

## FCC Part 15E Compliance Test Report

<b>Test Report no.:</b>	FCC15E_RM-927_14.docx	<b>Date of Report:</b>	19-Aug-13
<b>Number of pages:</b>	88	<b>Customer's Contact person:</b>	Victoria Abadilla
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<b>FCC listing no.:</b>	586140		
<b>IC recognition no.:</b>	10162A-1		
<b>Tested devices/ accessories:</b>	<b>Phone RM-927 / Dummy Battery SD-217R</b>		
<b>FCC ID:</b>	QMND	<b>IC:</b>	661X-D
<b>Supplement reports:</b>	-		
<b>Testing has been carried out in accordance with:</b>	<b>CFR 47, FCC rules Part 15 Subpart E, ANSI C63.4 (2003), DTS procedures KDB 789033 D01, IC standards. Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".</b>		
<b>Documentation:</b>	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Nokia.		
<b>Test Results:</b>	<b>The EUT complies with the requirements in respect of all parameters subject to the test.</b> The test results relate only to devices specified in this document		
<b>Date and signature for the contents:</b>			

Feng You, Senior Specialist

## 1. Summary for FCC Part 15E Compliance Test Report

<b>Date of receipt</b>	20-Jul-2013
<b>Testing completed</b>	19-Aug-13
<b>The customer's contact person</b>	Victoria Abadilla
<b>Test Plan referred to</b>	T:\Projects\RM-927\TestPlan\RS_testplan_RM-927.xlsm
<b>Notes</b>	-
<b>Document name</b>	T:\Projects\RM-927\EMC\FCC15E_RM-927_14.docx

### 1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/CDMA/WCDMA/LTE/WLAN/Bluetooth

The EUT is tested with maximum rated TX power.

Devices under tests

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-927	355906050012748	0161	-	1028.0305.1329.2000	30738
Dummy Battery	SD-217R	50346	0.3	-	-	30742

### 1.2. Summary of Test Results

5 GHz RLAN:

Section in CFR 47	Section in RSS-GEN or RSS-210	Name of the test	Result
15.407(a)	A9.2	Conducted peak output power	PASSED
15.407(b)	A9.2	Band edge compliance of RF emissions	NP
15.407(a)(6)	A9.2	Peak excursion	PASSED
15.407(b)	A9.2	Spurious radiated emissions	NP
15.407(b)(6)	A9.2	AC powerline conducted emissions	NP
-	A9.2	26dB(bandwidth)	PASSED
15.407(a)	A9.2	Power spectral density	PASSED

PASSED

FAILED

NP

The EUT complies with the essential requirements in the standard.

The EUT does not comply with the essential requirements in the standard.

The test was not performed by the TCC Nokia Laboratory.

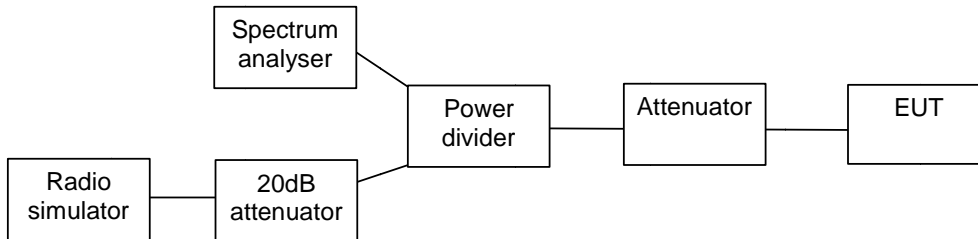
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## 2. Maximum conducted output power (FCC §15.407 (a), RSS-210 A9.2)

EUT with DUT number	RM-927, DUT 30738
Accessories with DUT numbers	SD-217R, DUT 30742
Operation Voltage [V] / [Hz]	3.8V DC
Results	PASSED
Remarks	
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21.3 / 48.6 / 1050
Date of measurements	30-Jul-2013
Measured by	Feng You

### 2.1. Test Setup



### 2.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D01 and IC standard RSS-210.

Limits for Maximum conducted output power measurements

Frequency range [MHz]	Limit [mW] / (dBm)	Limit [dBm]	Limit [dBm] for B=20 MHz
5150-5250	50 (17)	4+10 log B	17
5250-5350	250 (24)	11+10 log B	24
5470-5725	250 (24)	11+10 log B	24
5725-5825	1000 (30)	17+10 log B	30

### 2.3. Power results summary

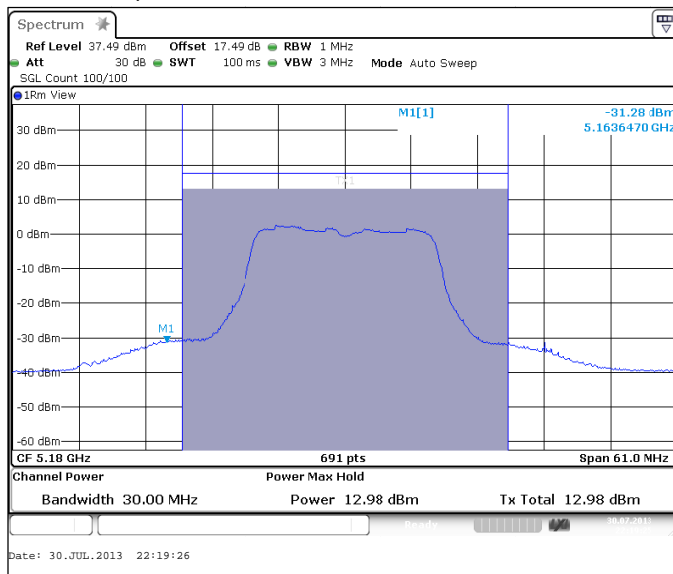
Channel / fC [MHz]	Mode	Modulation	Data rate	Level [dBm]
36 / 5180	802.11a	BPSK	9 Mbps	12.98
40 / 5200	802.11a	BPSK	9 Mbps	11.76
48 / 5240	802.11a	BPSK	9 Mbps	13.84
52 / 5260	802.11a	BPSK	9 Mbps	14.59
60 / 5300	802.11a	BPSK	9 Mbps	11.8
64 / 5320	802.11a	BPSK	9 Mbps	11.77
100 / 5500	802.11a	BPSK	9 Mbps	12.88
116 / 5580	802.11a	BPSK	9 Mbps	14.71
140 / 5700	802.11a	BPSK	9 Mbps	13.04
36 / 5180	802.11n	QPSK	13.0 / 14.4 Mbps	12.72
40 / 5200	802.11n	QPSK	13.0 / 14.4 Mbps	11.7
48 / 5240	802.11n	QPSK	13.0 / 14.4 Mbps	13.66
52 / 5260	802.11n	QPSK	13.0 / 14.4 Mbps	14.27
60 / 5300	802.11n	QPSK	13.0 / 14.4 Mbps	11.92
64 / 5320	802.11n	QPSK	13.0 / 14.4 Mbps	11.7
100 / 5500	802.11n	QPSK	13.0 / 14.4 Mbps	12.44
116 / 5580	802.11n	QPSK	13.0 / 14.4 Mbps	13.78
140 / 5700	802.11n	QPSK	13.0 / 14.4 Mbps	13.78
36+40 / 5190	802.11n	BPSK	13.5 / 15.0 Mbps	9.67
44+48 / 5230	802.11n	BPSK	13.5 / 15.0 Mbps	10.43
52+56 / 5270	802.11n	BPSK	13.5 / 15.0 Mbps	11.21
60+64 / 5310	802.11n	BPSK	13.5 / 15.0 Mbps	9.22
100+104 / 5510	802.11n	BPSK	13.5 / 15.0 Mbps	9.26
108+112 / 5550	802.11n	BPSK	13.5 / 15.0 Mbps	9.23
132+136 / 5670	802.11n	BPSK	13.5 / 15.0 Mbps	11.8
36+40 / 5190	802.11n	QPSK	27.0 / 30.0 Mbps	9.49
44+48 / 5230	802.11n	QPSK	27.0 / 30.0 Mbps	9.94
52+56 / 5270	802.11n	QPSK	27.0 / 30.0 Mbps	10.94
60+64 / 5310	802.11n	QPSK	27.0 / 30.0 Mbps	9.04
100+104 / 5510	802.11n	QPSK	27.0 / 30.0 Mbps	8.62
108+112 / 5550	802.11n	QPSK	27.0 / 30.0 Mbps	9.34
132+136 / 5670	802.11n	QPSK	27.0 / 30.0 Mbps	11.48
36-48 / 5210	802.11ac	BPSK	29.3 / 32.5 Mbps	12.95
52-64 / 5290	802.11ac	BPSK	29.3 / 32.5 Mbps	13.2
100-112 / 5530	802.11ac	BPSK	29.3 / 32.5 Mbps	12.75
52-64 / 5290	802.11ac	QPSK	58.5 / 65.0 Mbps	12.72
100-112 / 5530	802.11ac	QPSK	58.5 / 65.0 Mbps	12.05
36-48 / 5210	802.11ac	QPSK	58.5 / 65.0 Mbps	12.82

## 2.4. 5 GHz RLAN Test results

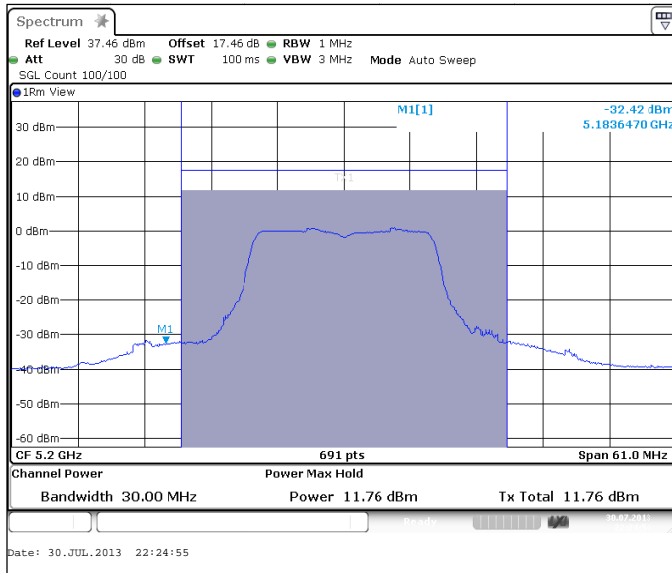
### 2.4.1 802.11a mode, BPSK modulation, 9 Mbps data rate

Channel / f <sub>c</sub> [MHz]	P [dBm]	P [mW]	Result
36 / 5180	12.98	19.861	PASSED
40 / 5200	11.76	14.997	PASSED
48 / 5240	13.84	24.21	PASSED
52 / 5260	14.59	28.774	PASSED
60 / 5300	11.8	15.136	PASSED
64 / 5320	11.77	15.031	PASSED
100 / 5500	12.88	19.409	PASSED
116 / 5580	14.71	29.58	PASSED
140 / 5700	13.04	20.137	PASSED

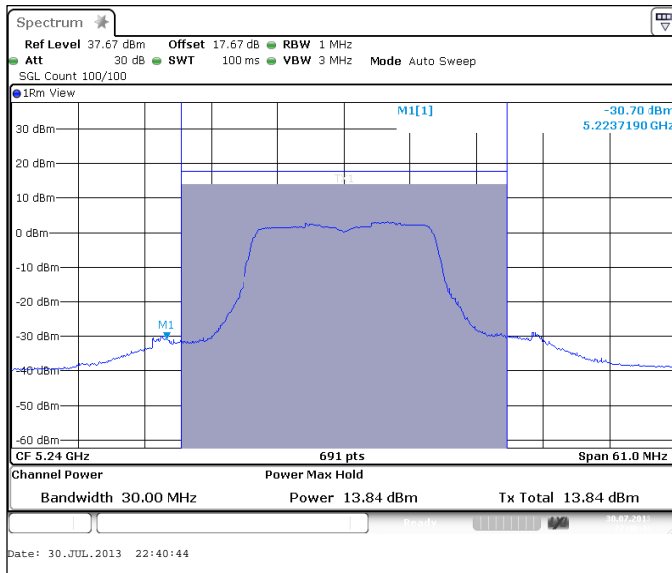
#### Channel 36 / 5180MHz



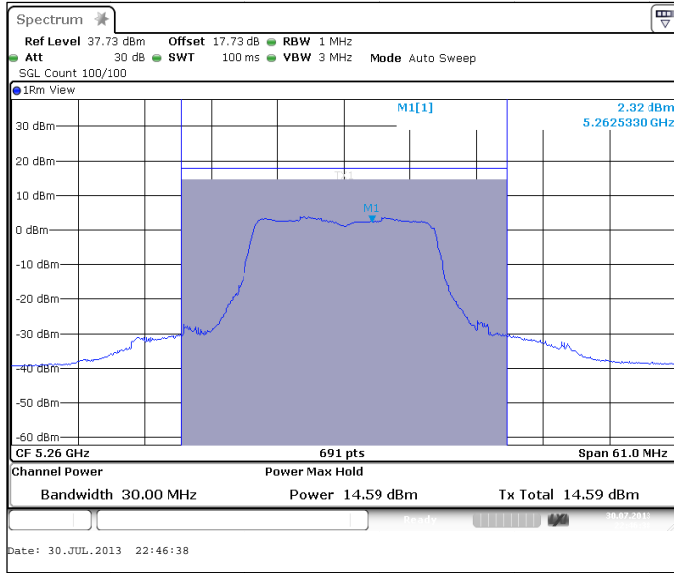
#### Channel 40 / 5200MHz



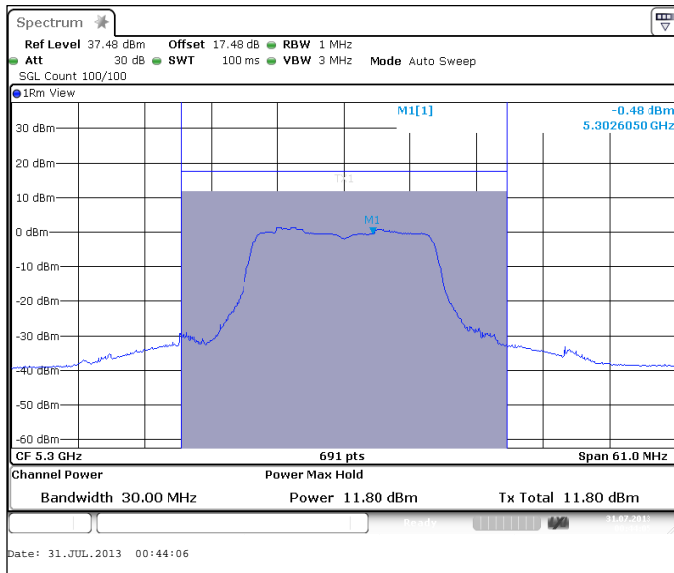
**Channel 48 / 5240MHz**



**Channel 52 / 5260MHz**

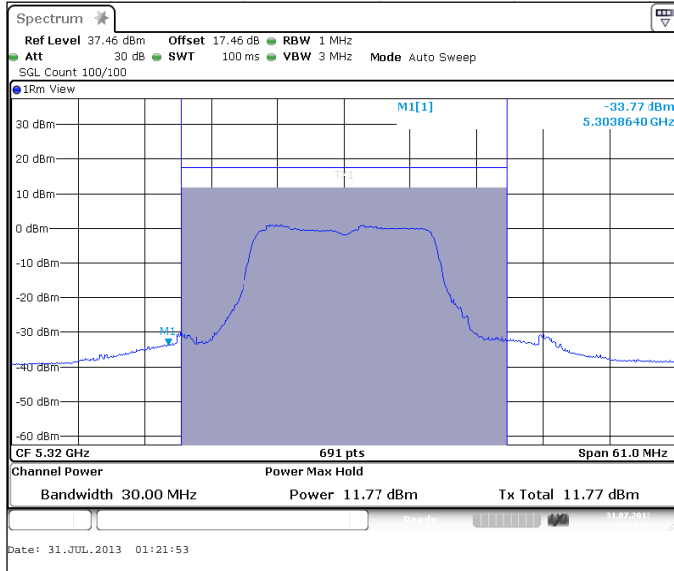


**Channel 60 / 5300MHz**

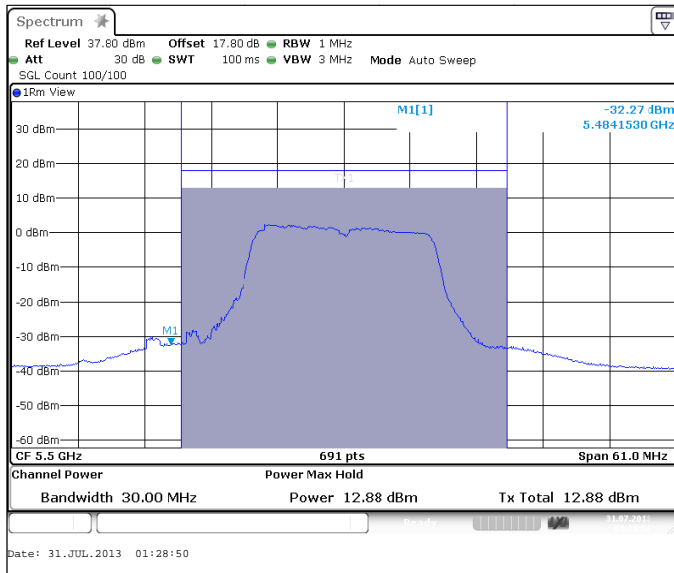




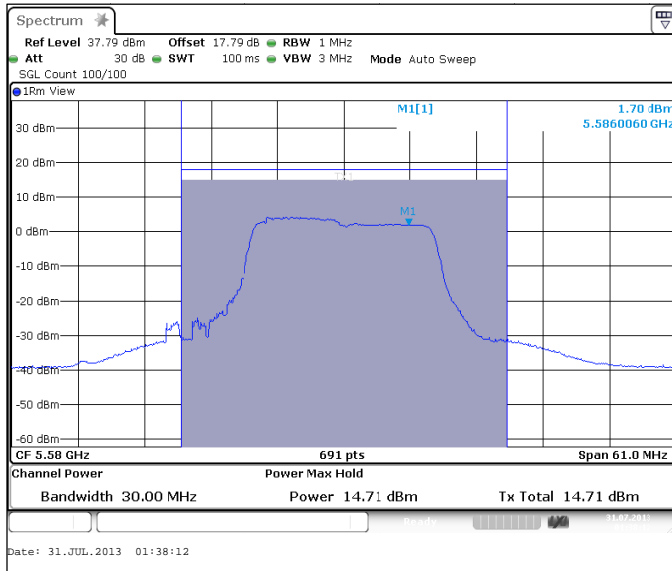
Channel 64 / 5320MHz



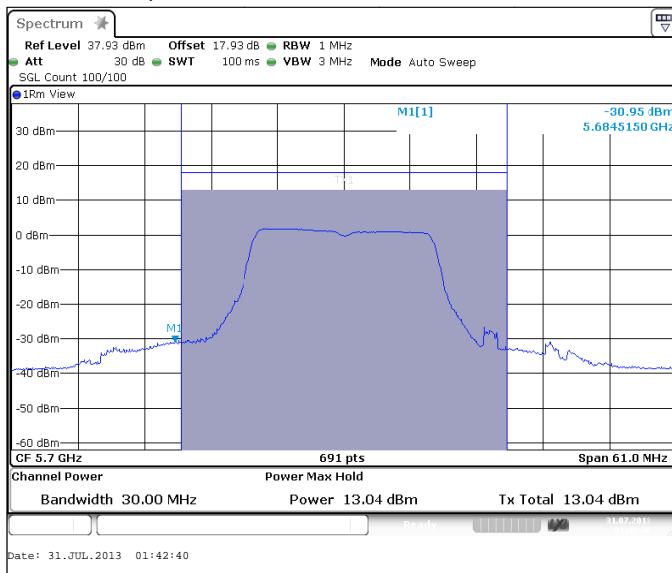
Channel 100 / 5500MHz



Channel 116 / 5580MHz



Channel 140 / 5700MHz

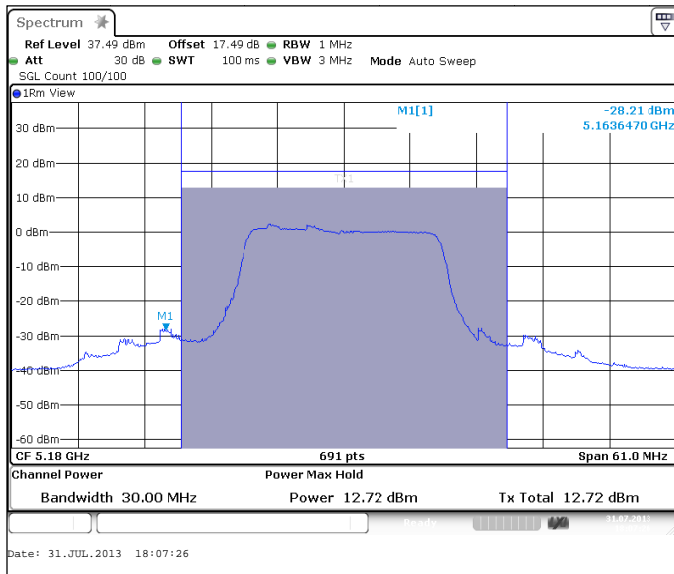


2.4.2 802.11n mode, QPSK modulation, 13.0 / 14.4 Mbps data rate

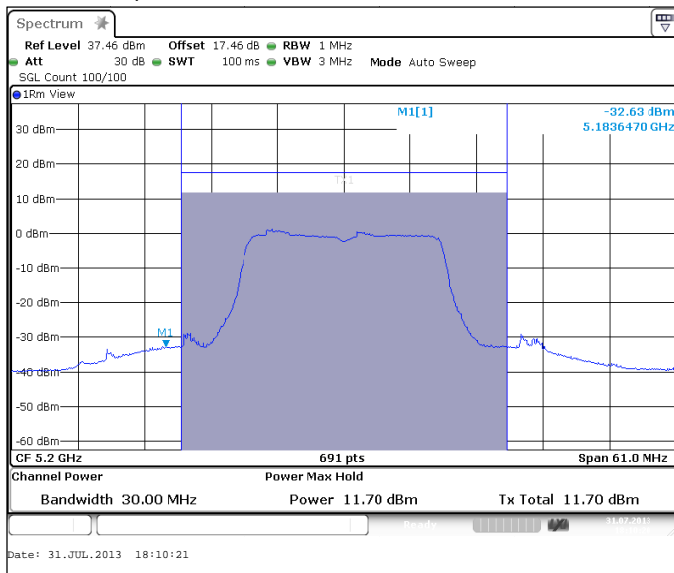
Channel / f <sub>c</sub> [MHz]	P [dBm]	P [mW]	Result
36 / 5180	12.72	18.707	PASSED
40 / 5200	11.7	14.791	PASSED
48 / 5240	13.66	23.227	PASSED
52 / 5260	14.27	26.73	PASSED

60 / 5300	11.92	15.56	PASSED
64 / 5320	11.7	14.791	PASSED
100 / 5500	12.44	17.539	PASSED
116 / 5580	13.78	23.878	PASSED
140 / 5700	13.78	23.878	PASSED

