3	71	6	1166	1863	23555
	3	3	91	14	1272	1818	601498
	4	3	95	15	1421	1315	354078
	5	1	73	20			368480
	6	2	89	13	1098		430091
	7	1	79	15			186629
	8	2	59	9	1628		488245
	9	3	83	20	1772	1398	309540
	10	3	91	6	1987	1547	131823
	11	1	81	16			91455
	12	2	77	8	1363		500715
	13	3	51	19	1208	1329	626155
	14	3	83	19	1054	1486	370031
	15	2	64	15	1208		533976
	16	1	87	11			130056
	17	2	82	18	1221		80736
	18	1	100	8			400734

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]
20	1	2	67	14	1000		417577
	2	3	89	15	1814	1200	749936
	3	2	84	11	1972		29584
	4	2	97	16	1348		39020
	5	1	81	12			516900
	6	3	89	12	1350	1577	45783
	7	3	89	12	1439	1610	277760
	8	2	91	18	1436		474452
	9	1	50	7			9073
	10	2	99	16	1813		3307
	11	1	73	17			98931
	12	1	63	11			549315
	13	1	100	6			467280
	14	3	64	6	1341	1643	14171
	15	2	80	5	1951		60308

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]
21	1	2	77	18	1000		368006
	2	3	55	13	1218	1023	131188
	3	1	80	7			94652
	4	2	98	19	1848		345833
	5	1	72	13			403533
	6	3	82	9	1785	1084	531912
	7	2	60	9	1523		447344
	8	3	92	17	1140	1502	392926
	9	3	76	18	1913	1222	406696
	10	1	83	5			33819
	11	1	51	6			223414
	12	3	72	12	1332	1548	274258
	13	2	91	6	1362		481616
	14	2	92	17	1812		289842
	15	1	90	5			464979
	16	2	69	14	1653		26061
	17	3	81	20	1537	1582	474086
	18	1	50	16			206976
	19	1	90	12			217876
	20	1	57	16			291968

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]
22	1	3	92	6	1109	1096	852484
	2	2	93	13	1475		649523
	3	2	71	8	1565		151227
	4	3	79	5	1782	1530	472754
	5	2	76	10	1121		563139
	6	2	66	5	1823		860468
	7	2	55	15	1703		669477
	8	2	99	5	1465		444703
	9	3	81	6	1898	1870	341140
	10	1	94	12			585543
	11	1	85	20			196131
	12	1	50	16			269336
	13	3	92	12	1637	1371	652817

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]
23	1	2	71	15	1000		481876
	2	1	55	11			102309
	3	1	61	19			823455
	4	2	90	13	1871		693047
	5	2	55	15	1416		251845
	6	2	84	15	1528		1140391
	7	1	64	11			584703
	8	1	88	19			1135948
	9	2	82	11	1448		317699

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]
24	1	1	79	10			502
	2	2	76	17	1924		683615
	3	3	68	11	1773	1157	334227
	4	2	84	18	1484		1339610
	5	1	95	11			1295901
	6	3	79	13	1997	1559	930277
	7	3	76	7	1350	1169	984612
	8	3	81	8	1100	1556	1190974

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]
25	1	1	98	13			431
	2	2	98	15	1178		218287
	3	3	87	9	1853	1983	47586
	4	3	89	19	1074	1112	605621
	5	1	86	6			489104
	6	2	88	10	1547		185698
	7	2	58	14	1445		60948
	8	3	65	7	1419	1187	576689
	9	2	64	13	1795		407838
	10	3	64	16	1277	1934	504383
	11	1	62	16			316127
	12	2	99	16	1831		86683
	13	1	89	6			235090
	14	2	92	17	1973		174000
	15	2	50	6	1037		230591
	16	3	80	8	1706	1594	510516
	17	3	96	9	1157	1220	490779
	18	3	62	19	1079	1188	131101
	19	3	59	15	1216	1955	320823

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]
26	1	2	90	7	1000		21406
	2	2	70	12	1156		410413
	3	2	53	14	1457		29335
	4	2	91	19	1269		72993
	5	3	57	16	1573	1384	8169
	6	1	69	18			561596
	7	1	66	20			696671
	8	3	72	20	1061	1122	730958
	9	1	91	14			178592
	10	3	73	15	1879	1073	394285
	11	2	74	12	1042		581205
	12	3	52	14	1321	1985	601492
	13	2	66	10	1339		311074
	14	3	68	19	1432	1190	642255
	15	2	88	5	1938		456778

