



*Full*

# TEST REPORT

**No. I18D00122-SRD03**

*For*

**Client : Mobiwire SAS**

**Production : 4G Smartphone**

**Model Name : MobiWire Huritt, Altice S61**

**FCC ID : QPN-S61**

**Hardware Version: V01**

**Software Version: VQ551-EH5511**

**Issued date: 2018-08-30**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of ECIT Shanghai.

**Test Laboratory:**

ECIT Shanghai, East China Institute of Telecommunications

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# RF Test Report

Report No.: I18D00122-SRD03

## Revision Version

Report Number	Revision	Date	Memo
I18D00122-SRD03	00	2018-08-30	Initial creation of test report

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**ANNEX A. DEVIATIONS FROM PRESCRIBED TEST METHODS.....50**

**ANNEX B. ACCREDITATION CERTIFICATE.....51**

## 1. Test Laboratory

### 1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	7-8F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China
Postal Code:	200001
Telephone:	(+86)-021-63843300
Fax:	(+86)-021-63843301

### 1.2. Testing Environment

Normal Temperature:	15-35°C
Extreme Temperature:	-30/+50°C
Relative Humidity:	20-75%

### 1.3. Project data

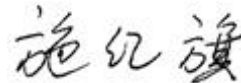
Project Leader:	Yu Anlu
Testing Start Date:	2018-07-06
Testing End Date:	2018-07-25

### 1.4. Signature



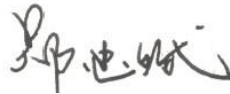
Yang Dejun

(Prepared this test report)



Shi Hongqi

(Reviewed this test report)



Zheng Zhongbin

Director of the laboratory

(Approved this test report)

## **2. Client Information**

### **2.1. Applicant Information**

Company Name:           Mobiwire SAS  
Address:                 79 AVENUE FRANCOIS ARAGO 92017 NANTERRE CEDEX France.  
Postcode:               France 92017  
Telephone:               +86 574 59555707

### **2.2. Manufacturer Information**

Company Name:           Mobiwire SAS  
Address:                 79 AVENUE FRANCOIS ARAGO 92017 NANTERRE CEDEX France.  
Postcode:               France 92017  
Telephone:               +86 574 59555707

### 3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

EUT Description	4G Smartphone
Model name	MobiWire Huritt, Altice S61
WLAN Frequency	2412MHz-2462MHz
WLAN Channel	Channel1-Channel11
WLAN type of modulation	802.11b:DSSS 802.11g/n: OFDM
Extreme Temperature	-30/+50°C
Nominal Voltage	3.85V
Extreme High Voltage	4.4V
Extreme Low Voltage	3.6V

Note: Photographs of EUT are shown in ANNEX A of this test report.

#### 3.2. Internal Identification of EUT used during the test

EUT ID*	Model Name	SN or IMEI	HW Version	SW Version	Date of receipt
N04	MobiWire Huritt, Altice S61	N/A	V01	VQ551-EH5 511	2018-07-05

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

#### 3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	RF cable	---
AE2	---	---

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

## 4. Reference Documents

### 4.1. Reference Documents for testing

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

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15,Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.	Jun,2016 Edition
ANSI 63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz	2013



## 5. Summary of Test Results

A brief summary of the tests carried out is shown as following.

Measurement Items	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.247(a)	/	P
Peak Power Spectral Density	15.247(e)	/	P
Occupied 6dB Bandwidth	15.247(d)	/	P
Band Edges Compliance	15.247(b)	/	P
Transmitter Spurious Emission-Conducted	15.247	/	P
Transmitter Spurious Emission-Radiated	15.247,15.209,	/	P
AC Powerline Conducted Emission	15.107,15.207	/	P

Please refer to part 5 for detail.

The measurements are according to Public notice KDB558074 and ANSI C63.4.

Terms used in Verdict column

P	Pass, the EUT complies with the essential requirements in the standard.
NP	Not Perform, the test was not performed by ECIT.
NA	Not Applicable, the test was not applicable.
F	Fail, the EUT does not comply with the essential requirements in the standard.

## Test Conditions

Tnom	Normal temperature
Tmin	Low Temperature
Tmax	High Temperature
Vnom	Normal Voltage
Vmin	Low Voltage
Vmax	High Voltage
Hnom	Norm Humidity
Anom	Norm Air Pressure

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

Temperature	Tnom	25°C
Voltage	Vnom	3.85
Humidity	Hnom	48%
Air Pressure	Anom	1010hPa

### 5.1. Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with section 3.

The test results of this test report relate exclusively to the item(s) tested as specified in section 5.

### 5.2. Statements

The MobiWire Huritt, Altice S61, supporting GSM/GPRS/EDGE/WCDMA/HSDPA/HSUPA/LTE/BT/BLE/WIFI, manufactured by Mobiwire SAS, which is a new product for testing. In this report, we test all the cases except the RSE data, and the RSE data please refer to Report No: C180816R01-RPW, which was prepared by Compliance Certification Service Inc Kun Shan Laboratory.

ECIT has verified that the compliance of the tested device specified in section 5 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 5 of this test report.

## 6. Test result

### 6.1. Maximum Output Power

#### 6.1.1 Measurement Limit and method:

Standard	Limit(dBm)
FCC CRF 15.247(b)	< 30

#### 6.1.2 Test procedure

The measurement is according to ANSI C63.10 clause 11.2

1. The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Enable EUT transmitter maximum power continuously.
3. Set RBW  $\geq$  OBW, VBW  $\geq$  3RBW.
4. Detector : Peak.
5. Trace mode: Max Hold

#### 6.1.3 Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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#### 6.1.4 Maximum Peak Output Power-conducted

##### Measurement Results:

##### 802.11b/g mode

Mode	Data Rate(Mbps)	Test Result(dBm)		
		2412MHz(Ch1)	2437MHz(Ch6)	2462MHz(Ch11)
802.11b	1	/	/	18.32
	2	/	/	19.53
	5.5	/	/	19.60
	11	21.11	21.27	21.46
802.11g	6	/	/	20.77
	9	/	/	21.08
	12	/	/	21.61
	18	/	/	21.75

	24	/	/	21.91
	36	/	/	21.95
	48	/	/	22.04
	54	20.33	21.17	22.07

The data rate 11 Mbps and 54 Mbps are selected as worse condition, and the following cases are performed with this condition.

**802.11n mode**

Mode	Data Rate(Index)	Teat Result(dBm)		
		2412MHz(Ch1)	2437MHz(Ch6)	2462MHz(Ch11)
802.11n(20MHz)	MCS0	/	/	20.85
	MCS1	/	/	21.29
	MCS2	/	/	21.14
	MCS3	/	/	21.53
	MCS4	/	/	21.60
	MCS5	20.35	20.78	21.83
	MCS6	/	/	21.56
	MCS7	/	/	21.52
Mode	Data Rate(Index)	Teat Result(dBm)		
		2422MHz(Ch3)	2437MHz(Ch6)	2452MHz(Ch9)
802.11n(40MHz)	MCS0	/	/	21.47
	MCS1	/	/	21.69
	MCS2	/	/	21.76
	MCS3	/	/	21.17
	MCS4	20.23	20.63	21.79
	MCS5	/	/	21.63
	MCS6	/	/	21.58

	MCS7	/	/	21.43
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The data rate MCS5 for 802.11n(20M)and MCS4 for 802.11n(40M) are selected as worse condition, and the following case are performed with this condition.

### 6.1.5 Maximum Average Output Power-conducted

#### 802.11b/g mode

Mode	Test Result(dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462MHz (Ch11)
802.11b	17.39	17.48	17.56
802.11g	15.58	16.03	16.52

#### 802.11n mode

Mode	Test Result(dBm)		
	2412MHz (Ch1)	2437MHz (Ch6)	2462MHz (Ch11)
802.11n( 20MHz)	14.62	15.13	15.80
Mode	Test Result(dBm)		
	2422MHz (Ch3)	2437MHz (Ch6)	2452MHz (Ch9)
802.11n( 40MHz)	14.84	14.97	15.12

**Conclusion: PASS**

## 6.2. Peak Power Spectral Density

### 6.2.1 Measurement Limit:

Standard	Limit
FCC CFR Part 15.247(e)	< 8dBm/3 KHz

### 6.2.2 Test procedures

The measurement is according to ANSI C63.10 clause 11.10.

1. The output power of EUT was connected to the spectrum analyzer. The path loss was

compensated to the results for each measurement.

2. Enable EUT transmitter maximum power continuously.
3. Set analyzer center frequency to DTS channel center frequency.
4. Set the span to 1.5 times the DTS bandwidth.
5. Set the RBW to  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
6. Set the VBW  $\geq [3 \times \text{RBW}]$ .
7. Detector = peak.
8. Sweep time = auto couple.
9. Trace mode = max hold.
10. Allow trace to fully stabilize.
11. Use the peak marker function to determine the maximum amplitude level within the RBW.
12. If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

### 6.2.3 Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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### 6.2.4 Measurement Results:

#### 802.11b/g mode

Mode	Channel	Power Spectral Density(dBm/3kHz)		Conclusion
802.11b	1	Fig 1.	-10.65	P
	6	Fig 2.	-9.905	P
	11	Fig 3.	-10.307	P
802.11g	1	Fig 4.	-16.06	P
	6	Fig 5.	-14.254	P
	11	Fig 6.	-14.201	P

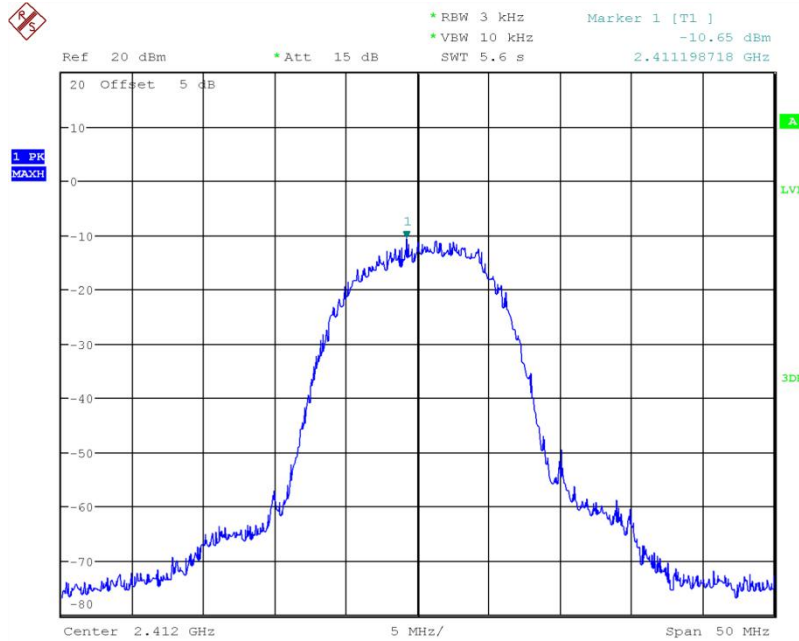
#### 802.11n mode

Mode	Channel	Power Spectral Density(dBm/3kHz)		Conclusion
802.11n(20MHz)	1	Fig 7.	-13.467	P
	6	Fig 8.	12.661	P
	11	Fig 9.	-12.995	P
802.11n(40MHz)	3	Fig 10.	-15.555	P

