

Report No.: SHEM210600565403

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# DFS TEST REPORT

Application No.: SHEM2106005654CR

FCC ID: UCZ-W482CA-Z
IC: 8575A-W482CAZ
Applicant: Lorex Technology Inc.

Address of Applicant: 250 Royal Crest Court Markham Ontario Canada L3R 3S1

Manufacturer: Lorex Technology Inc.

Address of Manufacturer: 250 Royal Crest Court Markham Ontario Canada L3R 3S1

**Equipment Under Test (EUT):** 

**EUT Name:** 1080p FHD Wi-Fi Deterrence Camera

Model No.: W482CA-Z

Standard(s): 47 CFR Part 15, Subpart E 15.407

RSS-247 Issue 2, February 2017

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 KDB 905462 D04 Operational Modes for DFS Testing New Rules v01

**Date of Receipt:** 2021-06-04

**Date of Test:** 2021-06-04 to 2021-06-13

**Date of Issue:** 2021-06-13

Test Result: Pass\*

parlan 2han

Parlam Zhan Laboratory Manager

检验检测专用章 Inspection & Testing Services

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



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Revision Record				
Version	Description	Date	Remark	
00	Original	2021-06-13	1	

Authorized for issue by:		
	Michael Mil	
	Micheal Niu / Project Engineer	
	Parlam Zhan	
	Parlam Zhan / Reviewer	



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# 2 Test Summary

Item	Standard	Method	Requirement	Result
Channel Move Time	47 CFR Part 15,	KDB 905462 D02	KDB 905462 D02	Pass
Channel wove Time	Subpart E 15.407	Section 7.8.3	Section 5.1	Pass
Channel Closing	47 CFR Part 15,	KDB 905462 D02	KDB 905462 D02	Pass
Transmission Time	Subpart E 15.407	Section 7.8.3	Section 5.1	F488



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# 4 General Information

Power supply:	DC 5V by Adapter
Test voltage:	AC 120V/60Hz

### For FCC

Operation Frequency:	Band Mode		Frequency	Number of	
	UNII Band I	902 44a/p/UT20\/aa/UT20\	Range(MHz)	channels	
	UNII Band I	802.11a/n(HT20)/ac(HT20)	5180-5240	4	
		802.11n(HT40)/ac(HT40)	5190-5230	2	
	LINIII Daniel II A	802.11ac(HT80)	5210	1	
	UNII Band II-A	802.11a/n(HT20)/ac(HT20)	5260-5320	4	
		802.11n(HT40)/ac(HT40)	5270-5310	2	
		802.11ac(HT80)	5290	1	
	UNII Band II-C	802.11a/n(HT20)/ac(HT20)	5500-5700	11	
		802.11n(HT40)/ac(HT40)	5510-5670	5	
		802.11ac(HT80)	5530~5610	2	
	UNII Band III	802.11a/n(HT20)/ac(HT20)	5745-5825	5	
		802.11n(HT40)/ac(HT40)	5755-5795	2	
		802.11ac(HT80)	5775	1	
Modulation Type:	802.11a: OFDM	(64QAM, 16QAM, QPSK, BPSK	<b>(</b> )		
	802.11n: OFDM	802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM)			
	802.11ac: OFDM	802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
Date Rate:	802.11a:6/9/12/18/24/36/48/54Mbps				
	802.11n:MCS0-MCS7				
	802.11ac:VHT MCS0-MCS7				
Channel Spacing:	802.11a/n(HT20)/ac(HT20): 20MHz				
	802.11n(HT40)/a	ac(HT40): 40MHz			
	802.11ac(HT80)	: 80MHz			
Antenna Gain:	Band 1 Ant 1:2.0	3dBi, Ant 2:4.35dBi (Provided b	y the manufactur	er)	
	Band 2 Ant 1:4dl	Bi, Ant 2:4.08dBi (Provided by t	he manufacturer)	,	
	Band 3 Ant 1:4.4	4dBi, Ant 2:3.21dBi (Provided b	y the manufactur	er)	
	Band 4 Ant 1:2.2	24dBi, Ant 2:6.81dBi (Provided b	y the manufactur	er)	
	Directional gain:	Directional gain: Band 1: 6.35dBi; Band 2: 7.05dBi; Band 3: 6.88dBi			
	Band 4: 8.11dBi				
Antenna Type:	PIFA Antenna				
DFS Function:	Slave without Ra	adar detection			
TPC Function:	Not Support				