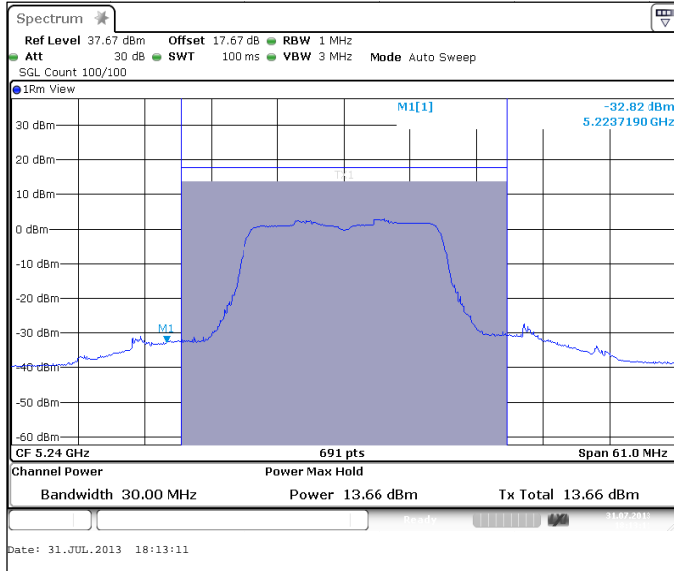
Channel 36 / 5180MHz



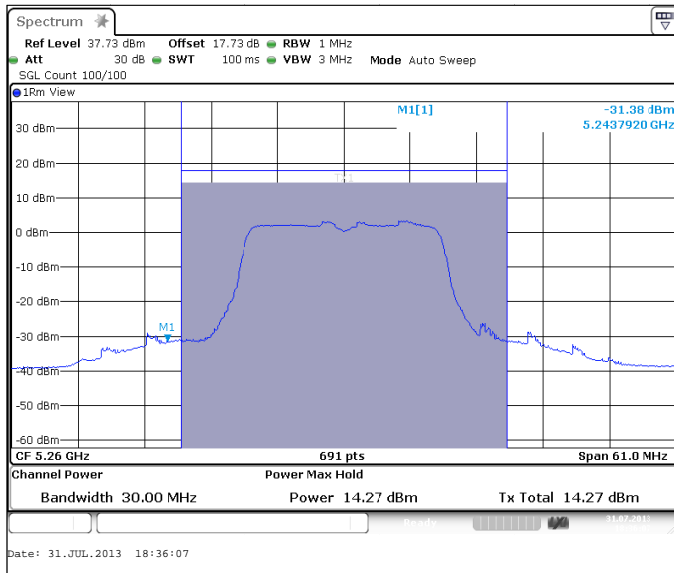
Channel 40 / 5200MHz



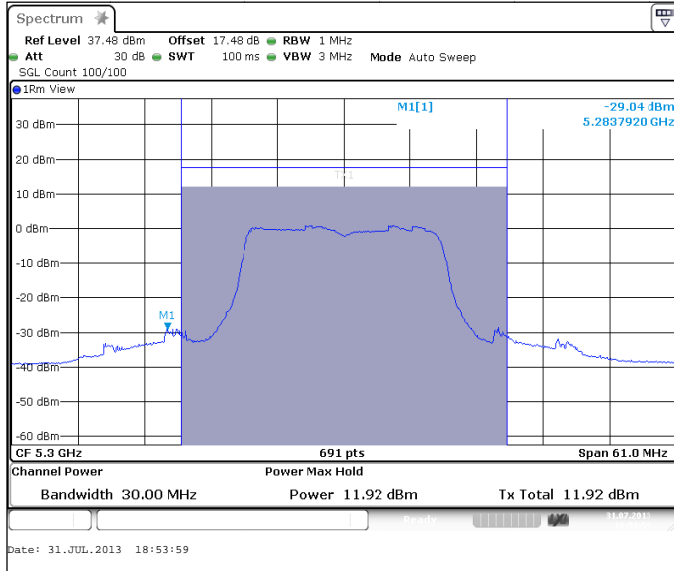
Channel 48 / 5240MHz



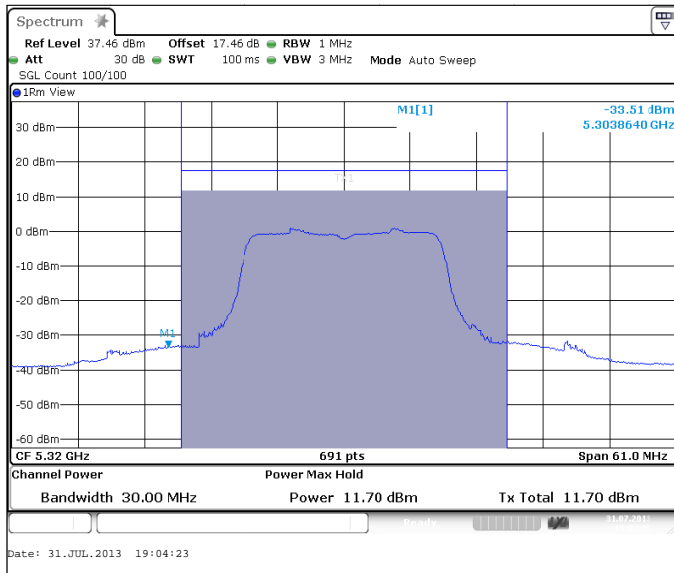
Channel 52 / 5260MHz



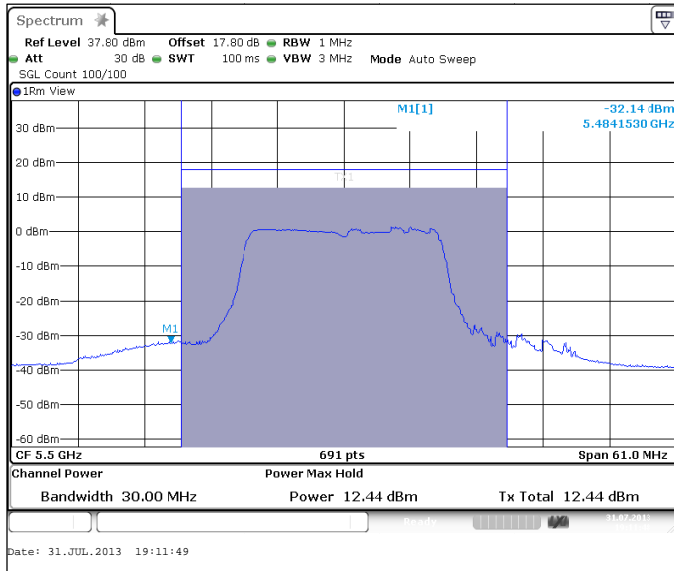
Channel 60 / 5300MHz



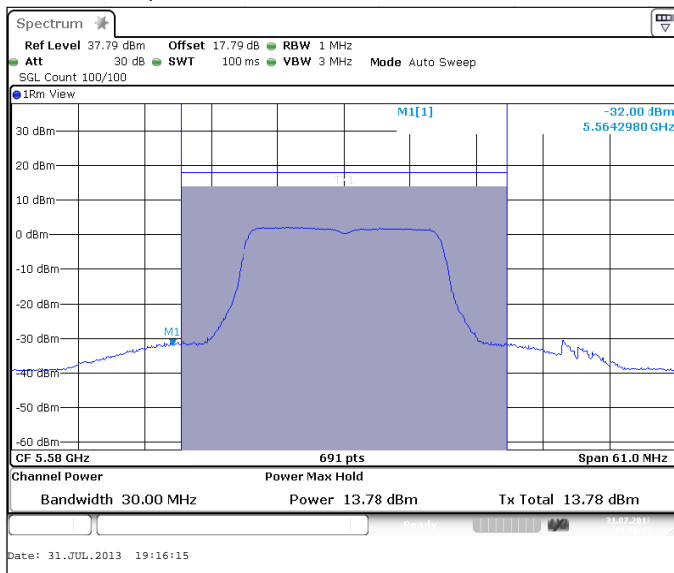
Channel 64 / 5320MHz



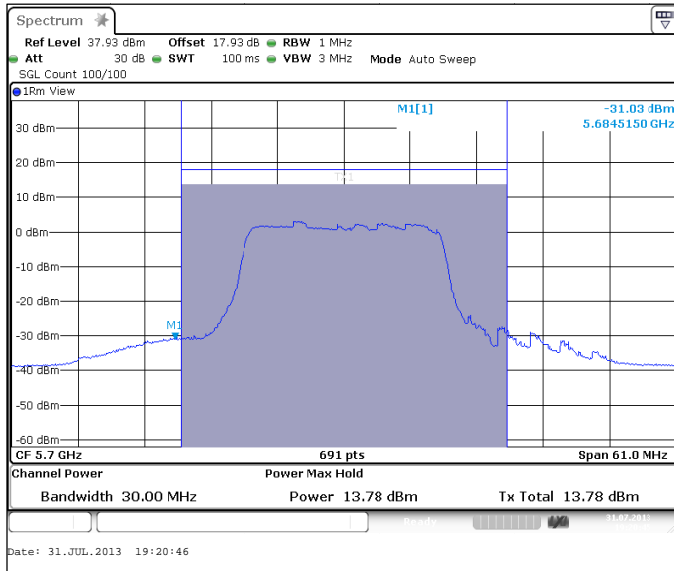
Channel 100 / 5500MHz



Channel 116 / 5580MHz



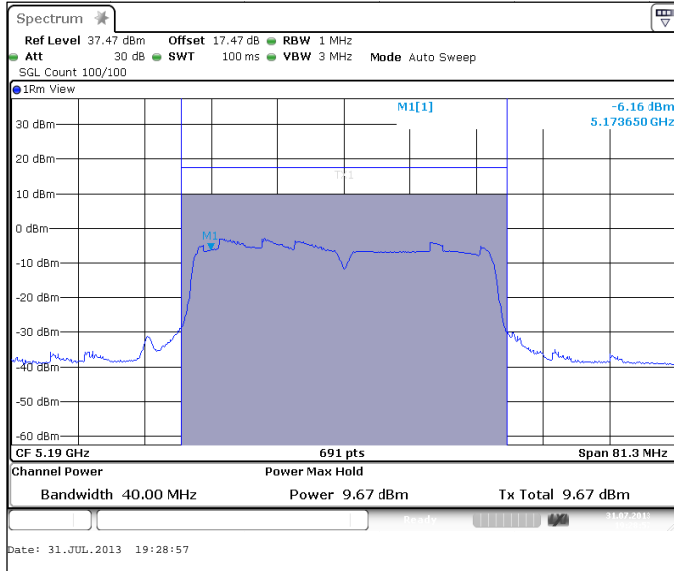
Channel 140 / 5700MHz



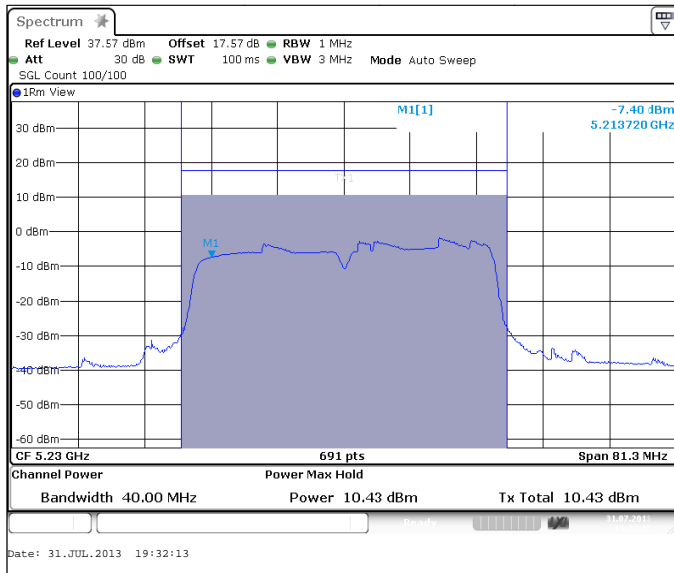
2.4.3 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / f <sub>c</sub> [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190	9.67	9.268	PASSED
44+48 / 5230	10.43	11.041	PASSED
52+56 / 5270	11.21	13.213	PASSED
60+64 / 5310	9.22	8.356	PASSED
100+104 / 5510	9.26	8.433	PASSED
108+112 / 5550	9.23	8.375	PASSED
132+136 / 5670	11.8	15.136	PASSED

Channel 36+40 / 5190MHz

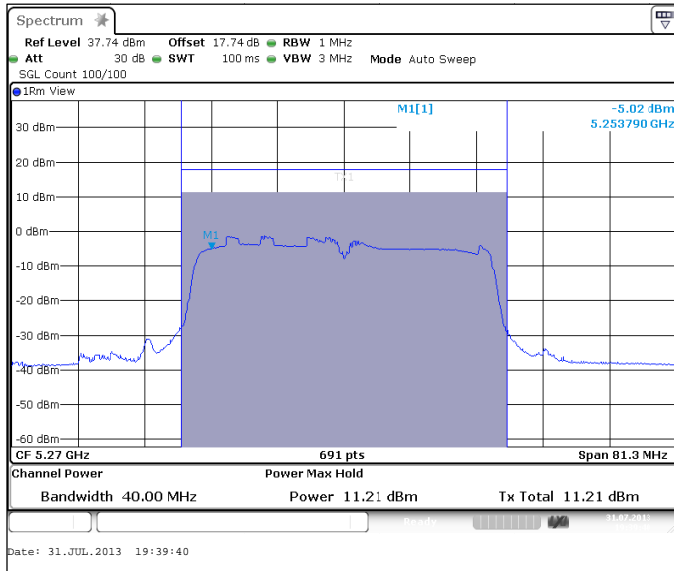


Channel 44+48 / 5230MHz

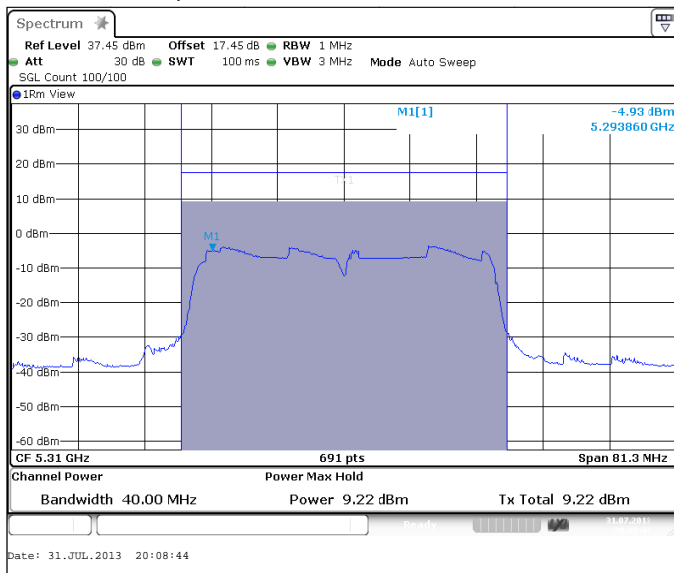




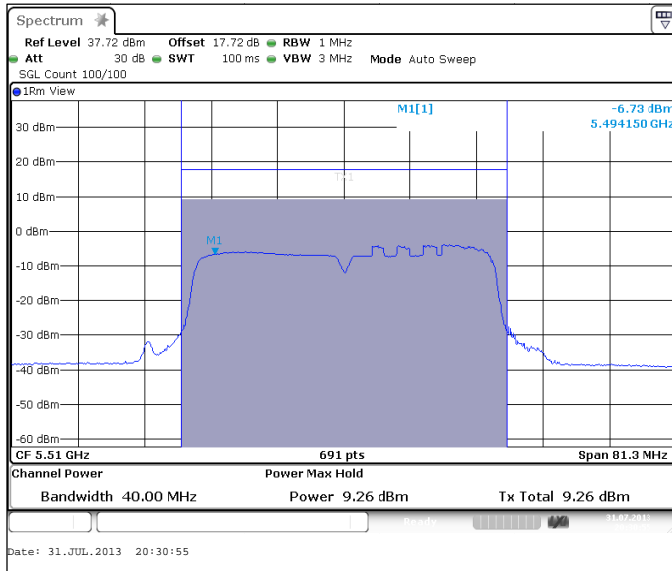
Channel 52+56 / 5270MHz



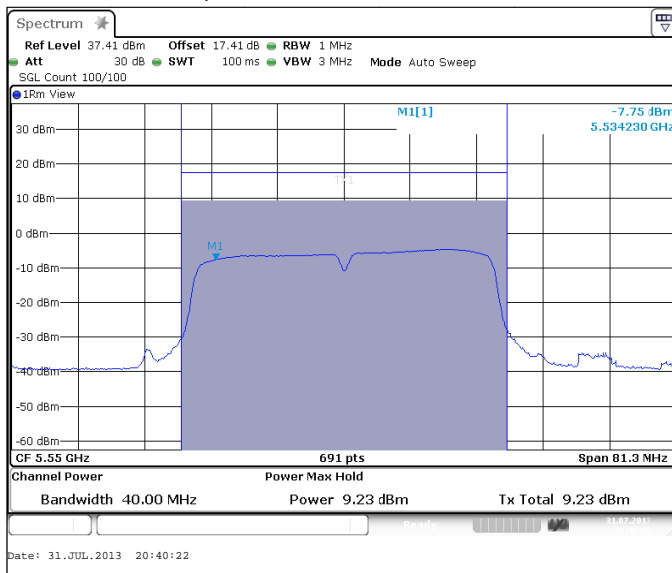
Channel 60+64 / 5310MHz



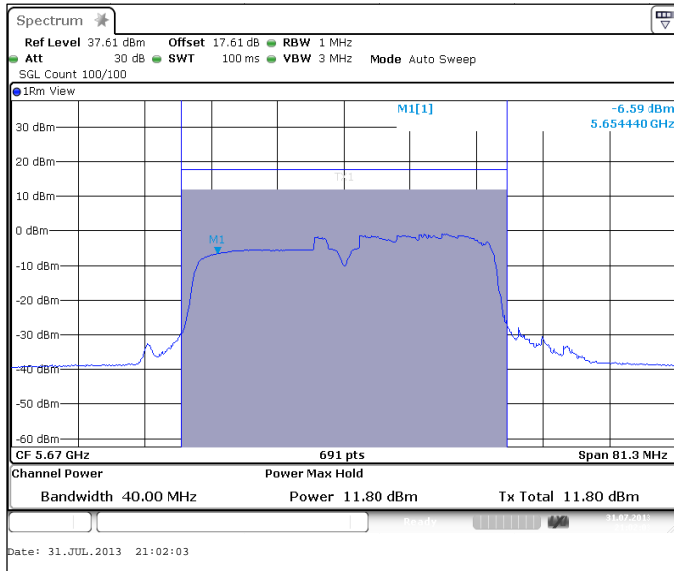
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



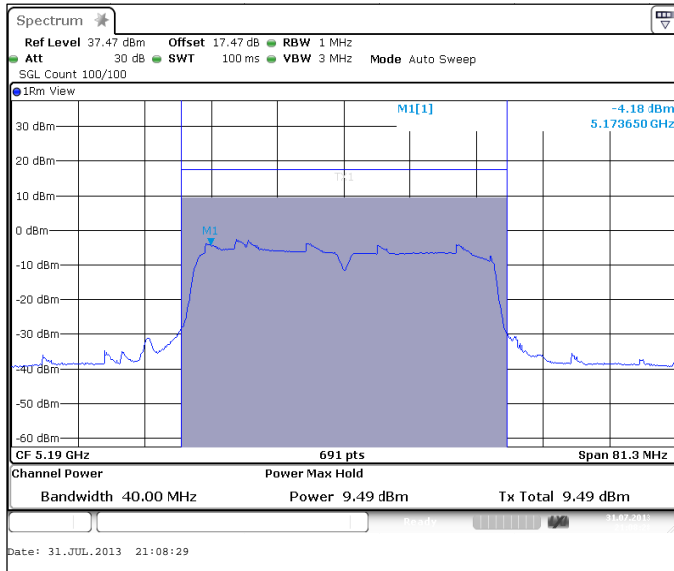
Channel 132+136 / 5670MHz



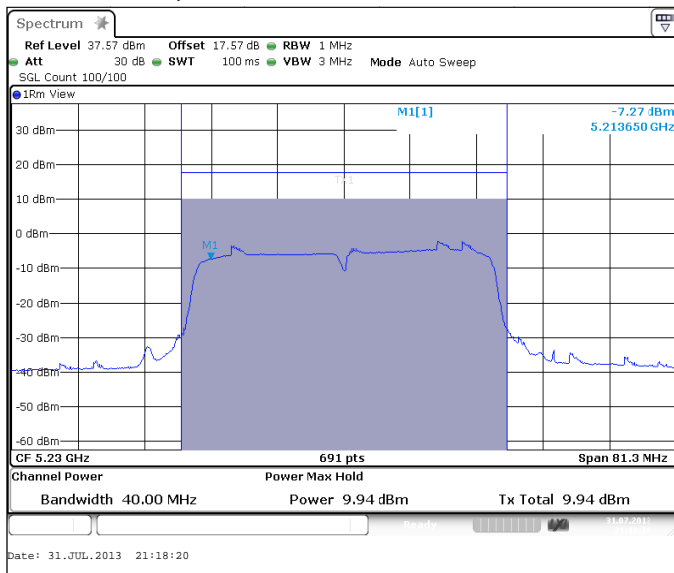
2.4.4 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / f <sub>c</sub> [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190	9.49	8.892	PASSED
44+48 / 5230	9.94	9.863	PASSED
52+56 / 5270	10.94	12.417	PASSED
60+64 / 5310	9.04	8.017	PASSED
100+104 / 5510	8.62	7.278	PASSED
108+112 / 5550	9.34	8.59	PASSED
132+136 / 5670	11.48	14.06	PASSED

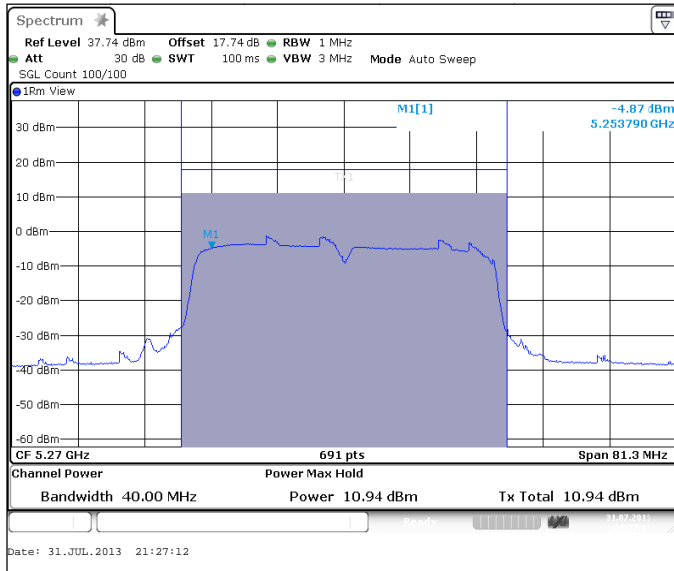
Channel 36+40 / 5190MHz



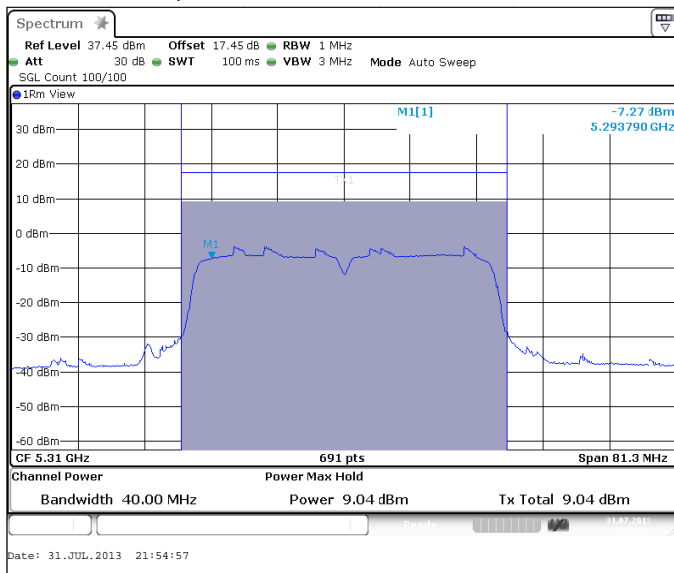
Channel 44+48 / 5230MHz



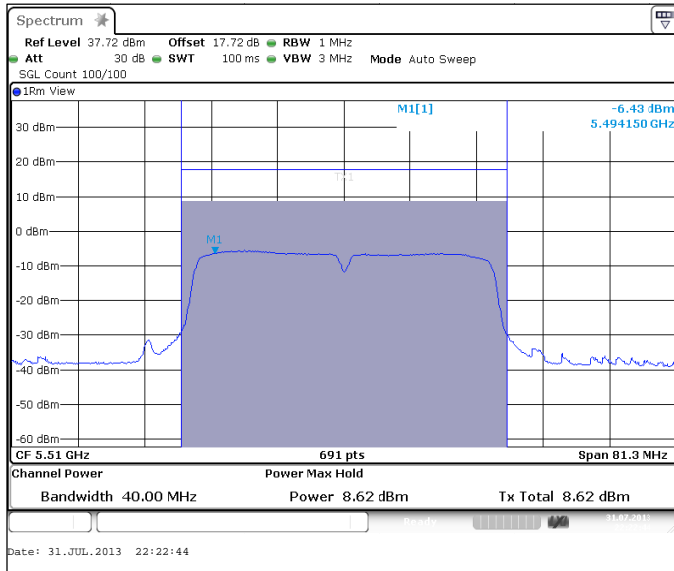
Channel 52+56 / 5270MHz



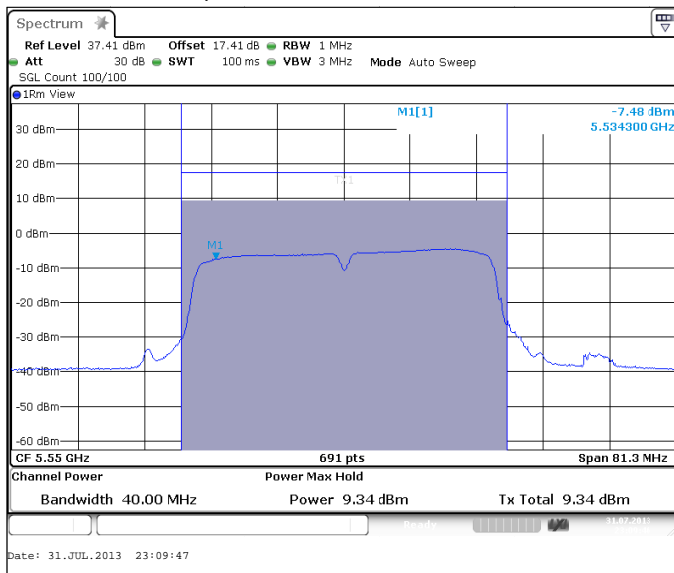
Channel 60+64 / 5310MHz



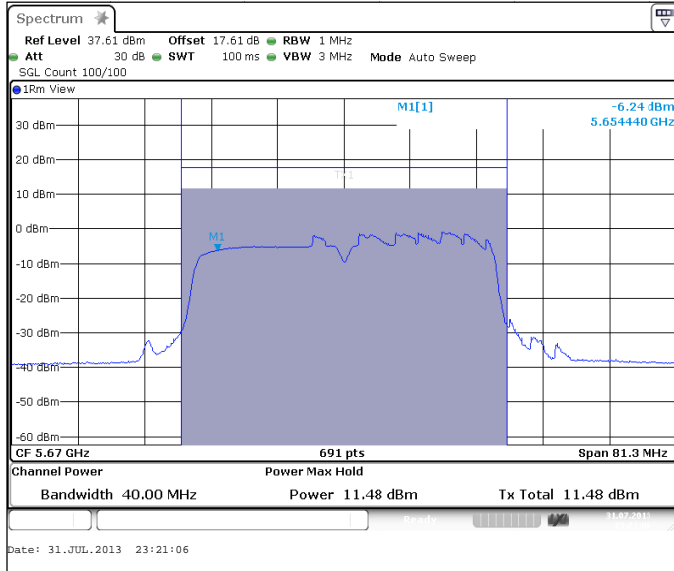
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



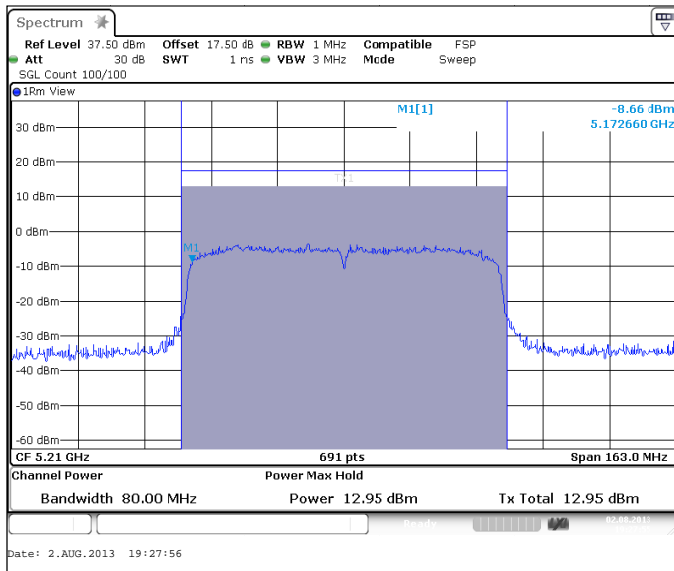
Channel 132+136 / 5670MHz



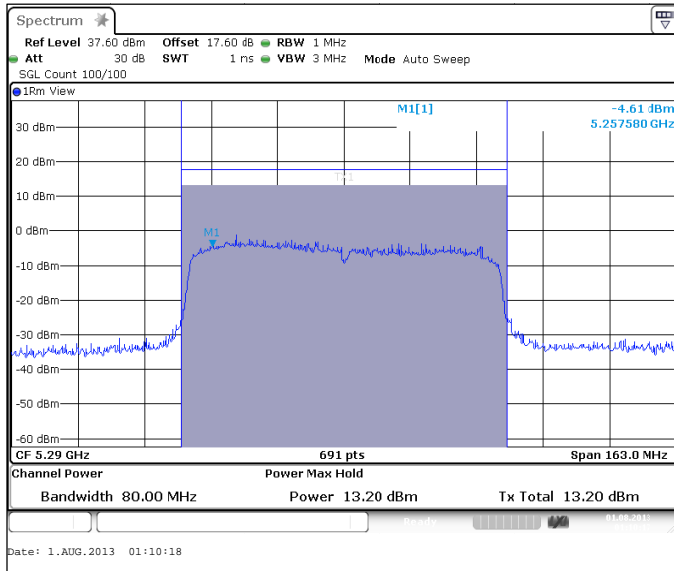
2.4.5 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / f <sub>c</sub> [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210	12.95	19.724	PASSED
52-64 / 5290	13.2	20.893	PASSED
100-112 / 5530	12.75	18.836	PASSED

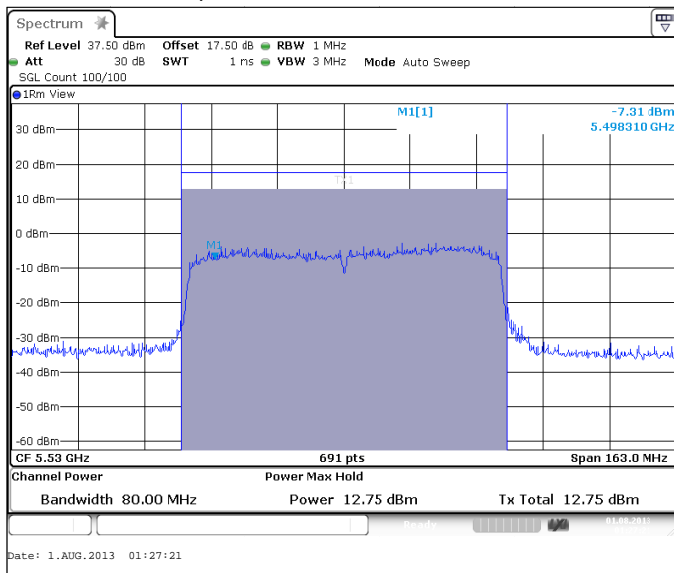
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz

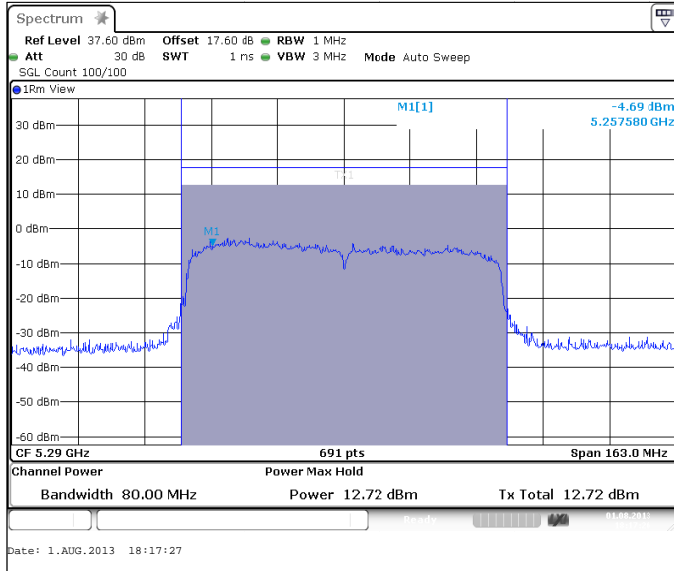




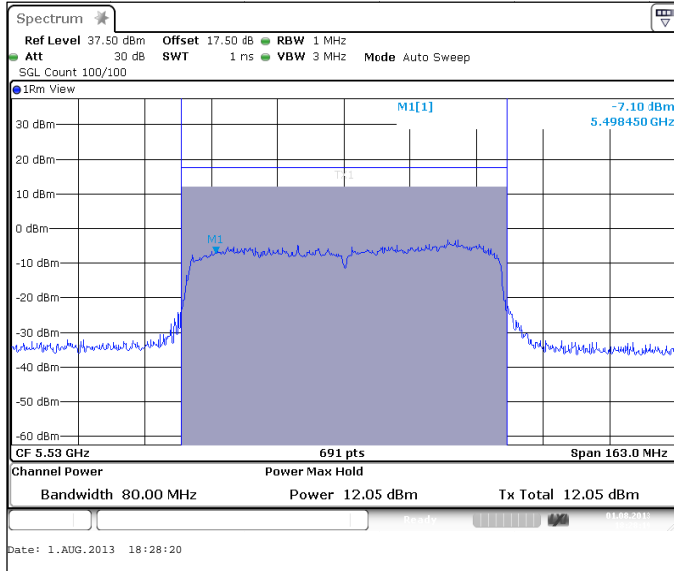
**2.4.6 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate**

Channel / f <sub>c</sub> [MHz]	P [dBm]	P [mW]	Result
52-64 / 5290	12.72	18.707	PASSED
100-112 / 5530	12.05	16.032	PASSED
36-48 / 5210	12.82	19.143	PASSED

