



# FCC RADIO TEST REPORT

FCC ID : A4RGXCA6  
Equipment : Wireless Device  
Model Name : GXCA6  
Applicant : Google LLC  
1600 Amphitheatre Parkway,  
Mountain View, California, 94043 USA  
Standard : FCC Part 15 Subpart C §15.247

The product was received on Feb. 13, 2020 and testing was started from Mar. 12, 2020 and completed on May 15, 2020. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

*Louis Wu*

Approved by: Louis Wu

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 1.54 dB at 2484.080 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 11.23 dB at 0.569 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**Reviewed by: Wii Chang**

**Report Producer: Ann Lee**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Wireless Device
Model Name	GXCA6
FCC ID	A4RGXCA6
EUT supports Radios application	WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer.

EUT Information List	
S/N	Performed Test Item
N/A	Conducted Measurement
01211HF DL015YK	Radiated Spurious Emission
01171HF DL013LG	Conducted Emission



## 1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx/Rx Channel Frequency Range</b>	2412 MHz ~ 2472 MHz
<b>Maximum (Average) Output Power to antenna</b>	<b>&lt;Ant. 1&gt;</b> 802.11b : 16.70 dBm (0.0468 W) 802.11g : 16.60 dBm (0.0457 W) 802.11n HT20 : 16.60 dBm (0.0457 W) 802.11n HT40 : 14.20 dBm (0.0263 W) <b>&lt;Ant. 2&gt;</b> 802.11b : 16.60 dBm (0.0457 W) 802.11g : 16.60 dBm (0.0457 W) 802.11n HT20 : 16.60 dBm (0.0457 W) 802.11n HT40 : 14.10 dBm (0.0257 W)
<b>99% Occupied Bandwidth</b>	<b>&lt;Ant. 1&gt;</b> 802.11b : 13.50MHz 802.11g : 17.00MHz 802.11n HT20 : 17.80MHz 802.11n HT40 : 36.60MHz <b>&lt;Ant. 2&gt;</b> 802.11b : 13.55MHz 802.11g : 16.95MHz 802.11n HT20 : 17.80MHz 802.11n HT40 : 36.70MHz
<b>Antenna Type / Gain</b>	<b>&lt;Ant. 1&gt;</b> PCB PIFA Antenna type with gain 3.80 dBi <b>&lt;Ant. 2&gt;</b> PCB PIFA Antenna type with gain 3.90 dBi
<b>Type of Modulation</b>	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

## 1.3 Modification of EUT

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



### 1.4 Testing Location

<b>Test Site</b>	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory	
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan 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	CO05-HY

**Note:** The test site complies with ANSI C63.4 2014 requirement.

<b>Test Site</b>	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory	
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan 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>	
	03CH16-HY	

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW0007

### 1.5 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2013

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.



## 2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).
  
- b. AC power line Conducted Emission was tested under maximum output power.

### 2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	8	2447
	2	2417	9	2452
	3	2422	10	2457
	4	2427	11	2462
	5	2432	12	2467
	6	2437	13	2472
	7	2442		





## 2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

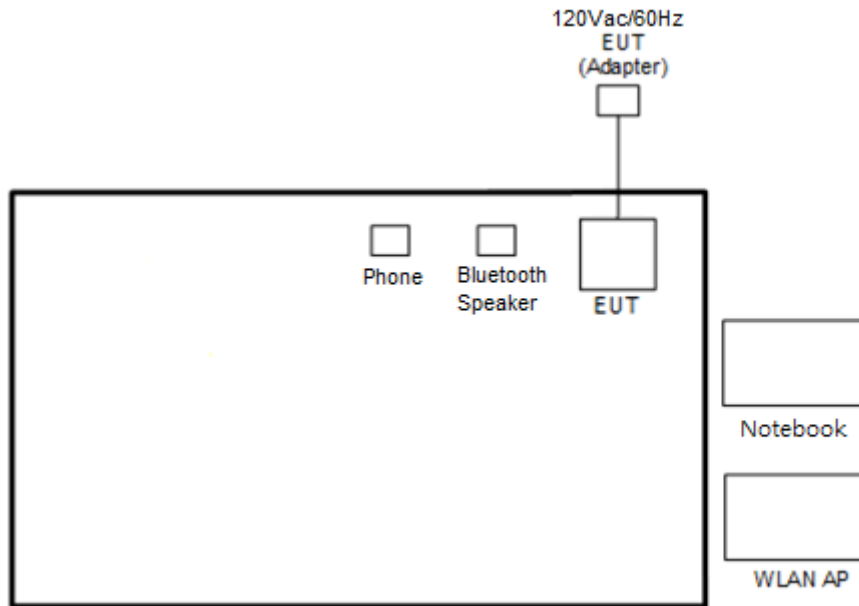
Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + Bluetooth Link + Max. Volum + Streaming music through WLAN and Bluetooth Speaker + AC Adapter 2
<b>Remark:</b> For Radiated Test Cases, the tests were performed with Adapter 1.	

Ch. #	2400-2483.5 MHz			
	802.11b	802.11g	802.11n HT20	802.11n HT40
Low	01	01	01	03
Middle	06	06	06	06
High	11	11	11	09
	12	12	12	10
	13	13	13	11

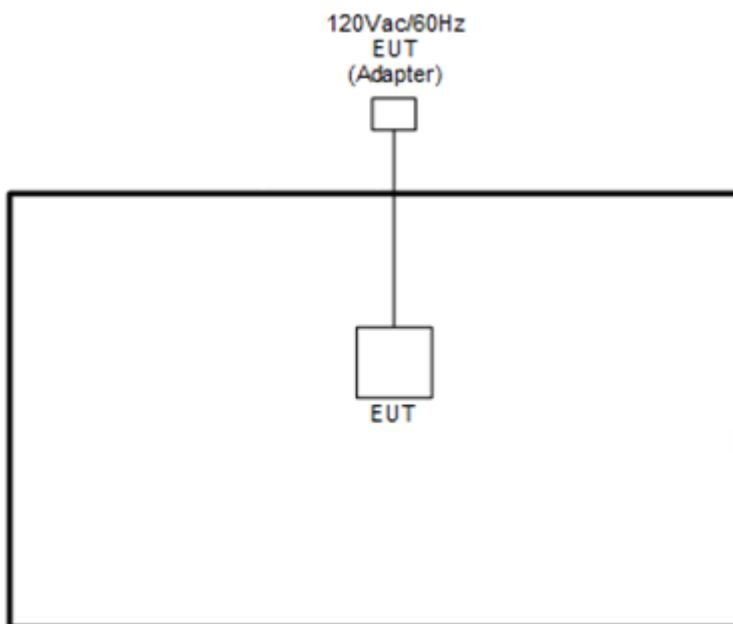
**Remark:** For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

## 2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN TX Mode>





## 2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 1.8m
3.	Bluetooth Speaker	KINGONE	K5	N/A	N/A	Unshielded, 1.8 m
4.	Phone	Google	Pixel 4 XL	N/A	N/A	Unshielded, 1.8 m

## 2.5 EUT Operation Test Setup

The RF test items, utility “CMD” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

## 2.6 Measurement Results Explanation Example

**For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset}(dB) &= \text{RF cable loss}(dB) + \text{attenuator factor}(dB). \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

### 3 Test Result

#### 3.1 6dB and 99% Bandwidth Measurement

##### 3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

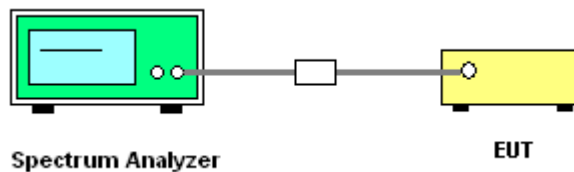
##### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

##### 3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW)  $\geq 3 * RBW$ .
6. Measure and record the results in the test report.

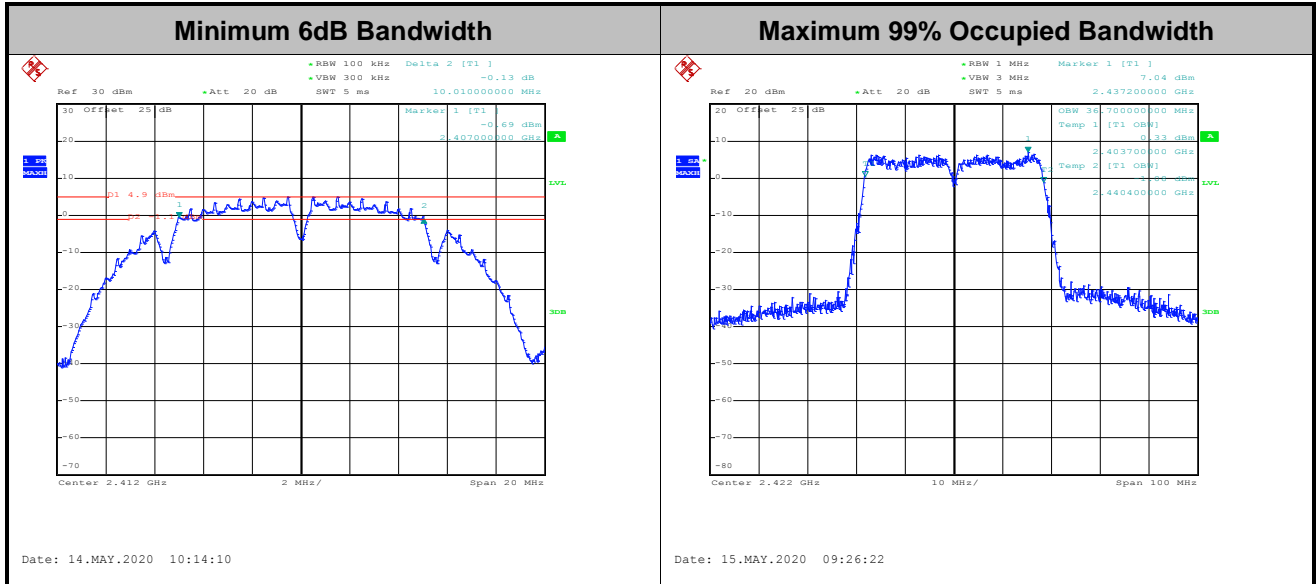
##### 3.1.4 Test Setup





### 3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

## 3.2 Output Power Measurement

### 3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for average output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the average output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

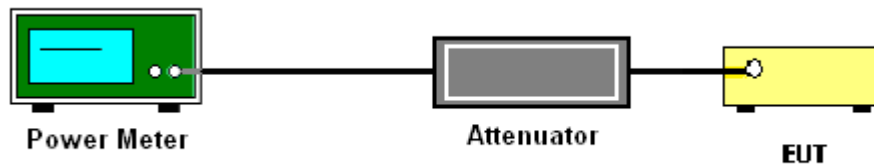
### 3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

### 3.2.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Average Output Power

Please refer to Appendix A.

### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

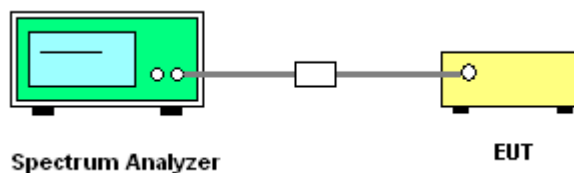
#### 3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

#### 3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

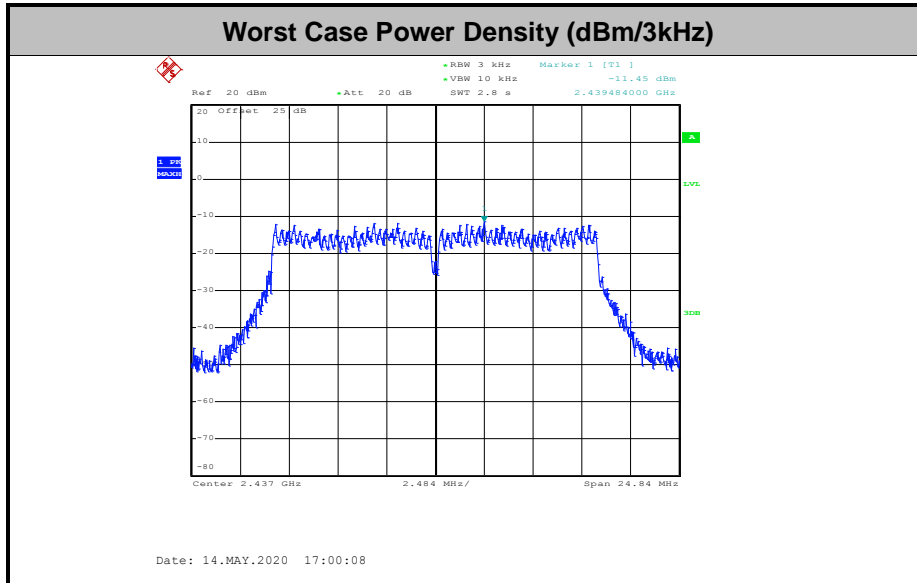
#### 3.3.4 Test Setup





### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.





## 3.4 Conducted Band Edges and Spurious Emission Measurement

### 3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

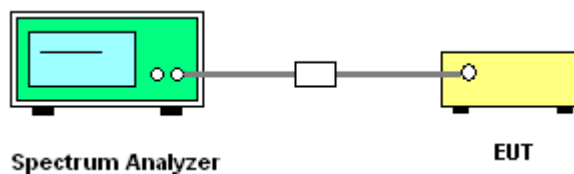
### 3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

### 3.4.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 3.4.4 Test Setup



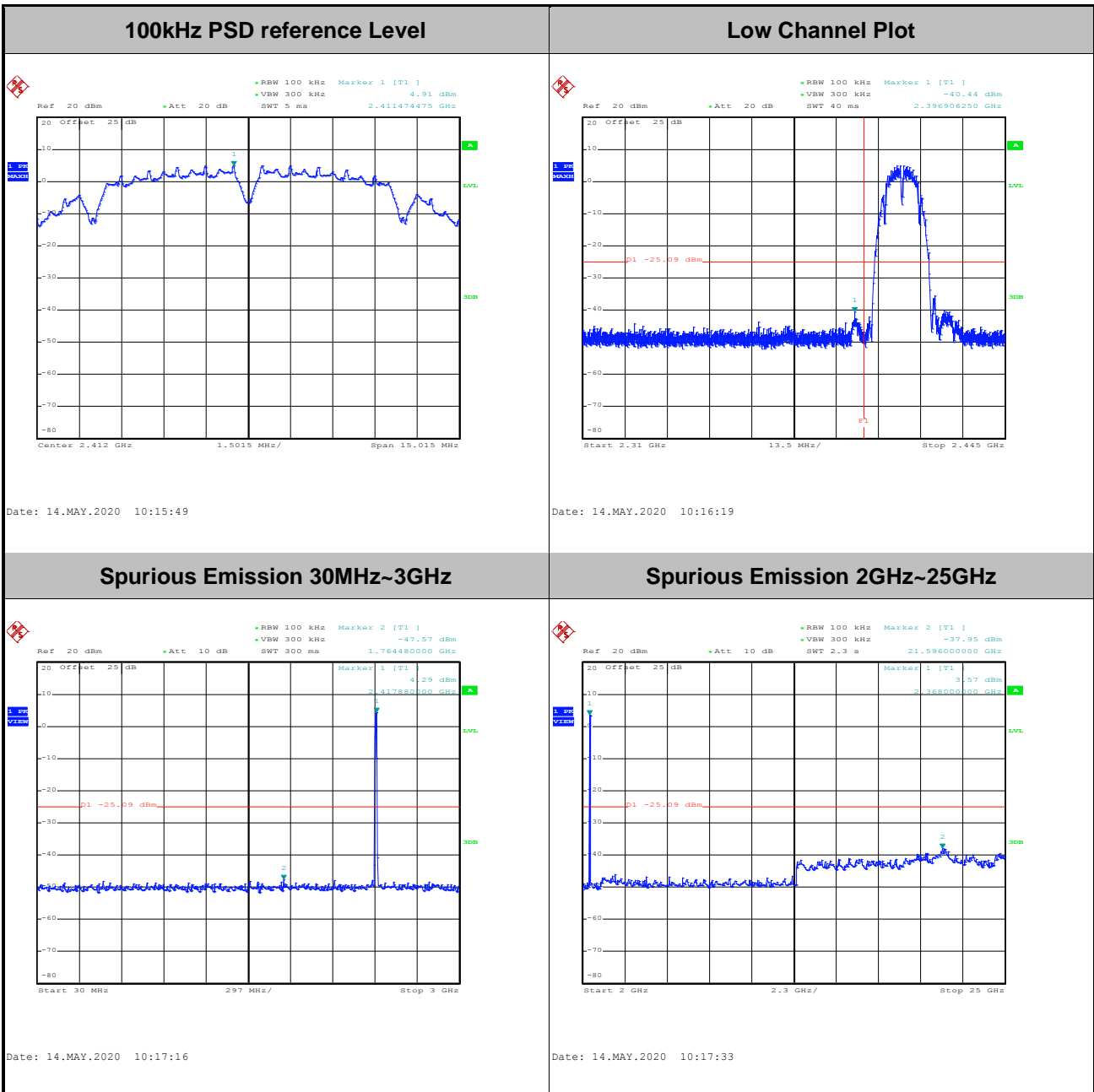


### 3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer : Shiming Liu	Temperature :	21~25°C
	Relative Humidity :	51~54%

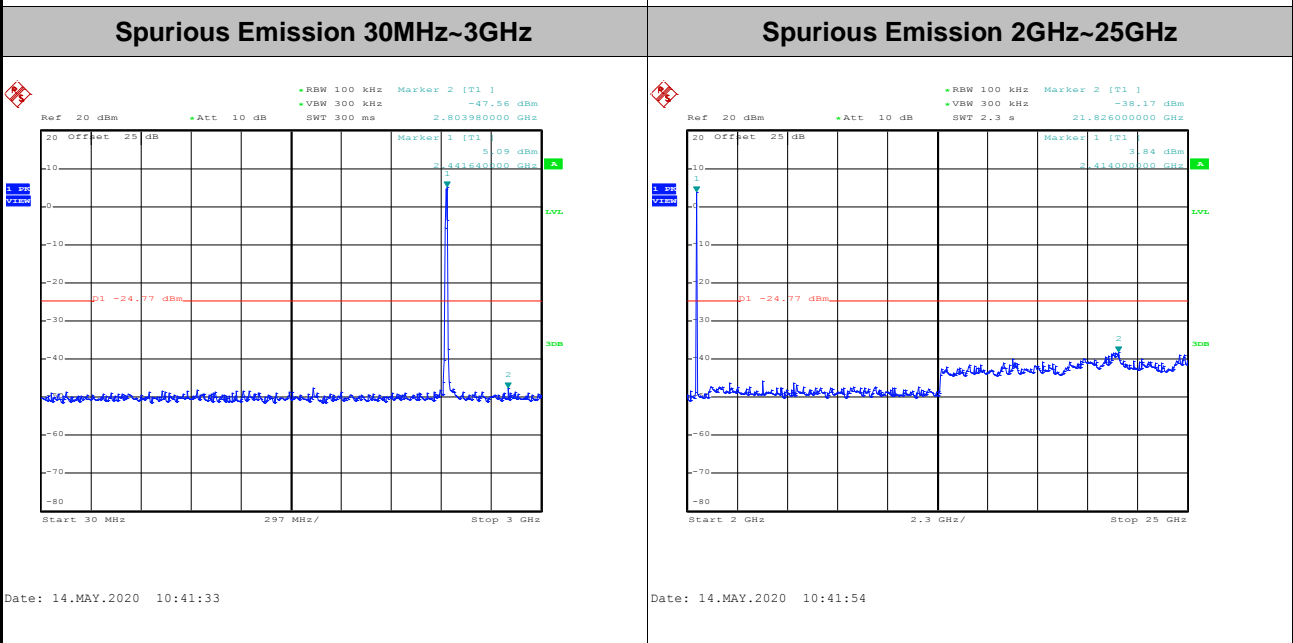
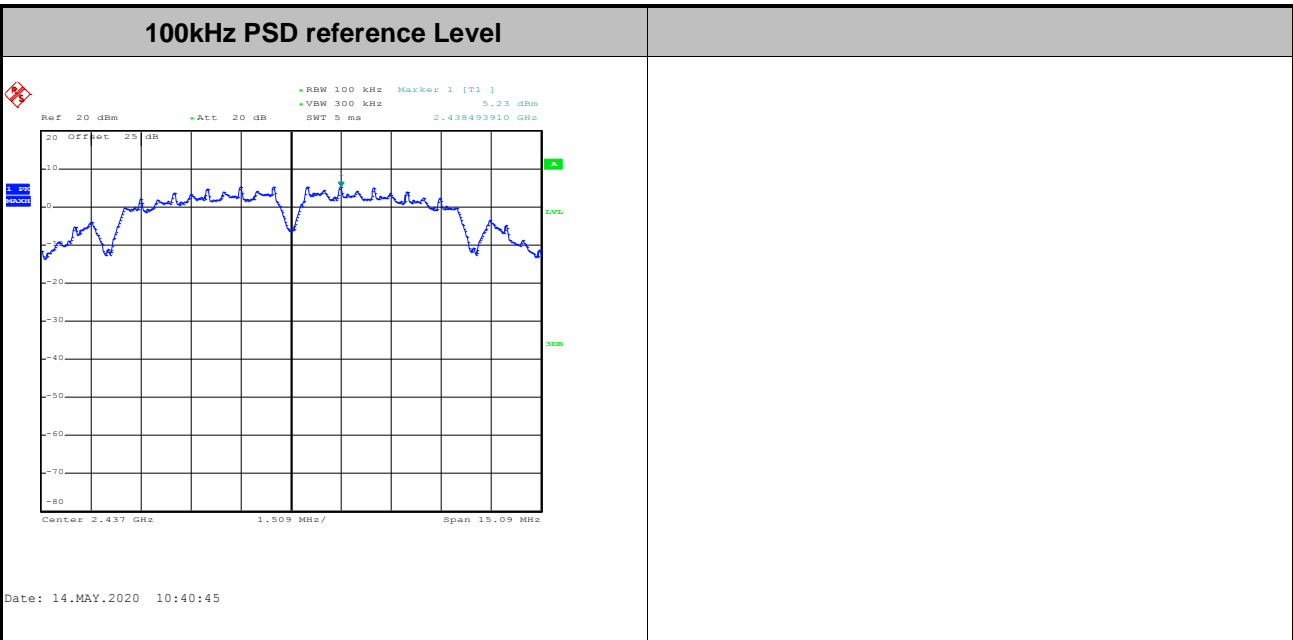
Number of TX = 1, Ant. 1 (Measured)

Test Mode :	802.11b	Test Channel :	01
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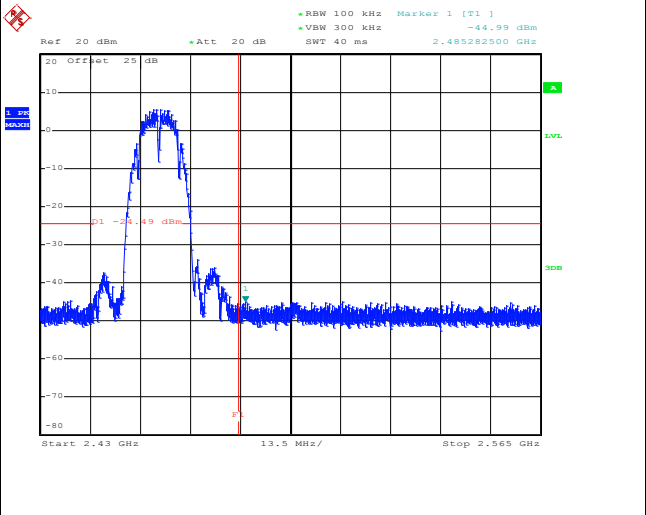
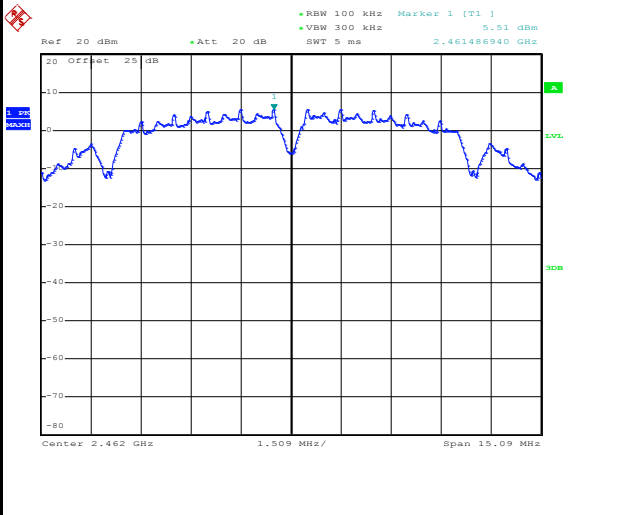
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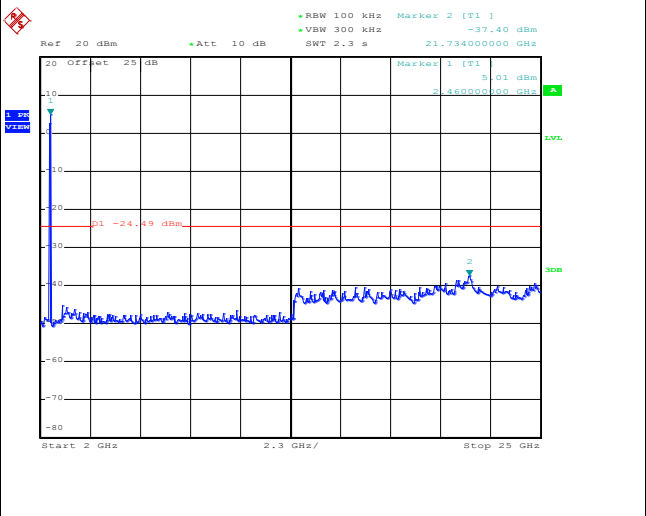
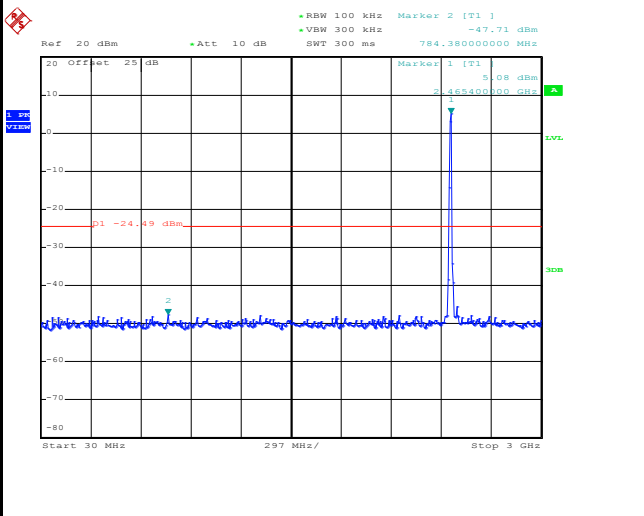


Test Mode :	802.11b	Test Channel :	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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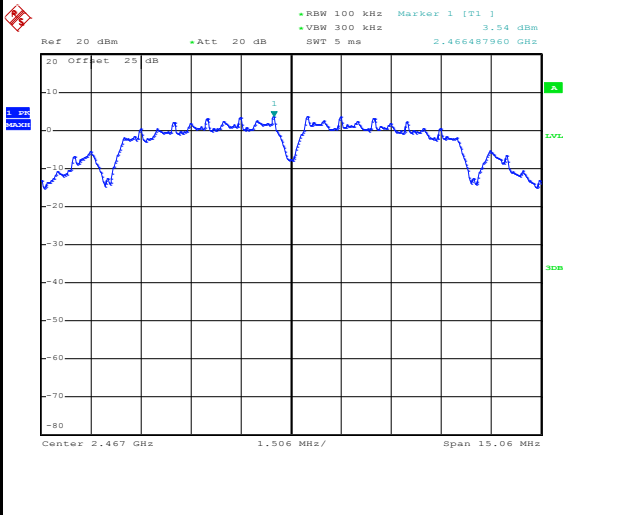
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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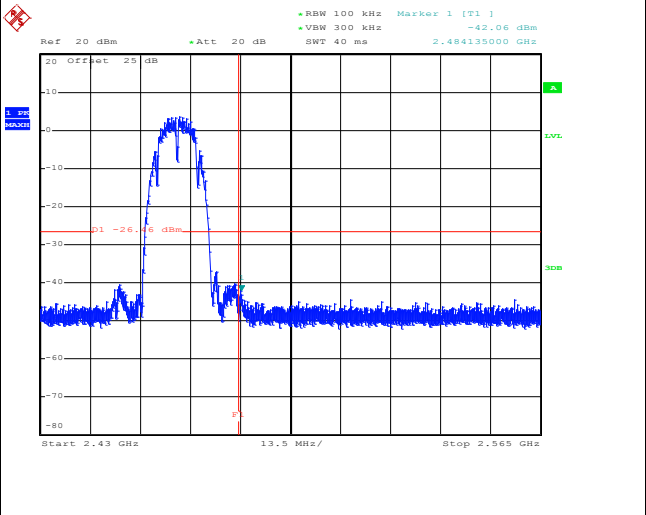


Test Mode :	802.11b	Test Channel :	12
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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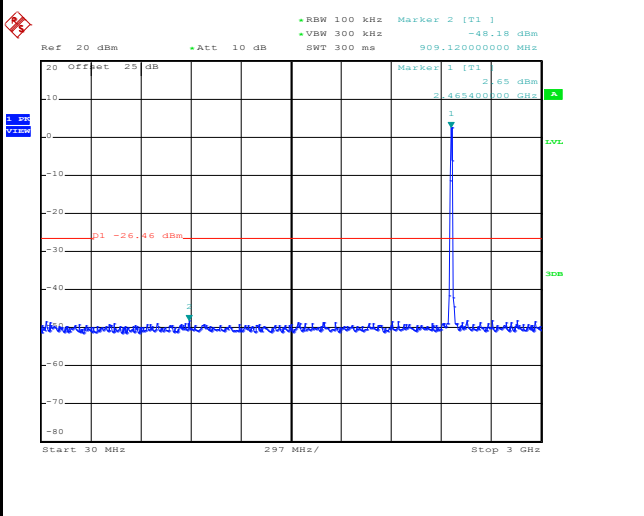


Date: 14.MAY.2020 10:54:54

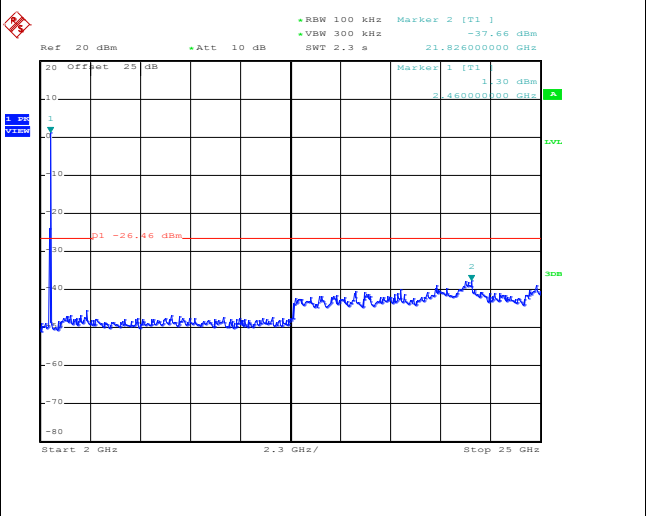


Date: 14.MAY.2020 10:55:19

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 10:55:50

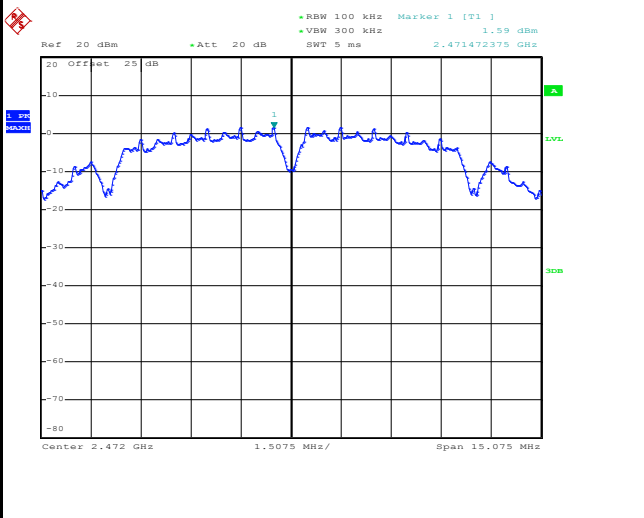


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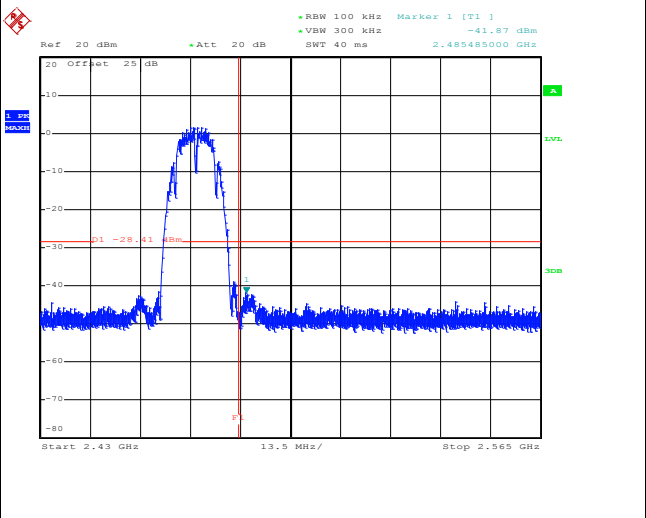