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]
27	1	3	67	13	1773	1879	269482
	2	2	87	12	1770		362023
	3	1	89	6			529815
	4	1	68	12			549730
	5	1	65	18			483308
	6	2	73	11	1873		349802
	7	1	90	10			584007
	8	2	64	11	1019		359296
	9	2	71	5	1300		490535
	10	3	97	19	1328	1160	516755
	11	2	62	5	1616		19691
	12	3	64	18	1511	1858	75022
	13	3	75	12	1481	1791	366913
	14	3	52	8	1790	1634	451743
	15	2	55	11	1917		438242
	16	1	60	6			229121
	17	2	58	12	1016		612445
	18	1	93	20			289962
	19	2	92	17	1550		305005

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]
28	1	3	77	10	1742	1027	263870
	2	3	58	11	1034	1090	724492
	3	3	74	14	1406	1033	689054
	4	3	68	15	1166	1872	604675
	5	1	54	14			276118
	6	1	59	5			203975
	7	1	99	9			206433
	8	3	76	14	1011	1212	153936
	9	3	58	20	1102	1506	642672
	10	1	61	20			689435
	11	1	82	18			689123
	12	1	67	16			725793
	13	3	88	9	1786	1768	354605
	14	2	89	10	1974		280460
	15	3	57	6	1317	1099	412638
	16	2	53	8	1301		240301

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]
29	1	2	59	8	1000		714854
	2	1	68	19			370073
	3	2	89	13	1833		940039
	4	1	94	16			248190
	5	2	66	7	1539		374497
	6	3	68	10	1639	1521	641873
	7	2	97	12	1102		454420
	8	1	78	5			85878
	9	1	98	17			772224

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]
30	1	3	69	16	1339	1381	222494
	2	1	70	7			594563
	3	3	56	20	1660	1444	530020
	4	2	73	11	1710		652048
	5	2	100	17	1536		244442
	6	3	93	5	1652	1731	632428
	7	2	55	9	1629		76229
	8	1	79	10			352412
	9	2	97	10	1504		447176
	10	2	87	10	1658		278814
	11	2	73	6	1719		549650
	12	3	63	12	1220	1669	724119
	13	3	58	6	1030	1034	721387
	14	1	69	11			21782
	15	3	79	11	1218	1069	345240
	16	1	93	17			613570

Parameter Data sheet for Radar Type 5

5310MHz (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]
1	1	2	89	6	1000		49861
	2	2	60	16	1795		220732
	3	2	93	17	1753		336331
	4	3	54	12	1971	1127	490899
	5	3	60	20	1822	1948	566715
	6	1	62	5			534774
	7	1	66	13			432254
	8	3	69	9	1107	1599	458752
	9	1	92	8			13801
	10	2	56	16	1839		281767
	11	2	70	13	1781		257920
	12	3	98	7	1660	1756	564335
	13	3	89	16	1403	1250	452405
	14	1	80	10			595864
	15	2	63	5	1987		420168
	16	1	67	16			453152
	17	2	63	12	1615		314403
	18	2	82	16	1134		382560

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]
2	1	2	70	14	1000		253751
	2	2	54	11	1286		304950
	3	2	54	13	1177		46562
	4	3	53	20	1956	1940	764476
	5	1	73	9			823140
	6	1	56	5			110410
	7	2	66	10	1887		368179
	8	3	71	5	1176	1398	542129
	9	3	95	10	1062	1896	566987
	10	1	87	16			647826
	11	3	50	17	1584	1876	342659
	12	1	82	8			167811
	13	3	65	9	1827	1324	324282
	14	1	82	16			556103

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]
3	1	3	79	9	1578	1788	268637
	2	2	67	9	1514		357905
	3	3	92	15	1299	1871	52060
	4	2	59	10	1371		373698
	5	2	56	7	1305		388593
	6	2	60	12	1715		266850
	7	3	88	19	1839	1745	154789
	8	3	70	17	1542	1702	389165
	9	3	53	16	1594	1106	424209
	10	3	71	17	1758	1631	398851
	11	3	81	7	1588	1025	308396
	12	1	74	11			481019
	13	2	65	16	1024		57269
	14	2	83	15	1095		44095
	15	1	88	11			388804
	16	3	78	10	1394	1248	288447
	17	1	73	14			66630
	18	2	53	6	1994		380270