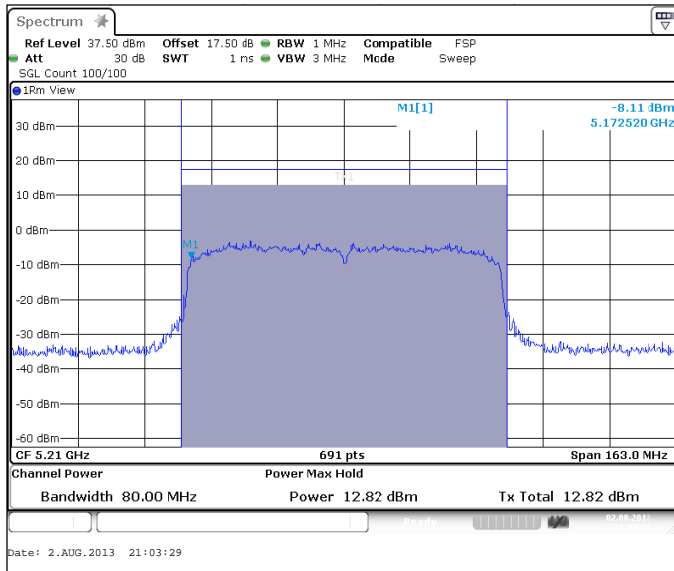
Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz



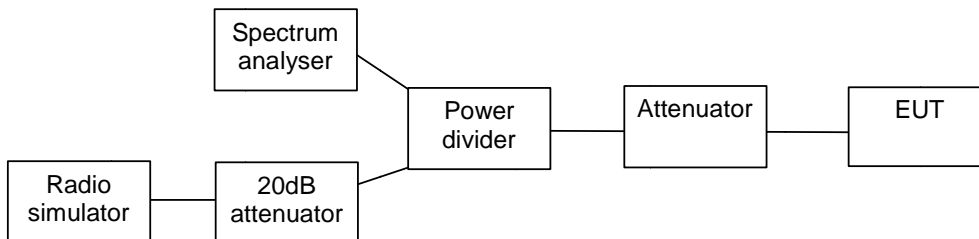
Channel 36-48 / 5210MHz



### 3. Peak excursion (FCC §15.407 (a), RSS-210 A9.2)

EUT with DUT number	RM-927, DUT 30738
Accessories with DUT numbers	SD-217R, DUT 30742
Operation Voltage [V] / [Hz]	3.8V DC
Results	PASSED
Remarks	
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21.3 / 48.6 / 1050
Date of measurements	30-Jul-2013
Measured by	Feng You

#### 3.1. Test Setup



#### 3.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D01 and IC standard RSS-210.

Limits for peak excursion measurements

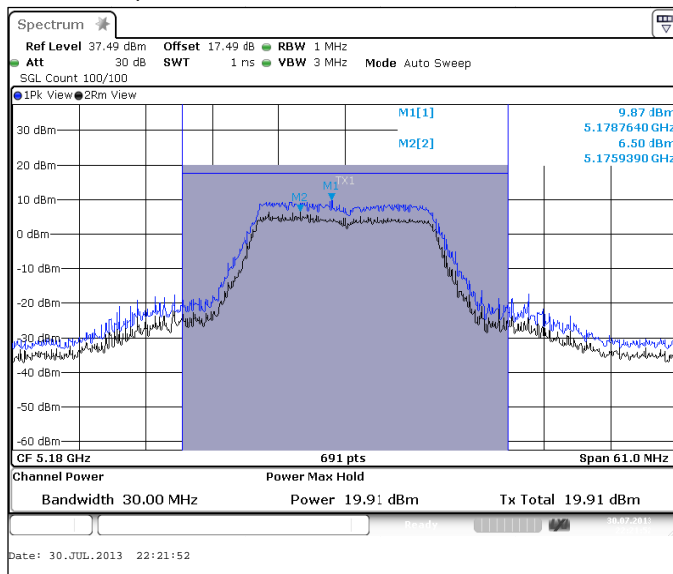
Limit [dB]
<= 13

### 3.3. 5 GHz RLAN Test results

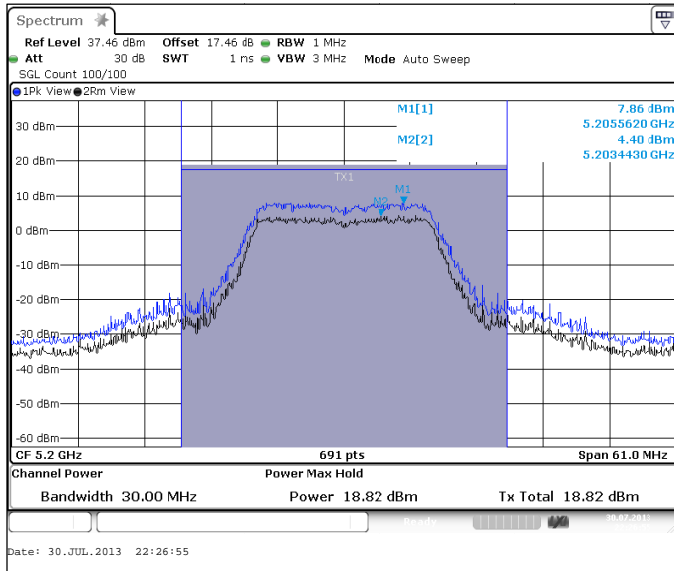
#### 3.3.1 802.11a mode, BPSK modulation, 9 Mbps data rate

Channel / f <sub>c</sub> [MHz]	Peak excursion [dB]	Result
36 / 5180	3.37	PASSED
40 / 5200	3.46	PASSED
48 / 5240	3.92	PASSED
52 / 5260	3.79	PASSED
60 / 5300	2.96	PASSED
64 / 5320	4.18	PASSED
100 / 5500	3.67	PASSED
116 / 5580	3.38	PASSED
140 / 5700	3.64	PASSED

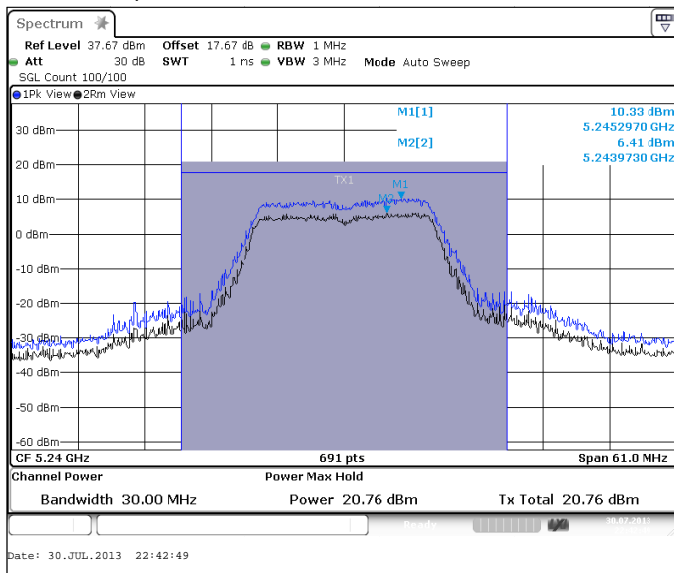
Channel 36 / 5180MHz



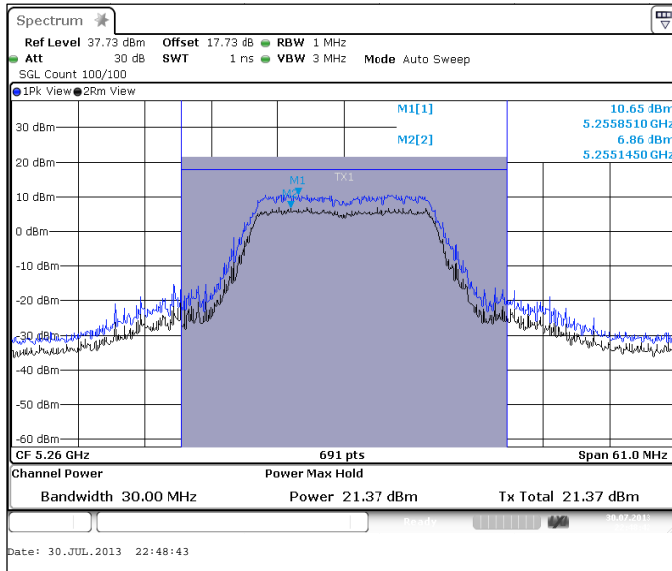
Channel 40 / 5200MHz



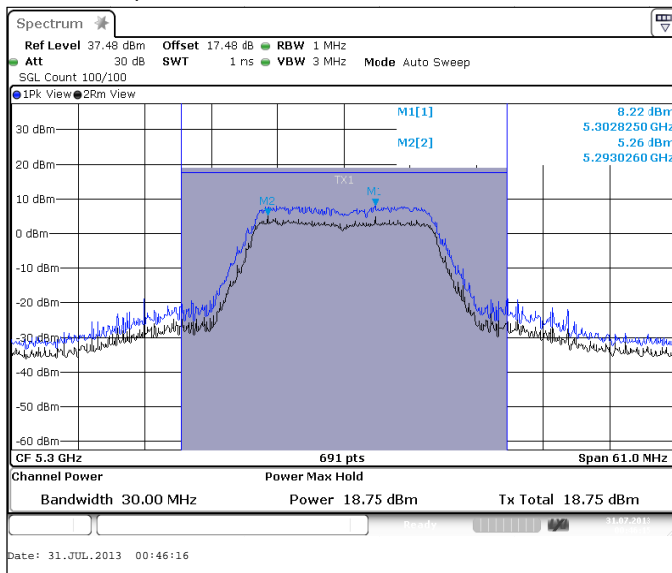
Channel 48 / 5240MHz



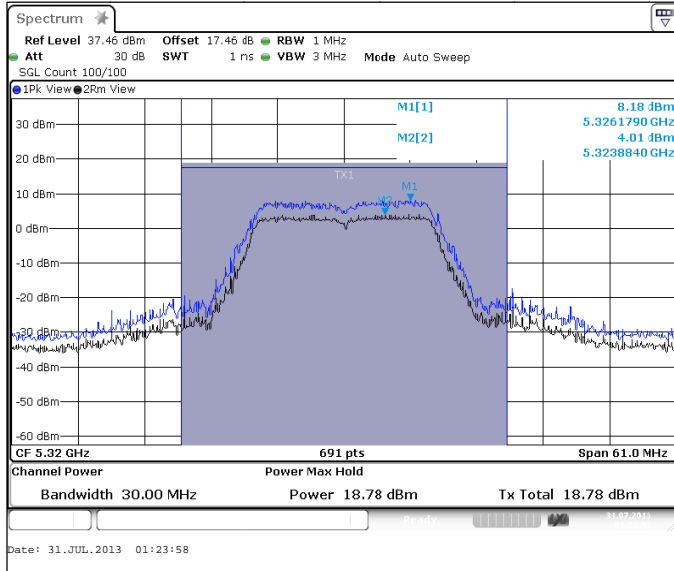
Channel 52 / 5260MHz



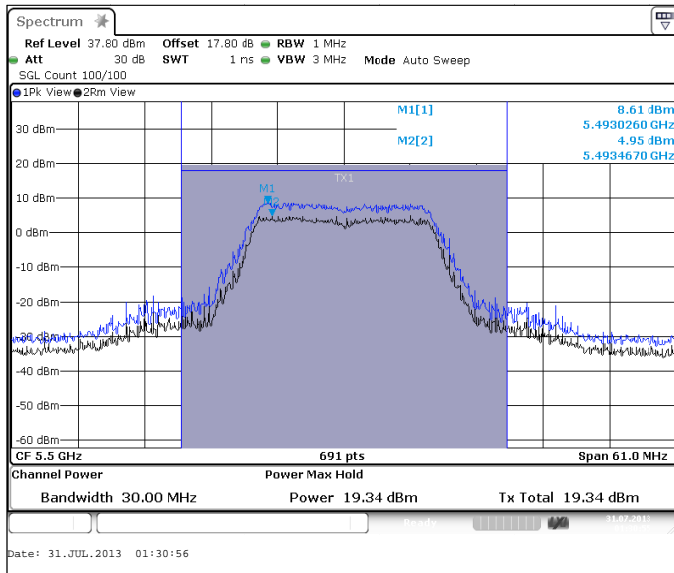
Channel 60 / 5300MHz



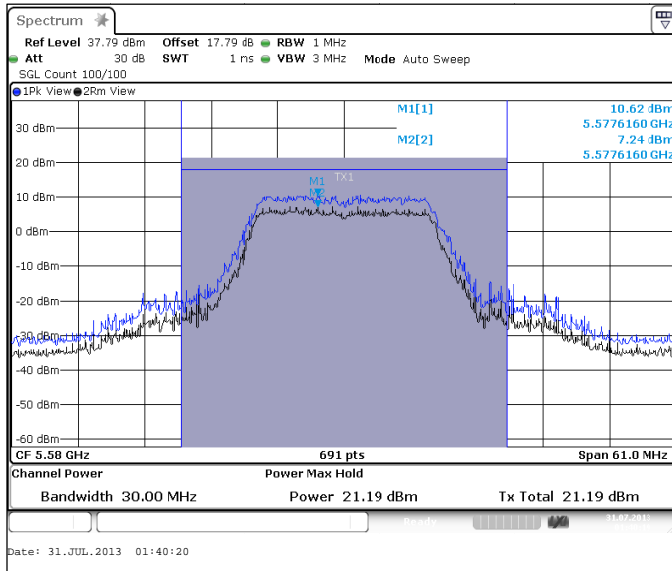
Channel 64 / 5320MHz



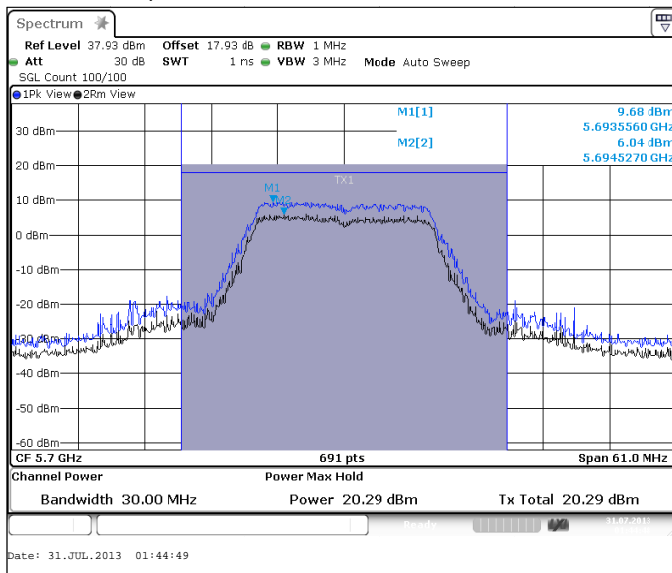
Channel 100 / 5500MHz



Channel 116 / 5580MHz



Channel 140 / 5700MHz



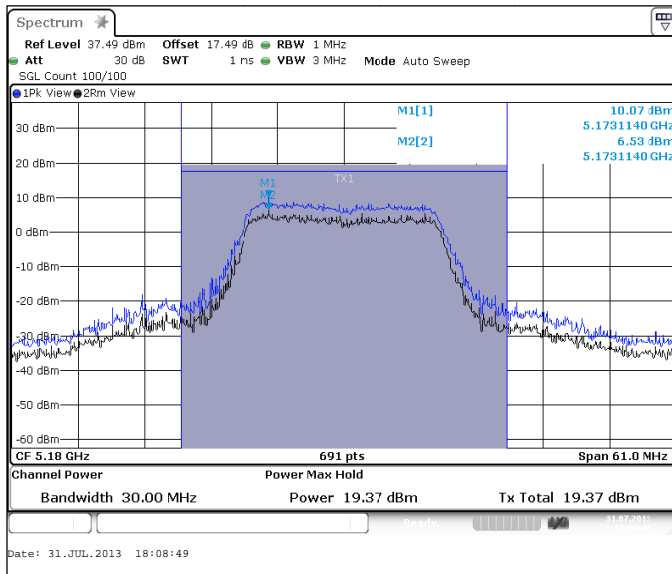
3.3.2 802.11n mode, QPSK modulation, 13.0 / 14.4 Mbps data rate

Channel / f <sub>c</sub> [MHz]	Peak excursion [dB]	Result
36 / 5180	3.54	PASSED
40 / 5200	3.33	PASSED
48 / 5240	4.1	PASSED
52 / 5260	2.8	PASSED

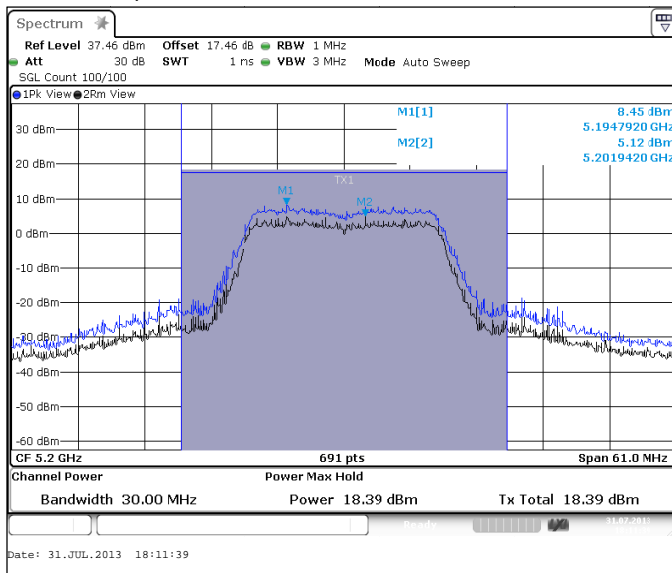


60 / 5300	4.1	PASSED
64 / 5320	3.11	PASSED
100 / 5500	3.29	PASSED
116 / 5580	3.48	PASSED
140 / 5700	3.57	PASSED

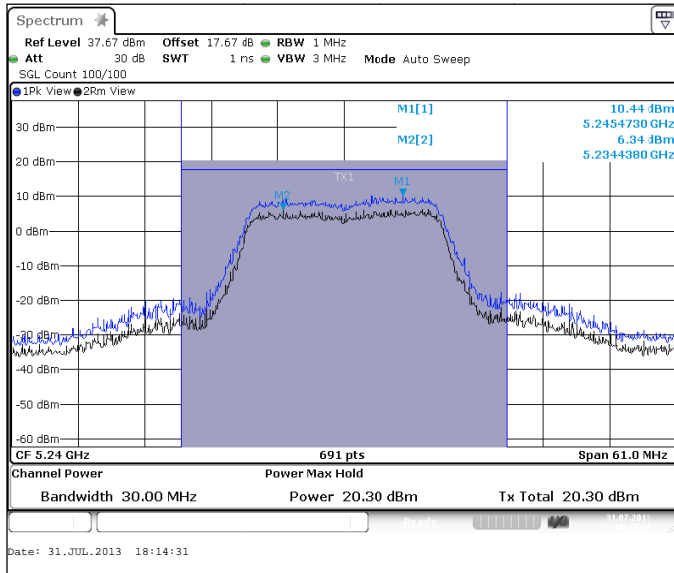
Channel 36 / 5180MHz



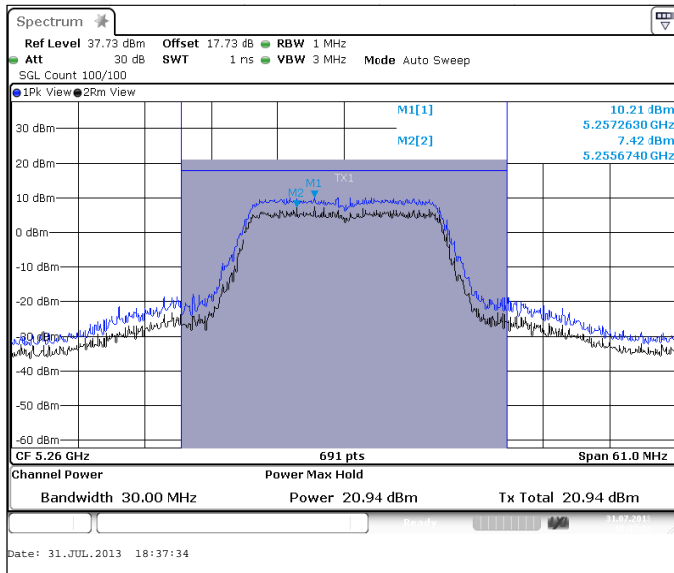
Channel 40 / 5200MHz



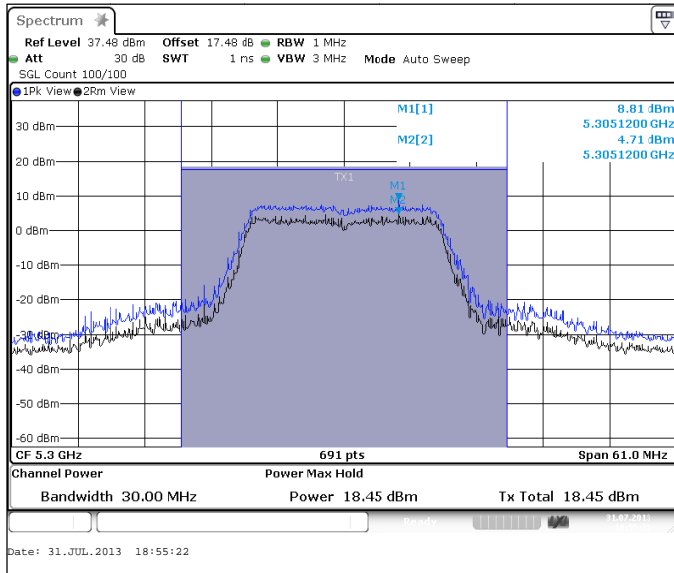
Channel 48 / 5240MHz



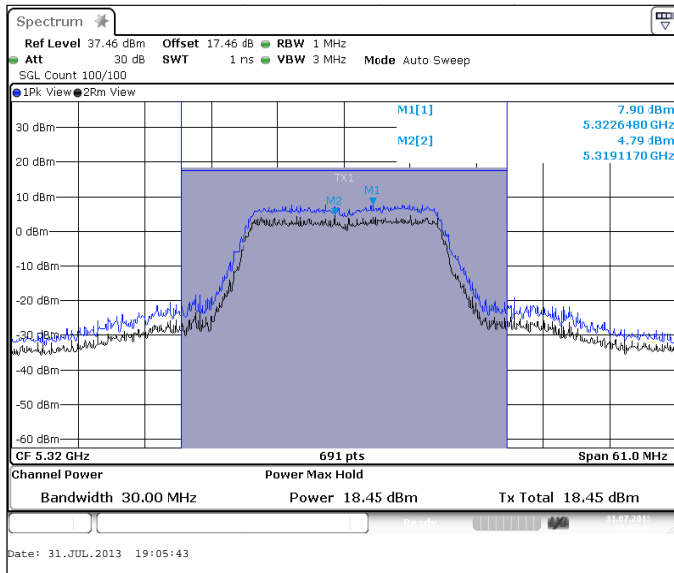
Channel 52 / 5260MHz



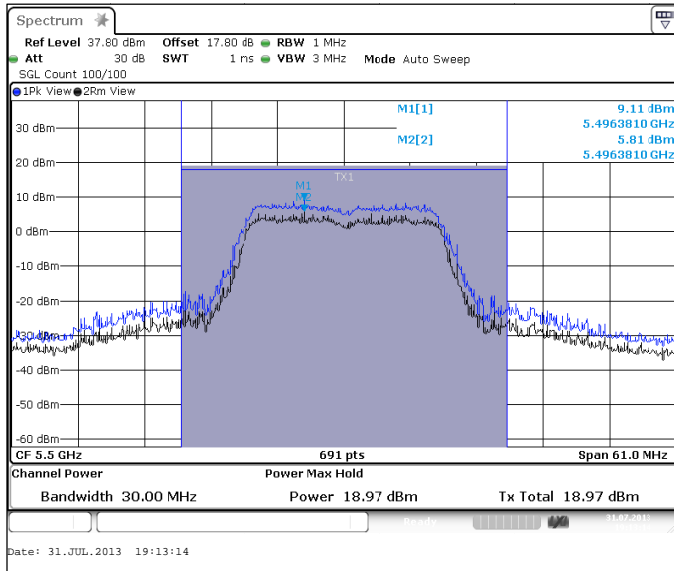
Channel 60 / 5300MHz



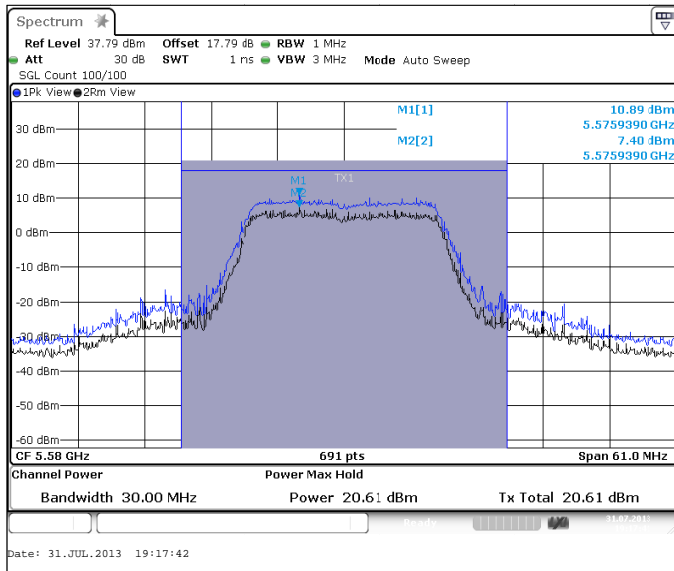
Channel 64 / 5320MHz



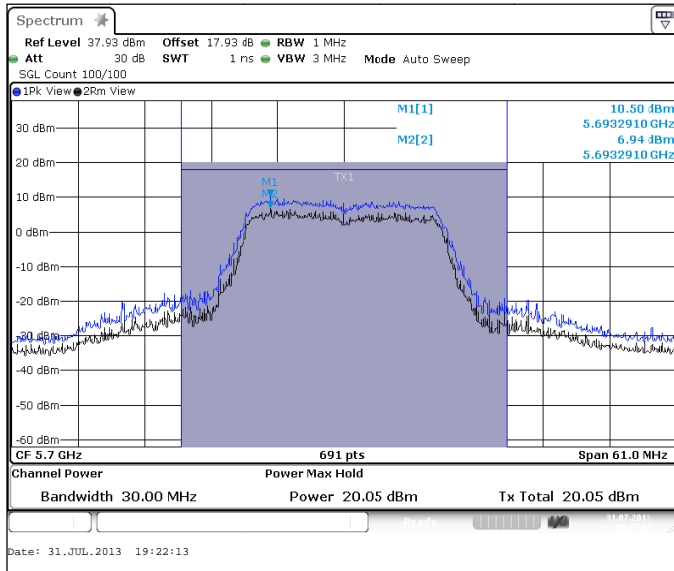
Channel 100 / 5500MHz



Channel 116 / 5580MHz



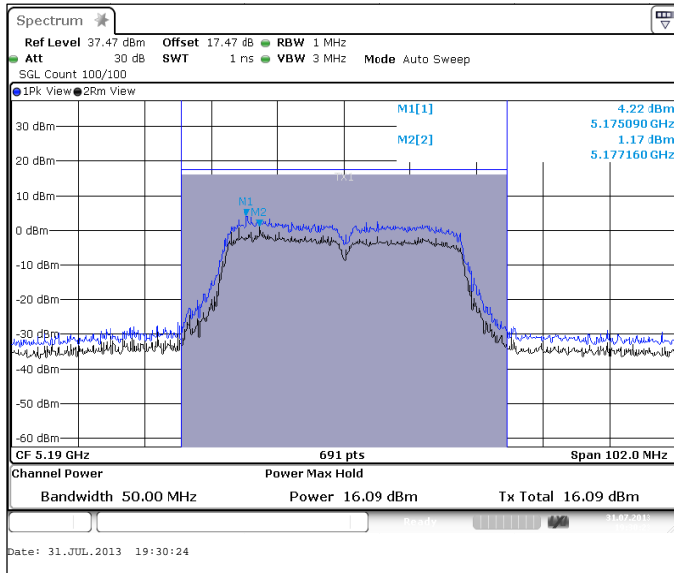
Channel 140 / 5700MHz



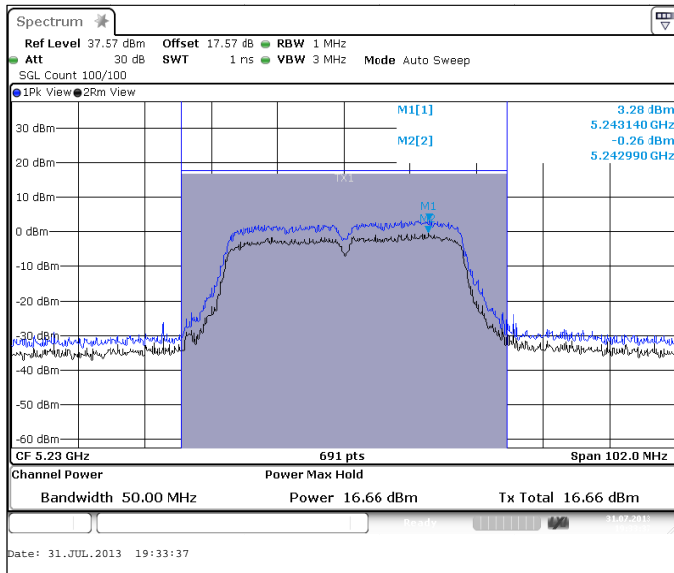
3.3.3 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / $f_c$ [MHz]	Peak excursion [dB]	Result
36+40 / 5190	3.05	PASSED
44+48 / 5230	3.54	PASSED
52+56 / 5270	3.92	PASSED
60+64 / 5310	3.13	PASSED
100+104 / 5510	3.6	PASSED
108+112 / 5550	4.29	PASSED
132+136 / 5670	3.01	PASSED

