





FCC DFS Test Report FCC ID: 2AFENWK08K

This report concerns: Original Grant

Project No. : 2502C023

Equipment : Projector

Brand Name : XGIMI

Test Model : WK08K

Series Model : N/A

Applicant: XGIMI Technology Co., Ltd.

Address : Building No.4, Zone A, No.1129, Shijicheng Road, High-tech Zone, Pilot

Free Trade, Chengdu Sichua, China

Manufacturer : XGIMI Technology Co., Ltd.

Address : No. 4, Zone A, No. 1129, Shijicheng Road, Chengdu Hi-tech Zone, Sichuan

Pilot Free Trade Zone, 610041 China

Factory 1 : Yibin XGIMI Optoelectronic Co., Ltd.

Address : No. 2, West Section 4, Changjiang North Road, Lingang Economic

Development Zone, Yibin City, Sichuan P.R. China

Factory 2 : XGIMI VIETNAM TECHNOLOGY COMPANY LIMITED

Address : Lot CN 4-1, My Thuan Industria I Zone,y Thuan Commune,Nam Dinh City,

Nam Dinh Province, Vietnam

Date of Receipt : Feb. 25, 2025

Date of Test : Feb. 28, 2025 ~ Mar. 27, 2025

Issued Date : May 30, 2025

Report Version : R01

Test Sample : Engineering Sample No.: DG2025022585
Standard(s) : FCC CFR Title 47, Part 15, Subpart E

The above equipment has been tested and found compliance with the requirement of the relative

standards by BTL Inc. (Dongguan)

Prepared by :

Sheldon Ou

Approved by : ______ Welly Zhou

No.3, Jinshagang 1st Road, Dalang, Dongguan, Guangdong People's Republic of China

Tel: +86-769-8318-3000 Web: www.newbtl.com Service mail: btl_qa@newbtl.com



Report No.: BTL-FCCP-5-2502C023

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this
test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in
determining the Pass/Fail results.



Table of Contents	Page
REPORT ISSUED HISTORY	4
1 . APPLICABLE STANDARDS	5
2 . SUMMARY OF TEST RESULTS	5
3 . TEST FACILITY	5
4 . TEST ENVIRONMENT CONDITIONS	5
5 . GENERAL INFORMATION	6
5.1 GENERAL DESCRIPTION OF EUT	6
5.2 CUSTOMER INFORMATION DESCRIPTION	9
5.3 MAXIMUM OUTPUT POWER AND E.I.R.P.	9
5.4 TRANSMIT POWER CONTROL (TPC)	10
5.5 DESCRIPTION OF TEST MODES	12
6 . U-NII DFS RULE REQUIREMENTS	13
6.1 WORKING MODES AND REQUIRED TEST ITEMS	13
6.2 TEST LIMITS AND RADAR SIGNAL PARAMETERS	14
7 . MEASUREMENT INSTRUMENTS LIST	17
8 . DYNAMIC FREQUENCY SELECTION (DFS)	18
8.1 DFS MEASUREMENT SYSTEM	18
8.2 CALIBRATION OF DFS DETECTION THRESHOLD LEVEL	20
8.3 DEVIATION FROM TEST STANDARD	20
9 . TEST RESULTS	21
9.1 SUMMARY OF DFS TEST RESULT	21
9.2 DFS DETECTION THRESHOLD	22
9.3 RADAR TEST WAVEFORMS	23
9.4 CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME	24
9.5 NON-OCCUPANCY PERIOD	26
10 . EUT TEST PHOTO	27





REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-5-2502C023	R00	Original Report.	Apr. 14, 2025	Invalid
BTL-FCCP-5-2502C023	R01	Only updated the applicant information and removed the series models.	May 30, 2025	Valid



Report No.: BTL-FCCP-5-2502C023

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

The following reference test guidance is not within the scope of accreditation of A2LA:

KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart E						
Standard(s) Test Item Test Result Judgment Remark						
FCC 15.407(h)	Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS)		PASS			

3. TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Dalang, Dongguan, Guangdong People's Republic of China.

BTL's Registration Number for FCC: 747969 BTL's Designation Number for FCC: CN1377

4. TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
Dynamic Frequency Selection (DFS)	20°C	49%	AC 120V/60Hz	Zack Zhang	Mar. 08, 2025