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]
4	1	2	71	19	1000		530435
	2	3	71	6	1166	1863	23555
	3	3	91	14	1272	1818	601498
	4	3	95	15	1421	1315	354078
	5	1	73	20			368480
	6	2	89	13	1098		430091
	7	1	79	15			186629
	8	2	59	9	1628		488245
	9	3	83	20	1772	1398	309540
	10	3	91	6	1987	1547	131823
	11	1	81	16			91455
	12	2	77	8	1363		500715
	13	3	51	19	1208	1329	626155
	14	3	83	19	1054	1486	370031
	15	2	64	15	1208		533976
	16	1	87	11			130056
	17	2	82	18	1221		80736
	18	1	100	8			400734

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]
5	1	2	67	14	1000		417577
	2	3	89	15	1814	1200	749936
	3	2	84	11	1972		29584
	4	2	97	16	1348		39020
	5	1	81	12			516900
	6	3	89	12	1350	1577	45783
	7	3	89	12	1439	1610	277760
	8	2	91	18	1436		474452
	9	1	50	7			9073
	10	2	99	16	1813		3307
	11	1	73	17			98931
	12	1	63	11			549315
	13	1	100	6			467280
	14	3	64	6	1341	1643	14171
	15	2	80	5	1951		60308

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]
6	1	2	77	18	1000		368006
	2	3	55	13	1218	1023	131188
	3	1	80	7			94652
	4	2	98	19	1848		345833
	5	1	72	13			403533
	6	3	82	9	1785	1084	531912
	7	2	60	9	1523		447344
	8	3	92	17	1140	1502	392926
	9	3	76	18	1913	1222	406696
	10	1	83	5			33819
	11	1	51	6			223414
	12	3	72	12	1332	1548	274258
	13	2	91	6	1362		481616
	14	2	92	17	1812		289842
	15	1	90	5			464979
	16	2	69	14	1653		26061
	17	3	81	20	1537	1582	474086
	18	1	50	16			206976
	19	1	90	12			217876
	20	1	57	16			291968

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]
7	1	3	92	6	1109	1096	852484
	2	2	93	13	1475		649523
	3	2	71	8	1565		151227
	4	3	79	5	1782	1530	472754
	5	2	76	10	1121		563139
	6	2	66	5	1823		860468
	7	2	55	15	1703		669477
	8	2	99	5	1465		444703
	9	3	81	6	1898	1870	341140
	10	1	94	12			585543
	11	1	85	20			196131
	12	1	50	16			269336
	13	3	92	12	1637	1371	652817

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]
8	1	2	71	15	1000		481876
	2	1	55	11			102309
	3	1	61	19			823455
	4	2	90	13	1871		693047
	5	2	55	15	1416		251845
	6	2	84	15	1528		1140391
	7	1	64	11			584703
	8	1	88	19			1135948
	9	2	82	11	1448		317699

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]
9	1	1	79	10			502
	2	2	76	17	1924		683615
	3	3	68	11	1773	1157	334227
	4	2	84	18	1484		1339610
	5	1	95	11			1295901
	6	3	79	13	1997	1559	930277
	7	3	76	7	1350	1169	984612
	8	3	81	8	1100	1556	1190974

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]
10	1	1	98	13			431
	2	2	98	15	1178		218287
	3	3	87	9	1853	1983	47586
	4	3	89	19	1074	1112	605621
	5	1	86	6			489104
	6	2	88	10	1547		185698
	7	2	58	14	1445		60948
	8	3	65	7	1419	1187	576689
	9	2	64	13	1795		407838
	10	3	64	16	1277	1934	504383
	11	1	62	16			316127
	12	2	99	16	1831		86683
	13	1	89	6			235090
	14	2	92	17	1973		174000
	15	2	50	6	1037		230591
	16	3	80	8	1706	1594	510516
	17	3	96	9	1157	1220	490779
	18	3	62	19	1079	1188	131101
	19	3	59	15	1216	1955	320823

