



# CE Radio Test Report

**APPLICANT** : Texas Instruments Incorporated  
**EQUIPMENT** : CC3200MODR1M2AMOB  
**BRAND NAME** : Texas Instruments  
**MODEL NAME** : CC3200MODR1M2AMOB  
**MARKETING NAME** : SimpleLink™ Wi-Fi® CC3200MOD  
Wireless Microcontroller Module  
**STANDARD** : ETSI EN 300 328 V2.1.1 (2016-11)  
**TEST DATE(S)** : May 05, 2017 ~ Jun. 07, 2017

The measurement shown in this test report is tested in accordance with the test procedures given in ETSI EN 300 328 V2.1.1 (2016-11).

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager

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Page Number : 1 of 46

Report Issued Date : Jun. 12, 2017

Report Version : Rev. 01

Report Template No.: BU5-ER328 2024 Version 2.1



# TABLE OF CONTENTS

**REVISION HISTORY.....3**

**SUMMARY OF TEST RESULT .....4**

**1 GENERAL DESCRIPTION .....5**

1.1 Applicant .....5

1.2 Manufacturer.....5

1.3 Product Feature of Equipment Under Test.....5

1.4 Modification of EUT .....5

1.5 Testing Facility.....6

1.6 Applied Standards .....6

1.7 Test Condition.....6

**2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST .....7**

2.1 Descriptions of Test Mode .....7

2.2 Connection Diagram of Test System.....8

2.3 Supported Unit used in test configuration and system .....8

2.4 EUT Operation Test Setup .....8

**3 TRANSMITTER PARAMETERS .....9**

3.1 Maximum Transmit Power .....9

3.2 Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Spectral Density .....10

3.3 Occupied Channel Bandwidth .....12

3.4 Transmitter unwanted emissions in the out-of-band domain .....14

3.5 Transmitter spurious emissions .....16

**4 RECEIVER PARAMETERS.....18**

4.1 Receiver spurious emissions .....18

4.2 Receiver Blocking Test.....20

**5 ADAPTIVITY TEST .....24**

5.1 Adaptivity .....24

**6 GEO-LOCATION CAPABILITY.....44**

6.1 Geo-location .....44

**7 LIST OF MEASURING EQUIPMENT .....45**

**8 UNCERTAINTY EVALUATION .....46**

**APPENDIX A. TEST RESULT OF CONDUCTED TEST ITEMS**

**APPENDIX B. CONDUCTED SPURIOUS EMISSION PLOTS**

**APPENDIX C. CABINET RADIATION PLOTS**

**APPENDIX D. PHOTOGRAPHS OF RADIATED EMISSION TEST CONFIGURATION**



## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
ER741322	Rev. 01	Initial issue of report	Jun. 12, 2017

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### SUMMARY OF TEST RESULT

CLAUSE (EN 300 328)	TEST PARAMETER	PASS/FAIL	REMARK
<b>Transmitter Parameters</b>			
4.3.1.2 4.3.2.2	Maximum Transmit Power	PASS	-
4.3.2.3	Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Spectral Density	PASS	Only applicable for modulations other than FHSS
4.3.1.8 4.3.2.7	Occupied Channel Bandwidth	PASS	-
4.3.1.4 4.3.1.5	Frequency Hopping Requirements	Not Required	Only applicable for FHSS
4.3.1.9 4.3.2.8	Transmitter spurious emissions in OOB	PASS	-
4.3.1.10 4.3.2.9	Transmitter spurious emissions	PASS	Under limit 11.50 dB at 12720.000 MHz
<b>Receiver Parameters</b>			
4.3.1.11 4.3.2.10	Receiver spurious emissions	PASS	Under limit 7.36 dB at 2398.000 MHz
<b>Adaptive Test Item</b>			
4.3.1.7 4.3.2.6	Adaptivity	PASS	Only applicable for adaptive equipment Output Power >10dBm
4.3.1.12 4.3.2.11	Receiver Blocking	PASS	
<b>Non-Adaptive Test Item</b>			
4.3.1.3 4.3.2.4	Duty cycle, Tx-Sequence, Tx-gap	Not Required	Only applicable for non-adaptive equipment Output Power >10dBm
4.3.1.6 4.3.2.5	Medium Utilisation (MU) factor	Not Required	
<b>Note:</b> WiFi belongs to adaptive equipment and EIRP > 10dBm.			



# 1 General Description

## 1.1 Applicant

Texas Instruments Incorporated  
12500 TI BLVD., Dallas Texas, 75243

## 1.2 Manufacturer

Texas Instruments Incorporated  
12500 TI BLVD., Dallas Texas, 75243

## 1.3 Product Feature of Equipment Under Test

WLAN 802.11 b/g/n

Product Specification subjective to this standard	
Antenna Type	WLAN: Chip Antenna

## 1.4 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.5 Testing Facility

<b>Test Site</b>	SPORTON INTERNATIONAL INC.
<b>Test Site Location</b>	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978
<b>Test Site No.</b>	<b>Sporton Site No. :</b> TH05-HY ; DFS02-HY

<b>Test Site</b>	SPORTON INTERNATIONAL INC.
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Kwei-Shan District, Tao Yuan City, Taiwan R.O.C. TEL: +886-3-327-0868 FAX: +886-3-327-0855
<b>Test Site No.</b>	<b>Sporton Site No. :</b> 05CH05-HY ;03CH13-HY

## 1.6 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of **ETSI EN 300 328 V2.1.1 (2016-11)**.

**Note:** All test items were verified and recorded according to the standards and without any deviation during the test.

## 1.7 Test Condition

<b>Normal Voltage</b>	DC 3.30V
<b>Normal Temperature</b>	25°C
<b>Extreme Temperature</b>	-20°C and 70°C

**Note:** The test temperature was between -20°C ~ 70°C by manufacturer request.

## 2 Test Configuration of Equipment under Test

### 2.1 Descriptions of Test Mode

- a. During testing, the interface cables and equipment positions were varied according to ETSI EN 300 328 V2.1.1 (2016-11).
- b. The complete test system included EUT for RF test.
- c. Preliminary tests were checked in different data rate and recorded worse in the following tables:

#### Single Antenna

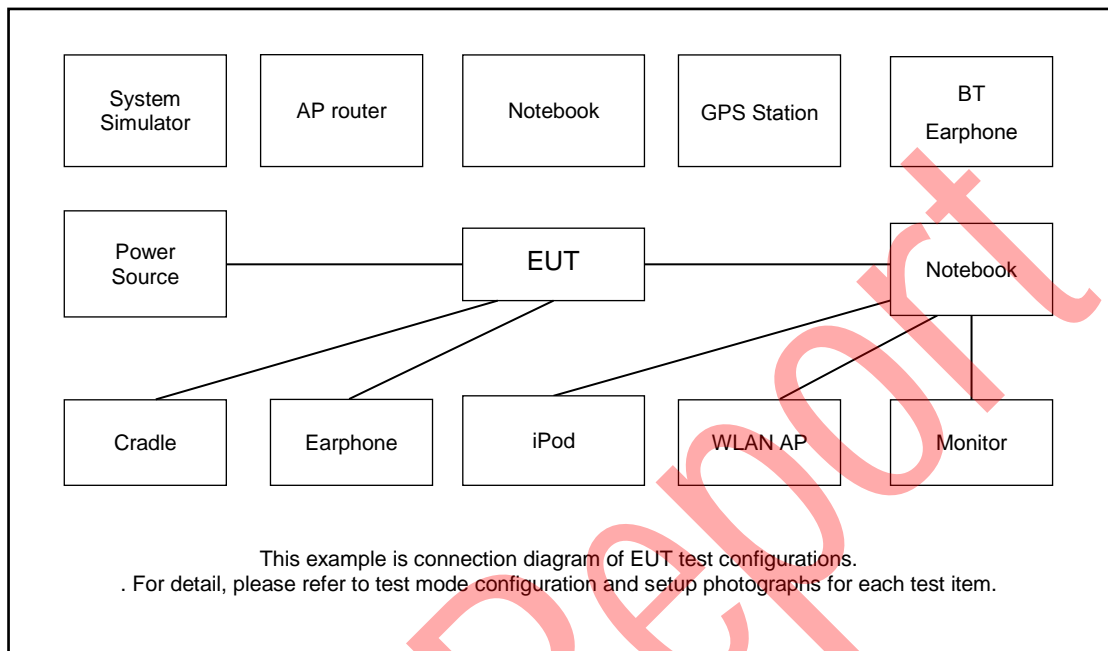
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0

The following tables for radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases were recorded in this report.

Test Modes		
RF	802.11b DSSS	802.11g OFDM
Tx	802.11b CH01 (2412MHz) 802.11b CH13 (2472MHz)	802.11g CH01 (2412MHz) 802.11g CH13 (2472MHz)
Rx	-	-

Test Modes	
RF	802.11n HT20 OFDM
Tx	802.11n HT20 CH01 (2412MHz) 802.11n HT20 CH13 (2472MHz)
Rx	802.11n HT20 CH01 (2412MHz)

## 2.2 Connection Diagram of Test System



## 2.3 Supported Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Inspiron 15	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

## 2.4 EUT Operation Test Setup

For WLAN test items, an engineering test program (CC3100\_CC3200 Radio Tool v1.2.5942.19689) was provided and enabled to make EUT continuous transmitting and receiving signals



### 3 Transmitter Parameters

#### 3.1 Maximum Transmit Power

##### 3.1.1 Limit of Effective Isotropic Radiated Power

SUBCLAUSE 4.3.1.2.3 and 4.3.2.2.3	
TEST CONDITION	LIMIT
Normal and Extreme Temperature Conditions	20dBm (e.i.r.p)

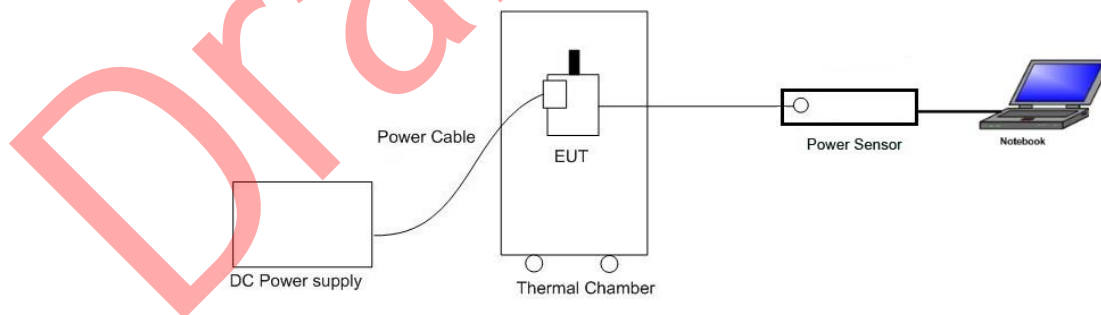
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 8 of this test report.

##### 3.1.3 Test Procedure

1. The measurement procedure follows the clause 5.4.2.2.1 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. Placing the EUT in thermal chamber.
3. The EUT is connected to external power supply.
4. Setting thermal chamber temperature and power supply voltage at suitable values.
5. The EIRP = A+G+Y, where A is the power measured, G is the assembly gain of the individual antenna of the EUT in dBi and Y is the additional beamforming gain of the EUT in dB if applicable, here, Y=0.
6. The measurement duration is at least 1 second to ensure a minimum number of bursts (at least 10) are captured.

##### 3.1.4 Test Setup



##### 3.1.5 Test Results

Please refer to Appendix A.

## 3.2 Maximum Equivalent Isotropically Radiated Power (E.I.R.P.) Spectral Density

### 3.2.1 Limit of Maximum Power Spectral Density

SUBCLAUSE 4.3.2.3.3	
TEST CONDITION	LIMIT
Normal and Extreme Temperature Conditions	10dBm / MHz

**Remark:** Maximum spectral power density is not applicable to FHSS system device.

### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 8 of this test report.

### 3.2.3 Test Procedure

1. The measurement procedure follows the clause 5.4.3.2.1 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. These measurements shall only be performed at normal test conditions.
3. The measurement shall be repeated for the equipment being configured to operate at the lowest, the middle, and the highest frequency of the stated frequency range.
4. The test procedure shall be as follows:

**Step 1:**

Connect the EUT to the spectrum analyzer and use the following settings:

Start Frequency	2400MHz
Stop Frequency	2483.5MHz
Resolution BW	10kHz
Video BW	30kHz
Sweep Points	8350
Detector	RMS
Trace Mode	Max Hold
Sweep time	10 sec

**Step 2:**

Add up the values for amplitude (power) for all the samples in the file.

**Step 3:**

Normalize the individual values for amplitude so that the sum is equal to the RF Output Power (e.i.r.p.) measured.

**Step 4:**

Starting from the first sample in the file (lowest frequency), add up the power of the following samples representing a 1 MHz segment and record the results for power and position (i.e. sample #1 to #100). This is the Power Spectral Density (e.i.r.p.) for the first 1 MHz segment which shall be recorded.

**Step 5:**

Shift the start point of the samples added up in step 4 by 1 sample and repeat the procedure in step 4 (i.e. sample #2 to #101).

**Step 6:**

Repeat step 5 until the end of the data set and record the radiated Power Spectral Density values for each of the 1 MHz segments.

From all the recorded results, the highest value is the maximum Power Spectral Density for the EUT. This value shall be recorded in the test report.

**3.2.4 Test Setup****3.2.5 Test Results**

Please refer to Appendix A.

### 3.3 Occupied Channel Bandwidth

#### 3.3.1 Limit of Occupied Channel Bandwidth

Occupied Channel Bandwidth fall completely within 2.4 GHz – 2.4835 GHz

#### 3.3.2 Measuring Instruments

The measuring equipment is listed in the section 8 of this test report.

#### 3.3.3 Test Procedure

1. The measurement procedure follows the clause 5.4.7.2.1 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. The measurement shall be performed only on the lowest and the highest frequency within the stated frequency range.
3. The test procedure shall be as follows:

**Step 1:**

Connect the EUT to the spectrum analyzer and use the following settings:

Center Frequency	Channel under test
Resolution BW	1 % of the span
Video BW	3 x RBW
Frequency Span	2 x Nominal Channel Bandwidth
Detector	RMS
Trace Mode	Max Hold
Sweep Time	1 s

**Step 2:**

Wait until the trace is completed.

Find the peak value of the trace and place the analyzer marker on this peak.

**Step 3:**

Use the 99 % bandwidth function of the spectrum analyzer to measure the Occupied Channel Bandwidth of the EUT.

