FCC Part15 E
DFS TEST REPORT
No.I20Z61117-IOT04

for

Wingtech Group (Hongkong) Limited

Multi-band WCDMA/LTE MIFI with WLAN

CT2MHS01

With

FCC ID: 2APXW-CT2MHS01

Hardware Version: 89323_1_21

Software Version: CT2MHS01_0.01.41

Issued Date: 2020-09-30

Note:

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I120Z61117-IOT04	Rev.0	1st edition	2020-09-11
I120Z61117-IOT04	Rev.1	Update the version of KDB905462 D02 on page 6. Add the photographs of the test set-up on page 46.	2020-09-22
I120Z61117-IOT04	Rev.2	Add the characteristics of each pulse.	2020-09-30
I120Z61117-IOT04	Rev.3	Add the 20M and 40M result on A.6.	2020-09-30

CONTENTS

1. TEST LATORATORY

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1:CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China100191

1.3. Project data

Testing Start Date: 2020-07-29

Testing End Date: 2020-09-11

1.4. Signature

Xie Xiuzhen

(Prepared this test report)

Zheng Wei

(Reviewed this test report)

Hu Xiaoyu

(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	Wingtech Group (Hongkong) Limited
Address:	Flat/RM 1903 ,19/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, Kowloon, Hongkong.
City:	Hongkong.
Postal Code:	/
Country:	China
Telephone:	+86-13917939276
Fax:	/

2.2. Manufacturer Information

Company Name:	Wingtech Group (Hongkong) Limited
Address:	Flat/RM 1903 ,19/F, Podium Plaza, 5 Hanoi Road, Tsim Sha Tsui, Kowloon, Hongkong.
City:	Hongkong.
Postal Code:	/
Country:	China
Telephone:	+86-13917939276
Fax:	/

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT(AE)

3.1. About EUT

Description	Multi-band WCDMA/LTE MIFI with WLAN
Model name	CT2MHS01
FCC ID	2APXW-CT2MHS01
WLAN Frequency Band	ISM Band: 5250MHz~5350MHz 5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna
Extreme vol. Limits	3.85V
Device Type (DFS)	Master
Antenna gain	-0.61dBi

3.2. Internal Identification of EUT used during the test

EUT ID*	S/N	HW Version	SW Version
EUT1	353929580002510	89323_1_21	CT2MHS01_0.01.41

*EUT ID: is used to identify the test sample in the lab internally.

3.3. General Description

The Equipment Under Test (EUT) is a model of Multi-band WCDMA/LTE MIFI with WLAN with internal antenna. It consists of normal options: AC power line charger. Manual and specifications of the EUT were provided to fulfil the test.

4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

905462 D02	COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION	2016
FCC Part15 E	Title 47 of the Code of Federal Regulations; Chapter I Part 15.407	2020

Note: This report is only for DFS

5. LABORATORY ENVIRONMENT

Measurement is performed in shielding room.

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	FCC Part 15.407	Verdict
Channel Availability Check	15.407(h)(2) (ii)	**P**
In-Service Monitoring	5.407(h)(2)	**P**
Channel move time and channel closing transmission time	15.407(h)(2) (iii)	**P**
DFS detection bandwidth	5.407(h)(2)	**P**
Non-Occupancy Period	15.407(h)(2) (iv)	**P**
Statistical Performance Check	5.407(h)(2)	**P**

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

Test Conditions

T nom	Normal Temperature
T min	Low Temperature
T max	High Temperature
V nom	Normal Voltage
V min	Low Voltage
V max	High Voltage
H nom	Norm Humidity
A nom	Norm Air Pressure

For this report, all the test case listed above is tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

Temperature	T nom	26℃
Voltage	V nom	3.85 V
Humidity	H nom	44%
Air Pressure	A nom	1010hPa

7. TEST EQUIPMENTS UTILIZED

Conducted test system

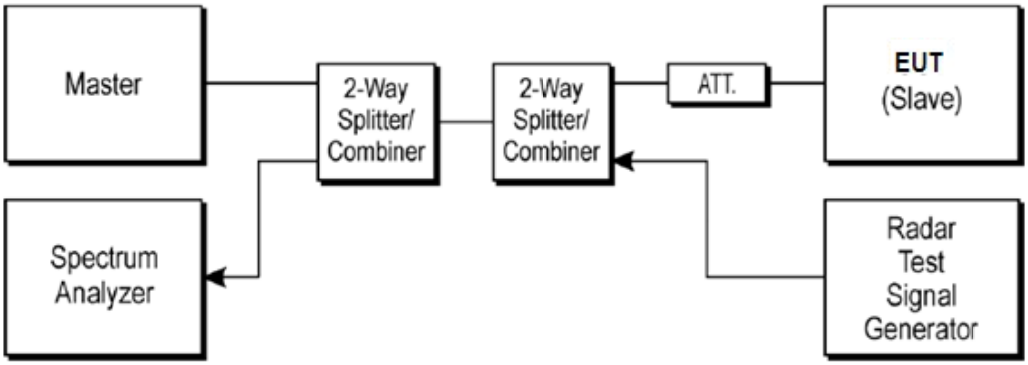
No.	Equipment	Model	Serial Number	Manufacturer	Calibration Date	Calibration Due Date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2021-05-06
2	Vector Signal Generator	SMU200A	103752	Rohde & Schwarz	1 year	2021-05-05
3	Shielding Room	S81	/	ETS-Lindgren	/	/

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

A.1.1. Conducted Measurements

The below figure shows the DFS setup, where the EUT is a RLAN device operating in slave mode, without Radar Interference Detection function. This setup also contains a device operating in master mode. The radar test signals are injected into the master device. The EUT (slave device) is associated with the master device. WLAN traffic is generated by streaming the mpeg file from the master to the slave in full monitor video mode using the media player.



Note:

1) All Measurements are performed with the EUT's narrowest channel bandwidth.
2) The master device information is as follows
   Vendor: RUCKUS
   Model: R600
   FCC ID: S9GR600
3) The software of radar signal generator (R&S SMU200A) is completely designed based on KDB 905642 requirement.

A.1.2. Parameters of DFS test signal

1). Interference threshold values, master or client incorporation in service monitoring

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

2). DFS requirement values

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

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.

3).Radar test waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{PRI_{\mu sec}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

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

4).Measurement Uncertainty

Item	Measurement Uncertainty
Time	0.70 ms
Power	0.75 dBm

A.2. Channel Availability Check

Method of Measurement: See KDB 905462 7.8.2

The Initial *Channel Availability Check Time* tests that the UUT does not emit beacon, control, or data signals on the test *Channel* until the power-up sequence has been completed and the U-NII device checks for *Radar Waveforms* for one minute on the test *Channel*. This test does not use any *Radar Waveforms* and only needs to be performed one time.

a) The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII *Channel* that must incorporate DFS functions. At the same time the UUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the *Channel* occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.

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

c) Confirm that the UUT initiates transmission on the channel

This measurement can be used to determine the length of the power-on cycle if it is not supplied by the manufacturer. If the spectrum analyzer sweep is started at the same time the UUT is powered on and the UUT does not begin transmissions until it has completed the cycle, the power-on time can be determined by comparing the two times.

The steps below define the procedure to verify successful radar detection on the test *Channel* during a period equal to the *Channel Availability Check Time* and avoidance of operation on that *Channel* when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1 dB occurs at the beginning of the *Channel Availability Check Time*.

a) The *Radar Waveform* generator and UUT are connected using the applicable test setup described in the sections on configuration for Conducted Tests (7.2) or Radiated Tests (7.3) and the power of the UUT is switched off.

b) The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence (Tpower_up). The *Channel Availability Check Time* commences on Chr at instant T1 and will end no sooner than T1 + Tch_avail_check.

c) A single *Burst* of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T1. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

d) Visual indication or measured results on the UUT of successful detection of the radar *Burst* will be recorded and reported. Observation of Chr for UUT emissions will continue for 2.5 minutes after the radar *Burst* has been generated.

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

The steps below define the procedure to verify successful radar detection on the test *Channel* during a period equal to the *Channel Availability Check Time* and avoidance of operation on that *Channel* when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB occurs at the end of the *Channel Availability Check Time*.

a) The *Radar Waveform* generator and UUT are connected using the applicable test setup described in the sections for Conducted Tests (7.2) or Radiated Tests (7.3) and the power of the UUT is switched off.

b) The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence (Tpower_up). The *Channel Availability Check Time* commences on Chr at instant T1 and will end no sooner than T1 + Tch_avail_check.

c) A single *Burst* of one of the Short Pulse Radar Types 0-4 will commence within a 6 second window starting at T1 + 54 seconds. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

d) Visual indication or measured results on the UUT of successful detection of the radar *Burst* will be recorded and reported. Observation of Chr for UUT emissions will continue for 2.5 minutes after the radar *Burst* has been generated.