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]
11	1	2	90	7	1000		21406
	2	2	70	12	1156		410413
	3	2	53	14	1457		29335
	4	2	91	19	1269		72993
	5	3	57	16	1573	1384	8169
	6	1	69	18			561596
	7	1	66	20			696671
	8	3	72	20	1061	1122	730958
	9	1	91	14			178592
	10	3	73	15	1879	1073	394285
	11	2	74	12	1042		581205
	12	3	52	14	1321	1985	601492
	13	2	66	10	1339		311074
	14	3	68	19	1432	1190	642255
	15	2	88	5	1938		456778

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]
12	1	3	67	13	1773	1879	269482
	2	2	87	12	1770		362023
	3	1	89	6			529815
	4	1	68	12			549730
	5	1	65	18			483308
	6	2	73	11	1873		349802
	7	1	90	10			584007
	8	2	64	11	1019		359296
	9	2	71	5	1300		490535
	10	3	97	19	1328	1160	516755
	11	2	62	5	1616		19691
	12	3	64	18	1511	1858	75022
	13	3	75	12	1481	1791	366913
	14	3	52	8	1790	1634	451743
	15	2	55	11	1917		438242
	16	1	60	6			229121
	17	2	58	12	1016		612445
	18	1	93	20			289962
	19	2	92	17	1550		305005

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]
13	1	3	77	10	1742	1027	263870
	2	3	58	11	1034	1090	724492
	3	3	74	14	1406	1033	689054
	4	3	68	15	1166	1872	604675
	5	1	54	14			276118
	6	1	59	5			203975
	7	1	99	9			206433
	8	3	76	14	1011	1212	153936
	9	3	58	20	1102	1506	642672
	10	1	61	20			689435
	11	1	82	18			689123
	12	1	67	16			725793
	13	3	88	9	1786	1768	354605
	14	2	89	10	1974		280460
	15	3	57	6	1317	1099	412638
	16	2	53	8	1301		240301

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]
14	1	2	59	8	1000		714854
	2	1	68	19			370073
	3	2	89	13	1833		940039
	4	1	94	16			248190
	5	2	66	7	1539		374497
	6	3	68	10	1639	1521	641873
	7	2	97	12	1102		454420
	8	1	78	5			85878
	9	1	98	17			772224

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]
15	1	3	69	16	1339	1381	222494
	2	1	70	7			594563
	3	3	56	20	1660	1444	530020
	4	2	73	11	1710		652048
	5	2	100	17	1536		244442
	6	3	93	5	1652	1731	632428
	7	2	55	9	1629		76229
	8	1	79	10			352412
	9	2	97	10	1504		447176
	10	2	87	10	1658		278814
	11	2	73	6	1719		549650
	12	3	63	12	1220	1669	724119
	13	3	58	6	1030	1034	721387
	14	1	69	11			21782
	15	3	79	11	1218	1069	345240
	16	1	93	17			613570

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]
16	1	1	70	11			219
	2	1	55	12			91544
	3	2	54	11	1450		285302
	4	3	73	16	1436	1044	499422
	5	3	50	5	1905	1344	232437
	6	2	90	18	1794		36643
	7	1	74	13			166401
	8	2	63	10	1740		567539
	9	1	81	6			457265
	10	2	78	10	1171		486482
	11	3	84	17	1479	1350	40458
	12	2	52	18	1886		65475
	13	3	81	18	1113	1657	60914
	14	3	62	18	1639	1168	294958
	15	1	65	18			4149
	16	2	62	6	1286		485493
	17	2	68	11	1979		150196
	18	1	82	13			106012
	19	1	79	16			570526
	20	3	55	19	1936	1715	120740

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]
17	1	2	56	10	1000		539891
	2	3	80	8	1549	1684	681328
	3	1	63	11			539925
	4	3	50	20	1390	1007	267645
	5	1	98	12			621161
	6	1	64	9			196708
	7	3	85	18	1561	1090	293673
	8	2	99	17	1988		176979
	9	3	75	9	1679	1564	552594
	10	3	70	19	1575	1608	634106
	11	1	60	13			344130
	12	2	95	8	1101		655663
	13	1	98	17			629943
	14	1	76	13			173445
	15	3	66	15	1636	1607	61900
	16	1	76	17			26991
	17	1	62	17			158477

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]
18	1	1	95	7			346
	2	2	70	20	1085		769475
	3	1	68	19			383420
	4	3	51	18	1543	1880	105402
	5	1	98	10			751080
	6	3	80	5	1185	1571	770484
	7	3	60	9	1975	1075	53740
	8	3	53	18	1281	1671	89173
	9	1	64	8			349207
	10	3	51	15	1988	1365	603981
	11	3	52	16	1367	1997	727147
	12	2	67	13	1453		747598
	13	3	51	5	1278	1115	616108
	14	3	68	20	2000	1936	384487
	15	1	97	5			664771