5. GENERAL INFORMATION

5.1 GENERAL DESCRIPTION OF EUT

Equipment	Projector
Brand Name	XGIMI
Test Model	WK08K
Series Model	N/A
Model Difference(s)	N/A
Software Version	V1.0.33
Hardware Version	251-02282-013
Power Source	1# DC voltage supplied from AC adapter. Model: S065ARU2000325 2# Supplied from Li-ion battery pack Model: S13741
Power Rating	1# I/P: 100-240V ~ 50/60Hz 1.8A Max O/P: 5V===3A/9V===3A/12V===3A/15V===3A/20V===33.25A 2# 14.4V 4950mAh
Operation Frequency Band(s)	UNII-2A: 5250 MHz ~ 5350 MHz UNII-2C: 5470 MHz ~ 5725 MHz
Modulation Type	IEEE 802.11a/n/ac: OFDM
Bit Rate of Transmitter	IEEE 802.11a: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps IEEE 802.11ac: up to 866.7 Mbps
Operating Mode(s)	☐ Master ☐ Client device without radar detection ☐ Client device with radar detection ☐ Mesh ☐ Bridge
Maximum Output Power _UNII-2A	IEEE 802.11ac(VHT40): 21.56 dBm (0.1432 W)
Maximum Output Power _UNII-2C	IEEE 802.11ac(VHT40): 23.61 dBm (0.2296 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.





2. Channel List:

iamor Elou						
IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		IEEE 802.11	lac(VHT80)	
UNII	-2A	UNII-2A UNII-2A		UNII-2A		I-2A
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	
52	5260	54	5270	58	5290	
56	5280	62	5310			
60	5300					
64	5320					

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		IEEE 802.11	Iac(VHT80)
UNII	-2C	UNI	I-2C	UNI	I-2C
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590		
112	5560	126	5630		
116	5580	134	5670		
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				

3. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	409-00234-001	FPC	N/A	6.07
2	N/A	409-00235-001	FPC	N/A	5.55

Note:

This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT}+Array Gain. For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=6.07. So, the UNII-1, the UNII-2A, UNII-2C output power limit is 23.98-(6.07-6)=23.91, UNII-3 output power limit is 30-(6.07-6)=23.93.

For power spectral density measurements, N_{ANT} =2, N_{SS} = 1. So the Directional gain= G_{ANT} +Array Gain= G_{ANT} +10log(N_{ANT} / N_{SS})dBi=6.07+10log(2/1)dBi=9.08. Then, the UNII-1, UNII-2A and UNII-2C power spectral density limit is 11-(9.08-6)=7.92, the UNII-3 power spectral density limit is 30-(9.08-6)=26.92.





4. Table for Antenna Configuration:

Operating Mode TX Mode	2TX
IEEE 802.11a	V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT20)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT80)	V (Ant. 1 + Ant. 2)





5.2 CUSTOMER INFORMATION DESCRIPTION

- 1) The antenna gain is provided by the manufacturer.
- 2) The results of all test items include cable losses. Part of the cable losses (0.5 dB) are provided by the manufacturer, while the other parts of the cable losses are provided by the testing laboratory.

5.3 MAXIMUM OUTPUT POWER AND E.I.R.P.

Non Beamforming						
Frequency Band (MHz)	Max Output Power (dBm)	Directional Gain (dBi)	Max. e.i.r.p. (dBm)	Max. e.i.r.p. (mW)		
5250~5350	21.56	6.07	27.63	579.43		
5470~5725	23.61	6.07	29.68	928.97		

Note:

1) U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.



5.4 TRANSMIT POWER CONTROL (TPC)

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

Test Mode: UNII-2A / IEEE 802.11a Mode						
Channel Frequency		Output Power (TPC High)	Output Power (TPC Low)			
Chamilei	(MHz)	(dBm)	(dBm)			
52	5260	19.30	13.30			
60	5300	19.37	13.37			
64	5320	19.31	13.31			

Test Mode: UNII-2A / IEEE 802.11ac(VHT20) Mode			
Channel	Frequency (MHz)	Output Power (TPC High) (dBm)	Output Power (TPC Low) (dBm)
52	5260	19.51	13.51
60	5300	19.77	13.77
64	5320	19.70	13.70

Test Mode: UNII-2A / IEEE 802.11ac(VHT40) Mode				
Channel	Frequency	Output Power (TPC High)	Output Power (TPC Low)	
Chamilei	(MHz)	(dBm)	(dBm)	
54	5270	21.56	15.56	
62	5310	18.59	12.59	

Test Mode: UNII-2A / IEEE 802.11ac(VHT80) Mode				
Channel	Frequency	Output Power (TPC High)	Output Power (TPC Low)	
Charmer	(MHz)	(dBm)	(dBm)	
58	5290	17.47	11.47	