	6	Fig 11.	-17.328	P
	9	Fig 12.	-14.787	P

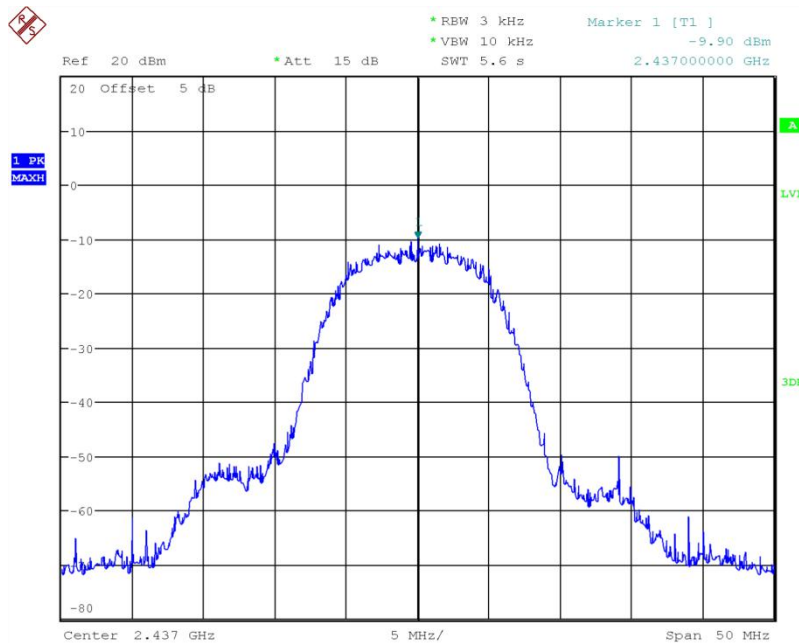
**Conclusion: PASS**

**Test graphs as below:**



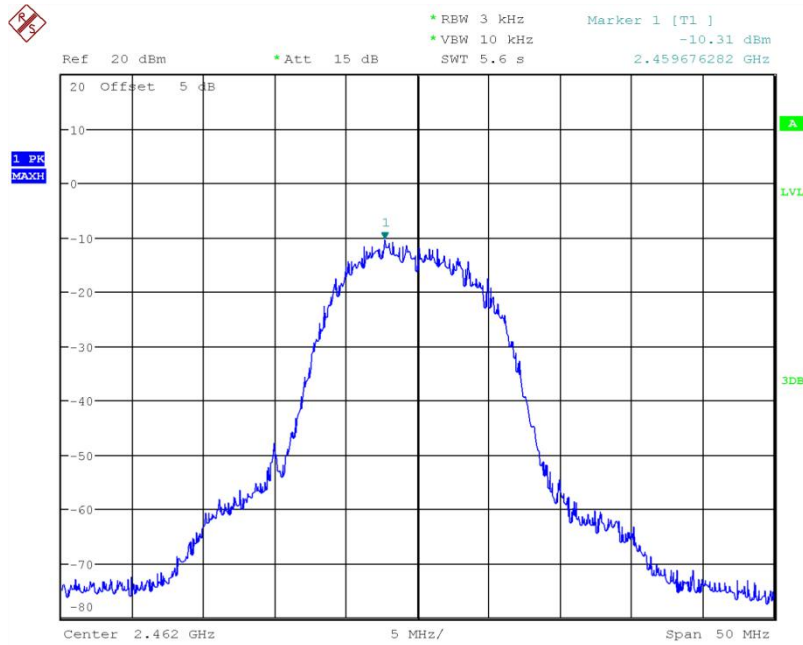
Date: 6.JUL.2018 11:12:20

**Fig 1. Power Spectral Density (802.1b,Ch1)**



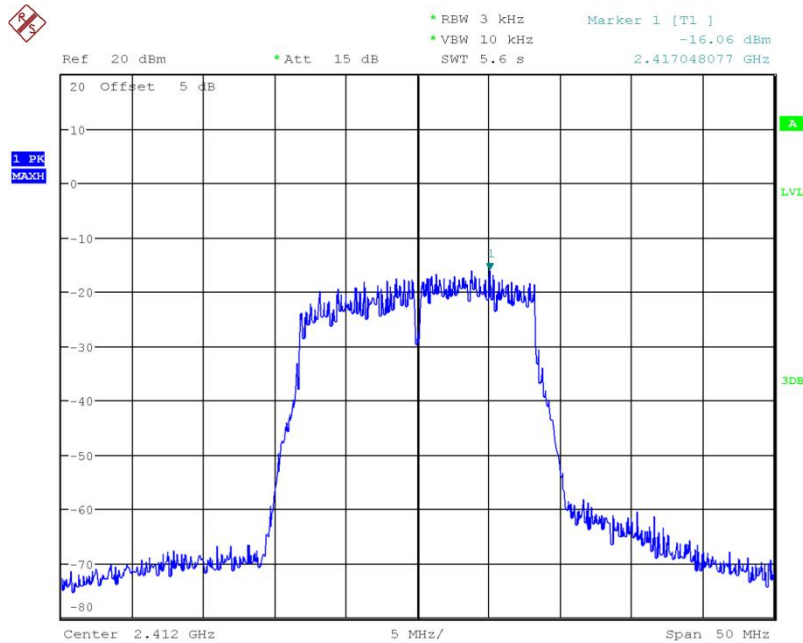
Date: 6.JUL.2018 11:13:02

**Fig 2. Power Spectral Density (802.1b,Ch6)**



Date: 6.JUL.2018 11:13:40

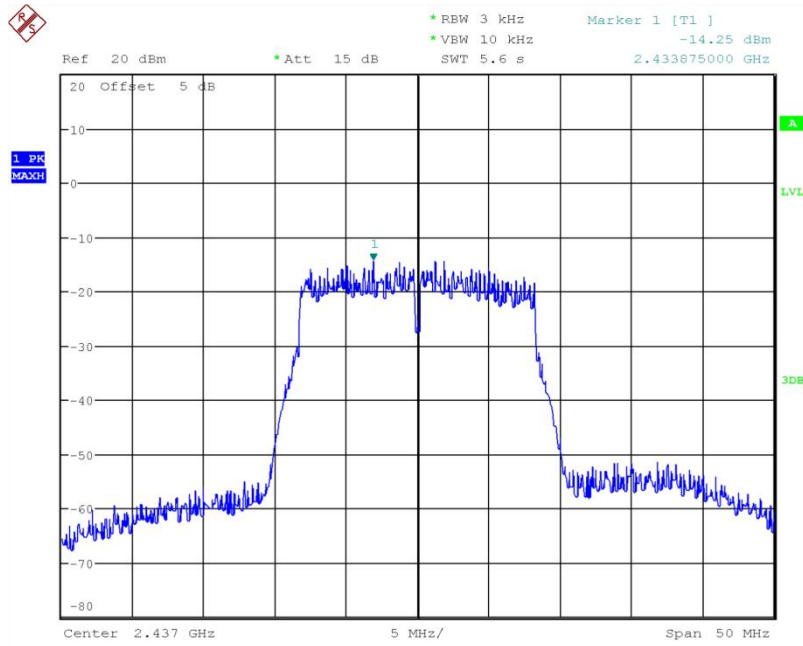
**Fig 3. Power Spectral Density (802.1b,Ch11)**



Date: 6.JUL.2018 11:14:15

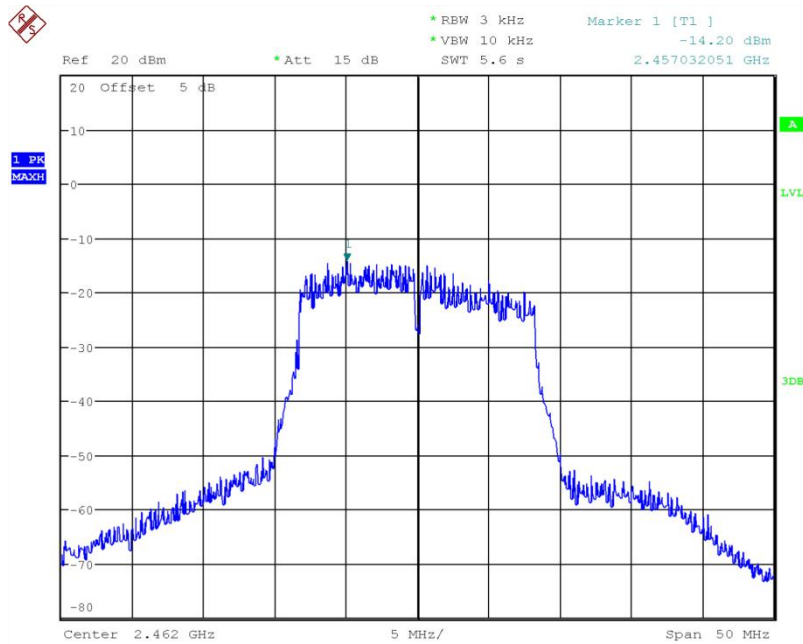
**Fig.6 Power Spectral Density (802.1g,Ch1)**