### 3.3.4 Test Setup



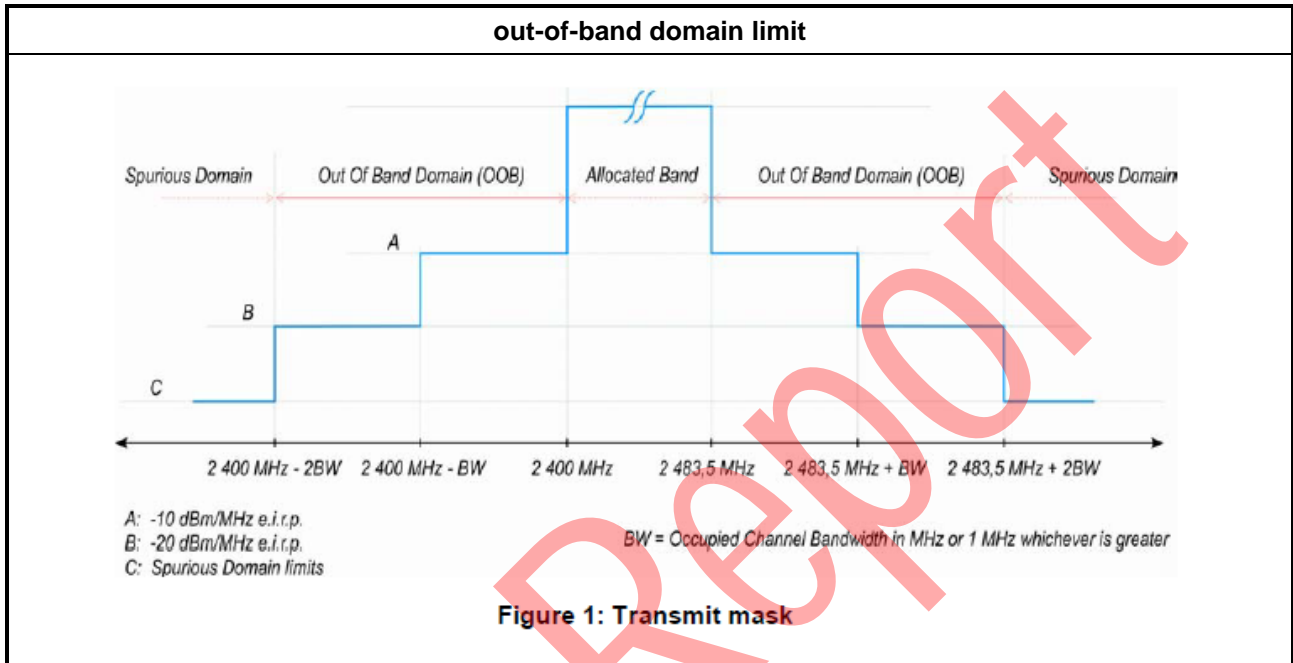
### 3.3.5 Test Results

Please refer to Appendix A.

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### 3.4 Transmitter unwanted emissions in the out-of-band domain

#### 3.4.1 Transmitter unwanted emissions in the out-of-band domain limit



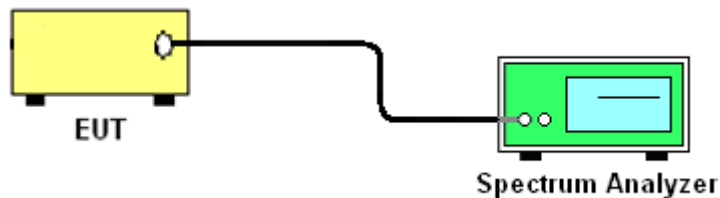
#### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 8 of this test report.

#### 3.4.3 Test Procedures

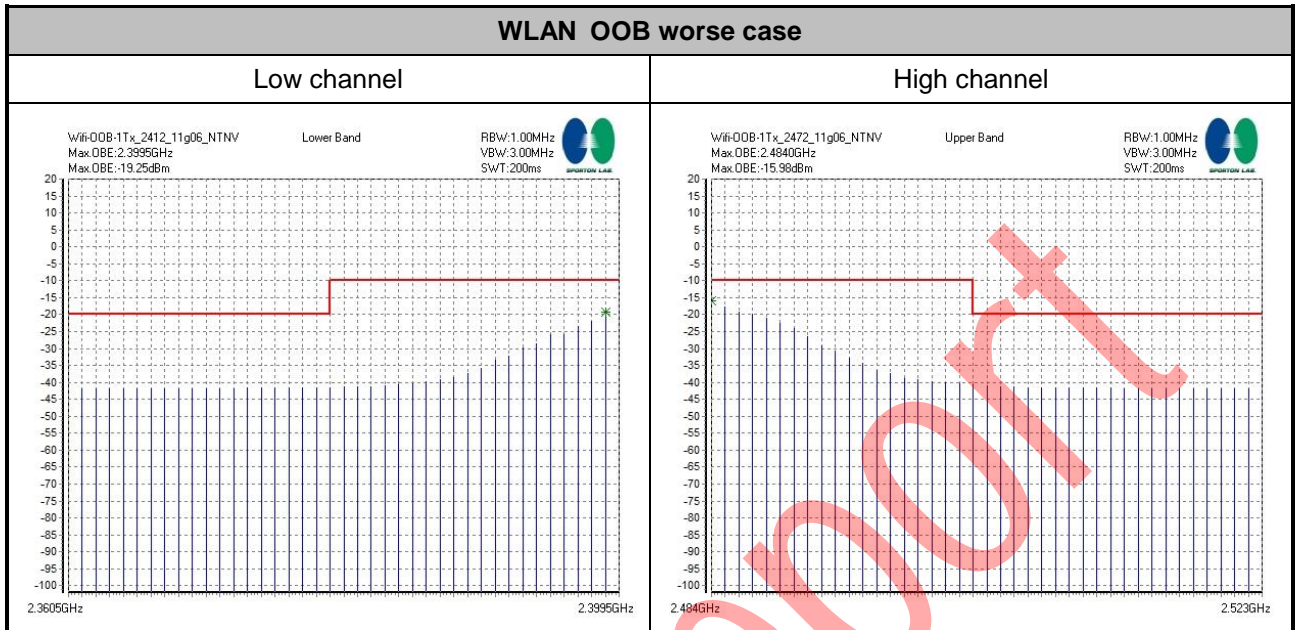
1. The measurement procedure follows the clause 5.4.8.2.1 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. These measurements shall only be performed at normal test conditions.
3. For conducted measurements on devices with multiple transmit chains using the results for each of the transmit chains for the corresponding 1 MHz segments shall be added and compared with the transmit mask limit.

#### 3.4.4 Test Setup



#### 3.4.5 Test Results

Please refer to Appendix A.



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### 3.5 Transmitter spurious emissions

#### 3.5.1 Limit of Transmitter spurious emissions

In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and as e.i.r.p. for emissions above 1 GHz.

SUBCLAUSE 4.3.1.10.3 and 4.3.2.9.3		
FREQUENCY RANGE	MAXIMUM POWER	BANDWIDTH
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87,5 MHz	-36 dBm	100 kHz
87,5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 862 MHz	-54 dBm	100 kHz
862 MHz to 1 GHz	-36 dBm	100 kHz
1 GHz to 12,75 GHz	-30 dBm	1 MHz

#### 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 8 of this test report.

#### 3.5.3 Test Procedures

1. The measurement procedure follows the clause 5.4.9.2.2 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. The EUT was placed on a turntable with 1.5m height.
3. The test distance between the receiving antenna and the EUT is 3meter below 1GHz frequency range, and 3 meter which is in far field test condition for measured frequency above 1GHz, while the receiving (test) antenna is kept at 1.5 meter height.
4. Set EUT in continuous transmitting with maximum output power.
5. The table was rotated from 0 to 360 degree to search the highest radiated emission.
6. Repeating step 3 and 4 for each polarization and channel to find the worst emission level.
7. The results obtained are compared to the limits in order to prove compliance with the requirement.

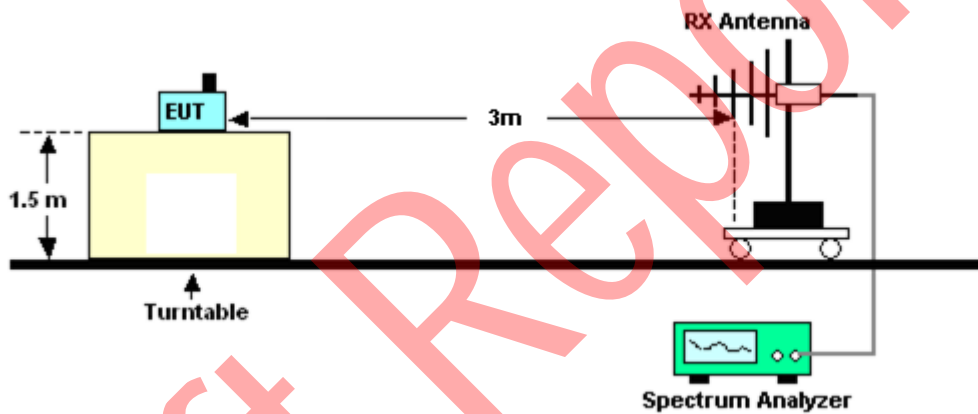


### 3.5.4 Test Setup

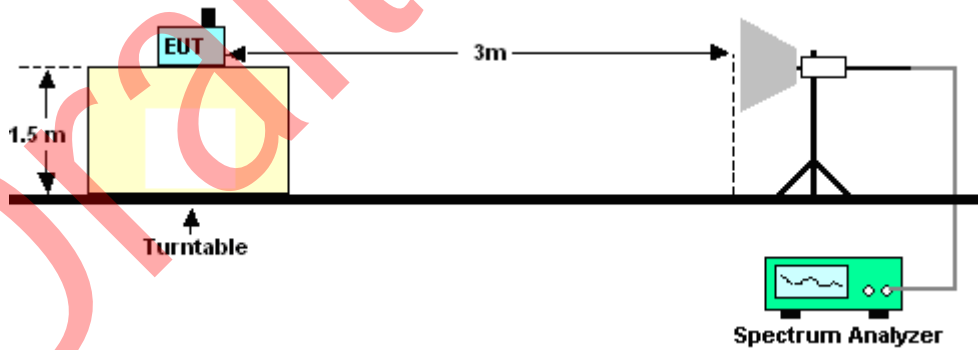
<Conducted Method>



<Below 1GHz>



<Above 1GHz>



### 3.5.5 Test Results of Conducted Spurious Emission

Refer to Appendix B of this test report.

### 3.5.6 Test Results of Cabinet Radiation

Refer to Appendix C of this test report.

## 4 Receiver Parameters

### 4.1 Receiver spurious emissions

#### 4.1.1 Limit of Receiver spurious emissions

In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and as e.i.r.p. for emissions above 1 GHz.

SUBCLAUSE 4.3.1.11.3 and 4.3.2.10.3		
FREQUENCY RANGE	MAXIMUM POWER	BANDWIDTH
30 MHz to 1 GHz	-57 dBm	100kHz
1 GHz to 12,75 GHz	-47 dBm	1MHz

#### 4.1.2 Measuring Instruments

The measuring equipment is listed in the section 8 of this test report.

#### 4.1.3 Test Procedures

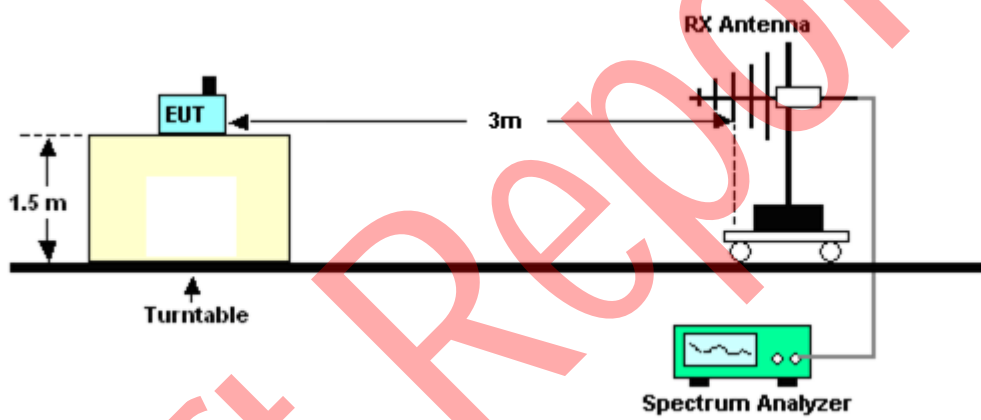
1. The measurement procedure follows the clause 5.4.10.2.2 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. The EUT was placed on a turntable with 1.5m height.
3. The test distance between the receiving antenna and the EUT is 3meter below 1GHz frequency range, and 3 meter which is in far field test condition for measured frequency above 1GHz, while the receiving (test) antenna is kept at 1.5 meter height.
4. Set EUT in receiving mode.
5. The table was rotated from 0 to 360 degree to search the highest radiated emission.
6. Repeating step 3 and 4 for each polarization and channel to find the worst emission level.
7. The results obtained are compared to the limits in order to prove compliance with the requirement.

### 4.1.4 Test Setup

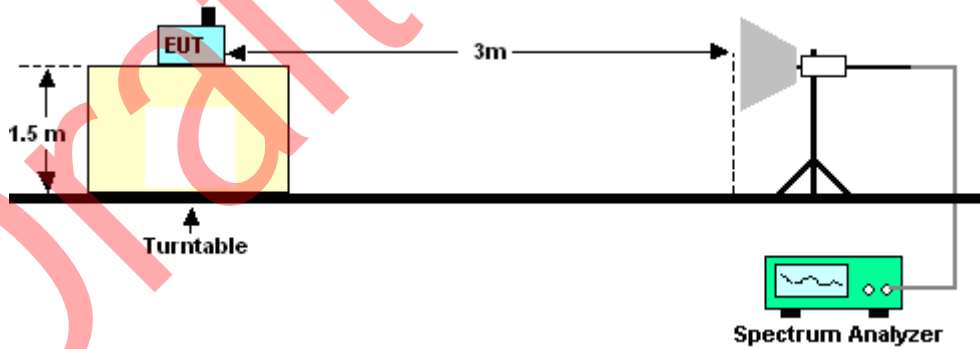
<Conducted Method>



<Below 1GHz>



<Above 1GHz>



### 4.1.5 Test Results of Conducted Spurious Emission

Refer to Appendix B of this test report.

### 4.1.6 Test Results of Cabinet Radiation

Refer to Appendix C of this test report.

## 4.2 Receiver Blocking Test

### 4.2.1 Limit of Receiver Blocking Test

#### Receiver category 1

- Adaptive equipment with maximum RF output power > 10dBm e.i.r.p. (EX: WiFi)

Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)	Type of blocking signal
$P_{min} + 6 \text{ dB}$	2 380 2 503,5	-53	CW
$P_{min} + 6 \text{ dB}$	2 300 2 330 2 360	-47	CW
$P_{min} + 6 \text{ dB}$	2 523,5 2 553,5 2 583,5 2 613,5 2 643,5 2 673,5	-47	CW
<p>NOTE 1: <math>P_{min}</math> is the minimum level of wanted signal (in dBm) required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.</p> <p>NOTE 2: The levels specified are levels in front of the UUT antenna. In case of conducted measurements, the levels have to be corrected by the actual antenna assembly gain.</p>			

#### Receiver category 2

- Non-adaptive equipment with MU 1% ~ 10%
- Adaptive equipment with Maximum RF output power < 10dBm e.i.r.p. (EX: Bluetooth)

Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)	Type of blocking signal
$P_{min} + 6 \text{ dB}$	2 380 2 503,5	-57	CW
$P_{min} + 6 \text{ dB}$	2 300 2 583,5	-47	CW
<p>NOTE 1: <math>P_{min}</math> is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.</p> <p>NOTE 2: The levels specified are levels in front of the UUT antenna. In case of conducted measurements, the levels have to be corrected by the actual antenna assembly gain.</p>			

**Receiver category 3**

1. Non-adaptive equipment with  $MU < 1\%$
2. Adaptive equipment with Maximum RF output power  $< 0\text{dBm e.i.r.p.}$

Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 2)	Type of blocking signal
$P_{\min} + 12\text{ dB}$	2 380 2 503,5	-57	CW
$P_{\min} + 12\text{ dB}$	2 300 2 583,5	-47	CW

NOTE 1:  $P_{\min}$  is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 2: The levels specified are levels in front of the UUT antenna. In case of conducted measurements, the levels have to be corrected by the actual antenna assembly gain.