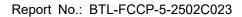


Test Mode: UNII-2C / IEEE 802.11a Mode				
Channel	Frequency Output Power (TPC High) Output Power (TPC Low) (MHz) (dBm) (dBm)			
100	5500	18.62	12.62	
116	5580	18.91	12.91	
140	5700	19.11	13.11	

	Test Mode: UNII-2C / IEEE 802.11ac(VHT20) Mode				
Channel Frequency Output Power		Output Power (TPC High)	Output Power (TPC Low)		
Chamilei	(MHz)	(dBm)	(dBm)		
100	5500	19.34	13.34		
116	5580	19.38	13.38		
140	5700	18.63	12.63		

Test Mode: UNII-2C / IEEE 802.11ac(VHT40) Mode				
Channel	Frequency (MHz)	Output Power (TPC High) (dBm)	Output Power (TPC Low) (dBm)	
102	5510	17.66	11.66	
110	5550	23.60	17.60	
134	5670	23.61	17.61	

Test Mode: UNII-2C / IEEE 802.11ac(VHT80) Mode				
Channel	Frequency	Output Power (TPC High)	Output Power (TPC Low)	
Charmer	(MHz)	(dBm)	(dBm)	
106	5530	15.25	9.25	
122	5610	22.44	16.44	





5.5 DESCRIPTION OF TEST MODES

Test Mode	Description
Mode 1	IEEE 802.11ac(VHT80): 5530MHz





6. U-NII DFS RULE REQUIREMENTS

6.1 WORKING MODES AND REQUIRED TEST ITEMS

The manufacturer shall state whether the UUT is capable of operating as a Master and/or a Client. If the UUT is capable of operating in more than one operating mode then each operating mode shall be tested separately. See tables below for the applicability of DFS requirements for each of the operational modes.

Applicability of DFS requirements prior to use a channel

Requirement	Operational Mode		
requirement	Master	Client without radar detection	Client with radar detection
Non-Occupancy Period	√	V	V
DFS Detection Threshold	$\sqrt{}$	Not required	$\sqrt{}$
Channel Availability Check Time		Not required	Not required
U-NII Detection Bandwidth	V	Not required	V

Applicability of DFS requirements during normal operation

Deminerat	Operational Mode		
Requirement	Master	Client without radar detection	Client with radar detection
DFS Detection Threshold	√	Not required	V
Channel Closing Transmission Time	$\sqrt{}$	V	$\sqrt{}$
Channel Move Time	V	V	V
U-NII Detection Bandwidth	V	Not required	V

Master Device or Client	Client Without Radar	
with Radar Detection	Detection	
All RW modes must be tested	Not required	
All BW filodes fildst be tested	Not required	
Test using widest BW mode	Test using the widest BW	
available	mode available for the link	
Any single BW mode	Not required	
	with Radar Detection All BW modes must be tested Test using widest BW mode available	

Note: Frequencies selected for statistical performance check 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.





6.2 TEST LIMITS AND RADAR SIGNAL PARAMETERS

DETECTION THRESHOLD VALUES

DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2 and 3)
e.i.r.p. ≥ 200 milliwatt	-64 dBm
e.i.r.p. < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
e.i.r.p. < 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: e.i.r.p. is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

TEST LIMIT

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 UNII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.



Report No.: BTL-FCCP-5-2502C023

PARAMETERS OF DFS TEST SIGNALS AND MINIMUM PERCENTAGE OF SUCCESSFUL DETECTIONS

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.

Short Pulse Radar Test Waveforms.

Radar	Pulse Width	PRI	Number of Pulses	Minimum	Minimum		
Type	(µsec)	(µsec)		Percentage of	Number of		
				Successful	Trials		
				Detection			
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 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	Roundup $ \left\{ \frac{\left(\frac{1}{360}\right)}{\left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)} \right\} $	60%	30		
		in Test A					
2	1-5	150-230	23-29	60%	30		
3	6-10	200-500	16-18	60%	30		
4	11-20	200-500	12-16	60%	30		
Aggregate (Radar Types 1-	4)		80%	120		
Note 1. Ch.	Note 1. Short Dulgo Dodor True O should be used for the detection bendryidth test showed move						

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

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.

For example if in Short Pulse Radar Type 1 Test B a PRI of 3066 usec is selected, the number of pulses would be $\frac{\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{3066}\right)\right\} = \text{Round up }\left\{17.2\right\} = 18. }{\text{Would be}}$



Table 5a - Pulse Repetition Intervals Values for Test A

Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (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

The aggregate is the average of the percentage of successful detections of Short Pulse Radar Types 1-4.