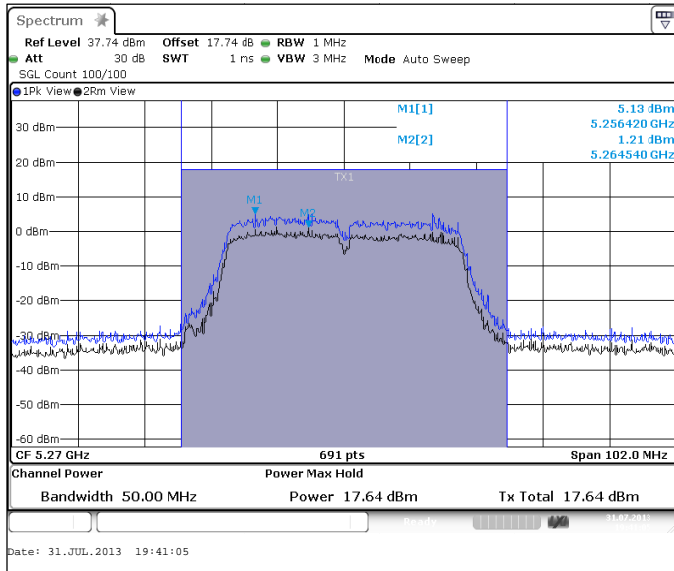
Channel 36+40 / 5190MHz



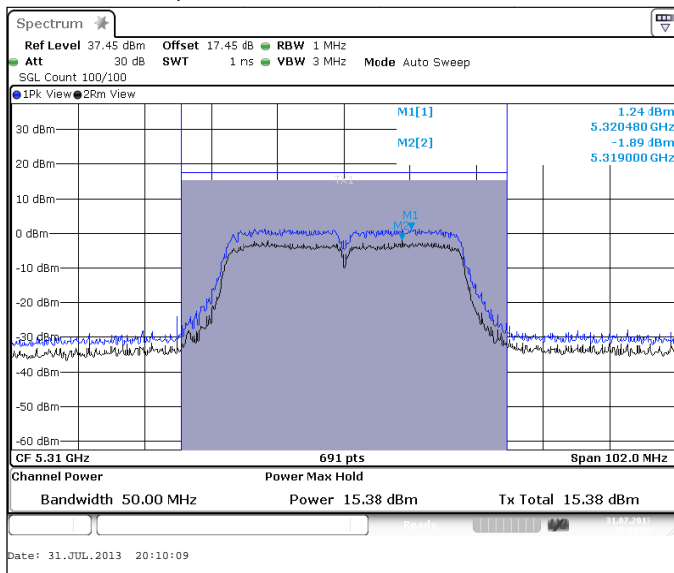
Channel 44+48 / 5230MHz



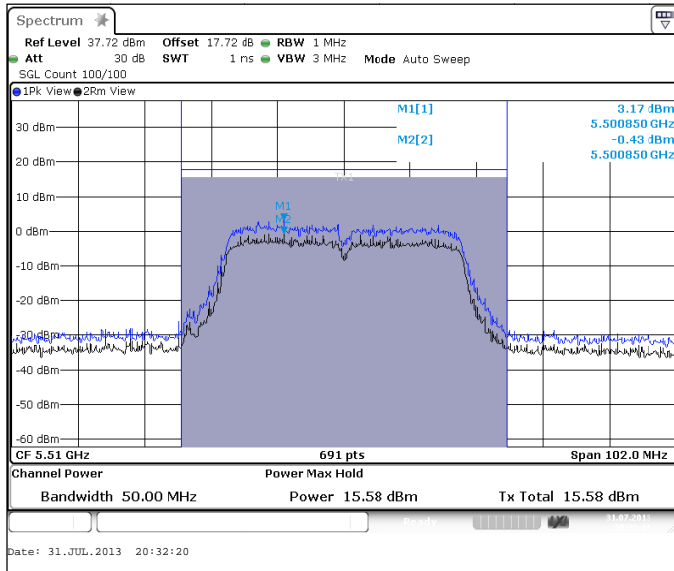
Channel 52+56 / 5270MHz



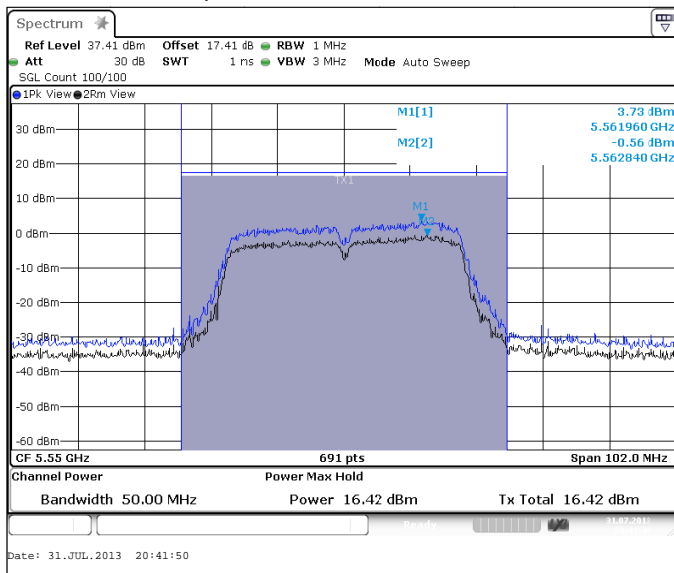
Channel 60+64 / 5310MHz



Channel 100+104 / 5510MHz

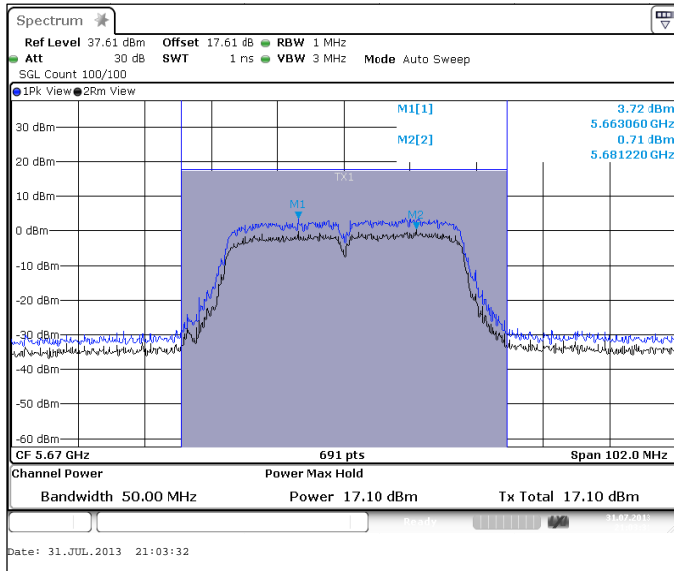


Channel 108+112 / 5550MHz





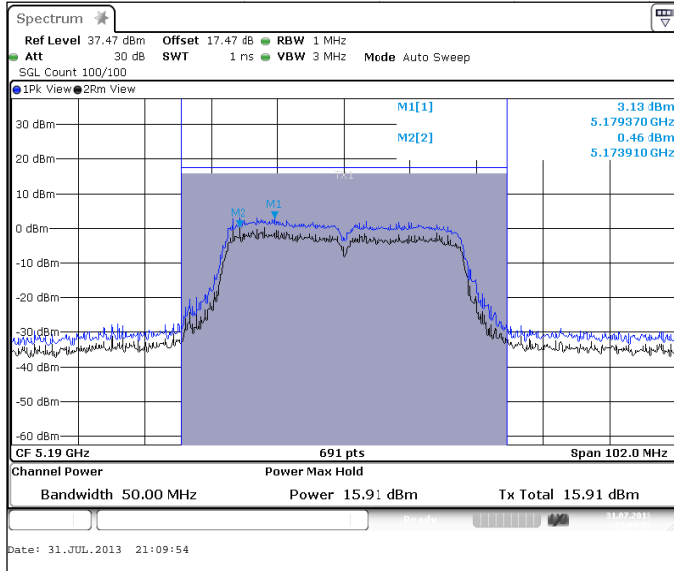
Channel 132+136 / 5670MHz



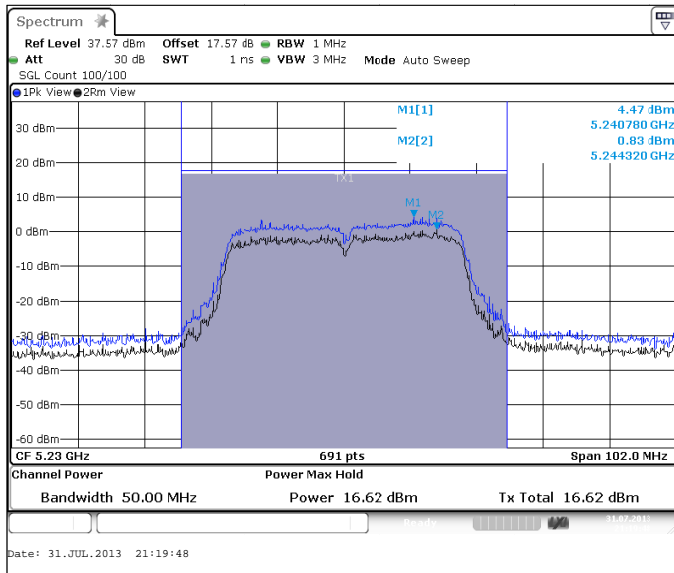
3.3.4 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / f <sub>c</sub> [MHz]	Peak excursion [dB]	Result
36+40 / 5190	2.67	PASSED
44+48 / 5230	3.64	PASSED
52+56 / 5270	2.33	PASSED
60+64 / 5310	3.59	PASSED
100+104 / 5510	4.16	PASSED
108+112 / 5550	3.91	PASSED
132+136 / 5670	2.88	PASSED

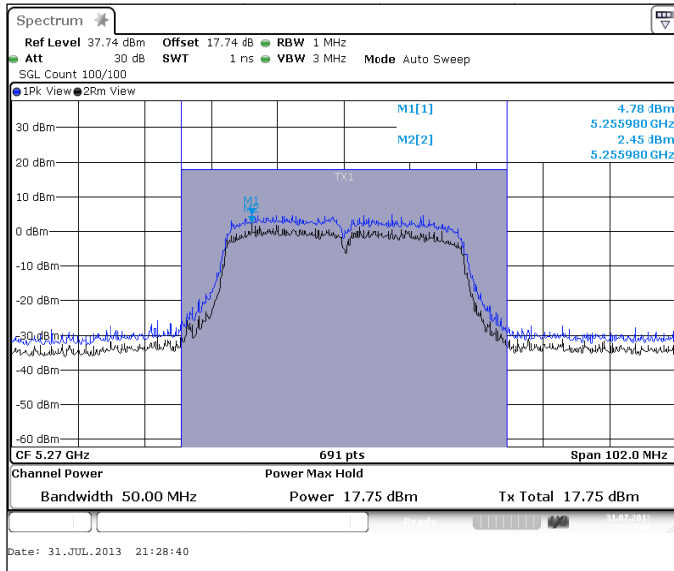
Channel 36+40 / 5190MHz



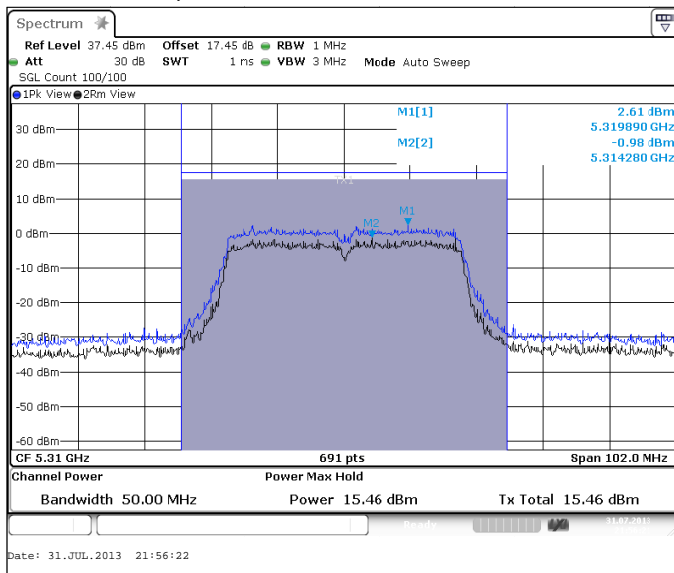
Channel 44+48 / 5230MHz



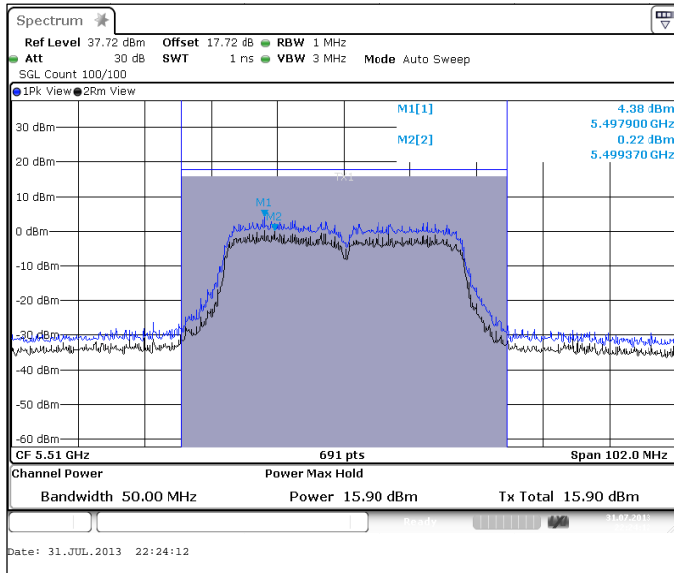
Channel 52+56 / 5270MHz



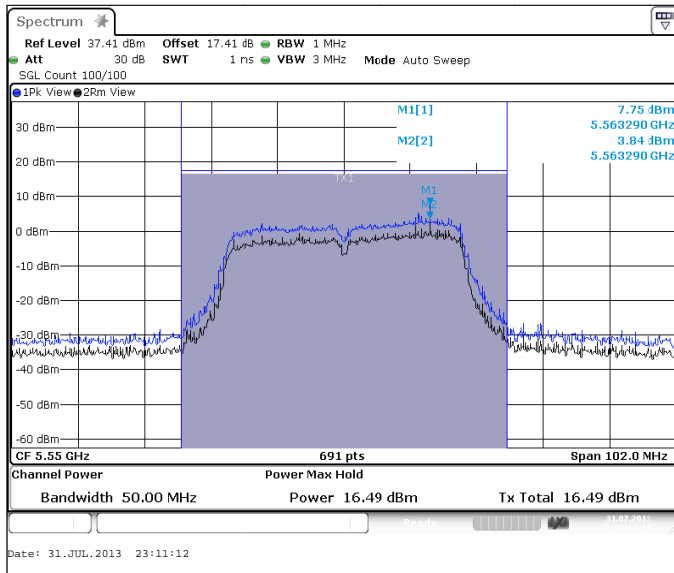
Channel 60+64 / 5310MHz



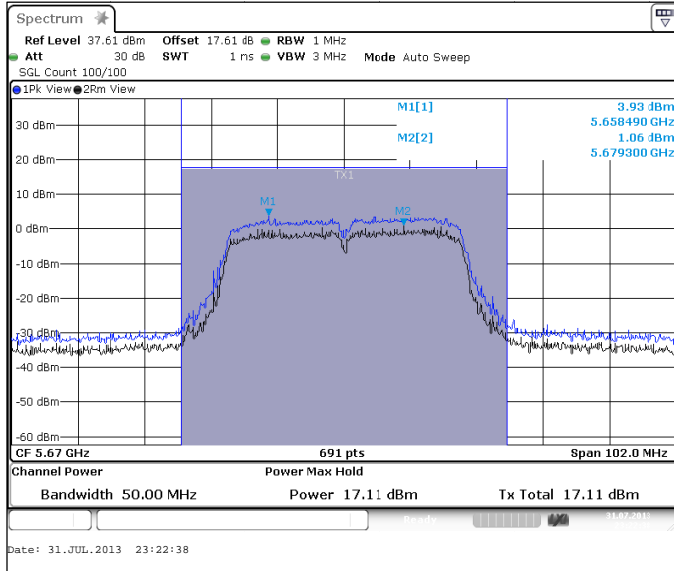
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



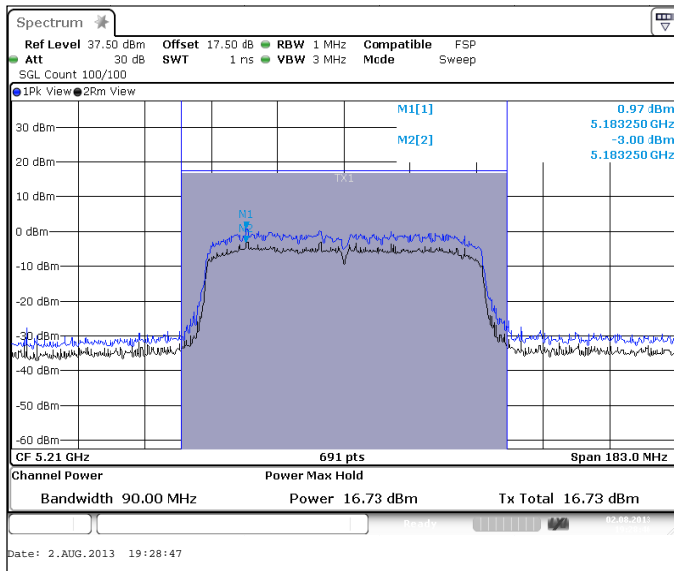
Channel 132+136 / 5670MHz



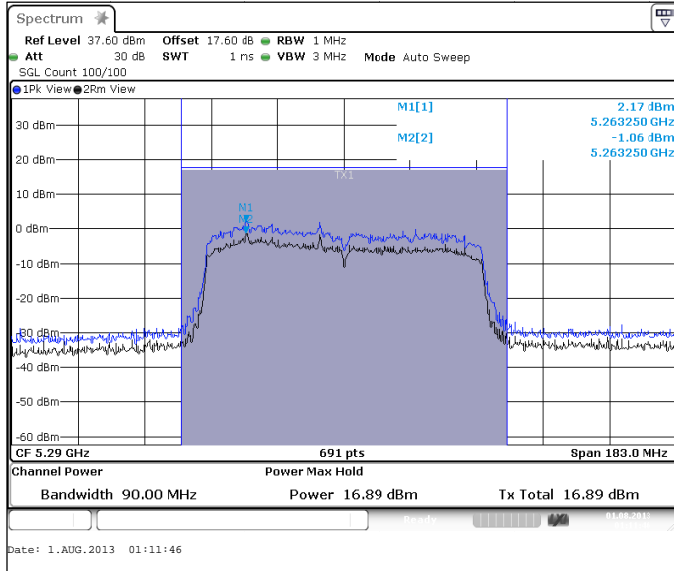
3.3.5 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / $f_c$ [MHz]	Peak excursion [dB]	Result
36-48 / 5210	3.97	PASSED
52-64 / 5290	3.23	PASSED
100-112 / 5530	4.26	PASSED

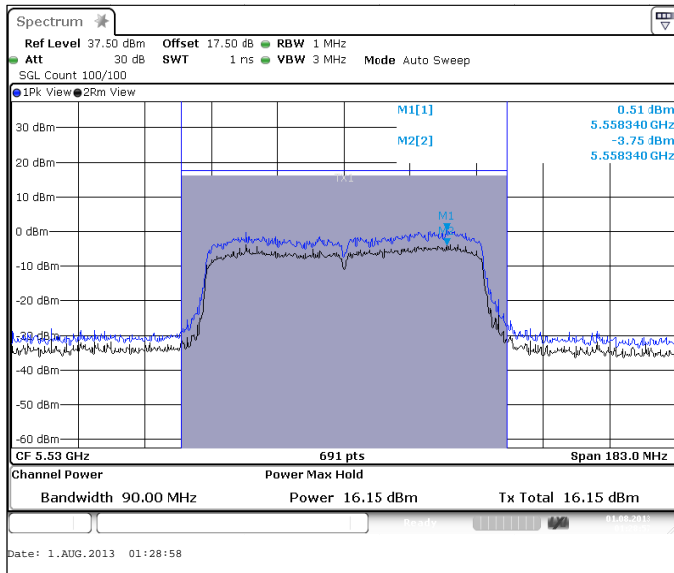
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



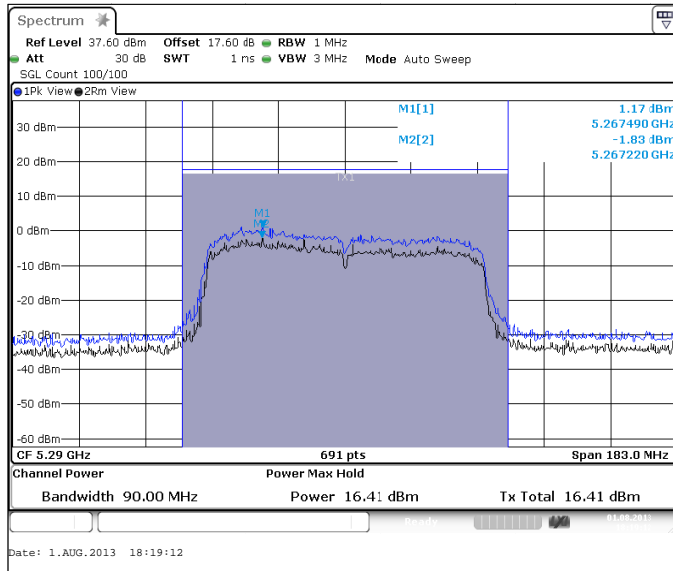
Channel 100-112 / 5530MHz



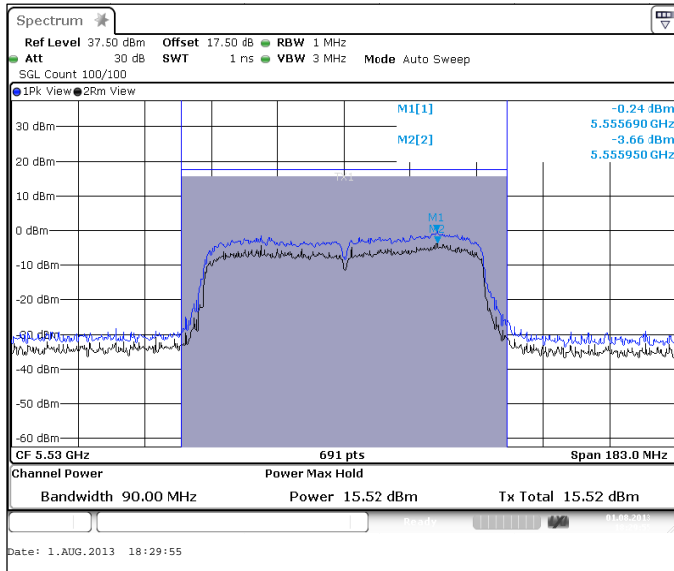
**3.3.6 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate**

Channel / f <sub>c</sub> [MHz]	Peak excursion [dB]	Result
52-64 / 5290	3	PASSED
100-112 / 5530	3.42	PASSED
36-48 / 5210	2.43	PASSED

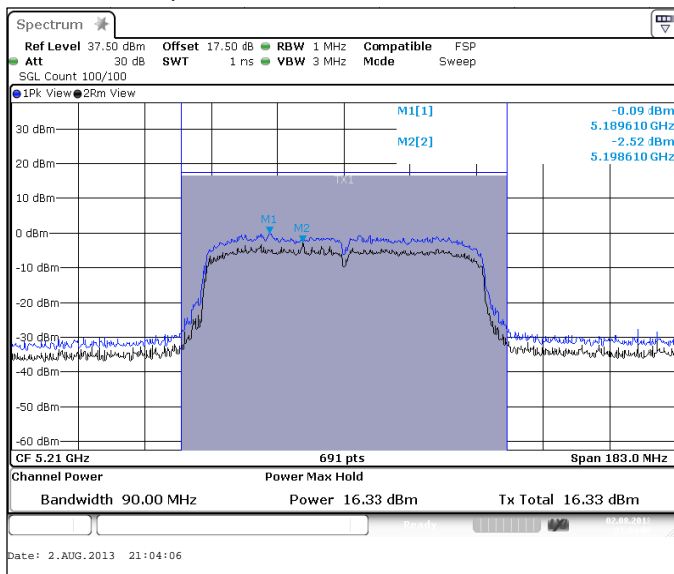
Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz



Channel 36-48 / 5210MHz

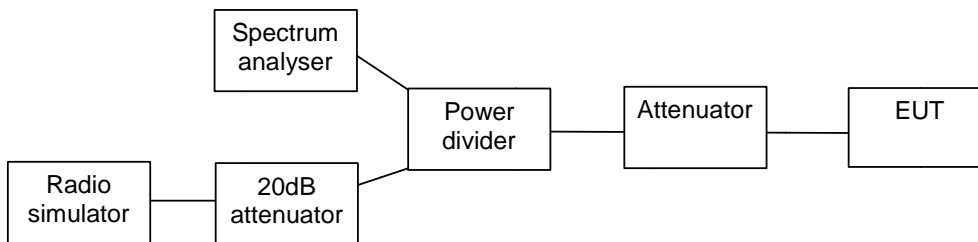




#### 4. 26 dB bandwidth

EUT with DUT number	RM-927, DUT 30738
Accessories with DUT numbers	SD-217R, DUT 30742
Operation Voltage [V] / [Hz]	3.8V DC
Results	PASSED
Remarks	
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21.3 / 48.6 / 1050
Date of measurements	30-Jul-2013
Measured by	Feng You

##### 4.1. Test Setup



##### 4.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D01 and IC standard RSS-210.

Limits for 26 dB bandwidth measurements

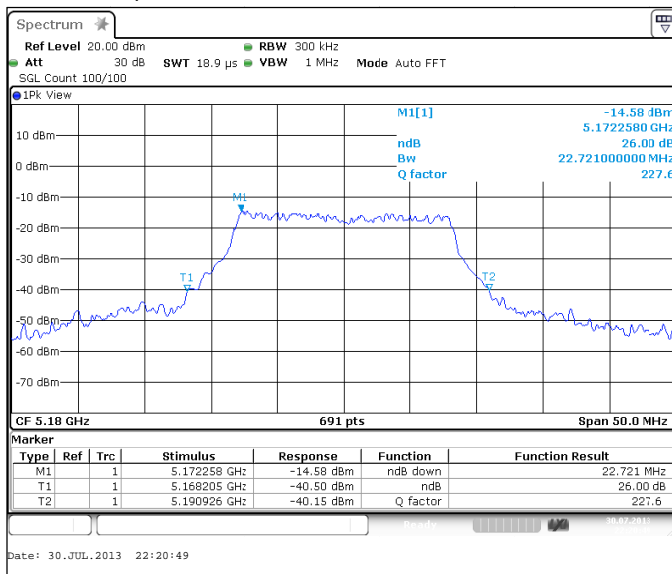
Limit [kHz]
No limit

### 4.3. 5 GHz RLAN Test results

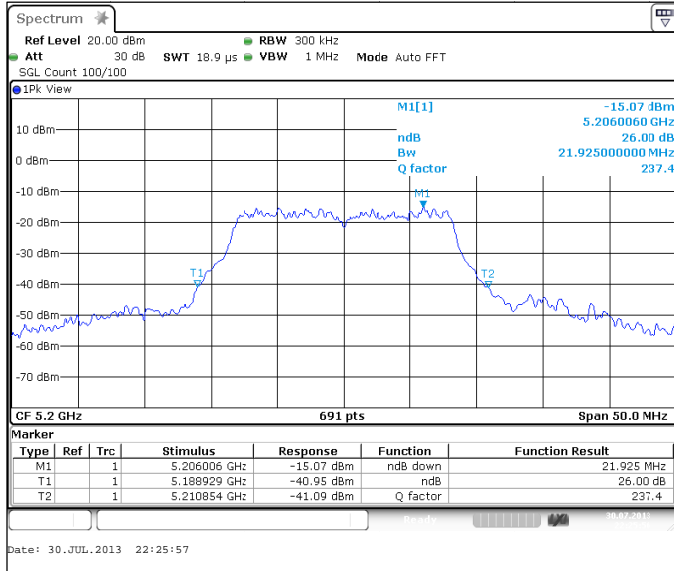
#### 4.3.1 802.11a mode, BPSK modulation, 9 Mbps data rate