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

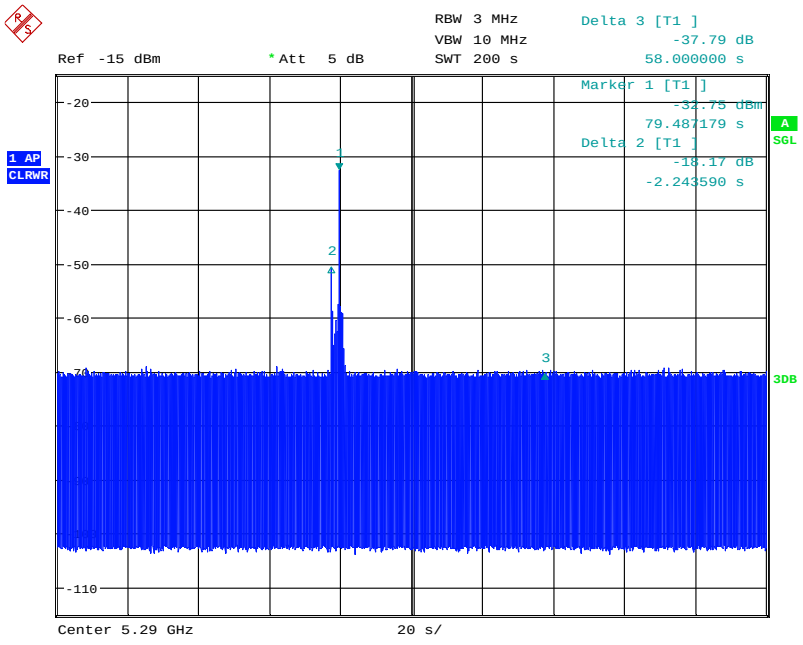
Measurement Limit:

Item	Limit
A. Tests with a radar burst at the beginning of the Channel Availability Check Time	Can detected.
B. Tests with radar burst at the end of the Channel Availability Check Time	Can Detected.
C. Radar Detection Threshold (during the Channel Availability Check)	The radar test signal shall be detected at least 12 times out of the 20 trials

Measurement Results:

A .Tests with a radar burst at the beginning of the Channel Availability Check Time

HT80 Frequency Band: 5250MHz ~ 5350MHz



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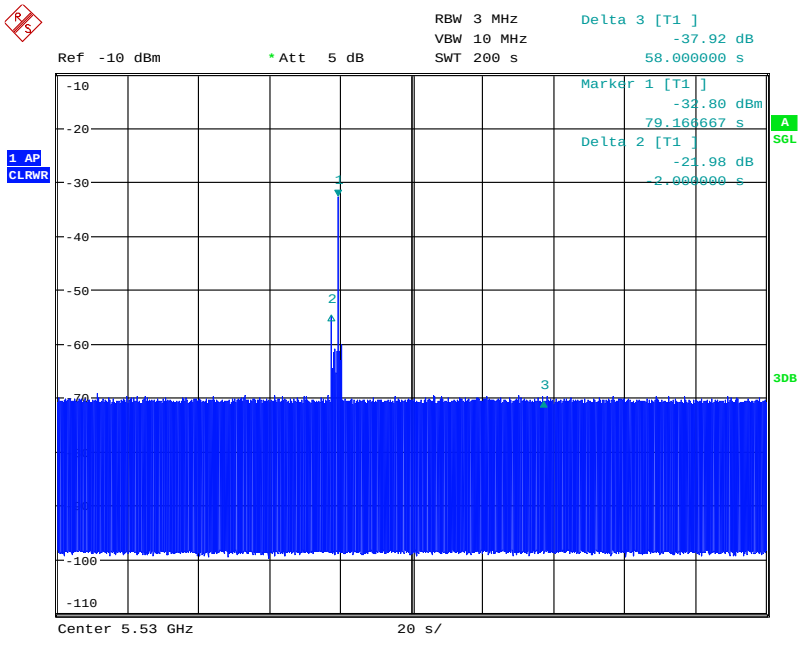
HT80 Frequency Band: 5470MHz ~ 5725MHz



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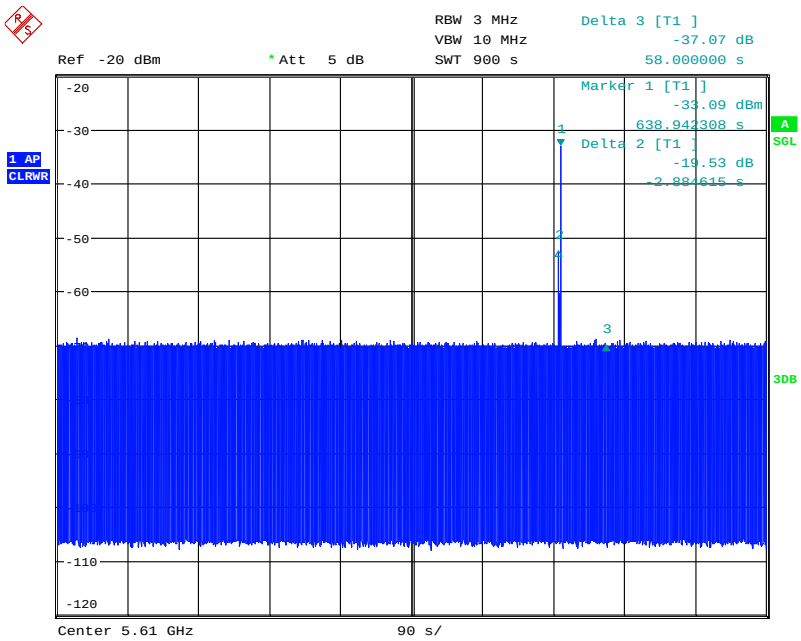
HT80 Frequency Band: 5600MHz ~ 5650MHz



Statistics results：

HT80 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	58	1	Pass
2	58	2	Pass
3	58	3	Pass
4	58	4	Pass
5	58	5	Fail
6	58	6	Pass
7	58	1	Pass
8	58	2	Pass
9	58	3	Fail
10	58	4	Pass
11	58	5	Pass
12	58	6	Pass
13	58	1	Pass
14	58	2	Fail
15	58	3	Pass
16	58	4	Pass
17	58	5	Pass
18	58	6	Pass
19	58	1	Pass
20	58	2	Pass

Detection Probability: 85%

HT80 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	106	1	Pass
2	106	2	Pass
3	106	3	Pass
4	106	4	Fail
5	106	5	Fail
6	106	6	Pass
7	106	1	Pass
8	106	2	Pass
9	106	3	Pass
10	106	4	Fail
11	106	5	Pass
12	106	6	Pass
13	106	1	Pass
14	106	2	Pass
15	106	3	Pass
16	106	4	Pass
17	106	5	Pass
18	106	6	Pass
19	106	1	Pass
20	106	2	Pass
Detection Probability: 85%			

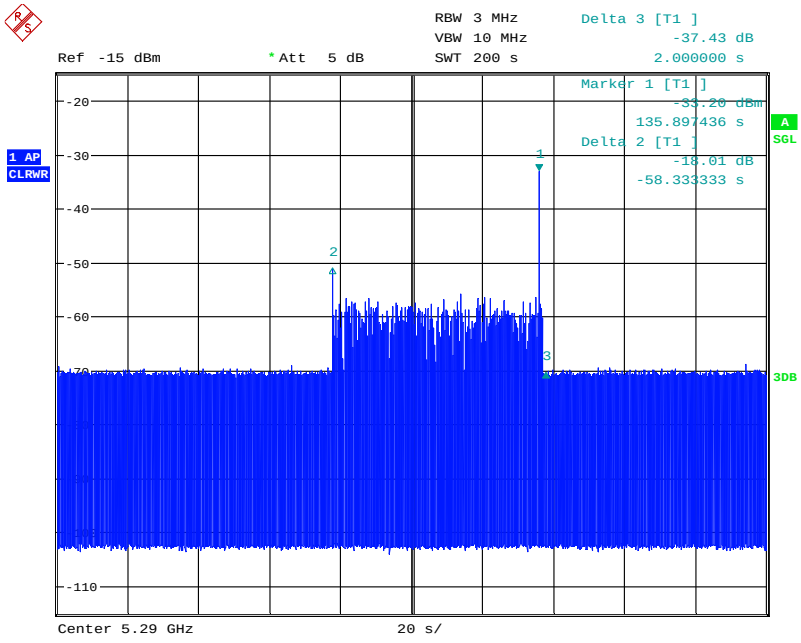
HT80 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	122	1	Pass
2	122	2	Pass
3	122	5	Pass
4	122	6	Pass
5	122	2	Pass
6	122	6	Pass
7	122	1	Pass
8	122	2	Pass
9	122	5	Pass
10	122	6	Pass
11	122	1	Pass
12	122	2	Pass
13	122	1	Pass
14	122	2	Pass
15	122	5	Pass

16	122	6	Pass
17	122	5	Pass
18	122	6	Pass
19	122	1	Pass
20	122	2	Pass
Detection Probability: 100%			

B. Tests with radar burst at the end of the Channel Availability Check Time

HT80 Frequency Band: 5250MHz ~ 5350MHz



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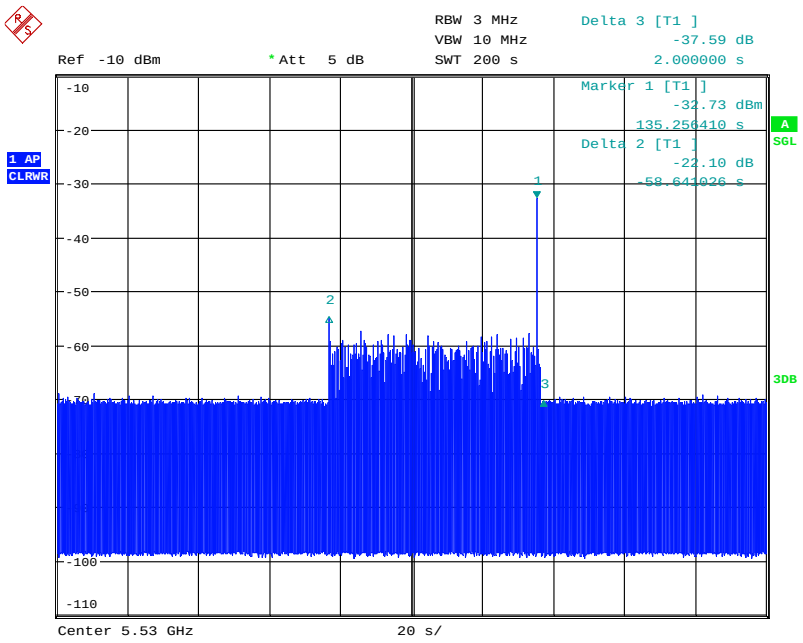
HT80 Frequency Band: 5470MHz ~ 5725MHz