Test Mode :	802.11b	Test Channel :	13
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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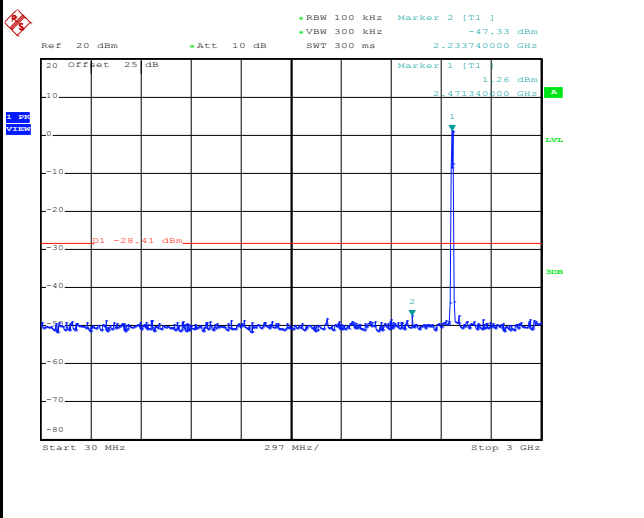


Date: 14.MAY.2020 11:00:11

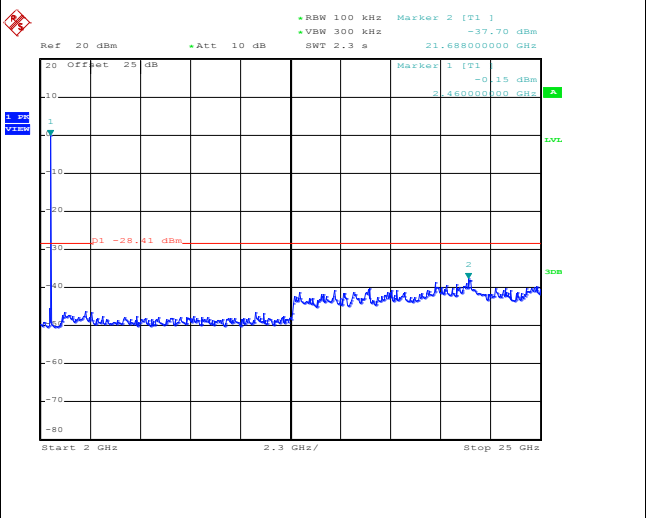


Date: 14.MAY.2020 11:00:33

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 11:00:59

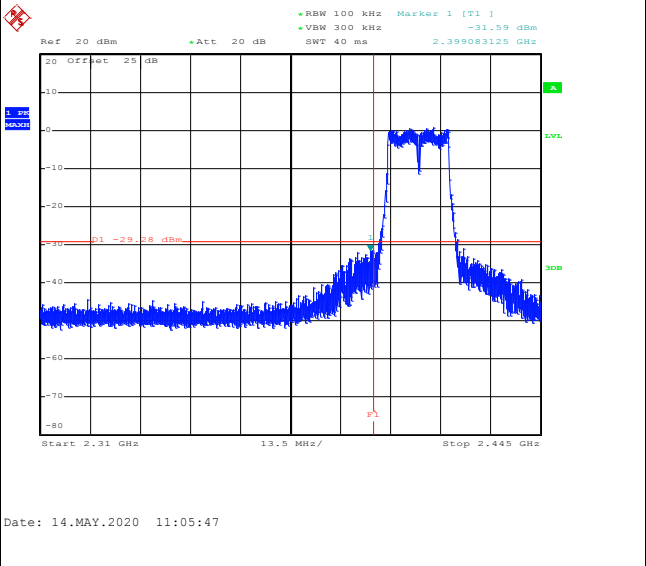
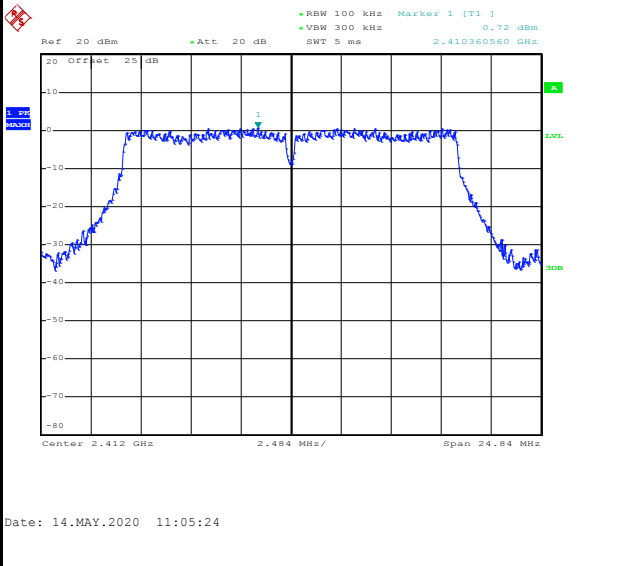


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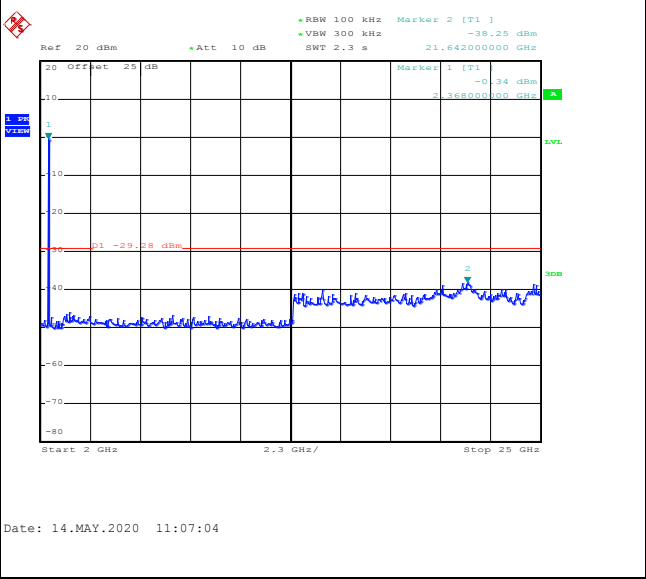
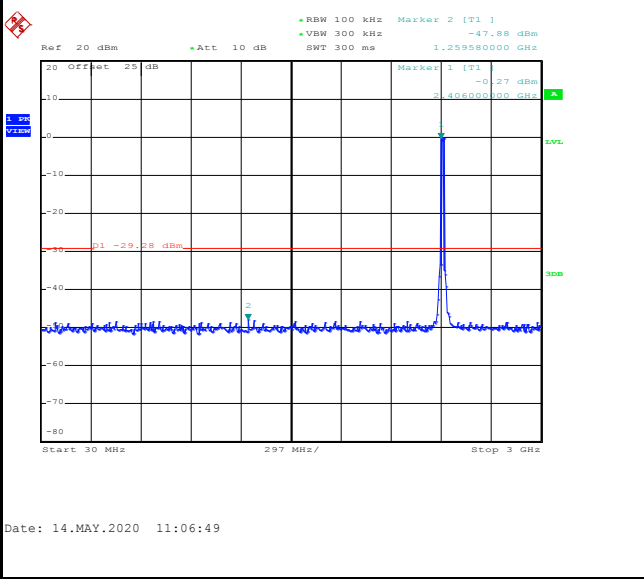


Test Mode :	802.11g	Test Channel :	01
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<b>100kHz PSD reference Level</b>	<b>Low Channel Plot</b>
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<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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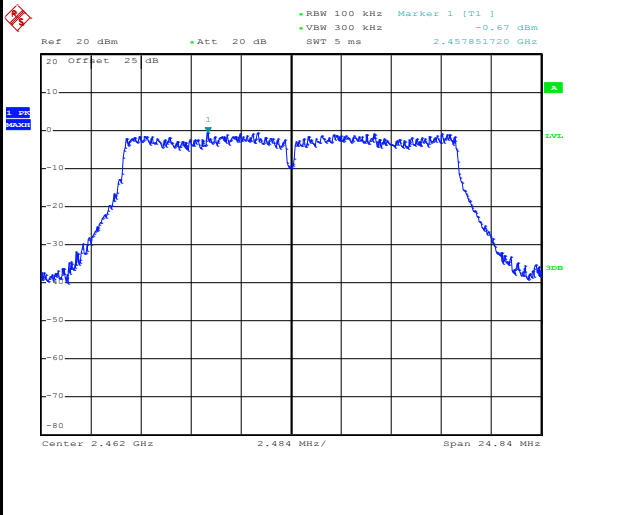




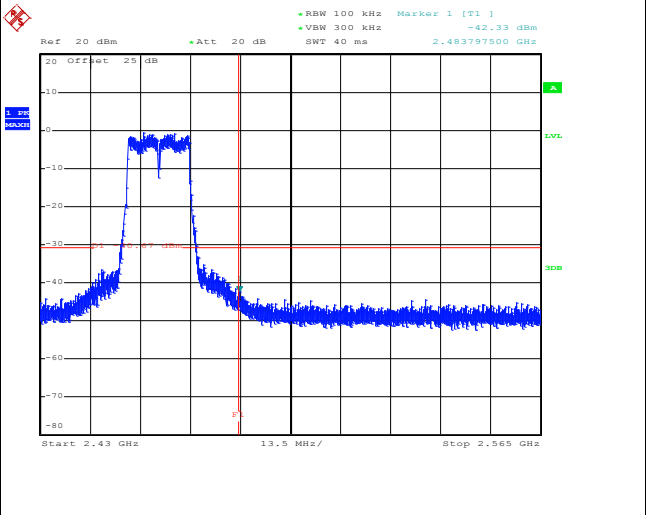


Test Mode :	802.11g	Test Channel :	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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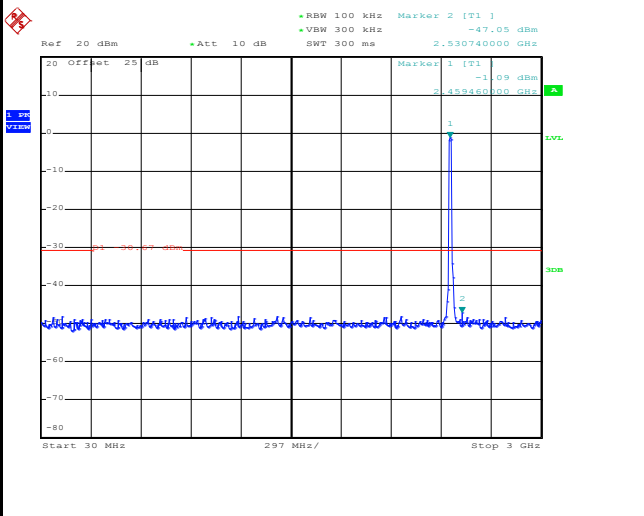


Date: 14.MAY.2020 11:16:16

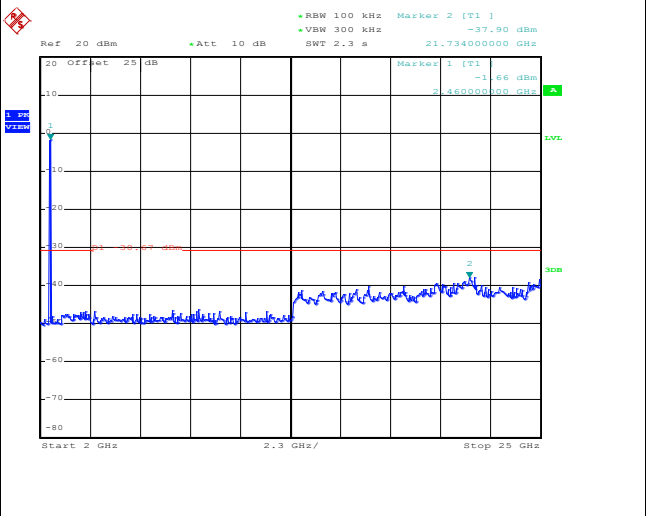


Date: 14.MAY.2020 11:17:09

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 11:17:47

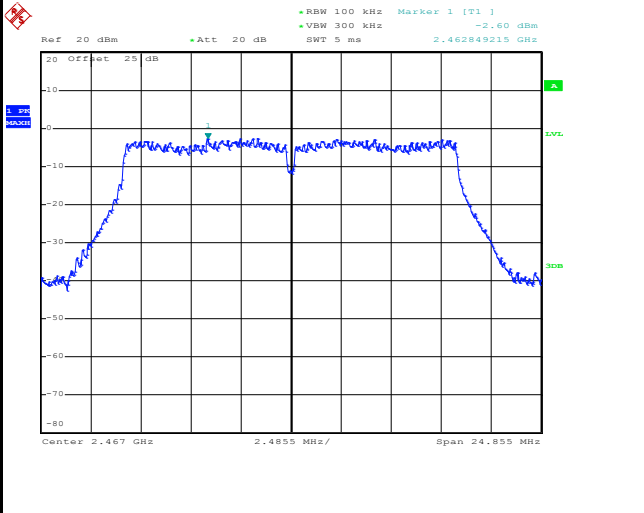


Date: 14.MAY.2020 11:18:02

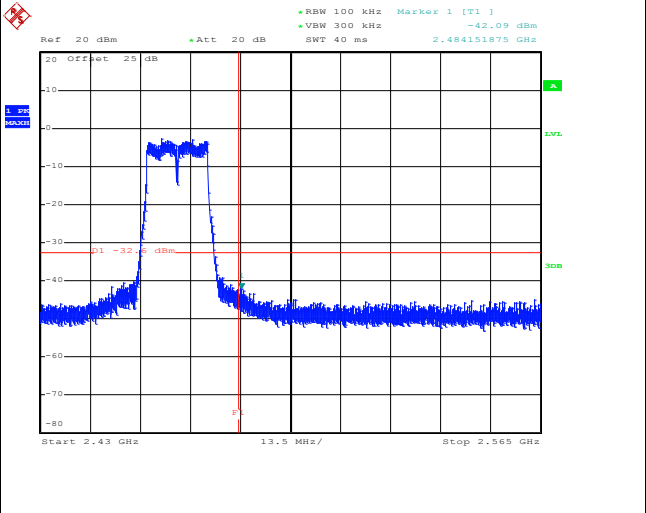


Test Mode :	802.11g	Test Channel :	12
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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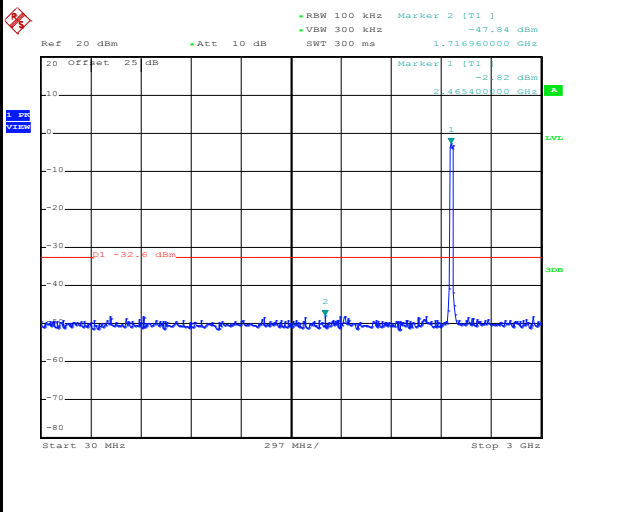


Date: 14.MAY.2020 11:29:37

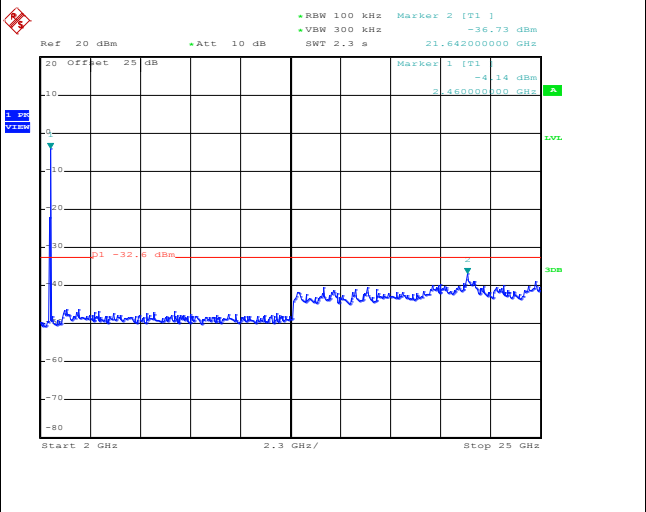


Date: 14.MAY.2020 11:30:01

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 11:30:40

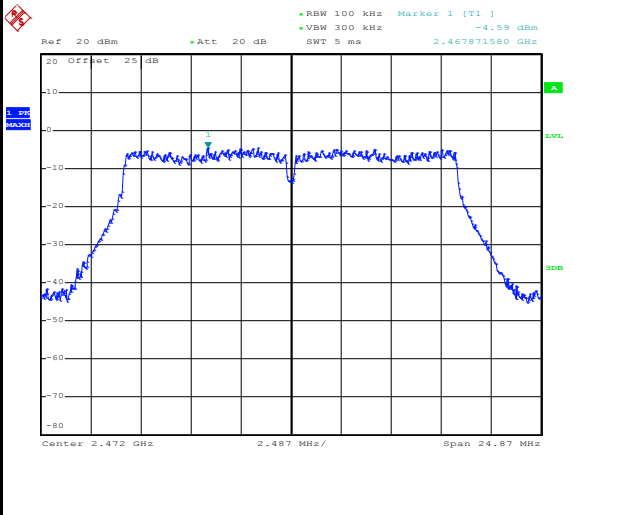


Date: 14.MAY.2020 11:30:54

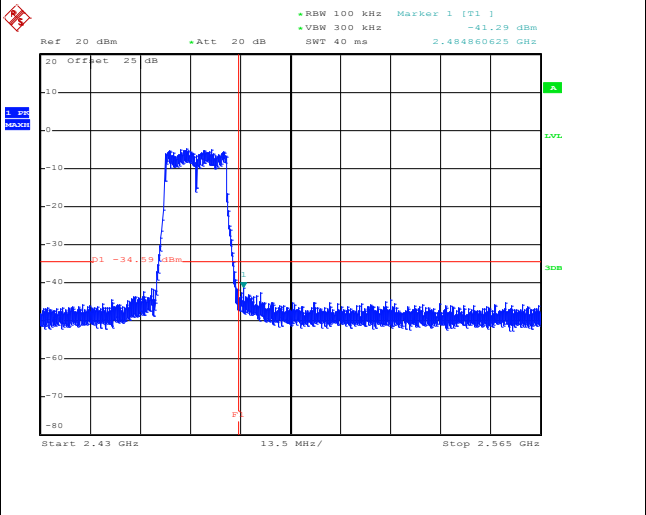


Test Mode :	802.11g	Test Channel :	13
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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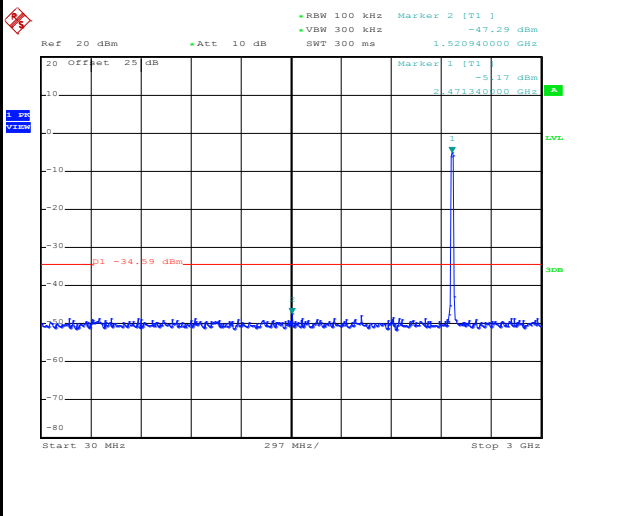


Date: 14.MAY.2020 11:35:02

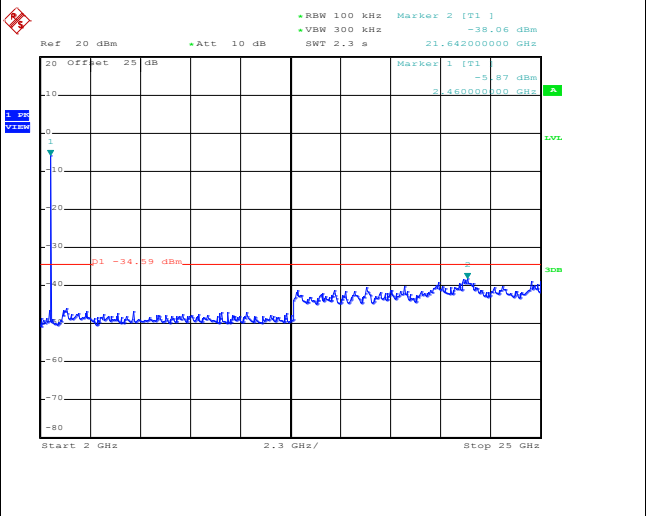


Date: 14.MAY.2020 11:35:48

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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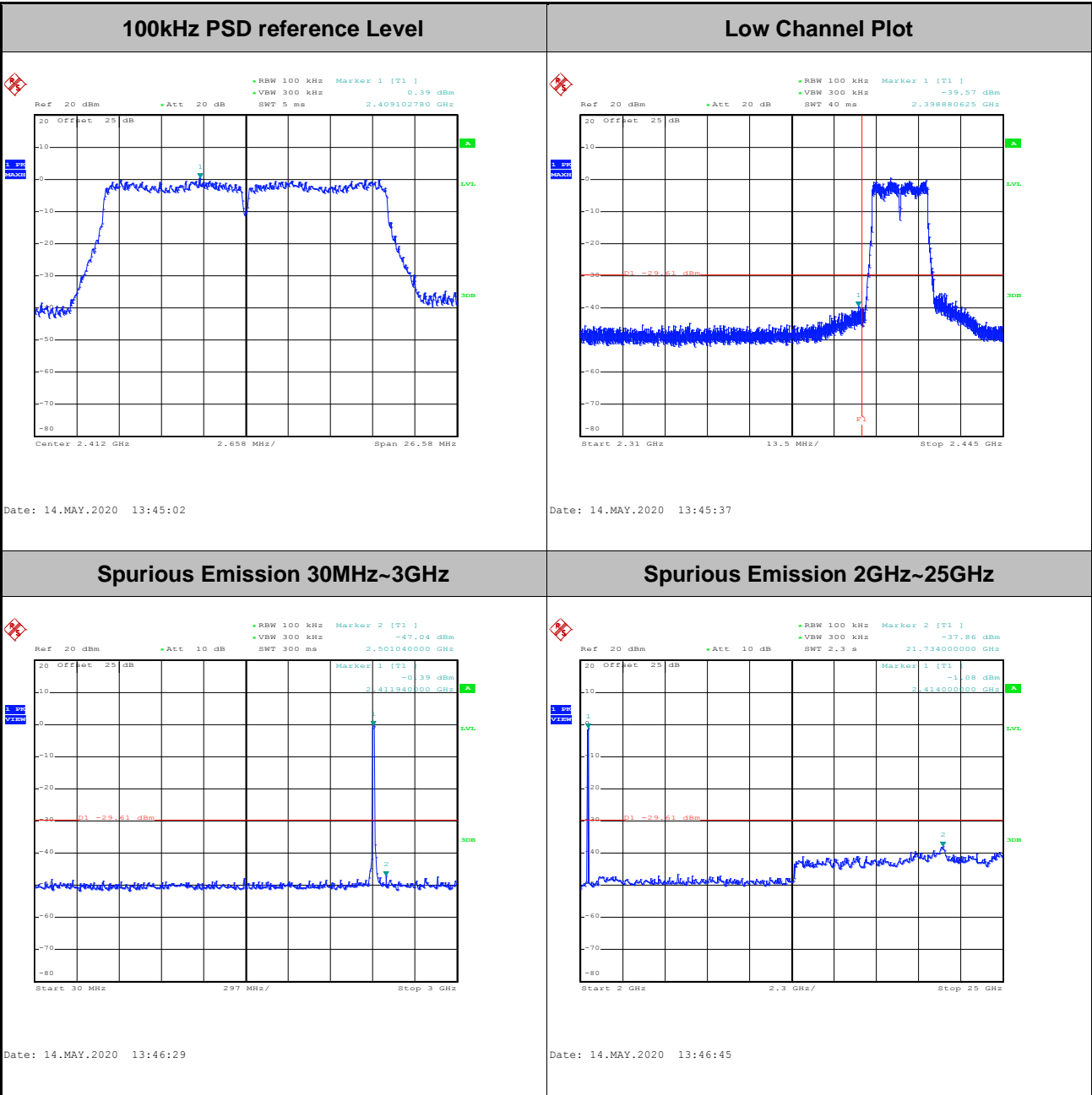
Date: 14.MAY.2020 11:36:27



Date: 14.MAY.2020 11:36:41



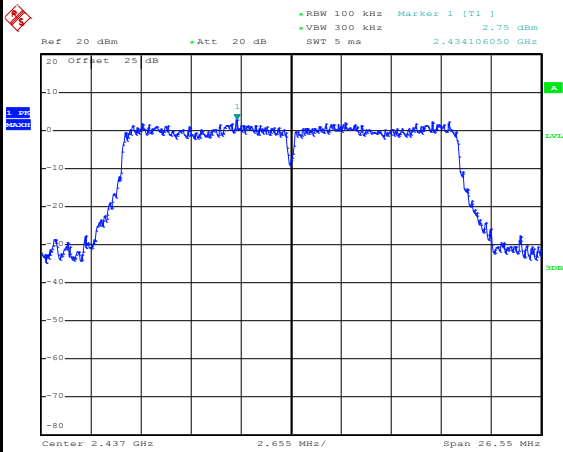
Test Mode :	802.11n HT20	Test Channel :	01
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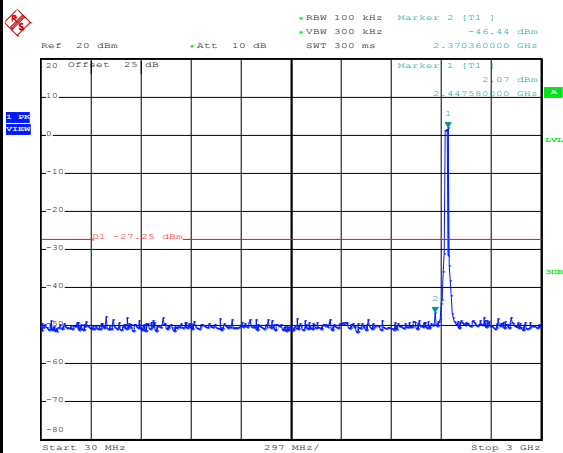
<b>Test Mode :</b>	802.11n HT20	<b>Test Channel :</b>	06
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<b>100kHz PSD reference Level</b>
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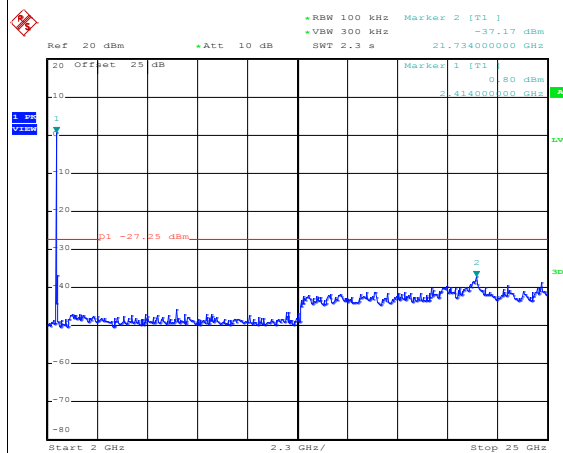


Date: 14.MAY.2020 13:55:58

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 13:56:50

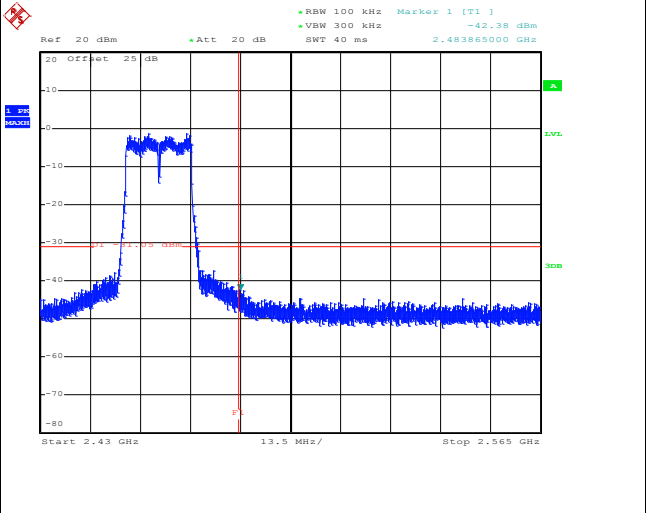
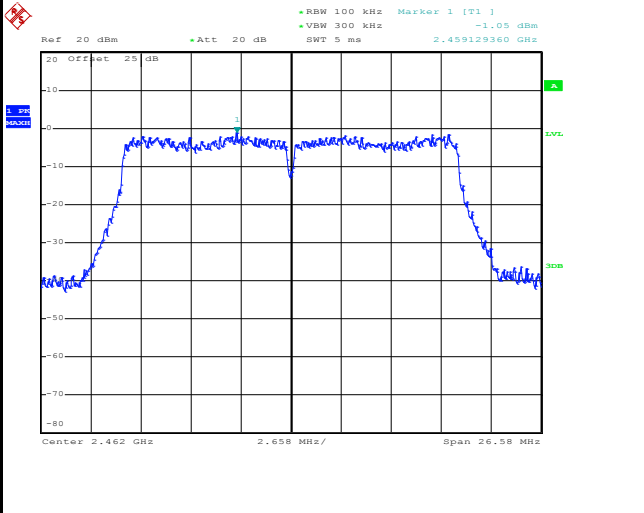


Date: 14.MAY.2020 13:57:07

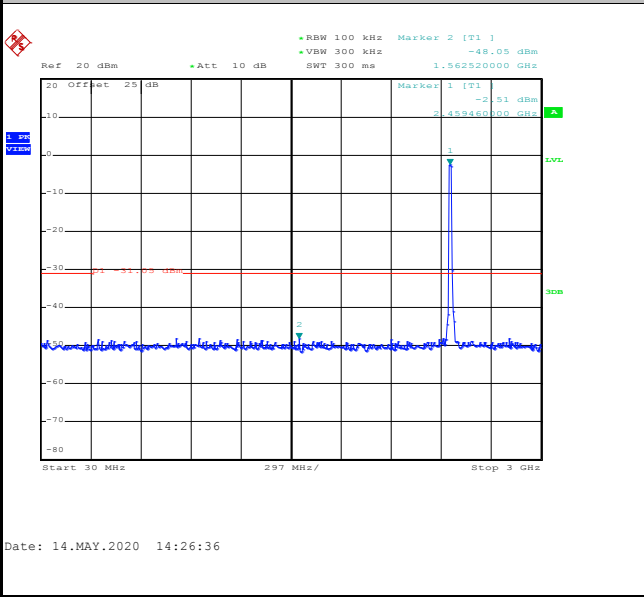


<b>Test Mode :</b>	802.11n HT20	<b>Test Channel :</b>	11
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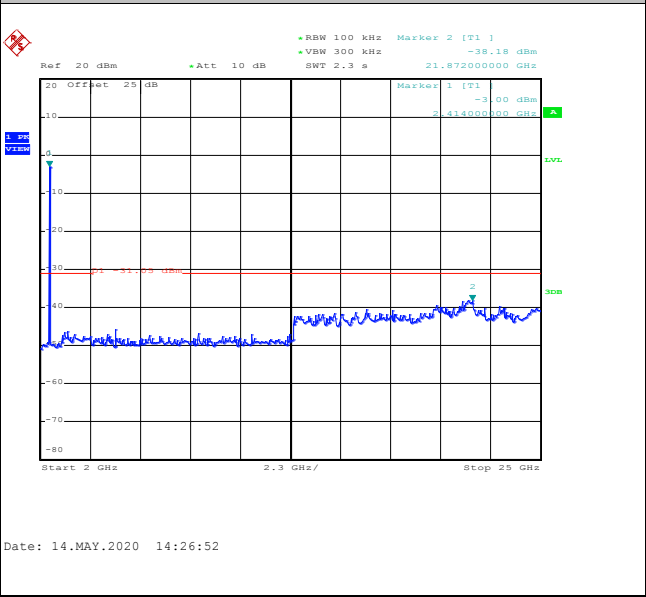
<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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**Spurious Emission 30MHz~3GHz**