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]
19	1	2	50	14	1000		346521
	2	2	90	17	1000		592183
	3	2	95	12	1063		215677
	4	3	72	9	1115	1409	278587
	5	1	99	14			590212
	6	1	56	10			378303
	7	3	100	10	1390	1169	60881
	8	1	60	5			197412
	9	3	56	20	1101	1234	129352
	10	1	84	7			325
	11	1	96	10			204492
	12	1	70	19			385184
	13	2	60	10	1485		79447
	14	3	61	8	1272	1478	152413
	15	2	86	11	1632		8966
	16	2	52	12	1863		600740
	17	3	51	20	1481	1306	135542
	18	2	50	12	1974		46065
	19	3	58	18	1173	1907	224147

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]
20	1	1	80	16			581
	2	1	87	5			780650
	3	3	95	14	1766	1590	519524
	4	1	56	15			517
	5	1	51	19			858352
	6	3	83	6	1728	1656	373720
	7	3	82	18	1322	1353	1119998
	8	3	84	11	1868	1935	1306648

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]
21	1	2	68	15	1000		38594
	2	3	67	16	1348	1435	57417
	3	2	81	17	1990		398541
	4	1	51	17			502899
	5	3	58	20	1229	1476	151036
	6	2	79	15	1094		232896
	7	3	85	16	1381	1158	282177
	8	2	69	9	1503		8307
	9	1	50	14			169145
	10	1	65	15			172270
	11	3	61	19	1589	1236	399689
	12	3	61	7	1397	1272	173407
	13	3	65	12	1998	1902	137596
	14	3	66	20	1388	1169	103278
	15	2	90	14	1145		211735
	16	2	72	20	1973		103037
	17	1	70	15			254649
	18	3	74	17	1669	1957	314448
	19	2	96	7	1055		174686
	20	2	69	7	1500		506863

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]
22	1	1	68	20			35
	2	2	53	6	1039		474496
	3	2	70	18	1401		586726
	4	2	90	14	1456		512051
	5	3	97	10	1259	1606	203811
	6	2	88	6	1007		307479
	7	3	79	7	1335	1361	11814
	8	2	53	6	1041		488674
	9	1	94	5			517333
	10	3	91	12	1560	1666	30606
	11	3	88	20	1164	1980	58758
	12	1	95	18			468892
	13	2	57	10	1874		155775
	14	3	66	7	1136	1555	579960
	15	3	88	5	1959	1439	266195
	16	1	58	18			424579
	17	3	77	14	1497	1305	124044
	18	1	66	10			452947
	19	3	96	8	1533	1418	416333
	20	3	53	9	1479	1888	474699

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]
23	1	3	66	9	1230	1755	240034
	2	2	58	11	1985		1097690
	3	3	67	18	1242	1840	848471
	4	3	68	5	1963	1446	184748
	5	2	56	14	1474		665830
	6	2	84	16	1386		792195
	7	3	79	17	1061	1706	789650
	8	2	94	18	1110		444320
	9	2	69	12	1610		314695

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]
24	1	3	64	12	1836	1639	939258
	2	1	70	16			1274359
	3	3	66	5	1327	1335	823435
	4	3	52	8	1148	1031	1448899
	5	3	50	15	1924	1718	905792
	6	2	60	19	1523		542201
	7	3	79	11	1357	1174	131480
	8	1	92	5			393399

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]
25	1	2	62	13	1000		145713
	2	1	74	13			552810
	3	1	60	19			587543
	4	3	56	9	1846	1581	1032442
	5	2	69	14	1593		85406
	6	3	70	17	1010	1838	1273771
	7	1	55	16			1091092
	8	1	90	17			1217310
	9	2	74	7	1530		544309

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]
26	1	2	80	14	1000		673221
	2	2	69	16	1353		1110251
	3	2	88	20	1023		776559
	4	2	70	9	1020		886213
	5	2	74	19	1280		570481
	6	3	95	16	1115	1782	163097
	7	1	96	20			450171
	8	1	60	5			937041