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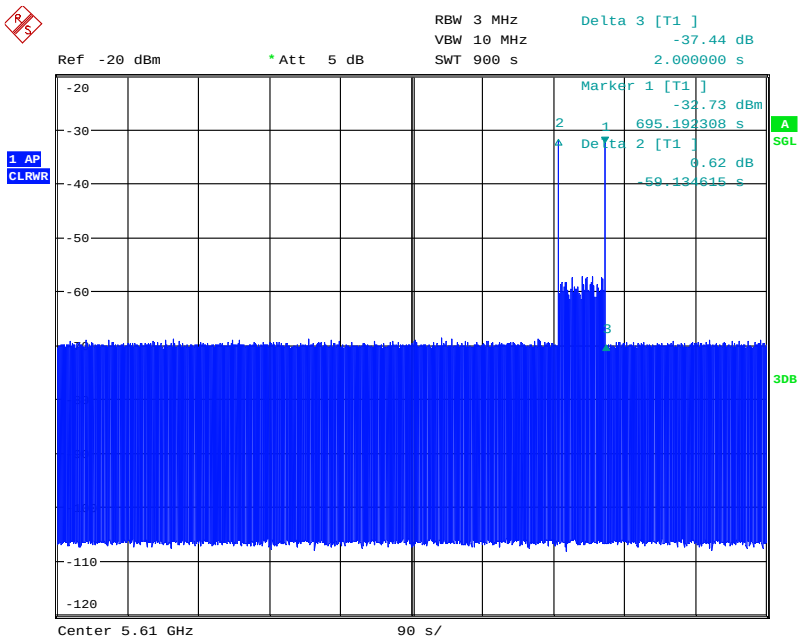
HT80 Frequency Band: 5600MHz ~ 5650MHz



Date: 26.AUG.2020 07:28:54

Statistics results：

HT80 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	58	1	Pass
2	58	2	Pass
3	58	3	Pass
4	58	4	Pass
5	58	5	Pass
6	58	6	Fail
7	58	1	Pass
8	58	2	Pass
9	58	3	Fail
10	58	4	Pass
11	58	5	Pass
12	58	6	Pass
13	58	1	Pass
14	58	2	Pass
15	58	3	Fail
16	58	4	Pass
17	58	5	Pass
18	58	6	Pass
19	58	1	Fail
20	58	2	Pass
Detection Probability: 80%			

HT80 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	106	1	Pass
2	106	2	Pass
3	106	3	Pass
4	106	4	Pass
5	106	5	Fail
6	106	6	Fail
7	106	1	Pass
8	106	2	Pass
9	106	3	Pass
10	106	4	Fail
11	106	5	Pass
12	106	6	Fail
13	106	1	Pass
14	106	2	Pass
15	106	3	Pass
16	106	4	Pass

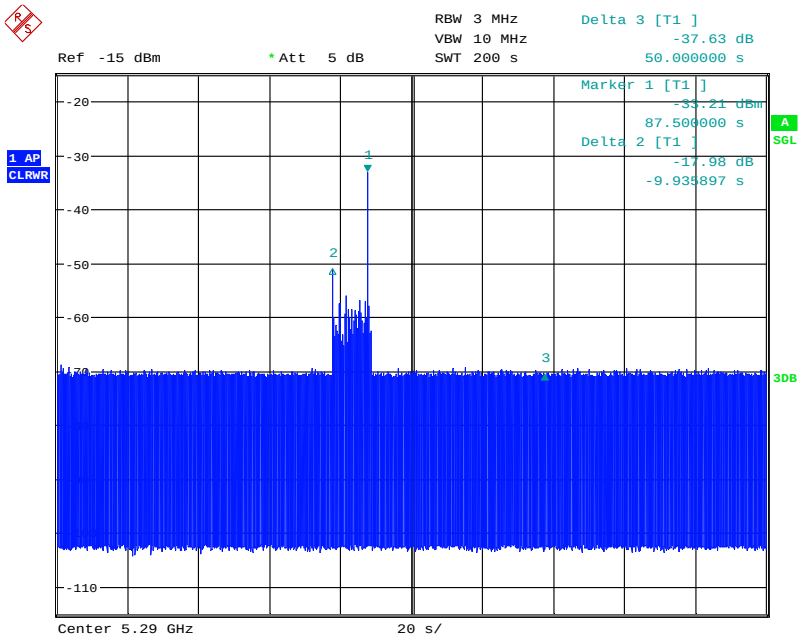
17	106	5	Pass
18	106	6	Pass
19	106	1	Pass
20	106	2	Pass
Detection Probability: 80%			

HT80 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	122	1	Pass
2	122	2	Pass
3	122	5	Pass
4	122	6	Pass
5	122	2	Pass
6	122	6	Pass
7	122	1	Pass
8	122	2	Pass
9	122	5	Pass
10	122	6	Pass
11	122	1	Pass
12	122	2	Pass
13	122	1	Pass
14	122	2	Pass
15	122	5	Pass
16	122	6	Pass
17	122	5	Pass
18	122	6	Pass
19	122	1	Pass
20	122	2	Pass
Detection Probability: 100%			

C. Radar Detection Threshold (during the Channel Availability Check)

HT80 Frequency Band: 5250MHz ~ 5350MHz



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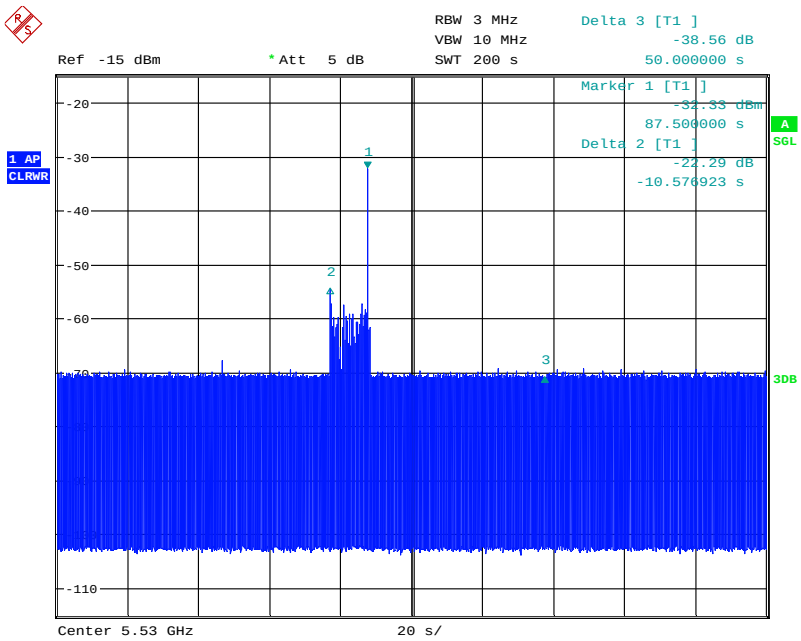
HT80 Frequency Band: 5470MHz ~ 5725MHz



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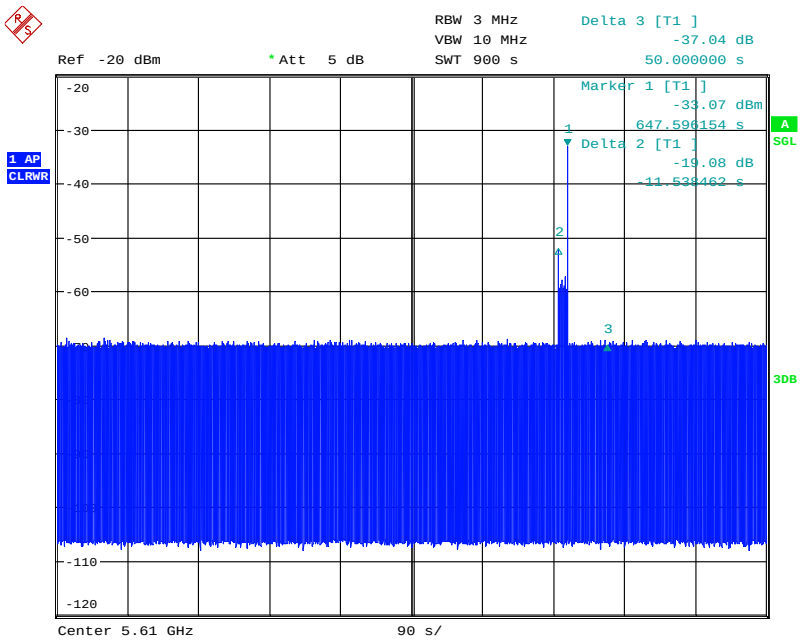
HT80 Frequency Band: 5600MHz ~ 5650MHz