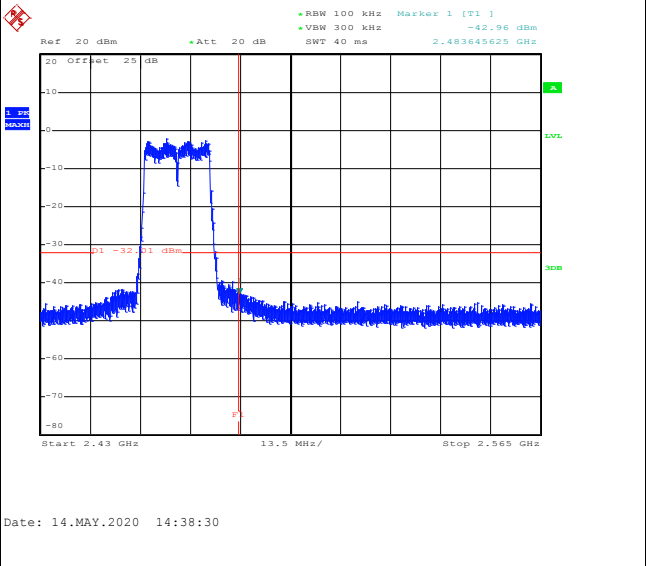
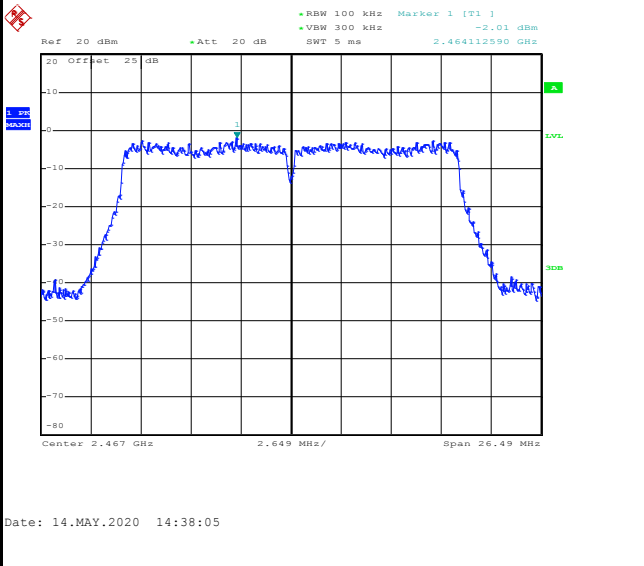
**Spurious Emission 2GHz~25GHz**



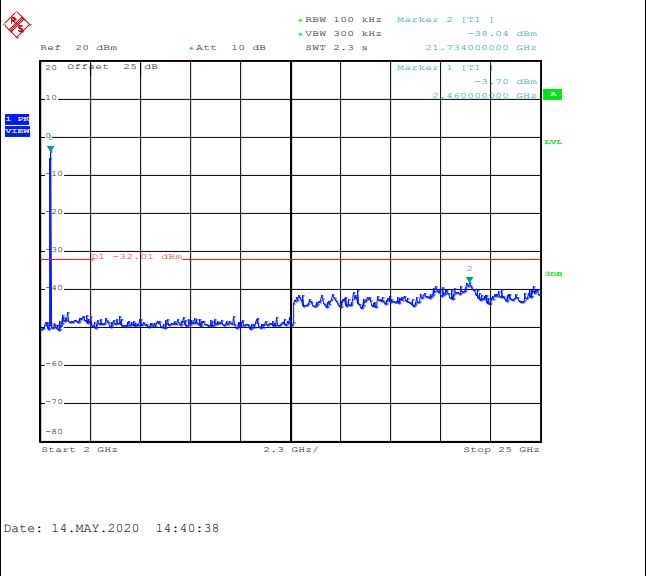
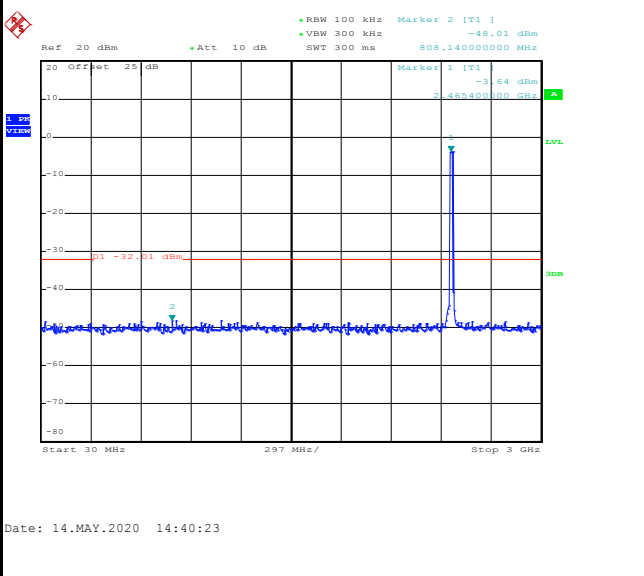


<b>Test Mode :</b>	802.11n HT20	<b>Test Channel :</b>	12
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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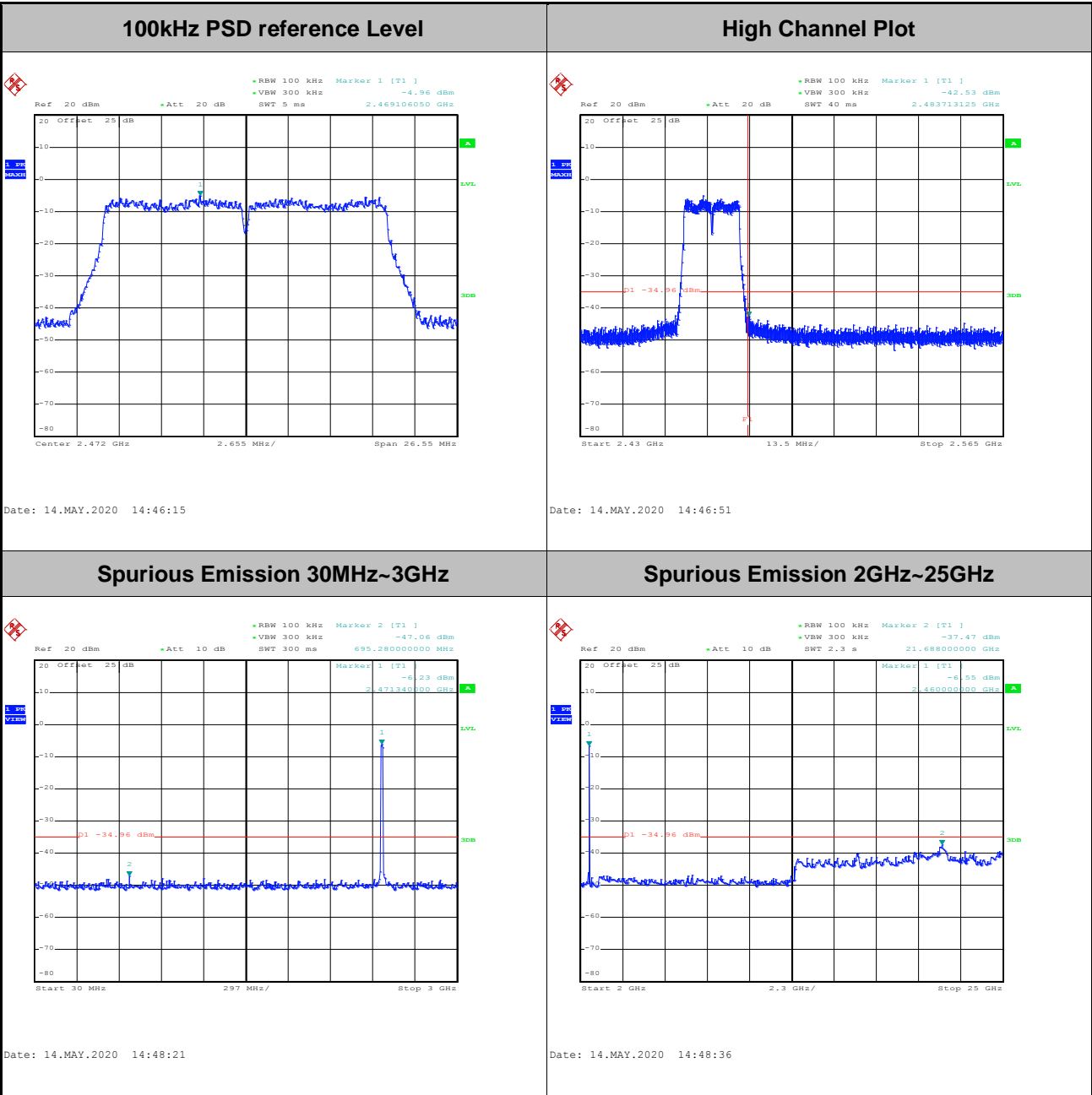


<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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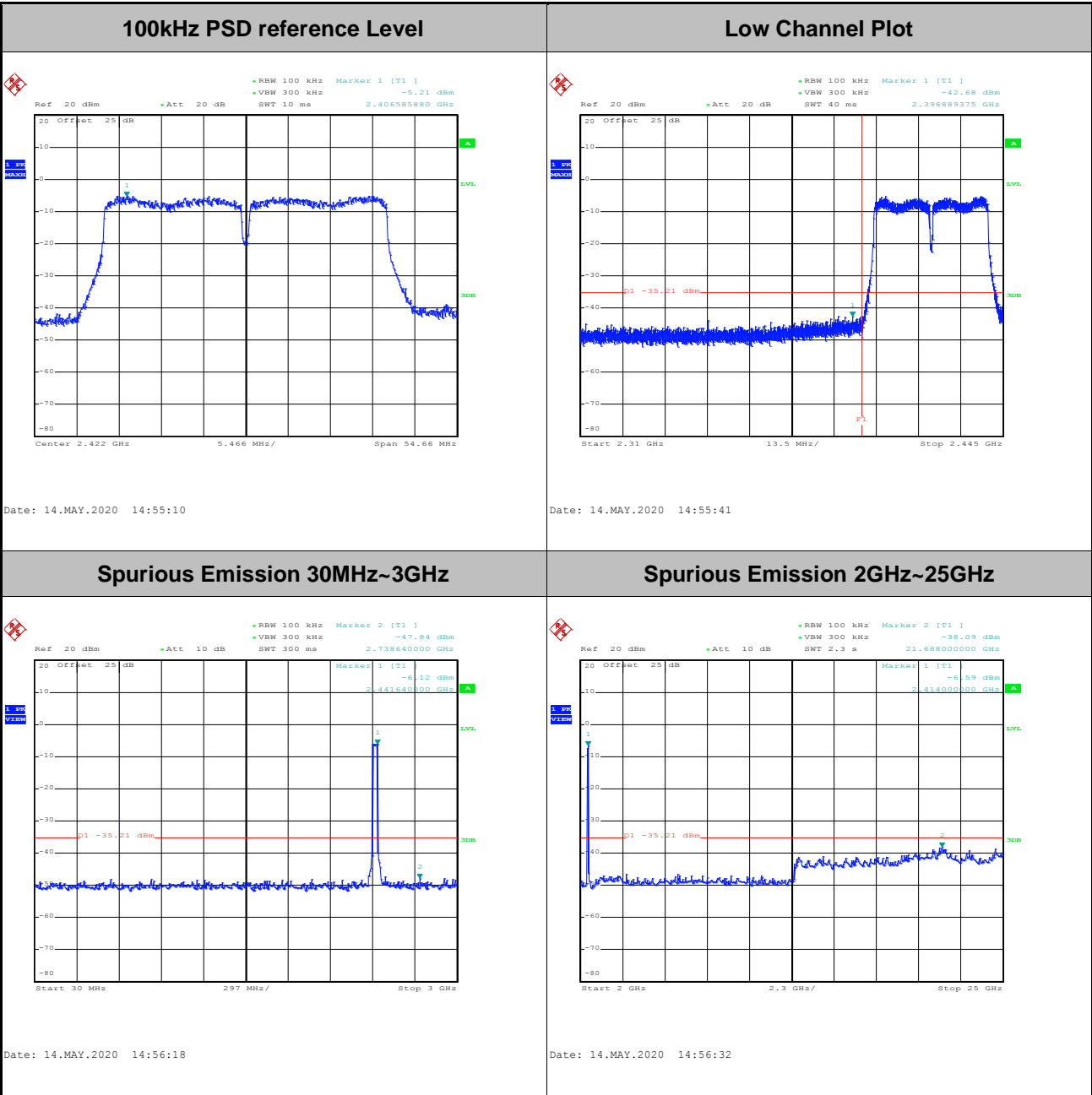
Test Mode :	802.11n HT20	Test Channel :	13
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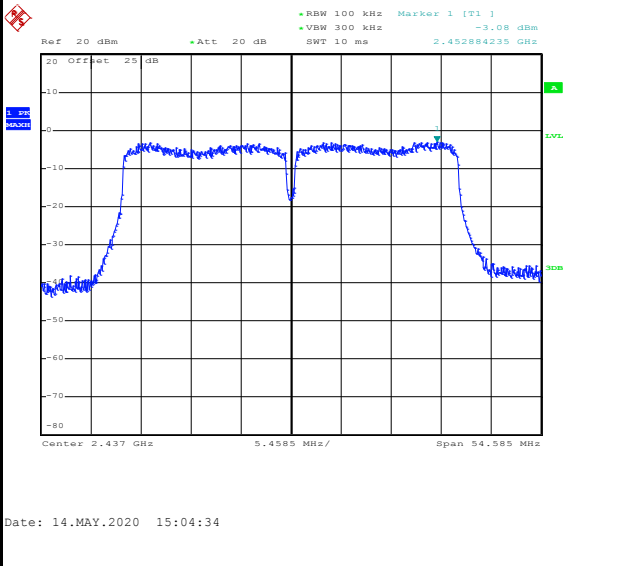
Test Mode :	802.11n HT40	Test Channel :	03
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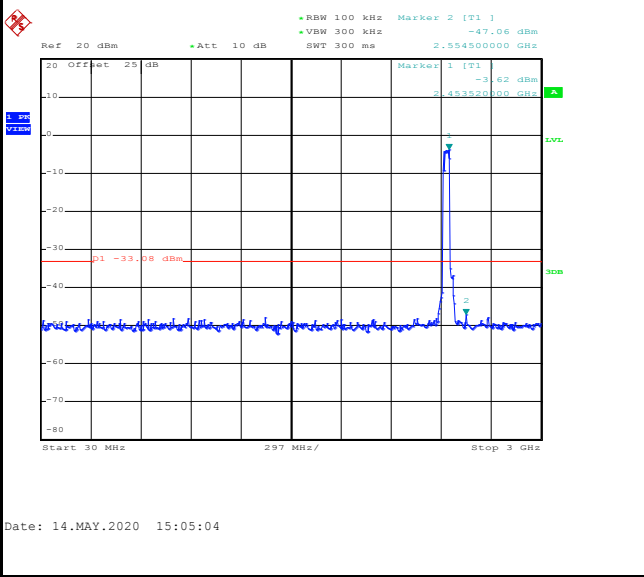


Test Mode :	802.11n HT40	Test Channel :	06
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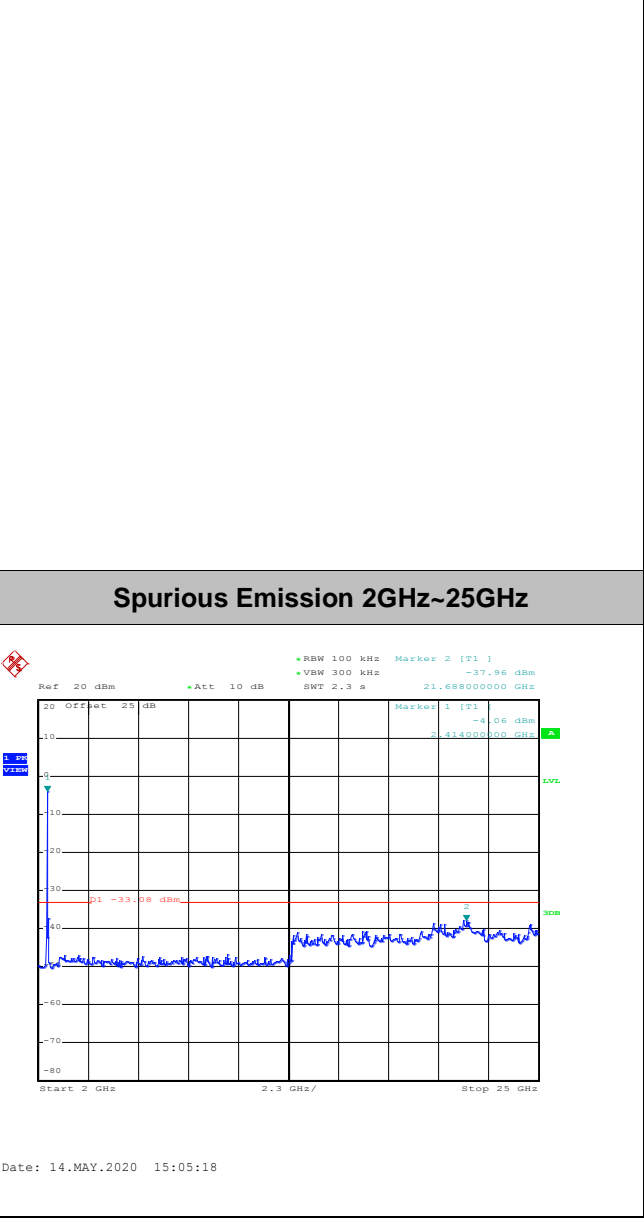
<b>100kHz PSD reference Level</b>
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<b>Spurious Emission 30MHz~3GHz</b>
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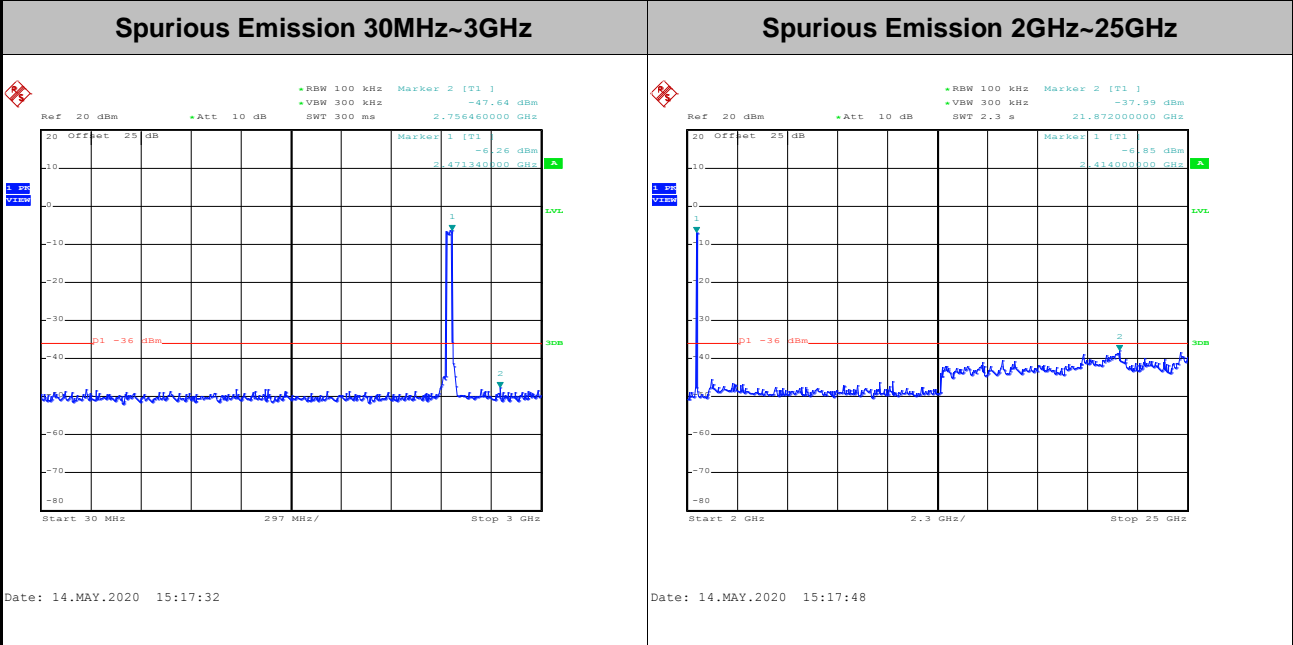
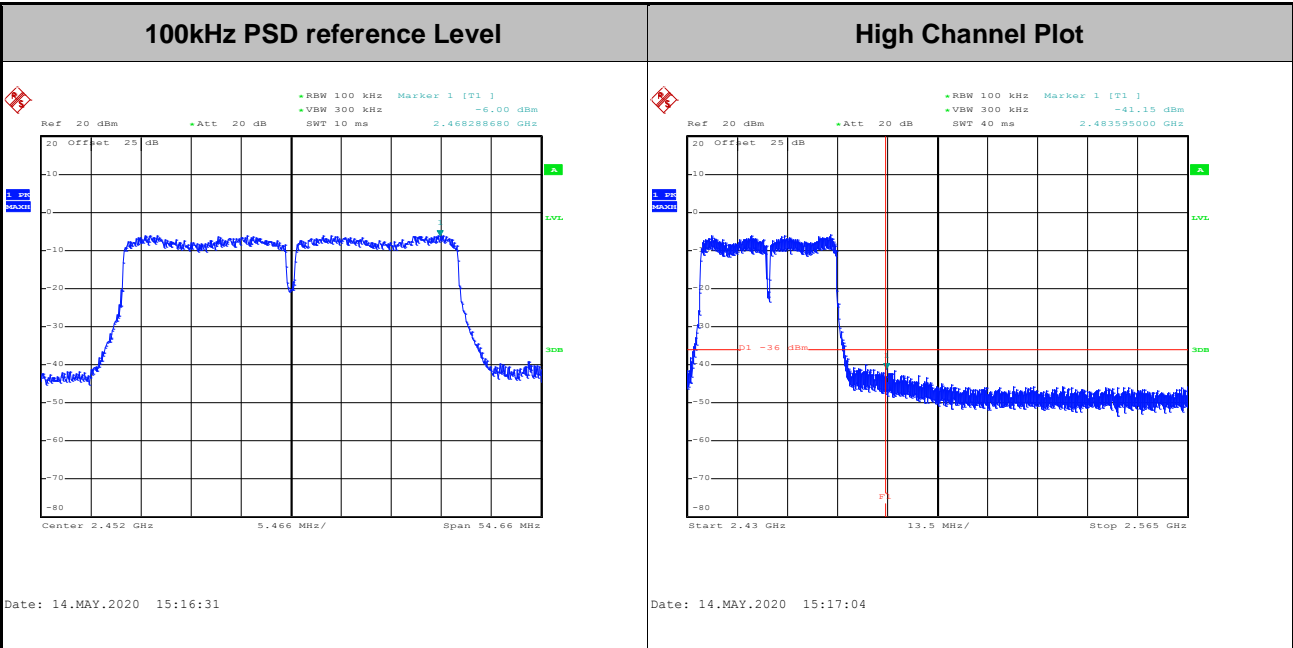


<b>Spurious Emission 2GHz~25GHz</b>
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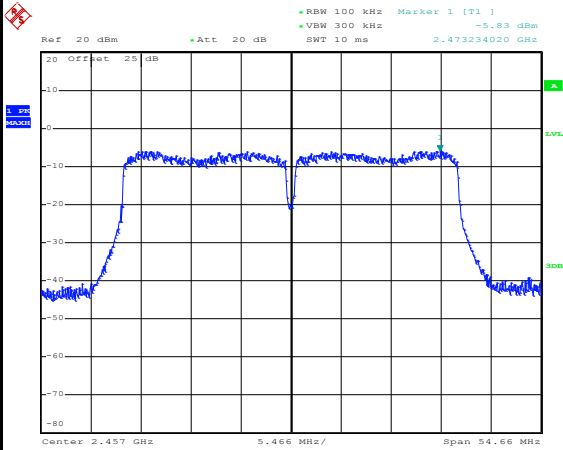
Test Mode :	802.11n HT40	Test Channel :	09
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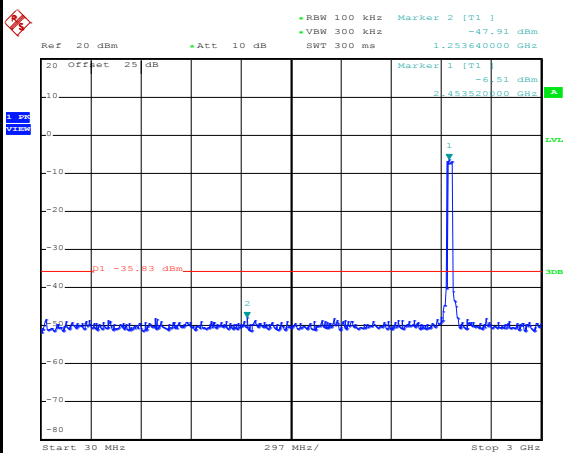
<b>Test Mode :</b>	802.11n HT40	<b>Test Channel :</b>	10
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**100kHz PSD reference Level**



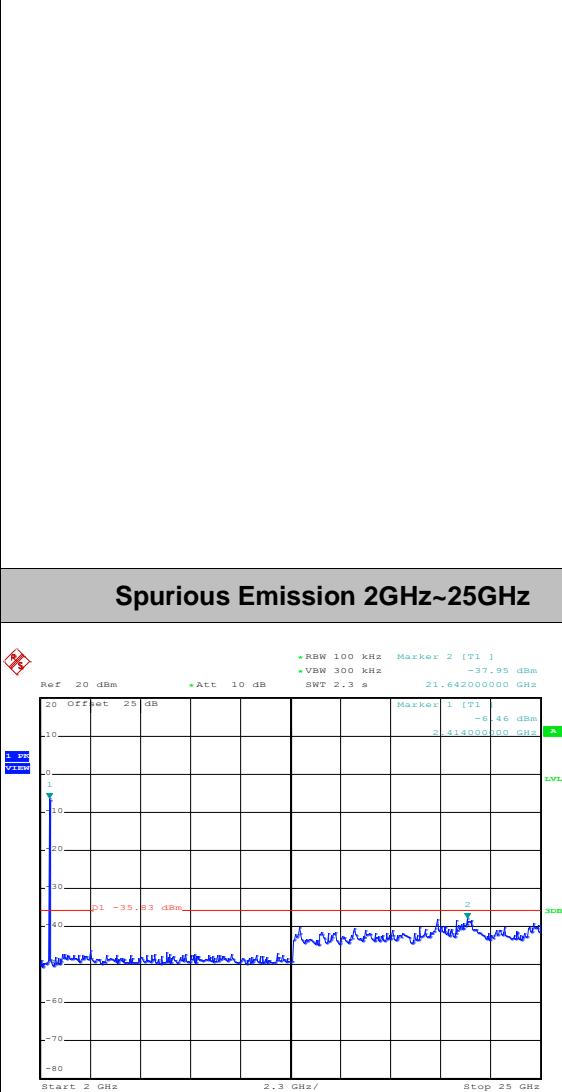
Date: 14.MAY.2020 15:23:04

**Spurious Emission 30MHz~3GHz**



Date: 14.MAY.2020 15:48:44

**Spurious Emission 2GHz~25GHz**

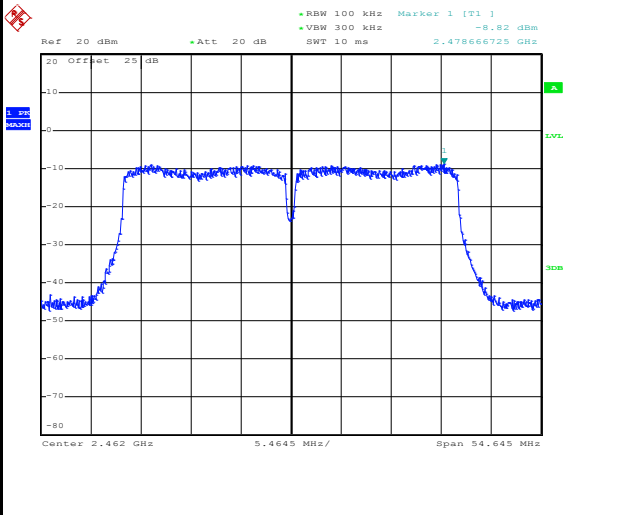


Date: 14.MAY.2020 15:49:00

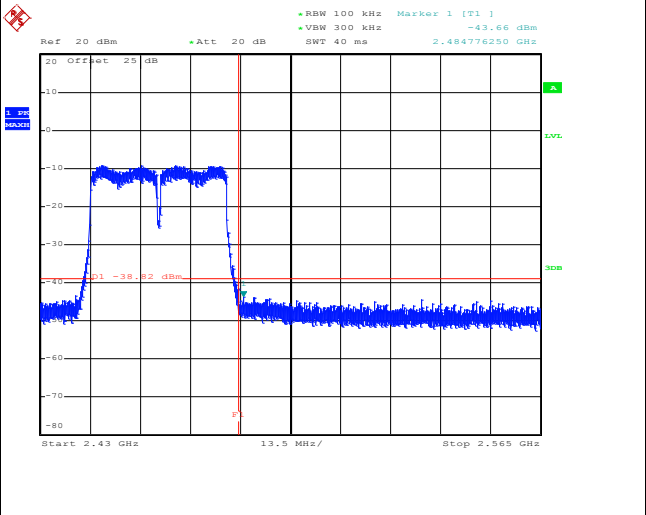


<b>Test Mode :</b>	802.11n HT40	<b>Test Channel :</b>	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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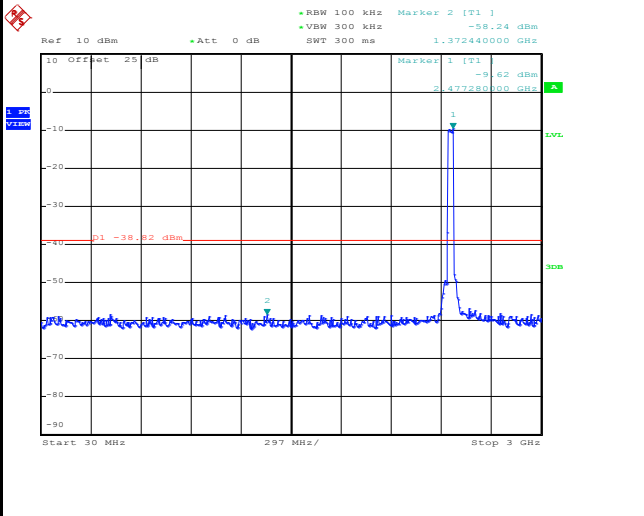


Date: 14.MAY.2020 15:55:50

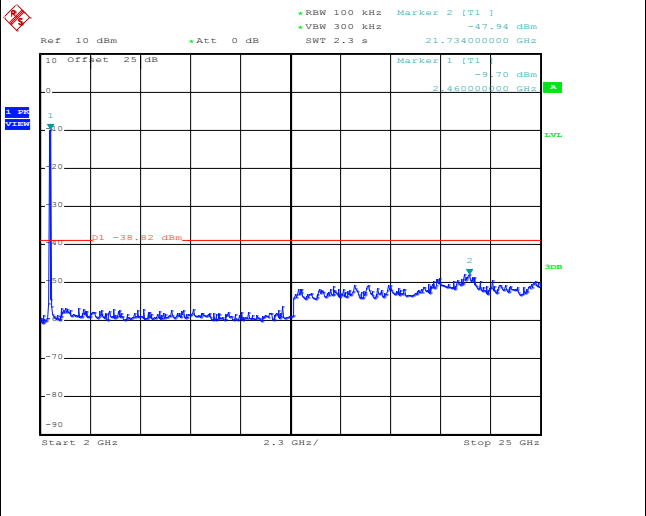


Date: 14.MAY.2020 15:56:16

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 16:18:04



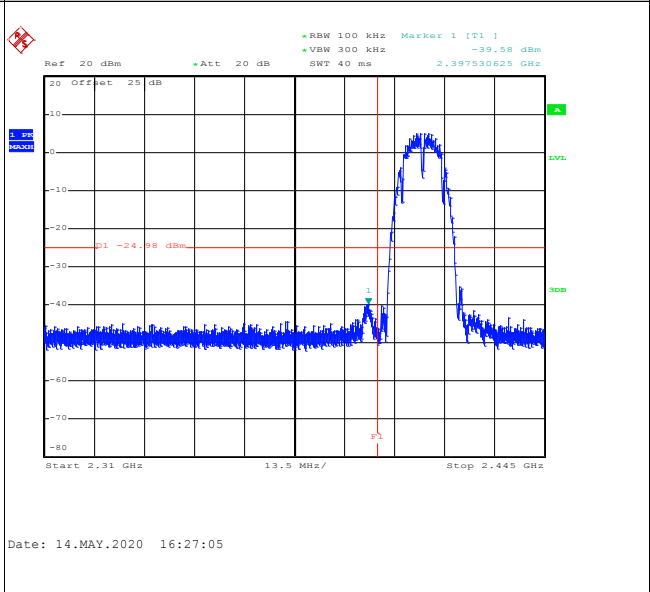
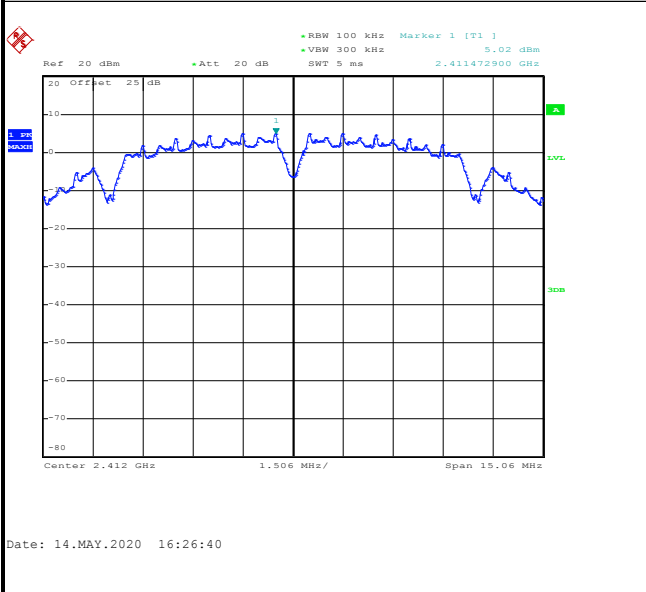
Date: 14.MAY.2020 16:18:24