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]
27	1	1	66	19			496
	2	3	90	6	1512	1231	363587
	3	2	74	16	1532		266573
	4	3	96	6	1795	1482	646079
	5	3	87	10	1514	1742	741696
	6	1	98	17			752907
	7	2	54	11	1374		79605
	8	3	88	8	1853	1703	184493
	9	3	52	7	1812	1368	478523
	10	3	84	18	1724	1652	842921
	11	3	84	17	1811	1059	505304
	12	1	61	9			201051
	13	3	98	12	1325	1850	825320

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]
28	1	3	79	14	1842	1516	292174
	2	3	64	8	1491	1561	193347
	3	2	73	7	1225		748406
	4	2	88	13	1766		479901
	5	3	97	20	1291	1286	16110
	6	1	77	10			181969
	7	1	72	17			657379
	8	2	56	8	1501		839653
	9	2	99	18	1715		631033
	10	1	80	10			518603
	11	1	56	8			202776
	12	1	74	15			436289
	13	1	77	7			414995
	14	3	53	7	1242	1848	210079

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]
29	1	1	51	6			524
	2	2	63	8	1624		485631
	3	1	91	7			608433
	4	3	89	20	1919	1082	102016
	5	3	100	10	1389	1645	516895
	6	1	51	19			8690
	7	3	89	13	1191	1193	129053
	8	2	70	17	1589		560596
	9	3	82	8	1541	1859	578340
	10	3	81	5	1343	1589	644526
	11	1	70	16			153975
	12	3	61	16	1077	1952	571022
	13	3	52	8	1770	1912	333910
	14	3	71	6	1164	1950	99519
	15	2	69	16	1682		43463
	16	2	60	18	1797		386596
	17	1	80	20			146406
	18	1	66	18			146854

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]
30	1	1	74	5			1082
	2	3	68	11	1292	1890	968502
	3	1	83	12			585516
	4	2	70	18	1258		569019
	5	1	50	12			593403
	6	3	92	20	1524	1622	805625
	7	1	85	9			116598
	8	1	56	14			507871

Parameter Data sheet for Radar Type 6

5300MHz (11n-20)

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
1	32	93	5291
	34	99	5305
	84	240	5291

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
2	12	33	5299
	19	54	5291
	25	72	5306
	29	84	5293

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
3	31	90	5291
	83	246	5309

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
4	74	219	5292
	82	243	5307

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
5	24	69	5299
	32	93	5305
	50	147	5301

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
6	42	123	5308
	46	135	5295
	78	231	5298

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
7	20	57	5291
	38	111	5297
	94	279	5304

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
8	41	120	5294
	44	129	5291
	58	171	5310
	67	198	5302
	70	207	5299

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
9	4	9	5292
	17	48	5303
	33	96	5293
	47	138	5310
	60	177	5300
	92	273	5299

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
10	51	150	5308
	62	183	5306
	65	192	5297
	66	195	5301

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
11	46	135	5306
	66	195	5303
	88	261	5302
	94	279	5296

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
12	3	6	5291
	21	60	5308
	32	93	5304
	45	132	5291
	48	141	5298
	88	261	5292
	96	265	5309

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
13	21	60	5307
	40	117	5302
	42	123	5291
	64	189	5296
	100	297	5294

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
14	31	90	5296
	76	225	5302
	92	273	5307

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
15	6	15	5296
	26	75	5310
	65	192	5300
	99	294	5295

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
16	6	15	5304
	21	60	5291
	40	117	5296
	64	189	5301
	100	297	5309

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
17	20	57	5295
	63	186	5309
	65	192	5298

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
18	12	33	5310
	27	78	5296
	39	114	5293
	48	141	5303
	66	195	5299
	82	243	5304

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
19	71	210	5310
	92	273	5306

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
20	9	24	5296
	15	42	5299
	70	207	5305
	91	270	5310
	94	279	5308

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
21	15	42	5291
	27	78	5310
	52	153	5294
	63	186	5295
	64	189	5296
	68	201	5291

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
22	24	69	5301
	40	117	5291
	46	135	5309
	57	168	5295
	60	177	5292
	67	198	5304
	99	294	5293

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
23	91	69	5298
	96	84	5293

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
24	28	81	5308
	37	108	5301

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
25	44	129	5291
	62	183	5298
	67	198	5292
	70	207	5296
	77	228	5291

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
26	38	111	5305
	59	174	5294
	60	177	5298
	68	201	5302