Statistics results：

HT80 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	58	1	Pass
2	58	2	Pass
3	58	3	Fail
4	58	4	Pass
5	58	5	Fail
6	58	6	Fail
7	58	1	Pass
8	58	2	Pass
9	58	3	Pass
10	58	4	Fail
11	58	5	Pass
12	58	6	Pass
13	58	1	Pass
14	58	2	Pass
15	58	3	Fail
16	58	4	Pass
17	58	5	Pass
18	58	6	Pass
19	58	1	Pass
20	58	2	Pass

Detection Probability: 75%

HT80 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	106	1	Pass
2	106	2	Pass
3	106	3	Fail
4	106	4	Pass
5	106	5	Pass
6	106	6	Pass
7	106	1	Fail
8	106	2	Pass
9	106	3	Pass
10	106	4	Fail
11	106	5	Pass
12	106	6	Pass
13	106	1	Pass
14	106	2	Pass
15	106	3	Fail
16	106	4	Pass
17	106	5	Pass
18	106	6	Pass
19	106	1	Pass
20	106	2	Pass
Detection Probability: 80%			

HT80 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	122	1	Pass
2	122	2	Pass
3	122	5	Pass
4	122	6	Pass
5	122	2	Pass
6	122	6	Pass
7	122	1	Pass
8	122	2	Pass
9	122	5	Pass
10	122	6	Pass
11	122	1	Pass
12	122	2	Pass
13	122	1	Pass
14	122	2	Pass
15	122	5	Pass

16	122	6	Pass
17	122	5	Pass
18	122	6	Pass
19	122	1	Pass
20	122	2	Pass
Detection Probability: 100%			

A.3. In-Service Monitoring

Method of Measurement: See KDB 905462 7.8.3

The steps below define the procedure to determine the above mentioned parameters when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB is generated on the *Operating Channel* of the U-NII device *(In- Service Monitoring).*

a) One frequency will be chosen from the *Operating Channels* of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.

b) In case the UUT is a U-NII device operating as a *Client Device* (with or without DFS), a U-NII device operating as a *Master Device* will be used to allow the UUT (Client device) to *Associate* with the *Master Device*. In case the UUT is a *Master Device*, a U-NII device operating as a *Client Device* will be used and it is assumed that the Client will *Associate* with the UUT (Master). In both cases for conducted tests, the *Radar Waveform* generator will be connected to the *Master Device*. For radiated tests, the emissions of the *Radar Waveform* generator will be directed towards the *Master Device*. If the *Master Device* has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.

c) Stream the channel loading test file from the *Master Device* to the *Client Device* on the test *Channel* for the entire period of the test.

d) At time T0 the *Radar Waveform* generator sends a *Burst* of pulses for one of the Radar Type 0 at levels defined, on the *Operating Channel*. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

e) Observe the transmissions of the UUT at the end of the radar *Burst* on the *Operating Channel* for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (*Channel Move Time)*. Measure and record the *Channel Move Time* and *Channel Closing Transmission Time* if radar detection occurs.

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

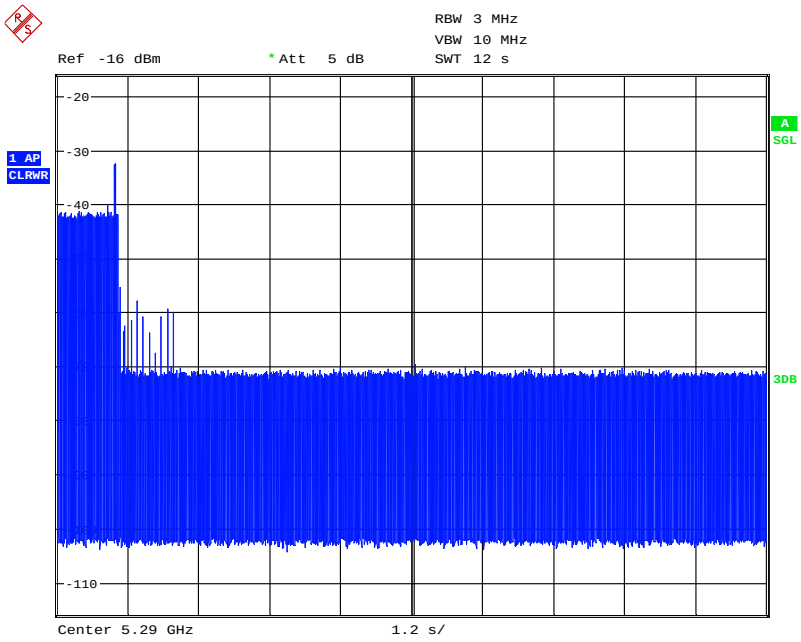
g) In case the UUT is a U-NII device operating as a *Client Device* with *In-Service Monitoring*, perform steps a) to f).

Measurement Limit:

Item	Limit
In-Service Monitoring	The radar test signal shall be detected at least 12 times out of the 20 trials

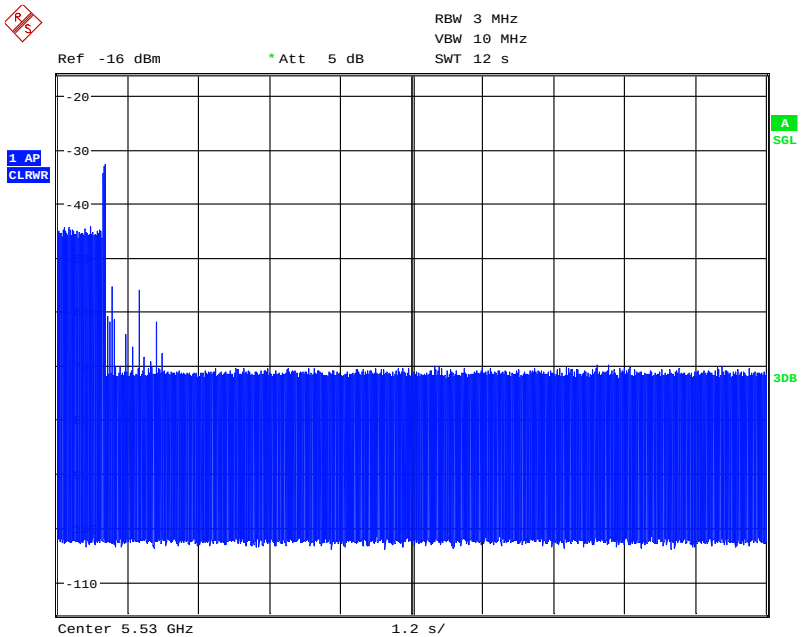
Measurement Results:

HT80 Frequency Band: 5250MHz ~ 5350MHz



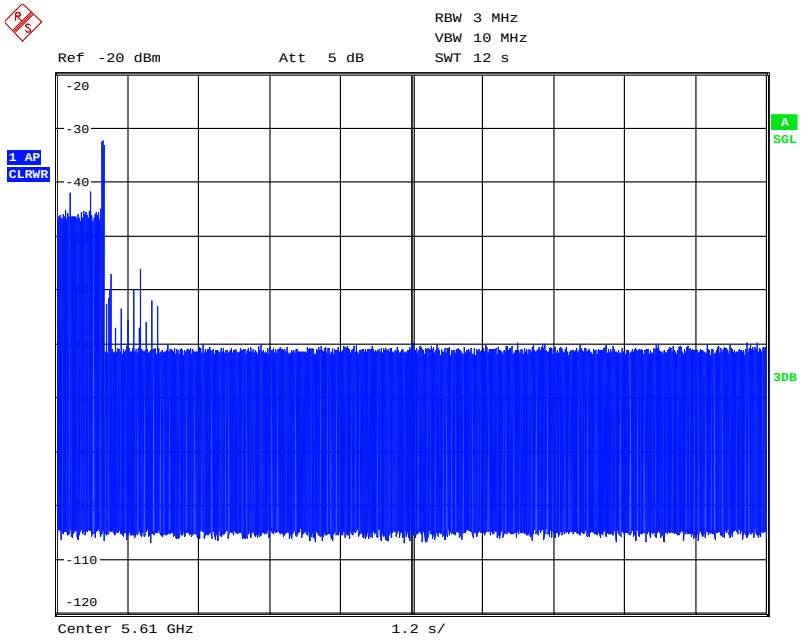
Date: 22.AUG.2020 01:25:14

HT80 Frequency Band: 5470MHz ~ 5725MHz



Date: 22.AUG.2020 03:45:13

HT80 Frequency Band: 5600MHz ~ 5650MHz



Statistics results：

HT80 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	58	1	Pass
2	58	1	Pass
3	58	1	Pass
4	58	1	Pass
5	58	1	Pass
6	58	1	Fail
7	58	1	Fail
8	58	1	Fail
9	58	1	Pass
10	58	1	Pass
11	58	1	Fail
12	58	1	Pass
13	58	1	Pass
14	58	1	Pass
15	58	1	Pass
16	58	1	Fail
17	58	1	Fail
18	58	1	Pass
19	58	1	Pass