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### For IC

Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels	
	UNII Band II-A	802.11a/n(HT20)/ac(HT20)	5260-5320	4	
		802.11n(HT40)/ac(HT40)	5270-5310	2	
		802.11ac(HT80)	5290	1	
	UNII Band II-C	802.11a/n(HT20)/ac(HT20)	5500-5700	9	
		802.11n(HT40)/ac(HT40)	5510-5670	4	
		802.11ac(HT80)	5530~5610	1	
	UNII Band III	802.11a/n(HT20)/ac(HT20)	5745-5825	5	
		802.11n(HT40)/ac(HT40)	5755-5795	2	
		802.11ac(HT80)	5775	1	
Note: 5600MHz to 565	50MHz band can n	ot be operated in Canada			
Modulation Type:	802.11a: OFDM (	(64QAM, 16QAM, QPSK, BPSK)			
	802.11n: OFDM (	(BPSK, QPSK, 16QAM, 64QAM)			
	802.11ac: OFDM	802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
Date Rate:	802.11a:6/9/12/18/24/36/48/54Mbps				
	802.11n:MCS0-MCS7				
	802.11ac:VHT M	802.11ac:VHT MCS0-MCS7			
Channel Spacing:	802.11a/n(HT20)/ac(HT20): 20MHz				
	802.11n(HT40)/ac(HT40): 40MHz				
	802.11ac(HT80):	80MHz			
Antenna Gain:	Band 1 Ant 1:2.0	3dBi, Ant 2:4.35dBi (Provided by	y the manufacture	r)	
	Band 2 Ant 1:4dl	Bi, Ant 2:4.08dBi (Provided by th	e manufacturer)		
	Band 3 Ant 1:4.4	4dBi, Ant 2:3.21dBi (Provided by	y the manufacture	r)	
	Band 4 Ant 1:2.2	4dBi, Ant 2:6.81dBi (Provided by	y the manufacture	r)	
	Directional gain: Band 1: 6.35dBi; Band 2: 7.05dBi; Band 3: 6.88dBi			3i	
	Band 4: 8.11dBi				
Antenna Type:	PIFA Antenna				
DFS Function:	Slave without Ra	dar detection			
TPC Function:	Not Support				



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### 4.1 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weive Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

### 4.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

## • CNAS (No. CNAS L4354)

CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

### • A2LA (Certificate No. 2541.01)

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

### • FCC (Designation Number: CN1172)

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory.

Designation Number: CN1172.

# • ISED (CAB identifier: CN0072)

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

CAB Identifier: CN0072.

### • VCCI (Member No.: 1938)

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1600, C-1707, T-1499, G-10216 respectively.

### 4.3 Deviation from Standards

None

# 4.4 Abnormalities from Standard Conditions

None



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# 5 Equipment List

RF Conducted Test					
Spectrum Analyzer	Agilent	E4446A	MY44020154	04/16/2021	04/15/2022
Spectrum Analyzer	Keysight	N9020A	MY55370209	12/02/2020	12/01/2021
Spectrum Analyzer	Keysight	N9010A	MY56480443	02/01/2021	01/31/2022
Signal Generator	Agilent	N5182A	MY50142015	09/25/2020	09/24/2021
Radio Communication Test Station	Anritsu	MT8000A	6262012849	N/A	N/A
Radio Communication Analyzer	Anritsu	MT8821C	6201692222	N/A	N/A
Universal Radio Communication Tester	R&S	CMW500	159275	10/19/2020	10/18/2021
Universal Radio Communication Tester	R&S	CMW500	167239	04/16/2021	04/15/2022
Power Meter	Anritsu	ML2495A	1445010	04/15/2021	04/14/2022
Switcher	CCSRF	FY562	KUS2001M001 -3	10/19/2020	10/18/2021
AC Power Source	EXTECH	6605	1570106	N.C.R	N.C.R
DC Power Supply	Aglient	E3632A	MY50340053	N.C.R	N.C.R
6dB Attenuator	Mini-Circuits	NAT-6-2W	15542-1	N.C.R	N.C.R
Power Divider	AISI	IOWOPE2068	PE2068	N.C.R	N.C.R
Filter	MICRO-TRONICS	BRM50701	5	N.C.R	N.C.R
Conducted test cable	1	RF01-RF04	/	04/15/2021	04/14/2022
Software	BST	TST-PASS	N/A	N/A	N/A
Temp. / Humidity Chamber	TERCHY	MHK-120AK	X30109	04/15/2021	04/14/2022
Thermometer	Anymetre	TH603	CCS007	10/16/2020	10/15/2021



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# 6 Dynamic Frequency Selection