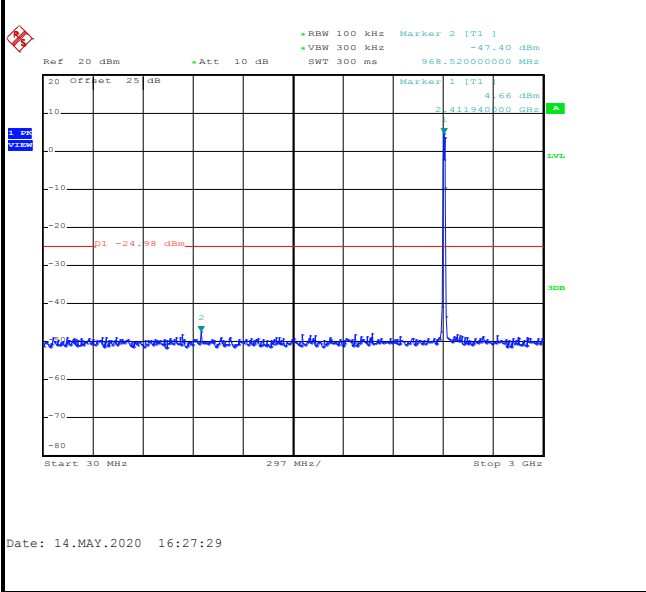
Number of TX = 1, Ant. 2 (Measured)

Test Mode :	802.11b	Test Channel :	01
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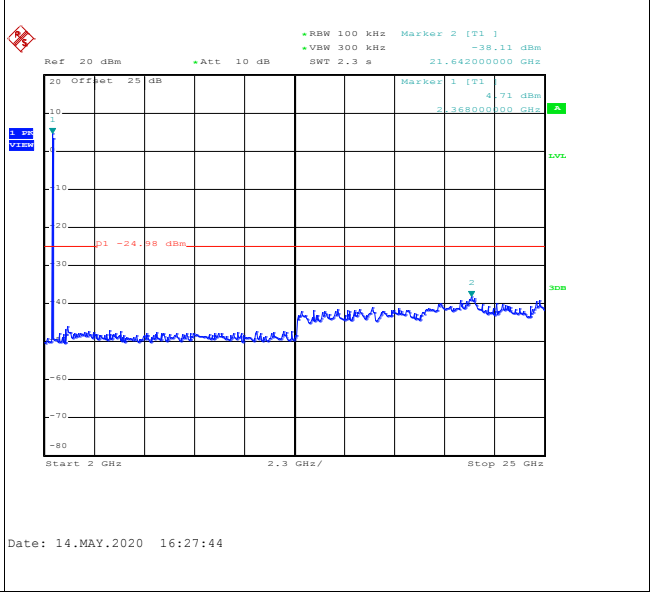
<b>100kHz PSD reference Level</b>	<b>Low Channel Plot</b>
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**Spurious Emission 30MHz~3GHz**



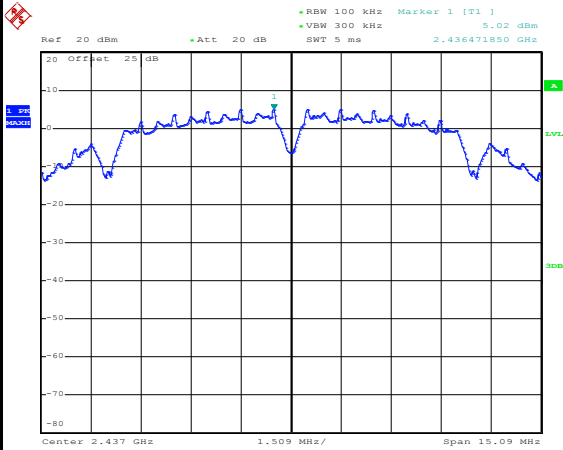
**Spurious Emission 2GHz~25GHz**





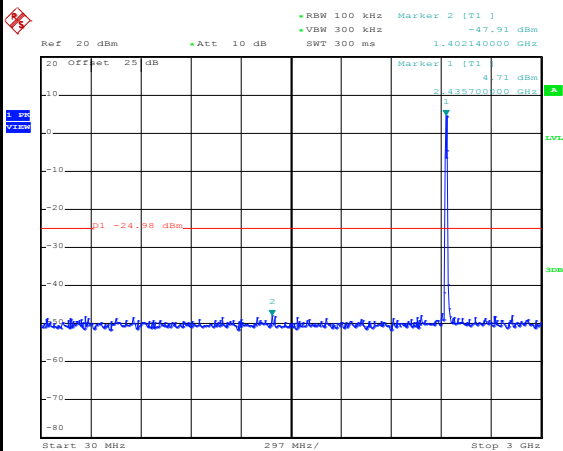
Test Mode :	802.11b	Test Channel :	06
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**100kHz PSD reference Level**

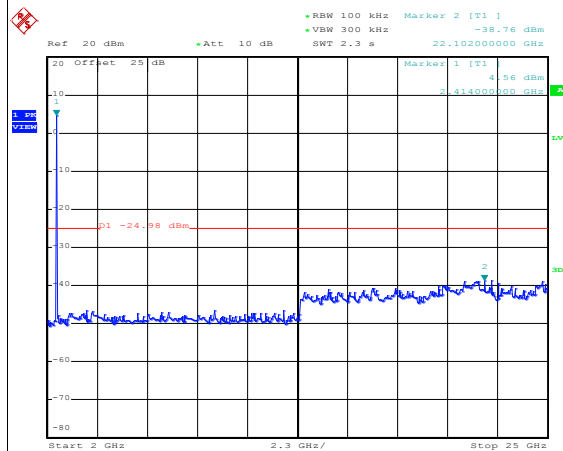


Date: 14.MAY.2020 16:31:04

**Spurious Emission 30MHz~3GHz**      **Spurious Emission 2GHz~25GHz**



Date: 14.MAY.2020 16:31:40

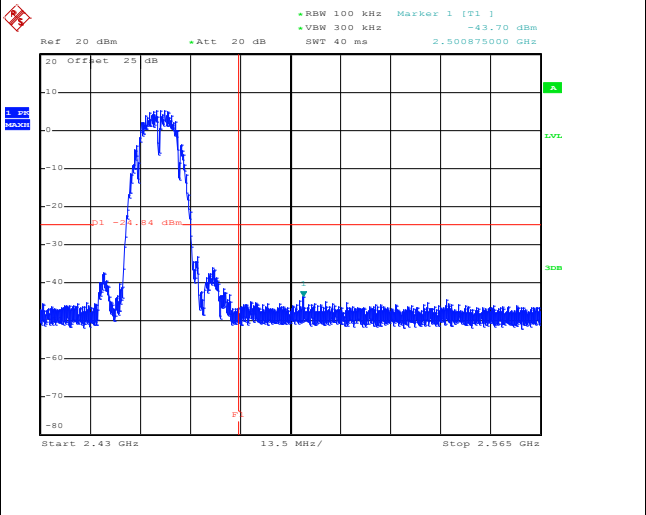
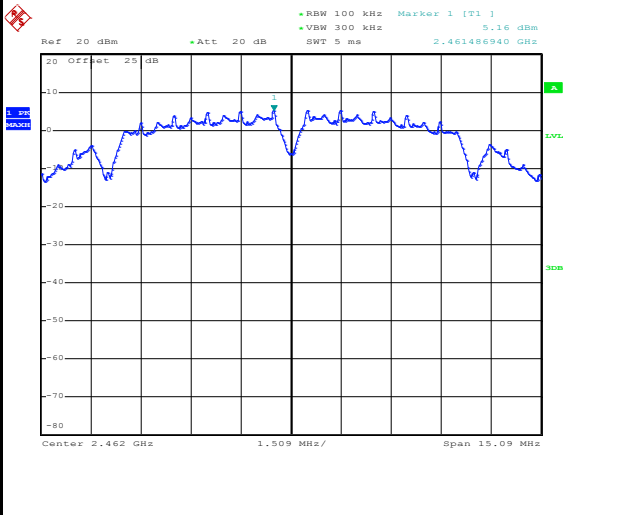


Date: 14.MAY.2020 16:31:57

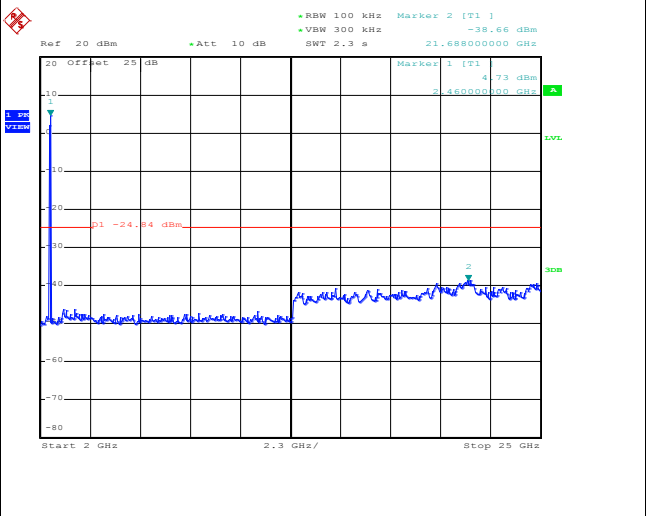
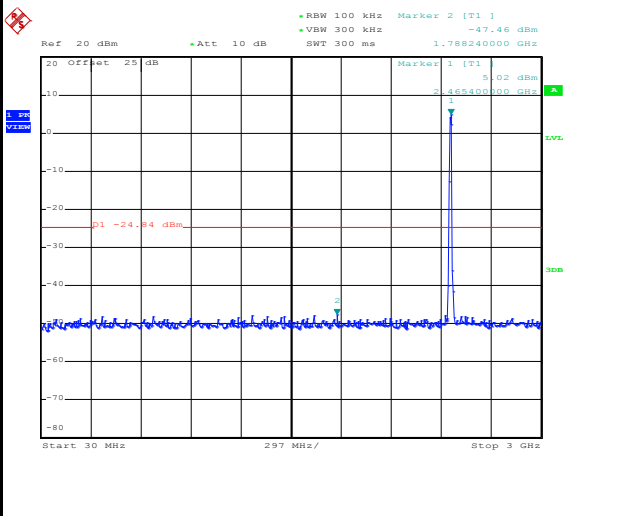


Test Mode :	802.11b	Test Channel :	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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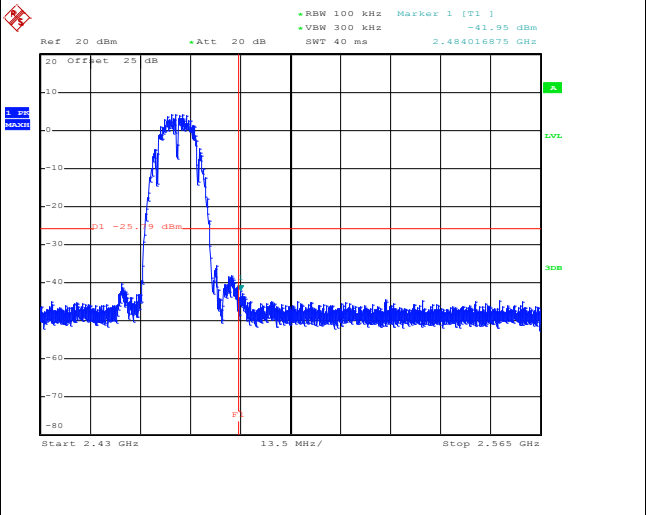
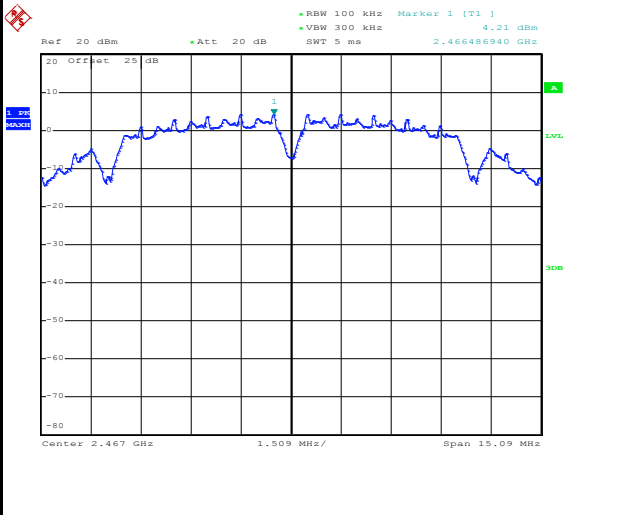




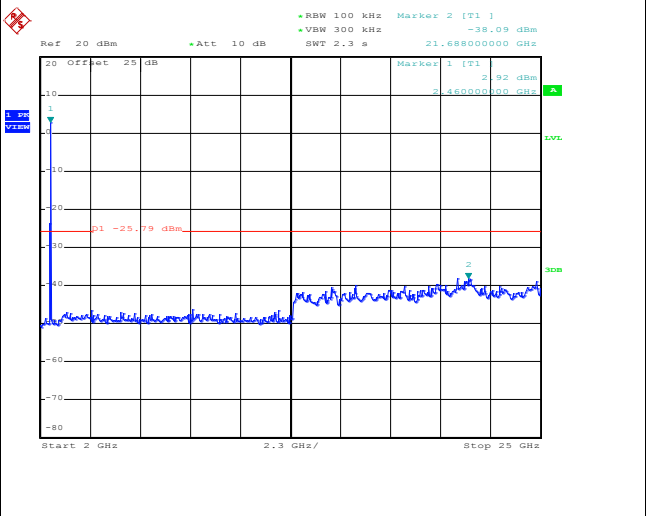
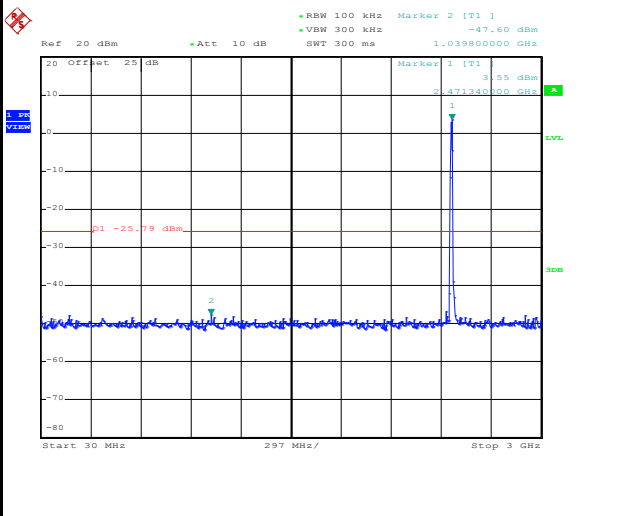


<b>Test Mode :</b>	802.11b	<b>Test Channel :</b>	12
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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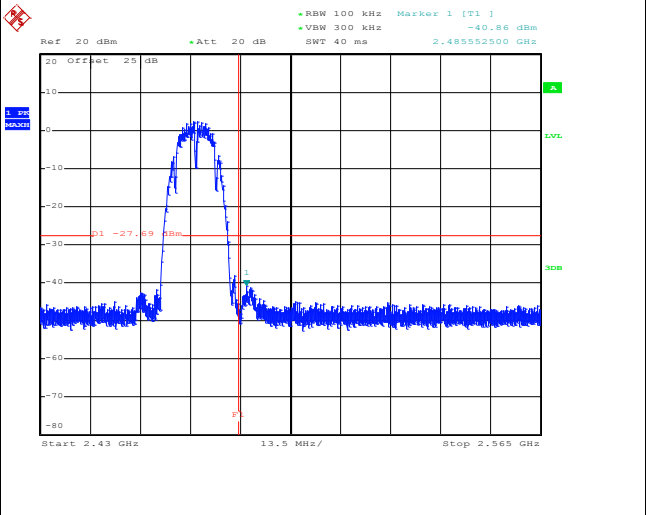
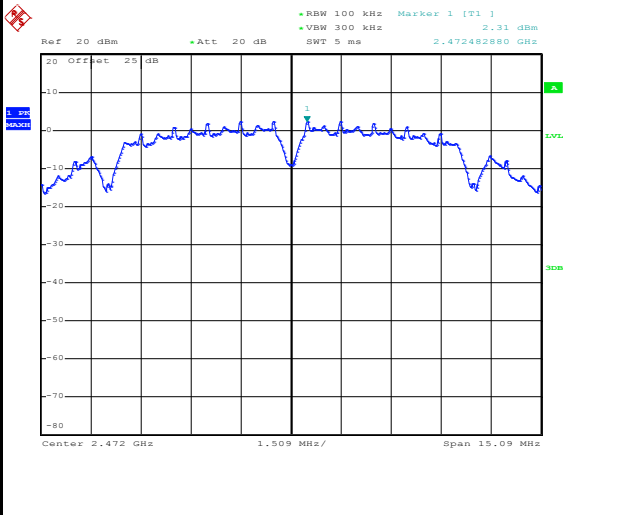
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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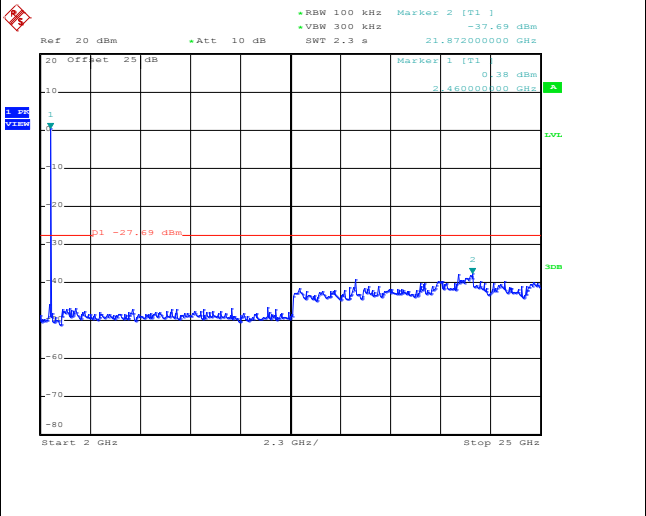
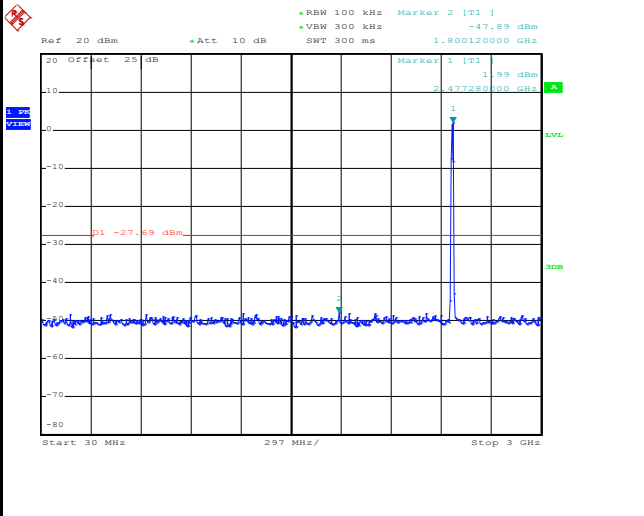


Test Mode :	802.11b	Test Channel :	13
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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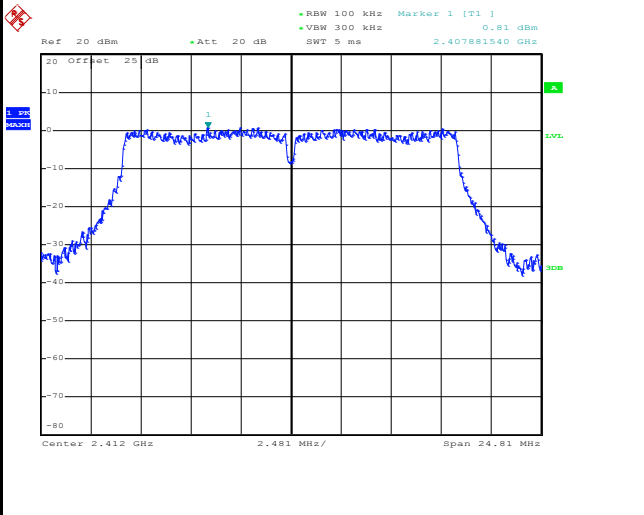
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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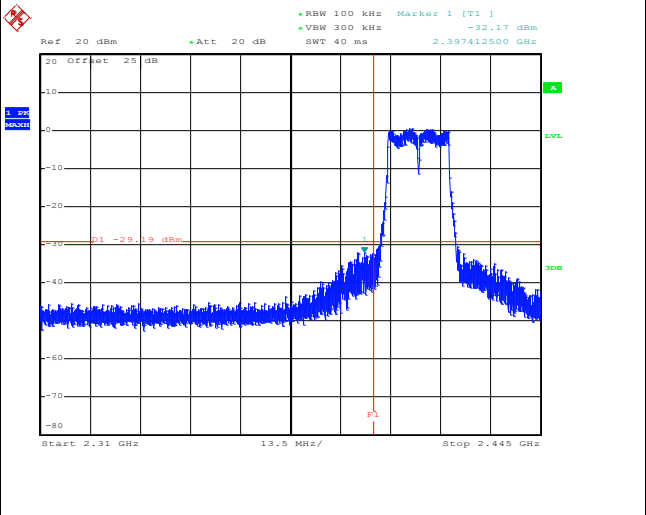


Test Mode :	802.11g	Test Channel :	01
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<b>100kHz PSD reference Level</b>	<b>Low Channel Plot</b>
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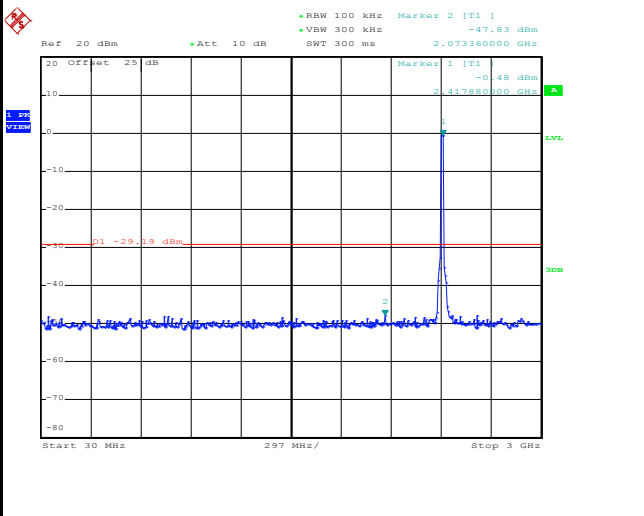


Date: 14.MAY.2020 16:53:56

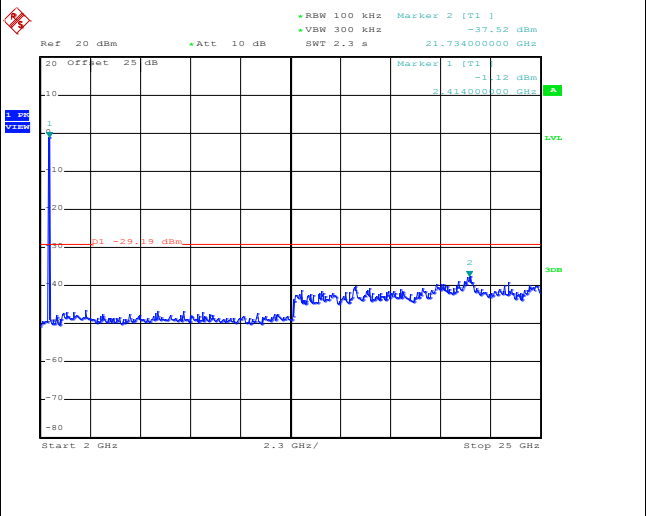


Date: 14.MAY.2020 16:54:43

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 16:55:10

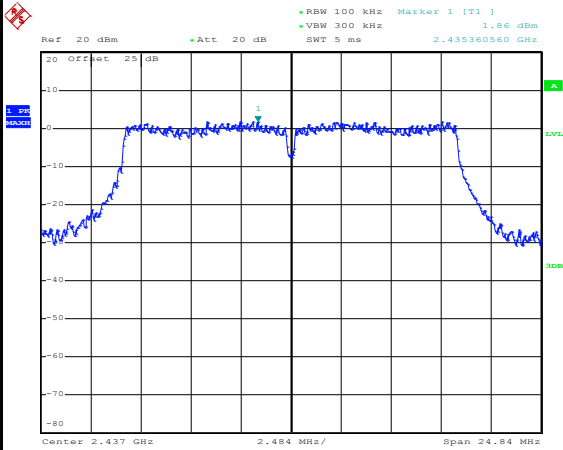


Date: 14.MAY.2020 16:55:25



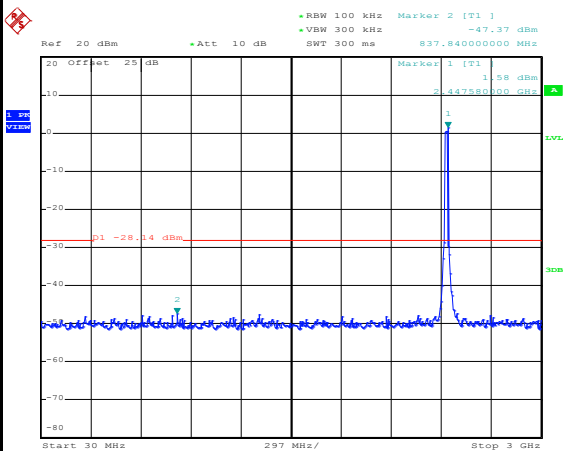
Test Mode :	802.11g	Test Channel :	06
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<b>100kHz PSD reference Level</b>
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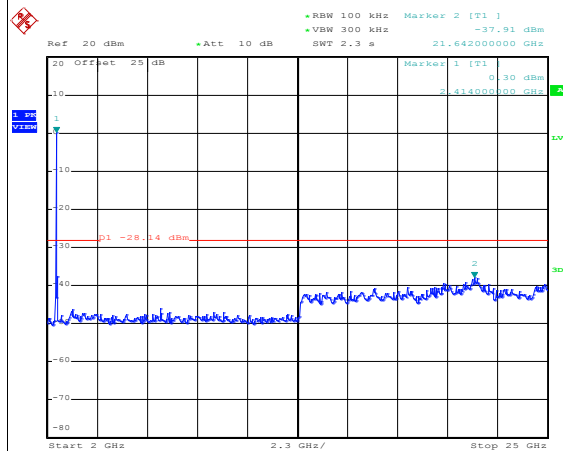


Date: 14.MAY.2020 17:01:12

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 17:02:47

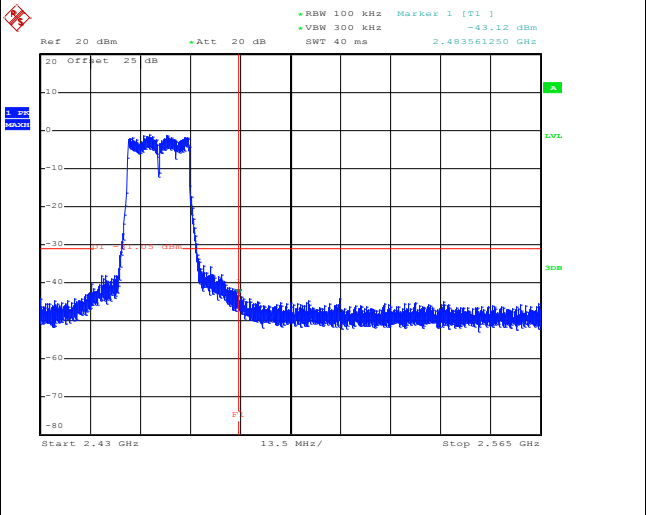
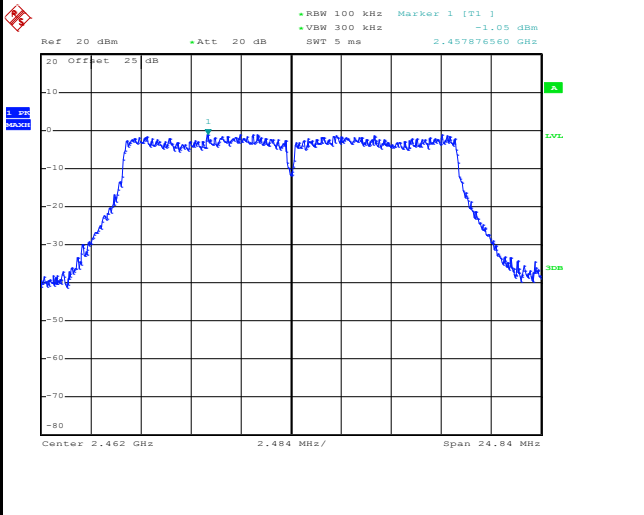


Date: 14.MAY.2020 17:03:04

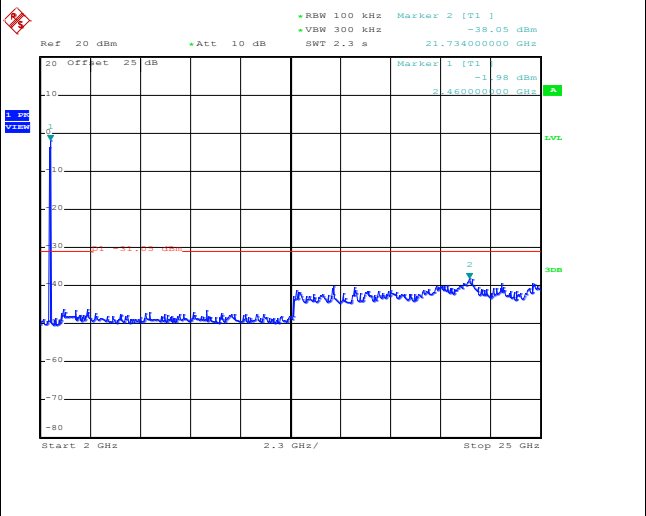
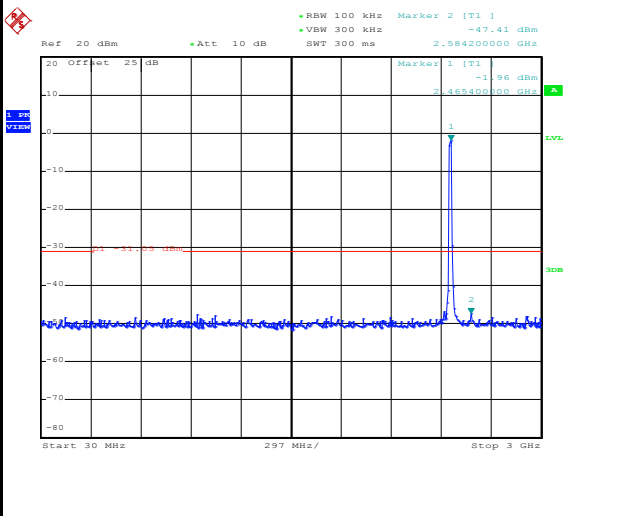


Test Mode :	802.11g	Test Channel :	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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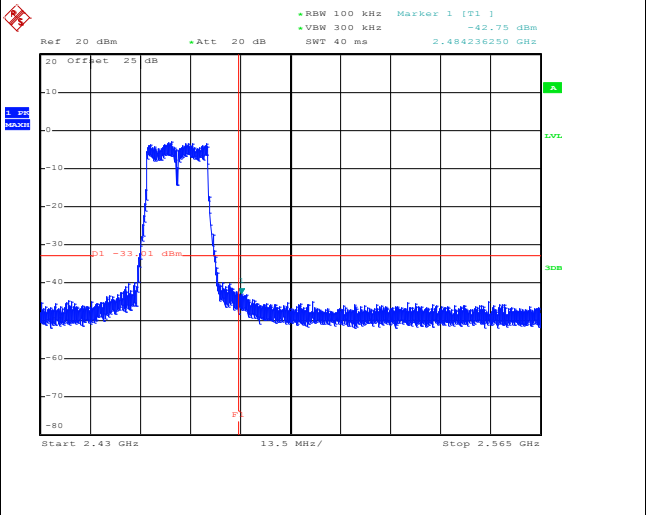
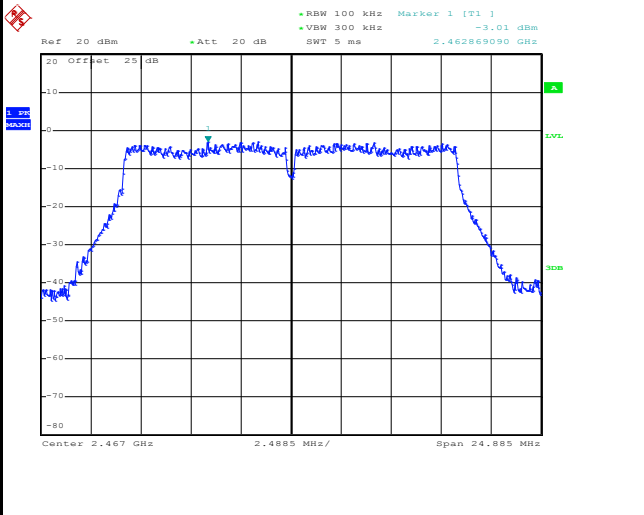
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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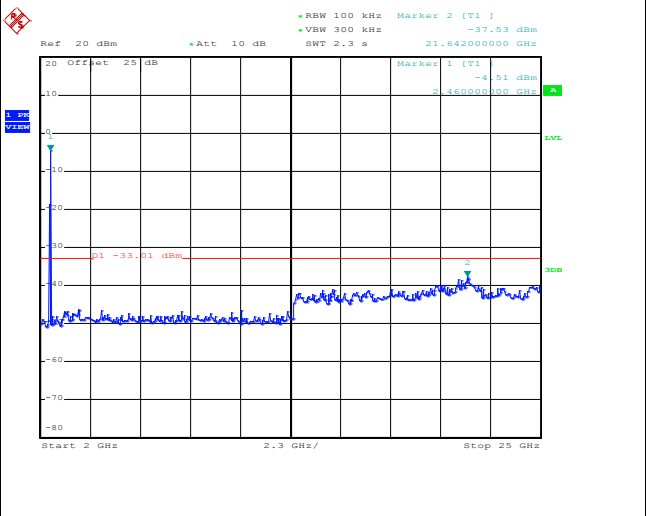
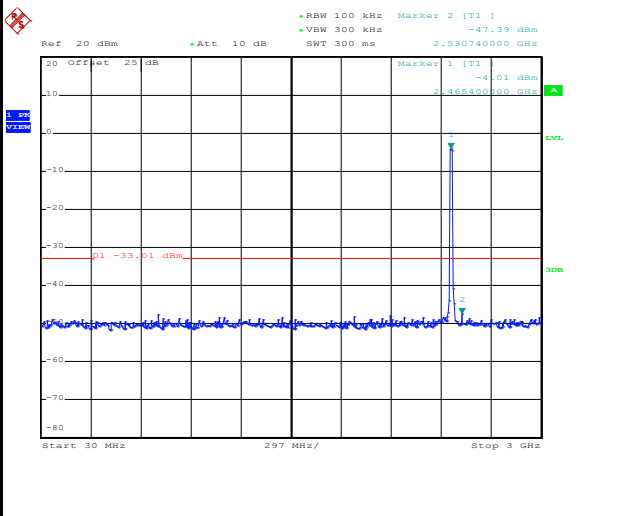