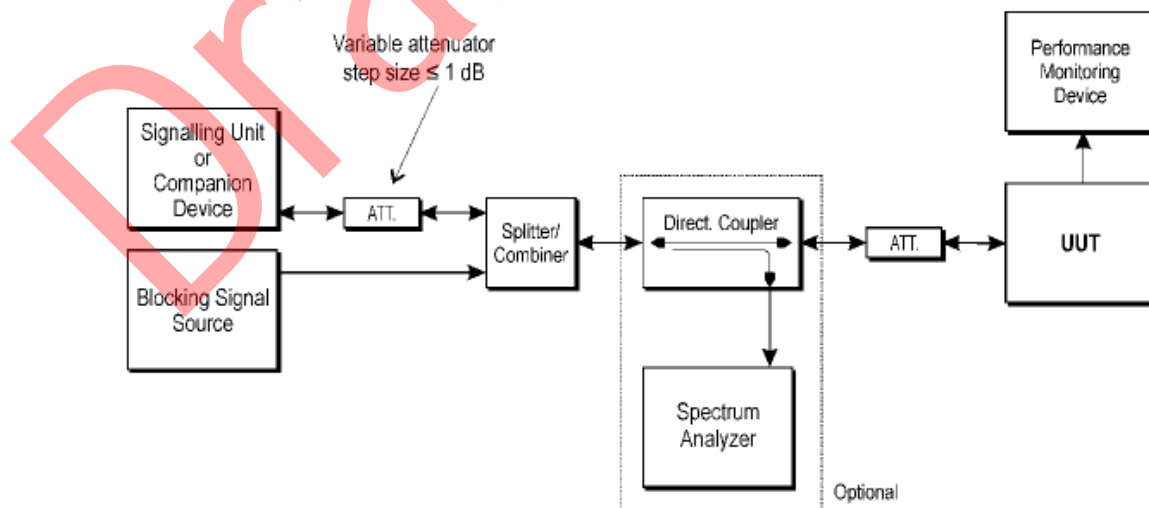
**4.2.2 Measuring Instruments**

The measuring equipment is listed in the section 8 of this test report.

**4.2.3 Test Procedures**

1. The measurement procedure follows the clause 5.4.11.2.1 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. For systems using multiple receive chains only one chain (antenna port) need to be tested. All other receiver inputs shall be terminated.

**4.2.4 Test Setup**



**Test Set-up for receiver blocking**



### 4.2.5 Test Results of Receiver Blocking

Pmin = CMW500 burst power - path cable loss - attenuator.

WiFi 802.11b 1Mbps Channel 01			
Wanted signal From companion	Blocking signal Frequency(MHz)	Blocking signal Power(dBm)	PER (%)
Pmin + 6dB	2380	-53	0
Pmin + 6dB	2503.5	-53	0
Pmin + 6dB	2300	-47	0
Pmin + 6dB	2330	-47	0
Pmin + 6dB	2360	-47	0
Pmin + 6dB	2523.5	-47	0
Pmin + 6dB	2553.5	-47	0
Pmin + 6dB	2583.5	-47	0
Pmin + 6dB	2613.5	-47	0
Pmin + 6dB	2643.5	-47	0
Pmin + 6dB	2673.5	-47	0
PER = 7.5 % when Pmin= -94 dBm before blocker is injected.			

Note:

1. Antenna gain is 1.9 dBi.
2. Blocking signal power level has offset antenna gain 1.9 dBi.

WiFi 802.11b 1Mbps Channel 13			
Wanted signal From companion	Blocking signal Frequency(MHz)	Blocking signal Power(dBm)	PER (%)
Pmin + 6dB	2380	-53	0
Pmin + 6dB	2503.5	-53	0
Pmin + 6dB	2300	-47	0
Pmin + 6dB	2330	-47	0
Pmin + 6dB	2360	-47	0
Pmin + 6dB	2523.5	-47	0
Pmin + 6dB	2553.5	-47	0
Pmin + 6dB	2583.5	-47	0
Pmin + 6dB	2613.5	-47	0
Pmin + 6dB	2643.5	-47	0
Pmin + 6dB	2673.5	-47	0
PER = 2.1 % when Pmin= -93 dBm before blocker is injected.			

Note:

1. Antenna gain is 1.9 dBi.
2. Blocking signal power level has offset antenna gain 1.9 dBi.



WiFi 802.11g 6Mbps Channel 01			
Wanted signal From companion	Blocking signal Frequency(MHz)	Blocking signal Power(dBm)	PER (%)
Pmin + 6dB	2380	-53	0.2
Pmin + 6dB	2503.5	-53	0
Pmin + 6dB	2300	-47	0
Pmin + 6dB	2330	-47	0
Pmin + 6dB	2360	-47	0
Pmin + 6dB	2523.5	-47	0
Pmin + 6dB	2553.5	-47	0
Pmin + 6dB	2583.5	-47	0
Pmin + 6dB	2613.5	-47	0
Pmin + 6dB	2643.5	-47	0
Pmin + 6dB	2673.5	-47	0
PER = 7.4 % when Pmin= -88 dBm before blocker is injected.			

Note:

1. Antenna gain is 1.9 dBi.
2. Blocking signal power level has offset antenna gain 1.9 dBi.

WiFi 802.11g 6Mbps Channel 13			
Wanted signal From companion	Blocking signal Frequency(MHz)	Blocking signal Power(dBm)	PER (%)
Pmin + 6dB	2380	-53	0
Pmin + 6dB	2503.5	-53	0
Pmin + 6dB	2300	-47	0
Pmin + 6dB	2330	-47	0
Pmin + 6dB	2360	-47	0
Pmin + 6dB	2523.5	-47	0
Pmin + 6dB	2553.5	-47	0
Pmin + 6dB	2583.5	-47	0
Pmin + 6dB	2613.5	-47	0.1
Pmin + 6dB	2643.5	-47	0
Pmin + 6dB	2673.5	-47	0
PER = 8.4 % when Pmin= -88 dBm before blocker is injected.			

Note:

1. Antenna gain is 1.9 dBi.
2. Blocking signal power level has offset antenna gain 1.9 dBi.

## 5 Adaptivity Test

### 5.1 Adaptivity

#### 5.1.1 Limit of Adaptivity

Only for adaptive systems and RF Output Power > 10 dBm

LBT based Detect and Avoid (Load Based Equipment with spectrum sharing mechanism IEEE Std.):

LBT based spectrum sharing mechanism may implement in IEEE Std. 802.11-2012 clauses 9, clause 10, clause 16, clause 17, clause 19 and clause 20, or in IEEE Std. IEEE 802.15.4-2011, clause 4, clause 5 and clause 8.

Short Control Signaling Transmissions shall have a maximum TxOn / (TxOn + TxOff) ratio of 10 % within an observation period of 50 ms.

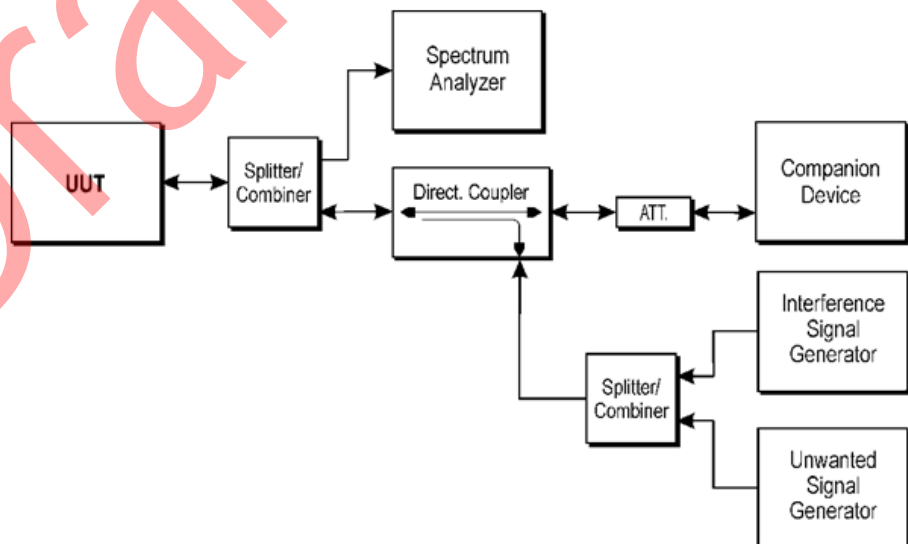
#### 5.1.2 Measurement Instruments

The measuring equipment is listed in the section 8 of this test report.

#### 5.1.3 Test Procedures

1. The measurement procedure follows the clause 5.4.6.2.1 of the ETSI EN 300 328 V2.1.1 (2016-11).
2. For conducted measurements on devices with multiple transmit chains and receive chains. The power splitter/combiner shall be used to combine all the transmit/receive chains (antenna outputs) into a single test point. The insertion loss of the power splitter/combiner shall be taken into account.

#### 5.1.4 Test Setup





**5.1.5 Support Unit used in test configuration and system**

Item	Instrument	Manufacturer	Model No.	Characteristics
1.	WLAN AP	D-LINK	DIR-855	Dual Band AP
2.	Notebook	Lenovo	E335	FTP / LAN

**5.1.6 Test Results of Adaptivity Test**

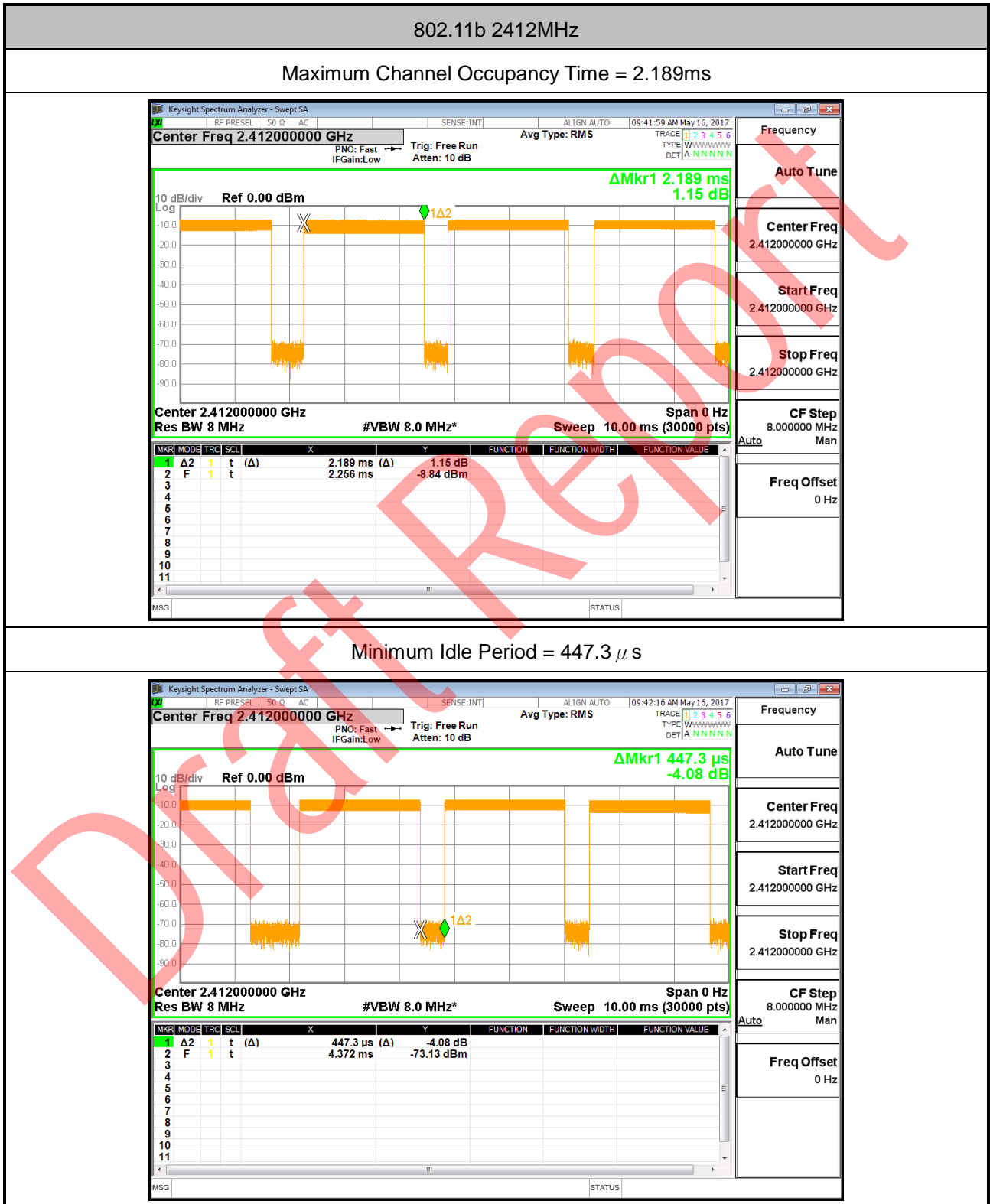
Equipment Information:	
<input type="checkbox"/>	Non-Adaptive Equipment
	The maximum RF output power (E.I.R.P.) dBm:
	The maximum (Corresponding) Duty Cycle : %
<input checked="" type="checkbox"/>	Adaptive Equipment without the possibility to switch to a non-adaptive mode:
<input checked="" type="checkbox"/>	The equipment has implemented an LBT based DAA mechanism:
	<input type="checkbox"/> The equipment is Frame Based equipment
	<input checked="" type="checkbox"/> The equipment is Load Based equipment
	<input type="checkbox"/> The equipment can switch dynamically between Frame Based and Load Based equipment
<input type="checkbox"/>	The equipment has implemented an non-LBT based DAA mechanism
<input type="checkbox"/>	The equipment can operate in more than one adaptive mode
<input type="checkbox"/>	Adaptive Frequency Hopping using other forms of DAA (non-LBT based)
<input type="checkbox"/>	Adaptive Equipment which can also operate in non-adaptive mode

	Modulation	Nominal Bandwidth	Channel	Test Frequency	Test Result
WIFI 2.4GHz	802.11b	20MHz	01	2412 MHz	PASS
			13	2472 MHz	PASS
	802.11g	20MHz	01	2412 MHz	PASS
			13	2472 MHz	PASS
	802.11n HT20	20MHz	01	2412 MHz	PASS
			13	2472 MHz	PASS