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
27	5	12	5292
	11	30	5303
	26	75	5307
	33	96	5296
	36	105	5300
	64	189	5305

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
28	24	69	5310
	26	75	5292
	95	282	5293

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
29	10	27	5305
	25	72	5291
	33	96	5293
	51	150	5295

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
30	18	51	5292
	28	81	5296
	85	252	5308
	90	267	5301
	98	291	5293

Parameter Data sheet for Radar Type 6

5310MHz (11n-40)

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
1	19	54	5303
	24	69	5326
	62	183	5315
	71	210	5299
	72	213	5323
	77	228	5322
	99	294	5312

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
2	13	54	5294
	28	99	5302
	31	108	5329
	45	150	5290
	52	171	5317
	55	180	5293
	59	192	5308
	62	201	5328
	78	249	5327
	85	270	5303

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
3	15	42	5297
	40	117	5329
	45	132	5323
	53	156	5328
	54	159	5302
	67	198	5324
	77	228	5325
	79	234	5305
	99	294	5320

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
4	11	30	5329
	15	42	5320
	35	102	5293
	58	171	5303
	59	174	5316
	86	255	5324
	87	258	5301
	99	294	5294

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
5	16	45	5322
	30	87	5291
	36	105	5328
	38	111	5307
	52	153	5305
	57	168	5301
	70	207	5308
	82	243	5292
	98	291	5321

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
6	3	6	5317
	4	9	5313
	12	33	5290
	39	114	5296
	62	183	5309
	87	258	5330
	97	288	5321

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
7	2	3	5312
	10	27	5299
	14	39	5298
	17	48	5329
	22	63	5302
	24	69	5291
	36	105	5330
	47	138	5294
	61	180	5325
	74	219	5313
	82	243	5297

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
8	26	75	5322
	35	102	5303
	40	117	5305
	43	126	5295
	54	159	5290
	56	165	5330
	61	180	5297
	79	234	5319
	83	246	5326
	97	288	5292

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
9	28	81	5301
	34	99	5327
	35	102	5324
	42	1223	5303
	69	204	5321
	78	231	5319
	81	240	5293
	86	255	5296
	96	285	5313
	100	297	5307

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
10	23	66	5292
	30	87	5330
	47	138	5308
	70	207	5327
	75	222	5303
	78	231	5309
	83	246	5304
	86	255	5328

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
11	5	12	5302
	15	42	5294
	21	60	5307
	29	84	5306
	35	102	5319
	44	129	5320
	88	261	5316
	91	270	5303

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
12	4	9	5299
	7	18	5313
	34	99	5319
	36	105	5327
	55	162	5309
	60	177	5316
	66	195	5323
	67	198	5290
	81	240	5301
	83	246	5298
	94	279	5310

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
13	12	33	5305
	43	126	5314
	49	144	5326
	63	186	5302
	72	213	5330
	74	219	5320
	80	237	5292
	86	255	5307

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
14	14	39	5329
	23	66	5317
	24	69	5312
	34	99	5304
	44	129	5323
	72	213	5295
	85	252	5302

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
15	3	6	5306
	10	27	5295
	11	30	5304
	13	36	5307
	21	60	5323
	26	75	5330
	37	108	5317
	53	156	5322
	71	210	5318
	75	222	5298
	88	261	5325
	89	264	5310
	92	273	5328
	93	276	5320

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
16	6	15	5326
	19	54	5316
	30	87	5308
	47	138	5314
	50	147	5294
	56	165	5310
	63	186	5309
	73	216	5307
	81	240	5329
	85	252	5303
	97	288	5296

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
17	8	21	5294
	10	27	5323
	14	39	5325
	62	183	5305
	71	210	5292
	76	225	5326

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
18	8	21	5302
	9	24	5311
	11	30	5297
	17	48	5294
	30	87	5330
	65	192	5312
	73	216	5329
	86	255	5305

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
19	7	18	5294
	9	24	5298
	29	84	5326
	32	93	5311
	45	132	5330
	54	19	5292
	72	213	5319
	76	225	5313
	96	285	5325
	100	297	5296

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
20	20	57	5329
	29	84	5291
	34	99	5301
	48	141	5317
	56	165	5310
	66	195	5318
	71	210	5313
	73	216	5320
	92	273	5330