Test Mode :	802.11g	Test Channel :	12
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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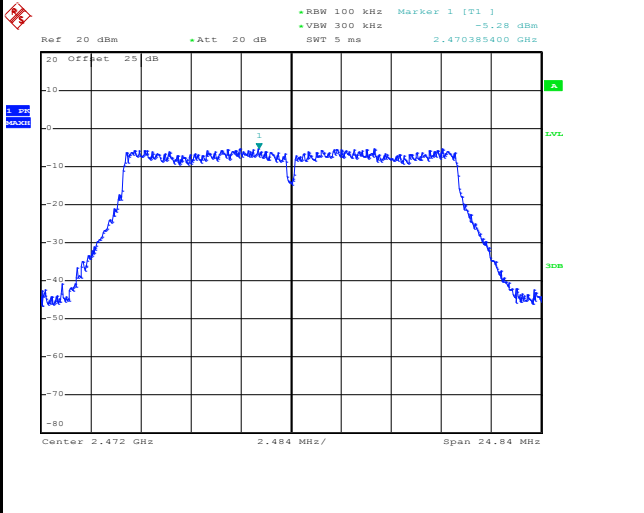
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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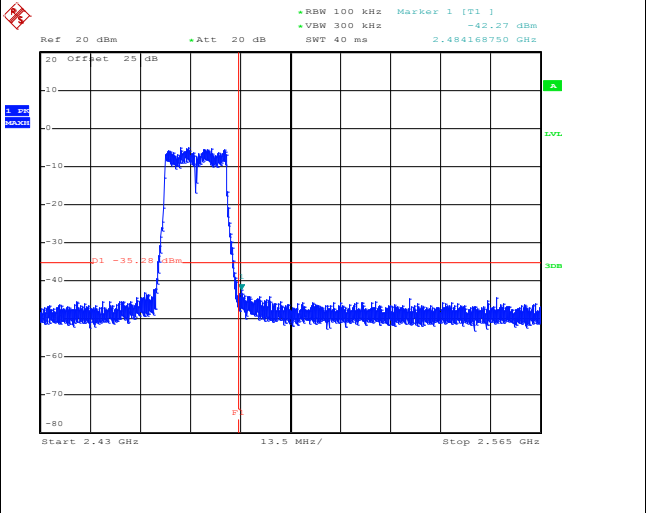


Test Mode :	802.11g	Test Channel :	13
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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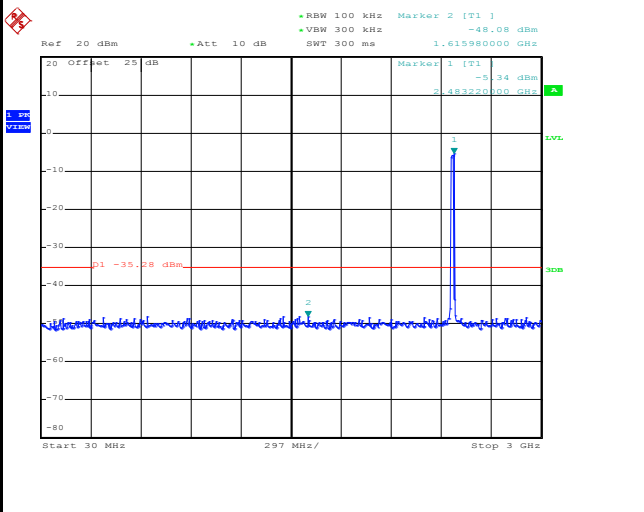


Date: 14.MAY.2020 17:26:23

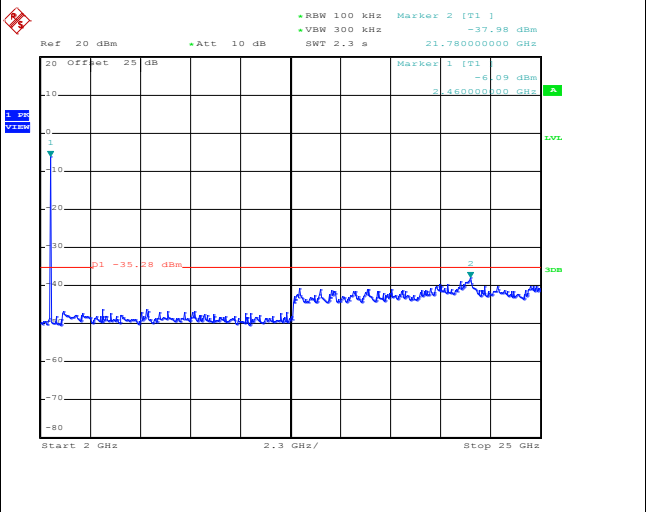


Date: 14.MAY.2020 17:27:13

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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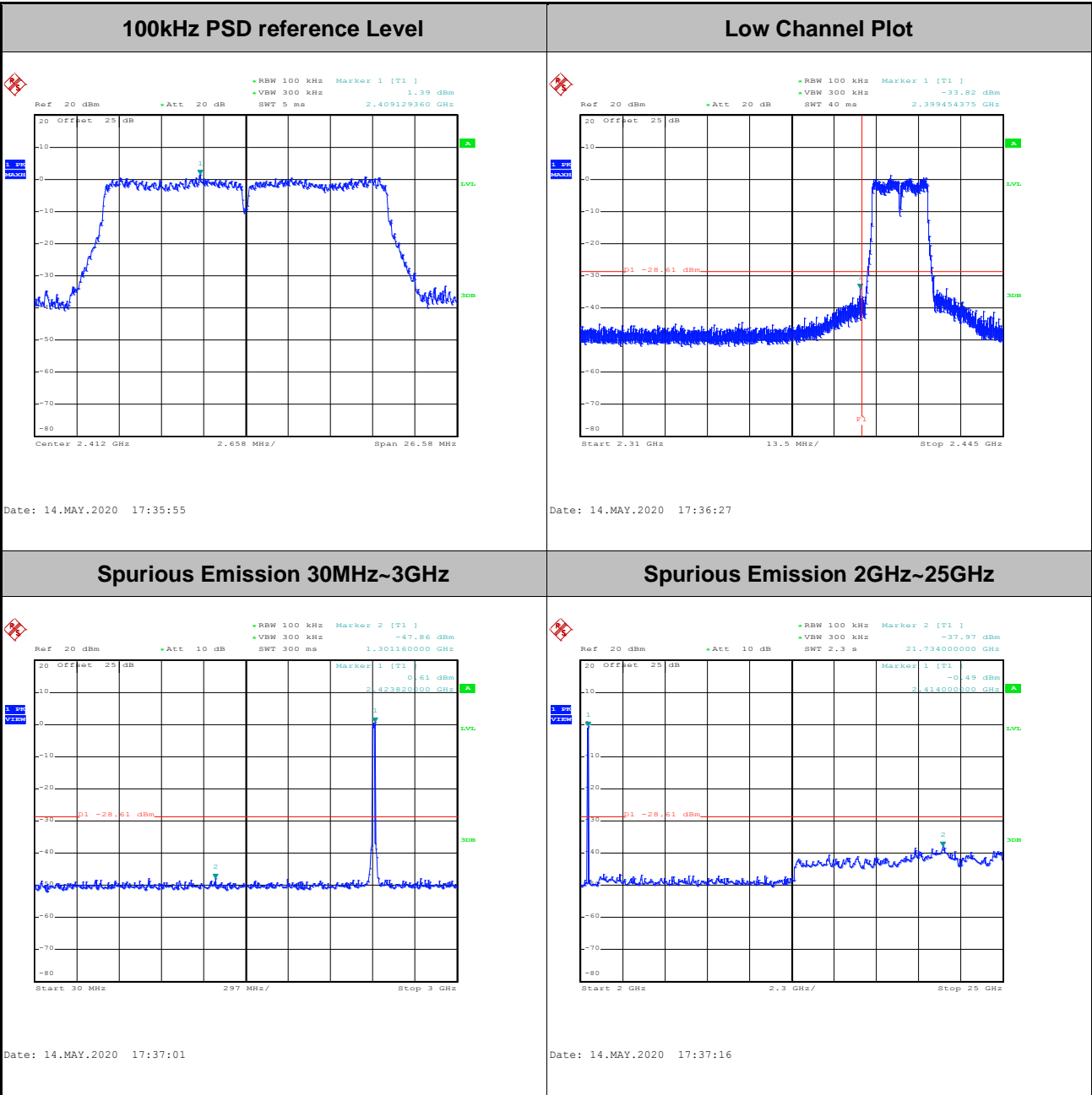
Date: 14.MAY.2020 17:27:42



Date: 14.MAY.2020 17:27:56



Test Mode :	802.11n HT20	Test Channel :	01
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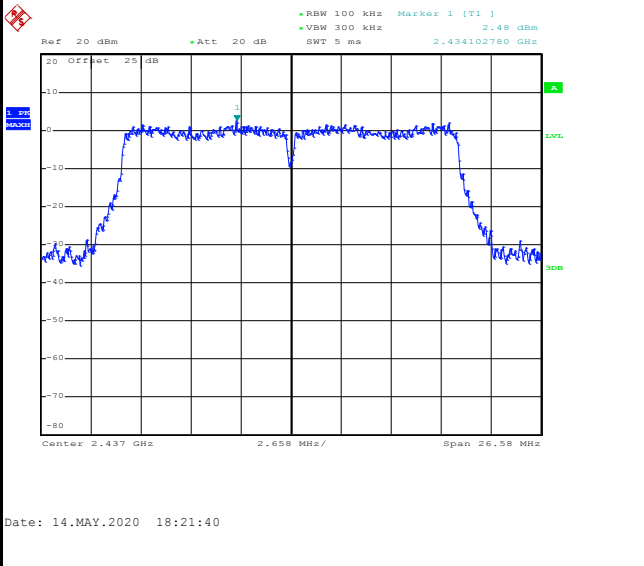




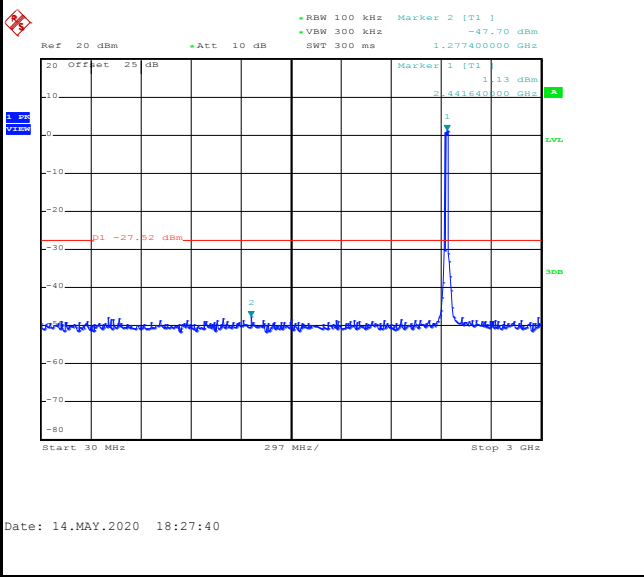


<b>Test Mode :</b>	802.11n HT20	<b>Test Channel :</b>	06
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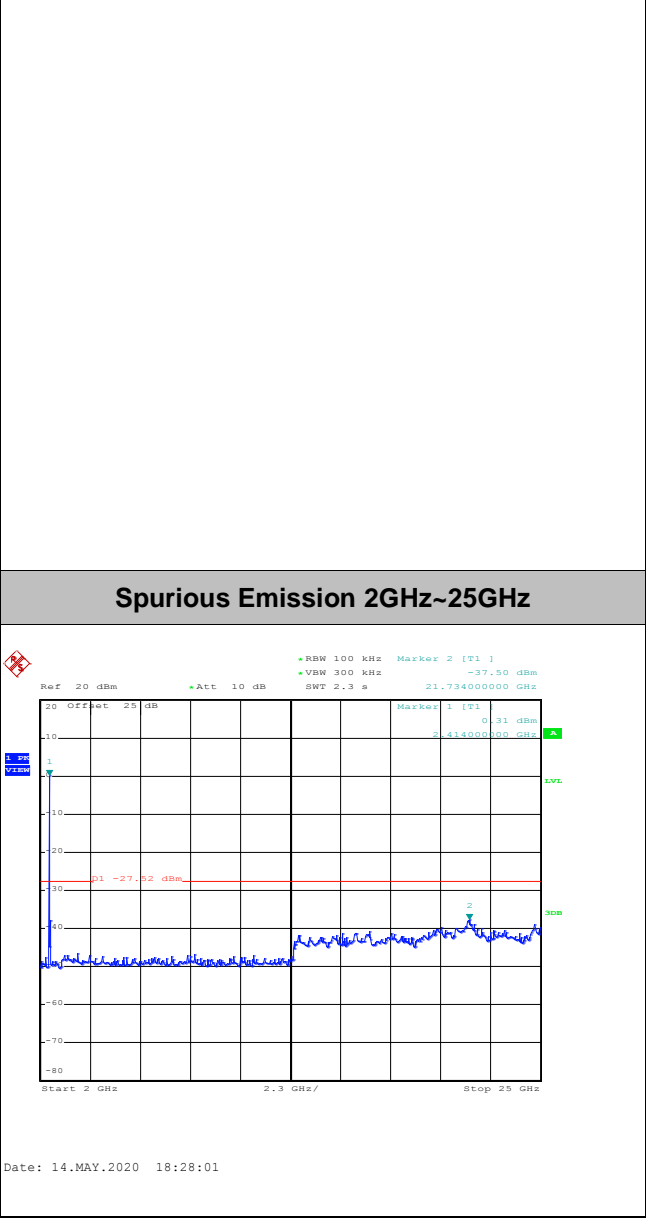
<b>100kHz PSD reference Level</b>
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<b>Spurious Emission 30MHz~3GHz</b>
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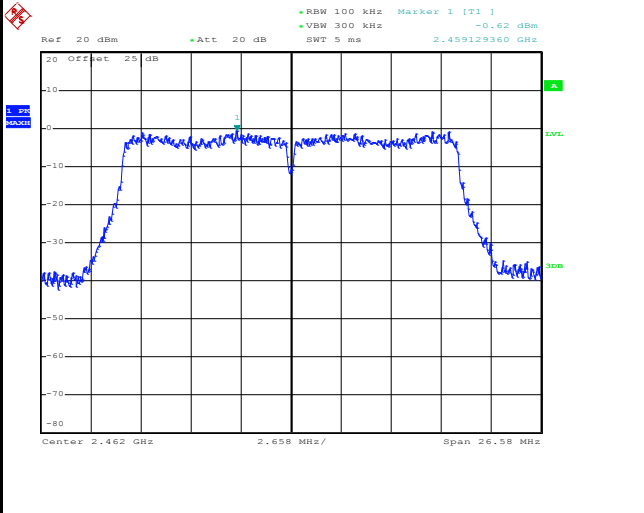
<b>Spurious Emission 2GHz~25GHz</b>
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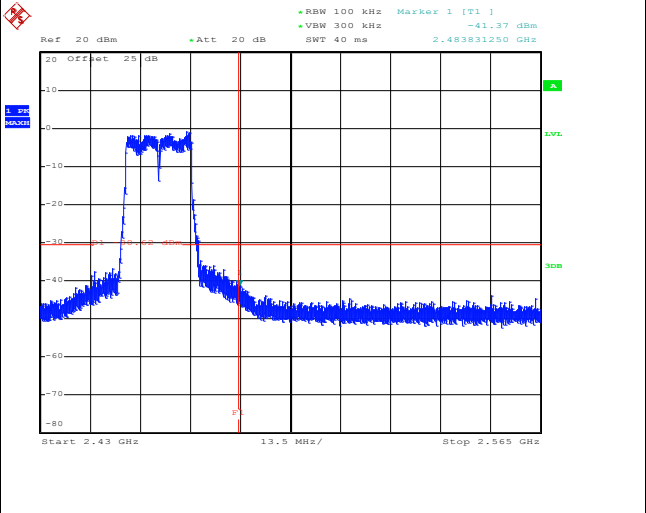


Test Mode :	802.11n HT20	Test Channel :	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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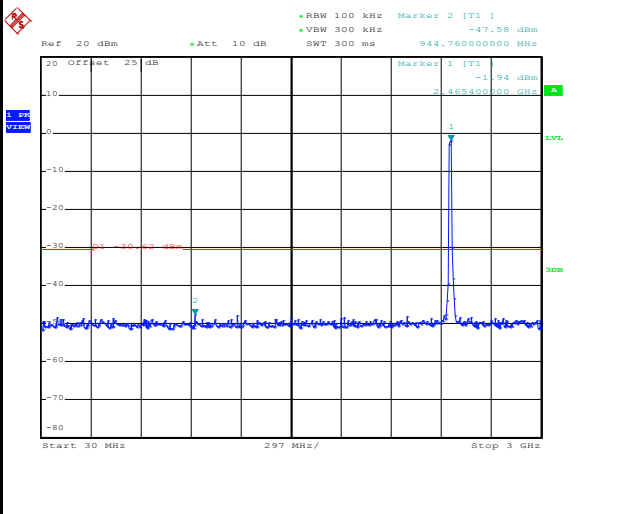


Date: 14.MAY.2020 18:32:44

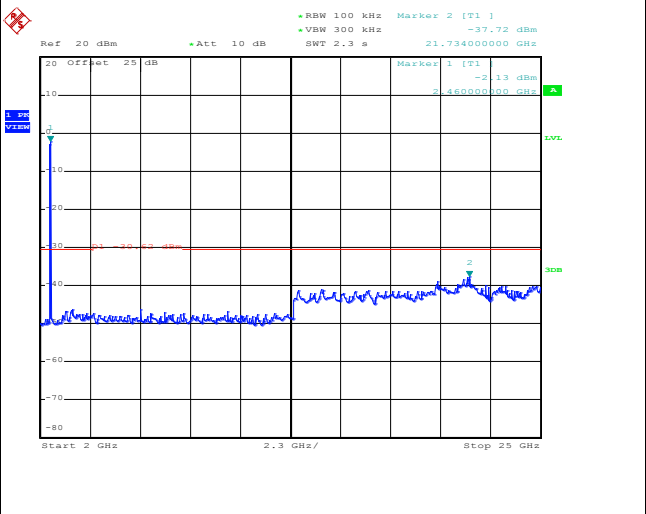


Date: 14.MAY.2020 18:33:14

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 14.MAY.2020 18:53:01

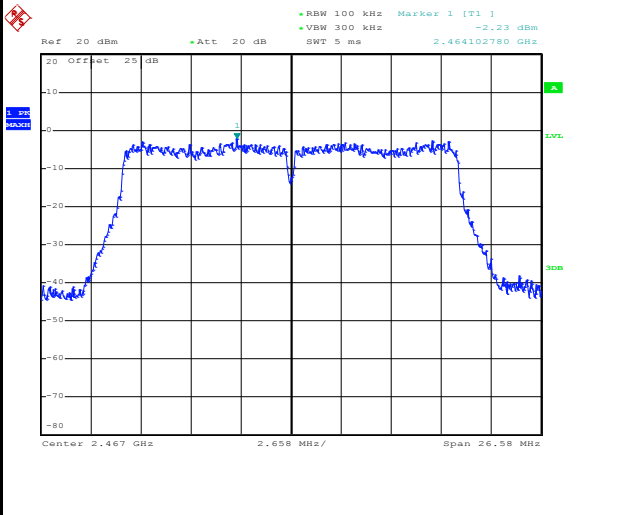


Date: 14.MAY.2020 18:53:18

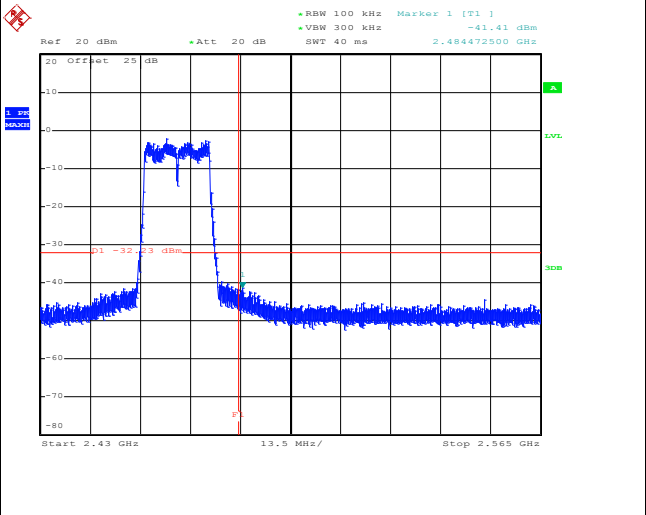


<b>Test Mode :</b>	802.11n HT20	<b>Test Channel :</b>	12
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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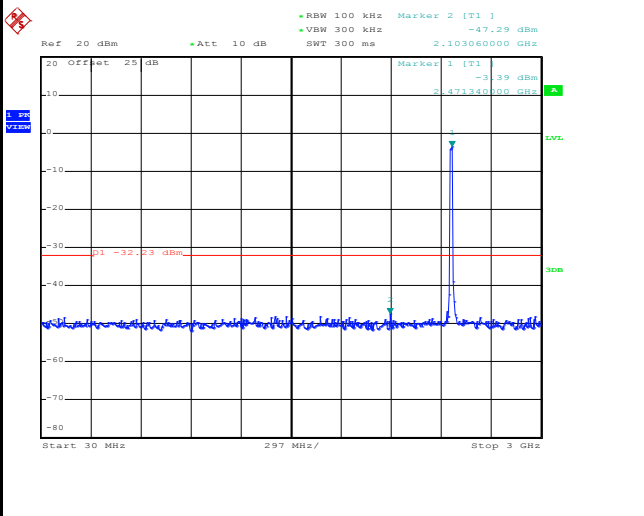


Date: 15.MAY.2020 09:12:08

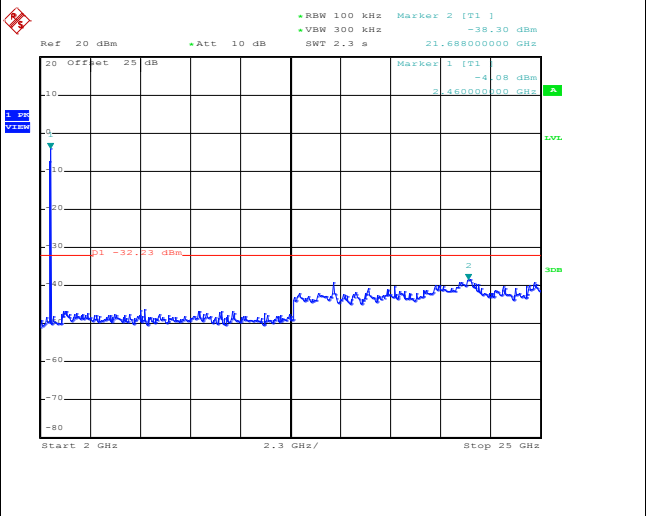


Date: 15.MAY.2020 09:12:38

<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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Date: 15.MAY.2020 09:13:13

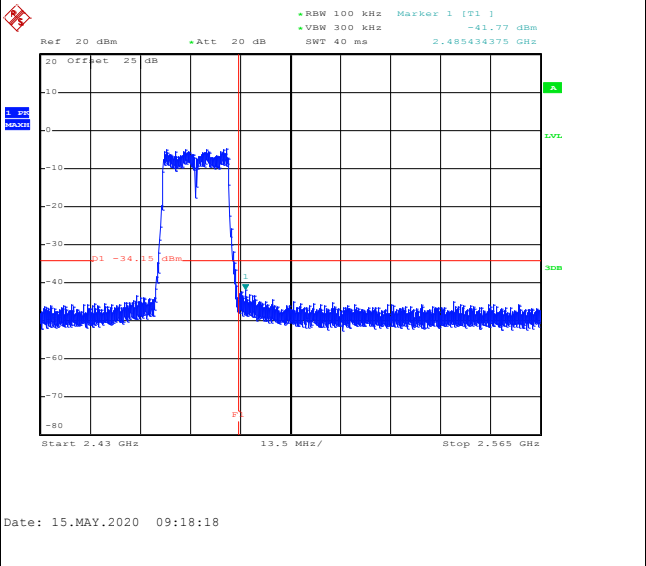
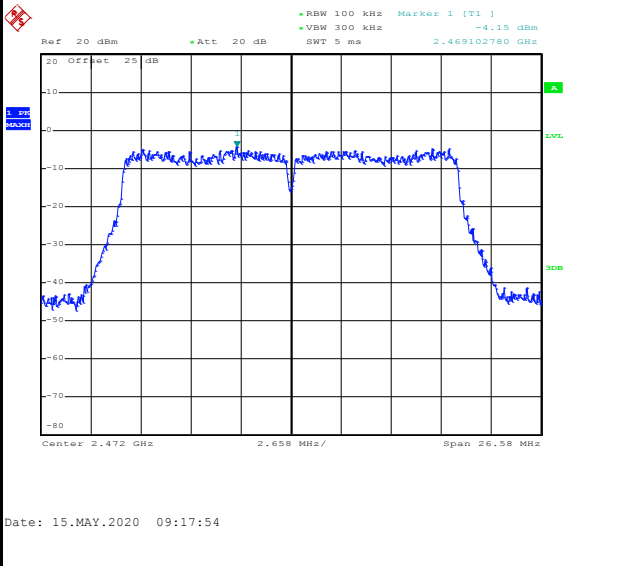


Date: 15.MAY.2020 09:13:28

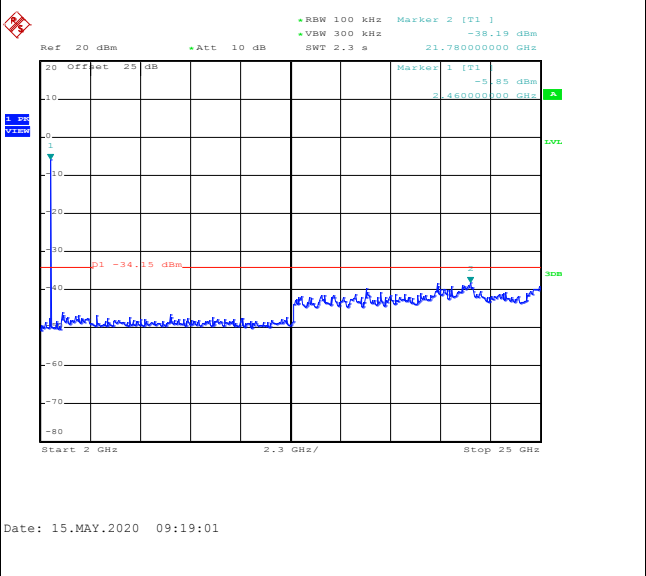
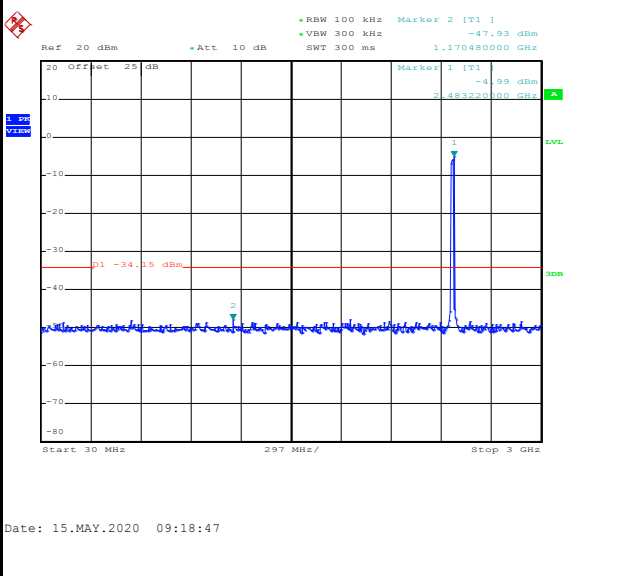


<b>Test Mode :</b>	802.11n HT20	<b>Test Channel :</b>	13
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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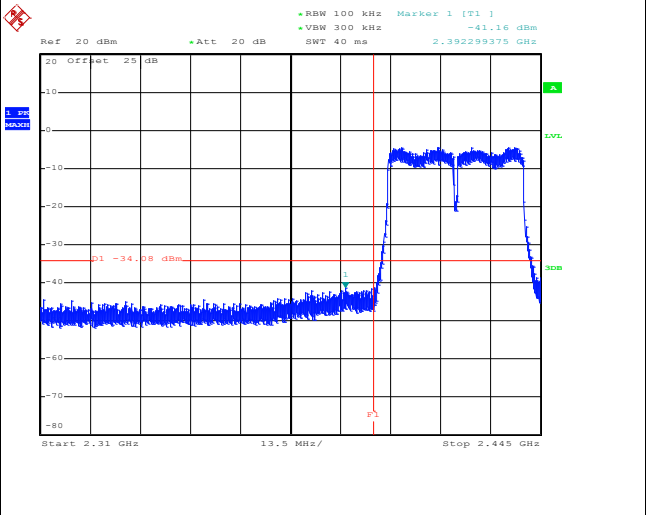
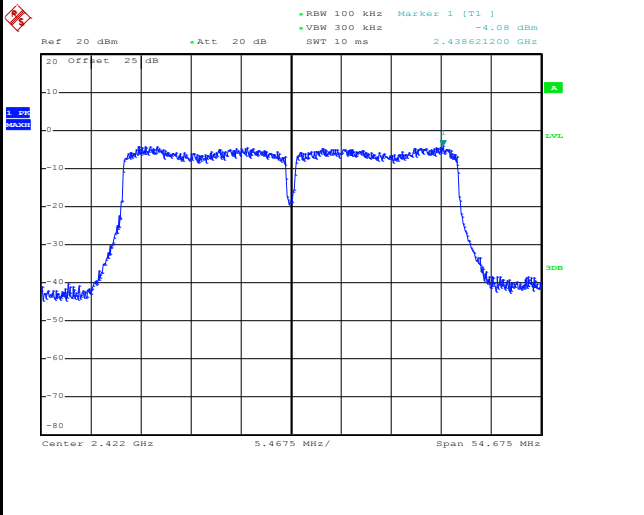
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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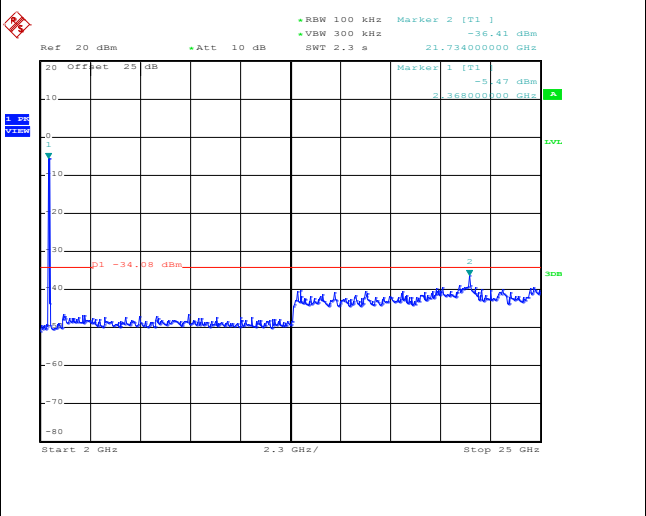
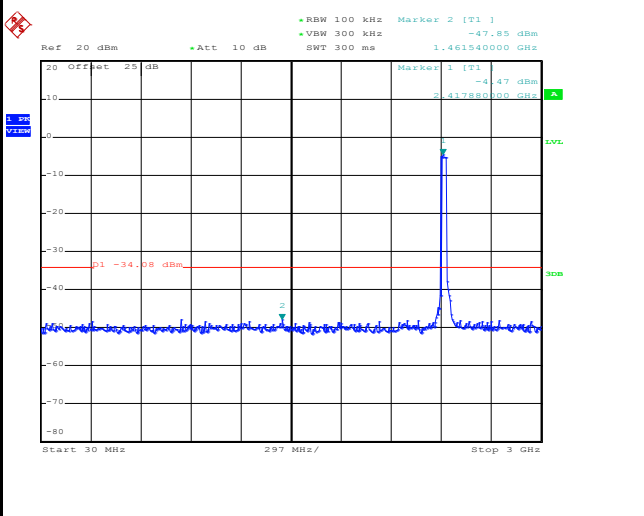