**Note:** The CCA time is declared by the manufacturer.



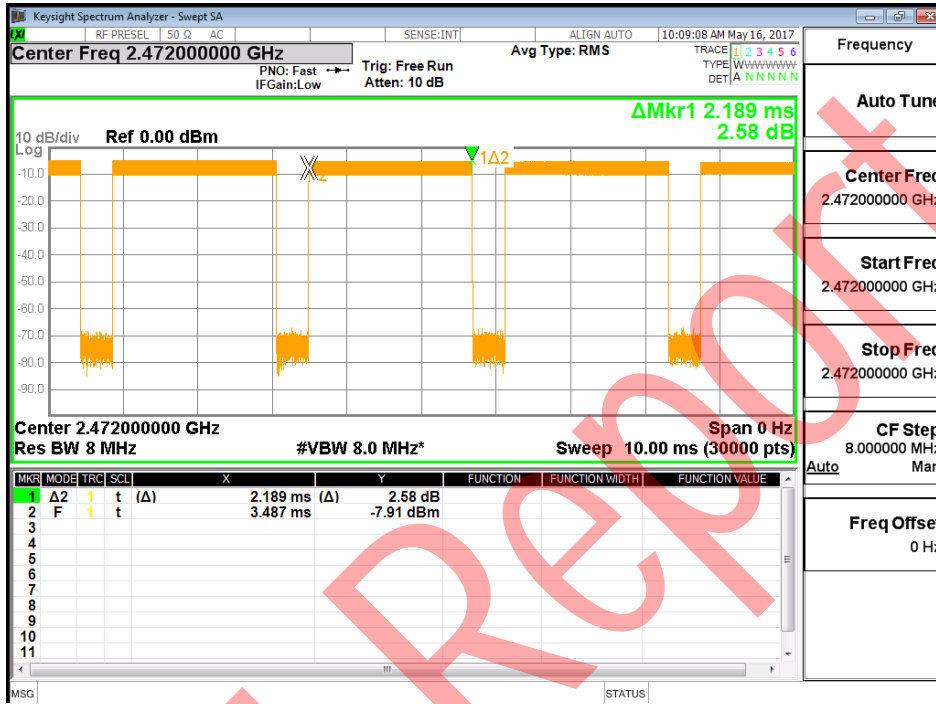
5.1.7 Test Plots of Adaptivity Test



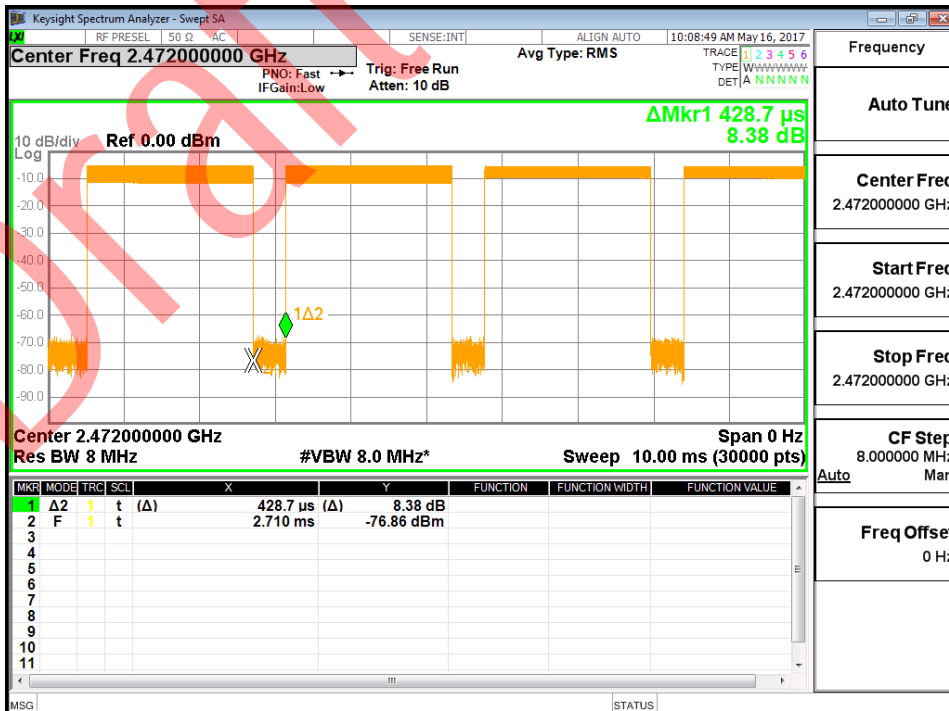


802.11b 2472MHz

Maximum Channel Occupancy Time = 2.189ms



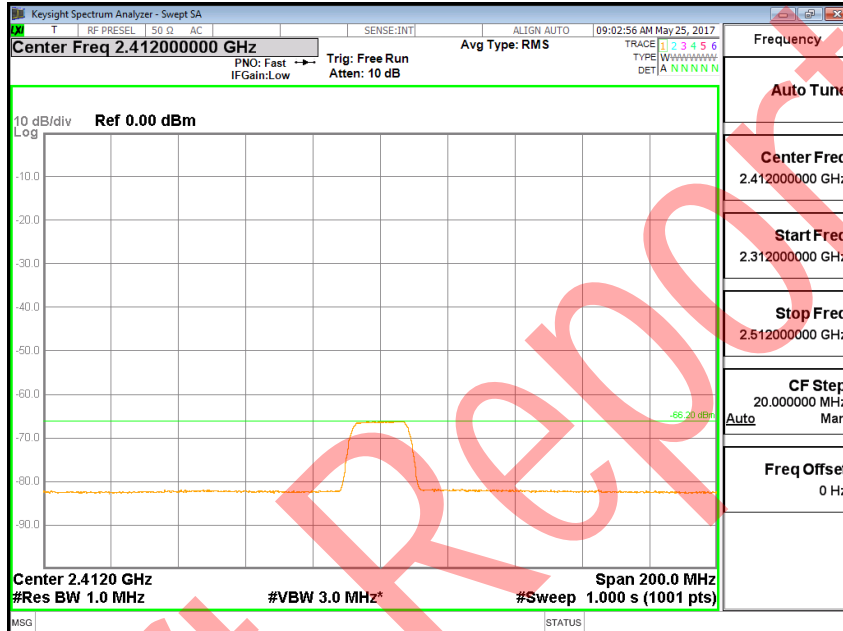
Minimum Idle Period = 428.7 μs



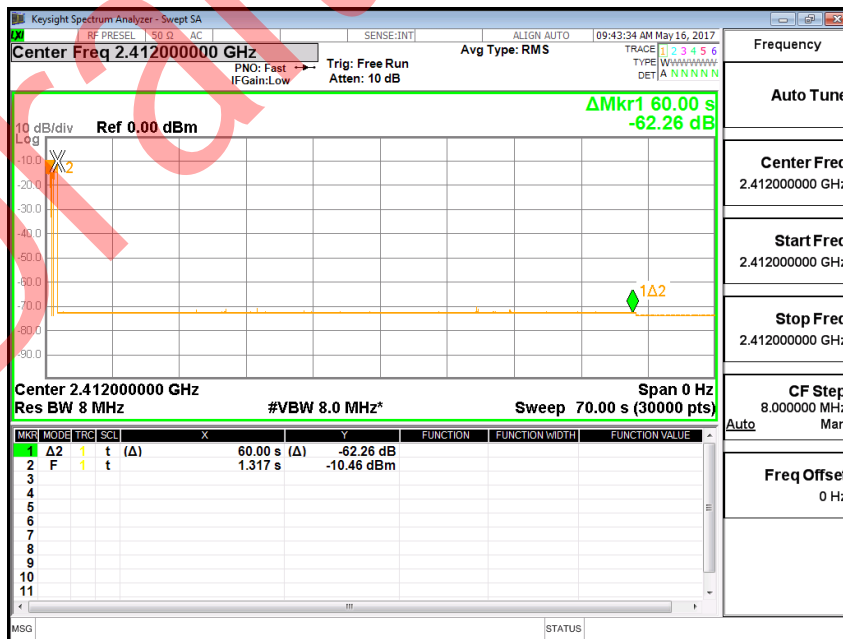


802.11b 2412MHz  
AWGN (Interference)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



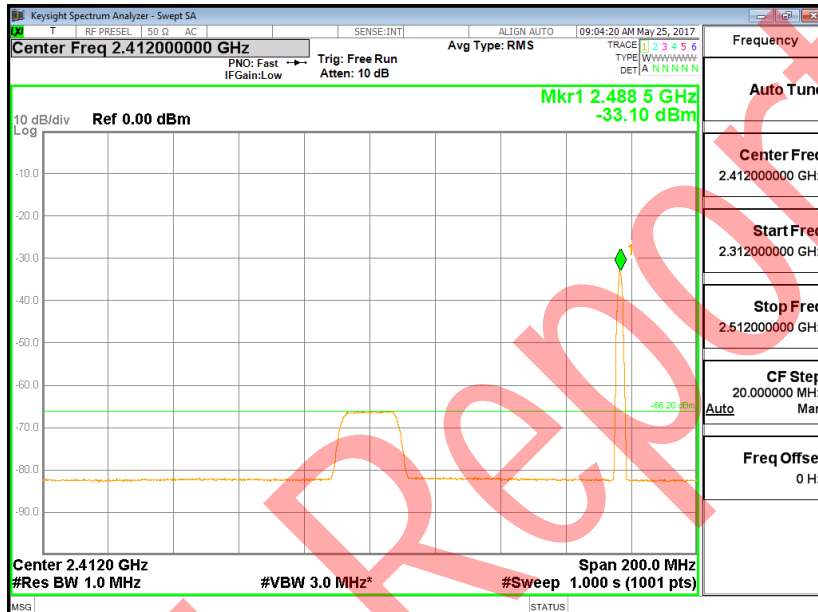
Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle





802.11b 2412MHz  
AWGN (Interference) + CW (Unwanted Signal)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle

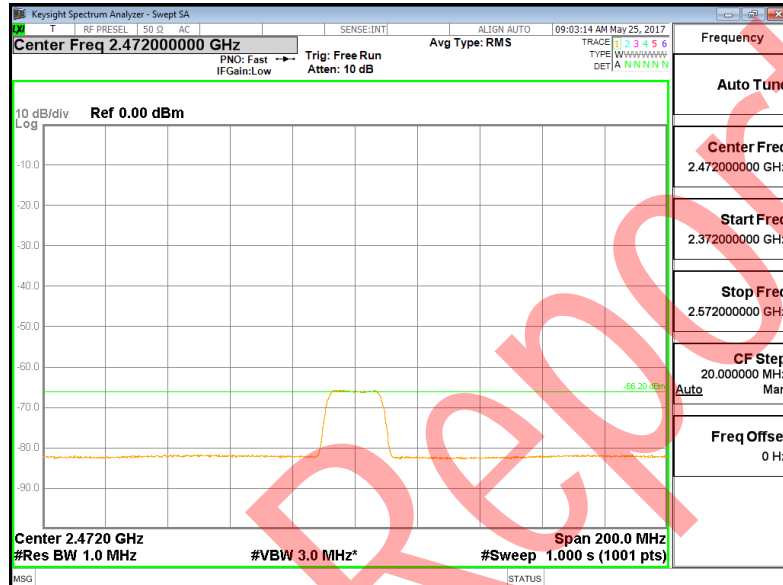


Note: Detection Level = -70 dBm/MHz + 10 × log<sub>10</sub> (100 mW / Pout) + Gain for conducted measurement. (Pout in mW e.i.r.p.)



802.11b 2472MHz  
AWGN (Interference)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



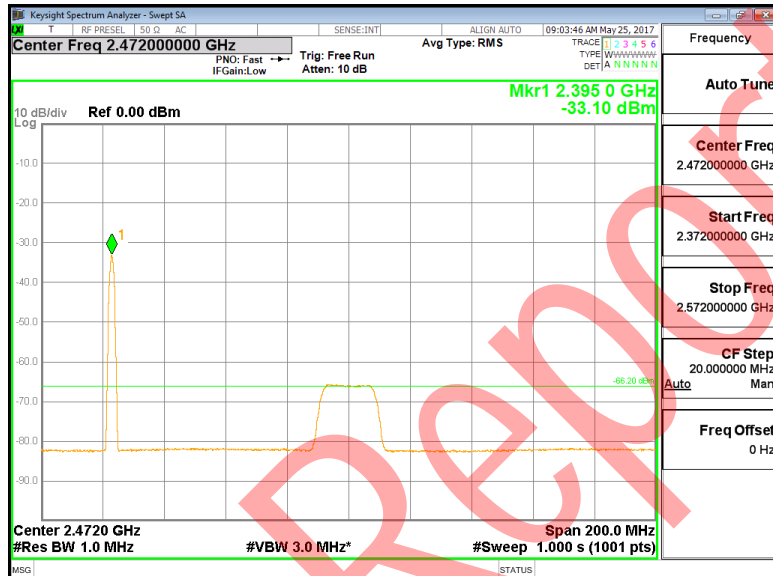
Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle





802.11b 2472MHz  
AWGN (Interference) + CW (Unwanted Signal)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle

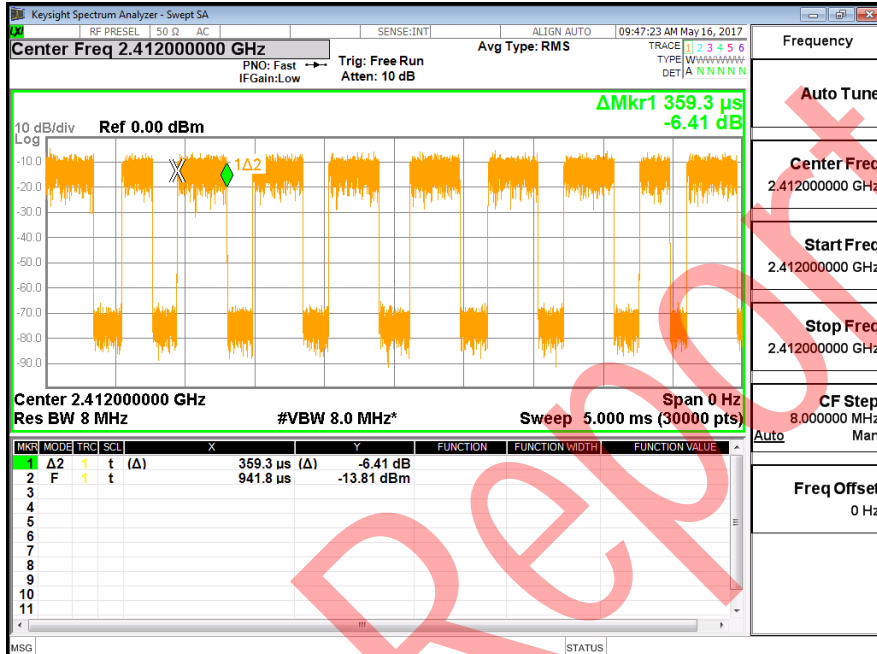


**Note:** Detection Level = -70 dBm/MHz + 10 × log<sub>10</sub>(100 mW / P<sub>out</sub>) + Gain for conducted measurement. (P<sub>out</sub> in mW e.i.r.p.)