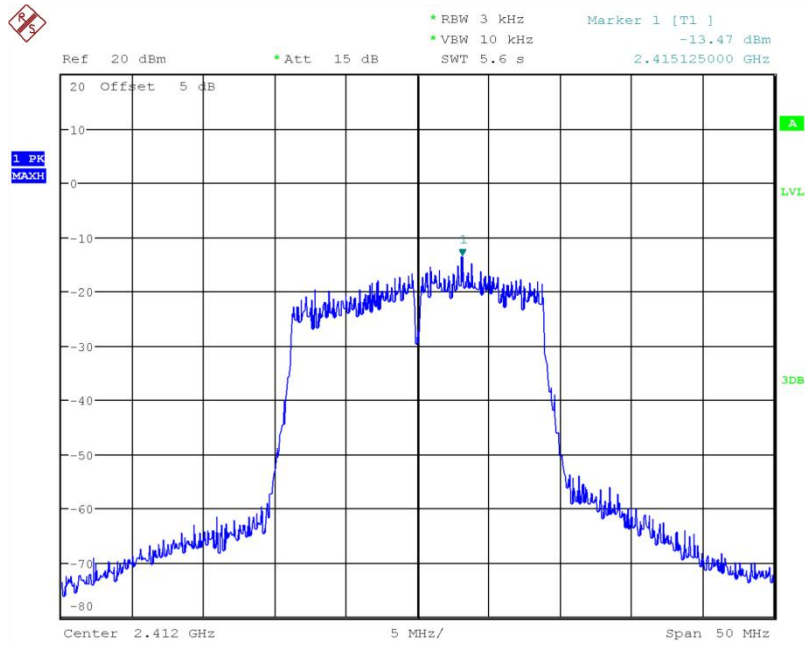
Date: 6.JUL.2018 11:14:43

**Fig.7 Power Spectral Density (802.1g,Ch6)**



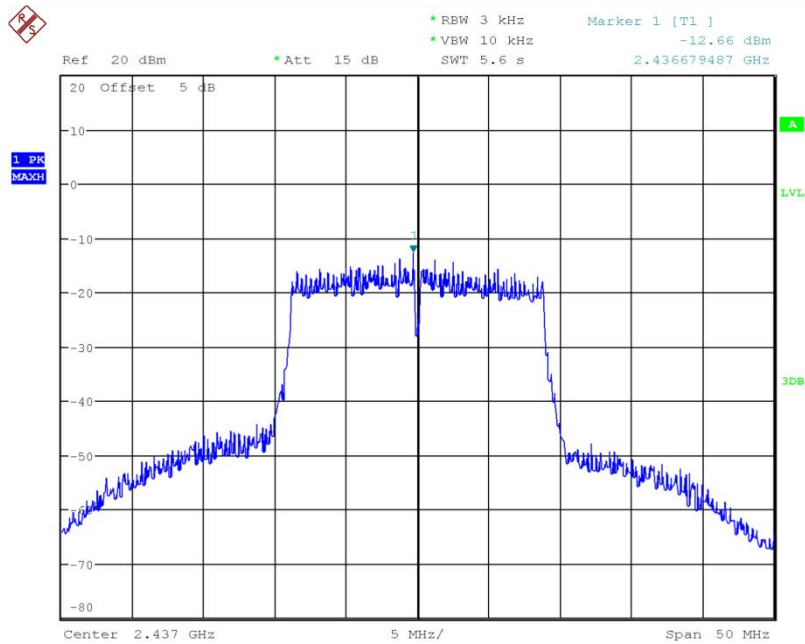
Date: 6.JUL.2018 11:15:12

**Fig.8 Power Spectral Density (802.1g,Ch11)**



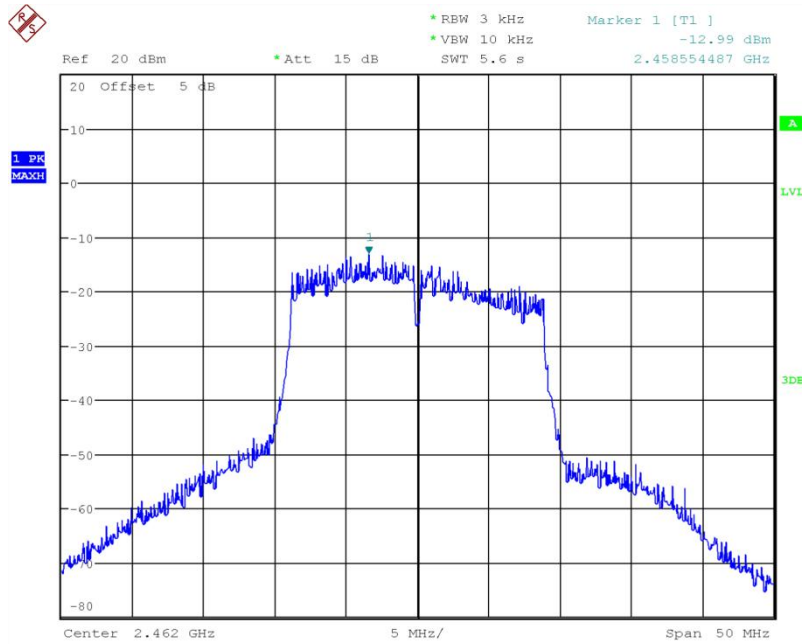
Date: 6.JUL.2018 11:15:43

**Fig.11 Power Spectral Density (802.1n-20MHz,Ch1)**



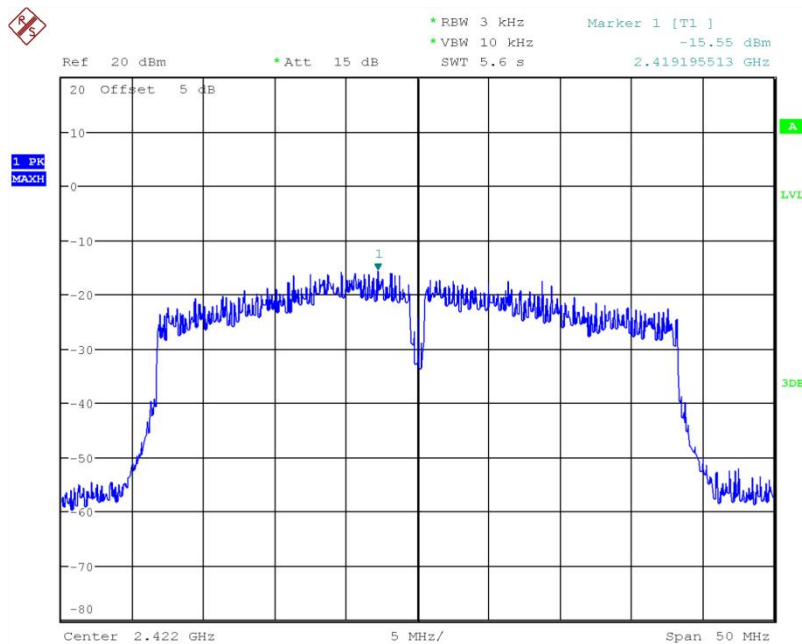
Date: 6.JUL.2018 11:16:10

**Fig.12 Power Spectral Density (802.1n-20MHz,Ch6)**



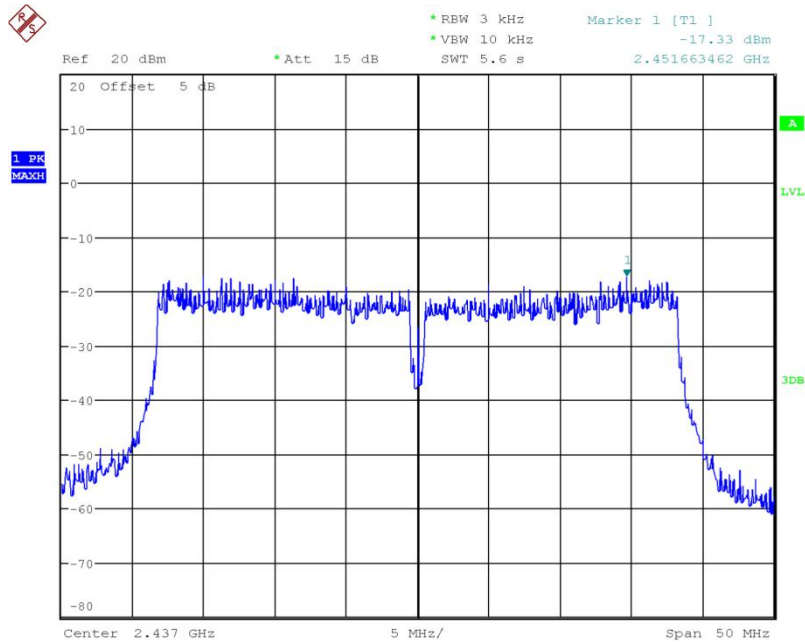
Date: 6.JUL.2018 11:16:47

**Fig.13 Power Spectral Density (802.1n-20MHz,Ch11)**



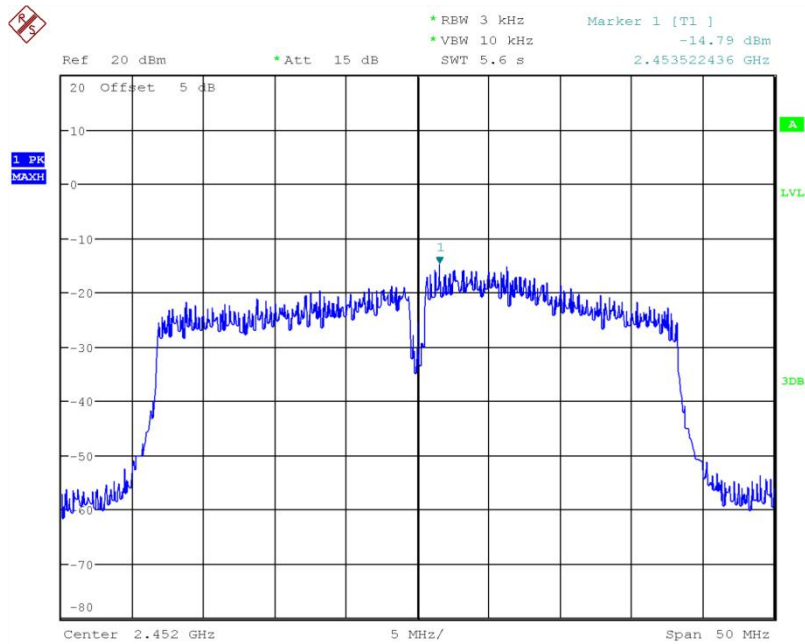
Date: 6.JUL.2018 11:20:36

**Fig.16 Power Spectral Density (802.1n-40MHz,Ch3)**



Date: 6.JUL.2018 11:21:04

**Fig.17 Power Spectral Density (802.1n-40MHz,Ch6)**



Date: 6.JUL.2018 11:22:46

**Fig.18 Power Spectral Density (802.1n-40MHz,Ch9)**

## 6.3. Occupied 6dB Bandwidth

### 6.3.1 Measurement Limit:

Standard	Limit(KHz)
FCC 47 CFR Part 15.247(a)	≥500

### 6.3.2 Test procedure

The measurement is according to ANSI C63.10 clause 11.8.

1. The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Enable EUT transmitter maximum power continuously.
3. Set RBW = 100 kHz.
4. Set the VBW  $\geq [3 \times \text{RBW}]$ .
5. Detector = peak.
6. Trace mode = max hold.
7. Sweep = auto couple.
8. Allow the trace to stabilize.
9. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 6.3.4 Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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### 6.3.5 Measurement Result:

#### 802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth(MHz)		Conclusion
802.11b	1	Fig 21.	9.375	P
	6	Fig 22.	10.016	P
	11	Fig 23.	9.856	P
802.11g	1	Fig 24.	15.785	P
	6	Fig 25.	16.426	P
	11	Fig 26.	15.785	P

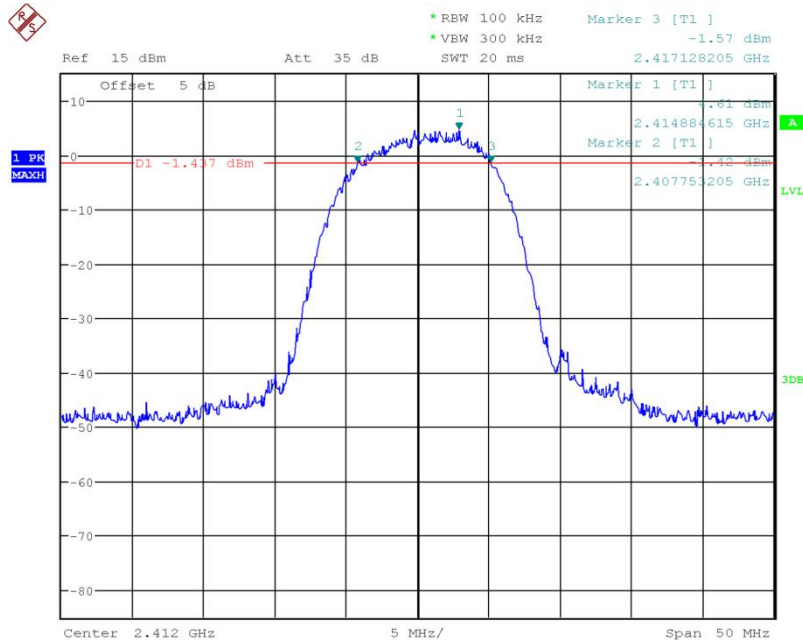
#### 802.11n mode

Mode	Channel	Occupied 6dB Bandwidth(MHz)		Conclusion
802.11n(20MHz)	1	Fig 27.	16.346	P
	6	Fig 28.	17.708	P

	11	Fig 29.	16.346	P
802.11n(40MHz)	3	Fig 30.	27.404	P
	6	Fig 31.	36.458	P
	9	Fig 32.	26.282	P

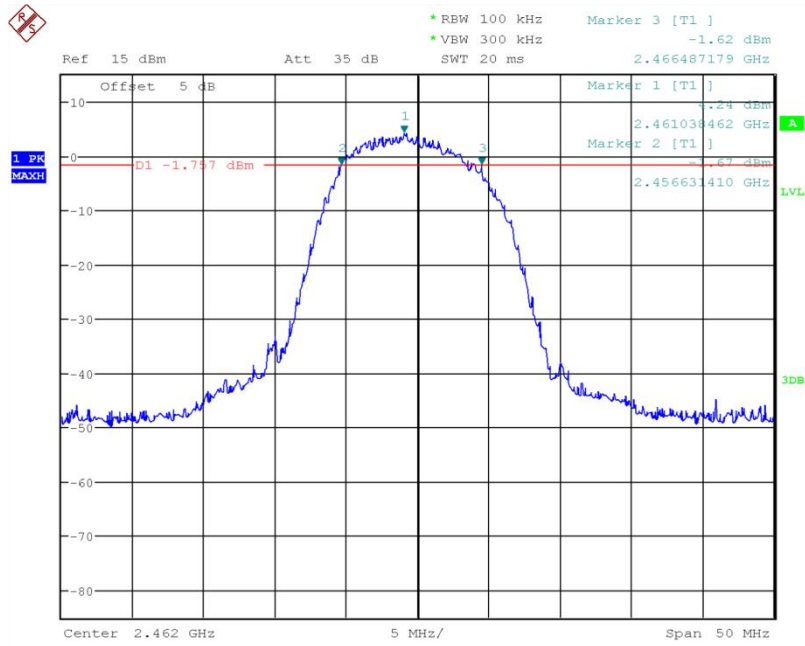
**Conclusion: PASS**

**Test graphs as below:**



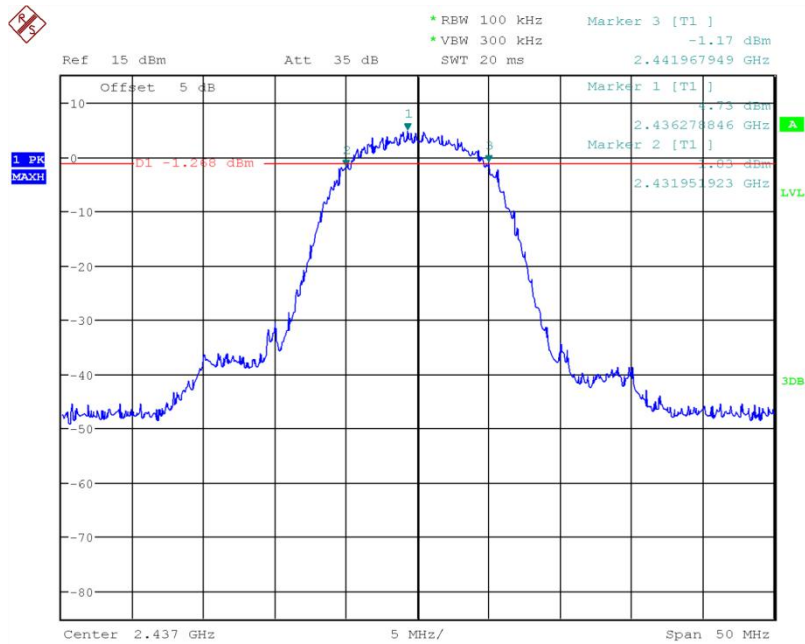
Date: 11.JUL.2018 10:21:20

**Fig.21 Occupied 6dB Bandwidth (802.11b, Ch1)**



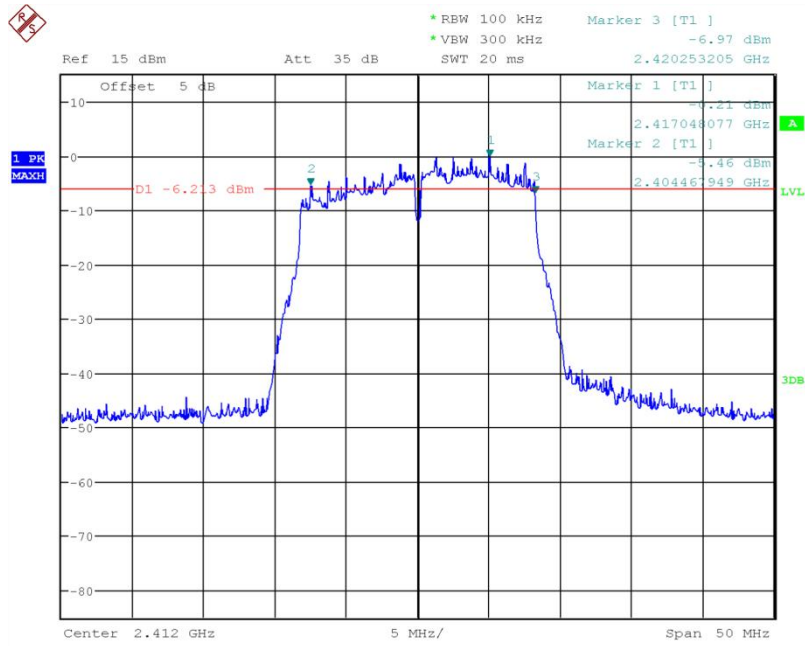
Date: 11.JUL.2018 10:22:17

**Fig.22 Occupied 6dB Bandwidth (802.11b, Ch6)**



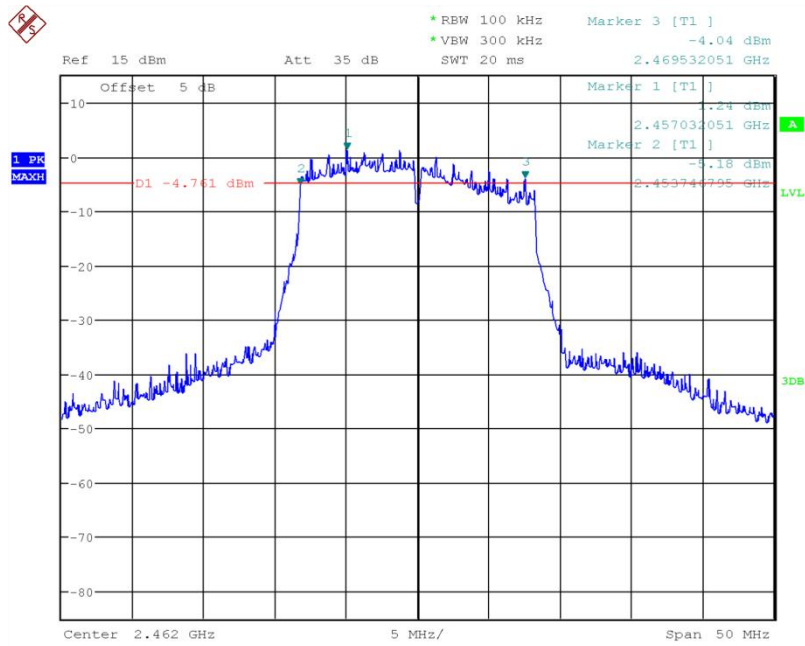
Date: 11.JUL.2018 10:21:51

**Fig.23 Occupied 6dB Bandwidth (802.11b, Ch11)**



Date: 11.JUL.2018 10:22:48

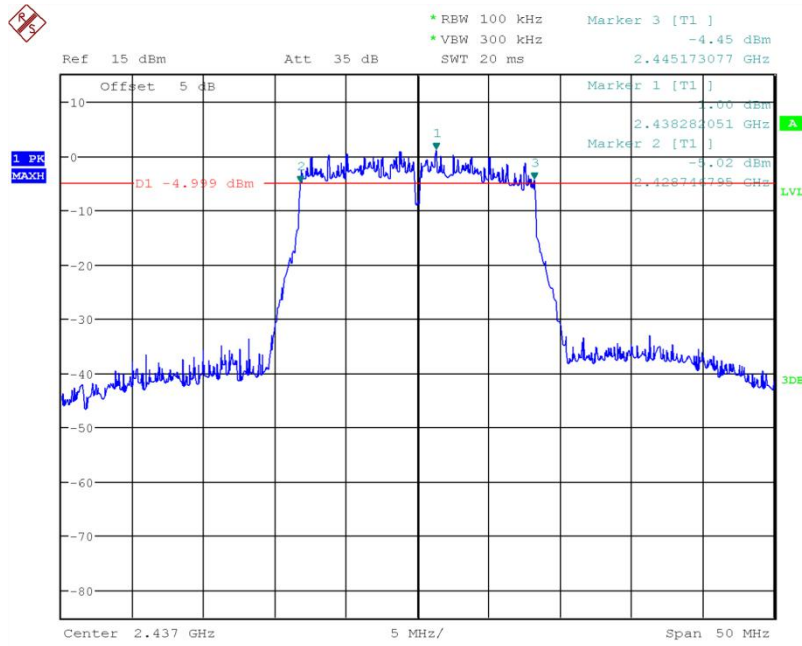
**Fig.26 Occupied 6dB Bandwidth (802.11g, Ch1)**