Test Mode :	802.11n HT40	Test Channel :	03
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<b>100kHz PSD reference Level</b>	<b>Low Channel Plot</b>
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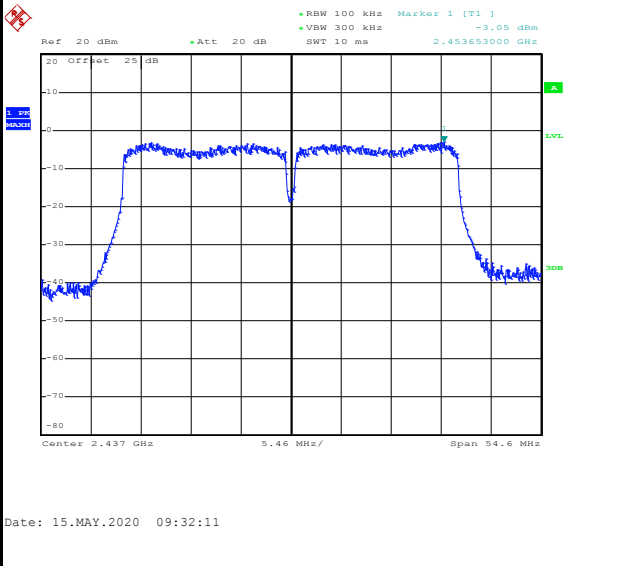
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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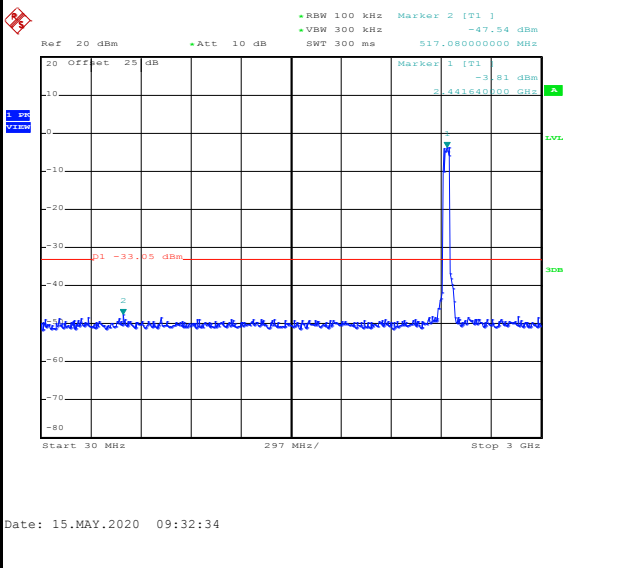


Test Mode :	802.11n HT40	Test Channel :	06
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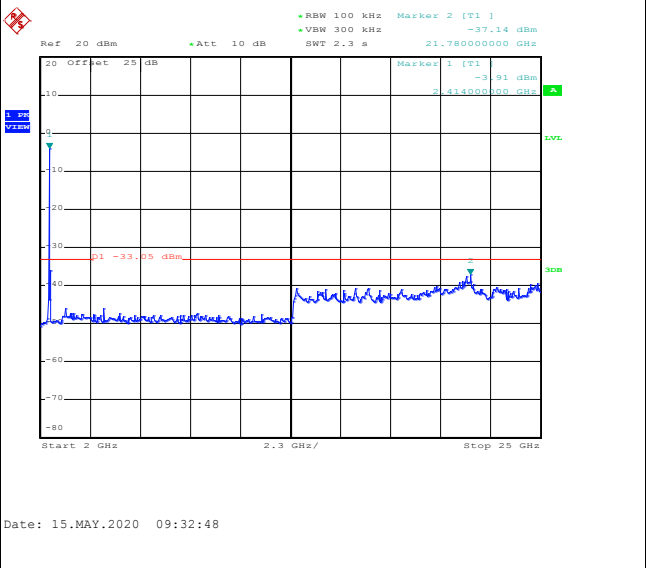
<b>100kHz PSD reference Level</b>
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<b>Spurious Emission 30MHz~3GHz</b>
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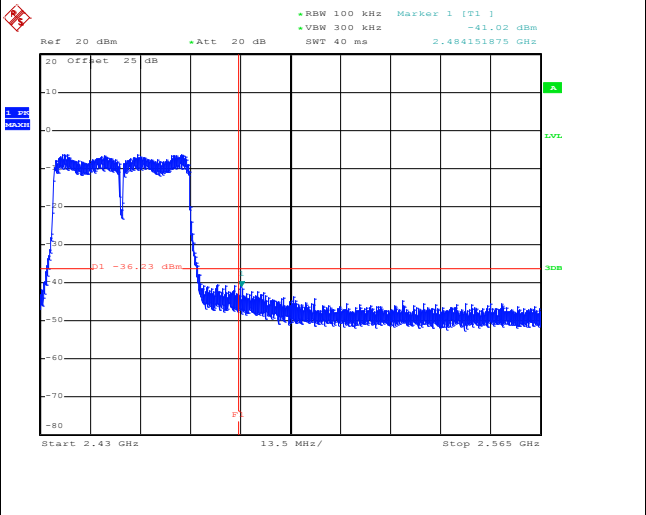
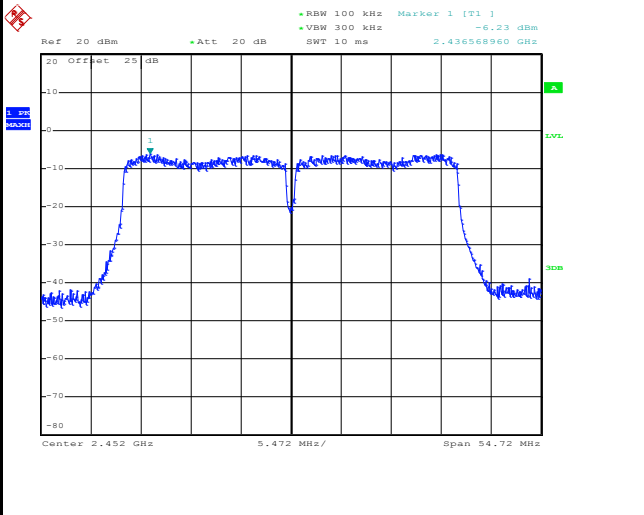
<b>Spurious Emission 2GHz~25GHz</b>
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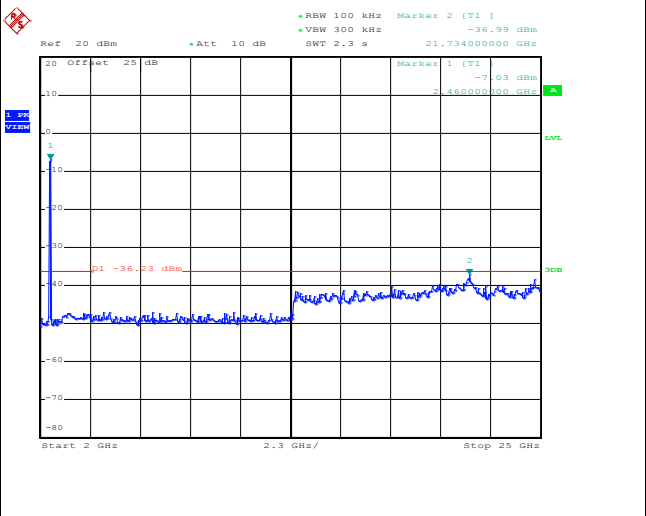
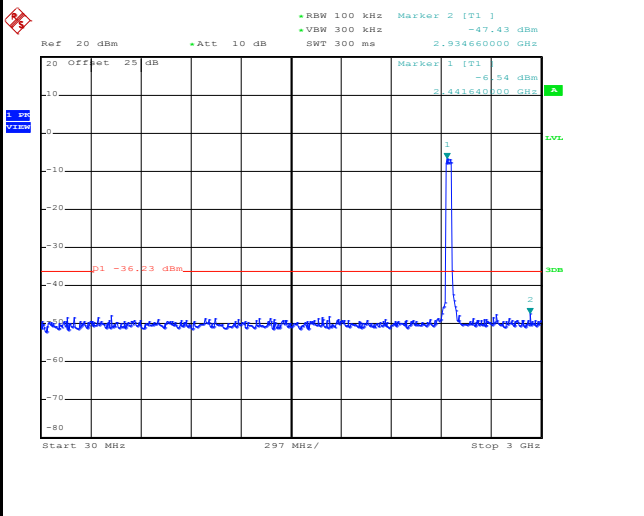


Test Mode :	802.11n HT40	Test Channel :	09
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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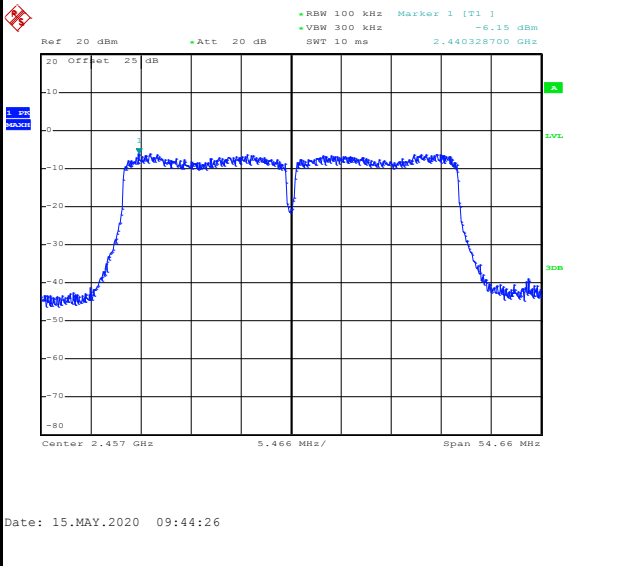
<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
-------------------------------------	-------------------------------------



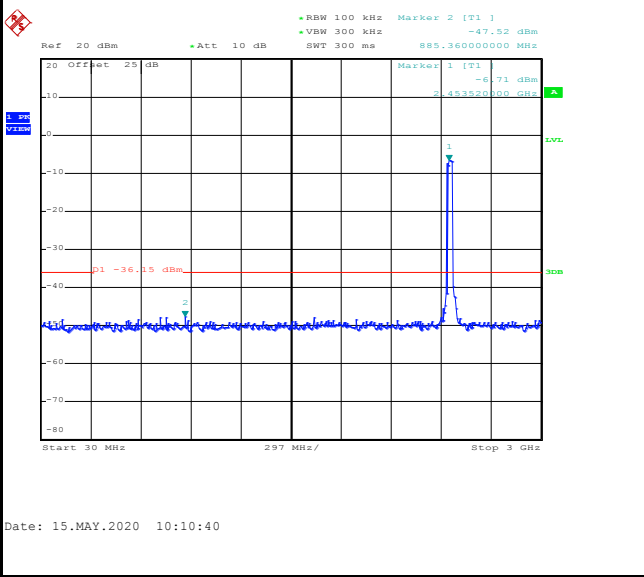


<b>Test Mode :</b>	802.11n HT40	<b>Test Channel :</b>	10
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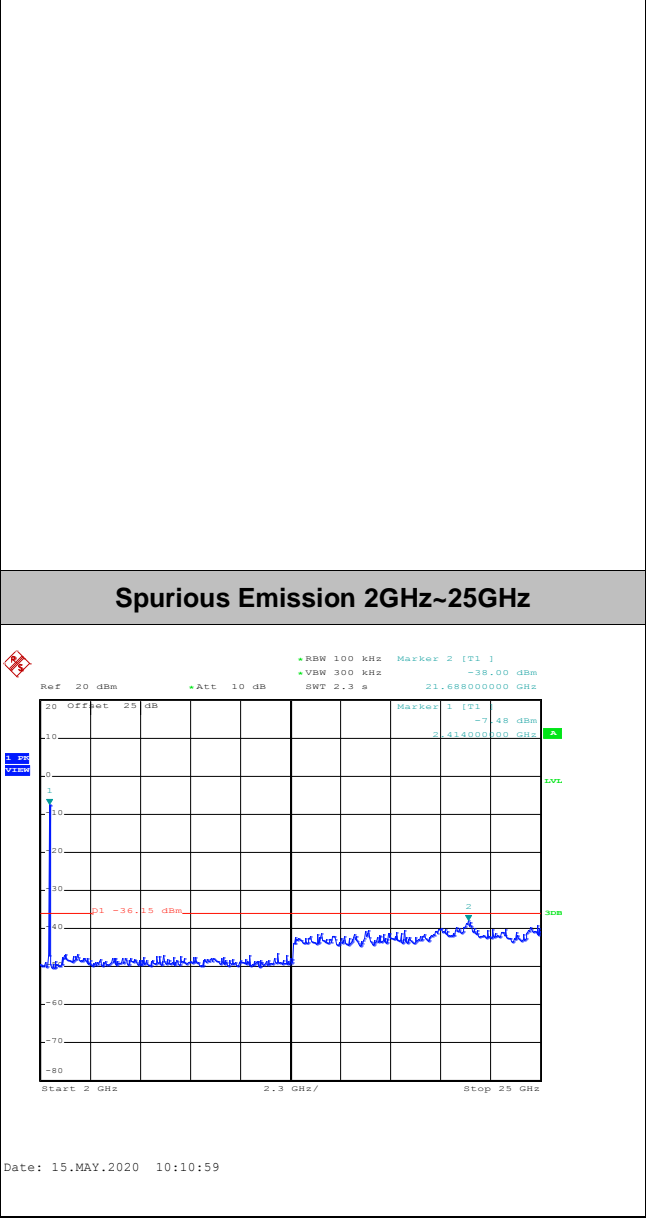
<b>100kHz PSD reference Level</b>
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<b>Spurious Emission 30MHz~3GHz</b>
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<b>Spurious Emission 2GHz~25GHz</b>
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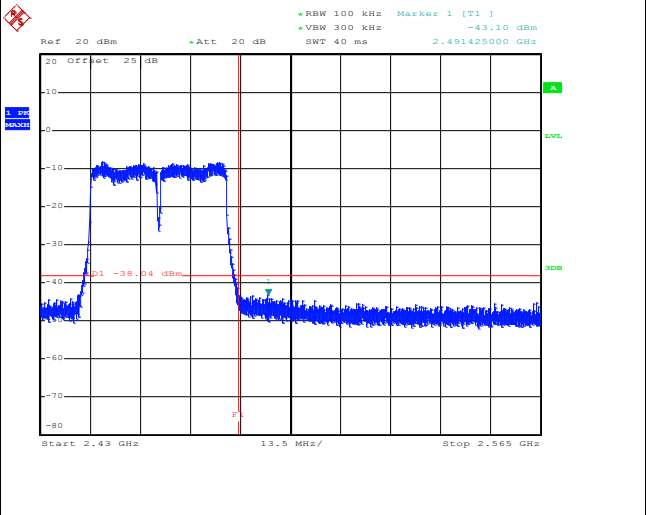
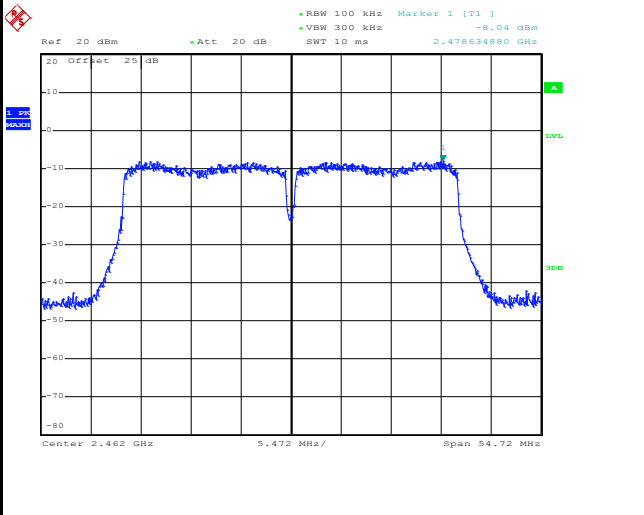




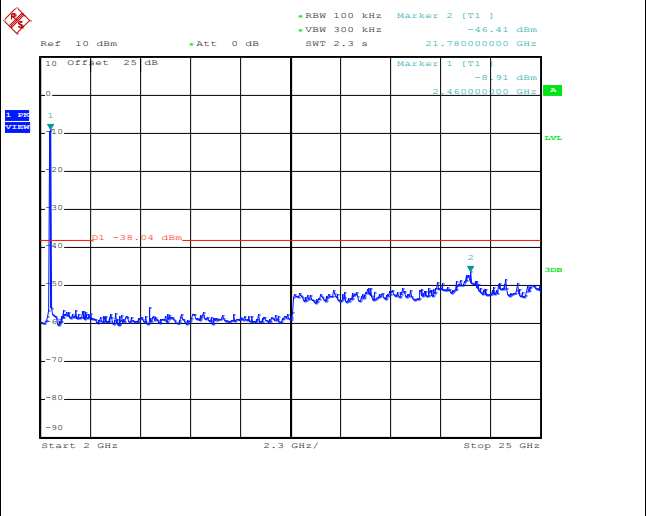
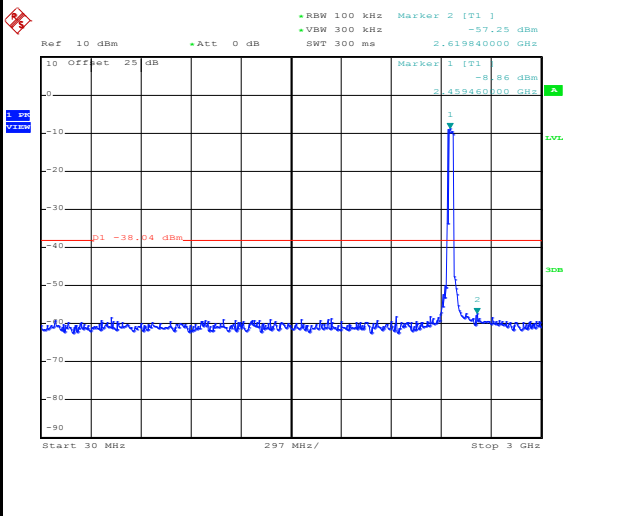


<b>Test Mode :</b>	802.11n HT40	<b>Test Channel :</b>	11
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<b>100kHz PSD reference Level</b>	<b>High Channel Plot</b>
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<b>Spurious Emission 30MHz~3GHz</b>	<b>Spurious Emission 2GHz~25GHz</b>
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### 3.5 Radiated Band Edges and Spurious Emission Measurement

#### 3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

#### 3.5.2 Measuring Instruments

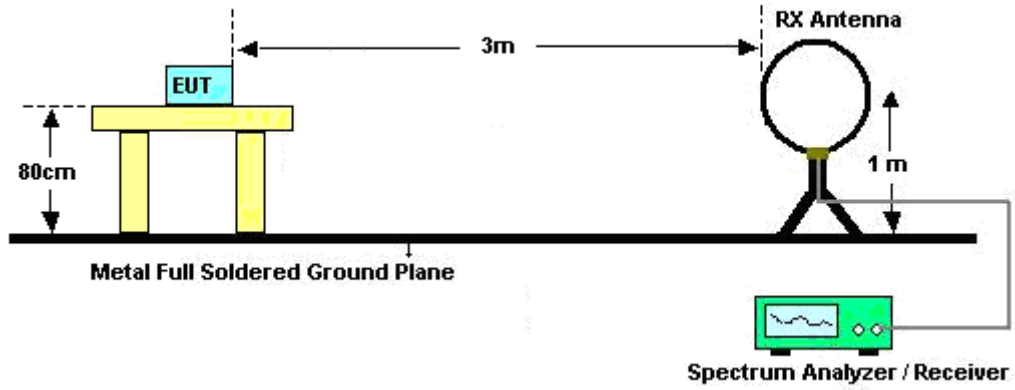
See list of measuring equipment of this test report.

**3.5.3 Test Procedures**

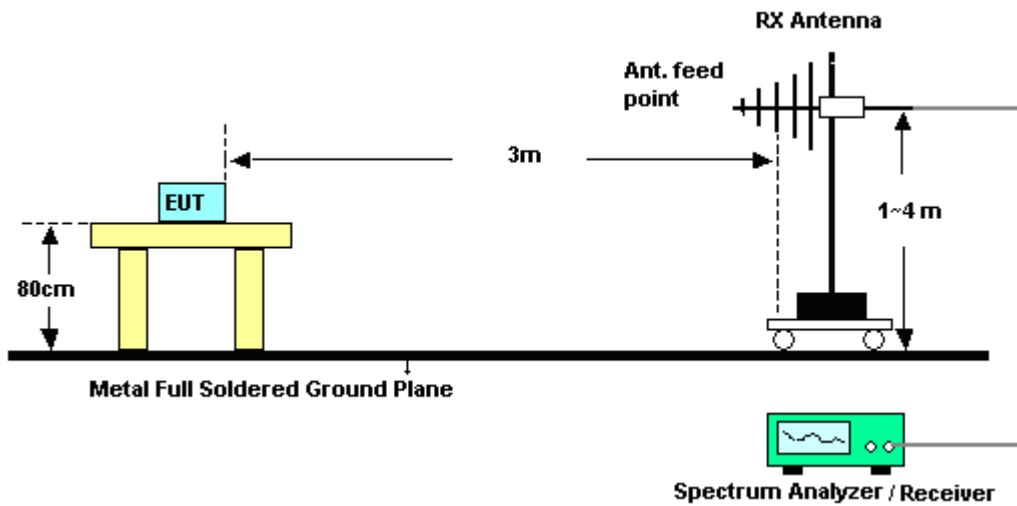
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz;  $VBW \geq RBW$ ; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.  
For average measurement:
    - $VBW = 10$  Hz, when duty cycle is no less than 98 percent.
    - $VBW \geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

### 3.5.4 Test Setup

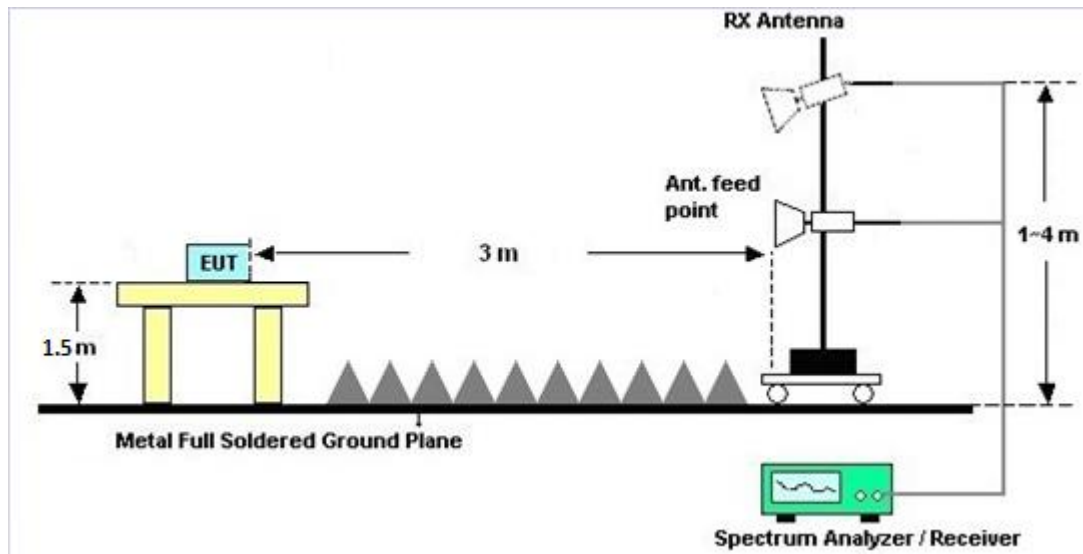
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

### 3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

### 3.5.7 Duty Cycle

Please refer to Appendix E.

### 3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)

Please refer to Appendix C and D.



### 3.6 AC Conducted Emission Measurement

#### 3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

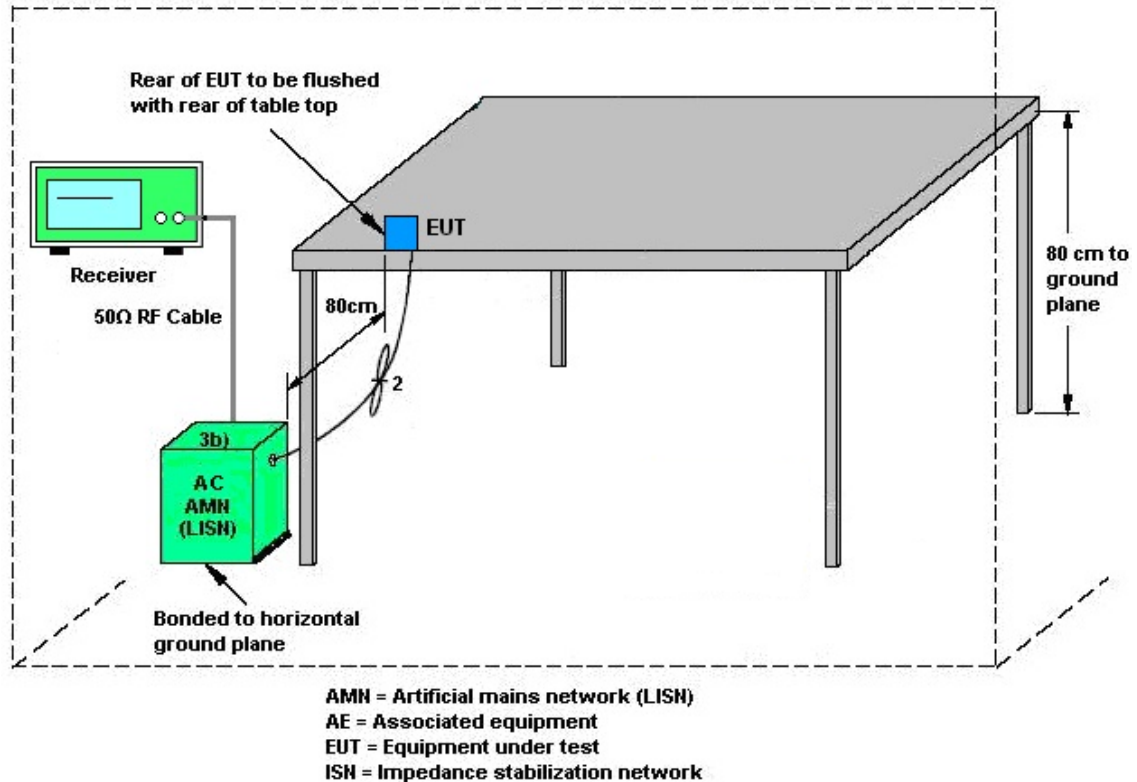
#### 3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

#### 3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

### 3.6.4 Test Setup



### 3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.7 Antenna Requirements**

### **3.7.1 Standard Applicable**

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

### **3.7.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.7.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.





## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Dec. 26, 2019	May 05, 2020~ May 11,,2020	Dec. 25, 2020	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL6111D&0 0802N1D01N- 06	47020&06	30MHz to 1GHz	Oct. 13, 2019	May 05, 2020~ May 11,,2020	Oct. 12, 2020	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-152 2	1G~18GHz	Sep. 19, 2019	May 05, 2020~ May 11,,2020	Sep. 18, 2020	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1000MHz	Oct. 01. 2019	May 05, 2020~ May 11,,2020	Sep. 30. 2020	Radiation (03CH16-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03	171000180 0055007	1GHz~18GHz	Mar. 31, 2020	May 05, 2020~ May 11,,2020	Mar. 30, 2021	Radiation (03CH16-HY)
Preamplifier	EMEC	EMC184045B	980192	18GHz ~40GHz	Jul. 10, 2019	May 05, 2020~ May 11,,2020	Jul. 09, 2020	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY532702 64	1GHz~26.5GHz	Dec. 11, 2019	May 05, 2020~ May 11,,2020	Dec.10, 2020	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A(MXE )	MY572901 11	3Hz~26.5GHz	Dec. 05, 2019	May 05, 2020~ May 11,,2020	Dec. 04, 2020	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/ 4PE	NA	Aug. 30, 2019	May 05, 2020~ May 11,,2020	Aug. 29, 2020	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/ 4PE	NA	Aug. 30, 2019	May 05, 2020~ May 11,,2020	Aug. 29, 2020	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300 -5757	NA	Aug. 30, 2019	May 05, 2020~ May 11,,2020	Aug. 29, 2020	Radiation (03CH16-HY)
Hygrometer	TECPEL	DTM-303B	TP161243	N/A	Jun. 17, 2019	May 05, 2020~ May 11,,2020	Jun. 16, 2020	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	May 05, 2020~ May 11,,2020	N/A	Radiation (03CH16-HY)
Hygrometer	Testo	608-H2	41410069	N/A	Jun. 17, 2019	May 01, 2020~ May 15, 2020	Jun. 16, 2020	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054S NO10	10MHz~6GHz	Dec. 23, 2019	May 01, 2020~ May 15, 2020	Dec. 22, 2020	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Aug. 14, 2019	May 01, 2020~ May 15, 2020	Aug. 13, 2020	Conducted (TH05-HY)
Switch Control Manframe	Burgeon	ETF-058	EC130048 4	N/A	Aug. 22,2019	May 01, 2020~ May 15, 2020	Aug. 21,2020	Conducted (TH05-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Mar. 12, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Mar. 12, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 19, 2019	Mar. 12, 2020	Mar. 18, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 20, 2019	Mar. 12, 2020	Nov. 19, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Mar. 12, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Mar. 12, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Mar. 12, 2020	Jan. 01, 2021	Conduction (CO05-HY)



## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.3
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.9
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	6.7
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.9
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**Appendix A. Test Result of Conducted Test Items**

Test Engineer:	Shiming Liu	Temperature:	21~25	°C
Test Date:	2020/05/01~2020/05/15	Relative Humidity:	51~54	%

**TEST RESULTS DATA**  
**6dB and 99% Occupied Bandwidth**

2.4GHz Band Single Antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	1	1	2412	13.45	13.45	10.01	10.04	0.50	Pass
11b	1Mbps	1	6	2437	13.50	13.45	10.06	10.06	0.50	Pass
11b	1Mbps	1	11	2462	13.50	13.50	10.06	10.06	0.50	Pass
11b	1Mbps	1	12	2467	13.45	13.55	10.04	10.06	0.50	Pass
11b	1Mbps	1	13	2472	13.45	13.55	10.05	10.06	0.50	Pass
11g	6Mbps	1	1	2412	16.85	16.85	16.56	16.54	0.50	Pass
11g	6Mbps	1	6	2437	17.00	16.95	16.58	16.56	0.50	Pass
11g	6Mbps	1	11	2462	16.85	16.85	16.56	16.56	0.50	Pass
11g	6Mbps	1	12	2467	16.85	16.80	16.57	16.59	0.50	Pass
11g	6Mbps	1	13	2472	16.80	16.80	16.58	16.56	0.50	Pass
HT20	MCS0	1	1	2412	17.75	17.80	17.72	17.72	0.50	Pass
HT20	MCS0	1	6	2437	17.80	17.80	17.70	17.72	0.50	Pass
HT20	MCS0	1	11	2462	17.75	17.80	17.72	17.72	0.50	Pass
HT20	MCS0	1	12	2467	17.75	17.75	17.66	17.72	0.50	Pass
HT20	MCS0	1	13	2472	17.75	17.75	17.70	17.72	0.50	Pass
HT40	MCS0	1	3	2422	36.60	36.70	36.44	36.45	0.50	Pass
HT40	MCS0	1	6	2437	36.50	36.70	36.39	36.40	0.50	Pass
HT40	MCS0	1	9	2452	36.60	36.60	36.44	36.48	0.50	Pass
HT40	MCS0	1	10	2457	36.60	36.50	36.44	36.44	0.50	Pass
HT40	MCS0	1	11	2462	36.50	36.60	36.43	36.48	0.50	Pass

**TEST RESULTS DATA**  
**Average Output Power**

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	16.10	16.10		30.00	30.00	3.80	3.90	19.90	20.00	36.00	36.00	Pass
11b	1Mbps	1	6	2437	16.60	16.60		30.00	30.00	3.80	3.90	20.40	20.50	36.00	36.00	Pass
11b	1Mbps	1	11	2462	16.70	16.60		30.00	30.00	3.80	3.90	20.50	20.50	36.00	36.00	Pass
11b	1Mbps	1	12	2467	14.40	15.20		30.00	30.00	3.80	3.90	18.20	19.10	36.00	36.00	Pass
11b	1Mbps	1	13	2472	12.40	13.20		30.00	30.00	3.80	3.90	16.20	17.10	36.00	36.00	Pass
11g	6Mbps	1	1	2412	14.90	15.00		30.00	30.00	3.80	3.90	18.70	18.90	36.00	36.00	Pass
11g	6Mbps	1	6	2437	16.60	16.60		30.00	30.00	3.80	3.90	20.40	20.50	36.00	36.00	Pass
11g	6Mbps	1	11	2462	13.40	13.20		30.00	30.00	3.80	3.90	17.20	17.10	36.00	36.00	Pass
11g	6Mbps	1	12	2467	11.50	11.30		30.00	30.00	3.80	3.90	15.30	15.20	36.00	36.00	Pass
11g	6Mbps	1	13	2472	9.50	9.30		30.00	30.00	3.80	3.90	13.30	13.20	36.00	36.00	Pass
HT20	MCS0	1	1	2412	14.10	15.10		30.00	30.00	3.80	3.90	17.90	19.00	36.00	36.00	Pass
HT20	MCS0	1	6	2437	16.60	16.60		30.00	30.00	3.80	3.90	20.40	20.50	36.00	36.00	Pass
HT20	MCS0	1	11	2462	12.60	13.40		30.00	30.00	3.80	3.90	16.40	17.30	36.00	36.00	Pass
HT20	MCS0	1	12	2467	11.70	11.40		30.00	30.00	3.80	3.90	15.50	15.30	36.00	36.00	Pass
HT20	MCS0	1	13	2472	8.70	9.40		30.00	30.00	3.80	3.90	12.50	13.30	36.00	36.00	Pass
HT40	MCS0	1	3	2422	12.10	13.10		30.00	30.00	3.80	3.90	15.90	17.00	36.00	36.00	Pass
HT40	MCS0	1	6	2437	14.20	14.10		30.00	30.00	3.80	3.90	18.00	18.00	36.00	36.00	Pass
HT40	MCS0	1	9	2452	11.40	11.20		30.00	30.00	3.80	3.90	15.20	15.10	36.00	36.00	Pass
HT40	MCS0	1	10	2457	11.40	11.20		30.00	30.00	3.80	3.90	15.20	15.10	36.00	36.00	Pass
HT40	MCS0	1	11	2462	8.50	9.30		30.00	30.00	3.80	3.90	12.30	13.20	36.00	36.00	Pass

Note: Measured power (dBm) has offset with cable loss.