20	58	1	Pass
Detection Probability: 70%			
times	Channel number	Type radar	Conclusion
1	58	2	Pass
2	58	2	Pass
3	58	2	Fail
4	58	2	Pass
5	58	2	Fail
6	58	2	Pass
7	58	2	Fail
8	58	2	Fail
9	58	2	Pass
10	58	2	Pass
11	58	2	Pass
12	58	2	Pass
13	58	2	Pass
14	58	2	Pass
15	58	2	Pass
16	58	2	Pass
17	58	2	Fail
18	58	2	Pass
19	58	2	Pass
20	58	2	Pass
Detection Probability: 75%			

HT80 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	106	3	Pass
2	106	3	Pass
3	106	3	Pass
4	106	3	Pass
5	106	3	Pass
6	106	3	Fail
7	106	3	Fail
8	106	3	Pass
9	106	3	Pass
10	106	3	Pass
11	106	3	Pass
12	106	3	Fail
13	106	3	Pass
14	106	3	Pass
15	106	3	Pass

16	106	3	Pass
17	106	3	Pass
18	106	3	Fail
19	106	3	Pass
20	106	3	Pass
Detection Probability: 80%			

times	Channel number	Type radar	Conclusion
1	106	4	Pass
2	106	4	Pass
3	106	4	Pass
4	106	4	Pass
5	106	4	Pass
6	106	4	Pass
7	106	4	Fail
8	106	4	Fail
9	106	4	Fail
10	106	4	Pass
11	106	4	Pass
12	106	4	Pass
13	106	4	Pass
14	106	4	Pass
15	106	4	Pass
16	106	4	Fail
17	106	4	Fail
18	106	4	Pass
19	106	4	Pass
20	106	4	Pass
Detection Probability: 75%			

HT80 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	122	5	Pass
2	122	5	Pass
3	122	5	Pass
4	122	5	Pass
5	122	5	Pass
6	122	5	Pass
7	122	5	Pass
8	122	5	Pass
9	122	5	Pass
10	122	5	Pass

11	122	5	Pass
12	122	5	Fail
13	122	5	Pass
14	122	5	Pass
15	122	5	Pass
16	122	5	Pass
17	122	5	Fail
18	122	5	Fail
19	122	5	Pass
20	122	5	Pass
Detection Probability: 85%			

times	Channel number	Type radar	Conclusion
1	122	6	Pass
2	122	6	Pass
3	122	6	Pass
4	122	6	Pass
5	122	6	Fail
6	122	6	Fail
7	122	6	Pass
8	122	6	Pass
9	122	6	Pass
10	122	6	Pass
11	122	6	Pass
12	122	6	Pass
13	122	6	Fail
14	122	6	Pass
15	122	6	Pass
16	122	6	Pass
17	122	6	Pass
18	122	6	Pass
19	122	6	Pass
20	122	6	Pass
Detection Probability: 85%			

A.4. Channel move time and channel closing transmission time

Method of Measurement: See KDB 905462 7.8.3

The steps below define the procedure to determine the above mentioned parameters when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB is generated on the *Operating Channel* of the U-NII device *(In- Service Monitoring).*

a) One frequency will be chosen from the *Operating Channels* of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.

b) In case the UUT is a U-NII device operating as a *Client Device* (with or without DFS), a U-NII device operating as a *Master Device* will be used to allow the UUT (Client device) to *Associate* with the *Master Device*. In case the UUT is a *Master Device*, a U-NII device operating as a *Client Device* will be used and it is assumed that the Client will *Associate* with the UUT (Master). In both cases for conducted tests, the *Radar Waveform* generator will be connected to the *Master Device*. For radiated tests, the emissions of the *Radar Waveform* generator will be directed towards the *Master Device*. If the *Master Device* has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.

c) Stream the channel loading test file from the *Master Device* to the *Client Device* on the test *Channel* for the entire period of the test.

d) At time T0 the *Radar Waveform* generator sends a *Burst* of pulses for one of the Radar Type 0 at levels defined, on the *Operating Channel*. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

e) Observe the transmissions of the UUT at the end of the radar *Burst* on the *Operating Channel* for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (*Channel Move Time)*. Measure and record the *Channel Move Time* and *Channel Closing Transmission Time* if radar detection occurs.

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

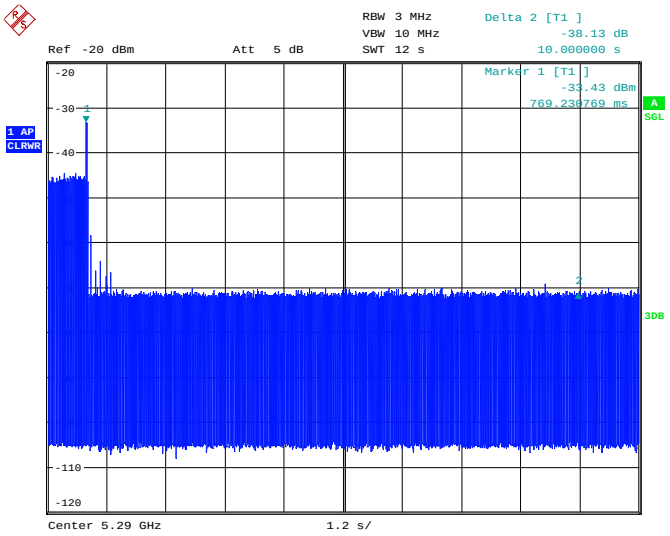
g) In case the UUT is a U-NII device operating as a *Client Device* with *In-Service Monitoring*, perform steps a) to f).

Measurement Limit:

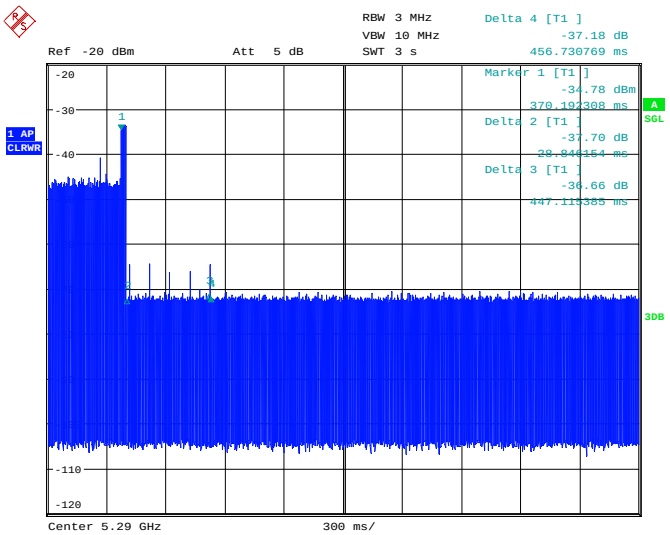
Test Items	Limit
Channel move time	10 s
Channel Closing Transmission Time	200 ms + 60 ms

Measurement Results:

HT80 Frequency Band: 5250MHz ~ 5350MHz



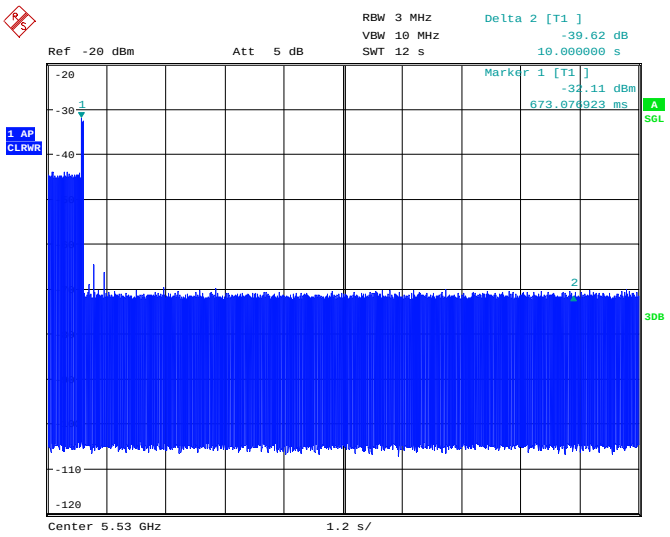
The channel move time is as the figure. It shows the time of the radar and the client pulses. The figure shows that the client stops transmission within 10 seconds, and no transmissions occur after 10 seconds later of the radar burst signal.



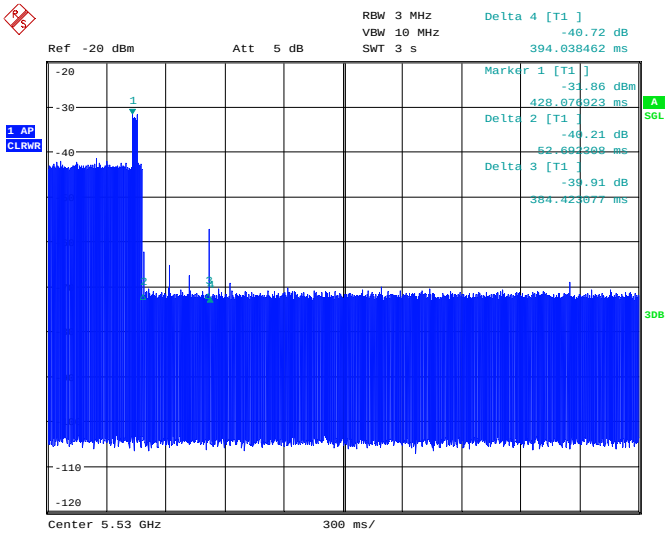
The closing transmission time is as the figure, and the result 76.92ms=Delta2+(Delta4-Delta3)*5.