# 6.1 Applicability of DFS requirements

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

rable 1.7 Applicability of B1 of Requirements 1 her to coo of a chainler				
	Operational Mode			
Requirement	□Master	⊠Client Without Radar Detection	☐Client with Radar Detection	
Non-Occupancy Period	Yes	Not required	Yes	
DFS Detection Threshold	Yes	Not required	Yes	
Channel Availability Check Time	Yes	Not required	Not required	
U-NII Detection Bandwidth	Yes	Not required	Yes	

Table 2: Applicability of DFS requirements during normal operation

11	Operational Mode		
Requirement	☐Master Device or Client with Radar Detection	⊠Client Without Radar Detection	
DFS Detection Threshold	Yes	Not required	
Channel Closing Transmission Time	Yes	Yes	
Channel Move Time	Yes	Yes	
U-NII Detection Bandwidth	Yes	Not required	

Additional requirements for devices with multiple bandwidth modes	☐Master Device or Client with Radar Detection	⊠Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices, it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.



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### 6.2 DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and	-62 dBm
power spectral density < 10 dBm/MHz	-02 dBIII
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

- Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.
- Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.
- Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

# 6.3 DFS Response Requirements

Table 4: DFS Response Requirement Values

Table II 2 To Ftosponios Ftosponios			
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 facilitating a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
- Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.



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### 6.4 Parameters of radar test Waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

#### 6.4.1 Short Pulse Radar Test Waveforms

Table 5 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
		Test A	$\begin{bmatrix} 1 \\ 1 \end{bmatrix}$		
1	1	Test B	Roundup $ \left\{ \frac{360}{360} \right\}^{\circ} $ $ \left\{ \frac{19 \cdot 10^{6}}{\text{PRI}_{\mu \text{sec}}} \right\} $	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Rad	ar 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.

Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a

Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

Test aggregate is average of the percentage of successful detections of short pulse radar types 1-4



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Table 5a - Pulse Repetition Intervals Values for Test A

Pulse Repetition	Pulse Repetition	Pulse Repetition Interval		
Frequency Number	Frequency (Pulses Per Second)	(Microseconds)		
1	1930.5	518		
2	1858.7	538		
3	1792.1	558		
4	1730.1	578		
5	1672.2	598		
6	1618.1	618		
7	1567.4	638		
8	1519.8	658		
9	1474.9	678		
10	1432.7	698		
11	1392.8	718		
12	1355	738		
13	1319.3	758		
14	1285.3	778		
15	1253.1	798		
16	1222.5	818		
17	1193.3	838		
18	1165.6	858		
19	1139	878		
20	1113.6	898		
21	1089.3	918		
22	1066.1	938		
23	326.2	3066		



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### 6.4.2 Long Pulse Radar Test Waveform

Table 6 - Long Pulse Radar Test Waveform

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

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Each waveform is defined as follows:

- 1) The transmission period for the Long Pulse Radar test signal is 12 seconds.
- 2) There are a total of 8 to 20 Bursts in the 12 second period, with the number of Bursts being randomly chosen. This number is Burst Count.
- 3) Each Burst consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each Burst within the 12 second sequence may have a different number of pulses.
- 4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a Burst will have the same pulse width. Pulses in different Bursts may have different pulse widths.
- 5) Each pulse has a linear frequency modulated chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a transmission period will have the same chirp width. The chirp is centered on the pulse. For example, with a radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.
- 6) If more than one pulse is present in a Burst, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a Burst, the random time interval between the first and second pulses is chosen independently of the random time interval between the second and third pulses.
- 7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to Burst Count. Each interval is of length (12,000,000 / Burst Count) microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and [(12,000,000 / Burst Count) (Total Burst Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each Burst is chosen randomly.

### A representative example of a Long Pulse Radar Type waveform:

- 1) The total test waveform length is 12 seconds.
- 2) Eight (8) Bursts are randomly generated for the Burst Count.
- 3) Burst 1 has 2 randomly generated pulses.
- 4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
- 5) The PRI is randomly selected to be at 1213 microseconds.
- 6) Bursts 2 through 8 are generated using steps 3 5.
- 7) Each Burst is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, Burst 1 is randomly generated (1 to 1,500,000 minus the total Burst 1 length + 1 random PRI interval) at the 325,001 microsecond step. Bursts 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. Burst 2 falls in the 1,500,001 3,000,000 microsecond range).



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### 6.4.3 Frequency Hopping Radar Test Waveform

Table 7 – Frequency Hopping Radar Test Waveform

Туре	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.