**TEST RESULTS DATA**  
**Peak Power Spectral Density**

2.4GHz Band Single Antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	-13.32	-13.29		3.80	3.90	8.00	8.00	Pass
11b	1Mbps	1	6	2437	-12.97	-13.19		3.80	3.90	8.00	8.00	Pass
11b	1Mbps	1	11	2462	-12.76	-13.08		3.80	3.90	8.00	8.00	Pass
11b	1Mbps	1	12	2467	-14.71	-14.04		3.80	3.90	8.00	8.00	Pass
11b	1Mbps	1	13	2472	-16.68	-15.97		3.80	3.90	8.00	8.00	Pass
11g	6Mbps	1	1	2412	-12.75	-12.86		3.80	3.90	8.00	8.00	Pass
11g	6Mbps	1	6	2437	-11.72	-11.45		3.80	3.90	8.00	8.00	Pass
11g	6Mbps	1	11	2462	-14.24	-14.50		3.80	3.90	8.00	8.00	Pass
11g	6Mbps	1	12	2467	-16.27	-16.34		3.80	3.90	8.00	8.00	Pass
11g	6Mbps	1	13	2472	-18.14	-18.48		3.80	3.90	8.00	8.00	Pass
HT20	MCS0	1	1	2412	-13.64	-12.79		3.80	3.90	8.00	8.00	Pass
HT20	MCS0	1	6	2437	-11.78	-11.60		3.80	3.90	8.00	8.00	Pass
HT20	MCS0	1	11	2462	-15.01	-14.48		3.80	3.90	8.00	8.00	Pass
HT20	MCS0	1	12	2467	-16.11	-16.49		3.80	3.90	8.00	8.00	Pass
HT20	MCS0	1	13	2472	-19.65	-18.16		3.80	3.90	8.00	8.00	Pass
HT40	MCS0	1	3	2422	-18.37	-16.61		3.80	3.90	8.00	8.00	Pass
HT40	MCS0	1	6	2437	-16.01	-15.60		3.80	3.90	8.00	8.00	Pass
HT40	MCS0	1	9	2452	-18.42	-18.71		3.80	3.90	8.00	8.00	Pass
HT40	MCS0	1	10	2457	-18.56	-18.92		3.80	3.90	8.00	8.00	Pass
HT40	MCS0	1	11	2462	-21.84	-20.51		3.80	3.90	8.00	8.00	Pass



## Appendix B. AC Conducted Emission Test Results

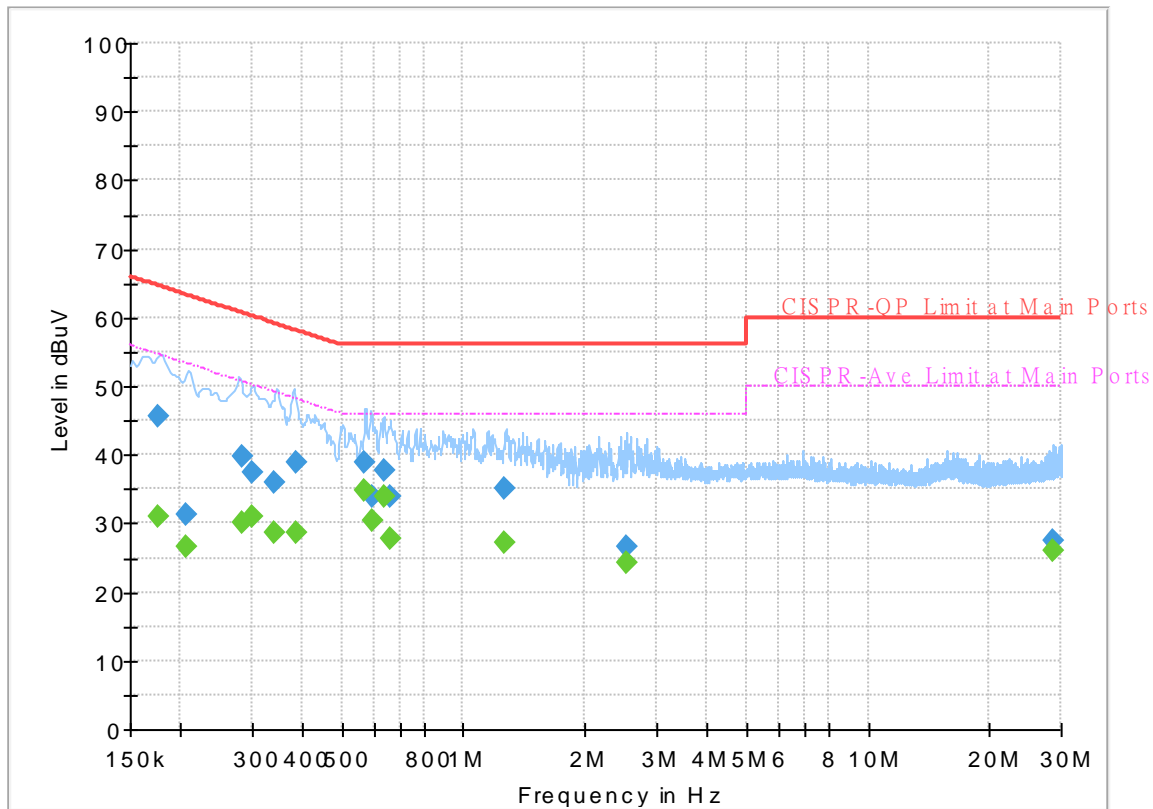
Test Engineer :	Tom Lee	Temperature :	21~25°C
		Relative Humidity :	42~50%



# EUT Information

Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum



## Final\_Result

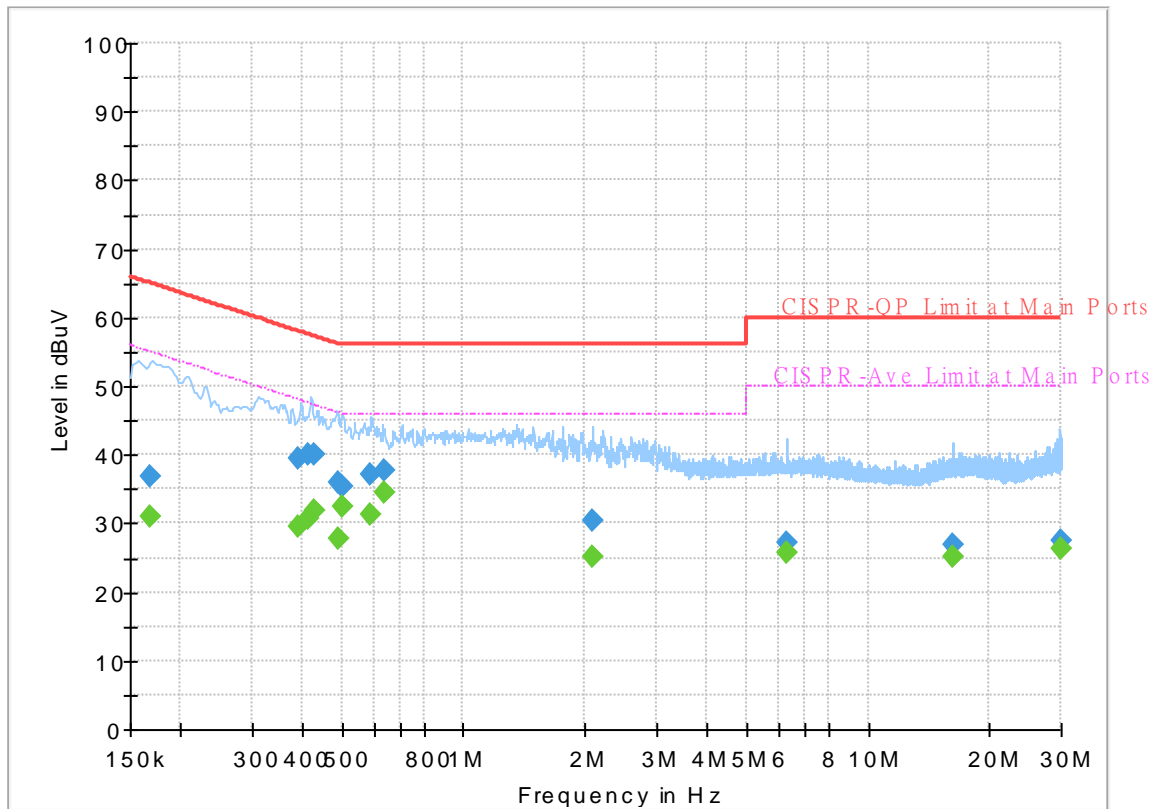
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.176460	---	31.05	54.65	23.60	L1	OFF	19.5
0.176460	45.50	---	64.65	19.15	L1	OFF	19.5
0.205530	---	26.61	53.38	26.77	L1	OFF	19.5
0.205530	31.19	---	63.38	32.19	L1	OFF	19.5
0.282750	---	30.03	50.74	20.71	L1	OFF	19.5
0.282750	39.80	---	60.74	20.94	L1	OFF	19.5
0.301830	---	31.09	50.19	19.10	L1	OFF	19.5
0.301830	37.57	---	60.19	22.62	L1	OFF	19.5
0.341250	---	28.67	49.17	20.50	L1	OFF	19.5
0.341250	35.92	---	59.17	23.25	L1	OFF	19.5
0.384180	---	28.53	48.19	19.66	L1	OFF	19.5
0.384180	39.01	---	58.19	19.18	L1	OFF	19.5
0.568500	---	34.77	46.00	11.23	L1	OFF	19.5
0.568500	38.75	---	56.00	17.25	L1	OFF	19.5
0.594870	---	30.35	46.00	15.65	L1	OFF	19.5
0.594870	33.81	---	56.00	22.19	L1	OFF	19.5
0.635370	---	34.05	46.00	11.95	L1	OFF	19.5
0.635370	37.83	---	56.00	18.17	L1	OFF	19.5
0.661830	---	27.78	46.00	18.22	L1	OFF	19.5
0.661830	33.88	---	56.00	22.12	L1	OFF	19.5
1.266000	---	27.25	46.00	18.75	L1	OFF	19.6

<b>1.266000</b>	<b>35.13</b>	<b>---</b>	<b>56.00</b>	<b>20.87</b>	<b>L1</b>	<b>OFF</b>	<b>19.6</b>
<b>2.535000</b>	<b>---</b>	<b>24.15</b>	<b>46.00</b>	<b>21.85</b>	<b>L1</b>	<b>OFF</b>	<b>19.7</b>
<b>2.535000</b>	<b>26.65</b>	<b>---</b>	<b>56.00</b>	<b>29.35</b>	<b>L1</b>	<b>OFF</b>	<b>19.7</b>
<b>28.659570</b>	<b>---</b>	<b>25.96</b>	<b>50.00</b>	<b>24.04</b>	<b>L1</b>	<b>OFF</b>	<b>20.4</b>
<b>28.659570</b>	<b>27.36</b>	<b>---</b>	<b>60.00</b>	<b>32.64</b>	<b>L1</b>	<b>OFF</b>	<b>20.4</b>

# EUT Information

Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



## Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.167190	---	31.09	55.10	24.01	N	OFF	19.6
0.167190	36.81	---	65.10	28.29	N	OFF	19.6
0.390750	---	29.61	48.05	18.44	N	OFF	19.6
0.390750	39.48	---	58.05	18.57	N	OFF	19.6
0.415500	---	30.74	47.54	16.80	N	OFF	19.6
0.415500	40.11	---	57.54	17.43	N	OFF	19.6
0.430080	---	32.01	47.25	15.24	N	OFF	19.6
0.430080	39.99	---	57.25	17.26	N	OFF	19.6
0.489750	---	27.75	46.17	18.42	N	OFF	19.6
0.489750	35.87	---	56.17	20.30	N	OFF	19.6
0.500370	---	32.58	46.00	13.42	N	OFF	19.6
0.500370	35.46	---	56.00	20.54	N	OFF	19.6
0.586500	---	31.27	46.00	14.73	N	OFF	19.6
0.586500	37.13	---	56.00	18.87	N	OFF	19.6
0.634110	---	34.45	46.00	11.55	N	OFF	19.6
0.634110	37.80	---	56.00	18.20	N	OFF	19.6
2.090940	---	25.13	46.00	20.87	N	OFF	19.6
2.090940	30.41	---	56.00	25.59	N	OFF	19.6
6.323100	---	25.68	50.00	24.32	N	OFF	19.9
6.323100	27.24	---	60.00	32.76	N	OFF	19.9
16.285200	---	25.16	50.00	24.84	N	OFF	20.2

16.285200	26.91	---	60.00	33.09	N	OFF	20.2
29.832000	---	26.36	50.00	23.64	N	OFF	20.7
29.832000	27.52	---	60.00	32.48	N	OFF	20.7



### Appendix C. Radiated Spurious Emission

Test Engineer :	Andy Yang and CR Liro	Temperature :	20~25°C
		Relative Humidity :	50~60%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11b CH 01 2412MHz		2380.56	57.5	-16.5	74	41.52	27.68	18.08	29.78	203	165	P	H
		2387.28	46.66	-7.34	54	30.7	27.65	18.09	29.78	203	165	A	H
	*	2412	108.12	-	-	92.18	27.6	18.13	29.79	203	165	P	H
	*	2412	105.05	-	-	89.11	27.6	18.13	29.79	203	165	A	H
		2387.28	57.1	-16.9	74	41.14	27.65	18.09	29.78	400	358	P	V
		2387.175	45.95	-8.05	54	29.99	27.65	18.09	29.78	400	358	A	V
	*	2412	105.71	-	-	89.77	27.6	18.13	29.79	400	358	P	V
	*	2412	102.62	-	-	86.68	27.6	18.13	29.79	400	358	A	V
802.11b CH 06 2437MHz		2323.02	57.23	-16.77	74	41.1	27.91	17.98	29.76	348	239	P	H
		2382.8	45.63	-8.37	54	29.66	27.67	18.08	29.78	348	239	A	H
	*	2437	108.44	-	-	92.47	27.6	18.17	29.8	348	239	P	H
	*	2437	105.38	-	-	89.41	27.6	18.17	29.8	348	239	A	H
		2491.39	56.91	-17.09	74	40.96	27.52	18.26	29.83	348	239	P	H
		2491.39	45.52	-8.48	54	29.57	27.52	18.26	29.83	348	239	A	H
		2378.6	56.99	-17.01	74	41.01	27.69	18.07	29.78	279	141	P	V
		2382.66	45.61	-8.39	54	29.64	27.67	18.08	29.78	279	141	A	V
	*	2437	107.25	-	-	91.28	27.6	18.17	29.8	279	141	P	V
	*	2437	104.08	-	-	88.11	27.6	18.17	29.8	279	141	A	V
		2487.12	58.19	-15.81	74	42.23	27.53	18.25	29.82	279	141	P	V
	2491.32	45.45	-8.55	54	29.5	27.52	18.26	29.83	279	141	A	V	



<b>802.11b</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	108.15	-	-	92.17	27.58	18.21	29.81	337	229	P	H
	*	2462	105.03	-	-	89.05	27.58	18.21	29.81	337	229	A	H
		2485.96	57.87	-16.13	74	41.91	27.53	18.25	29.82	337	229	P	H
		2486.6	48.65	-5.35	54	32.69	27.53	18.25	29.82	337	229	A	H
													H
													H
	*	2462	107.4	-	-	91.42	27.58	18.21	29.81	303	142	P	V
	*	2462	104.3	-	-	88.32	27.58	18.21	29.81	303	142	A	V
		2487.2	57.46	-16.54	74	41.5	27.53	18.25	29.82	303	142	P	V
		2486.72	47.37	-6.63	54	31.41	27.53	18.25	29.82	303	142	A	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11b CH 12 2467MHz	*	2467	106.14	-	-	90.17	27.57	18.22	29.82	375	251	P	H
	*	2467	103.09	-	-	87.12	27.57	18.22	29.82	375	251	A	H
		2483.64	60.81	-13.19	74	44.86	27.53	18.24	29.82	375	251	P	H
		2484.08	52.46	-1.54	54	36.51	27.53	18.24	29.82	375	251	P	H
													H
													H
	*	2467	105.47	-	-	89.5	27.57	18.22	29.82	241	156	P	V
	*	2467	102.36	-	-	86.39	27.57	18.22	29.82	241	156	A	V
		2483.84	60.05	-13.95	74	44.1	27.53	18.24	29.82	241	156	P	V
		2484.04	52.43	-1.57	54	36.48	27.53	18.24	29.82	241	156	A	V
													V
													V
802.11b CH 13 2472MHz	*	2472	104.45	-	-	88.48	27.56	18.23	29.82	264	225	P	H
	*	2472	101.39	-	-	85.42	27.56	18.23	29.82	264	225	A	H
		2487.32	59.95	-14.05	74	43.99	27.53	18.25	29.82	264	225	P	H
		2487.4	51.95	-2.05	54	35.99	27.53	18.25	29.82	264	225	A	H
													H
													H
	*	2472	102.8	-	-	86.83	27.56	18.23	29.82	400	342	P	V
	*	2472	99.76	-	-	83.79	27.56	18.23	29.82	400	342	A	V
		2487.48	59.5	-14.5	74	43.54	27.53	18.25	29.82	400	342	P	V
		2487.52	51.98	-2.02	54	36.03	27.52	18.25	29.82	400	342	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz  
WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11b CH 01 2412MHz		4824	46.84	-27.16	74	61.54	31.15	12.43	58.28	100	0	P	H
		12060	48.7	-25.3	74	50.27	38.86	21.29	61.72	100	0	P	H
													H
													H
		4824	48.87	-25.13	74	63.57	31.15	12.43	58.28	100	0	P	V
		12060	49.81	-24.19	74	51.38	38.86	21.29	61.72	100	0	P	V
													V
													V
802.11b CH 06 2437MHz		4874	45.43	-28.57	74	60.12	31.1	12.48	58.27	100	0	P	H
		7311	43.85	-30.15	74	50.24	36.44	15.68	58.51	100	0	P	H
		12185	48.11	-25.89	74	49.75	38.81	21.3	61.75	100	0	P	H
													H
		4874	47.27	-26.73	74	61.96	31.1	12.48	58.27	100	0	P	V
		7311	44.36	-29.64	74	50.75	36.44	15.68	58.51	100	0	P	V
		12185	49.86	-24.14	74	51.5	38.81	21.3	61.75	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	44.56	-29.44	74	59.21	31.1	12.52	58.27	100	0	P	H
		7386	43.44	-30.56	74	49.81	36.53	15.66	58.56	100	0	P	H
		12310	47.84	-26.16	74	49.83	38.48	21.31	61.78	100	0	P	H
													H
		4924	45.64	-28.36	74	60.29	31.1	12.52	58.27	100	0	P	V
		7386	43.7	-30.3	74	50.07	36.53	15.66	58.56	100	0	P	V
		12310	49.02	-24.98	74	51.01	38.48	21.31	61.78	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





**2.4GHz 2400~2483.5MHz  
WIFI 802.11g (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11g CH 01 2412MHz		2389.695	71.79	-2.21	74	55.84	27.64	18.09	29.78	345	240	P	H	
		2390	52.4	-1.6	54	36.45	27.64	18.09	29.78	345	240	A	H	
	*	2412	110.45	-	-	94.51	27.6	18.13	29.79	345	240	P	H	
	*	2412	102.28	-	-	86.34	27.6	18.13	29.79	345	240	A	H	
													H	
													H	
			2389.59	67.87	-6.13	74	51.92	27.64	18.09	29.78	384	358	P	V
			2390	49.43	-4.57	54	33.48	27.64	18.09	29.78	384	358	A	V
	*		2412	107.7	-	-	91.76	27.6	18.13	29.79	384	358	P	V
	*		2412	100.05	-	-	84.11	27.6	18.13	29.79	384	358	A	V
													V	
													V	
802.11g CH 06 2437MHz		2389.94	59.29	-14.71	74	43.34	27.64	18.09	29.78	345	248	P	H	
		2389.94	45.83	-8.17	54	29.88	27.64	18.09	29.78	345	248	A	H	
	*	2437	111.17	-	-	95.2	27.6	18.17	29.8	345	248	P	H	
	*	2437	103.4	-	-	87.43	27.6	18.17	29.8	345	248	A	H	
			2484.6	60.65	-13.35	74	44.69	27.53	18.25	29.82	345	248	P	H
			2483.69	46.22	-7.78	54	30.27	27.53	18.24	29.82	345	248	A	H
			2378.32	58.45	-15.55	74	42.47	27.69	18.07	29.78	279	141	P	V
			2389.8	46	-8	54	30.05	27.64	18.09	29.78	279	141	A	V
	*		2437	109.51	-	-	93.54	27.6	18.17	29.8	279	141	P	V
	*		2437	101.78	-	-	85.81	27.6	18.17	29.8	279	141	A	V
			2483.9	61.55	-12.45	74	45.6	27.53	18.24	29.82	279	141	P	V
			2483.5	46.38	-7.62	54	30.43	27.53	18.24	29.82	279	141	A	V



<b>802.11g</b>  <b>CH 11</b>  <b>2462MHz</b>	*	2462	107.84	-	-	91.86	27.58	18.21	29.81	333	238	P	H
	*	2462	100.15	-	-	84.17	27.58	18.21	29.81	333	238	A	H
		2483.56	64.69	-9.31	74	48.74	27.53	18.24	29.82	333	238	P	H
		2483.52	51.04	-2.96	54	35.09	27.53	18.24	29.82	333	238	A	H
													H
													H
	*	2462	105.63	-	-	89.65	27.58	18.21	29.81	400	344	P	V
	*	2462	98.1	-	-	82.12	27.58	18.21	29.81	400	344	A	V
		2484.12	63.23	-10.77	74	47.28	27.53	18.24	29.82	400	344	P	V
		2483.52	50.63	-3.37	54	34.68	27.53	18.24	29.82	400	344	A	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11g CH 12 2467MHz	*	2467	105.76	-	-	89.79	27.57	18.22	29.82	265	238	P	H
	*	2467	98.11	-	-	82.14	27.57	18.22	29.82	265	238	A	H
		2484.76	63.94	-10.06	74	47.98	27.53	18.25	29.82	265	238	P	H
		2483.52	51.6	-2.4	54	35.65	27.53	18.24	29.82	265	238	A	H
													H
													H
	*	2467	104.24	-	-	88.27	27.57	18.22	29.82	400	343	P	V
	*	2467	96.57	-	-	80.6	27.57	18.22	29.82	400	343	A	V
		2484.84	64.36	-9.64	74	48.4	27.53	18.25	29.82	400	343	P	V
		2483.52	51.69	-2.31	54	35.74	27.53	18.24	29.82	400	343	A	V
													V
													V
802.11g CH 13 2472MHz	*	2472	103.61	-	-	87.64	27.56	18.23	29.82	266	238	P	H
	*	2472	95.97	-	-	80	27.56	18.23	29.82	266	238	A	H
		2483.6	63.67	-10.33	74	47.72	27.53	18.24	29.82	266	238	P	H
		2483.52	50.8	-3.2	54	34.85	27.53	18.24	29.82	266	238	A	H
													H
													H
	*	2472	102.91	-	-	86.94	27.56	18.23	29.82	400	344	P	V
	*	2472	94.65	-	-	78.68	27.56	18.23	29.82	400	344	A	V
		2484.48	63.66	-10.34	74	47.7	27.53	18.25	29.82	400	344	P	V
		2483.52	50.87	-3.13	54	34.92	27.53	18.24	29.82	400	344	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz  
WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 01 2412MHz		4824	46.03	-27.97	74	60.73	31.15	12.43	58.28	100	0	P	H	
													H	
													H	
													H	
			4824	52.6	-21.4	74	67.3	31.15	12.43	58.28	179	353	P	V
			4824	42.02	-11.98	54	56.72	31.15	12.43	58.28	179	353	A	V
														V
802.11g CH 06 2437MHz		4874	45.66	-28.34	74	60.35	31.1	12.48	58.27	100	0	P	H	
		7311	43.88	-30.12	74	50.27	36.44	15.68	58.51	100	0	P	H	
													H	
													H	
			4874	53.61	-20.39	74	68.3	31.1	12.48	58.27	188	354	P	V
			4874	41.88	-12.12	54	56.57	31.1	12.48	58.27	188	354	A	V
			7311	43.69	-30.31	74	50.08	36.44	15.68	58.51	100	0	P	V
			12195	52.42	-21.58	74	54.06	38.81	21.31	61.76	100	340	P	V
802.11g CH 11 2462MHz		12195	40.83	-13.17	54	42.47	38.81	21.31	61.76	100	340	A	V	
		4924	41.77	-32.23	74	56.41	31.1	12.53	58.27	100	0	P	H	
		7386	43.93	-30.07	74	50.36	36.53	15.6	58.56	100	0	P	H	
													H	
													H	
			4924	43.02	-30.98	74	57.66	31.1	12.53	58.27	100	0	P	V
			7386	44.12	-29.88	74	50.55	36.53	15.6	58.56	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 01 2412MHz		2389.905	65.22	-8.78	74	49.27	27.64	18.09	29.78	346	236	P	H	
		2390	51.28	-2.72	54	35.33	27.64	18.09	29.78	346	236	A	H	
	*	2412	108.62	-	-	92.68	27.6	18.13	29.79	346	236	P	H	
	*	2412	100.99	-	-	85.05	27.6	18.13	29.79	346	236	A	H	
													H	
														H
			2390	65.31	-8.69	74	49.36	27.64	18.09	29.78	277	146	P	V
			2390	51.09	-2.91	54	35.14	27.64	18.09	29.78	277	146	A	V
		*	2412	107.69	-	-	91.75	27.6	18.13	29.79	277	146	P	V
		*	2412	100.07	-	-	84.13	27.6	18.13	29.79	277	146	A	V
													V	
													V	
802.11n HT20 CH 06 2437MHz		2316.44	59.26	-14.74	74	43.11	27.93	17.97	29.75	342	248	P	H	
		2389.94	45.57	-8.43	54	29.62	27.64	18.09	29.78	342	248	A	H	
	*	2437	110.9	-	-	94.93	27.6	18.17	29.8	342	248	P	H	
	*	2437	103.2	-	-	87.23	27.6	18.17	29.8	342	248	A	H	
			2484.11	61.24	-12.76	74	45.29	27.53	18.24	29.82	342	248	P	H
			2483.62	46.19	-7.81	54	30.24	27.53	18.24	29.82	342	248	A	H
			2387.98	58.79	-15.21	74	42.83	27.65	18.09	29.78	277	139	P	V
			2389.94	45.69	-8.31	54	29.74	27.64	18.09	29.78	277	139	A	V
		*	2437	109.43	-	-	93.46	27.6	18.17	29.8	277	139	P	V
		*	2437	101.7	-	-	85.73	27.6	18.17	29.8	277	139	A	V
		2486.14	60.56	-13.44	74	44.6	27.53	18.25	29.82	277	139	P	V	
		2483.76	46.2	-7.8	54	30.25	27.53	18.24	29.82	277	139	A	V	



<b>802.11n</b> <b>HT20</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	106.47	-	-	90.49	27.58	18.21	29.81	240	232	P	H
	*	2462	99.03	-	-	83.05	27.58	18.21	29.81	240	232	A	H
		2483.96	64.9	-9.1	74	48.95	27.53	18.24	29.82	240	232	P	H
		2483.52	50.89	-3.11	54	34.94	27.53	18.24	29.82	240	232	A	H
													H
													H
	*	2462	105.84	-	-	89.86	27.58	18.21	29.81	302	145	P	V
	*	2462	97.77	-	-	81.79	27.58	18.21	29.81	302	145	A	V
		2483.52	65.49	-8.51	74	49.54	27.53	18.24	29.82	302	145	P	V
		2483.52	49.65	-4.35	54	33.7	27.53	18.24	29.82	302	145	A	V
													V
												V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT20 CH 12 2467MHz	*	2467	105.25	-	-	89.28	27.57	18.22	29.82	207	241	P	H
	*	2467	97.47	-	-	81.5	27.57	18.22	29.82	207	241	A	H
		2484.28	64.24	-9.76	74	48.29	27.53	18.24	29.82	207	241	P	H
		2483.52	51.4	-2.6	54	35.45	27.53	18.24	29.82	207	241	A	H
													H
													H
	*	2467	104.24	-	-	88.27	27.57	18.22	29.82	301	124	P	V
	*	2467	96.45	-	-	80.48	27.57	18.22	29.82	301	124	A	V
		2484.72	63.24	-10.76	74	47.28	27.53	18.25	29.82	301	124	P	V
		2483.52	49.08	-4.92	54	33.13	27.53	18.24	29.82	301	124	A	V
												V	
												V	
802.11n HT20 CH 13 2472MHz	*	2472	102.71	-	-	86.74	27.56	18.23	29.82	263	248	P	H
	*	2472	94.79	-	-	78.82	27.56	18.23	29.82	263	248	A	H
		2485.08	60.7	-13.3	74	44.74	27.53	18.25	29.82	263	248	P	H
		2483.52	49.12	-4.88	54	33.17	27.53	18.24	29.82	263	248	A	H
													H
													H
	*	2472	101.11	-	-	85.14	27.56	18.23	29.82	400	343	P	V
	*	2472	93.58	-	-	77.61	27.56	18.23	29.82	400	343	A	V
		2484.12	61.29	-12.71	74	45.34	27.53	18.24	29.82	400	343	P	V
		2483.52	49.02	-4.98	54	33.07	27.53	18.24	29.82	400	343	A	V
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 01 2412MHz		4824	43.75	-30.25	74	58.43	31.15	12.45	58.28	100	0	P	H	
													H	
													H	
													H	
			4824	53.3	-20.7	74	67.98	31.15	12.45	58.28	200	354	P	V
			4824	40.55	-13.45	54	55.23	31.15	12.45	58.28	200	354	A	V
														V
802.11n HT20 CH 06 2437MHz		4874	44.74	-29.26	74	59.43	31.1	12.48	58.27	100	0	P	H	
		7311	44.02	-29.98	74	50.41	36.44	15.68	58.51	100	0	P	H	
													H	
													H	
			4874	47.41	-26.59	74	62.1	31.1	12.48	58.27	100	0	P	V
			7311	43.92	-30.08	74	50.31	36.44	15.68	58.51	100	0	P	V
														V
802.11n HT20 CH 11 2462MHz		4924	40.13	-33.87	74	54.78	31.1	12.52	58.27	100	0	P	H	
		7386	43.41	-30.59	74	49.78	36.53	15.66	58.56	100	0	P	H	
													H	
													H	
			4924	40.37	-33.63	74	55.02	31.1	12.52	58.27	100	0	P	V
			7386	43.75	-30.25	74	50.12	36.53	15.66	58.56	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													





**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT40 CH 03 2422MHz		2389.24	62.12	-11.88	74	46.17	27.64	18.09	29.78	302	234	P	H
		2389.94	50.04	-3.96	54	34.09	27.64	18.09	29.78	302	234	A	H
	*	2422	103.79	-	-	87.84	27.6	18.15	29.8	302	234	P	H
	*	2422	96.38	-	-	80.43	27.6	18.15	29.8	302	234	A	H
		2492.09	56.85	-17.15	74	40.9	27.52	18.26	29.83	302	234	P	H
		2487.05	45.11	-8.89	54	29.15	27.53	18.25	29.82	302	234	A	H
		2386.02	62.14	-11.86	74	46.17	27.66	18.09	29.78	247	154	P	V
		2388.82	50.19	-3.81	54	34.24	27.64	18.09	29.78	247	154	A	V
	*	2422	101.84	-	-	85.89	27.6	18.15	29.8	247	154	P	V
	*	2422	94.07	-	-	78.12	27.6	18.15	29.8	247	154	A	V
		2493.98	57.48	-16.52	74	41.54	27.51	18.26	29.83	247	154	P	V
		2484.88	44.94	-9.06	54	28.98	27.53	18.25	29.82	247	154	A	V
802.11n HT40 CH 06 2437MHz		2388.82	61.74	-12.26	74	45.79	27.64	18.09	29.78	346	246	P	H
		2389.66	49.93	-4.07	54	33.98	27.64	18.09	29.78	346	246	A	H
	*	2437	105.61	-	-	89.64	27.6	18.17	29.8	346	246	P	H
	*	2437	98	-	-	82.03	27.6	18.17	29.8	346	246	A	H
		2483.55	62.02	-11.98	74	46.07	27.53	18.24	29.82	346	246	P	H
		2483.5	50.09	-3.91	54	34.14	27.53	18.24	29.82	346	246	A	H
		2388.96	61.01	-12.99	74	45.06	27.64	18.09	29.78	241	142	P	V
		2389.66	49.43	-4.57	54	33.48	27.64	18.09	29.78	241	142	A	V
	*	2437	104.68	-	-	88.71	27.6	18.17	29.8	241	142	P	V
	*	2437	97.21	-	-	81.24	27.6	18.17	29.8	241	142	A	V
		2483.55	64.05	-9.95	74	48.1	27.53	18.24	29.82	241	142	P	V
		2483.5	51.09	-2.91	54	35.14	27.53	18.24	29.82	241	142	A	V