Conclusion: PASS

HT80 Frequency Band: 5470MHz ~ 5725MHz



The channel move time is as the figure. It shows the time of the radar and the client pulses. The figure shows that the client stops transmission within 10 seconds, and no transmissions occur after 10 seconds later of the radar burst signal.



The closing transmission time is as the figure, and the result 91.15ms=Delta2+(Delta4-Delta3)*4

Conclusion: PASS

A.5. Non-Occupancy Period

Method of Measurement: See KDB 905462 7.8.3

The steps below define the procedure to determine the above mentioned parameters when a radar *Burst* with a level equal to the *DFS Detection Threshold* + 1dB is generated on the *Operating Channel* of the U-NII device *(In- Service Monitoring).*

a) One frequency will be chosen from the *Operating Channels* of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands. For 802.11 devices, the test frequency must contain control signals. This can be verified by disabling channel loading and monitoring the spectrum analyzer. If no control signals are detected, another frequency must be selected within the emission bandwidth where control signals are detected.

b) In case the UUT is a U-NII device operating as a *Client Device* (with or without DFS), a U-NII device operating as a *Master Device* will be used to allow the UUT (Client device) to *Associate* with the *Master Device*. In case the UUT is a *Master Device*, a U-NII device operating as a *Client Device* will be used and it is assumed that the Client will *Associate* with the UUT (Master). In both cases for conducted tests, the *Radar Waveform* generator will be connected to the *Master Device*. For radiated tests, the emissions of the *Radar Waveform* generator will be directed towards the *Master Device*. If the *Master Device* has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.

c) Stream the channel loading test file from the *Master Device* to the *Client Device* on the test *Channel* for the entire period of the test.

d) At time T0 the *Radar Waveform* generator sends a *Burst* of pulses for one of the Radar Type 0 at levels defined, on the *Operating Channel*. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.

e) Observe the transmissions of the UUT at the end of the radar *Burst* on the *Operating Channel* for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (*Channel Move Time)*. Measure and record the *Channel Move Time* and *Channel Closing Transmission Time* if radar detection occurs.

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

g) In case the UUT is a U-NII device operating as a *Client Device* with *In-Service Monitoring*, perform steps a) to f).

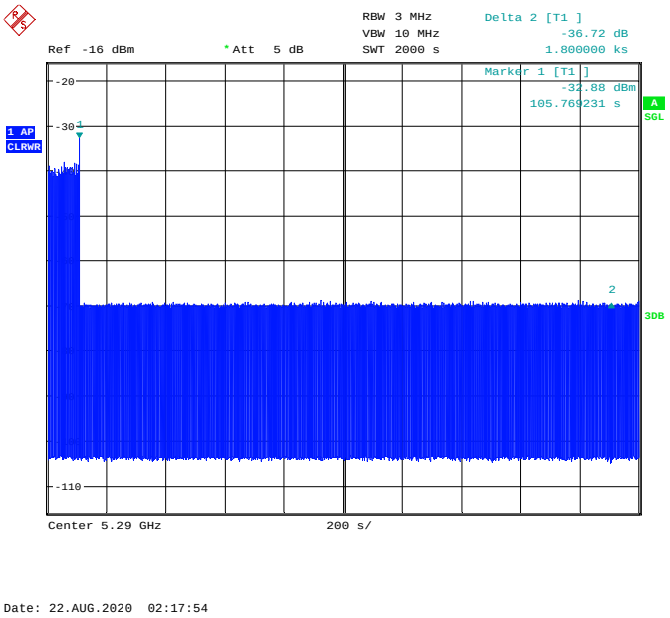
Measurement Limit:

Test Items	Limit
Non-Occupancy Period	> 1800 s

Measurement Results:

HT80 Frequency Band: 5250MHz ~ 5350MHz

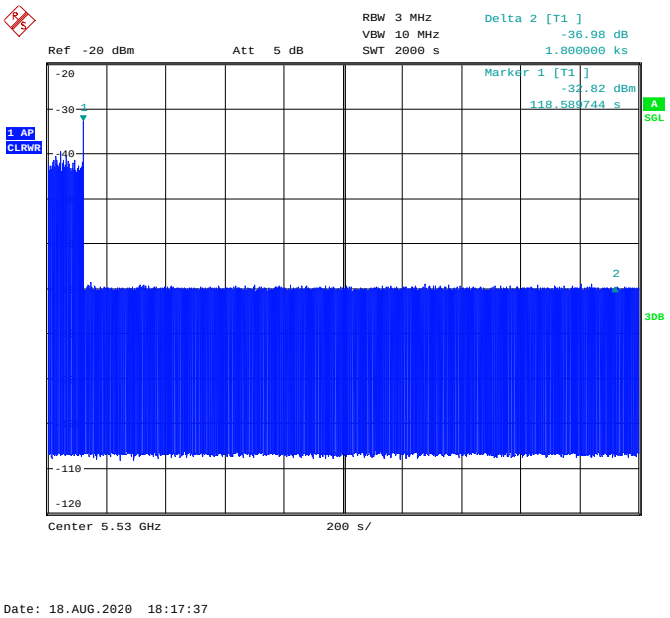
Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.



The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of “stop transmits” from the DFS master (access point).

HT80 Frequency Band: 5470MHz ~ 5725MHz

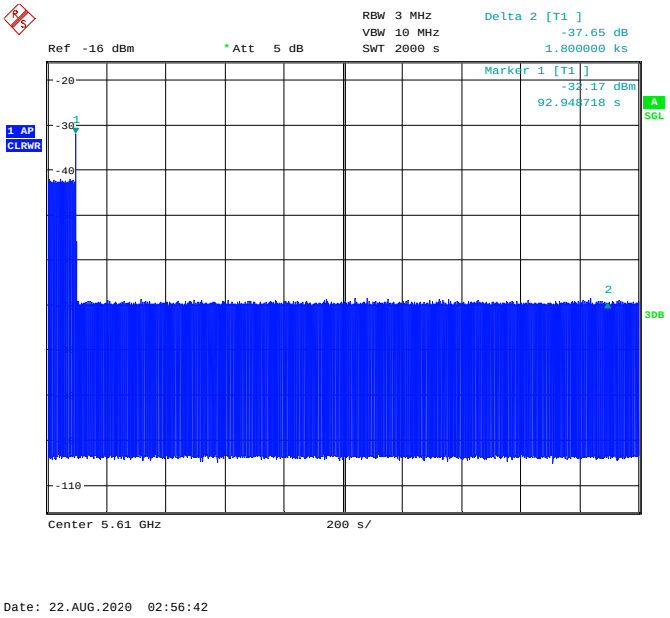
Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.



The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of “stop transmits” from the DFS master (access point).

HT80 Frequency Band: 5600MHz ~ 5650MHz

Associate the master and client, transmit specified stream between the master and client; monitor the analyzer on the operating frequency to make sure no beacons have been transmitted for 1800 seconds.



The figure above shows that the client does not transmit any emission within 1800 seconds after getting the order of “stop transmits” from the DFS master (access point).

Conclusion: PASS

A.6. DFS detection bandwidth

Method of Measurement: See KDB 905462 7.8.1

Set up the generating equipmen, or equivalent. Set up the DFS timing monitoring equipment. Set up the overall system for either radiated or conducted coupling to the UUT.

Adjust the equipment to produce a single *Burst* of any one of the Short Pulse Radar Types 0 – 4 at the center frequency of the UUT *Operating Channel* at the specified *DFS Detection Threshold* level found.

Set the UUT up as a standalone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.

Generate a single radar *Burst*, and note the response of the UUT. Repeat for a minimum of 10 trials. The UUT must detect the *Radar Waveform* within the DFS band using the specified *U-NII Detection Bandwidth* criterion. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.

Starting at the center frequency of the UUT operating *Channel*, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the *U-NII Detection Bandwidth* criterion specified. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the *U-NII Detection Bandwidth* criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.

Starting at the center frequency of the UUT operating *Channel*, decrease the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the *U-NII Detection Bandwidth* criterion specified. Repeat this measurement in 1MHz steps at frequencies 5 MHz above where the detection rate begins to fall. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the *U-NII Detection Bandwidth* criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.

The *U-NII Detection Bandwidth* is calculated as follows:

U-NII Detection Bandwidth = FH – FL

The *U-NII Detection Bandwidth* must meet the *U-NII Detection Bandwidth* criterion specified. Otherwise, the UUT does not comply with DFS requirements. This is essential to ensure that the UUT is capable of detecting *Radar Waveforms* across the same frequency spectrum that contains the significant energy from the system. In the case that the *U-NII Detection Bandwidth* is greater than or equal to the 99 percent power bandwidth for the measured FH and FL, the test can be truncated and the *U-NII Detection Bandwidth* can be reported as the measured FH and FL.

Measurement Limit:

Test Items	Limit
DFS detection bandwidth	Minimum 100% of the **U**-NII 99% transmission power bandwidth.