802.11g 2412MHz

Maximum Channel Occupancy Time = 359.3  $\mu$ s



Minimum Idle Period = 181.2  $\mu$ s

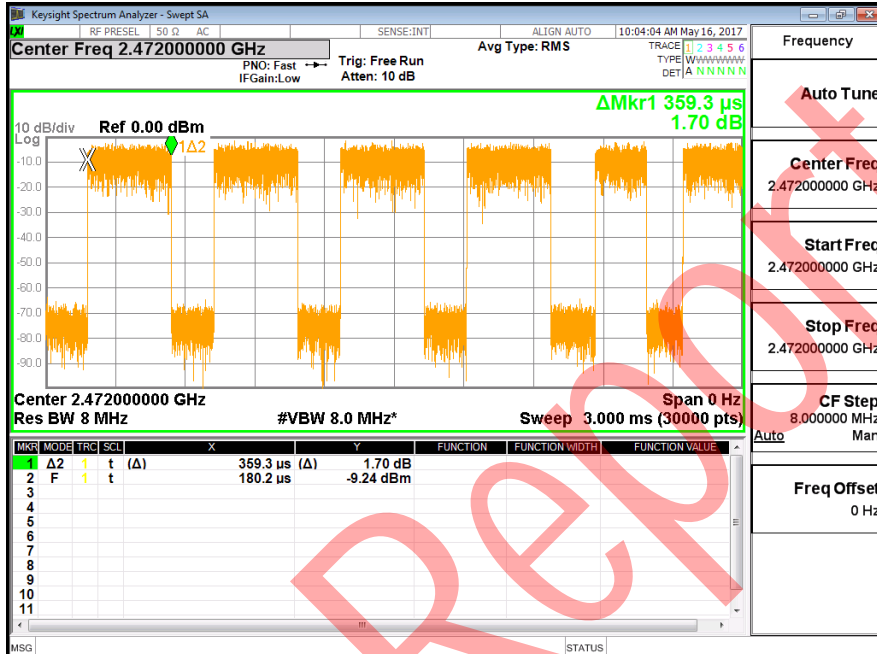






802.11g 2472MHz

Maximum Channel Occupancy Time = 359.3ms



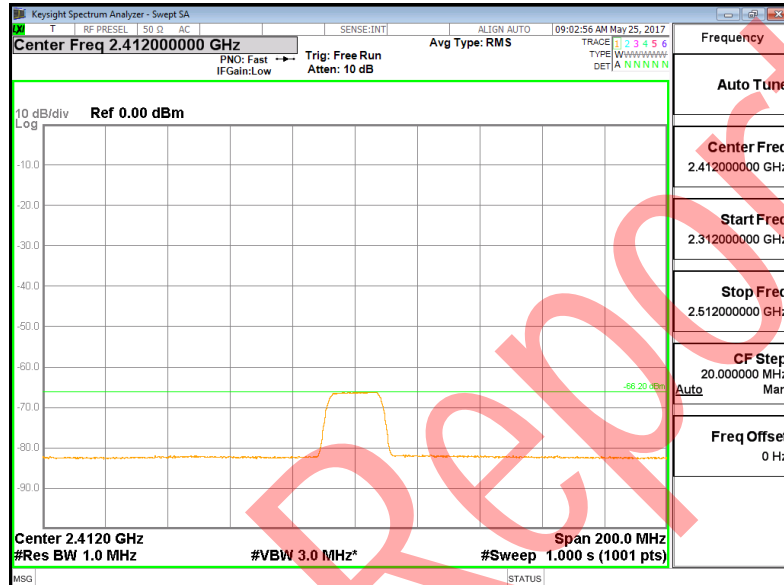
Minimum Idle Period = 181.3  $\mu$ s



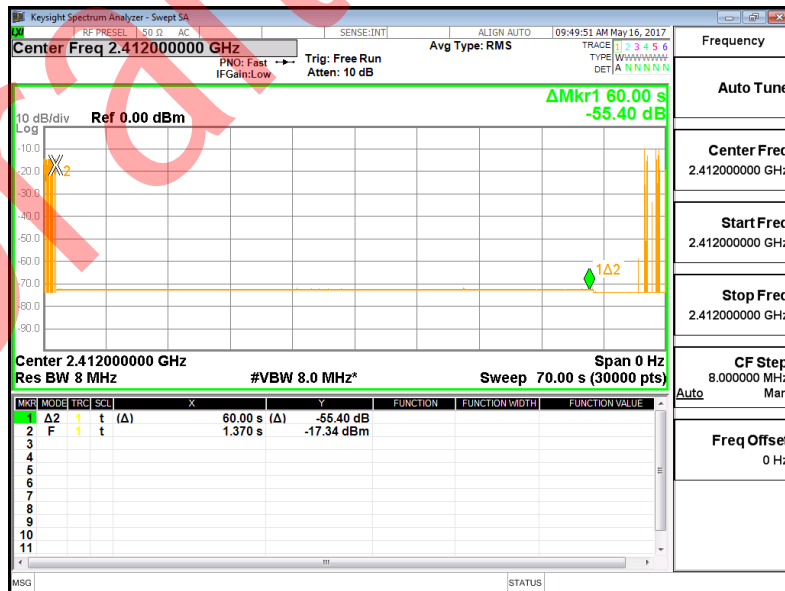


802.11g 2412MHz  
AWGN (Interference)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds

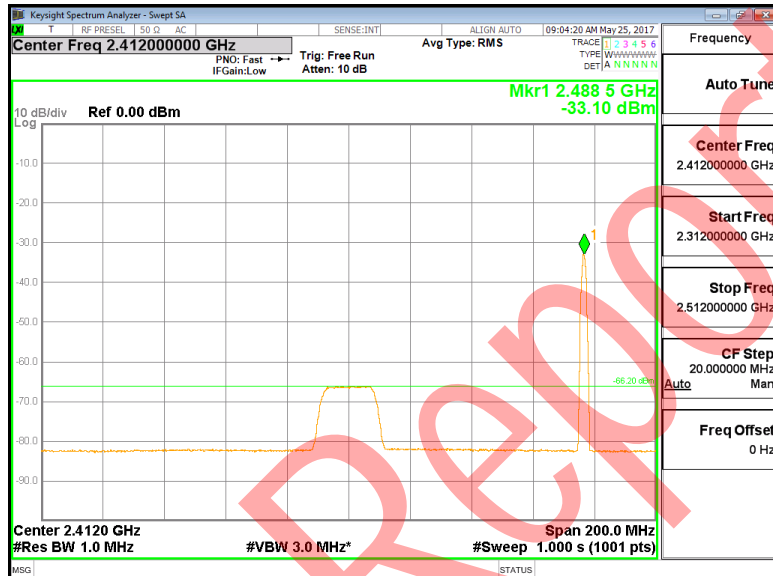


Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle

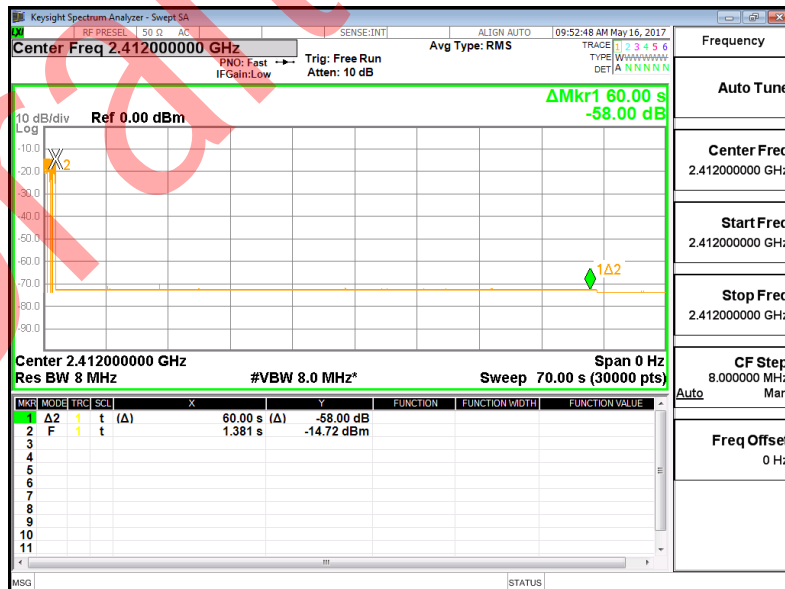


802.11g 2412MHz  
AWGN (Interference) + CW (Unwanted Signal)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle



**Note:** Detection Level = -70 dBm/MHz + 10 × log<sub>10</sub> (100 mW / Pout) + Gain for conducted measurement. (Pout in mW e.i.r.p.)

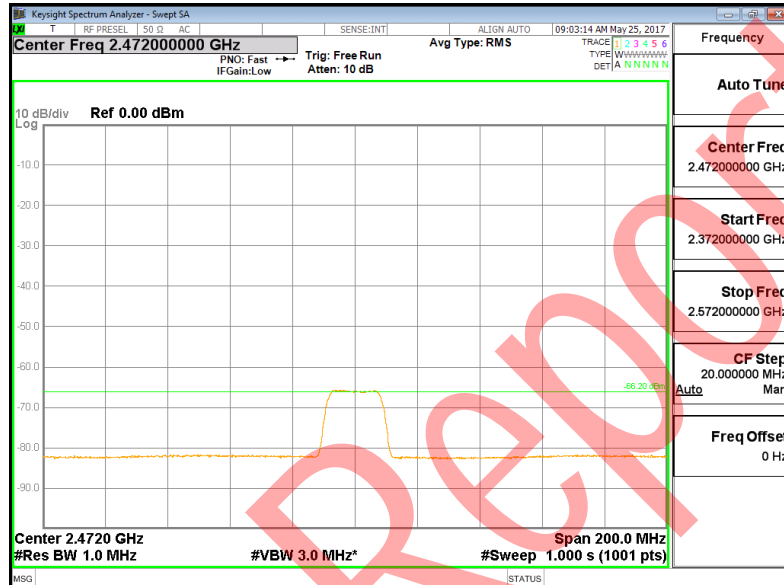


802.11g 2472MHz

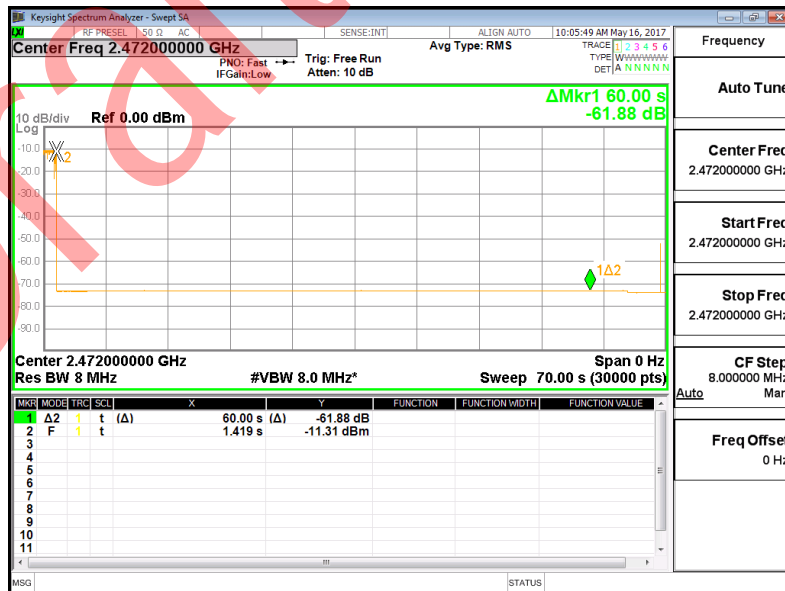
AWGN (Interference)

Detection Level = -66.20dBm/MHz

Interference dwell time = 60 seconds

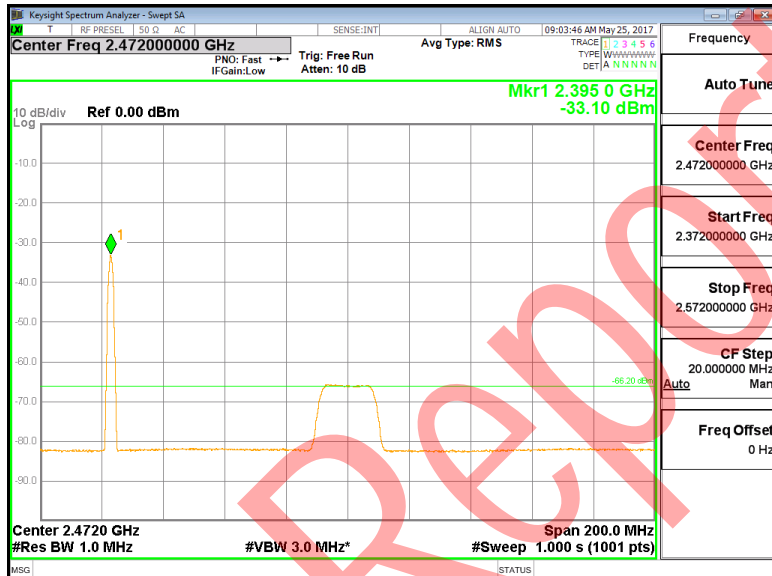


Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle



802.11g 2472MHz  
AWGN (Interference) + CW (Unwanted Signal)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle

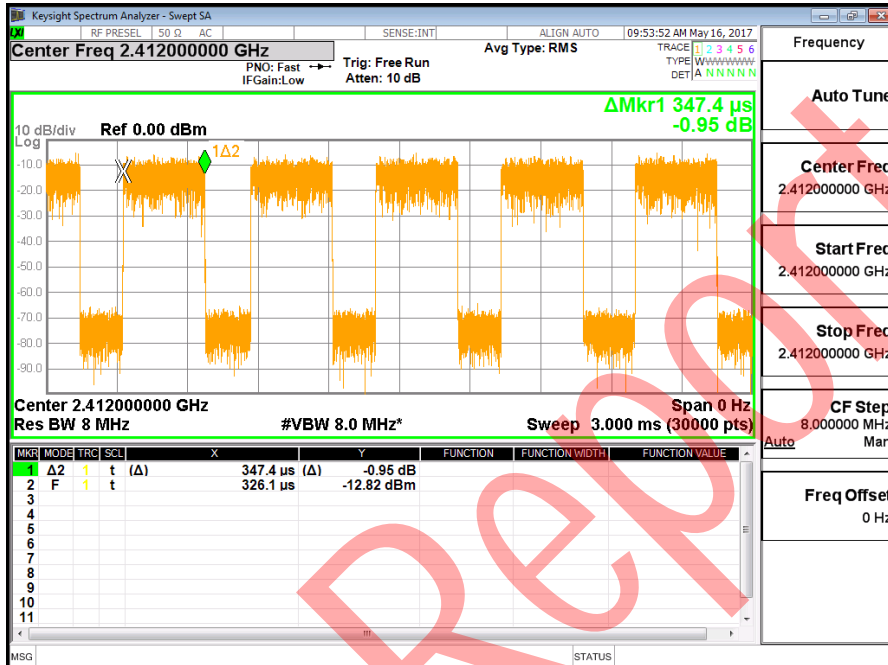


**Note:** Detection Level = -70 dBm/MHz + 10 × log<sub>10</sub> (100 mW / Pout) + Gain for conducted measurement. (Pout in mW e.i.r.p.)