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
21	17	48	5319
	21	60	5309
	22	63	5300
	25	72	5306
	26	75	5316
	31	90	5293
	58	171	5290
	72	213	5301
	74	219	5294
	92	273	5323

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
22	4	9	5327
	8	21	5297
	10	27	5329
	16	45	5318
	17	48	5326
	26	75	5303
	29	84	5294
	32	93	5304
	48	141	5296
	49	144	5315
	50	147	5299
	62	183	5311
	78	231	5293
	96	285	5301

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
23	2	3	5304
	46	135	5317
	47	138	5325
	58	171	5305
	65	192	5297
	72	213	5316
	77	228	5299
	90	267	5330

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
24	12	33	5307
	36	105	5313
	41	120	5311
	67	198	5294
	75	222	5295
	92	273	5317

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
25	7	18	5295
	34	99	5312
	48	141	5291
	59	174	5290
	61	180	5313
	66	195	5305
	84	249	5302
	85	252	5301
	95	282	5330

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
26	13	36	5298
	15	42	5294
	50	147	5313
	72	213	5322

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
27	2	3	5319
	9	24	5330
	15	42	5315
	32	93	5325
	34	99	5295
	45	132	5326
	47	138	5297
	96	283	5314

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
28	4	9	5294
	12	33	5323
	22	63	5298
	36	105	5290
	38	111	5319
	39	114	5327
	59	174	5324
	60	177	5296

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
29	13	36	5296
	22	63	5322
	34	99	5293
	42	123	5303
	45	132	5305
	65	192	5323
	78	231	5325
	95	282	5298
	98	291	5321

Trial #	Hopping Number	Start Time [ms]	Frequency [MHz]
30	14	39	5324
	20	57	5296
	29	84	5316
	30	87	5302
	62	183	5329
	79	234	5318
	97	288	5299

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	2015/01/13 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	DFS	2015/02/26 * 12
EST-48 *1)	Signal Generator	Agilent	E4438C	MY45090353	DFS	2014/12/19 * 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	2014/04/14 * 12
MCC-137	Microwave cable	HUBER+SUHNER	SUCOFLEX 102	37954/2	DFS	2014/10/02 * 12
MCC-99	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	30820/2	DFS	2014/05/16 * 12
MPD-03	Power Divider DC-12.4GHz	SUHNER	4901.19.A	-	DFS	2014/05/14 * 12
MPD-04	Power Divider DC-12.4GHz	SUHNER	4901.19.A	-	DFS	2014/05/20 * 12
MAT-57	Attenuator(10dB)	Suhner	6810.19.A	-	DFS	2015/01/08 * 12
MAT-58	Attenuator(10dB)	Suhner	6810.19.A	-	DFS	2015/01/09 * 12
MAT-59	Attenuator(20dB)	Suhner	6820.19.A	-	DFS	Pre Check
MAT-60	Attenuator(20dB)	Suhner	6820.19.A	-	DFS	Pre Check
MAT-61	Attenuator(20dB)	Suhner	6820.19.A	-	DFS	Pre Check
MPSC-04	Power Splitters/Combiners	Mini-Circuit	ZFSC-2-10G	0326	DFS	2014/09/26 * 12
MCC-45	Microwave Cable	Murata	MXGS83RK3000	-	DFS	2014/07/31 * 12
MCC-103	Microwave Cable	Hirose Electric	U.FL-2LP-066J1-A(200)	-	DFS	2014/06/12 * 12
MCC-105	Microwave Cable	Hirose Electric	U.FL-2LP-066J1-A(200)	-	DFS	2014/06/12 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	DFS	2014/12/22 * 12
MOS-34	Thermo-Hygrometer	Custom	CTH-201	3401	DFS	2015/01/13 * 12
MCC-35	Microwave Cable	Hirose Electric	U.FL-2LP-066-A-(200)	-	DFS	2014/09/12 * 12
MCC-37	Microwave Cable	Hirose Electric	U.FL-2LP-066-A-(200)	-	DFS	2014/09/25 * 12
MCC-97	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	30818/2	DFS	2014/05/16 * 12
MAT-20	Attenuator(10dB)(above 1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	-	DFS	2015/01/08 * 12
MAT-24	Attenuator(10dB)(above 1GHz)	Agilent	8493C	71389	DFS	2014/06/12 * 12
MAT-56	Attenuator(10dB)	Suhner	6810.19.A	-	DFS	2015/01/08 * 12

***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