Measurement Results:

Test channel：5530MHz											
Radar Frequency (MHz)	**DFS Detection trials (1 Detection; 0 No Detection)**										**Detection Rate (%)**
5490	0	0	0	0	0	0	0	0	0	0	0%
5491	0	0	0	1	0	0	0	0	0	0	10%
5492	0	1	0	0	0	1	0	0	1	0	30%
5493	1	1	0	1	1	0	1	0	1	1	70%
5494-FL	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%

5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5531	1	1	1	1	1	1	1	1	1	1	100%
5532	1	1	1	1	1	1	1	1	1	1	100%
5533	1	1	1	1	1	1	1	1	1	1	100%
5534	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5536	1	1	1	1	1	1	1	1	1	1	100%
5537	1	1	1	1	1	1	1	1	1	1	100%
5538	1	1	1	1	1	1	1	1	1	1	100%
5539	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5541	1	1	1	1	1	1	1	1	1	1	100%

5542	1	1	1	1	1	1	1	1	1	1	100%
5543	1	1	1	1	1	1	1	1	1	1	100%
5544	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5546	1	1	1	1	1	1	1	1	1	1	100%
5547	1	1	1	1	1	1	1	1	1	1	100%
5548	1	1	1	1	1	1	1	1	1	1	100%
5549	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5551	1	1	1	1	1	1	1	1	1	1	100%
5552	1	1	1	1	1	1	1	1	1	1	100%
5553	1	1	1	1	1	1	1	1	1	1	100%
5554	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5556	1	1	1	1	1	1	1	1	1	1	100%
5557	1	1	1	1	1	1	1	1	1	1	100%
5558	1	1	1	1	1	1	1	1	1	1	100%
5559	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5561	1	1	1	1	1	1	1	1	1	1	100%
5562	1	1	1	1	1	1	1	1	1	1	100%
5563	1	1	1	1	1	1	1	1	1	1	100%
5564	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566-FH	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	0	1	0	1	0	70%
5568	1	1	0	0	0	0	1	0	0	0	30%
5569	0	1	0	0	0	0	0	0	0	0	10%

5570	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth=Fh-Fl=5494-5566=72MHz											
the limit=EUT 99% bandwithx80% =64MHz											
The test result: Pass											

A.7. Statistical Performance Check

Measurement Limit:

Each of the declared Channel Plans shall make use of at least 60 % of the spectrum available in the applicable sub-band(s).

Measurement Results:

HT20 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	56	1	Pass
2	56	2	Pass
3	56	3	Pass
4	56	4	Pass
5	56	5	Fail
6	56	6	Pass
7	56	1	Pass
8	56	2	Fail
9	56	3	Fail
10	56	4	Pass
11	56	5	Pass
12	56	6	Pass
13	56	1	Fail
14	56	2	Pass
15	56	3	Fail
16	56	4	Pass
17	56	5	Pass
18	56	6	Fail
19	56	1	Pass
20	56	2	Pass
21	56	3	Pass
22	56	4	Pass
23	56	5	Pass
24	56	6	Fail
25	56	1	Fail
26	56	2	Pass
27	56	3	Pass

28	56	4	Pass
29	56	5	Pass
30	56	6	Pass
31	56	1	Pass
32	56	2	Pass
33	56	3	Pass
34	56	4	Fail
35	56	5	Pass
36	56	6	Pass
37	56	1	Pass
38	56	2	Fail
39	56	3	Pass
40	56	4	Pass
Detection Probability: 75.0%			

HT40 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	54	1	Fail
2	54	2	Pass
3	54	3	Pass
4	54	4	Pass
5	54	5	Fail
6	54	6	Pass
7	54	1	Pass
8	54	2	Fail
9	54	3	Pass
10	54	4	Pass
11	54	5	Pass
12	54	6	Pass
13	54	1	Pass
14	54	2	Fail
15	54	3	Pass
16	54	4	Pass
17	54	5	Pass
18	54	6	Fail
19	54	1	Pass
20	54	2	Fail
21	54	3	Pass
22	54	4	Pass
23	54	5	Fail
24	54	6	Pass
25	54	1	Pass

26	54	2	Pass
27	54	3	Fail
28	54	4	Pass
29	54	5	Pass
30	54	6	Fail
31	54	1	Pass
32	54	2	Fail
33	54	3	Pass
34	54	4	Pass
35	54	5	Fail
36	54	6	Fail
37	54	1	Pass
38	54	2	Fail
39	54	3	Pass
40	54	4	Pass
Detection Probability: 67.5%			

HT80 Frequency Band: 5250MHz ~ 5350MHz

times	Channel number	Type radar	Conclusion
1	58	1	Pass
2	58	2	Pass
3	58	3	Pass
4	58	4	Fail
5	58	5	Fail
6	58	6	Fail
7	58	1	Pass
8	58	2	Pass
9	58	3	Pass
10	58	4	Pass
11	58	5	Fail
12	58	6	Pass
13	58	1	Pass
14	58	2	Pass
15	58	3	Fail
16	58	4	Fail
17	58	5	Pass
18	58	6	Pass
19	58	1	Pass
20	58	2	Fail
21	58	3	Pass
22	58	4	Pass
23	58	5	Pass
24	58	6	Fail

25	58	1	Pass
26	58	2	Pass
27	58	3	Pass
28	58	4	Pass
29	58	5	Pass
30	58	6	Pass
31	58	1	Fail
32	58	2	Pass
33	58	3	Pass
34	58	4	Fail
35	58	5	Pass
36	58	6	Pass
37	58	1	Pass
38	58	2	Fail
39	58	3	Pass
40	58	4	Pass
Detection Probability: 72.5%			

HT20 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	100	1	Pass
2	100	2	Pass
3	100	3	Fail
4	100	4	Fail
5	100	5	Fail
6	100	6	Pass
7	100	1	Pass
8	100	2	Pass
9	100	3	Pass
10	100	4	Pass
11	100	5	Pass
12	100	6	Pass
13	100	1	Fail
14	100	2	Pass
15	100	3	Pass
16	100	4	Pass
17	100	5	Fail
18	100	6	Fail
19	100	1	Fail
20	100	2	Pass
21	100	3	Pass
22	100	4	Fail
23	100	5	Pass

24	100	6	Fail
25	100	1	Pass
26	100	2	Pass
27	100	3	Fail
28	100	4	Fail
29	100	5	Pass
30	100	6	Pass
31	100	1	Fail
32	100	2	Fail
33	100	3	Pass
34	100	4	Pass
35	100	5	Pass
36	100	6	Pass
37	100	1	Fail
38	100	2	Fail
39	100	3	Pass
40	100	4	Fail
Detection Probability: 60.0%			

HT40 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	102	1	Pass
2	102	2	Pass
3	102	3	Fail
4	102	4	Pass
5	102	5	Pass
6	102	6	Pass
7	102	1	Pass
8	102	2	Pass
9	102	3	Fail
10	102	4	Fail
11	102	5	Fail
12	102	6	Pass
13	102	1	Pass
14	102	2	Pass
15	102	3	Fail
16	102	4	Pass
17	102	5	Pass
18	102	6	Fail
19	102	1	Fail
20	102	2	Fail
21	102	3	Pass
22	102	4	Pass

23	102	5	Pass
24	102	6	Fail
25	102	1	Fail
26	102	2	Fail
27	102	3	Fail
28	102	4	Fail
29	102	5	Pass
30	102	6	Pass
31	102	1	Pass
32	102	2	Pass
33	102	3	Pass
34	102	4	Pass
35	102	5	Fail
36	102	6	Fail
37	102	1	Pass
38	102	2	Pass
39	102	3	Pass
40	102	4	Pass
Detection Probability: 62.5%			

HT80 Frequency Band: 5470MHz ~ 5725MHz

times	Channel number	Type radar	Conclusion
1	106	1	Pass
2	106	2	Pass
3	106	3	Fail
4	106	4	Pass
5	106	5	Pass
6	106	6	Pass
7	106	1	Fail
8	106	2	Fail
9	106	3	Pass
10	106	4	Pass
11	106	5	Pass
12	106	6	Fail
13	106	1	Fail
14	106	2	Pass
15	106	3	Pass
16	106	4	Pass
17	106	5	Pass
18	106	6	Fail
19	106	1	Pass
20	106	2	Pass
21	106	3	Pass

22	106	4	Fail
23	106	5	Pass
24	106	6	Pass
25	106	1	Fail
26	106	2	Pass
27	106	3	Pass
28	106	4	Fail
29	106	5	Pass
30	106	6	Pass
31	106	1	Fail
32	106	2	Fail
33	106	3	Fail
34	106	4	Pass
35	106	5	Fail
36	106	6	Pass
37	106	1	Fail
38	106	2	Fail
39	106	3	Pass
40	106	4	Pass
Detection Probability: 62.5%			

HT20 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	120	1	Pass
2	120	2	Pass
3	120	5	Pass
4	120	6	Pass
5	120	1	Pass
6	120	2	Pass
7	120	5	Pass
8	120	6	Pass
9	120	1	Pass
10	120	2	Pass
11	120	5	Pass
12	120	6	Pass
13	120	1	Pass
14	120	2	Pass
15	120	5	Pass
16	120	6	Pass
17	120	1	Pass
18	120	2	Pass
19	120	5	Pass
20	120	6	Pass

21	120	1	Pass
22	120	2	Pass
23	120	5	Pass
24	120	6	Pass
25	120	1	Pass
26	120	2	Pass
27	120	5	Pass
28	120	6	Pass
29	120	1	Pass
30	120	2	Pass
31	120	5	Pass
32	120	6	Pass
33	120	1	Pass
34	120	2	Pass
35	120	5	Pass
36	120	6	Pass
37	120	1	Pass
38	120	2	Pass
39	120	5	Pass
40	120	6	Pass
Detection Probability:100%			