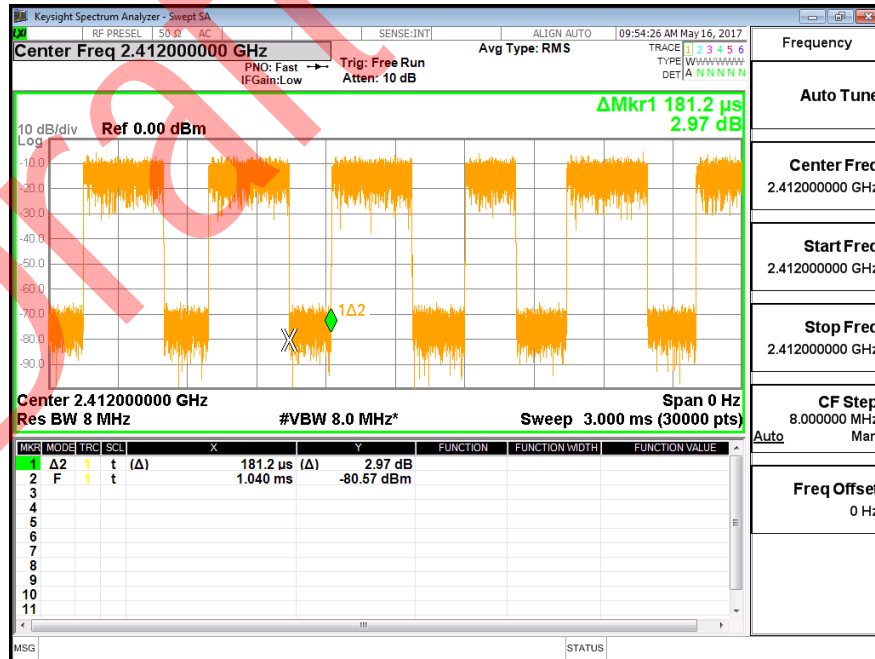


802.11n HT20 2412MHz

Maximum Channel Occupancy Time = 347.4  $\mu$ s



Minimum Idle Period = 181.2  $\mu$ s



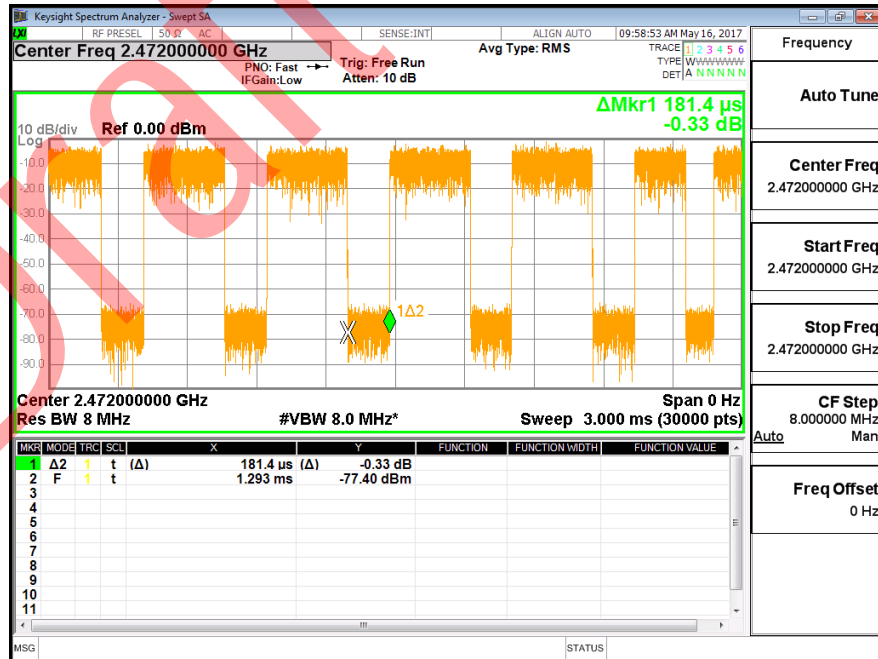


802.11n HT20 2472MHz

Maximum Channel Occupancy Time = 347.1  $\mu$ s



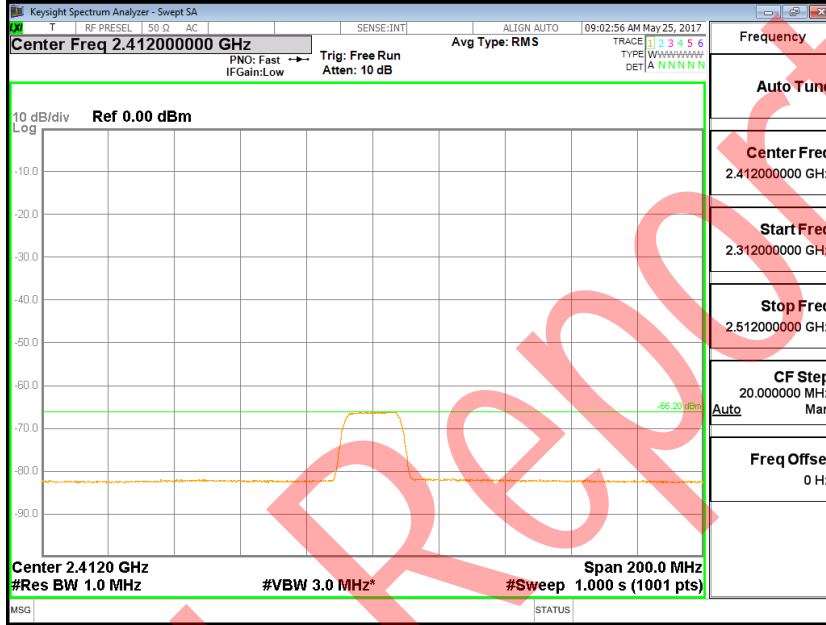
Minimum Idle Period = 181.4  $\mu$ s



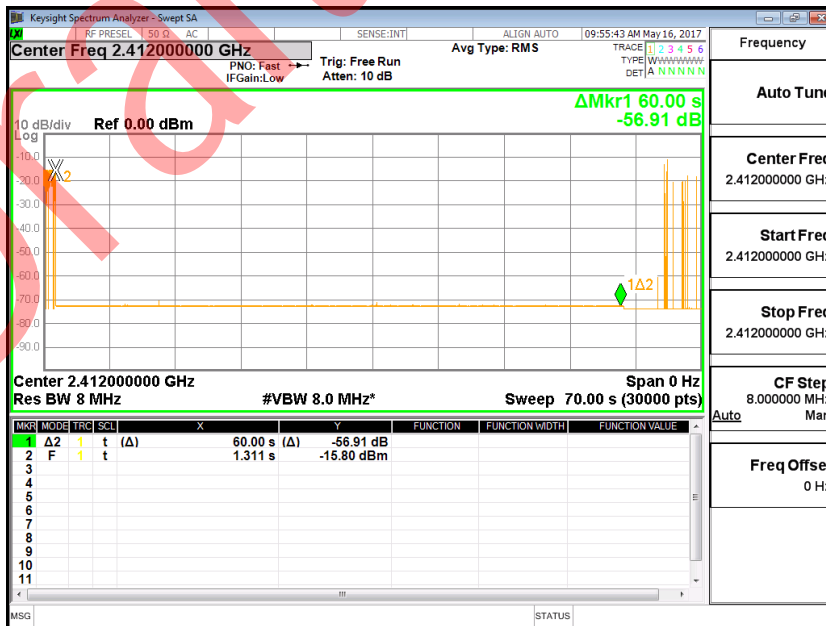


802.11n HT20 2412MHz  
AWGN (Interference)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle

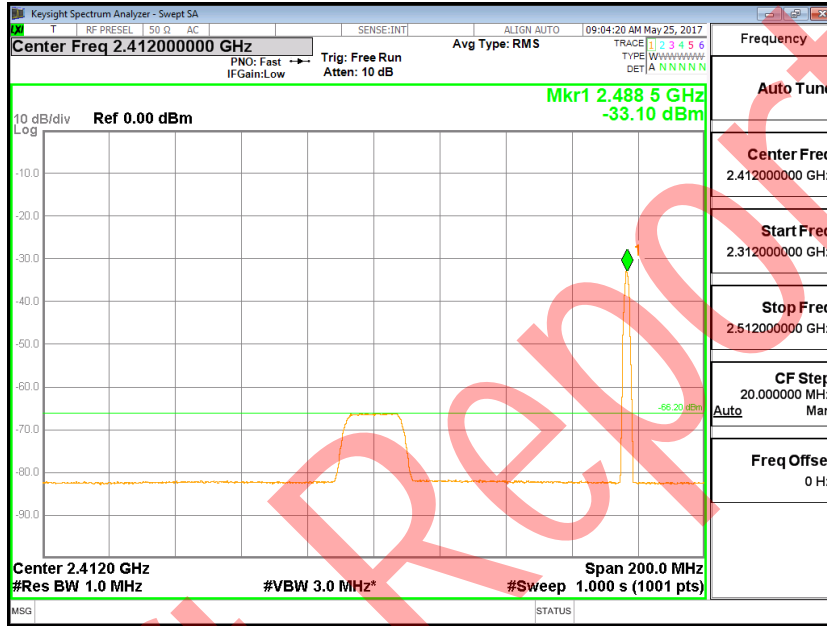




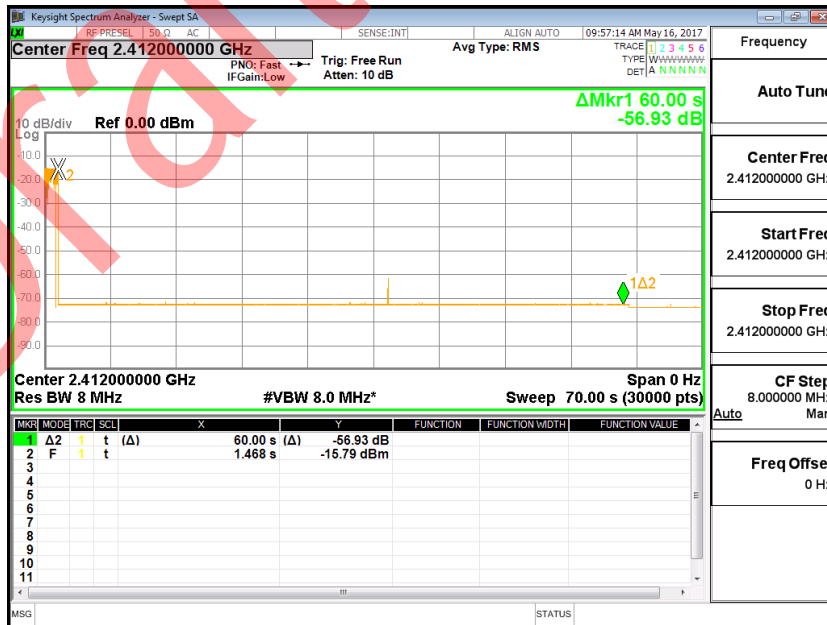


802.11n HT20 2412MHz  
AWGN (Interference) + CW (Unwanted Signal)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle

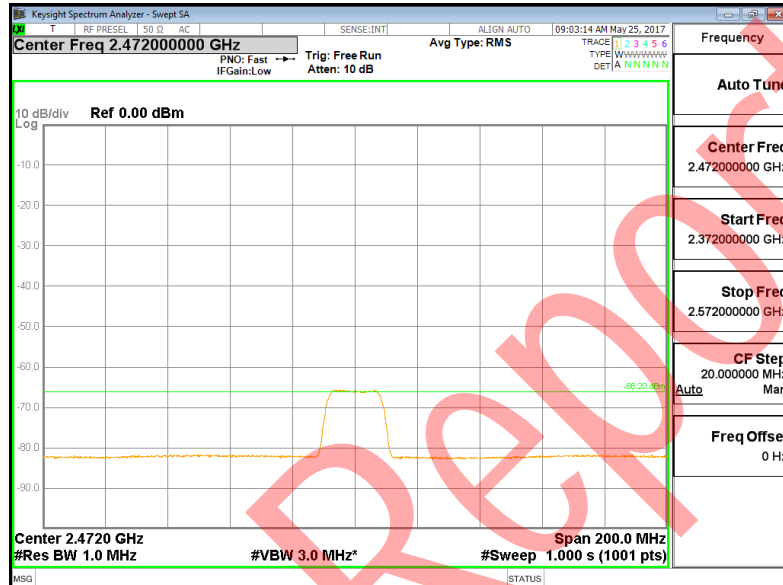


Note: Detection Level = -70 dBm/MHz + 10 × log<sub>10</sub> (100 mW / Pout) + Gain for conducted measurement.  
(Pout in mW e.i.r.p.)

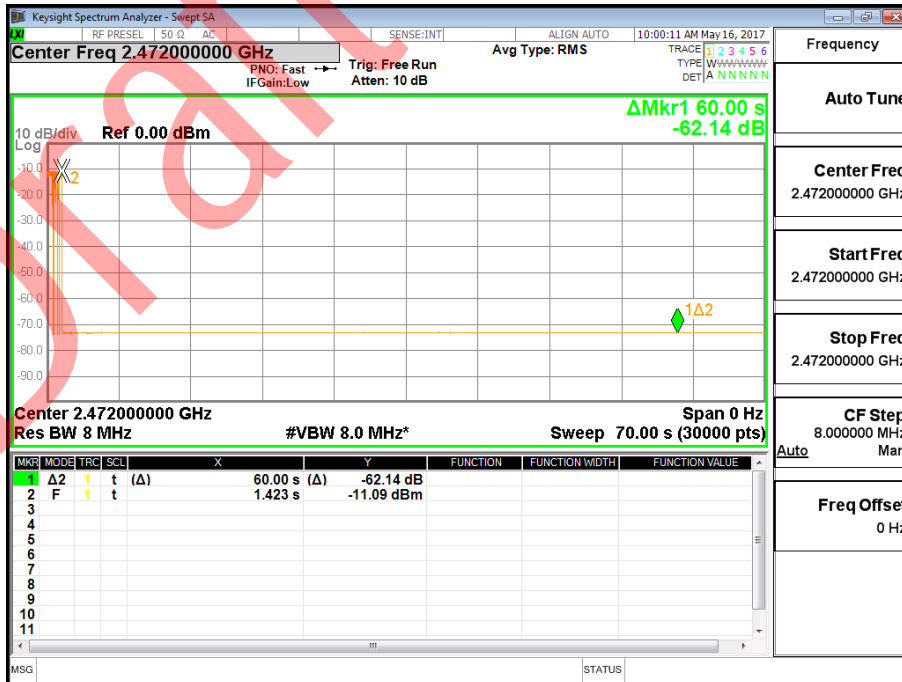


802.11n HT20 2472MHz  
AWGN (Interference)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



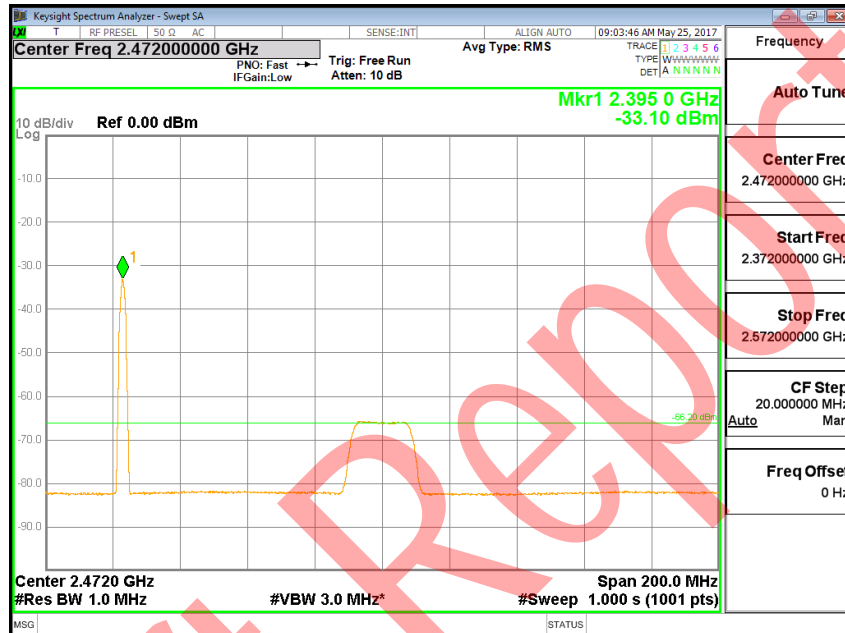
Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle



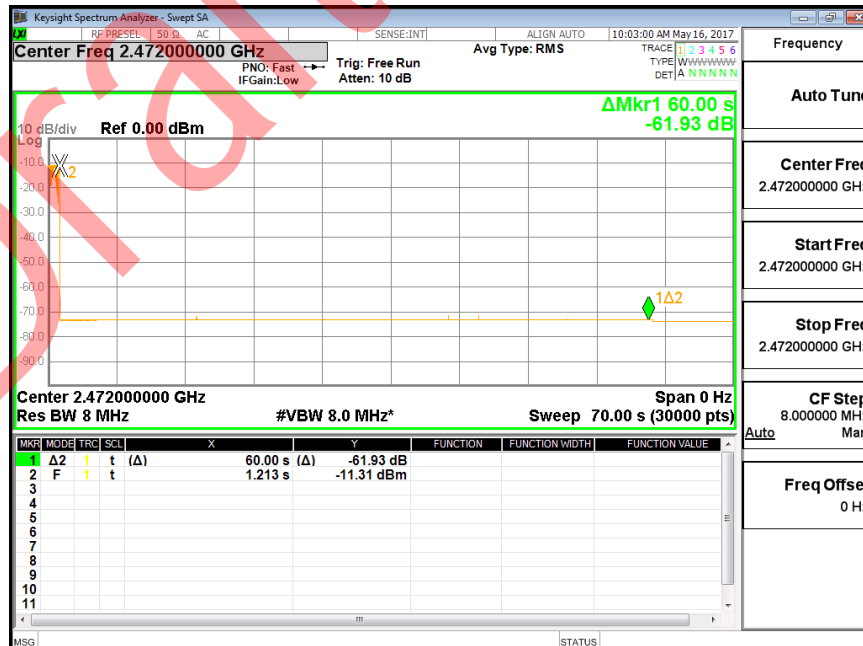


802.11n HT20 2472MHz  
AWGN (Interference) + CW (Unwanted Signal)

Detection Level = -66.20dBm/MHz  
Interference dwell time = 60 seconds



Transmission abort within Maximum Channel Occupancy Time after interference added and the short control signaling is less than 10% duty cycle



Note: Detection Level = -70 dBm/MHz + 10 × log<sub>10</sub> (100 mW / Pout) + Gain for conducted measurement.  
(Pout in mW e.i.r.p.)