Channel / f <sub>c</sub> [MHz]	26 dB bandwidth [kHz]	Result
36 / 5180	22721	PASSED
40 / 5200	21925	PASSED
48 / 5240	21925	PASSED
52 / 5260	21129	PASSED
60 / 5300	21274	PASSED
64 / 5320	21708	PASSED
100 / 5500	22142	PASSED
116 / 5580	21563	PASSED
140 / 5700	21563	PASSED

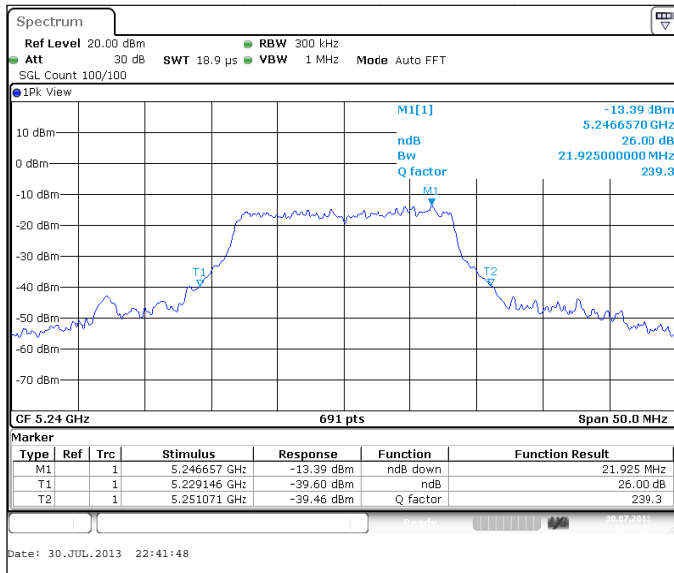
#### Channel 36 / 5180MHz



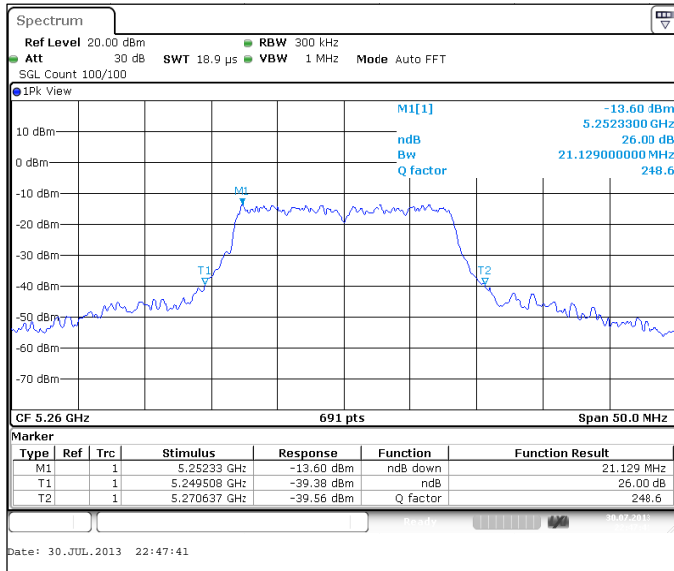
Channel 40 / 5200MHz



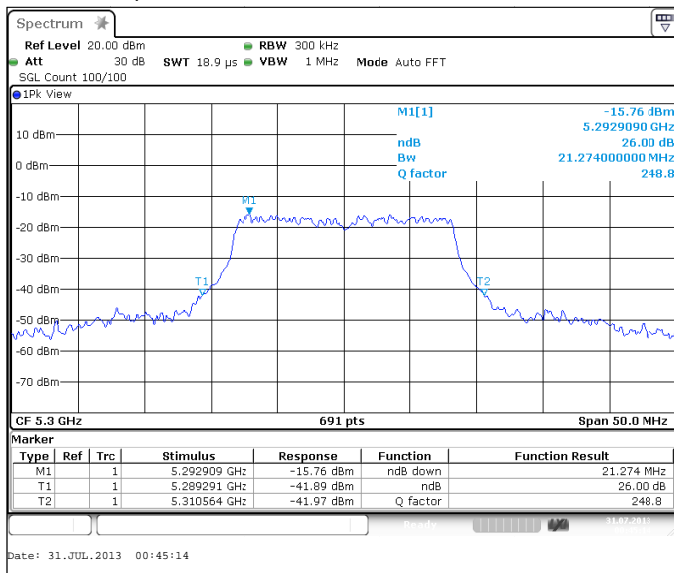
Channel 48 / 5240MHz



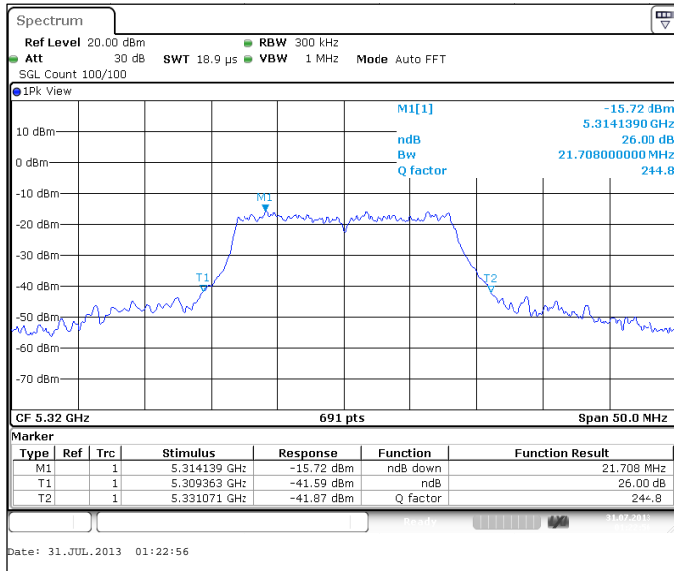
Channel 52 / 5260MHz



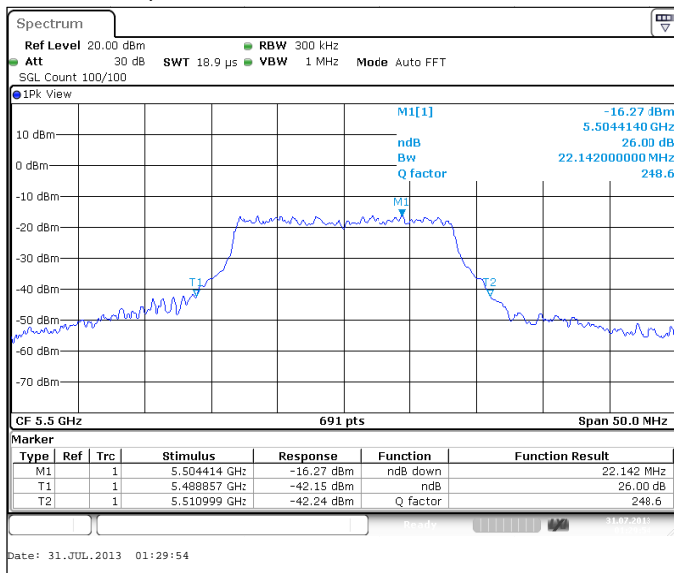
Channel 60 / 5300MHz



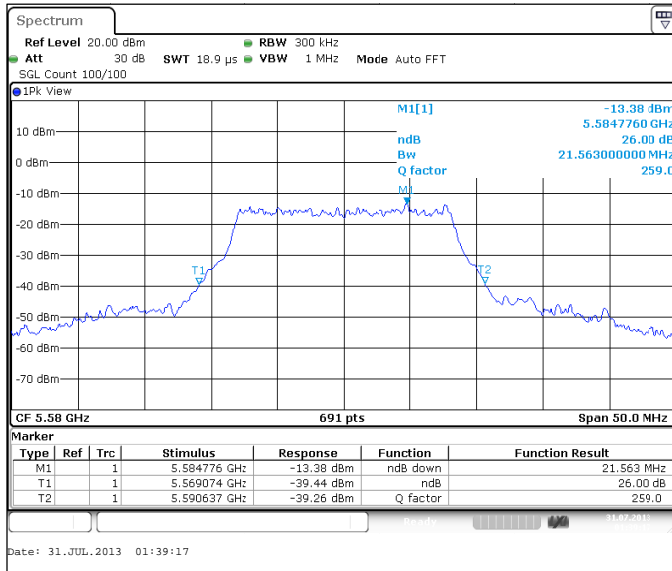
Channel 64 / 5320MHz



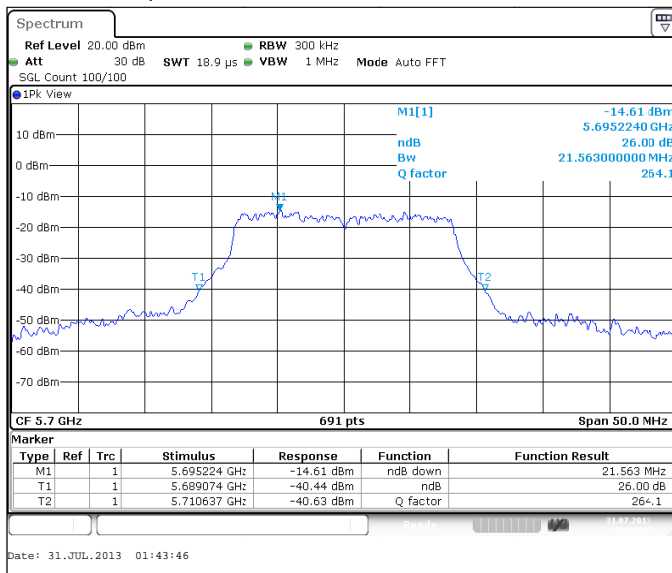
Channel 100 / 5500MHz



Channel 116 / 5580MHz



Channel 140 / 5700MHz

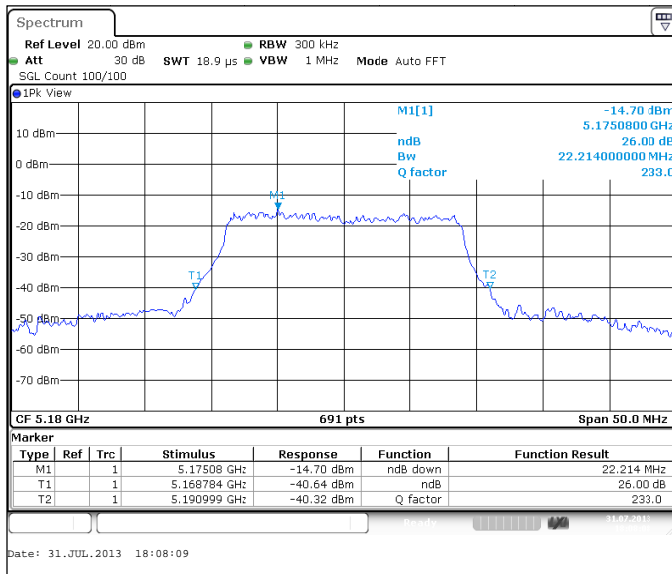


4.3.2 802.11n mode, QPSK modulation, 13.0 / 14.4 Mbps data rate

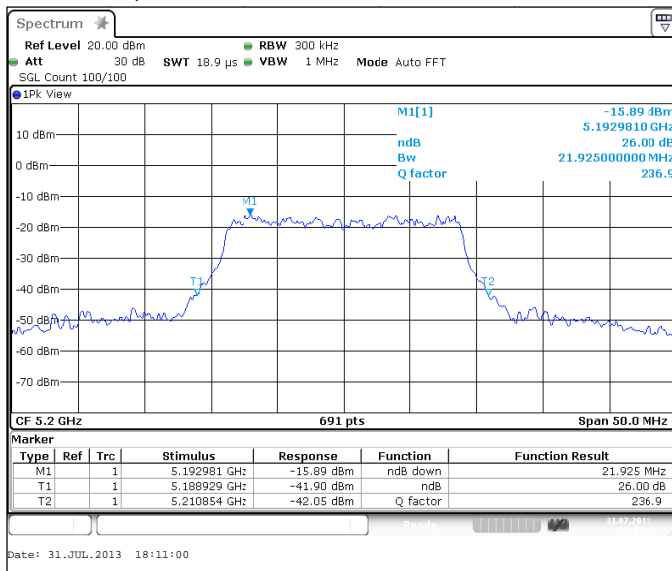
Channel / f <sub>c</sub> [MHz]	26 dB bandwidth [kHz]	Result
36 / 5180	22214	PASSED
40 / 5200	21925	PASSED
48 / 5240	21925	PASSED
52 / 5260	21852	PASSED

60 / 5300	21780	PASSED
64 / 5320	22142	PASSED
100 / 5500	21925	PASSED
116 / 5580	21780	PASSED
140 / 5700	21635	PASSED

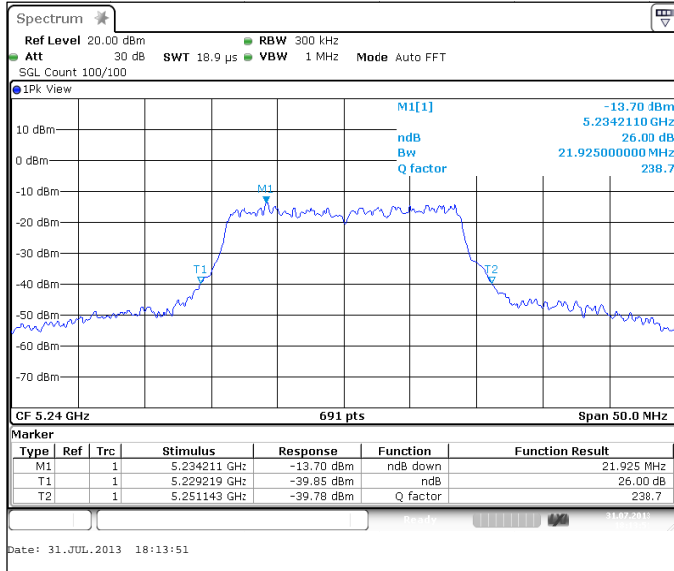
Channel 36 / 5180MHz



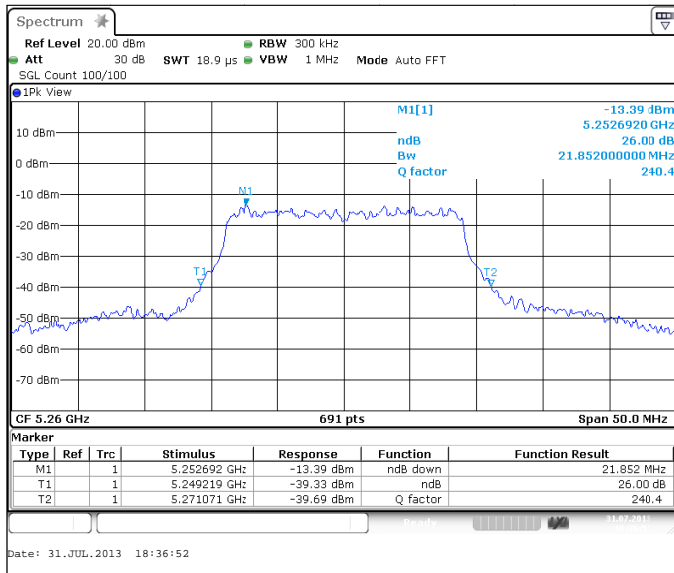
Channel 40 / 5200MHz



Channel 48 / 5240MHz

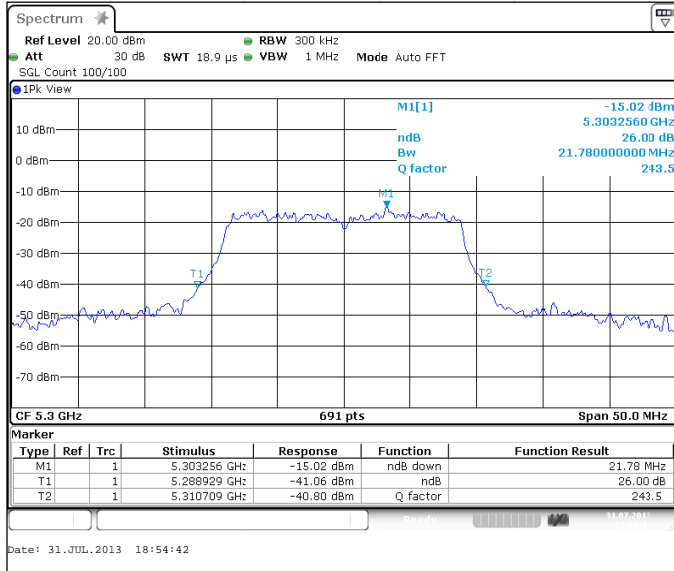


Channel 52 / 5260MHz

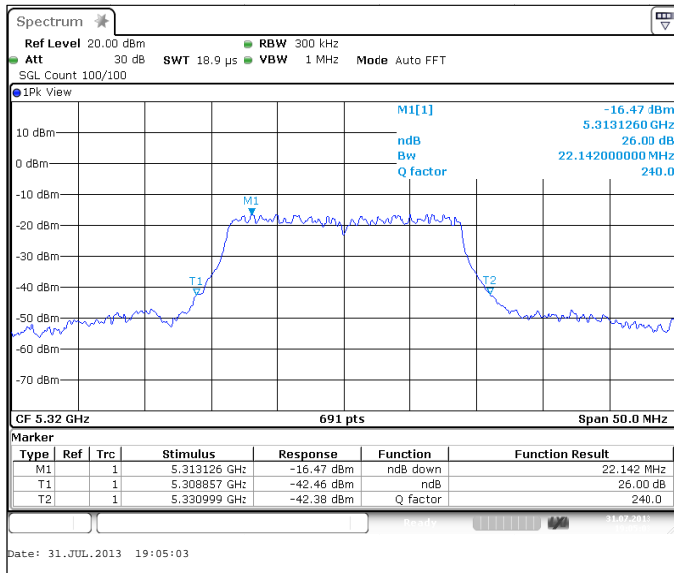




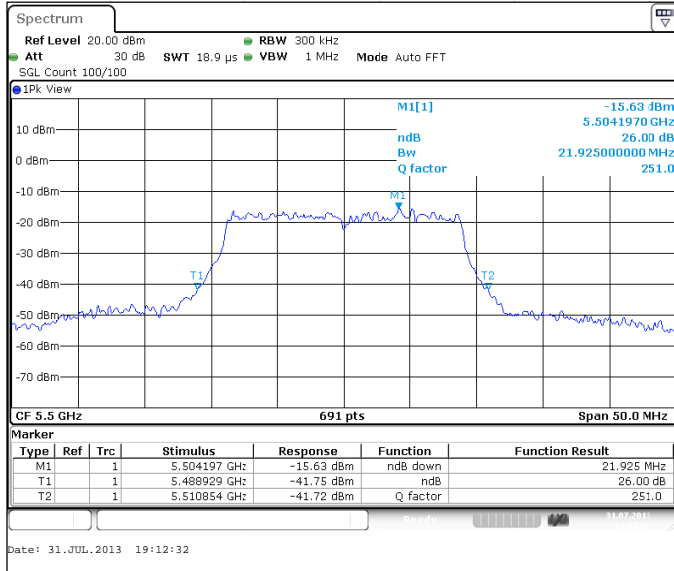
Channel 60 / 5300MHz



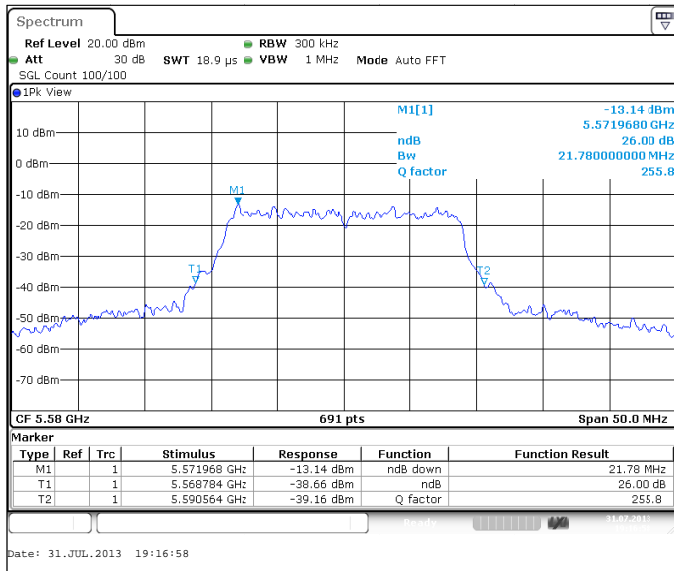
Channel 64 / 5320MHz



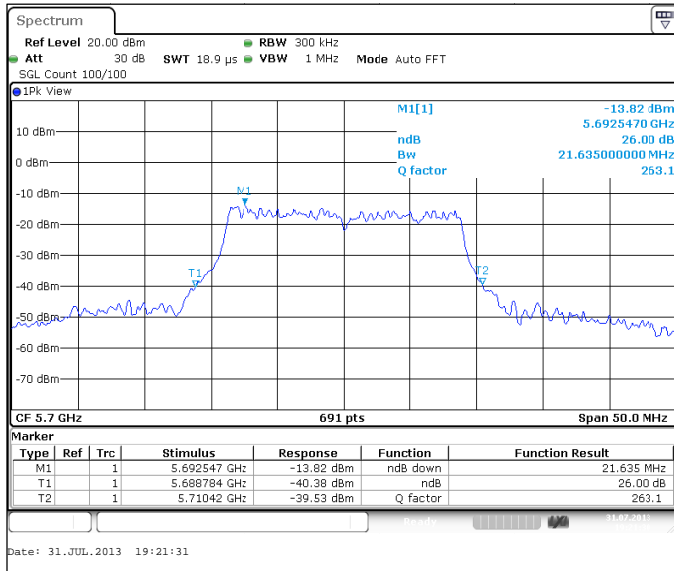
Channel 100 / 5500MHz



Channel 116 / 5580MHz



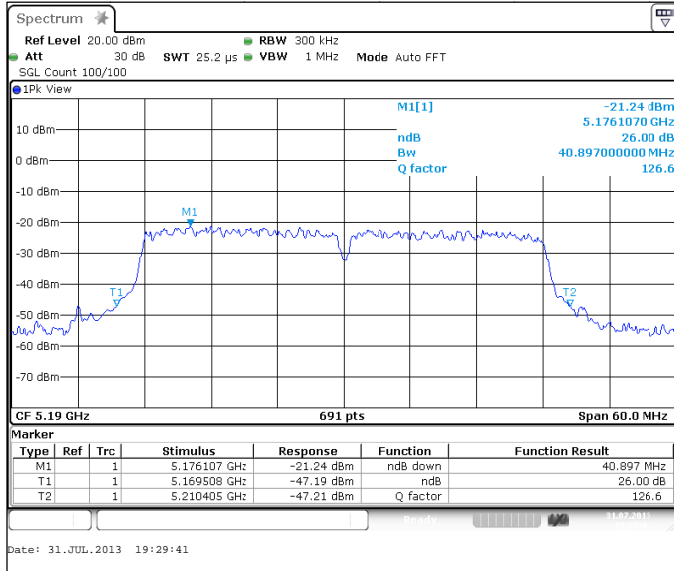
Channel 140 / 5700MHz



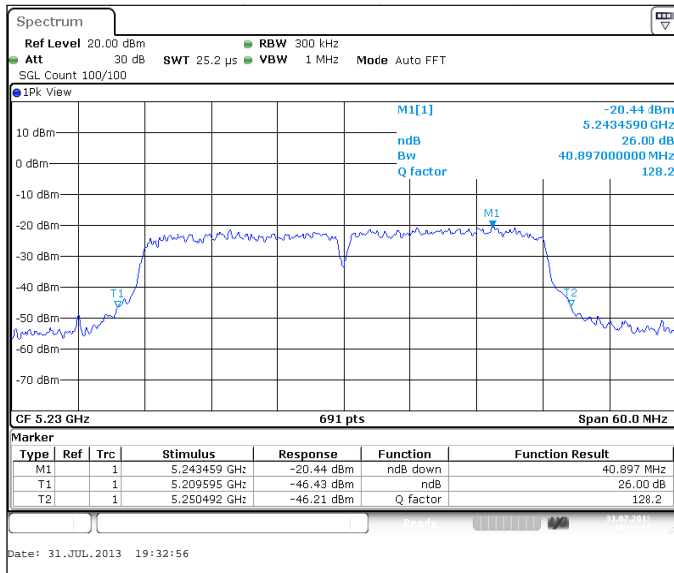
4.3.3 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / f <sub>c</sub> [MHz]	26 dB bandwidth [kHz]	Result
36+40 / 5190	40897	PASSED
44+48 / 5230	40897	PASSED
52+56 / 5270	40897	PASSED
60+64 / 5310	42373	PASSED
100+104 / 5510	41331	PASSED
108+112 / 5550	41331	PASSED
132+136 / 5670	39768	PASSED

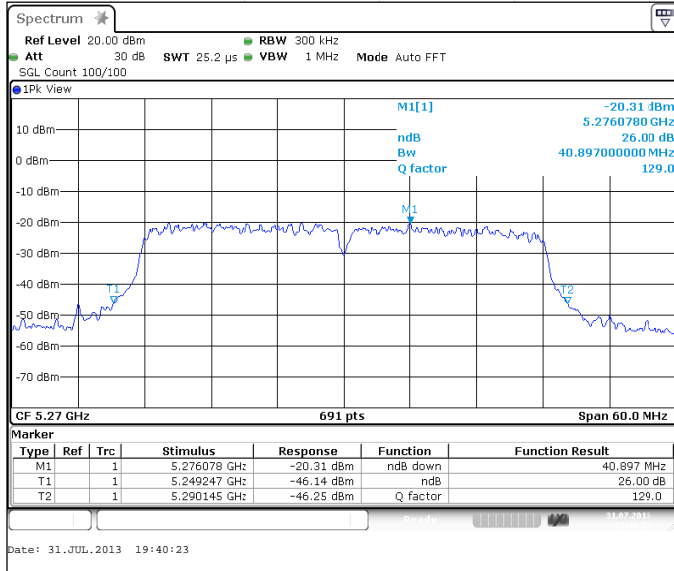
Channel 36+40 / 5190MHz



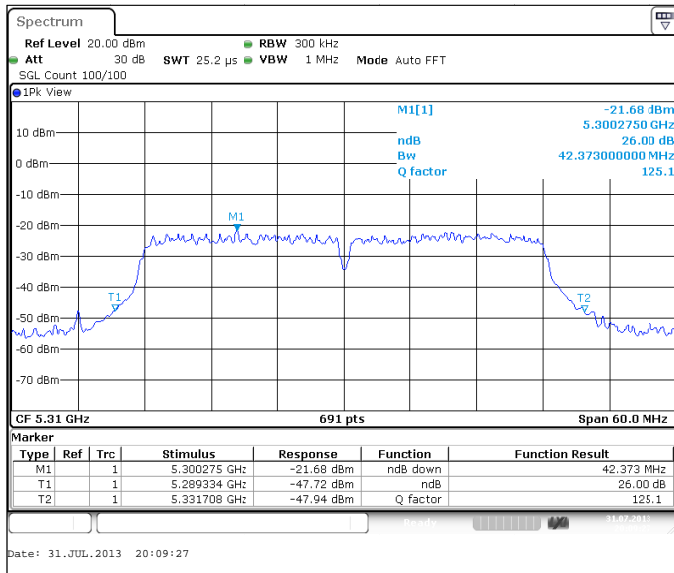
Channel 44+48 / 5230MHz



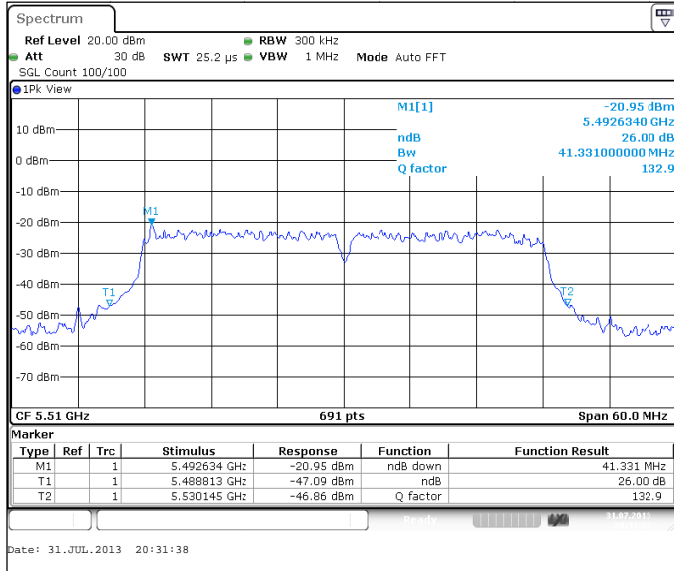
Channel 52+56 / 5270MHz



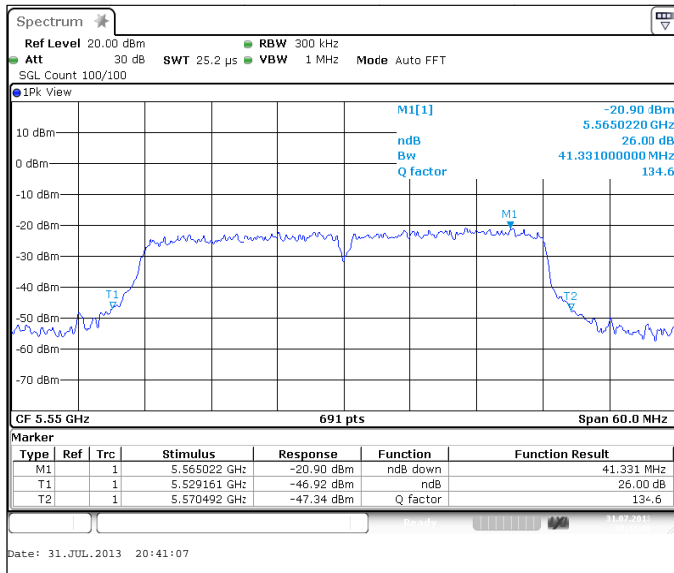
Channel 60+64 / 5310MHz



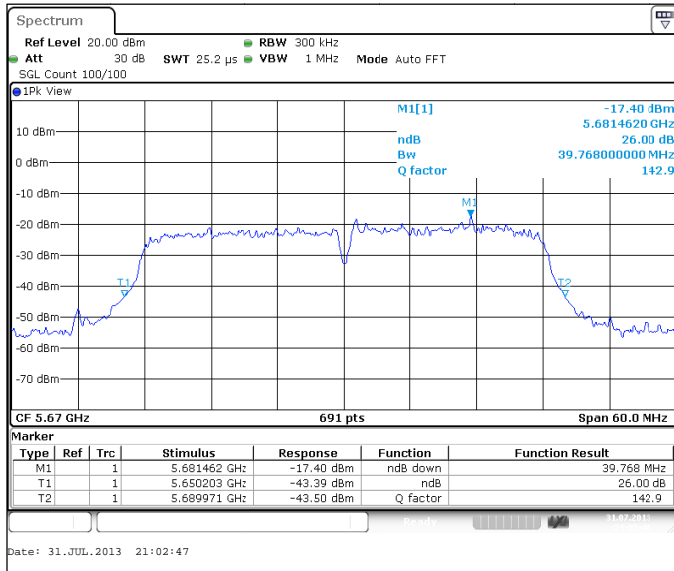
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