<b>802.11n</b>  <b>HT40</b>  <b>CH 09</b>  <b>2452MHz</b>		2316.86	56.75	-17.25	74	40.6	27.93	17.97	29.75	243	230	P	H
		2389.8	44.89	-9.11	54	28.94	27.64	18.09	29.78	243	230	A	H
	*	2452	102.65	-	-	86.67	27.6	18.19	29.81	243	230	P	H
	*	2452	95.01	-	-	79.03	27.6	18.19	29.81	243	230	A	H
		2487.82	62.63	-11.37	74	46.68	27.52	18.25	29.82	243	230	P	H
		2483.5	50.77	-3.23	54	34.82	27.53	18.24	29.82	243	230	A	H
		2383.08	56.24	-17.76	74	40.27	27.67	18.08	29.78	250	137	P	V
		2388.96	44.67	-9.33	54	28.72	27.64	18.09	29.78	250	137	A	V
	*	2452	100.48	-	-	84.5	27.6	18.19	29.81	250	137	P	V
	*	2452	92.97	-	-	76.99	27.6	18.19	29.81	250	137	A	V
		2487.26	60.97	-13.03	74	45.01	27.53	18.25	29.82	250	137	P	V
		2483.5	49.92	-4.08	54	33.97	27.53	18.24	29.82	250	137	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 10 2457MHz		2363.2	57.18	-16.82	74	41.15	27.75	18.05	29.77	301	235	P	H
		2389.24	44.73	-9.27	54	28.78	27.64	18.09	29.78	301	235	A	H
	*	2457	102.75	-	-	86.77	27.59	18.2	29.81	301	235	P	H
	*	2457	95.01	-	-	79.03	27.59	18.2	29.81	301	235	A	H
		2484.39	63.61	-10.39	74	47.65	27.53	18.25	29.82	301	235	P	H
		2483.5	51.53	-2.47	54	35.58	27.53	18.24	29.82	301	235	A	H
		2333.1	57.14	-16.86	74	41.03	27.87	18	29.76	239	147	P	V
		2389.8	44.81	-9.19	54	28.86	27.64	18.09	29.78	239	147	A	V
	*	2457	101.73	-	-	85.75	27.59	18.2	29.81	239	147	P	V
	*	2457	94.3	-	-	78.32	27.59	18.2	29.81	239	147	A	V
		2484.25	63.4	-10.6	74	47.45	27.53	18.24	29.82	239	147	P	V
		2483.5	52.09	-1.91	54	36.14	27.53	18.24	29.82	239	147	A	V
802.11n HT40 CH 11 2462MHz		2355.64	57.07	-16.93	74	41.02	27.78	18.04	29.77	341	237	P	H
		2386.44	44.55	-9.45	54	28.59	27.65	18.09	29.78	341	237	A	H
	*	2462	99.94	-	-	83.96	27.58	18.21	29.81	341	237	P	H
	*	2462	92.28	-	-	76.3	27.58	18.21	29.81	341	237	A	H
		2483.55	62.77	-11.23	74	46.82	27.53	18.24	29.82	341	237	P	H
		2483.5	50.47	-3.53	54	34.52	27.53	18.24	29.82	341	237	A	H
		2344.44	56.84	-17.16	74	40.76	27.82	18.02	29.76	400	343	P	V
		2389.52	44.64	-9.36	54	28.69	27.64	18.09	29.78	400	343	A	V
	*	2462	98.56	-	-	82.58	27.58	18.21	29.81	400	343	P	V
	*	2462	90.86	-	-	74.88	27.58	18.21	29.81	400	343	A	V
		2483.5	63.66	-10.34	74	47.71	27.53	18.24	29.82	400	343	P	V
		2483.5	51.55	-2.45	54	35.6	27.53	18.24	29.82	400	343	A	V



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT40 CH 03 2422MHz		4844	39.35	-34.65	74	54	31.19	12.44	58.28	100	0	P	H
		7266	43.89	-30.11	74	50.36	36.33	15.68	58.48	100	0	P	H
													H
													H
		4844	41.34	-32.66	74	55.99	31.19	12.44	58.28	100	0	P	V
		7266	44.08	-29.92	74	50.55	36.33	15.68	58.48	100	0	P	V
802.11n HT40 CH 06 2437MHz		4874	40.6	-33.4	74	55.29	31.1	12.48	58.27	100	0	P	H
		7311	43.34	-30.66	74	49.73	36.44	15.68	58.51	100	0	P	H
													H
													H
		4874	42.2	-31.8	74	56.89	31.1	12.48	58.27	100	0	P	V
		7311	43.62	-30.38	74	50.01	36.44	15.68	58.51	100	0	P	V
802.11n HT40 CH 09 2452MHz		4904	38.95	-35.05	74	53.7	31.02	12.5	58.27	100	0	P	H
		7356	43.84	-30.16	74	50.13	36.59	15.66	58.54	100	0	P	H
													H
													H
		4904	38.88	-35.12	74	53.63	31.02	12.5	58.27	100	0	P	V
		7356	44.64	-29.36	74	50.93	36.59	15.66	58.54	100	0	P	V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
2.4GHz 802.11b LF		99.84	30.48	-13.02	43.5	45.28	15.76	1.67	32.25	-	-	P	H	
		123.12	35.18	-8.32	43.5	48.14	17.38	1.89	32.27	100	0	P	H	
		517.91	33.57	-12.43	46	37.78	24.01	3.78	32.06	-	-	P	H	
		563.5	29.47	-16.53	46	31.24	26.14	3.98	31.98	-	-	P	H	
		840.92	32.2	-13.8	46	30.47	28.93	4.84	32.19	-	-	P	H	
		957.32	34.41	-11.59	46	29.41	30.91	5.16	31.24	-	-	P	H	
														H
														H
														H
														H
														H
														H
			32.91	32.85	-7.15	40	41.13	22.99	0.95	32.23	100	0	Q	V
			121.18	30.35	-13.15	43.5	43.24	17.45	1.88	32.26	-	-	P	V
			357.86	29.83	-16.17	46	38.27	20.62	3.17	32.27	-	-	P	V
			517.91	38.37	-7.63	46	42.58	24.01	3.78	32.06	-	-	P	V
			746.83	31.84	-14.16	46	31.29	28.1	4.57	32.25	-	-	P	V
			946.65	34.24	-11.76	46	29.72	30.59	5.13	31.37	-	-	P	V
														V
														V
													V	
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



2.4GHz 2400~2483.5MHz

Emission above 18GHz

2.4GHz WIFI 802.11b (SHF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
2.4GHz 802.11b SHF		23691	42.07	-31.93	74	42.39	39.97	22.55	53.3	150	0	P	H	
													H	
													H	
													H	
			23502	42.11	-31.89	74	42.68	39.7	22.57	53.3	150	0	P	V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
2		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)	
802.11b CH 01 2412MHz		2369.535	57.41	-16.59	74	41.41	27.72	18.06	29.78	279	112	P	H	
		2387.49	45.74	-8.26	54	29.78	27.65	18.09	29.78	279	112	A	H	
	*	2412	106.94	-	-	91	27.6	18.13	29.79	279	112	P	H	
	*	2412	103.89	-	-	87.95	27.6	18.13	29.79	279	112	A	H	
													H	
														H
			2312.625	56.81	-17.19	74	40.64	27.95	17.97	29.75	286	207	P	V
			2387.7	46.31	-7.69	54	30.35	27.65	18.09	29.78	286	207	A	V
	*		2412	107.92	-	-	91.98	27.6	18.13	29.79	286	207	P	V
	*		2412	104.89	-	-	88.95	27.6	18.13	29.79	286	207	A	V
														V
														V
802.11b CH 06 2437MHz		2377.76	57.23	-16.77	74	41.25	27.69	18.07	29.78	216	134	P	H	
		2379.02	44.88	-9.12	54	28.9	27.68	18.08	29.78	216	134	A	H	
	*	2437	107.74	-	-	91.77	27.6	18.17	29.8	216	134	P	H	
	*	2437	104.67	-	-	88.7	27.6	18.17	29.8	216	134	A	H	
			2485.09	56.92	-17.08	74	40.96	27.53	18.25	29.82	216	134	P	H
			2495.52	45.16	-8.84	54	29.22	27.51	18.26	29.83	216	134	A	H
			2378.88	56.52	-17.48	74	40.54	27.68	18.08	29.78	276	216	P	V
			2379.16	44.64	-9.36	54	28.66	27.68	18.08	29.78	276	216	A	V
	*		2437	107.72	-	-	91.75	27.6	18.17	29.8	276	216	P	V
	*		2437	104.61	-	-	88.64	27.6	18.17	29.8	276	216	A	V
			2495.94	56.7	-17.3	74	40.76	27.51	18.26	29.83	276	216	P	V
			2495.94	45.1	-8.9	54	29.16	27.51	18.26	29.83	276	216	A	V



<b>802.11b</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	108.47	-	-	92.49	27.58	18.21	29.81	338	318	P	H
	*	2462	105.44	-	-	89.46	27.58	18.21	29.81	338	318	A	H
		2486.08	57.95	-16.05	74	41.99	27.53	18.25	29.82	338	318	P	H
		2486.6	47.88	-6.12	54	31.92	27.53	18.25	29.82	338	318	A	H
													H
													H
	*	2462	108.14	-	-	92.16	27.58	18.21	29.81	240	209	P	V
	*	2462	105.08	-	-	89.1	27.58	18.21	29.81	240	209	A	V
		2486.32	58.99	-15.01	74	43.03	27.53	18.25	29.82	240	209	P	V
		2486.68	48.93	-5.07	54	32.97	27.53	18.25	29.82	240	209	A	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11b CH 12 2467MHz	*	2467	106.86	-	-	90.89	27.57	18.22	29.82	300	310	P	H
	*	2467	103.74	-	-	87.77	27.57	18.22	29.82	300	310	A	H
		2484.72	59.31	-14.69	74	43.35	27.53	18.25	29.82	300	310	P	H
		2484.44	51.27	-2.73	54	35.31	27.53	18.25	29.82	300	310	A	H
													H
													H
	*	2467	105.85	-	-	89.88	27.57	18.22	29.82	292	203	P	V
	*	2467	102.81	-	-	86.84	27.57	18.22	29.82	292	203	A	V
		2485.04	59.45	-14.55	74	43.49	27.53	18.25	29.82	292	203	P	V
		2484.44	52.11	-1.89	54	36.15	27.53	18.25	29.82	292	203	A	V
													V
													V
802.11b CH 13 2472MHz	*	2472	104.83	-	-	88.86	27.56	18.23	29.82	296	317	P	H
	*	2472	101.7	-	-	85.73	27.56	18.23	29.82	296	317	A	H
		2486.8	59.67	-14.33	74	43.71	27.53	18.25	29.82	296	317	P	H
		2485.16	52.01	-1.99	54	36.05	27.53	18.25	29.82	296	317	A	H
													H
													H
	*	2472	103.44	-	-	87.47	27.56	18.23	29.82	295	222	P	V
	*	2472	100.33	-	-	84.36	27.56	18.23	29.82	295	222	A	V
		2485.32	59.39	-14.61	74	43.43	27.53	18.25	29.82	295	222	P	V
		2486.6	51.82	-2.18	54	35.86	27.53	18.25	29.82	295	222	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz  
WIFI 802.11b (Harmonic @ 3m)**

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11b CH 01 2412MHz		4824	46.56	-27.44	74	61.26	31.15	12.43	58.28	100	0	P	H	
		12060	48.77	-25.23	74	50.34	38.86	21.29	61.72	100	0	P	H	
													H	
													H	
			4824	47.57	-26.43	74	62.27	31.15	12.43	58.28	100	0	P	V
			12060	49.77	-24.23	74	51.34	38.86	21.29	61.72	100	0	P	V
														V
														V
802.11b CH 06 2437MHz		4874	45.45	-28.55	74	60.14	31.1	12.48	58.27	100	0	P	H	
		7311	43.41	-30.59	74	49.8	36.44	15.68	58.51	100	0	P	H	
		12185	47.59	-26.41	74	49.23	38.81	21.3	61.75	100	0	P	H	
													H	
			4874	45.32	-28.68	74	60.01	31.1	12.48	58.27	100	0	P	V
			7311	43.65	-30.35	74	50.04	36.44	15.68	58.51	100	0	P	V
			12185	52.82	-21.18	74	54.46	38.81	21.3	61.75	104	342	P	V
			12185	45.31	-8.69	54	46.95	38.81	21.3	61.75	104	342	A	V
802.11b CH 11 2462MHz		4924	44.21	-29.79	74	58.86	31.1	12.52	58.27	100	0	P	H	
		7386	43.47	-30.53	74	49.84	36.53	15.66	58.56	100	0	P	H	
		12310	47.34	-26.66	74	49.33	38.48	21.31	61.78	100	0	P	H	
													H	
			4924	44.85	-29.15	74	59.5	31.1	12.52	58.27	100	0	P	V
			7386	43.94	-30.06	74	50.31	36.53	15.66	58.56	100	0	P	V
			12310	49.34	-24.66	74	51.33	38.48	21.31	61.78	100	0	P	V
														V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



2.4GHz 2400~2483.5MHz  
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11g CH 01 2412MHz		2389.59	70.1	-3.9	74	54.15	27.64	18.09	29.78	316	319	P	H	
		2390	50.4	-3.6	54	34.45	27.64	18.09	29.78	316	319	A	H	
	*	2412	109.42	-	-	93.48	27.6	18.13	29.79	316	319	P	H	
	*	2412	101.71	-	-	85.77	27.6	18.13	29.79	316	319	A	H	
													H	
													H	
			2389.8	72.17	-1.83	74	56.22	27.64	18.09	29.78	285	207	P	V
			2390	52.03	-1.97	54	36.08	27.64	18.09	29.78	285	207	A	V
	*		2412	108.96	-	-	93.02	27.6	18.13	29.79	285	207	P	V
	*		2412	101.35	-	-	85.41	27.6	18.13	29.79	285	207	A	V
													V	
													V	
802.11g CH 06 2437MHz		2389.66	58.45	-15.55	74	42.5	27.64	18.09	29.78	343	319	P	H	
		2389.8	45.46	-8.54	54	29.51	27.64	18.09	29.78	343	319	A	H	
	*	2437	109.74	-	-	93.77	27.6	18.17	29.8	343	319	P	H	
	*	2437	102.38	-	-	86.41	27.6	18.17	29.8	343	319	A	H	
			2484.04	62.47	-11.53	74	46.52	27.53	18.24	29.82	343	319	P	H
			2483.5	46.6	-7.4	54	30.65	27.53	18.24	29.82	343	319	A	H
			2387	59.25	-14.75	74	43.29	27.65	18.09	29.78	245	203	P	V
			2389.94	45.96	-8.04	54	30.01	27.64	18.09	29.78	245	203	A	V
	*		2437	109.76	-	-	93.79	27.6	18.17	29.8	245	203	P	V
	*		2437	102.26	-	-	86.29	27.6	18.17	29.8	245	203	A	V
			2484.39	63.54	-10.46	74	47.58	27.53	18.25	29.82	245	203	P	V
			2483.55	46.56	-7.44	54	30.61	27.53	18.24	29.82	245	203	A	V



<b>802.11g CH 11 2462MHz</b>	*	2462	108.19	-	-	92.21	27.58	18.21	29.81	310	326	P	H
	*	2462	99.99	-	-	84.01	27.58	18.21	29.81	310	326	A	H
		2483.68	63.72	-10.28	74	47.77	27.53	18.24	29.82	310	326	P	H
		2483.52	49.87	-4.13	54	33.92	27.53	18.24	29.82	310	326	A	H
													H
													H
	*	2462	107.8	-	-	91.82	27.58	18.21	29.81	241	206	P	V
	*	2462	99.59	-	-	83.61	27.58	18.21	29.81	241	206	A	V
		2483.52	63.77	-10.23	74	47.82	27.53	18.24	29.82	241	206	P	V
		2483.52	50.13	-3.87	54	34.18	27.53	18.24	29.82	241	206	A	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11g CH 12 2467MHz	*	2467	105.83	-	-	89.86	27.57	18.22	29.82	339	320	P	H
	*	2467	98.09	-	-	82.12	27.57	18.22	29.82	339	320	A	H
		2484.52	64.65	-9.35	74	48.69	27.53	18.25	29.82	339	320	P	H
		2483.52	51.12	-2.88	54	35.17	27.53	18.24	29.82	339	320	A	H
													H
													H
	*	2467	105.46	-	-	89.49	27.57	18.22	29.82	238	210	P	V
	*	2467	97.68	-	-	81.71	27.57	18.22	29.82	238	210	A	V
		2483.6	65.24	-8.76	74	49.29	27.53	18.24	29.82	238	210	P	V
		2483.52	51.57	-2.43	54	35.62	27.53	18.24	29.82	238	210	A	V
													V
													V
802.11g CH 13 2472MHz	*	2472	103.62	-	-	87.65	27.56	18.23	29.82	299	320	P	H
	*	2472	95.86	-	-	79.89	27.56	18.23	29.82	299	320	A	H
		2486.8	63.07	-10.93	74	47.11	27.53	18.25	29.82	299	320	P	H
		2483.52	50.47	-3.53	54	34.52	27.53	18.24	29.82	299	320	A	H
													H
													H
	*	2472	104.1	-	-	88.13	27.56	18.23	29.82	236	210	P	V
	*	2472	95.92	-	-	79.95	27.56	18.23	29.82	236	210	A	V
		2486.76	63.84	-10.16	74	47.88	27.53	18.25	29.82	236	210	P	V
		2483.52	51.19	-2.81	54	35.24	27.53	18.24	29.82	236	210	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz  
WIFI 802.11g (Harmonic @ 3m)**

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11g CH 01 2412MHz		4824	45.98	-28.02	74	60.68	31.15	12.43	58.28	100	0	P	H	
													H	
													H	
													H	
			4824	46.16	-27.84	74	60.86	31.15	12.43	58.28	100	0	P	V
														V
														V
802.11g CH 06 2437MHz		4874	45.41	-28.59	74	60.1	31.1	12.48	58.27	100	0	P	H	
		7311	43.36	-30.64	74	49.75	36.44	15.68	58.51	100	0	P	H	
													H	
													H	
			4874	45.75	-28.25	74	60.44	31.1	12.48	58.27	100	0	P	V
			7311	43.86	-30.14	74	50.25	36.44	15.68	58.51	100	0	P	V
														V
802.11g CH 11 2462MHz		4924	40.76	-33.24	74	55.41	31.1	12.52	58.27	100	0	P	H	
		7386	44.59	-29.41	74	50.96	36.53	15.66	58.56	100	0	P	H	
													H	
													H	
			4924	40.04	-33.96	74	54.69	31.1	12.52	58.27	100	0	P	V
			7386	43.64	-30.36	74	50.01	36.53	15.66	58.56	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 01 2412MHz		2387.595	62.69	-11.31	74	46.73	27.65	18.09	29.78	310	319	P	H	
		2390	50.18	-3.82	54	34.23	27.64	18.09	29.78	310	319	A	H	
	*	2412	109.29	-	-	93.35	27.6	18.13	29.79	310	319	P	H	
	*	2412	101.79	-	-	85.85	27.6	18.13	29.79	310	319	A	H	
													H	
														H
			2390	66.19	-7.81	74	50.24	27.64	18.09	29.78	287	208	P	V
			2390	52.25	-1.75	54	36.3	27.64	18.09	29.78	287	208	A	V
		*	2412	109.01	-	-	93.07	27.6	18.13	29.79	287	208	P	V
		*	2412	101.32	-	-	85.38	27.6	18.13	29.79	287	208	A	V
													V	
													V	
802.11n HT20 CH 06 2437MHz		2368.1	59.39	-14.61	74	43.37	27.73	18.06	29.77	343	319	P	H	
		2389.8	45.48	-8.52	54	29.53	27.64	18.09	29.78	343	319	A	H	
	*	2437	110.27	-	-	94.3	27.6	18.17	29.8	343	319	P	H	
	*	2437	102.59	-	-	86.62	27.6	18.17	29.8	343	319	A	H	
			2484.74	60.89	-13.11	74	44.93	27.53	18.25	29.82	343	319	P	H
			2483.55	46.41	-7.59	54	30.46	27.53	18.24	29.82	343	319	A	H
			2379.44	59.89	-14.11	74	43.91	27.68	18.08	29.78	243	201	P	V
			2389.8	45.96	-8.04	54	30.01	27.64	18.09	29.78	243	201	A	V
		*	2437	110.11	-	-	94.14	27.6	18.17	29.8	243	201	P	V
		*	2437	102.66	-	-	86.69	27.6	18.17	29.8	243	201	A	V
		2491.25	60.28	-13.72	74	44.33	27.52	18.26	29.83	243	201	P	V	
		2484.04	46.36	-7.64	54	30.41	27.53	18.24	29.82	243	201	A	V	



<b>802.11n</b> <b>HT20</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	108.11	-	-	92.13	27.58	18.21	29.81	208	121	P	H
	*	2462	100.33	-	-	84.35	27.58	18.21	29.81	208	121	A	H
		2483.84	67.12	-6.88	74	51.17	27.53	18.24	29.82	208	121	P	H
		2483.52	51.91	-2.09	54	35.96	27.53	18.24	29.82	208	121	A	H
													H
													H
	*	2462	106.5	-	-	90.52	27.58	18.21	29.81	247	207	P	V
	*	2462	98.69	-	-	82.71	27.58	18.21	29.81	247	207	A	V
		2483.76	65.15	-8.85	74	49.2	27.53	18.24	29.82	247	207	P	V
		2483.52	50.72	-3.28	54	34.77	27.53	18.24	29.82	247	207	A	V
													V
												V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT20 CH 12 2467MHz	*	2467	105.91	-	-	89.94	27.57	18.22	29.82	206	121	P	H
	*	2467	98.2	-	-	82.23	27.57	18.22	29.82	206	121	A	H
		2484.6	64.82	-9.18	74	48.86	27.53	18.25	29.82	206	121	P	H
		2483.52	51.31	-2.69	54	35.36	27.53	18.24	29.82	206	121	A	H
													H
													H
	*	2467	104.87	-	-	88.9	27.57	18.22	29.82	263	207	P	V
	*	2467	96.98	-	-	81.01	27.57	18.22	29.82	263	207	A	V
		2484.84	64.2	-9.8	74	48.24	27.53	18.25	29.82	263	207	P	V
		2483.52	50.93	-3.07	54	34.98	27.53	18.24	29.82	263	207	A	V
												V	
												V	
802.11n HT20 CH 13 2472MHz	*	2472	103.99	-	-	88.02	27.56	18.23	29.82	338	319	P	H
	*	2472	96.2	-	-	80.23	27.56	18.23	29.82	338	319	A	H
		2484.52	62.04	-11.96	74	46.08	27.53	18.25	29.82	338	319	P	H
		2483.52	50.58	-3.42	54	34.63	27.53	18.24	29.82	338	319	A	H
													H
													H
	*	2472	103.33	-	-	87.36	27.56	18.23	29.82	240	209	P	V
	*	2472	95.71	-	-	79.74	27.56	18.23	29.82	240	209	A	V
		2483.8	62.2	-11.8	74	46.25	27.53	18.24	29.82	240	209	P	V
		2483.52	50.84	-3.16	54	34.89	27.53	18.24	29.82	240	209	A	V
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 01 2412MHz		4824	45.24	-28.76	74	59.94	31.15	12.43	58.28	100	0	P	H	
													H	
													H	
													H	
			4824	46.05	-27.95	74	60.75	31.15	12.43	58.28	100	0	P	V
														V
														V
802.11n HT20 CH 06 2437MHz		4874	44.24	-29.76	74	58.93	31.1	12.48	58.27	100	0	P	H	
		7311	44.22	-29.78	74	50.61	36.44	15.68	58.51	100	0	P	H	
													H	
													H	
			4874	44.98	-29.02	74	59.67	31.1	12.48	58.27	100	0	P	V
			7311	44.36	-29.64	74	50.75	36.44	15.68	58.51	100	0	P	V
														V
802.11n HT20 CH 11 2462MHz		4924	41.48	-32.52	74	56.13	31.1	12.52	58.27	100	0	P	H	
		7386	43.55	-30.45	74	49.92	36.53	15.66	58.56	100	0	P	H	
													H	
													H	
			4924	40.3	-33.7	74	54.95	31.1	12.52	58.27	100	0	P	V
			7386	44.18	-29.82	74	50.55	36.53	15.66	58.56	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT40 CH 03 2422MHz		2388.82	63.64	-10.36	74	47.69	27.64	18.09	29.78	213	140	P	H
		2389.94	51.92	-2.08	54	35.97	27.64	18.09	29.78	213	140	A	H
	*	2422	104.73	-	-	88.78	27.6	18.15	29.8	213	140	P	H
	*	2422	96.99	-	-	81.04	27.6	18.15	29.8	213	140	A	H
		2484.25	57.06	-16.94	74	41.11	27.53	18.24	29.82	213	140	P	H
		2483.69	45.69	-8.31	54	29.74	27.53	18.24	29.82	213	140	A	H
		2385.32	62.77	-11.23	74	46.8	27.66	18.09	29.78	217	213	P	V
		2389.94	51.95	-2.05	54	36	27.64	18.09	29.78	217	213	A	V
	*	2422	104.27	-	-	88.32	27.6	18.15	29.8	217	213	P	V
	*	2422	96.6	-	-	80.65	27.6	18.15	29.8	217	213	A	V
		2484.18	58.01	-15.99	74	42.06	27.53	18.24	29.82	217	213	P	V
		2484.18	45.55	-8.45	54	29.6	27.53	18.24	29.82	217	213	A	V
802.11n HT40 CH 06 2437MHz		2389.24	59.91	-14.09	74	43.96	27.64	18.09	29.78	210	139	P	H
		2389.8	49.12	-4.88	54	33.17	27.64	18.09	29.78	210	139	A	H
	*	2437	105.77	-	-	89.8	27.6	18.17	29.8	210	139	P	H
	*	2437	98.18	-	-	82.21	27.6	18.17	29.8	210	139	A	H
		2483.5	64.55	-9.45	74	48.6	27.53	18.24	29.82	210	139	P	H
		2483.5	51.87	-2.13	54	35.92	27.53	18.24	29.82	210	139	A	H
		2389.24	60.57	-13.43	74	44.62	27.64	18.09	29.78	218	215	P	V
		2389.52	48.57	-5.43	54	32.62	27.64	18.09	29.78	218	215	A	V
	*	2437	104.24	-	-	88.27	27.6	18.17	29.8	218	215	P	V
	*	2437	96.67	-	-	80.7	27.6	18.17	29.8	218	215	A	V
	2483.5	63.91	-10.09	74	47.96	27.53	18.24	29.82	218	215	P	V	
	2483.5	51.65	-2.35	54	35.7	27.53	18.24	29.82	218	215	A	V	



<b>802.11n</b>  <b>HT40</b>  <b>CH 09</b>  <b>2452MHz</b>		2384.34	56.55	-17.45	74	40.59	27.66	18.08	29.78	187	144	P	H
		2388.54	45.17	-8.83	54	29.21	27.65	18.09	29.78	187	144	A	H
	*	2452	102.39	-	-	86.41	27.6	18.19	29.81	187	144	P	H
	*	2452	94.61	-	-	78.63	27.6	18.19	29.81	187	144	A	H
		2484.39	63	-11	74	47.04	27.53	18.25	29.82	187	144	P	H
		2483.5	51.57	-2.43	54	35.62	27.53	18.24	29.82	187	144	A	H
		2311.12	58.13	-15.87	74	41.96	27.96	17.96	29.75	218	221	P	V
		2389.8	45.11	-8.89	54	29.16	27.64	18.09	29.78	218	221	A	V
	*	2452	101.43	-	-	85.45	27.6	18.19	29.81	218	221	P	V
	*	2452	93.76	-	-	77.78	27.6	18.19	29.81	218	221	A	V
		2488.1	63.46	-10.54	74	47.52	27.52	18.25	29.83	218	221	P	V
		2483.55	51.09	-2.91	54	35.14	27.53	18.24	29.82	218	221	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 10 2457MHz		2338.14	56.44	-17.56	74	40.34	27.85	18.01	29.76	270	122	P	H
		2389.8	44.38	-9.62	54	28.43	27.64	18.09	29.78	270	122	A	H
	*	2457	102.11	-	-	86.13	27.59	18.2	29.81	270	122	P	H
	*	2457	94.42	-	-	78.44	27.59	18.2	29.81	270	122	A	H
		2483.55	62.83	-11.17	74	46.88	27.53	18.24	29.82	270	122	P	H
		2483.5	51.38	-2.62	54	35.43	27.53	18.24	29.82	270	122	A	H
		2380.98	56.81	-17.19	74	40.83	27.68	18.08	29.78	246	210	P	V
		2388.54	44.66	-9.34	54	28.7	27.65	18.09	29.78	246	210	A	V
	*	2457	102.3	-	-	86.32	27.59	18.2	29.81	246	210	P	V
	*	2457	94.56	-	-	78.58	27.59	18.2	29.81	246	210	A	V
		2484.04	63.14	-10.86	74	47.19	27.53	18.24	29.82	246	210	P	V
		2483.5	51.67	-2.33	54	35.72	27.53	18.24	29.82	246	210	A	V
802.11n HT40 CH 11 2462MHz		2362.22	57.15	-16.85	74	41.12	27.75	18.05	29.77	213	135	P	H
		2389.52	44.81	-9.19	54	28.86	27.64	18.09	29.78	213	135	A	H
	*	2462	100.98	-	-	85	27.58	18.21	29.81	213	135	P	H
	*	2462	93.23	-	-	77.25	27.58	18.21	29.81	213	135	A	H
		2483.5	64.98	-9.02	74	49.03	27.53	18.24	29.82	213	135	P	H
		2483.5	52.37	-1.63	54	36.42	27.53	18.24	29.82	213	135	A	H
		2389.1	57	-17	74	41.05	27.64	18.09	29.78	244	214	P	V
		2389.94	44.86	-9.14	54	28.91	27.64	18.09	29.78	244	214	A	V
	*	2462	99.65	-	-	83.67	27.58	18.21	29.81	244	214	P	V
	*	2462	92.13	-	-	76.15	27.58	18.21	29.81	244	214	A	V
		2483.5	64.15	-9.85	74	48.2	27.53	18.24	29.82	244	214	P	V
		2483.5	51.15	-2.85	54	35.2	27.53	18.24	29.82	244	214	A	V



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBµV/m )	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level ( dBµV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT40 CH 03 2422MHz		4844	40.54	-33.46	74	55.19	31.19	12.44	58.28	100	0	P	H
		7266	44.17	-29.83	74	50.64	36.33	15.68	58.48	100	0	P	H
													H
													H
		4844	40.21	-33.79	74	54.86	31.19	12.44	58.28	100	0	P	V
		7266	43.63	-30.37	74	50.1	36.33	15.68	58.48	100	0	P	V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	39.42	-34.58	74	54.11	31.1	12.48	58.27	100	0	P	H
		7311	44.34	-29.66	74	50.73	36.44	15.68	58.51	100	0	P	H
													H
													H
		4874	40.81	-33.19	74	55.5	31.1	12.48	58.27	100	0	P	V
		7311	43.44	-30.56	74	49.83	36.44	15.68	58.51	100	0	P	V
													V
													V
802.11n HT40 CH 09 2452MHz		4904	37.78	-36.22	74	52.53	31.02	12.5	58.27	100	0	P	H
		7356	44.55	-29.45	74	50.84	36.59	15.66	58.54	100	0	P	H
													H
													H
		4904	37.33	-36.67	74	52.08	31.02	12.5	58.27	100	0	P	V
		7356	44.46	-29.54	74	50.75	36.59	15.66	58.54	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
2		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
2.4GHz 802.11n HT40 LF		102.75	30.38	-13.12	43.5	44.72	16.19	1.72	32.25	-	-	P	H	
		124.09	33.96	-9.54	43.5	46.86	17.43	1.94	32.27	100	0	P	H	
		157.07	27.65	-15.85	43.5	41.12	16.6	2.22	32.29	-	-	P	H	
		517.91	33.72	-12.28	46	37.93	24.01	3.84	32.06	-	-	P	H	
		875.84	32.79	-13.21	46	30.72	29.01	5.09	32.03	-	-	P	H	
		958.29	34.46	-11.54	46	29.42	30.93	5.34	31.23	-	-	P	H	
														H
														H
														H
														H
														H
														H
			32.91	32.85	-7.15	40	41.13	22.99	0.96	32.23	100	0	Q	V
			123.12	30.06	-13.44	43.5	43.02	17.38	1.93	32.27	-	-	P	V
			360.77	27.89	-18.11	46	36.22	20.71	3.22	32.26	-	-	P	V
			517.91	38.8	-7.2	46	43.01	24.01	3.84	32.06	-	-	P	V
			835.1	32.37	-13.63	46	30.86	28.75	4.97	32.21	-	-	P	V
			942.77	33.68	-12.32	46	29.37	30.44	5.29	31.42	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



**Emission above 18GHz  
2.4GHz WIFI 802.11n HT40 (SHF)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
2		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
2.4GHz 802.11n HT40 SHF		23467	41.75	-32.25	74	42.41	39.62	22.58	53.32	150	0	P	H	
													H	
													H	
													H	
			24237	41.33	-32.67	74	41.31	40.26	22.69	53.39	150	0	P	V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against limit line.													





**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =  
Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)  
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
= 55.45 (dBμV/m)
2. Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 55.45(dBμV/m) – 74(dBμV/m)  
= -18.55(dB)

**For Average Limit @ 2390MHz:**

1. Level(dBμV/m)  
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
= 43.54 (dBμV/m)
2. Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 43.54(dBμV/m) – 54(dBμV/m)  
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.