Date: 11.JUL.2018 10:23:44

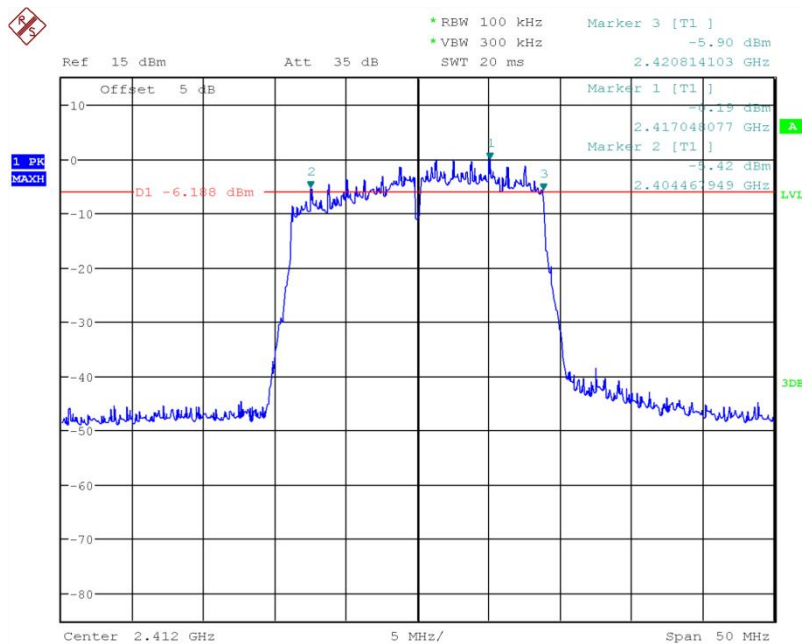
**Fig.27 Occupied 6dB Bandwidth (802.11g, Ch6)**





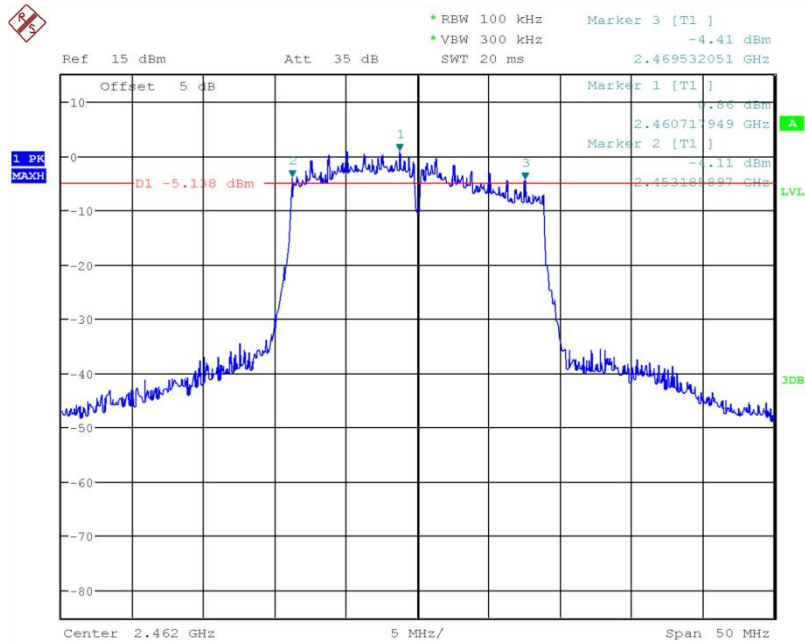
Date: 11.JUL.2018 10:23:11

**Fig.28 Occupied 6dB Bandwidth (802.11g, Ch11)**



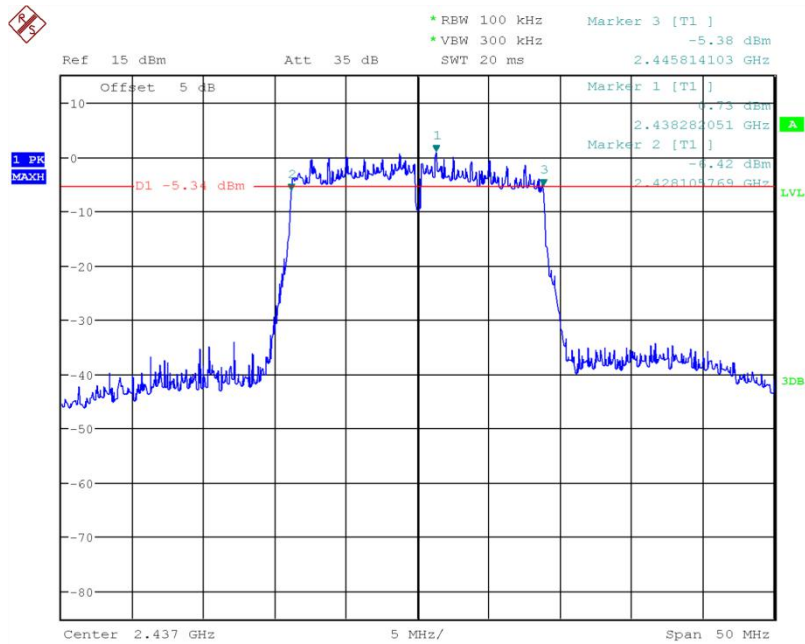
Date: 11.JUL.2018 10:24:15

**Fig.31 Occupied 6dB Bandwidth (802.11n-20MHz, Ch1)**



Date: 11.JUL.2018 10:25:15

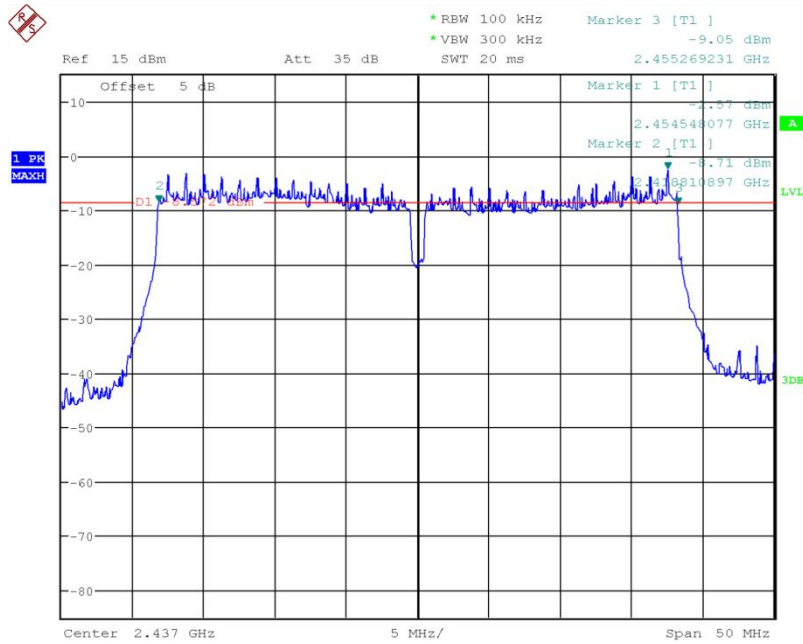
**Fig.32 Occupied 6dB Bandwidth (802.11n-20MHz, Ch6)**



Date: 11.JUL.2018 10:24:46

**Fig.33 Occupied 6dB Bandwidth (802.11n-20MHz, Ch11)**





Date: 11.JUL.2018 10:31:47

**Fig.38 Occupied 6dB Bandwidth (802.11n-40MHz, Ch9)**

## 6.4. Band Edges Compliance

### 6.4.1 Measurement Limit:

Standard	Limited(dBc)
FCC 47 CFR Part 15.247(d)	>20

### 6.4.2 Test procedures

The measurement is according to ANSI C63.10 clause 11.13.

1. The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Enable EUT transmitter maximum power continuously.
3. Set instrument center frequency to the frequency of the emission to be measured (must be within 2MHz of the authorized band edge).
4. Set span to 2 MHz.
5. RBW = 100 kHz.
6.  $VBW \geq [3 \times RBW]$ .
7. Detector = peak.
8. Sweep time = auto.
9. Trace mode = max hold.
10. Allow sweep to continue until the trace stabilizes

### 6.4.3 Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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### 6.4.4 Measurement results

#### 802.11b/g mode

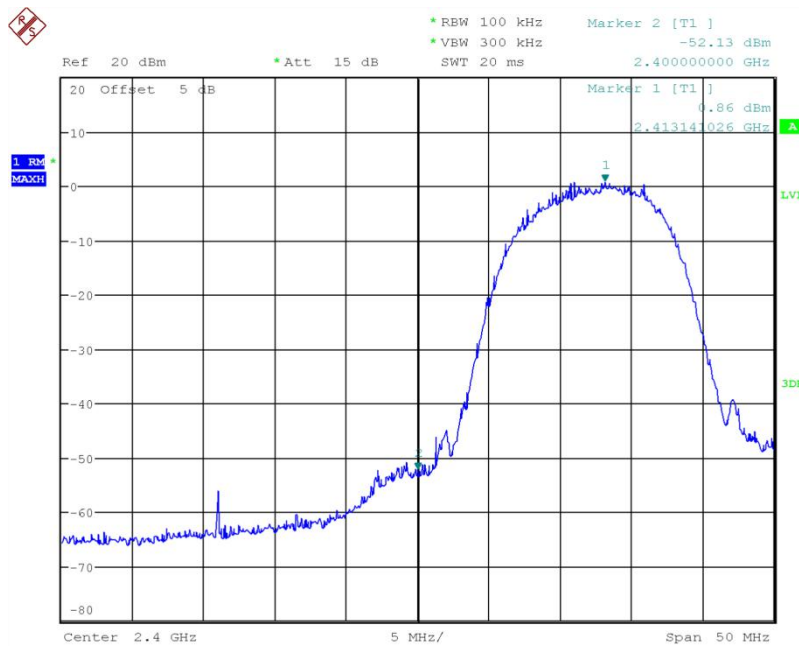
Mode	Channel	Test Results	Conclusion
802.11b	1	Fig 33.	P
	11	Fig 34.	P
802.11g	1	Fig 35.	P
	11	Fig 36.	P

#### 802.11n mode

Mode	Channel	Test Results	Conclusion
802.11n(20MHz)	1	Fig 37.	P
	11	Fig 38.	P
802.11n(40MHz)	3	Fig 39.	P
	9	Fig 40.	P