## 6 Geo-location Capability

### 6.1 Geo-location

#### 6.1.1 Definition and Requirement

Geo-location capability is a feature of the equipment to determine its geographical location with the purpose to configure itself according to the regulatory requirements applicable at the geographical location where it operates.

The geo-location capability may be present in the equipment or in an external device (temporary) associated with the equipment operating at the same geographical location during the initial power up of the equipment. The geographical location may also be available in equipment already installed and operating at the same geographical location.

The geographical location determined by the equipment shall not be accessible to the user.

#### 6.1.2 Description

This device does not support this capability declared by the manufacturer.

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## 7 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Sensor	DARE	RPR3006W	13100030SN O31	10MHz~6GHz	Sep. 21, 2016	May 05, 2017 ~ Jun. 07, 2017	Sep. 22, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Jul. 17, 2016	May 05, 2017 ~ Jun. 07, 2017	Jul. 16, 2017	Conducted (TH05-HY)
Temperature Chamber	ESPEC	SH-641	92013720	-40°C ~90°C	Sep. 01, 2016	May 05, 2017 ~ Jun. 07, 2017	Aug. 31, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Agilent	E4445A	MY41000161	3Hz~13.2GHz	Nov. 28,2016	May 17, 2017	Nov. 27,2017	Conducted (DFS02-HY)
Base Station	Rohde & Schwarz	CMW500	132247	GSM/GPRS/WC DMA/FD-LTE/TD -LTE/MIMO	Dec. 14, 2016	May 17, 2017	Dec. 13, 2017	Conducted (DFS02-HY)
Signal Generator	Agilent	E8247C	MY43321356	CW Signal Generator	Sep. 30, 2016	May 17, 2017	Sep. 29, 2017	Conducted (DFS02-HY)
Signal Generator (Interferer)	Rohde & Schwarz	SMU200A	103008	9KHz~3GHz	Aug. 02, 2016	May 16, 2017 ~ May 25, 2017	Aug. 01, 2017	DFS (DFS02-HY)
Signal Generator (Interferer)	Rohde & Schwarz	SMJ100A	101375	100kHz~6GHz	Jan. 25, 2017	May 16, 2017 ~ May 25, 2017	Jan. 24, 2018	DFS (DFS02-HY)
Spectrum Analyzer	Keysight	N9010A	MY56070412	10Hz~7GHz	Aug. 05, 2016	May 16, 2017 ~ May 25, 2017	Aug. 04, 2017	DFS (DFS02-HY)
Bilog Antenna	Teseq GmbH	CBL6112D	35379	30MHz~2GHz	Oct. 15, 2016	Jun. 03, 2017	Oct. 14, 2017	Radiation (05CH05-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Jul. 14, 2016	Jun. 03, 2017	Jul. 13, 2017	Radiation (05CH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV 30	101749	10Hz~30GHz	Jan. 04, 2017	Jun. 03, 2017	Jan. 03, 2018	Radiation (05CH05-HY)
Preamplifier	Agilent	8449B	3008A02665	1GHz~26.5GHz	Dec. 27, 2016	Jun. 03, 2017	Dec. 26, 2017	Radiation (05CH05-HY)
Amplifier	EMCI	EMC001830	980191	10MHz~8GHz	Jan. 17, 2017	Jun. 03, 2017	Jan. 16, 2018	Radiation (05CH05-HY)
Antenna Mast	ChainTek	MD-200	1308055	1m~4m	N/A	Jun. 03, 2017	N/A	Radiation (05CH05-HY)
Turn Table	EMEC	TT 2000	N/A	0-360 degree	N/A	Jun. 03, 2017	N/A	Radiation (05CH05-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Mar. 23, 2017	May 19, 2017	Mar. 22, 2018	Radiation (03CH13-HY)

**Note:** Test equipment calibration is traceable to the procedure of ISO17025.



## 8 Uncertainty Evaluation

Test Item	Uncertainty
Occupied Channel Bandwidth	$\pm 0.49 \%$
RF output power, conducted	$\pm 0.61 \text{ dB}$
Power density, conducted	$\pm 0.60 \text{ dB}$
Radiated emissions	$\pm 2.86 \text{ dB}$
Temperature	$\pm 0.8 \text{ }^\circ\text{C}$
Humidity	$\pm 3 \%$
Time	$\pm 0.33 \%$

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**Appendix A. Test Result of Conducted Test Items**

Test Engineer:	Derek Hsu	Temperature:	24~25	°C
Test Date:	2017/05/05~2017/06/07	Relative Humidity:	55~57	%

**TEST RESULTS DATA**  
**EIRP Power**

Conducted Power (dBm)								
Mod.	Data Rate	NTX	Channe	Freq. (MHz)	Temperature Nomal	Extreme Temperature Low	Extreme Temperature High	Gain (dBi)
					25 °C	-20 °C	70 °C	
11b	1Mbps	1	1	2412	14.10	13.80	13.00	1.90
11b	1Mbps	1	7	2442	15.60	15.30	14.50	1.90
11b	1Mbps	1	13	2472	14.00	13.70	12.70	1.90
11g	6Mbps	1	1	2412	13.30	13.40	12.00	1.90
11g	6Mbps	1	7	2442	16.10	16.20	14.80	1.90
11g	6Mbps	1	13	2472	14.70	14.80	13.20	1.90
HT20	MCS0	1	1	2412	12.60	12.60	11.30	1.90
HT20	MCS0	1	7	2442	15.90	15.80	14.60	1.90
HT20	MCS0	1	13	2472	14.40	14.30	13.00	1.90

EIRP Power (dBm)									
Mod.	Data Rate	NTX	Channe	Freq. (MHz)	Temperature Nomal	Temperature Low	Temperature High	Limit (dBm)	Pass/Fail
11b	1Mbps	1	1	2412	16.00	15.70	14.90	20	Pass
11b	1Mbps	1	7	2442	17.50	17.20	16.40	20	Pass
11b	1Mbps	1	13	2472	15.90	15.60	14.60	20	Pass
11g	6Mbps	1	1	2412	15.20	15.30	13.90	20	Pass
11g	6Mbps	1	7	2442	18.00	18.10	16.70	20	Pass
11g	6Mbps	1	13	2472	16.60	16.70	15.10	20	Pass
HT20	MCS0	1	1	2412	14.50	14.50	13.20	20	Pass
HT20	MCS0	1	7	2442	17.80	17.70	16.50	20	Pass
HT20	MCS0	1	13	2472	16.30	16.20	14.90	20	Pass

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**TEST RESULTS DATA**  
**EIRP Power Density**

Power Density							
Mod.	Data Rate	N <sub>TX</sub>	Channe	Freq. (MHz)	EIRP Power Density (dBm/MHz)	EIRP Limit (dBm /MHz)	Pass/Fail
11b	1Mbps	1	1	2412	7.70	10	Pass
11b	1Mbps	1	7	2442	9.14	10	Pass
11b	1Mbps	1	13	2472	7.51	10	Pass
11g	6Mbps	1	1	2412	4.58	10	Pass
11g	6Mbps	1	7	2442	7.55	10	Pass
11g	6Mbps	1	13	2472	5.92	10	Pass
HT20	MCS0	1	1	2412	3.72	10	Pass
HT20	MCS0	1	7	2442	7.17	10	Pass
HT20	MCS0	1	13	2472	5.49	10	Pass

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**TEST RESULTS DATA**  
**99% Occupied Bandwidth**

Occupied Bandwidth									
Mod.	Data Rate	NTX	Channe	Freq. (MHz)	99% Occupied BW (MHz)	Freq. Low (MHz)	Freq. High (MHz)	Limit (Within operating Band)	Pass/Fail
11b	1Mbps	1	1	2412	14.24	2404.88	2419.12		Pass
11b	1Mbps	1	13	2472	14.24	2464.88	2479.12		Pass
11g	6Mbps	1	1	2412	16.84	2403.60	2420.44		Pass
11g	6Mbps	1	13	2472	16.92	2463.56	2480.48		Pass
HT20	MCS0	1	1	2412	17.92	2403.04	2420.96		Pass
HT20	MCS0	1	13	2472	17.96	2463.04	2481.00		Pass

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**TEST RESULTS DATA**  
**OOB Emission Level**

Mod.	Data Rate	N	Tx Channel	Freq. (MHz)	OOB Emission Worst Level (dBm/MHz)	Limit (dBm /MHz)	Pass/Fail
11b	1Mbps	1	1	2412	-33.96	-10,-20	Pass
11b	1Mbps	1	13	2472	-32.77	-10,-20	Pass
11g	6Mbps	1	1	2412	-19.25	-10,-20	Pass
11g	6Mbps	1	13	2472	-15.98	-10,-20	Pass
HT20	MCS0	1	1	2412	-20.46	-10,-20	Pass
HT20	MCS0	1	13	2472	-17.46	-10,-20	Pass

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# WLAN TX Conducted Spurious Emission Plots

Test Engineer :	Karl Hou	Temperature :	21~22°C
		Relative Humidity :	45~46%

2.4GHz 2400~2483.5MHz

WIFI 802.11b

WIFI	2.4GHz 2400~2483.5MHz																																																																																																																																																																																																																																
ANT	802.11b																																																																																																																																																																																																																																
1	CH01 2412MHz	CH13 2472MHz																																																																																																																																																																																																																															
TX	<p>Date: 2017-05-19</p>	<p>Date: 2017-05-19</p>																																																																																																																																																																																																																															
	<table border="1"> <thead> <tr> <th>Site</th> <th>03CH13-HY</th> </tr> <tr> <th>Condition</th> <th>300328-TX</th> </tr> <tr> <th>Project</th> <th>741322</th> </tr> <tr> <th>Mode</th> <th>1</th> </tr> </thead> <tbody> <tr> <th>Freq</th> <th>Level</th> <th>Over</th> <th>Limit</th> <th>Resd</th> <th>Ass</th> <th>Ass2</th> <th>Cable</th> </tr> <tr> <th>MHz</th> <th>dBm</th> <th>Limit</th> <th>Line</th> <th>Level</th> <th>Factor</th> <th>Factor</th> <th>Loss</th> </tr> <tr> <td>1</td> <td>2400.00</td> <td>-53.96</td> <td>-53.96</td> <td>-56.00</td> <td>0.41</td> <td>0.00</td> <td>0.43</td> </tr> <tr> <td>2</td> <td>801.00</td> <td>-88.74</td> <td>-34.74</td> <td>-54.00</td> <td>-50.56</td> <td>0.42</td> <td>0.00</td> </tr> <tr> <td>3</td> <td>1600.00</td> <td>-51.71</td> <td>-21.71</td> <td>-30.00</td> <td>-54.16</td> <td>0.79</td> <td>0.00</td> </tr> <tr> <td>4</td> <td>2330.00</td> <td>-45.17</td> <td>-15.17</td> <td>-30.00</td> <td>-48.17</td> <td>0.92</td> <td>0.00</td> </tr> <tr> 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2.4GHz 2400~2483.5MHz