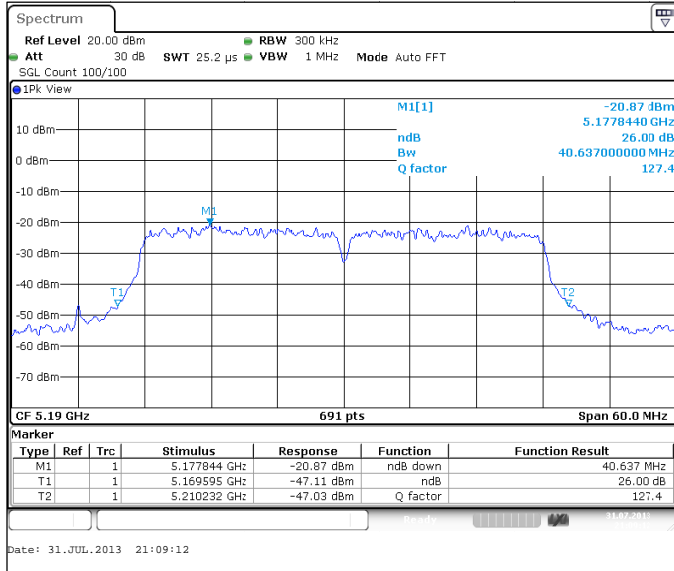
Channel 132+136 / 5670MHz



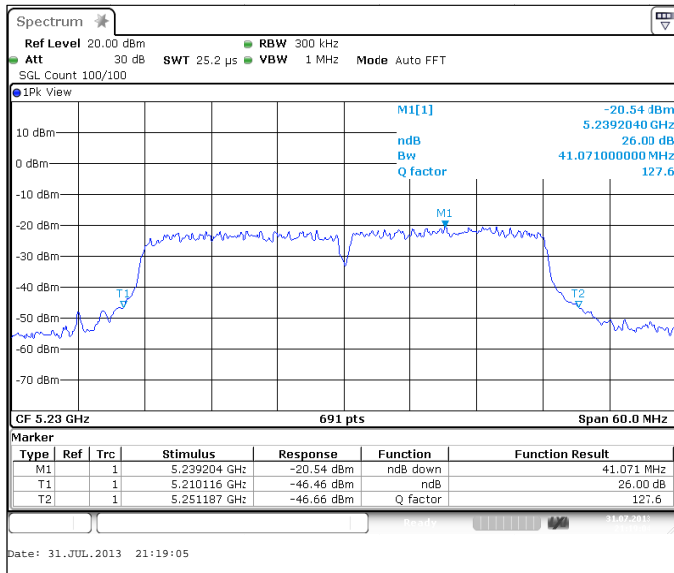
4.3.4 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / f <sub>c</sub> [MHz]	26 dB bandwidth [kHz]	Result
36+40 / 5190	40637	PASSED
44+48 / 5230	41071	PASSED
52+56 / 5270	40289	PASSED
60+64 / 5310	41852	PASSED
100+104 / 5510	43155	PASSED
108+112 / 5550	41679	PASSED
132+136 / 5670	40897	PASSED

Channel 36+40 / 5190MHz

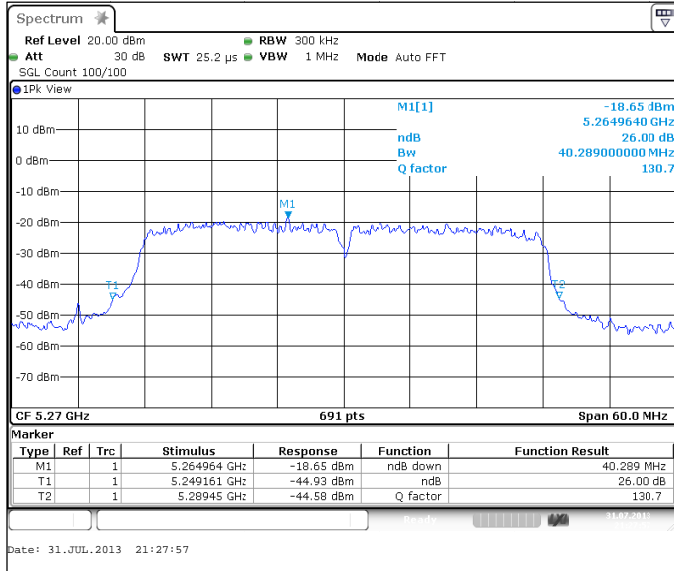


Channel 44+48 / 5230MHz

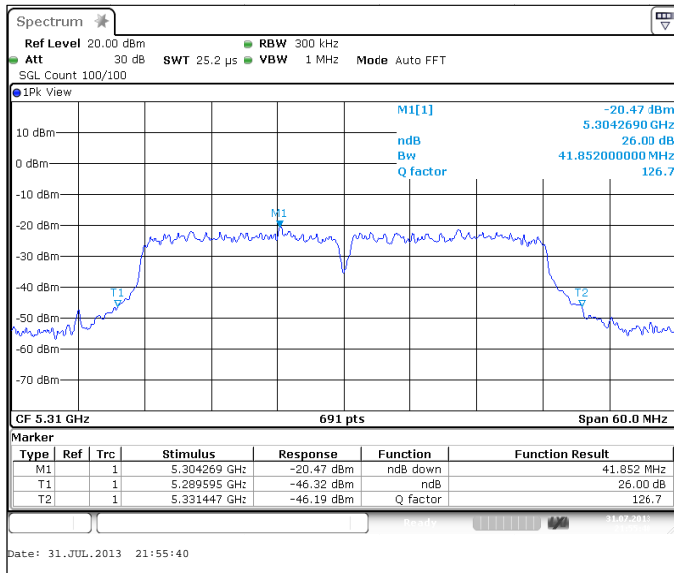




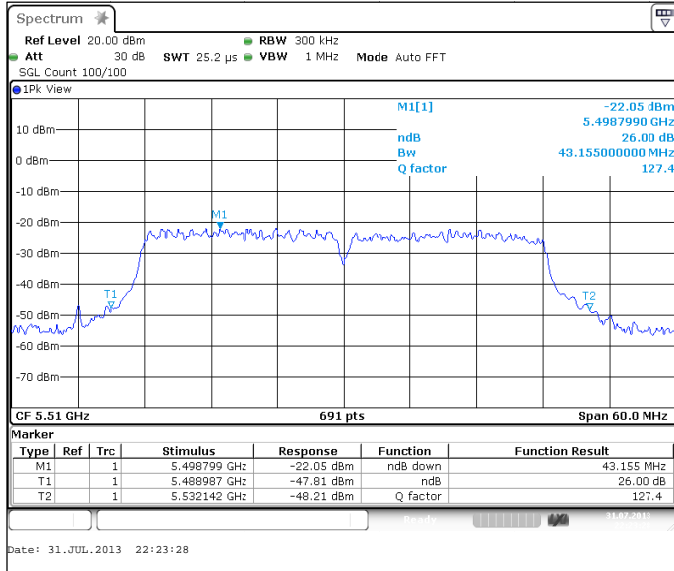
Channel 52+56 / 5270MHz



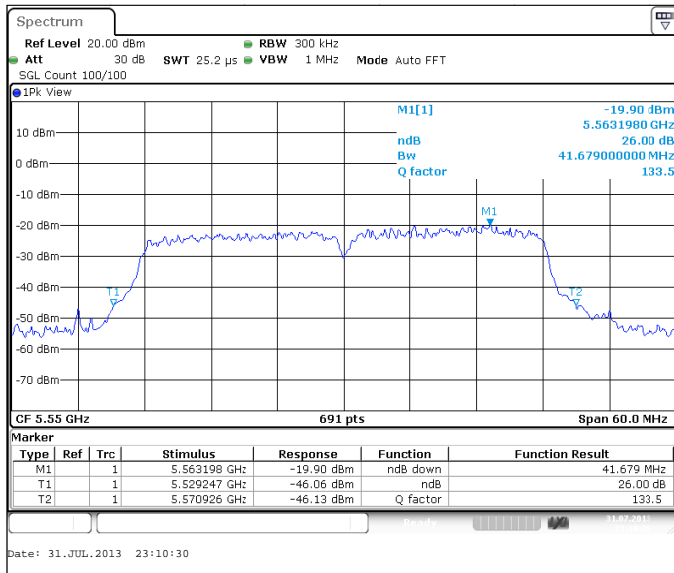
Channel 60+64 / 5310MHz



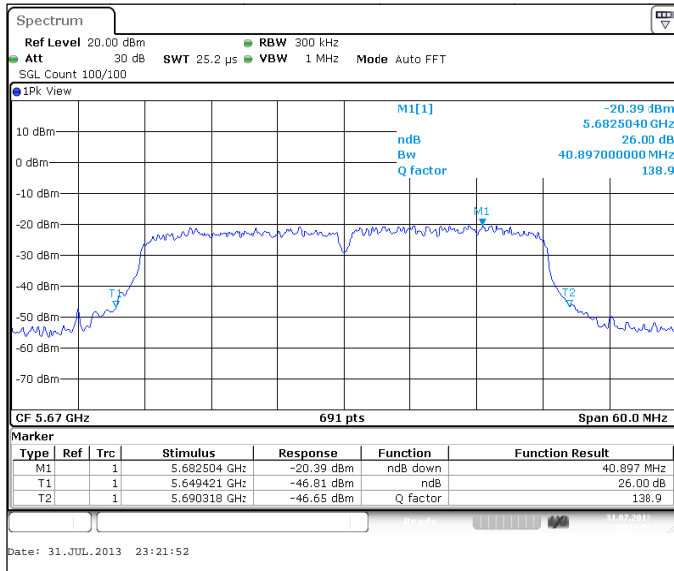
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



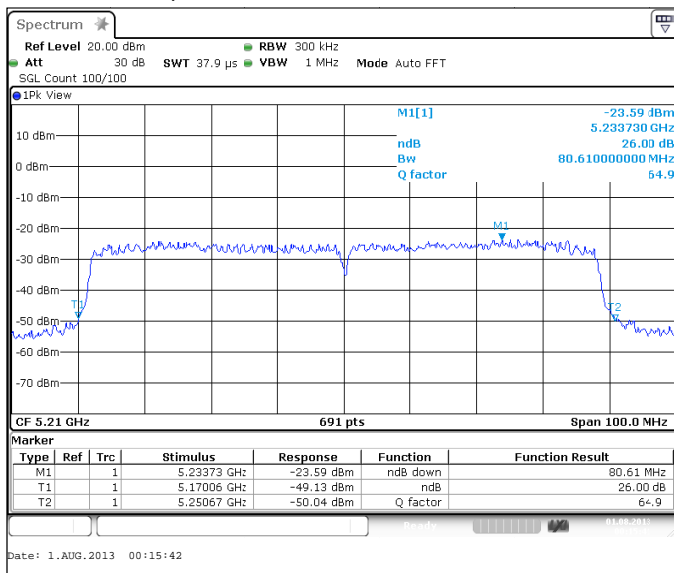
Channel 132+136 / 5670MHz



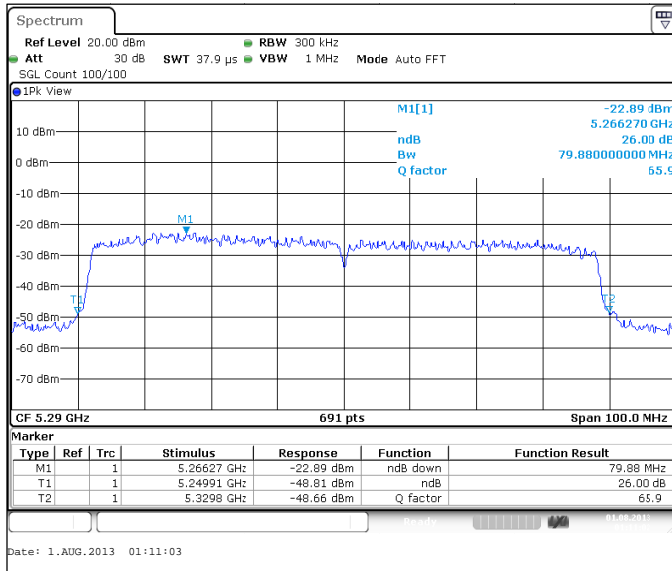
4.3.5 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / f <sub>c</sub> [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210	80610	PASSED
52-64 / 5290	79880	PASSED
100-112 / 5530	81040	PASSED

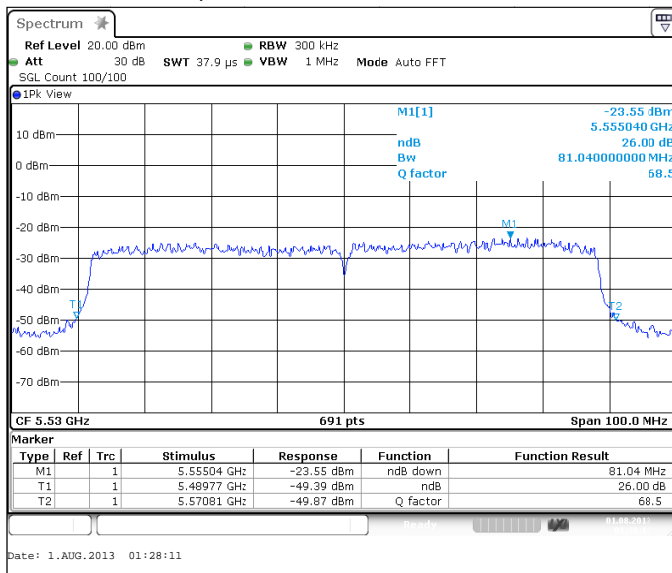
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



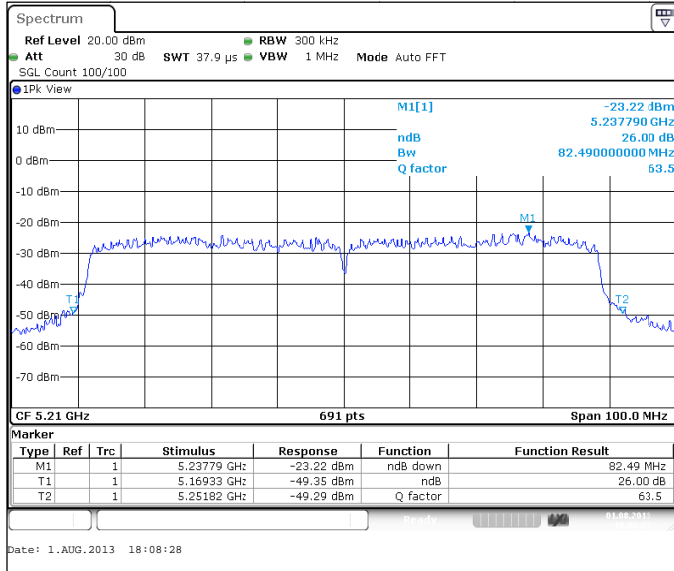
Channel 100-112 / 5530MHz



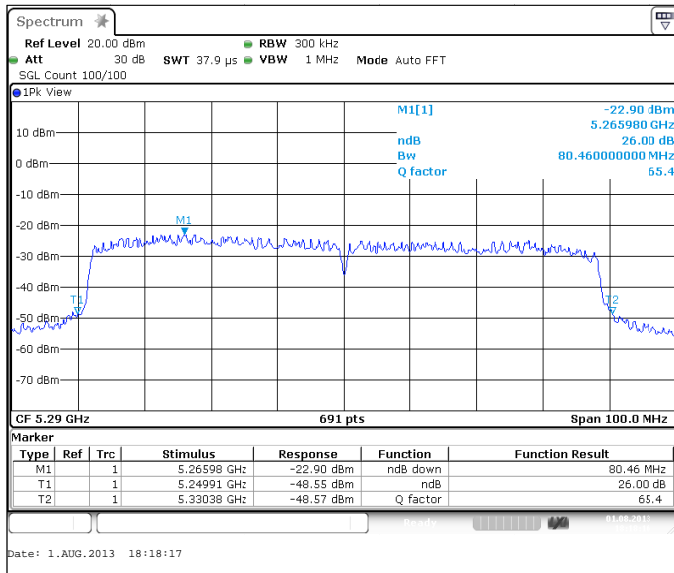
4.3.6 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / f <sub>c</sub> [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210	82490	PASSED
52-64 / 5290	80460	PASSED
100-112 / 5530	82340	PASSED

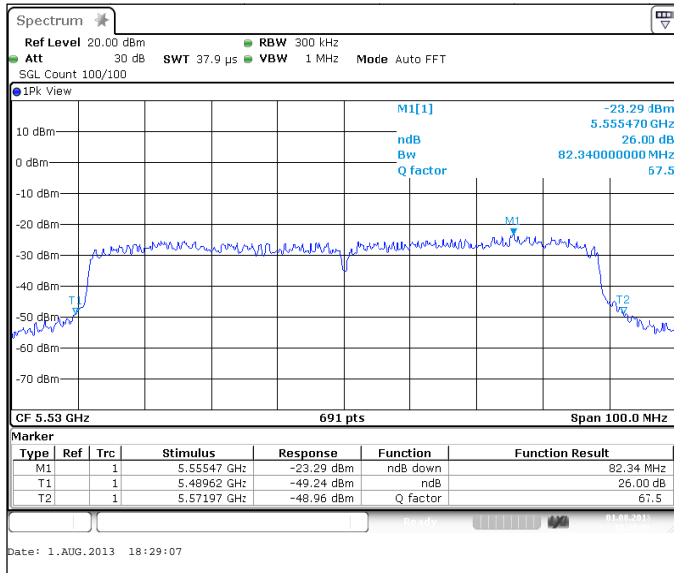
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



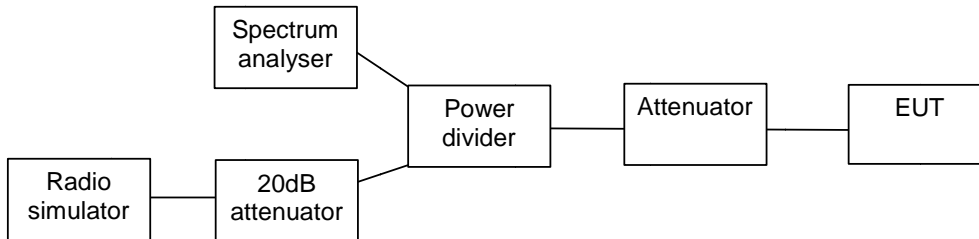
Channel 100-112 / 5530MHz



## 5. Peak power spectral density (FCC §15.407(a), RSS-210 A9.2)

EUT with DUT number	RM-927, DUT 30738
Accessories with DUT numbers	SD-217R, DUT 30742
Operation Voltage [V] / [Hz]	3.8V DC
Results	PASSED
Remarks	
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21.3 / 48.6 / 1050
Date of measurements	30-Jul-2013
Measured by	Feng You

### 5.1. Test Setup



### 5.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D01 and IC standard RSS-210.

Limits for power spectral density measurements

Frequency range [MHz]	Limit [dBm]
5150-5250	4
5250-5350	11
5470-5725	11
5725-5825	17

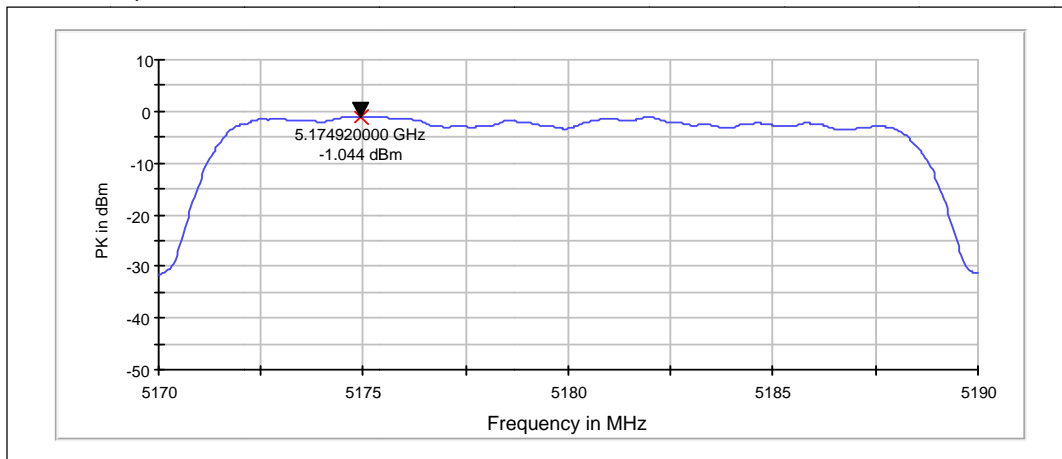
### 5.3. 5 GHz RLAN Test results

#### 5.3.1 802.11a mode, BPSK modulation, 9 Mbps data rate

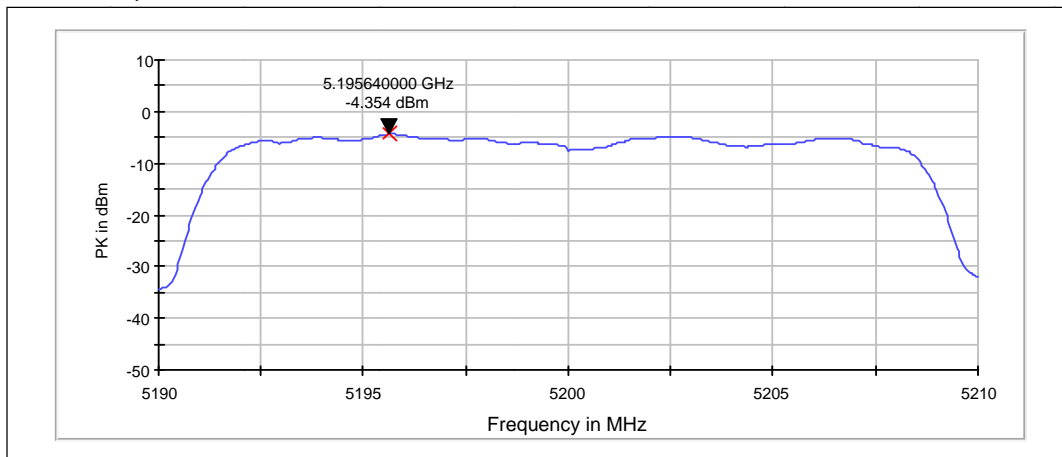
RMS detector (RBW: 1 MHz, VBW: 3 MHz, Video averaging)

Channel / f <sub>c</sub> [MHz]	P [dBm]	Result
36 / 5180	-1.04	PASSED
40 / 5200	-4.35	PASSED
48 / 5240	-0.47	PASSED
52 / 5260	0.57	PASSED
60 / 5300	-2.02	PASSED
64 / 5320	-2.37	PASSED
100 / 5500	-0.94	PASSED
116 / 5580	-0.52	PASSED
140 / 5700	-0.43	PASSED