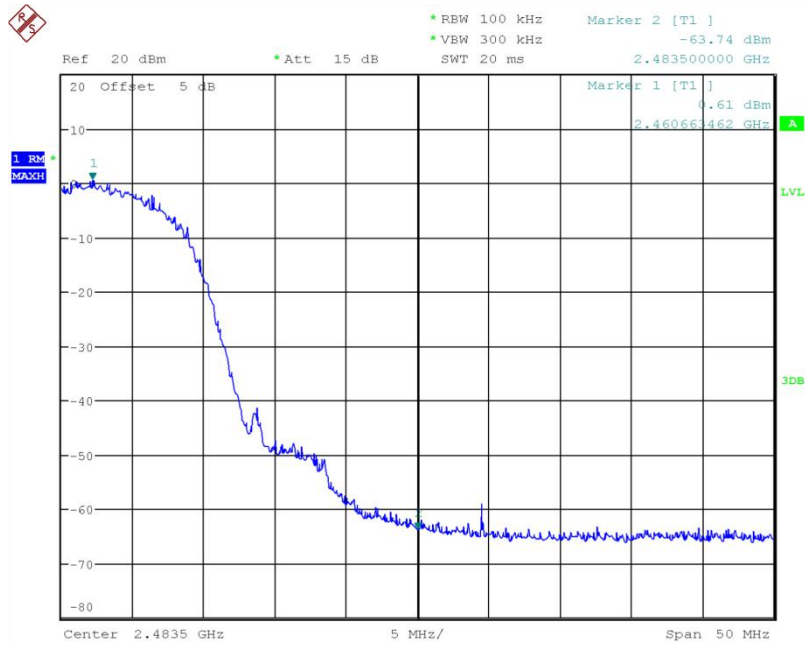
**Conclusion: PASS**

**Test graphs as blew:**



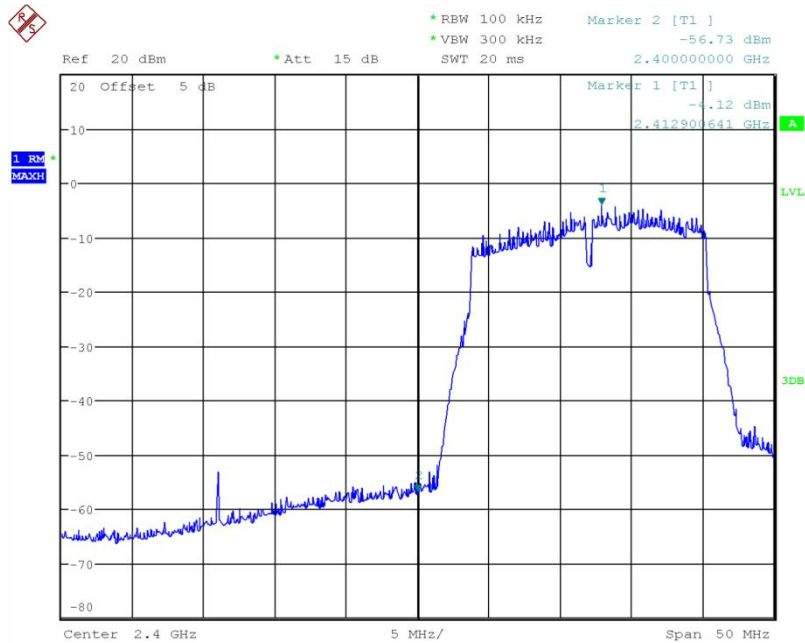
Date: 6.JUL.2018 11:28:50

## Fig.41 Band Edges (802.11b, Ch1)



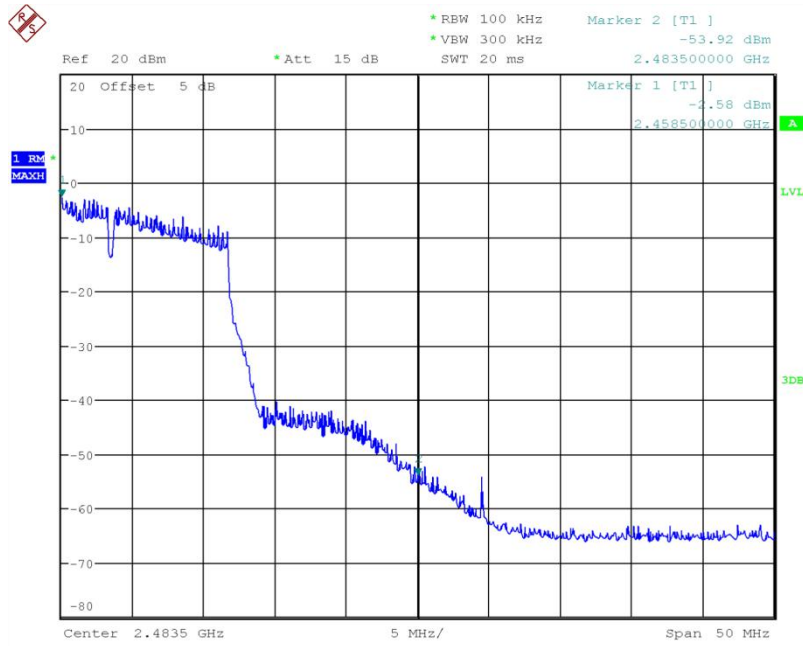
Date: 6.JUL.2018 11:29:47

## Fig.42 Band Edges (802.11b, Ch11)



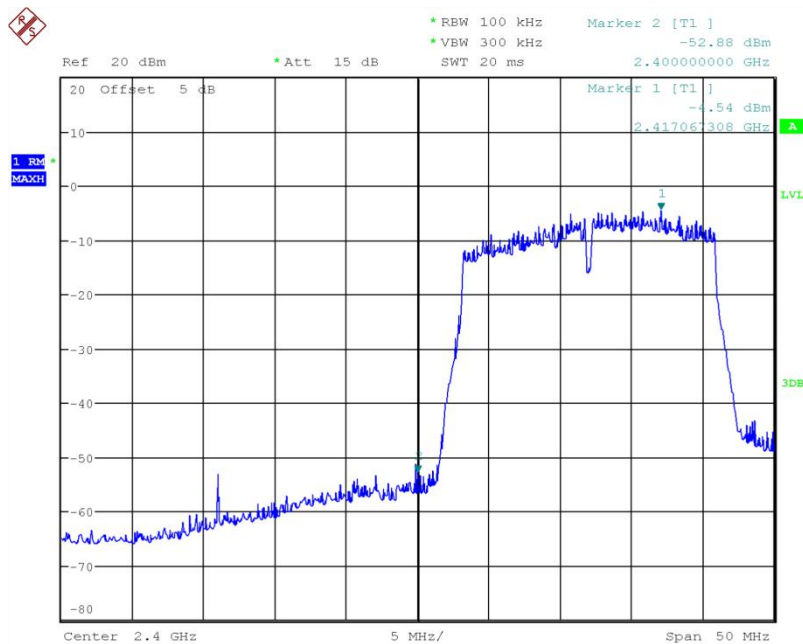
Date: 6.JUL.2018 11:31:02

## Fig.45 Band Edges (802.11g, Ch1)



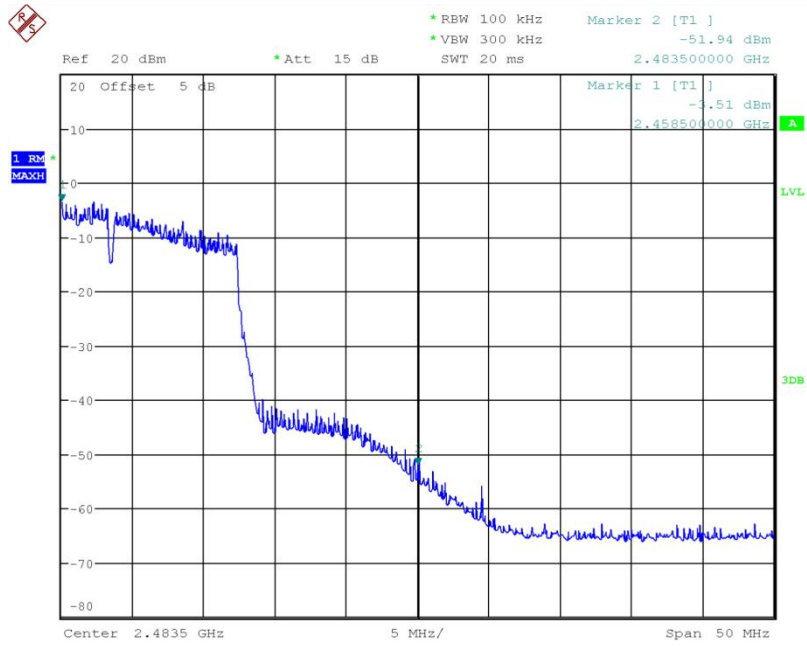
Date: 6.JUL.2018 11:32:01

**Fig.46 Band Edges (802.11g, Ch11)**



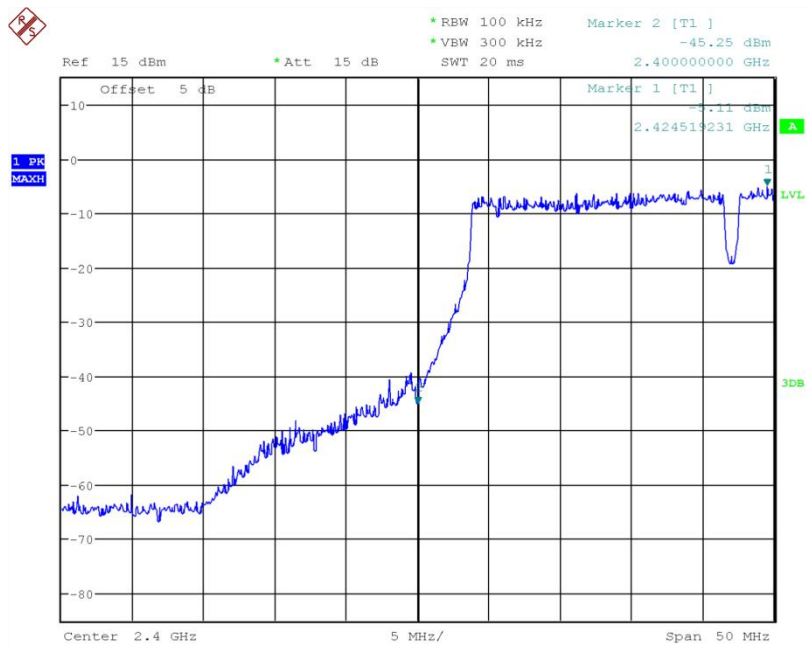
Date: 6.JUL.2018 11:33:06

**Fig.49 Band Edges (802.11n-20MHz, Ch1)**



Date: 6.JUL.2018 11:34:07

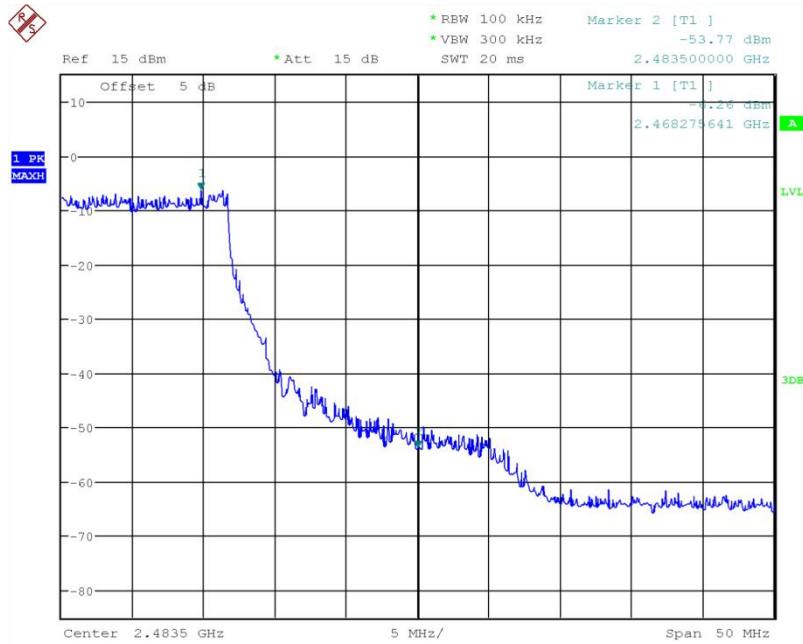
**Fig.50 Band Edges (802.11b-20MHz, Ch11)**



Date: 12.JUL.2018 05:20:48

**Fig.53 Band Edges (802.11n-40MHz, Ch3)**





Date: 12.JUL.2018 05:21:16

**Fig.54 Band Edges (802.11b-40MHz, Ch9)**

## 6.5. Transmitter Spurious Emission-conducted

### 6.5.1 Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(d)	20dB below peak output power in 100KHz bandwidth

### 6.5.2 Test procedures

This measurement is according to ANSI C63.10 clause 11.11.

1. The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Enable EUT transmitter maximum power continuously.

Reference level measurement

3. Set instrument center frequency to DTS channel center frequency.
4. Set the span to  $\geq 1.5$  times the DTS bandwidth.
5. Set the RBW = 100 kHz.
6. Set the VBW  $\geq [3 \times \text{RBW}]$ .
7. Detector = peak.
8. Sweep time = auto couple.
9. Trace mode = max hold.
10. Allow trace to fully stabilize.
11. Use the peak marker function to determine the maximum PSD level.

Emission level measurement

12. Set the center frequency and span to encompass frequency range to be measured.
13. Set the RBW = 100 kHz.
14. Set the VBW  $\geq [3 \times \text{RBW}]$ .
15. Detector = peak.
16. Sweep time = auto couple.
17. Trace mode = max hold.
18. Allow trace to fully stabilize.
19. Use the peak marker function to determine the maximum amplitude level.