WIFI 802.11g

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<tr><td>6</td><td>2374.00</td><td>-44.95</td><td>-14.95</td><td>-30.00</td><td>-47.35</td><td>0.91</td><td>0.00</td><td>2.06</td><td></td></tr> <tr><td>7</td><td>2374.00</td><td>-46.64</td><td>-16.64</td><td>-30.00</td><td>-49.77</td><td>0.97</td><td>0.00</td><td>2.16</td><td></td></tr> <tr><td>8</td><td>3784.00</td><td>-51.46</td><td>-21.46</td><td>-30.00</td><td>-56.17</td><td>1.22</td><td>0.00</td><td>2.49</td><td></td></tr> <tr><td>9</td><td>4122.00</td><td>-50.72</td><td>-20.72</td><td>-30.00</td><td>-55.47</td><td>1.92</td><td>0.00</td><td>2.83</td><td></td></tr> <tr><td>10</td><td>4848.00</td><td>-72.64</td><td>-42.64</td><td>-30.00</td><td>-77.61</td><td>1.83</td><td>0.00</td><td>3.14</td><td></td></tr> <tr><td>11</td><td>5749.00</td><td>-57.70</td><td>-27.70</td><td>-30.00</td><td>-63.08</td><td>1.92</td><td>0.00</td><td>3.46</td><td></td></tr> <tr><td>12</td><td>6581.00</td><td>-56.84</td><td>-26.84</td><td>-30.00</td><td>-62.64</td><td>2.24</td><td>0.00</td><td>3.76</td><td></td></tr> <tr><td>13</td><td>11048.75</td><td>-71.73</td><td>-41.73</td><td>-30.00</td><td>-79.86</td><td>2.84</td><td>0.00</td><td>5.29</td><td></td></tr> </tbody> </table>	Ch	Freq	Level	Over	Limit	Band	Acc	Acc2	Cable	Loss		MHz	dBm	dB	dBm	dBm	dB	dB	dB	dB	1	239.79	-93.20	-57.20	-36.00	-94.24	0.41	0.00	0.63		2	239.79	-93.20	-57.20	-36.00	-94.24	0.41	0.00	0.63		3	826.40	-57.56	-27.56	-30.00	-59.40	0.68	0.00	1.16		4	1826.40	-57.56	-27.56	-30.00	-59.40	0.68	0.00	1.16		5	1846.00	-52.18	-22.18	-30.00	-54.78	0.60	0.00	1.70		6	2374.00	-44.95	-14.95	-30.00	-47.35	0.91	0.00	2.06		7	2374.00	-46.64	-16.64	-30.00	-49.77	0.97	0.00	2.16		8	3784.00	-51.46	-21.46	-30.00	-56.17	1.22	0.00	2.49		9	4122.00	-50.72	-20.72	-30.00	-55.47	1.92	0.00	2.83		10	4848.00	-72.64	-42.64	-30.00	-77.61	1.83	0.00	3.14		11	5749.00	-57.70	-27.70	-30.00	-63.08	1.92	0.00	3.46		12	6581.00	-56.84	-26.84	-30.00	-62.64	2.24	0.00	3.76		13	11048.75	-71.73	-41.73	-30.00	-79.86	2.84	0.00	5.29	
Ch	Freq	Level	Over	Limit	Band	Acc	Acc2	Cable	Loss																																																																																																																																																																																																																																																																																	
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2	801.20	-91.00	-37.00	-54.00	-92.00	0.68	0.00	1.14																																																																																																																																																																																																																																																																																		
3	1814.00	-55.53	-25.53	-30.00	-57.96	0.77	0.00	1.68																																																																																																																																																																																																																																																																																		
4	2334.00	-46.60	-16.60	-30.00	-49.78	0.92	0.00	2.06																																																																																																																																																																																																																																																																																		
5	2346.00	-46.99	-16.99	-30.00	-50.11	0.97	0.00	2.15																																																																																																																																																																																																																																																																																		
6	2374.00	-55.57	-25.57	-30.00	-60.32	1.30	0.00	2.45																																																																																																																																																																																																																																																																																		
7	4017.00	-49.72	-19.72	-30.00	-54.41	1.92	0.00	2.77																																																																																																																																																																																																																																																																																		
8	4621.00	-49.83	-19.83	-30.00	-54.76	1.95	0.00	3.10																																																																																																																																																																																																																																																																																		
9	5622.00	-57.95	-27.95	-30.00	-63.28	1.90	0.00	3.43																																																																																																																																																																																																																																																																																		
10	6422.00	-64.72	-31.72	-30.00	-67.54	2.12	0.00	3.70																																																																																																																																																																																																																																																																																		
11	11118.75	-72.23	-42.23	-30.00	-80.36	2.84	0.00	5.30																																																																																																																																																																																																																																																																																		
Ch	Freq	Level	Over	Limit	Band	Acc	Acc2	Cable	Loss																																																																																																																																																																																																																																																																																	
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2	239.79	-93.20	-57.20	-36.00	-94.24	0.41	0.00	0.63																																																																																																																																																																																																																																																																																		
3	826.40	-57.56	-27.56	-30.00	-59.40	0.68	0.00	1.16																																																																																																																																																																																																																																																																																		
4	1826.40	-57.56	-27.56	-30.00	-59.40	0.68	0.00	1.16																																																																																																																																																																																																																																																																																		
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8	3784.00	-51.46	-21.46	-30.00	-56.17	1.22	0.00	2.49																																																																																																																																																																																																																																																																																		
9	4122.00	-50.72	-20.72	-30.00	-55.47	1.92	0.00	2.83																																																																																																																																																																																																																																																																																		
10	4848.00	-72.64	-42.64	-30.00	-77.61	1.83	0.00	3.14																																																																																																																																																																																																																																																																																		
11	5749.00	-57.70	-27.70	-30.00	-63.08	1.92	0.00	3.46																																																																																																																																																																																																																																																																																		
12	6581.00	-56.84	-26.84	-30.00	-62.64	2.24	0.00	3.76																																																																																																																																																																																																																																																																																		
13	11048.75	-71.73	-41.73	-30.00	-79.86	2.84	0.00	5.29																																																																																																																																																																																																																																																																																		



2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20

WIFI	2.4GHz 2400~2483.5MHz																																																																																																																																																																																																																									
ANT	802.11n HT20																																																																																																																																																																																																																									
1	CH01 2412MHz	CH13 2472MHz																																																																																																																																																																																																																								
TX	<p>Site : 03CH13-HY Condition : 300328-TX Project : 741322 Mode : 6</p> <table border="1"> <thead> <tr> <th>Ch</th> <th>Freq</th> <th>Level</th> <th>Limit</th> <th>Diff</th> <th>Band</th> <th>Att</th> <th>Att2</th> <th>Cable</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBm</th> <th>dB</th> <th>dBm</th> <th>dB</th> <th>dB</th> <th>dB</th> <th>Loss</th> </tr> </thead> <tbody> <tr><td>1</td><td>239.79</td><td>-94.14</td><td>-58.14</td><td>-36.00</td><td>-95.18</td><td>0.41</td><td>0.00</td><td>0.63</td></tr> <tr><td>2</td><td>239.10</td><td>-85.01</td><td>-31.01</td><td>-54.00</td><td>-86.69</td><td>0.59</td><td>0.00</td><td>1.89</td></tr> <tr><td>3</td><td>2384.00</td><td>-46.67</td><td>-16.67</td><td>-30.00</td><td>-49.61</td><td>0.99</td><td>0.00</td><td>2.04</td></tr> <tr><td>4</td><td>2376.00</td><td>-44.08</td><td>-14.08</td><td>-30.00</td><td>-47.22</td><td>0.98</td><td>0.00</td><td>2.16</td></tr> <tr><td>5</td><td>2316.00</td><td>-55.21</td><td>-25.21</td><td>-30.00</td><td>-59.96</td><td>2.39</td><td>0.00</td><td>2.45</td></tr> <tr><td>6</td><td>4814.00</td><td>-50.08</td><td>-30.08</td><td>-30.00</td><td>-54.77</td><td>1.92</td><td>0.00</td><td>2.77</td></tr> <tr><td>7</td><td>4833.00</td><td>-71.49</td><td>-41.49</td><td>-30.00</td><td>-76.44</td><td>1.85</td><td>0.00</td><td>3.10</td></tr> <tr><td>8</td><td>5629.00</td><td>-55.45</td><td>-25.45</td><td>-30.00</td><td>-60.78</td><td>1.99</td><td>0.00</td><td>3.43</td></tr> <tr><td>9</td><td>6432.00</td><td>-62.01</td><td>-32.01</td><td>-30.00</td><td>-67.83</td><td>2.12</td><td>0.00</td><td>3.70</td></tr> <tr><td>10</td><td>10522.50</td><td>-71.98</td><td>-41.98</td><td>-30.00</td><td>-79.85</td><td>2.76</td><td>0.00</td><td>5.11</td></tr> </tbody> </table>	Ch	Freq	Level	Limit	Diff	Band	Att	Att2	Cable		MHz	dBm	dB	dBm	dB	dB	dB	Loss	1	239.79	-94.14	-58.14	-36.00	-95.18	0.41	0.00	0.63	2	239.10	-85.01	-31.01	-54.00	-86.69	0.59	0.00	1.89	3	2384.00	-46.67	-16.67	-30.00	-49.61	0.99	0.00	2.04	4	2376.00	-44.08	-14.08	-30.00	-47.22	0.98	0.00	2.16	5	2316.00	-55.21	-25.21	-30.00	-59.96	2.39	0.00	2.45	6	4814.00	-50.08	-30.08	-30.00	-54.77	1.92	0.00	2.77	7	4833.00	-71.49	-41.49	-30.00	-76.44	1.85	0.00	3.10	8	5629.00	-55.45	-25.45	-30.00	-60.78	1.99	0.00	3.43	9	6432.00	-62.01	-32.01	-30.00	-67.83	2.12	0.00	3.70	10	10522.50	-71.98	-41.98	-30.00	-79.85	2.76	0.00	5.11	<p>Site : 03CH13-HY Condition : 300328-TX Project : 741322 Mode : 6</p> <table border="1"> <thead> <tr> <th>Ch</th> <th>Freq</th> <th>Level</th> <th>Limit</th> <th>Diff</th> <th>Band</th> <th>Att</th> <th>Att2</th> <th>Cable</th> </tr> <tr> <th></th> <th>MHz</th> <th>dBm</th> <th>dB</th> <th>dBm</th> <th>dB</th> <th>dB</th> <th>dB</th> <th>Loss</th> </tr> </thead> <tbody> <tr><td>1</td><td>239.79</td><td>-93.05</td><td>-57.05</td><td>-36.00</td><td>-94.09</td><td>0.41</td><td>0.00</td><td>0.63</td></tr> <tr><td>2</td><td>239.10</td><td>-83.37</td><td>-34.37</td><td>-54.00</td><td>-86.21</td><td>0.68</td><td>0.00</td><td>1.16</td></tr> <tr><td>3</td><td>2384.00</td><td>-45.73</td><td>-15.73</td><td>-30.00</td><td>-48.70</td><td>0.91</td><td>0.00</td><td>2.06</td></tr> <tr><td>4</td><td>2376.00</td><td>-43.12</td><td>-13.12</td><td>-30.00</td><td>-46.35</td><td>0.91</td><td>0.00</td><td>2.16</td></tr> <tr><td>5</td><td>2316.00</td><td>-53.98</td><td>-23.98</td><td>-30.00</td><td>-58.69</td><td>2.22</td><td>0.00</td><td>2.49</td></tr> <tr><td>6</td><td>4822.00</td><td>-52.48</td><td>-22.48</td><td>-30.00</td><td>-57.53</td><td>1.92</td><td>0.00</td><td>2.93</td></tr> <tr><td>7</td><td>4847.00</td><td>-70.52</td><td>-40.52</td><td>-30.00</td><td>-79.50</td><td>1.83</td><td>0.00</td><td>3.15</td></tr> <tr><td>8</td><td>5722.00</td><td>-59.61</td><td>-29.61</td><td>-30.00</td><td>-62.89</td><td>1.92</td><td>0.00</td><td>3.46</td></tr> <tr><td>9</td><td>6591.00</td><td>-56.47</td><td>-26.47</td><td>-30.00</td><td>-63.47</td><td>2.24</td><td>0.00</td><td>3.76</td></tr> <tr><td>10</td><td>10522.50</td><td>-73.99</td><td>-43.99</td><td>-30.00</td><td>-79.86</td><td>2.76</td><td>0.00</td><td>5.11</td></tr> </tbody> </table>	Ch	Freq	Level	Limit	Diff	Band	Att	Att2	Cable		MHz	dBm	dB	dBm	dB	dB	dB	Loss	1	239.79	-93.05	-57.05	-36.00	-94.09	0.41	0.00	0.63	2	239.10	-83.37	-34.37	-54.00	-86.21	0.68	0.00	1.16	3	2384.00	-45.73	-15.73	-30.00	-48.70	0.91	0.00	2.06	4	2376.00	-43.12	-13.12	-30.00	-46.35	0.91	0.00	2.16	5	2316.00	-53.98	-23.98	-30.00	-58.69	2.22	0.00	2.49	6	4822.00	-52.48	-22.48	-30.00	-57.53	1.92	0.00	2.93	7	4847.00	-70.52	-40.52	-30.00	-79.50	1.83	0.00	3.15	8	5722.00	-59.61	-29.61	-30.00	-62.89	1.92	0.00	3.46	9	6591.00	-56.47	-26.47	-30.00	-63.47	2.24	0.00	3.76	10	10522.50	-73.99	-43.99	-30.00	-79.86	2.76	0.00	5.11
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6	4814.00	-50.08	-30.08	-30.00	-54.77	1.92	0.00	2.77																																																																																																																																																																																																																		
7	4833.00	-71.49	-41.49	-30.00	-76.44	1.85	0.00	3.10																																																																																																																																																																																																																		
8	5629.00	-55.45	-25.45	-30.00	-60.78	1.99	0.00	3.43																																																																																																																																																																																																																		
9	6432.00	-62.01	-32.01	-30.00	-67.83	2.12	0.00	3.70																																																																																																																																																																																																																		
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5	2316.00	-53.98	-23.98	-30.00	-58.69	2.22	0.00	2.49																																																																																																																																																																																																																		
6	4822.00	-52.48	-22.48	-30.00	-57.53	1.92	0.00	2.93																																																																																																																																																																																																																		
7	4847.00	-70.52	-40.52	-30.00	-79.50	1.83	0.00	3.15																																																																																																																																																																																																																		
8	5722.00	-59.61	-29.61	-30.00	-62.89	1.92	0.00	3.46																																																																																																																																																																																																																		
9	6591.00	-56.47	-26.47	-30.00	-63.47	2.24	0.00	3.76																																																																																																																																																																																																																		
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Draft Report



## WLAN RX Conducted Spurious Emission Plots

Test Engineer :	Karl Hou	Temperature :	21~22°C
		Relative Humidity :	45~46%

2.4GHz 2400~2483.5MHz

WIFI 802.11 n HT20

WIFI	2.4GHz 2400~2483.5MHz																																																																																																	
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# WLAN TX Radiated Spurious Emission Plots

Test Engineer :	Watt Tseng	Temperature :	21~22°C
		Relative Humidity :	45~46%

## 2.4GHz 2400~2483.5MHz

### WIFI 802.11b

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# WLAN RX Radiated Spurious Emission Plots

Test Engineer :	Watt Tseng	Temperature :	21~22°C
		Relative Humidity :	45~46%

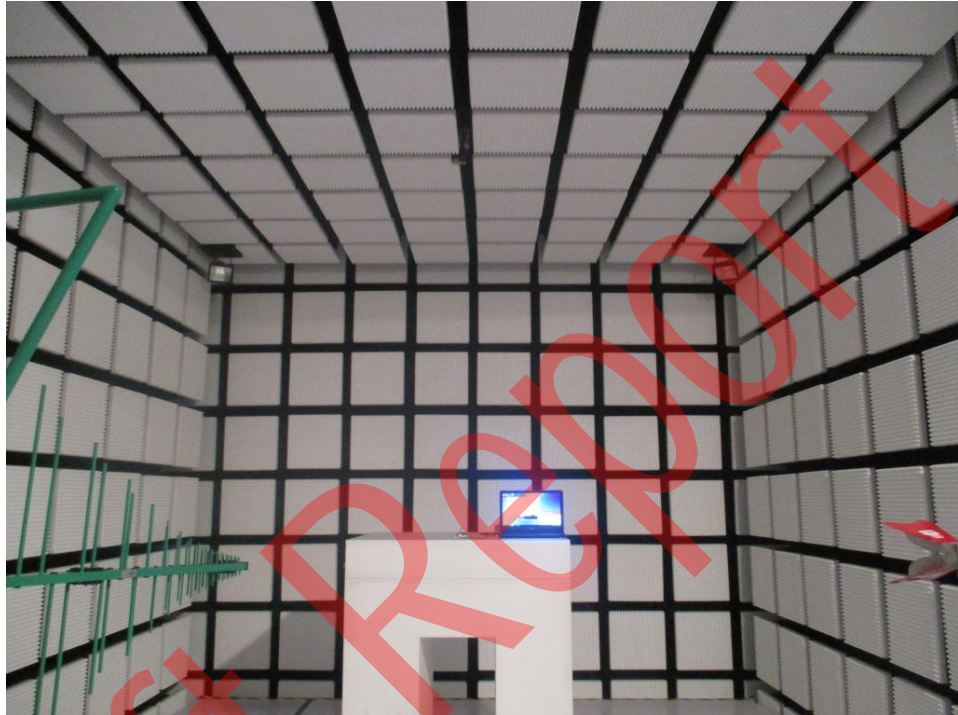
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## Appendix D. Photographs of Radiated Emission Test Configuration

Remote View



Near View