Report No.: BTL-FCCP-5-2502C023

Long Pulse Radar Test Waveform

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

The parameters for this waveform are randomly chosen (The center frequency for each of the 30 trials of the Bin 5 radar shall be randomly selected within 80% of the Occupied Bandwidth.) 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.

Frequency Hopping Radar Test Waveform

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

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: If a segment does not contain at least 1 frequency within the U-NII Detection Bandwidth of the UUT, then that segment is not used.

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.

7. MEASUREMENT INSTRUMENTS LIST

Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
EXA Spectrum Analyzer	Agilent	N9010A	MY54430251	May 31, 2025
Power Splitter	Mini-Circuits	ZFRSC-183-S+	SFG32801811-1	May 31, 2025
Attenuator	STI	STI01-0201-01	N/A	Dec. 06, 2025
Power Splitter	Mini-Circuits	ZFRSC-183-S+	SFG32801811-3	May 31, 2025
Power Splitter	Mini-Circuits	ZN4PD-642W-S+	SN224901449	Dec. 06, 2025
EXG-B RF Vector Signal Generator	Keysight	N5172B	MY53051637	Dec. 06, 2025
Power Splitter	N/A	N/A	SZ201504604	Dec. 06, 2025
DC Block	N/A	N/A	N/A	N/A
20DB	N/A	N/A	N/A	N/A
Wi-Fi Router	tp-link	Archer AX6000	N/A	N/A
Measurement Software	Keysight	N7607C Signal studio V2.4.0.0	N/A	N/A

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

Wi-Fi Router's FCC ID: TE7AX6000



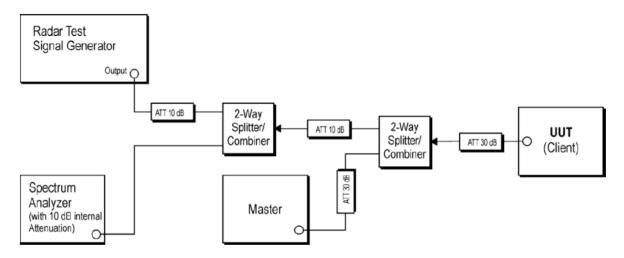
8. DYNAMIC FREQUENCY SELECTION (DFS)

8.1 DFS MEASUREMENT SYSTEM

Test Precedure

- 1. Master device and client device are set up by conduction method as the following configuration.
- 2. The client device is connected to notebook and to access a IP address on wireless connection with the master device.
- 3. Then the master device is connected to another notebook to access a IP address.
- 4. Finally, let the two IP addresses run traffic with each other through the Run flow software "Lan test" to reach 17% channel loading as below.

Setup for Client with injection at the Client

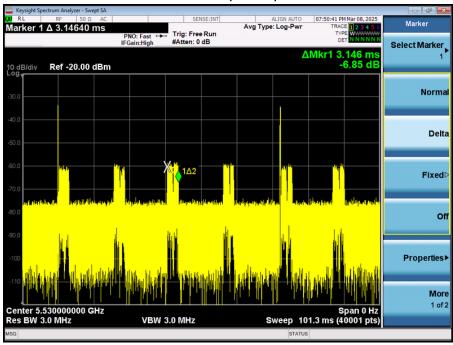


Radar Test Waveforms are injected into the Client



Channel Loading

IEEE 802.11ac(VHT80) Mode



Frequency (MHz)	Marker Delta (ms)	Number	On Time (ms)	Total Time (ms)	Duty cycle (%)	Limit (%)
5530	3.146	6	18.876	101.3	18.63%	17.00

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of FCC 06-96. The frequency of the signal generator is incremented in 1 MHz steps from FL to FH for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer set to display 8001 bins on the horizontal axis. The time-domain resolution is 2 msec / bin with a 16 second sweep time, meeting the 10 second 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 and max hold.

Should multiple RF ports be utilized for the Master and/or Slave devices (for example, for diversity or MIMO implementations), additional combiner/dividers are inserted between the Master Combiner/Divider and the pad connected to the Master Device (and/or between the Slave Combiner/Divider and the pad connected to the Slave Device). Additional pads are utilized such that there is one pad at each RF port on each EUT.