Channel 36 / 5180MHz

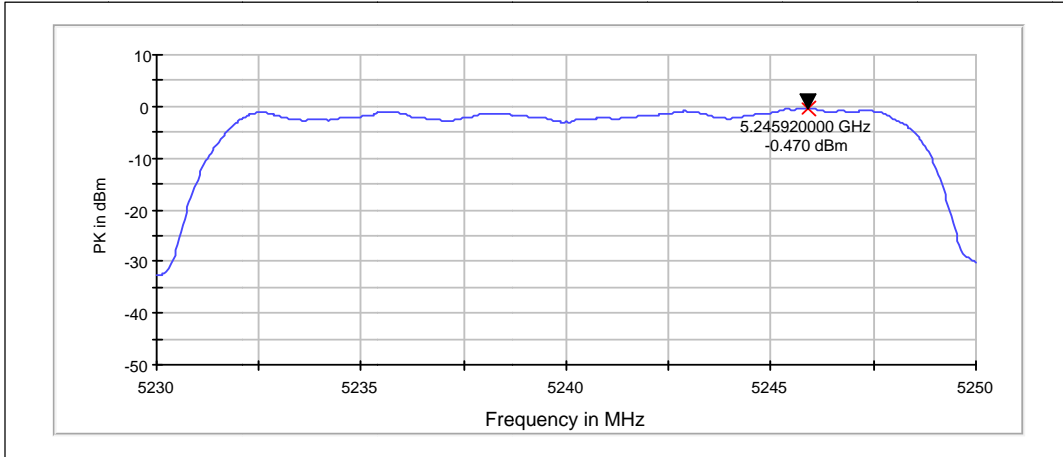


Channel 40 / 5200MHz

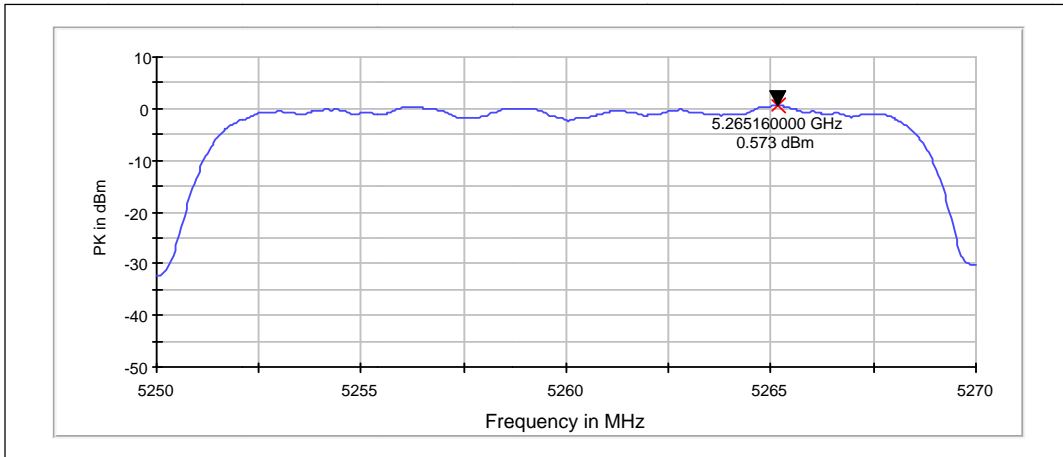




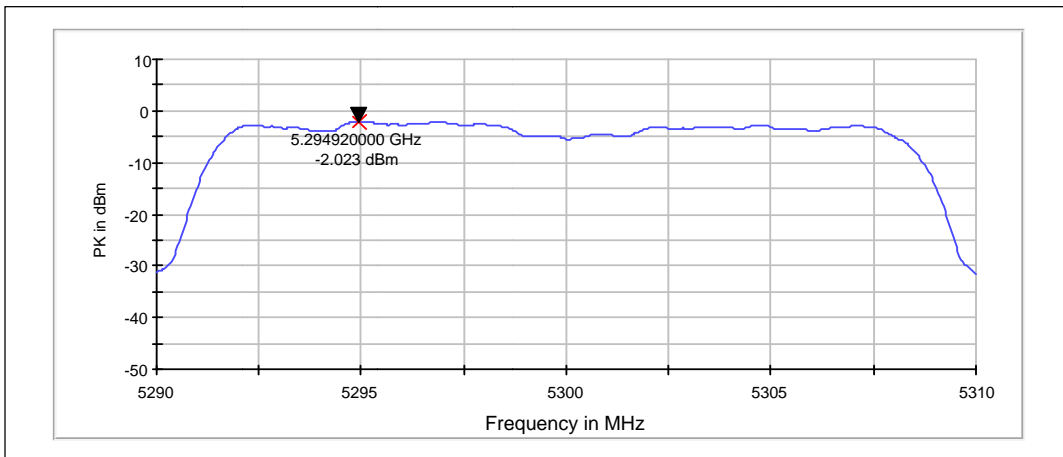
Channel 48 / 5240MHz



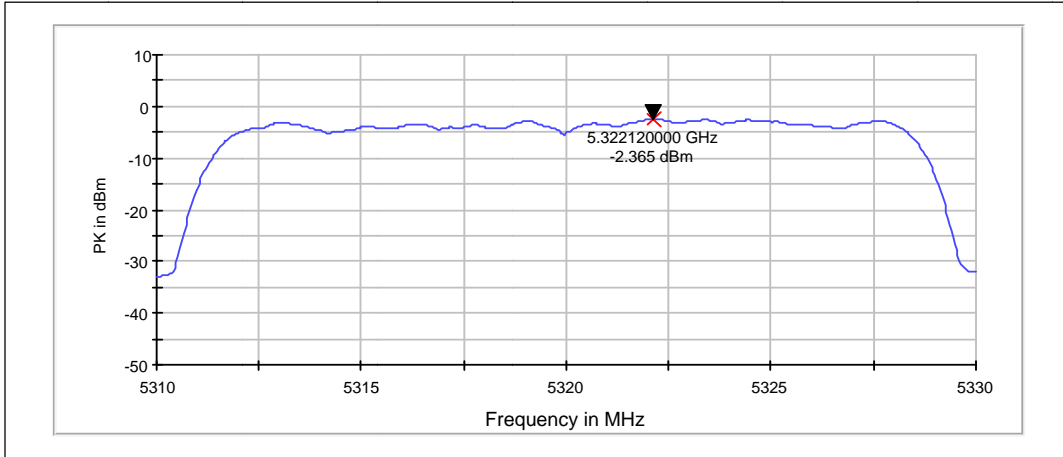
Channel 52 / 5260MHz



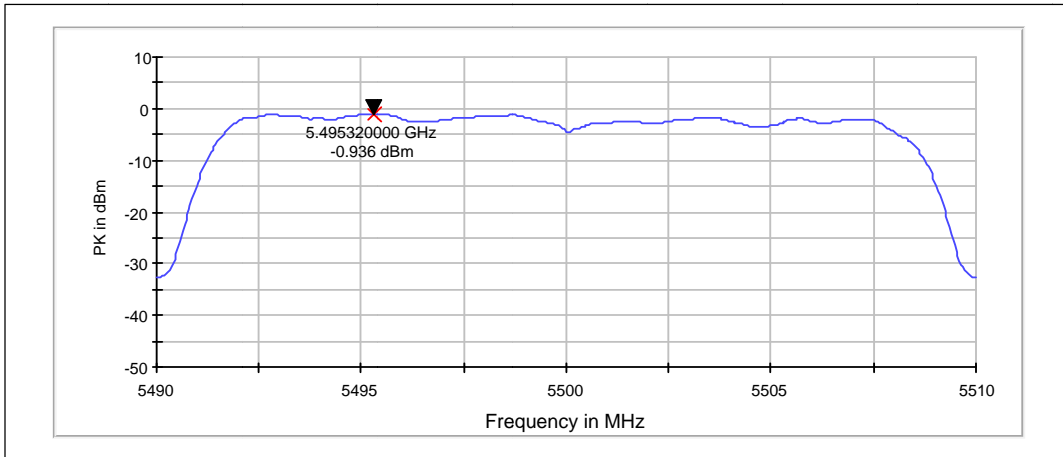
Channel 60 / 5300MHz



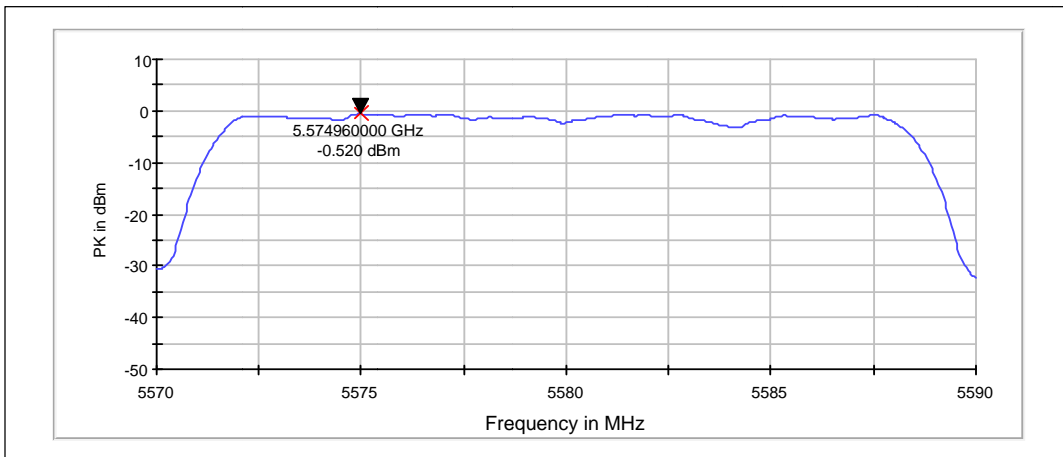
Channel 64 / 5320MHz



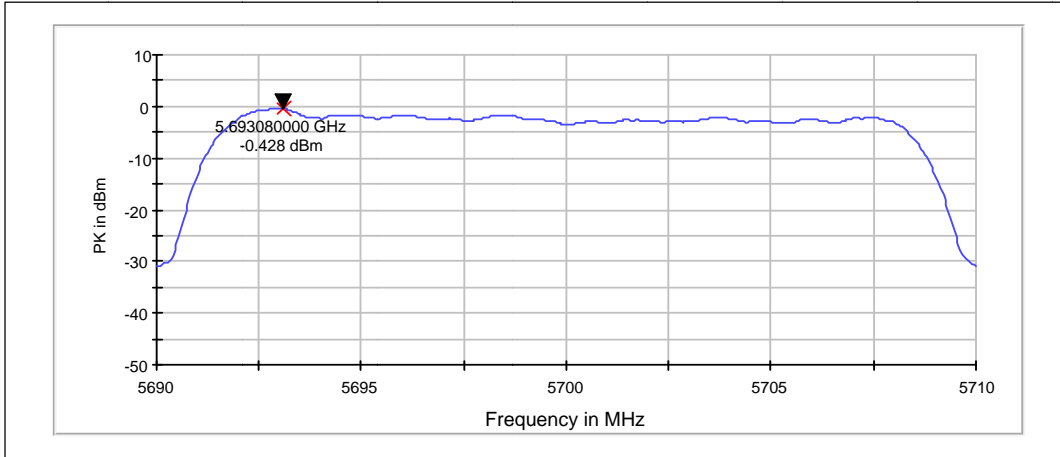
Channel 100 / 5500MHz



Channel 116 / 5580MHz



Channel 140 / 5700MHz

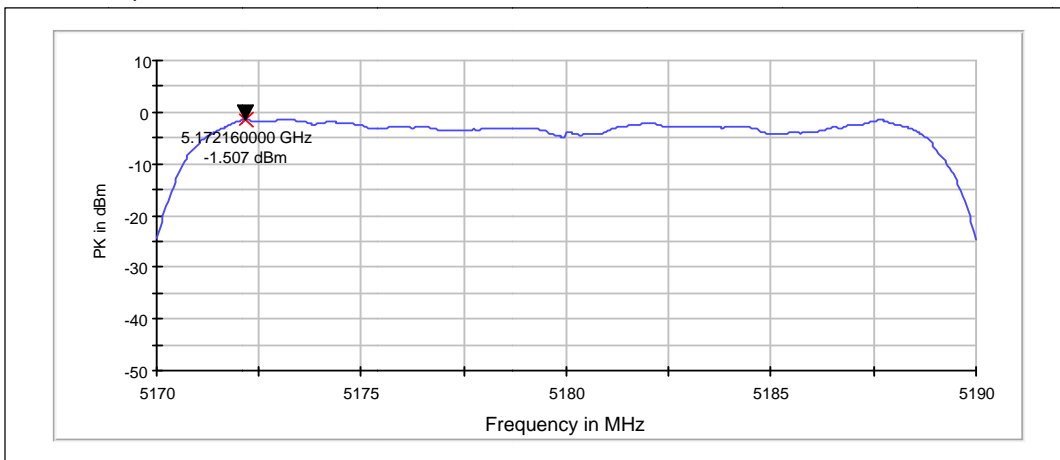


**5.3.2 802.11n mode, QPSK modulation, 13.0 / 14.4 Mbps data rate**

RMS detector (RBW: 1 MHz, VBW: 3 MHz, Video averaging)

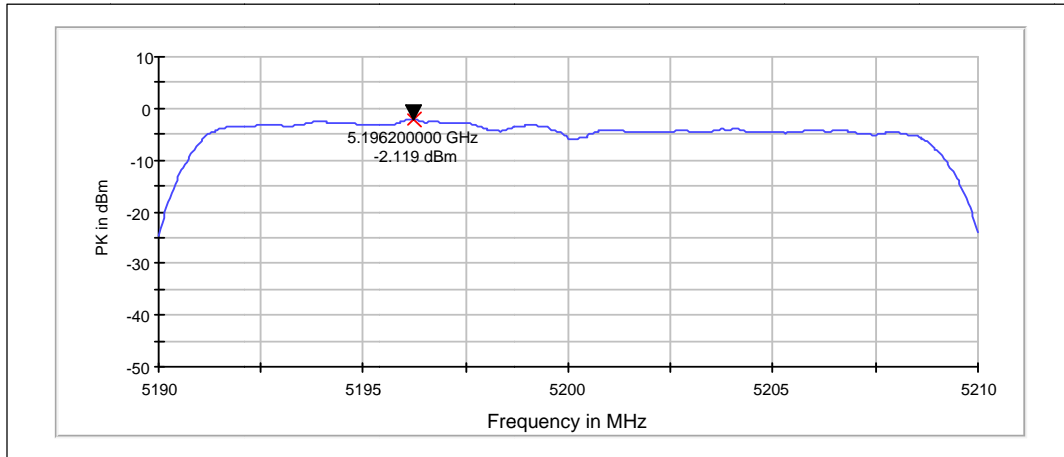
Channel / f <sub>c</sub> [MHz]	P [dBm]	Result
36 / 5180	-1.51	PASSED
40 / 5200	-2.12	PASSED
48 / 5240	0.05	PASSED
52 / 5260	0.01	PASSED
60 / 5300	-2.01	PASSED
64 / 5320	-2.88	PASSED
100 / 5500	-1.43	PASSED
116 / 5580	-0.12	PASSED
140 / 5700	-1.5	PASSED

Channel 36 / 5180MHz

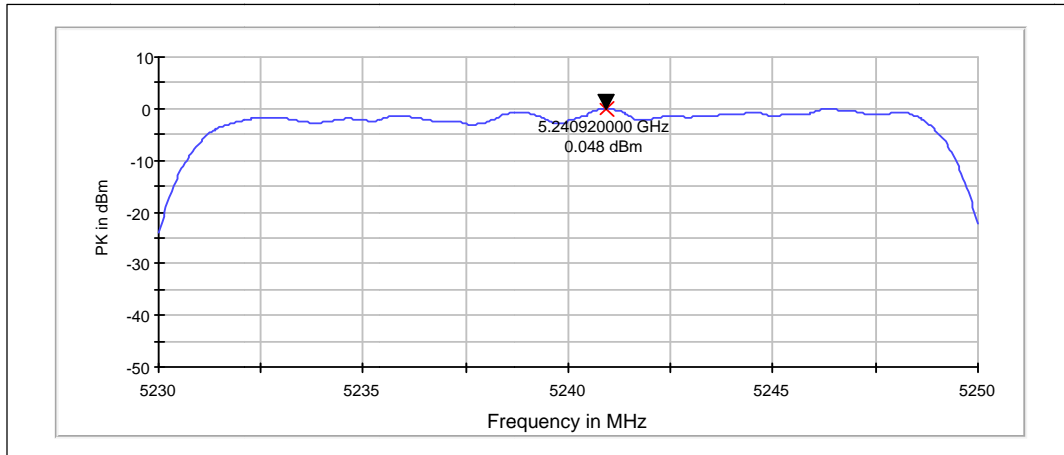


Channel

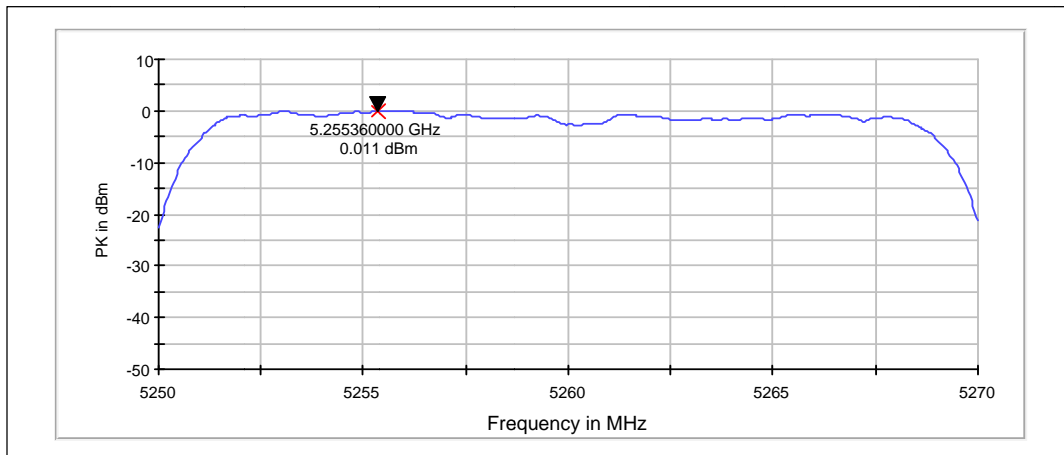
40 / 5200MHz



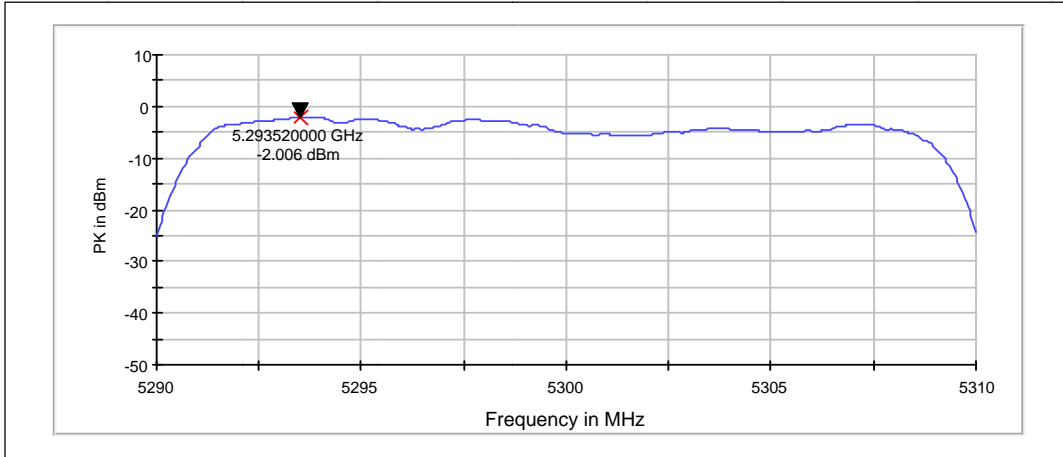
Channel 48 / 5240MHz



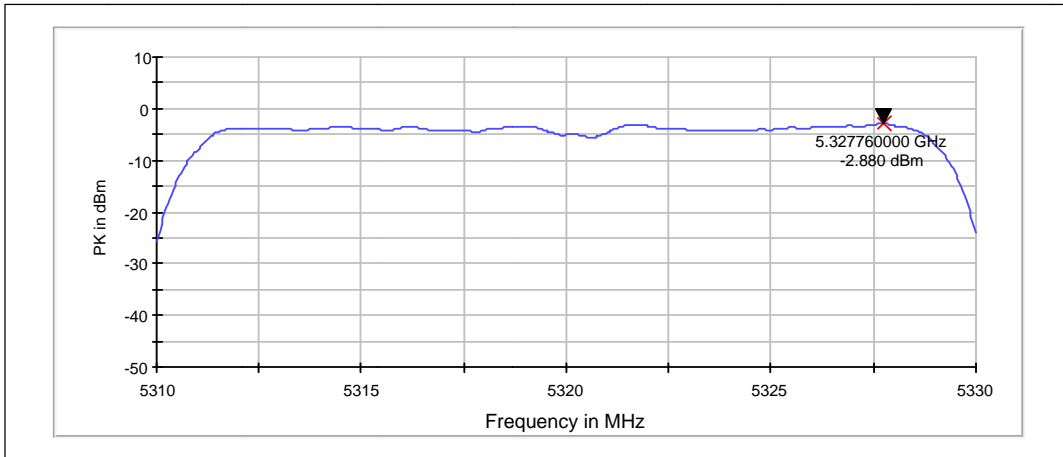
Channel 52 / 5260MHz



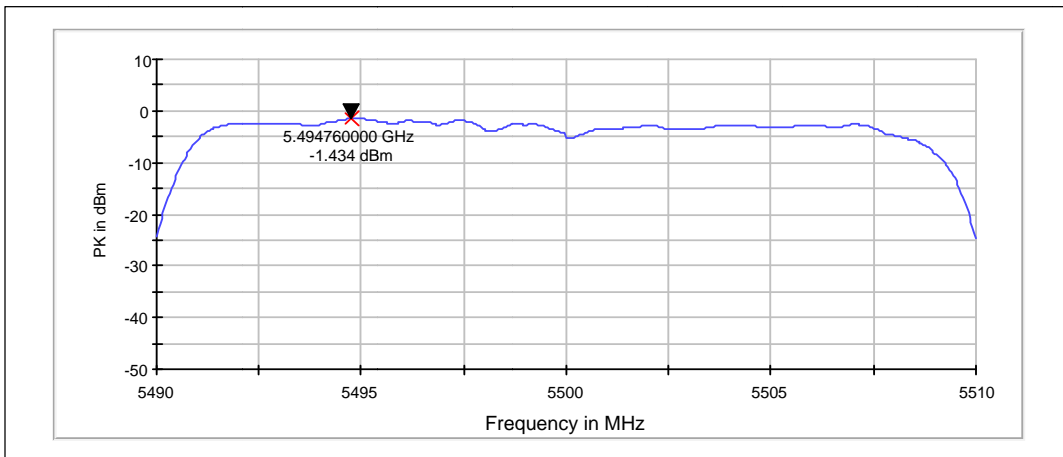
Channel 60 / 5300MHz



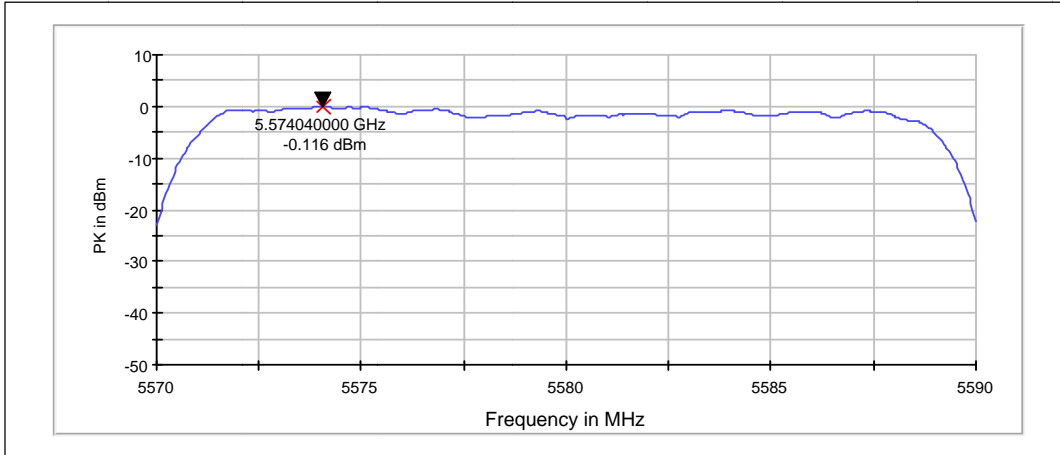
Channel 64 / 5320MHz



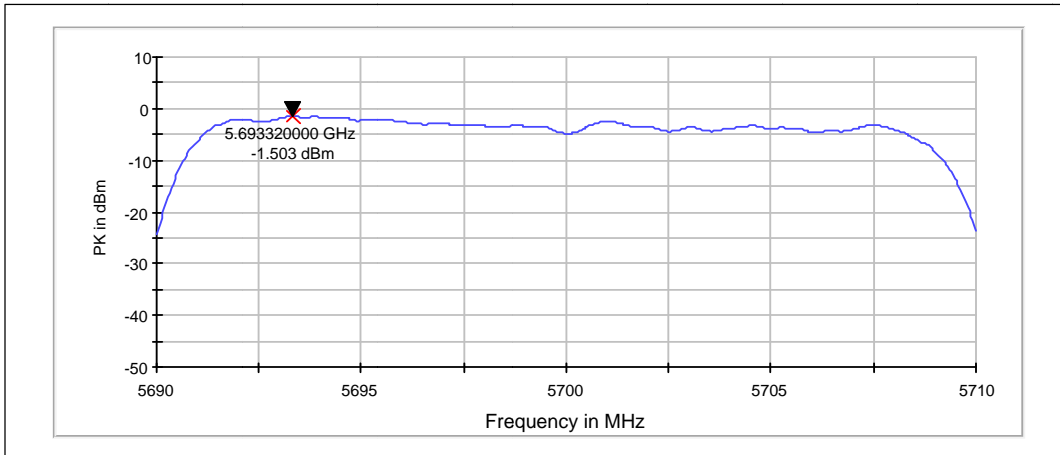
Channel 100 / 5500MHz



Channel 116 / 5580MHz



Channel 140 / 5700MHz

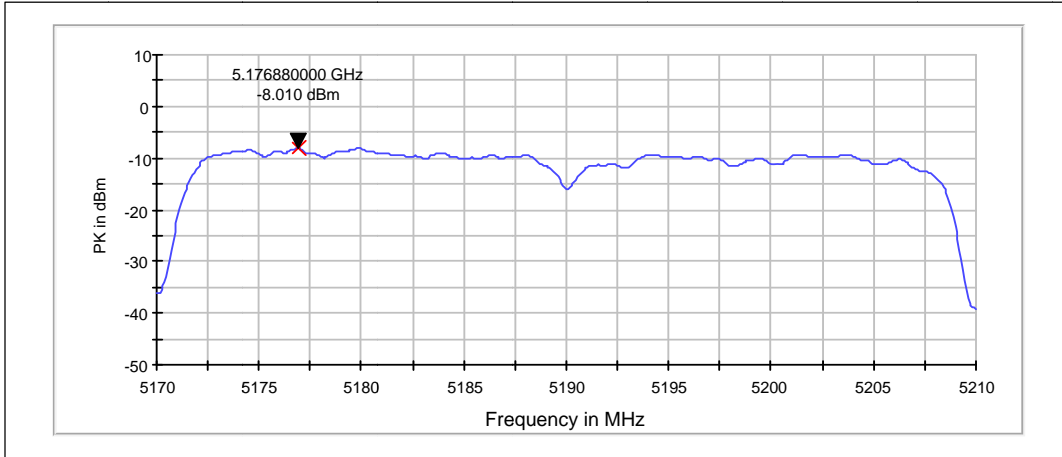


### 5.3.3 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

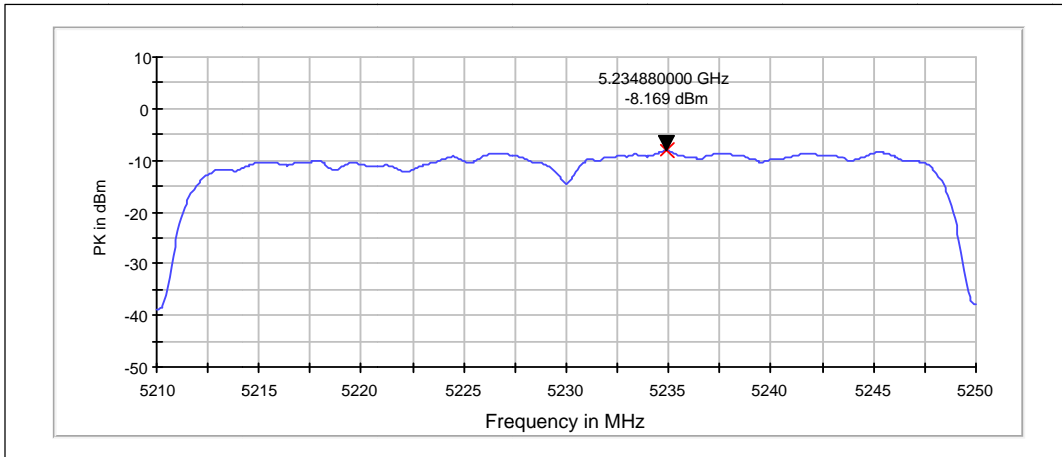
RMS detector (RBW: 1 MHz, VBW: 3 MHz, Video averaging)

Channel / f <sub>c</sub> [MHz]	P [dBm]	Result
36+40 / 5190	-8.01	PASSED
44+48 / 5230	-8.17	PASSED
52+56 / 5270	-7.2	PASSED
60+64 / 5310	-8.24	PASSED
100+104 / 5510	-9.66	PASSED
108+112 / 5550	-7.68	PASSED
132+136 / 5670	-7.53	PASSED