**6.5.3 Measurement Uncertainty:**

Frequency Range	Uncertainty
$30\text{MHz} \leq f \leq 2\text{GHz}$	0.63
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	0.82
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.55
$8\text{GHz} \leq f \leq 20\text{GHz}$	1.86
$20\text{GHz} \leq f \leq 22\text{GHz}$	1.90
$22\text{GHz} \leq f \leq 26\text{GHz}$	2.20

**6.5.4 Measurement Result:**
**802.11b/g mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412GHz	Fig 41.	P
		30MHz~26GHz	Fig 42.	P
	6	2.437GHz	Fig 43.	P
		30MHz~26GHz	Fig 44.	P
	11	2.462GHz	Fig 45.	P
		30MHz~26GHz	Fig 46.	P
802.11g	1	2.412GHz	Fig 47.	P
		30MHz~26GHz	Fig 48.	P
	6	2.437GHz	Fig 49.	P

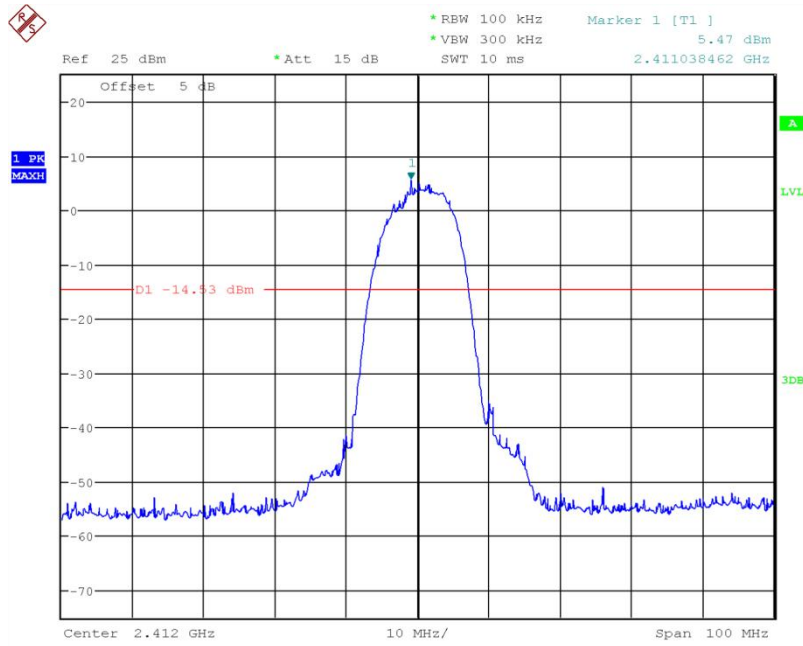
		30MHz~26GHz	Fig 50.	P
	11	2.462GHz	Fig 51.	P
		30MHz~26GHz	Fig 52.	P

**802.11n mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n(20MHz)	1	2.412GHz	Fig 53.	P
		30MHz~26GHz	Fig 54.	P
	6	2.437GHz	Fig 55.	P
		30MHz~26GHz	Fig 56.	P
	11	2.462GHz	Fig 57.	P
		30MHz~26GHz	Fig 58.	P
802.11n(40MHz)	3	2.422GHz	Fig 59.	P
		30MHz~26GHz	Fig 60.	P
	6	2.437GHz	Fig 61.	P
		30MHz~26GHz	Fig 62.	P
	9	2.452GHz	Fig 63.	P
		30MHz~26GHz	Fig 64.	P