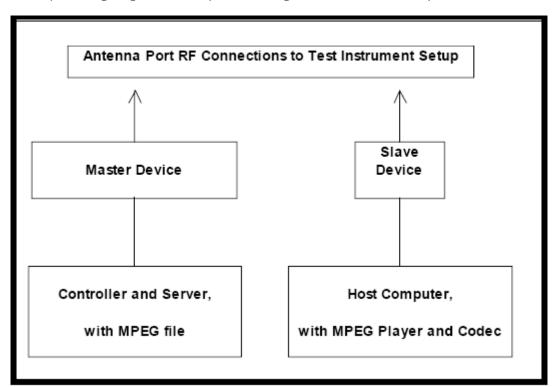
8.2 CALIBRATION OF DFS DETECTION THRESHOLD LEVEL

A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected in place of the master device and the signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of -64dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. Measure the amplitude and calculate the difference from -64 dBm. Adjust the Reference Level Offset of the spectrum analyzer to this difference.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of -64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

Set the signal generator to produce a radar waveform, trigger a burst manually and measure the level 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.



8.3 DEVIATION FROM TEST STANDARD

No deviation.



9. TEST RESULTS

9.1 SUMMARY OF DFS TEST RESULT

Clause	Test Parameter	Remarks	Result
FCC 15.407	DFS Detection Threshold	Applicable	Pass
	Channel Move Time	Applicable	Pass
	Channel Closing Transmission Time	Applicable	Pass
	Non-Occupancy Period	Applicable	Pass



9.2 DFS DETECTION THRESHOLD

Calibration:

For a detection threshold level of -64dBm and the antenna gain is 0 dBi, required detection threshold is -64 dBm.

Note: Maximum Transmit Power is more than 200 milliwatt in this report, so detection threshold level is -64dBm.

Radar Signal 0 Peak Search Avg Type: Log-Pwr PNO: Fast --- Trig: Free Run IFGain:High #Atten: 0 dB **Next Peak** Mkr1 48.80 ms -64.33 dBm Ref -20.00 dBm **Next Pk Right** Next Pk Left Marker Delta Mkr→CF Mkr→RefLvl More 1 of 2 Center 5.530000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 101.3 ms (40001 pts) VBW 3.0 MHz



9.3 RADAR TEST WAVEFORMS

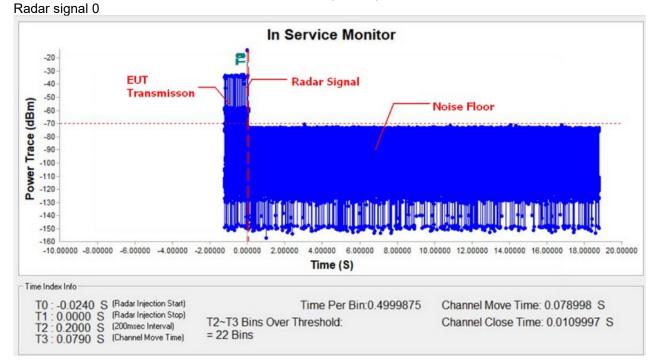
Radar Signal 0

Trial ID	Radar Type	Pulse Width (µs)	PRI (µs)	Number of Pulses	Waveform Length (µs)
0	Type 0	1	1428	18	25704



9.4 CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME

IEEE 802.11ac(VHT80) Mode



Note: T0 denotes the Radar Injection Start.

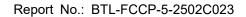
T1 denotes the start of Channel Move Time upon the end of the last Radar burst.

T2 denotes the data transmission time of 200ms from T1.

T3 denotes the end of Channel Move Time.



Note: An expanded plot for the device vacates the channel in the required 500ms.



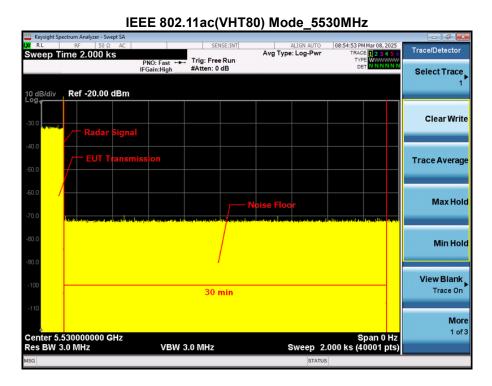


IEEE 802.11ac(VHT80) Mode					
Item	Measured Value(s)	Limit(s)			
Channel Move Time	0.078998	10			
		200 milliseconds + an aggregate of 60			
Channel Close Time	0.0109997	milliseconds over remaining 10 second			
		period.			



9.5 NON-OCCUPANCY PERIOD

During the 30 minutes observation time, UUT did not make any transmissions on a channel after a radar signal was detected on that channel by either the Channel Availability Check or the In-Service Monitoring.





10. EUT TEST PHOTO











End of Test Report