HT40 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	126	1	Pass
2	126	2	Pass
3	126	5	Pass
4	126	6	Pass
5	126	1	Pass
6	126	2	Pass
7	126	5	Pass
8	126	6	Pass
9	126	1	Pass
10	126	2	Pass
11	126	5	Pass
12	126	6	Pass
13	126	1	Pass
14	126	2	Pass
15	126	5	Pass
16	126	6	Pass
17	126	1	Pass
18	126	2	Pass
19	126	5	Pass

20	126	6	Pass
21	126	1	Pass
22	126	2	Pass
23	126	5	Pass
24	126	6	Pass
25	126	1	Pass
26	126	2	Pass
27	126	5	Pass
28	126	6	Pass
29	126	1	Pass
30	126	2	Pass
31	126	5	Pass
32	126	6	Pass
33	126	1	Pass
34	126	2	Pass
35	126	5	Pass
36	126	6	Pass
37	126	1	Pass
38	126	2	Pass
39	126	5	Pass
40	126	6	Pass
Detection Probability:100%			

HT80 Frequency Band: 5600MHz ~ 5650MHz

times	Channel number	Type radar	Conclusion
1	122	1	Pass
2	122	2	Pass
3	122	5	Pass
4	122	6	Pass
5	122	1	Pass
6	122	2	Pass
7	122	5	Pass
8	122	6	Pass
9	122	1	Pass
10	122	2	Pass
11	122	5	Pass
12	122	6	Pass
13	122	1	Pass
14	122	2	Pass
15	122	5	Pass
16	122	6	Pass
17	122	1	Pass

18	122	2	Pass
19	122	5	Pass
20	122	6	Pass
21	122	1	Pass
22	122	2	Pass
23	122	5	Pass
24	122	6	Pass
25	122	1	Pass
26	122	2	Pass
27	122	5	Pass
28	122	6	Pass
29	122	1	Pass
30	122	2	Pass
31	122	5	Pass
32	122	6	Pass
33	122	1	Pass
34	122	2	Pass
35	122	5	Pass
36	122	6	Pass
37	122	1	Pass
38	122	2	Pass
39	122	5	Pass
40	122	6	Pass
Detection Probability:100%			

Conclusion: PASS

ANNEX B: CHARACTERISTICS OF EACH PULSE

RADAR TYPE 1			
Trial #	Number of Pulses per Burst	Pulse Width (μsec)	PRI (μs)
1	102	1	518
2	72	1	738
3	81	1	658
4	57	1	938
5	68	1	778
6	58	1	918
7	102	1	518
8	89	1	598
9	78	1	678
10	78	1	678
11	98	1	538
12	65	1	818
13	83	1	638
14	98	1	538
15	68	1	778
16	81	1	658
17	65	1	818
18	59	1	898
19	83	1	638
20	95	1	558
21	63	1	838
22	61	1	878
23	65	1	818
24	67	1	798
25	74	1	718
26	86	1	618
27	92	1	578
28	95	1	558
29	65	1	818
30	76	1	698

Type 1

Scenario: Type 2

Pulse	PW us	PRI us	Level dB
1	3.2	0	-30
2	3.2	0	-30
3	3.2	0	-30
4	3.2	0	-30
5	3.2	0	-30
6	3.2	0	-30
7	3.2	0	-30
8	3.2	0	-30
9	3.2	0	-30
10	3.2	0	-30
11	3.2	0	-30
12	3.2	0	-30
13	3.2	0	-30
14	3.2	0	-30
15	3.2	0	-30
16	3.2	0	-30
17	3.2	0	-30
18	3.2	0	-30
19	3.2	0	-30
20	3.2	0	-30

Type 2

RADAR TYPE 3			
Trial #	Number of Pulses per Burst	Pulse Width (μsec)	PRI (μs)
1	18	7	302
2	16	7.5	218
3	18	7.3	402
4	18	7	359
5	17	7.4	396
6	16	8.8	450
7	18	9.5	350
8	17	7.6	408
9	16	9.6	311
10	17	7.1	402
11	17	9	304
12	16	7.1	449
13	17	10	478
14	18	8.6	261
15	18	7.2	304
16	17	8.8	383
17	18	6.6	319
18	17	7	271
19	17	9.9	342
20	17	7.7	204
21	17	8.3	340
22	17	6.5	442
23	18	9.2	315
24	17	8.6	476
25	16	6.2	274
26	16	6	364
27	16	9.5	421
28	17	8.8	270
29	16	9.5	425
30	17	7.1	459

Type 3

RADAR TYPE 4			
Trial #	Number of Pulses per Burst	Pulse Width (μsec)	PRI (μs)
1	13	17.9	390
2	15	15.4	276
3	13	18.4	323
4	12	11.9	294
5	13	15.1	429
6	15	13	430
7	15	14.9	395
8	12	17.6	498
9	13	15.7	392
10	16	14.3	332
11	12	14.1	370
12	16	16.2	362
13	14	15.9	343
14	15	12.7	460
15	14	19.8	469
16	14	17.1	228
17	14	13.2	321
18	16	18.8	479
19	15	13.7	211
20	15	11.1	441
21	14	12.7	224
22	14	16	461
23	15	20	495
24	15	18.1	436
25	16	12.4	368
26	15	11.6	428
27	14	17.1	486
28	12	12.3	336
29	15	19.4	221
30	13	12.9	239

Type 4

TYPE 5 PARAMETER SHEET						Rohde & Schwarz Pulse Sequencer
Trial Number : 30						
Bursts in Trial: 19						
Burst	Number of Pulses	Pulse Width (µsec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (µsec)	Pulse 2-to-3 PRI (µsec)	Start Location Within Interval (msec)
1	2	50	7	1342		176.248
2	2	63.2	7	1197		471.611
3	3	94.3	7	1016	1857	2.062
4	3	50.4	7	1299	1026	224.243
5	2	64.4	7	1100		199.744
6	2	98.8	7	1393		58.145
7	2	79.2	7	1116		184.116
8	1	91.6	7			171.017
9	3	72.3	7	1007	1683	579.118
10	3	59	7	1677	1194	15.309
11	3	50	7	1207	1875	145.811
12	3	77	7	1292	1337	595.192
13	2	62.4	7	1205		269.383
14	3	52.2	7	1505	1677	337.754
15	1	56.6	7			132.685
16	3	83.5	7	1485	1588	96.916
17	1	75	7			625.037
18	2	68.5	7	1692		368.358
19	2	85.8	7	1448		500.979

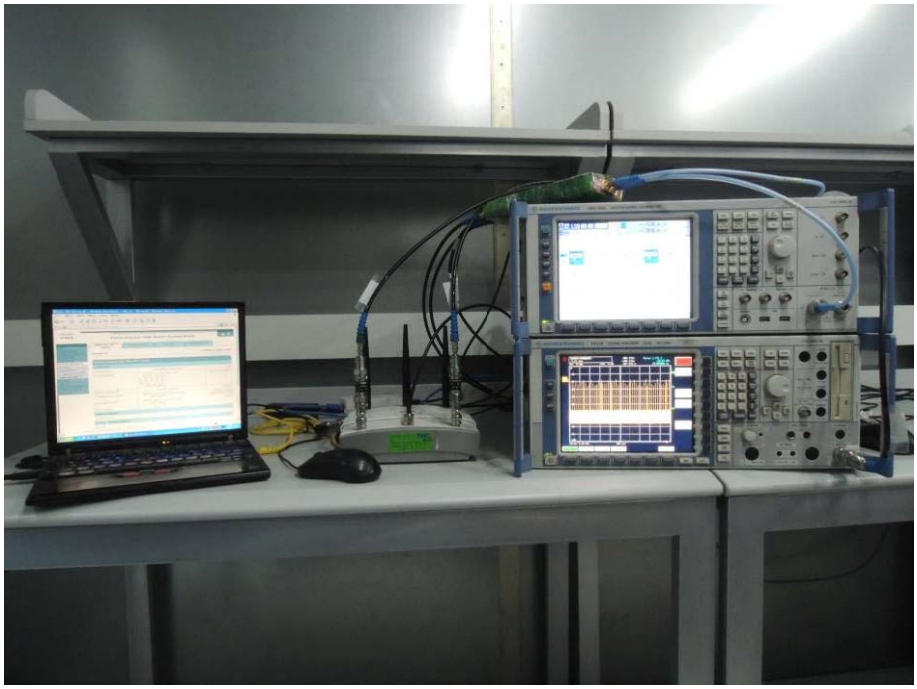
Type 5

TYPE 6 PARAMETER SHEET			
Trial Number : 30			
Bursts in Trial: 100			
Burst	Carrier (GHz)	Hop (GHz)	DUT BW (MHz)
1	5.5	5.394	20
2	5.5	5.649	20
3	5.5	5.288	20
4	5.5	5.524	20
5	5.5	5.513	20
6	5.5	5.409	20
7	5.5	5.468	20
8	5.5	5.666	20
9	5.5	5.251	20
10	5.5	5.303	20
11	5.5	5.691	20
12	5.5	5.282	20
13	5.5	5.361	20
14	5.5	5.315	20
15	5.5	5.509	20
16	5.5	5.673	20
17	5.5	5.667	20
18	5.5	5.386	20
19	5.5	5.692	20
20	5.5	5.642	20

Type 6

ANNEX C: PHOTOGRAPHS OF THE TEST SET-UP

Layout of Conducted Test



ANNEX D: Accreditation Certificate

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2019-09-26 through 2020-09-30
Effective Dates

For the National Voluntary Laboratory Accreditation Program

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