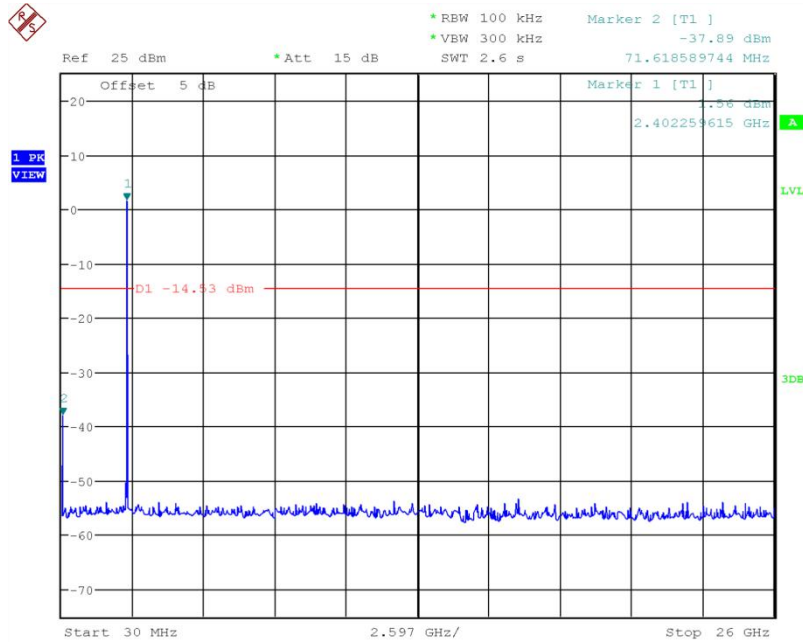
**Conclusion: PASS**

**Test graphs as below:**



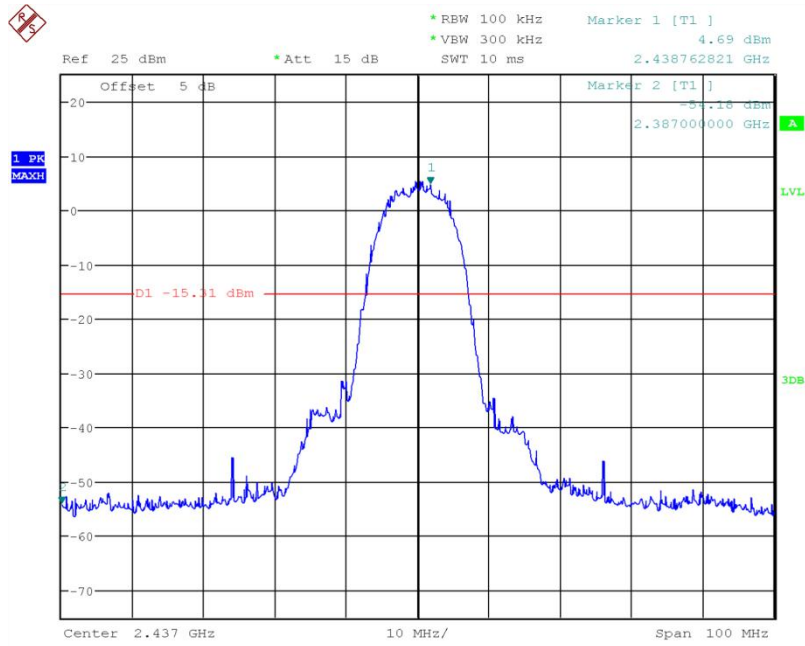
Date: 6.JUL.2018 11:39:24

**Fig.57 Conducted Spurious Emission (802.11b, Ch1)**



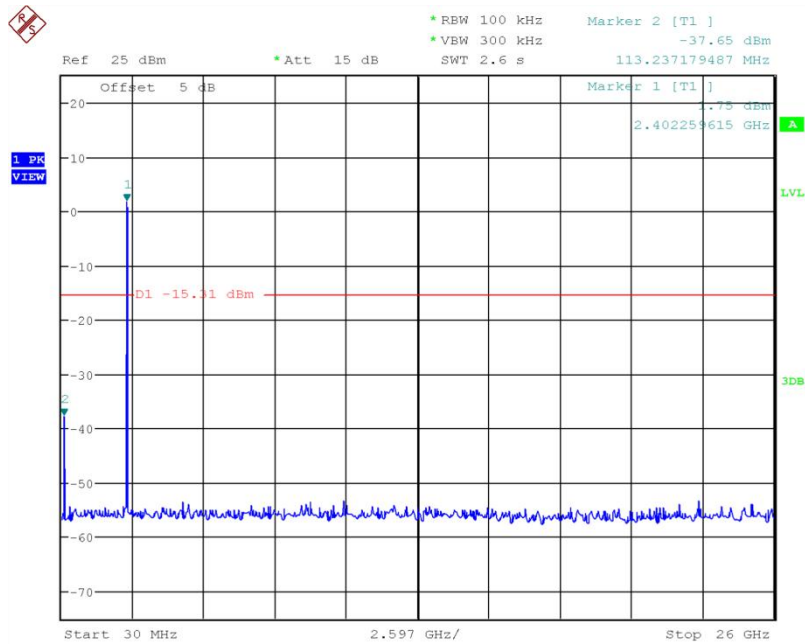
Date: 6.JUL.2018 11:39:43

**Fig.58 Conducted Spurious Emission (802.11b, Ch1, 30MHz~26GHz)**



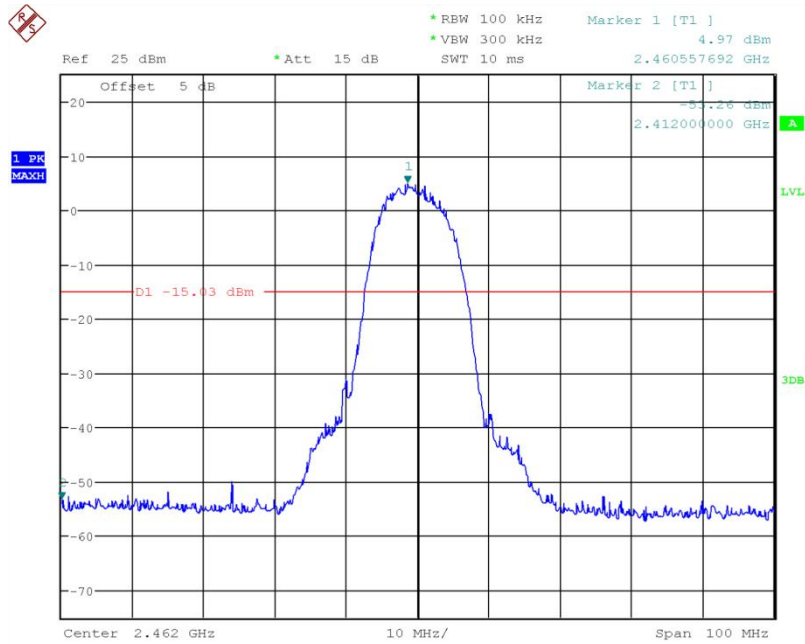
Date: 6.JUL.2018 11:40:50

**Fig.59 Conducted Spurious Emission (802.11b, Ch6)**



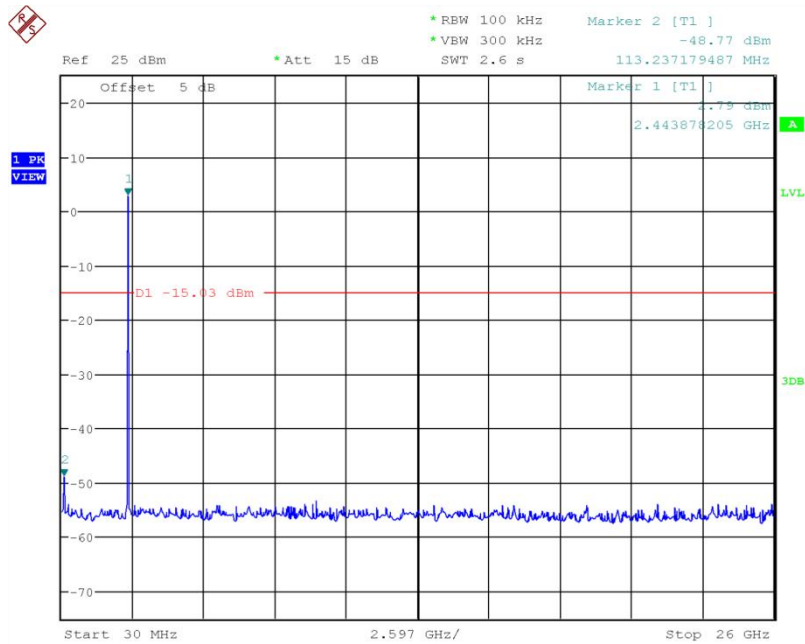
Date: 6.JUL.2018 11:41:09

**Fig.60 Conducted Spurious Emission (802.11b, Ch6, 30MHz~26GHz)**



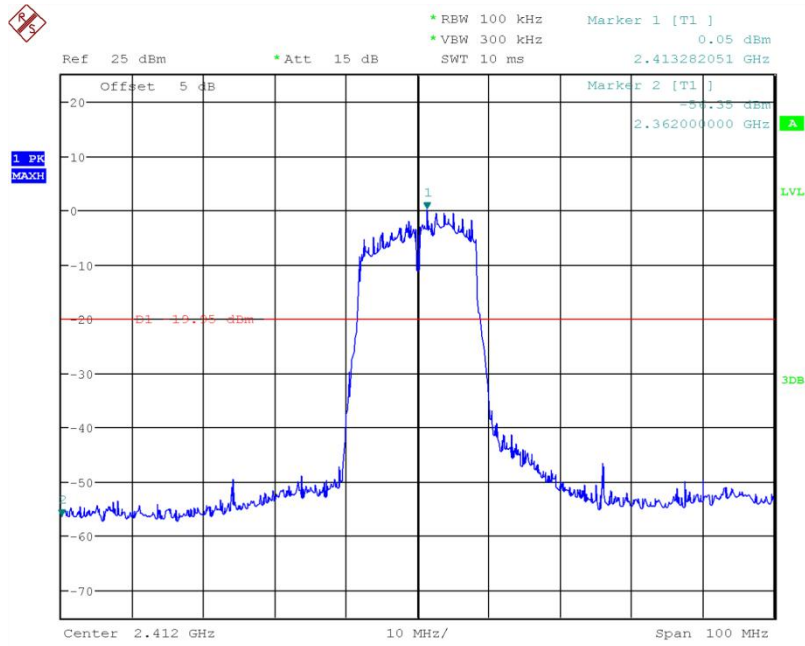
Date: 6.JUL.2018 11:41:45

**Fig.61 Conducted Spurious Emission (802.11b, Ch11)**



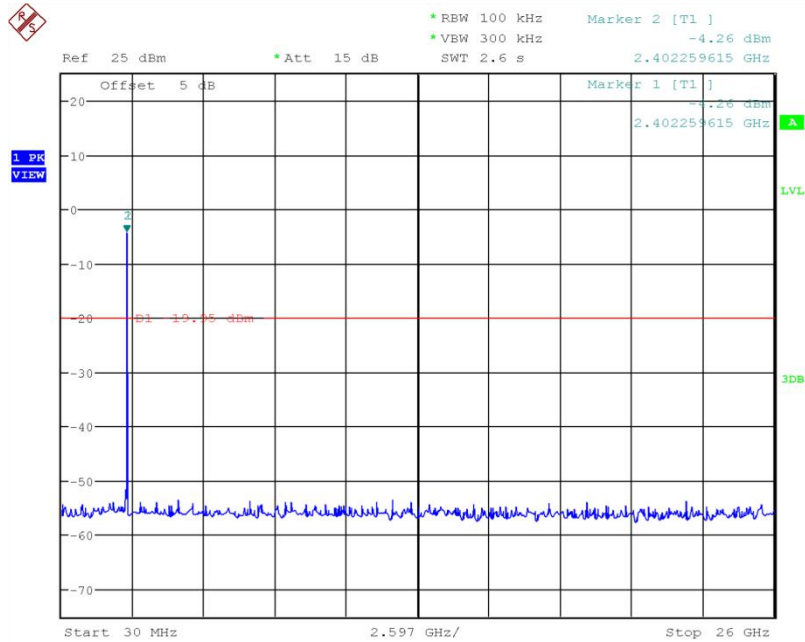
Date: 6.JUL.2018 11:42:04

**Fig.62 Conducted Spurious Emission (802.11b, Ch11, 30MHz~26GHz)**



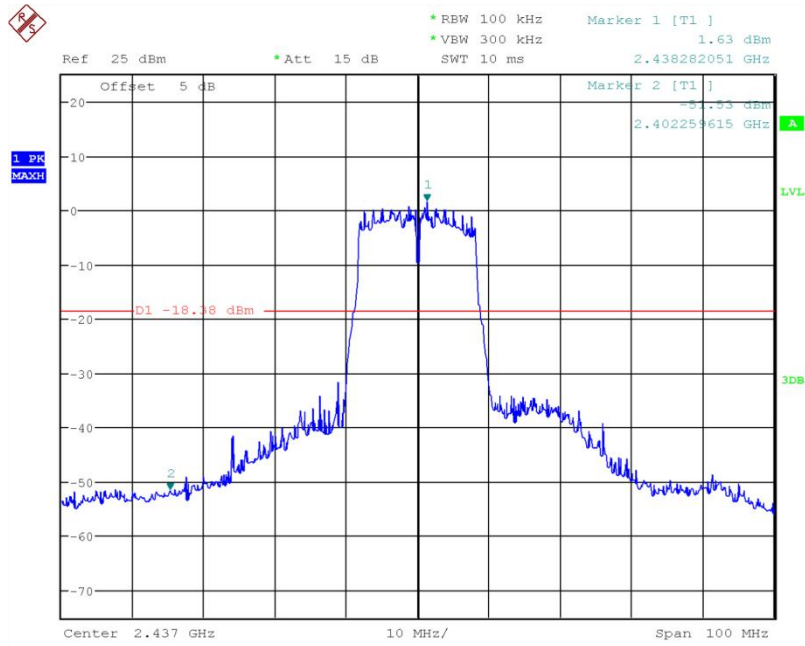
Date: 6.JUL.2018 11:42:47

**Fig.67 Conducted Spurious Emission (802.11g, Ch1)**



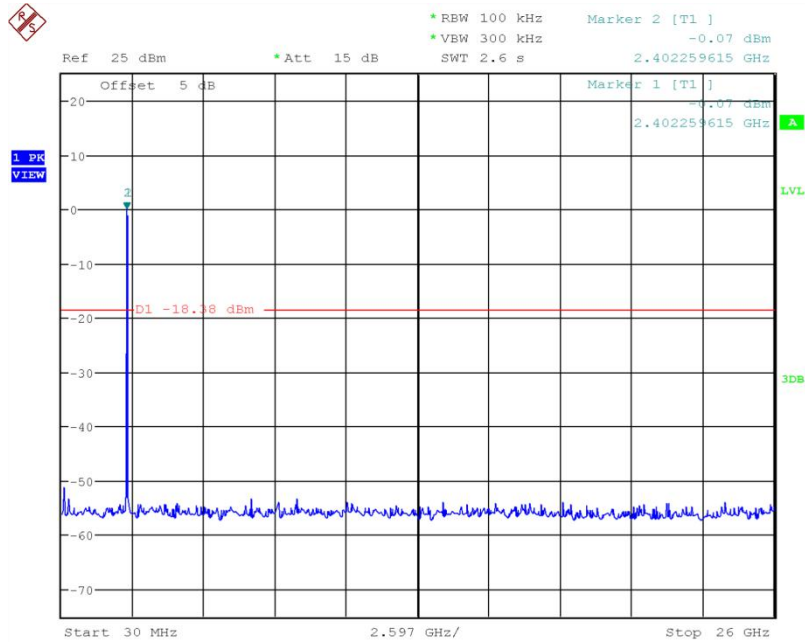
Date: 6.JUL.2018 11:43:06

**Fig.68 Conducted Spurious Emission (802.11g, Ch1, 30MHz~26GHz)**



Date: 6.JUL.2018 11:43:39

**Fig.69 Conducted Spurious Emission (802.11g, Ch6)**

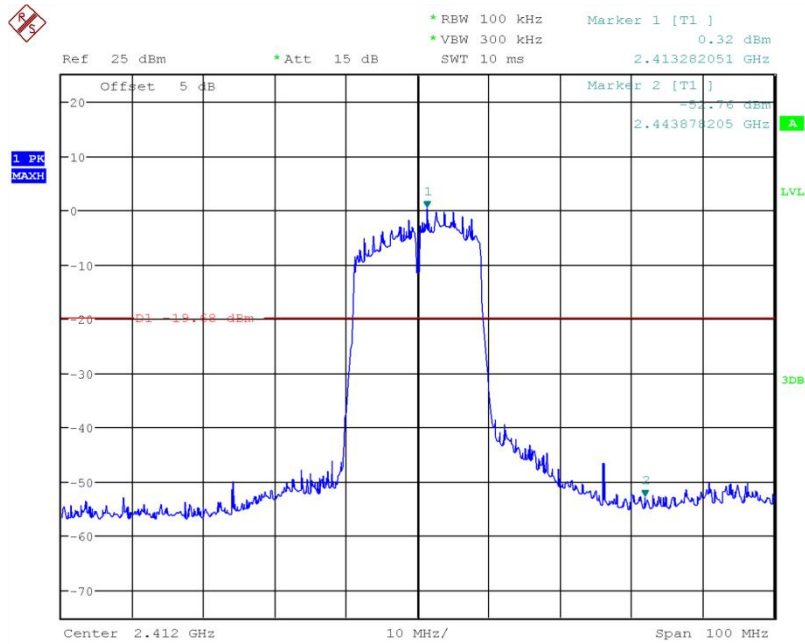


Date: 6.JUL.2018 11:43:58

**Fig.70 Conducted Spurious Emission (802.11g, Ch6, 30MHz~26GHz)**

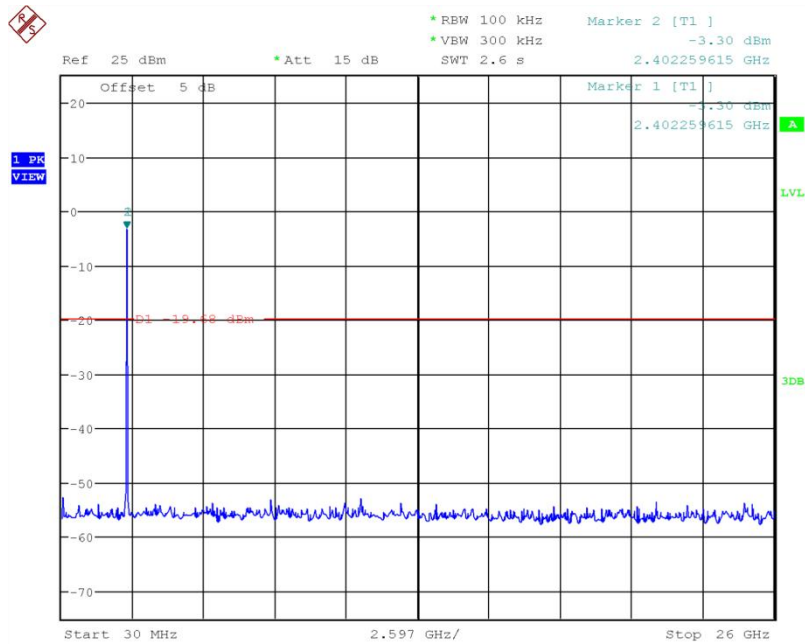






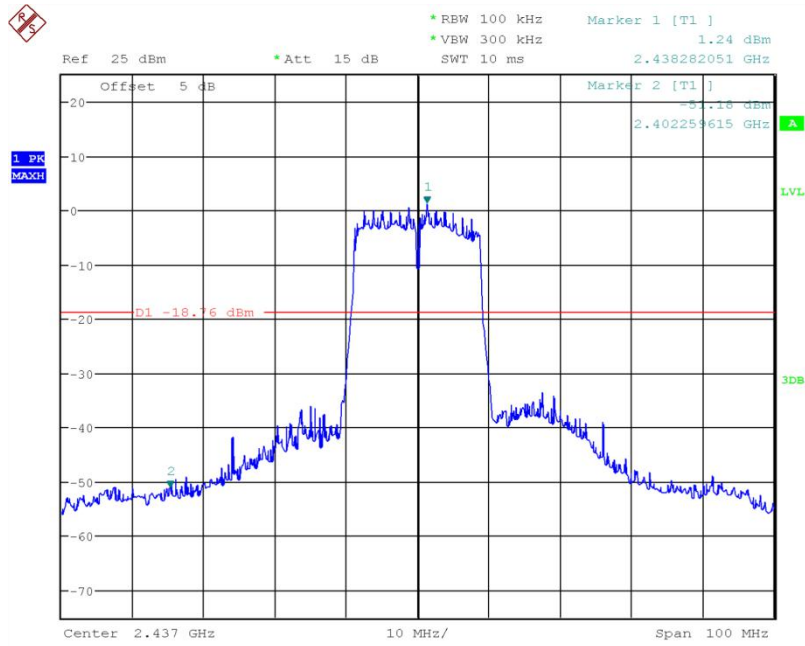
Date: 6.JUL.2018 11:45:31

**Fig.77 Conducted Spurious Emission (802.11n-20MHz, Ch1)**



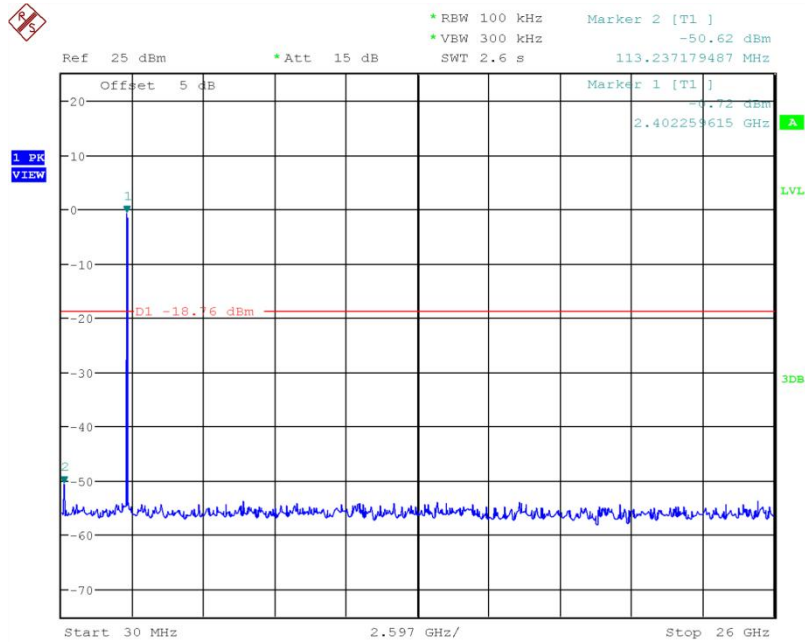
Date: 6.JUL.2018 11:45:50

**Fig.78 Conducted Spurious Emission (802.11n-20MHz, Ch1, 30MHz~26GHz)**



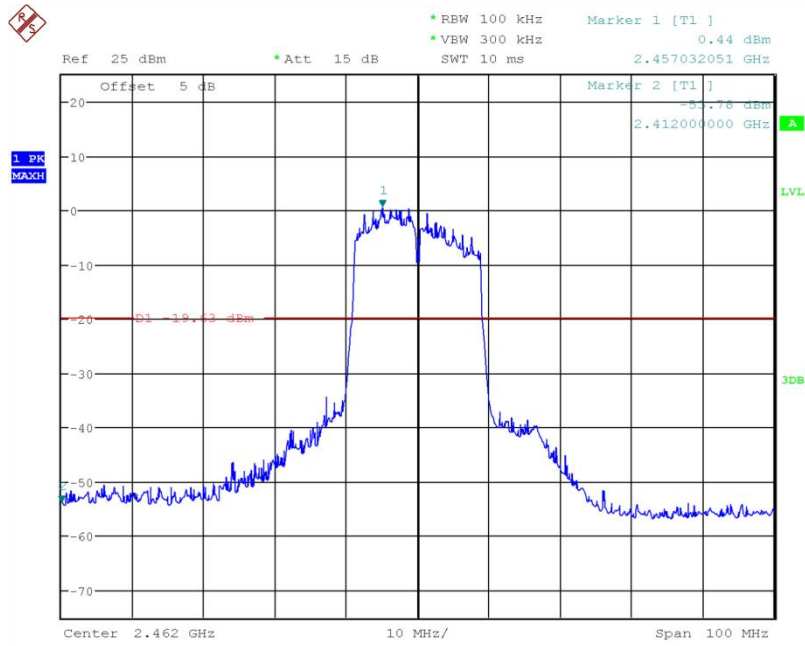
Date: 6.JUL.2018 11:46:33

**Fig.79 Conducted Spurious Emission (802.11n-20MHz, Ch6)**



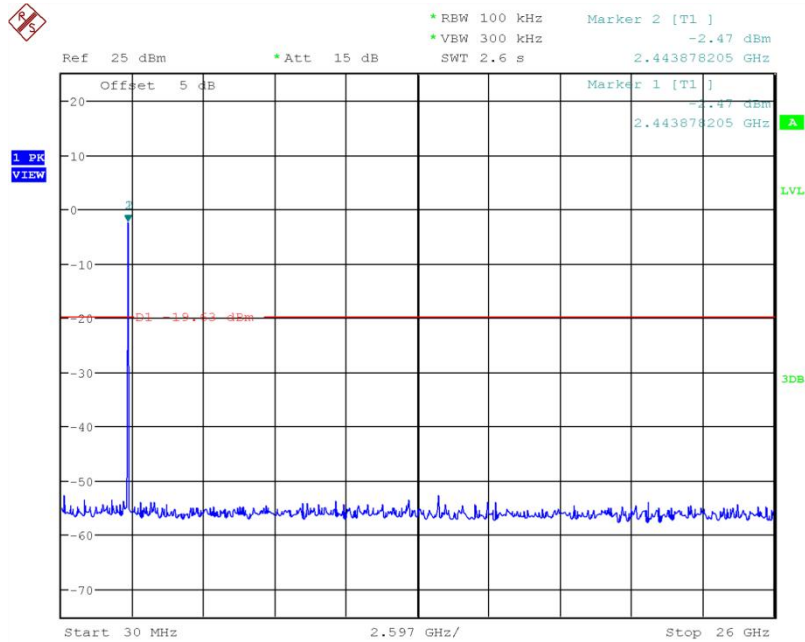
Date: 6.JUL.2018 11:46:53

**Fig.80 Conducted Spurious Emission (802.11n-20MHz, Ch6, 30MHz~26GHz)**



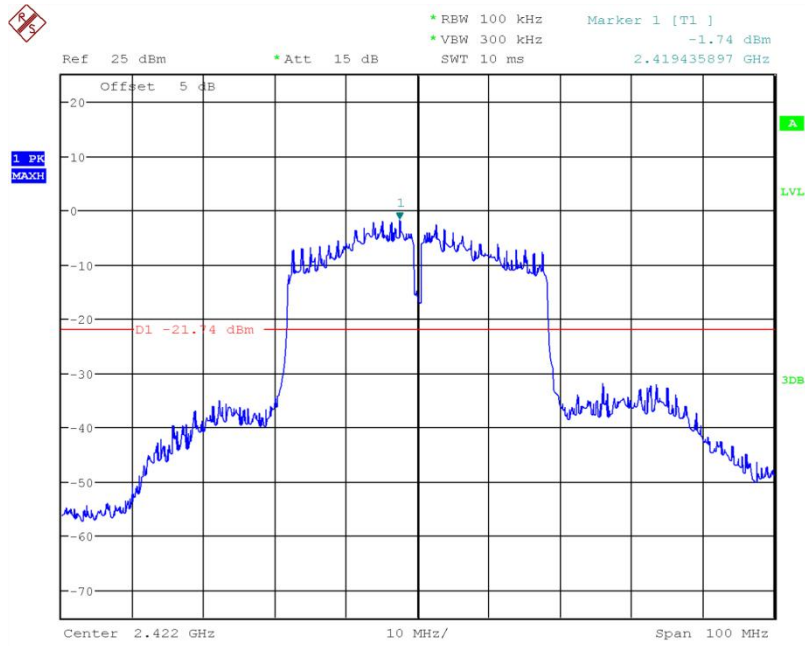
Date: 6.JUL.2018 11:47:28

**Fig.81 Conducted Spurious Emission (802.11n-20MHz, Ch11)**



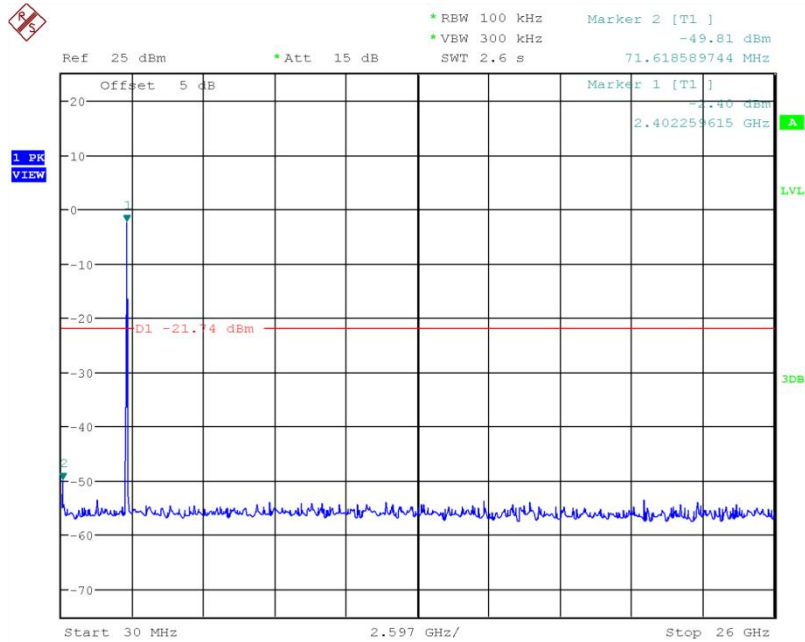
Date: 6.JUL.2018 11:47:47

**Fig.82 Conducted Spurious Emission (802.11n-20MHz, Ch11, 30MHz~26GHz)**



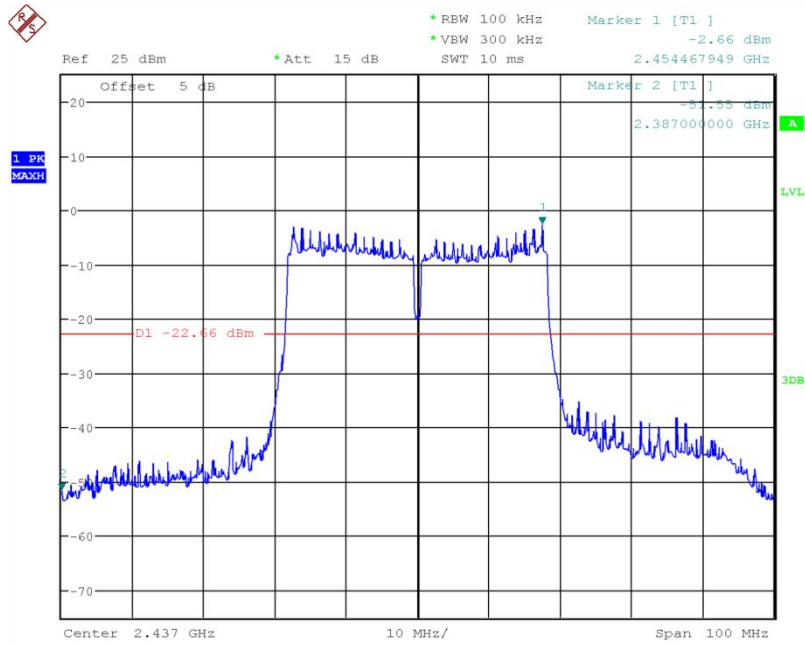
Date: 6.JUL.2018 11:48:48