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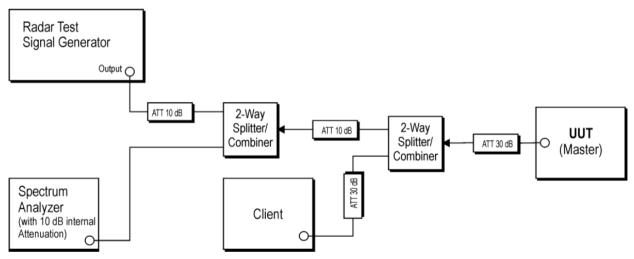
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### 6.5 Calibration of Radar Waveform

### 6.5.1 Radar Waveform Calibration Procedure

- 1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- 2) The interference Radar Detection Threshold Level is -62dBm +3.21dBi +1dB = -57.79dBm that had been taken into account the output power range and antenna gain.
- 3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The spectrum analyzer had offset -1.0dB to compensate RF cable loss 1.0dB.
- 4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was -62dBm+3.21dBi +1dB = -57.79dBm. Capture the spectrum analyzer plots on short pulse radar waveform.

### 6.5.2 Conducted Calibration Setup



Remark: During the test, a lower radar signal level -57.79dBm was used.



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### 6.6 Test Procedure

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (0.3ms) =S (12000ms) / B (4000); where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: C (ms)= N X Dwell (0.3ms); where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.



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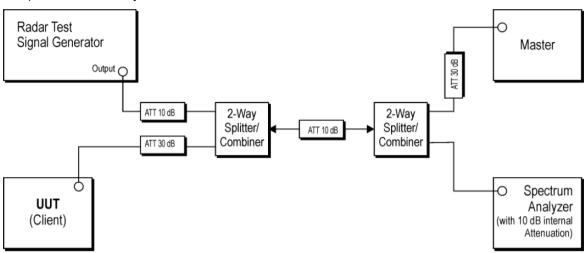




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### 6.7 Test Setup

Setup for Client with injection at the Master



# 6.8 Channel Loading

System testing will be performed with channel-loading using means appropriate to the data types that are used by the unlicensed device. The following requirements apply:

a) The data file must be of a type that is typical for the device (i.e., MPEG-2, MPEG-4, WAV, MP3, MP4, AVI, etc.) and must generally be transmitting in a streaming mode.
b) Software to ping the client is permitted to simulate data transfer but must have random ping intervals.
c) Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater. For example, channel loading can be estimated by setting the spectrum analyzer for zero span and approximate the Time On/ (Time On + Off Time). This can be done with any appropriate channel BW and modulation type.
d) Unicast or Multicast protocols are preferable but other protocols may be used. The appropriate protocol used must be described in the test procedures.



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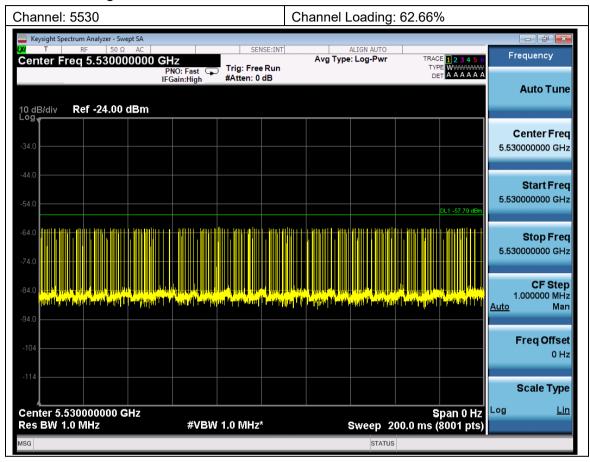




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### 6.9 Test Result

### 6.9.1 Channel Loading Result





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### 6.9.2 Radar Waveform Calibration Result





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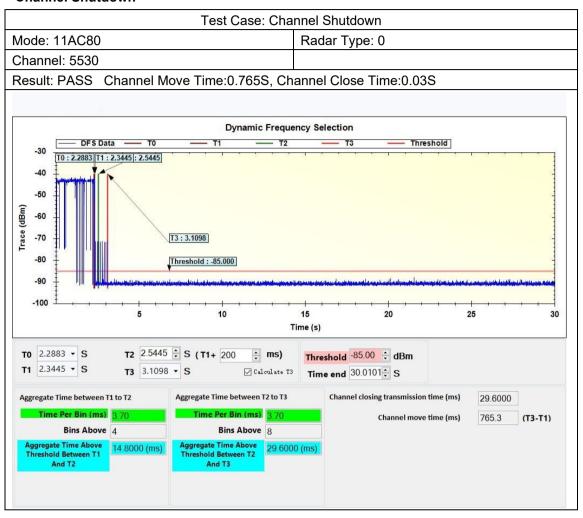
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### 6.9.3 Channel Shutdown



- End of the Report -



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