**Fig.87 Conducted Spurious Emission (802.11n-40MHz, Ch3)**



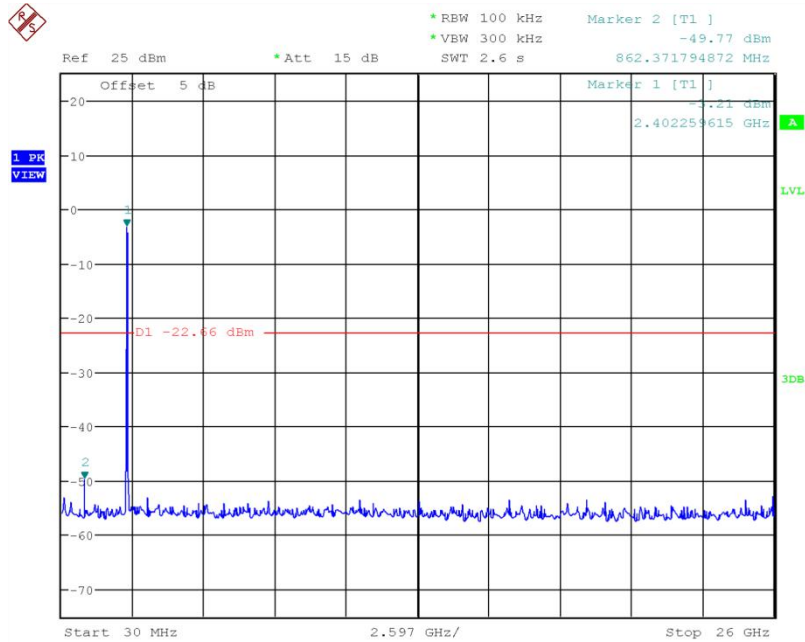
Date: 6.JUL.2018 11:49:07

**Fig.88 Conducted Spurious Emission (802.11n-40MHz, Ch3, 30MHz~26GHz)**



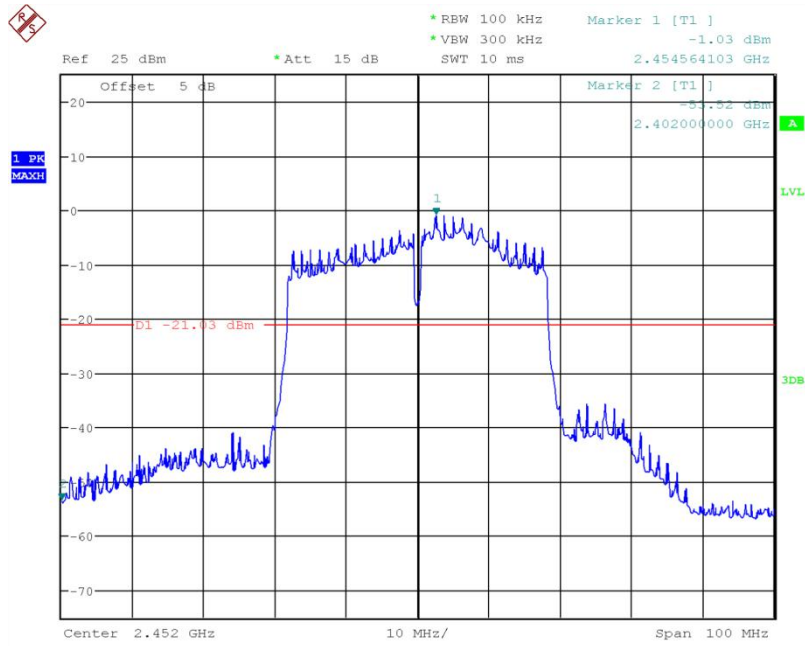
Date: 6.JUL.2018 11:49:39

**Fig.89 Conducted Spurious Emission (802.11n-40MHz, Ch6)**



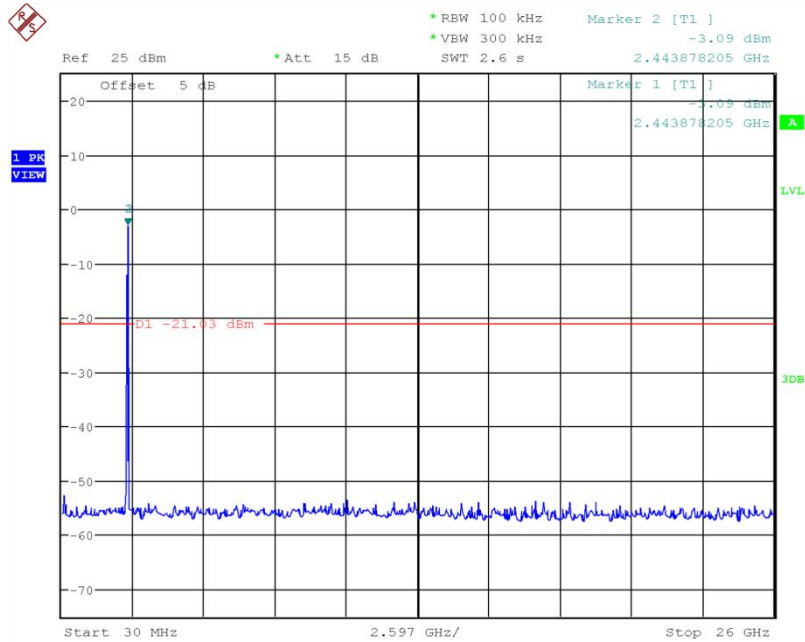
Date: 6.JUL.2018 11:49:58

**Fig.90 Conducted Spurious Emission (802.11n-40MHz, Ch6, 30MHz~26GHz)**



Date: 6.JUL.2018 11:51:10

**Fig.91 Conducted Spurious Emission (802.11n-40MHz, Ch9)**



Date: 6.JUL.2018 11:51:29

**Fig.92 Conducted Spurious Emission (802.11n-40MHz, Ch9, 30MHz~26GHz)**

## 7. Test Equipment and Ancillaries Used For Tests

The test equipment and ancillaries used are as follows.

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration date	Cal.interval
1	Vector Signal Analyzer	FSQ26	101096	Rohde&Schwarz	2018-05-11	1 Year
2	DC Power Supply	ZUP60-14	LOC-220Z006-0007	TDL-Lambda	2018-05-11	1 Year

### Anechoic chamber

Fully anechoic chamber by Frankonia German.

## 8. Test Environment

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Ground system resistance	< 0.5

**Control room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 k
Ground system resistance	< 0.5

**Fully-anechoic chamber1** (6.9 meters×10.9 meters×5.4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
-------------	----------------------------





## RF Test Report

Report No.: I18D00122-SRD03

Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 k
Ground system resistance	< 0.5
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB, 30MHz to 1GHz
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz

**ANNEX A. Deviations from Prescribed Test Methods**

No deviation from Prescribed Test Methods.

**ANNEX B. Accreditation Certificate**



**Accredited Laboratory**

A2LA has accredited

**EAST CHINA INSTITUTE OF TELECOMMUNICATIONS**

*Shanghai, People's Republic of China*

for technical competence in the field of

**Electrical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 15<sup>th</sup> day of March 2017.

  
President and CEO  
For the Accreditation Council  
Certificate Number 3682.01  
Valid to February 28, 2019

*For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.*



**\*\*\*\*\*End The Report\*\*\*\*\***