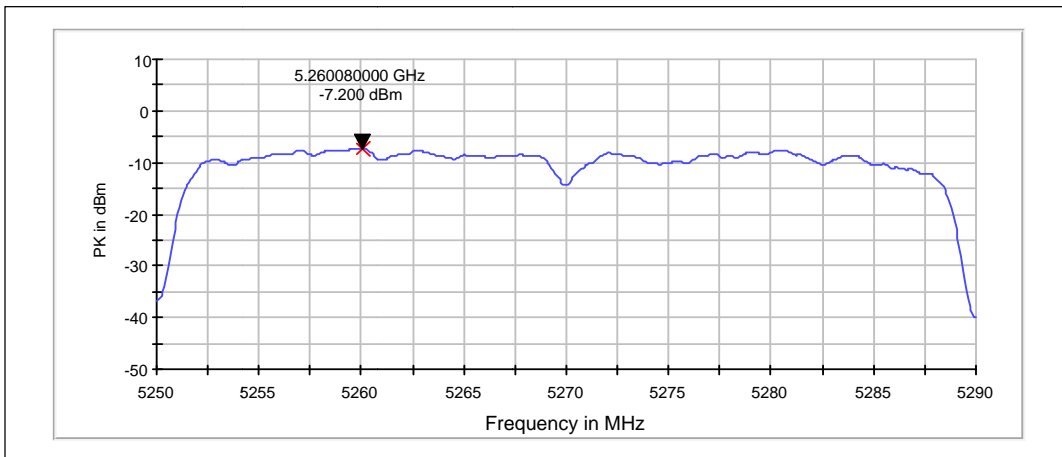
Channel 36+40 / 5190MHz



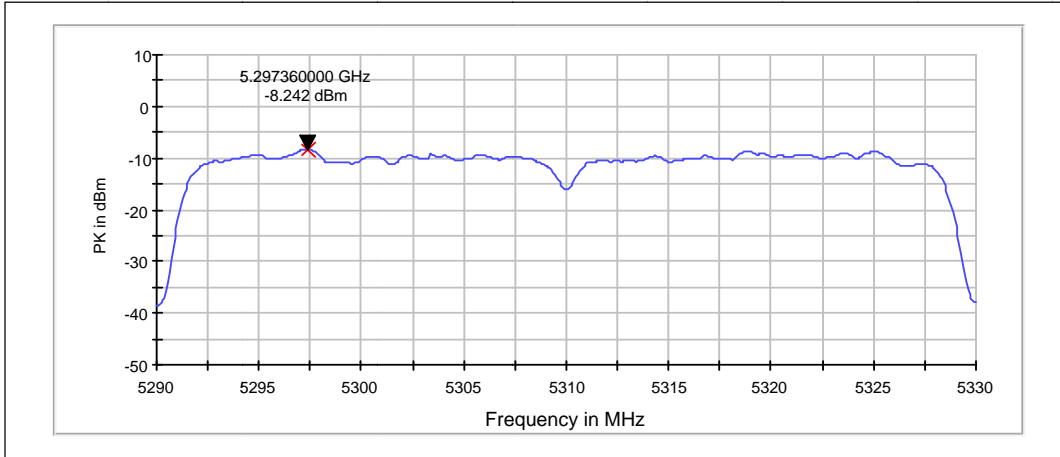
Channel 44+48 / 5230MHz



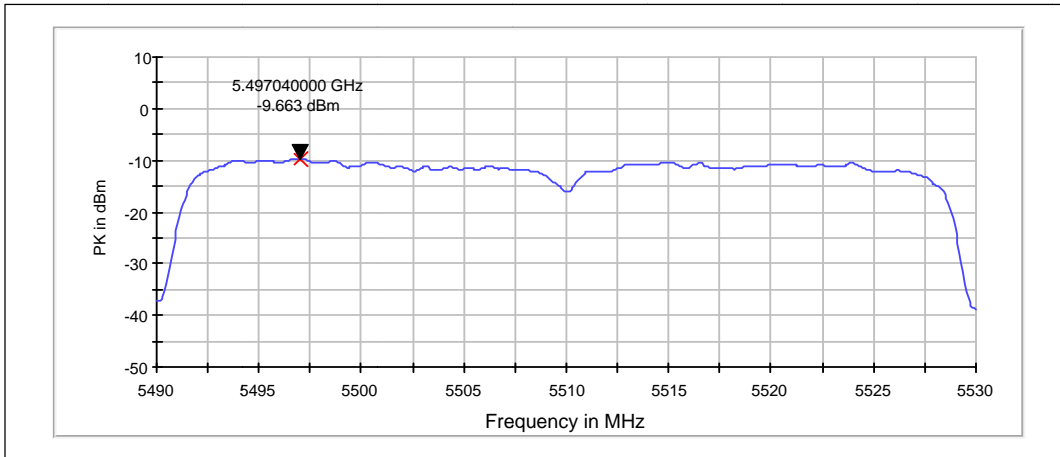
Channel 52+56 / 5270MHz



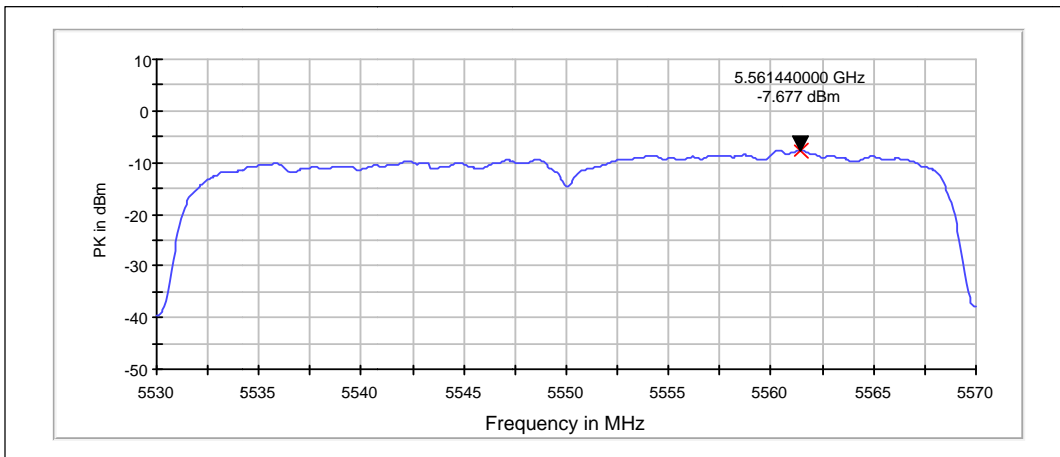
Channel 60+64 / 5310MHz



Channel 100+104 / 5510MHz

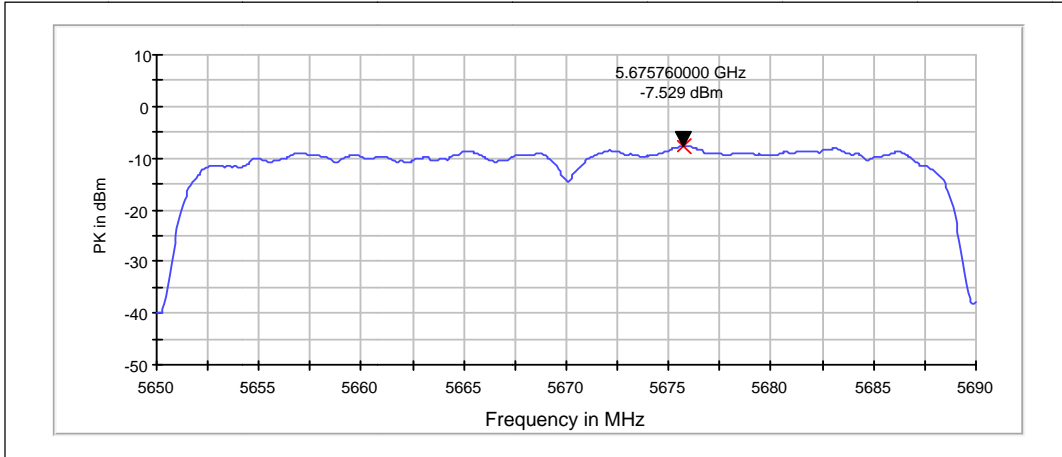


Channel 108+112 / 5550MHz





Channel 132+136 / 5670MHz

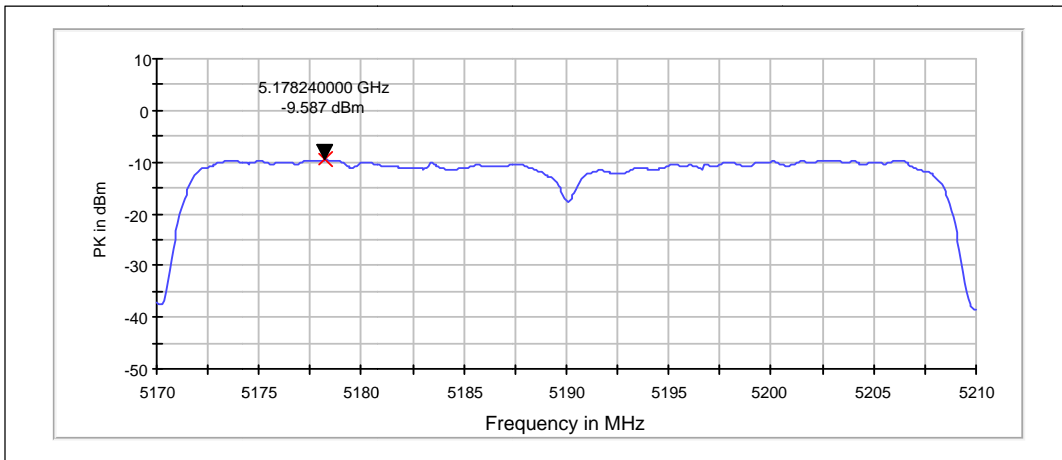


**5.3.4 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate**

RMS detector (RBW: 1 MHz, VBW: 3 MHz, Video averaging)

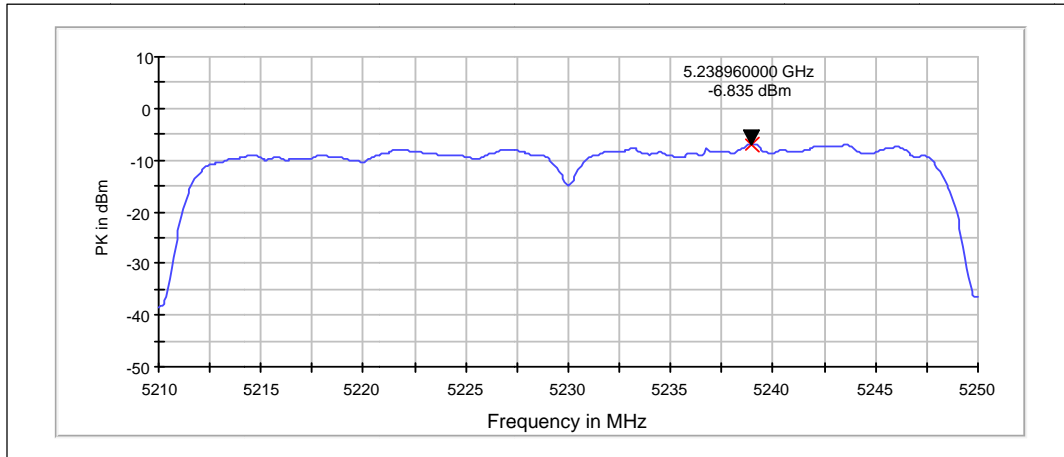
Channel / f <sub>c</sub> [MHz]	P [dBm]	Result
36+40 / 5190	-9.59	PASSED
44+48 / 5230	-6.83	PASSED
52+56 / 5270	-8.34	PASSED
60+64 / 5310	-8.77	PASSED
100+104 / 5510	-7.53	PASSED
108+112 / 5550	-6.83	PASSED
132+136 / 5670	-7.74	PASSED

Channel 36+40 / 5190MHz

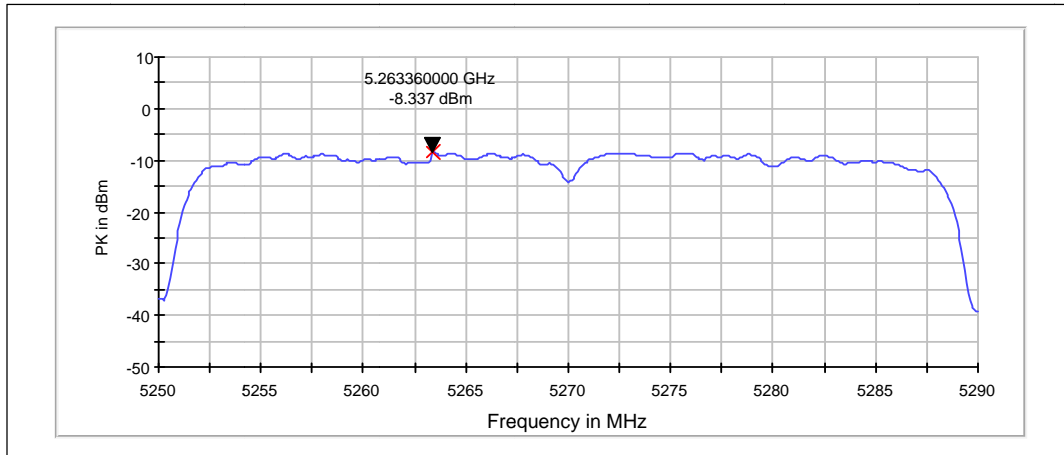


Channel

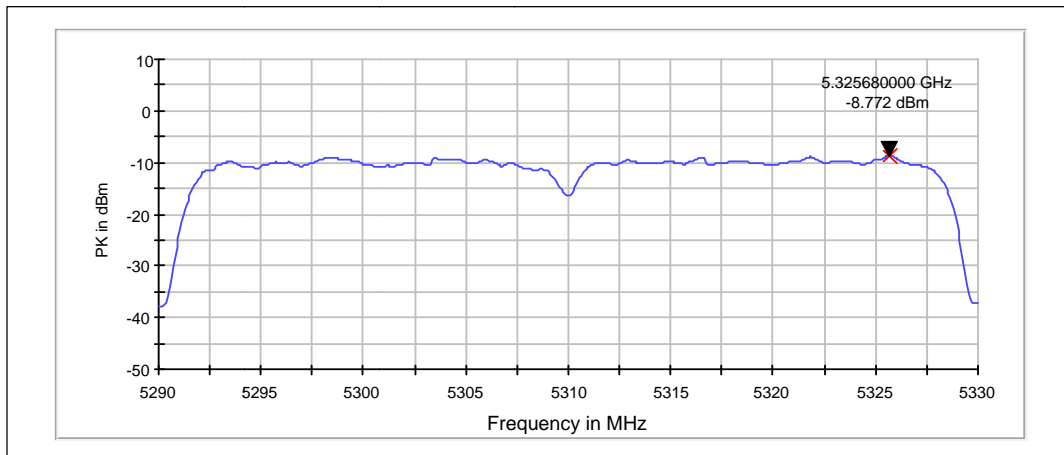
44+48 / 5230MHz



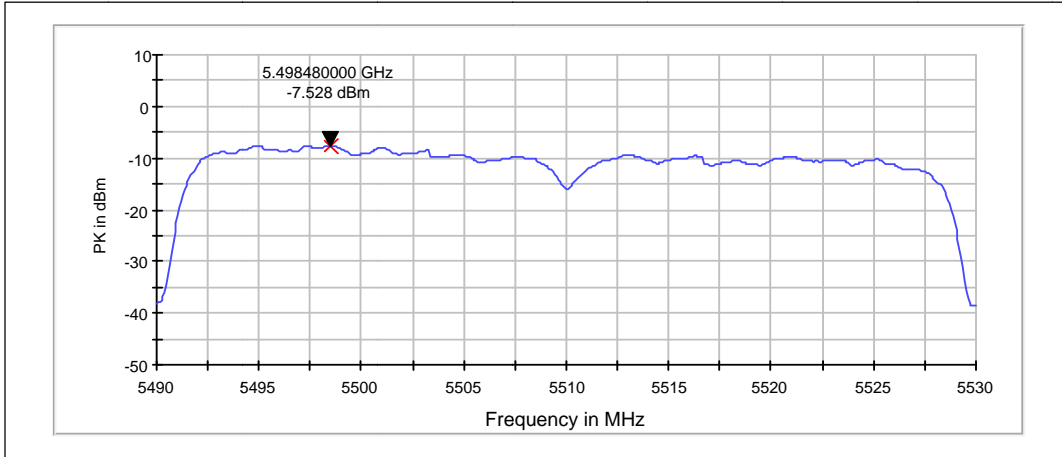
Channel 52+56 / 5270MHz



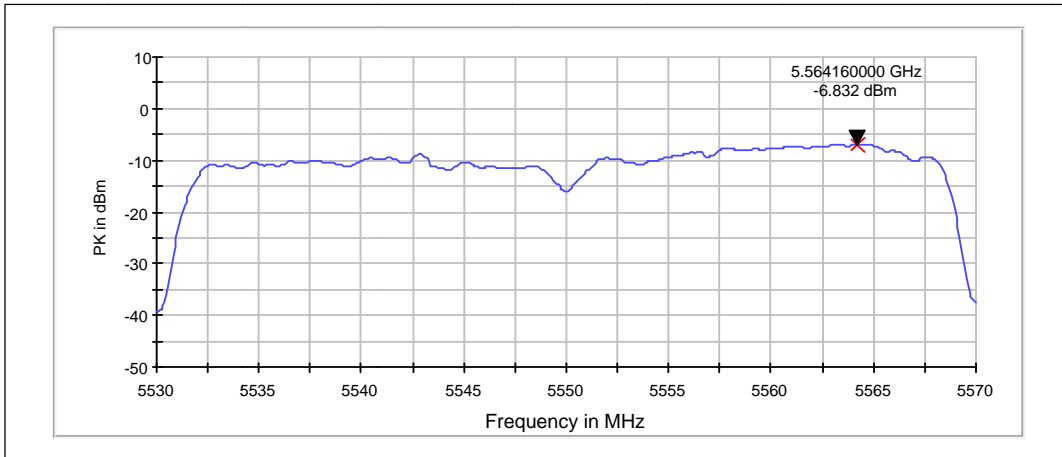
Channel 60+64 / 5310MHz



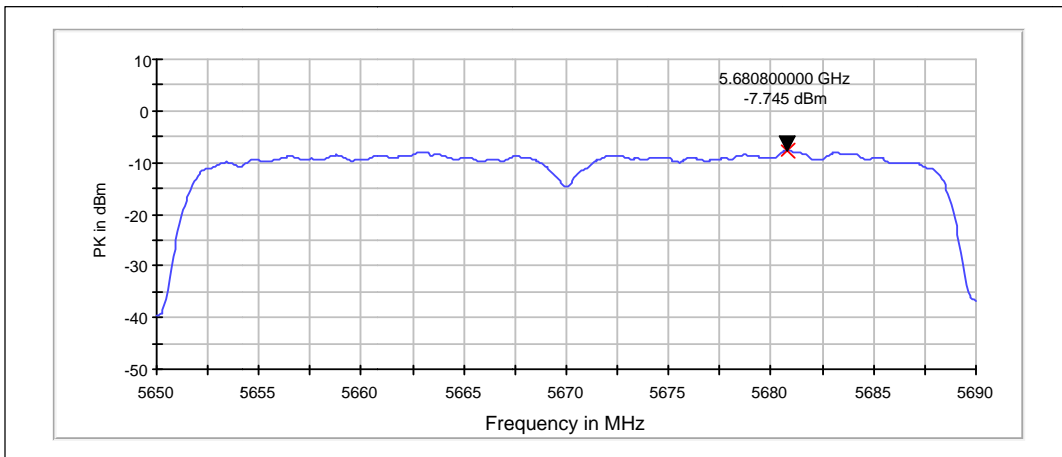
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



Channel 132+136 / 5670MHz

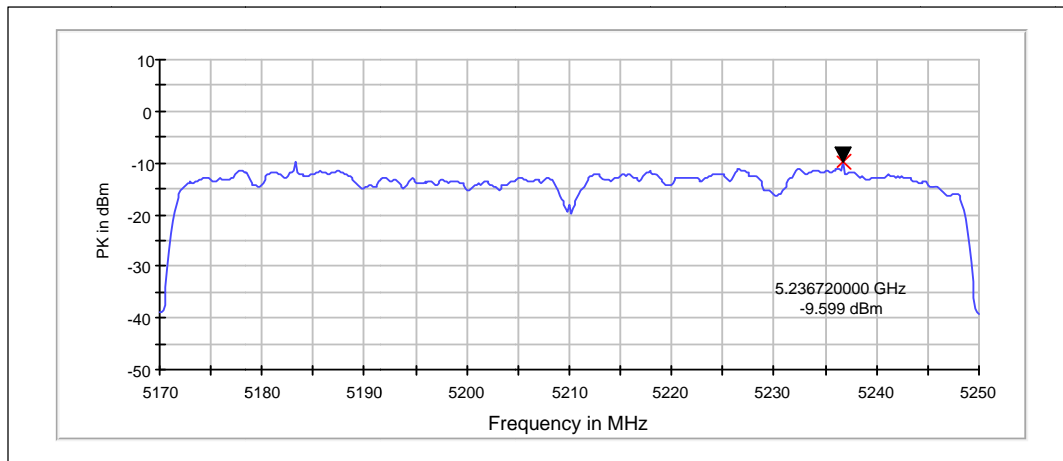


### 5.3.5 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

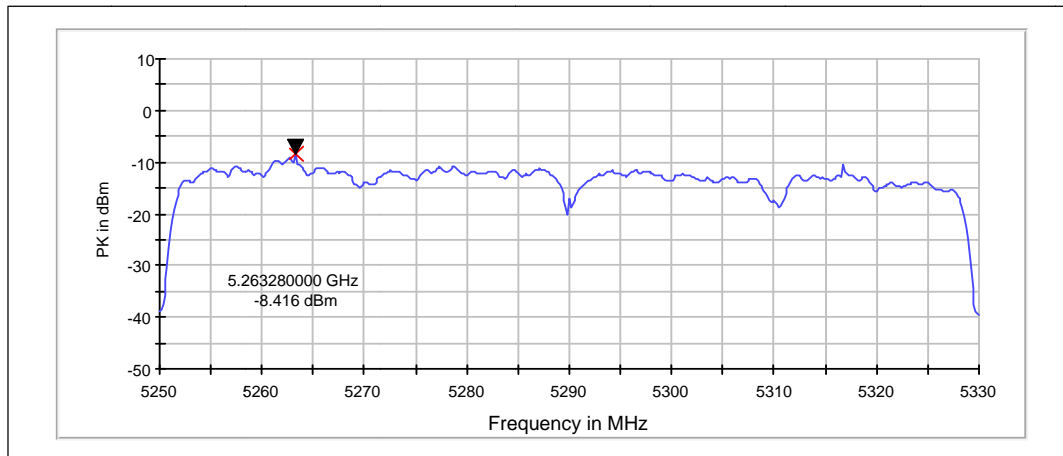
RMS detector (RBW: 1 MHz, VBW: 3 MHz, Video averaging)

Channel / f <sub>c</sub> [MHz]	P [dBm]	Result
36-48 / 5210	-9.6	PASSED
52-64 / 5290	-8.42	PASSED
100-112 / 5530	-9.86	PASSED

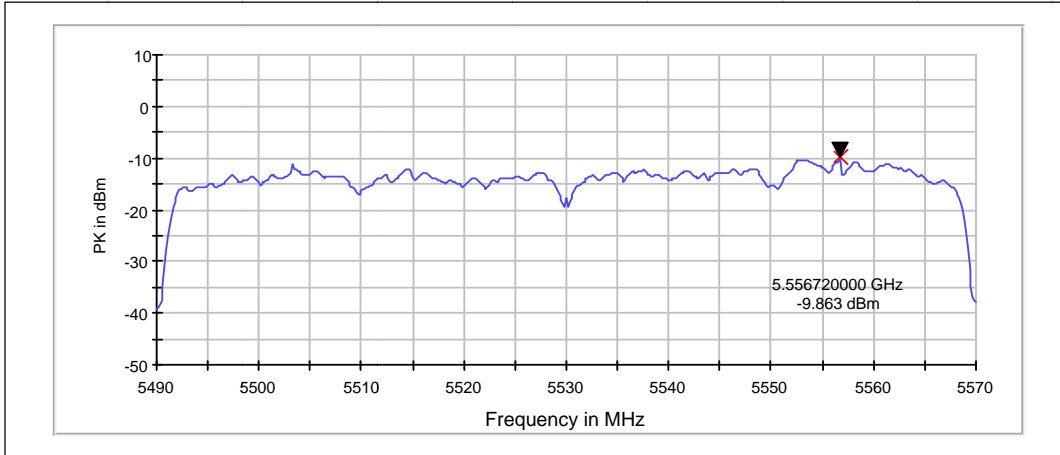
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz

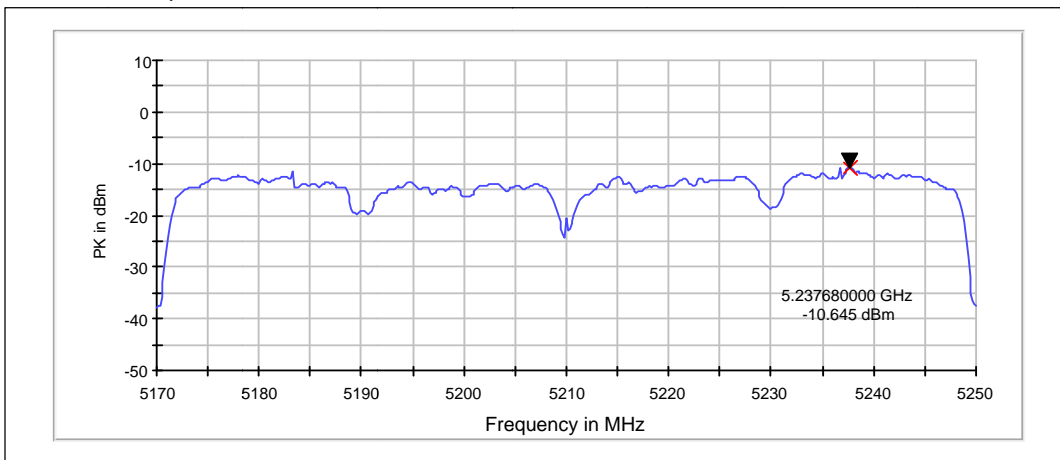


**5.3.6 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate**

RMS detector (RBW: 1 MHz, VBW: 3 MHz, Video averaging)

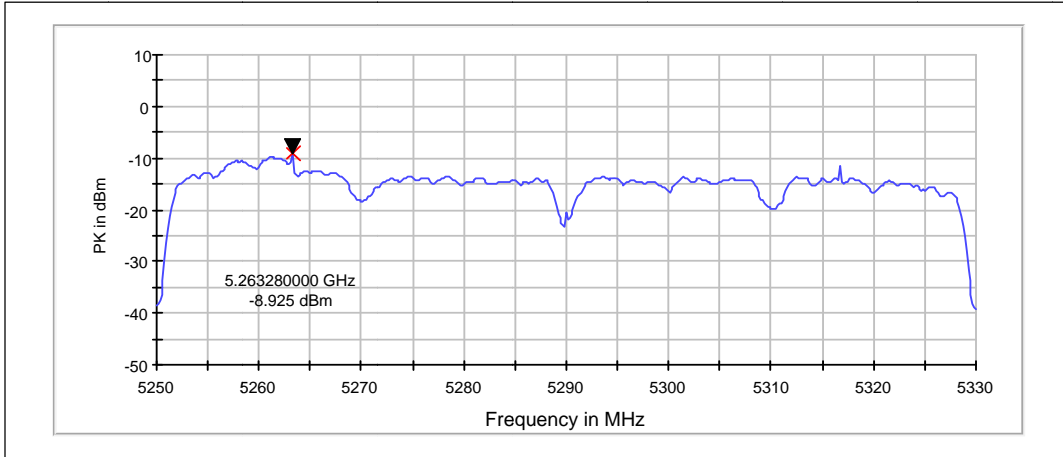
Channel / f <sub>c</sub> [MHz]	P [dBm]	Result
36-48 / 5210	-10.65	PASSED
52-64 / 5290	-8.92	PASSED
100-112 / 5530	-10.62	PASSED

Channel 36-48 / 5210MHz

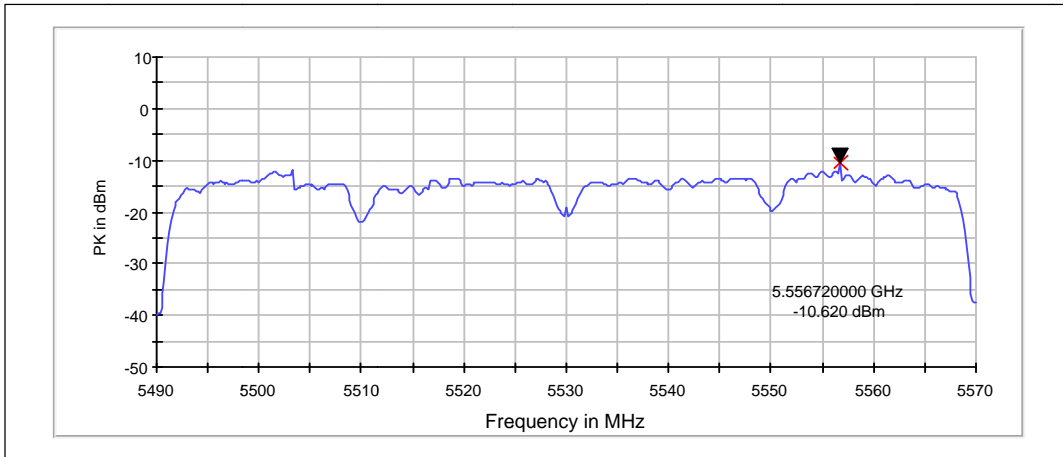


Channel

52-64 / 5290MHz



Channel 100-112 / 5530MHz



## 6. Test Equipment

### 6.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
4406	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
7602	Communication Tester	CMW500	R&S	22/24/27, 15C, 15B
7151	Bluetooth Tester	CBT	R&S	15B
-	GPS RX Antenna w/AMP	L1A-PM-NF	GPS Source	15C
-	GPS Inline amplifier	A11M-V-NF-NM	GPS Source	15C
-	GPS signal Splitter	S12-P110/5-NF	GPS Source	15C
-	GPS TX Antenna	L1P-PV-NF	GPS Source	15C
7912	Spectrum Analyzer	FSV-30	R&S	22/24/27, 15C
-	Thermal Chamber	VT-4002	Vötsch	22/24/27, 15C
-	Power splitter	11667B	Agilent	22/24/27, 15C
3396	EMC Analyzer	E7405A	HP	-
7451	EMI Receiver	ESU-26	R&S	22/24/27, 15C, 15B
4188	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
6981	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
-	Pulse Limiter	ESH3-Z2	R&S	15C, 15B
7582	Signal Generator	SMB100A	R&S	15C, 15B

### 6.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
7591	Antenna	HL562	R&S	22/24/27, 15C, 15B
7572	Double Ridge Horn Antenna	3117	ETS-Lindgren	22/24/27, 15C
7607	Standard Gain HornAntenna	SAS 586	A.H. System	22/24/27, 15C
7624	Standard Gain HornAntenna	SAS 587	A.H. System	22/24/27, 15C
7561	Antenna	HFH2-Z2	R&S	15C, 15B
5715	Antenna	MBA-3030	EMC Automation	22/24/27, 15C
5712	Antenna	PLP3003	EMC Automation	22/24/27, 15C
7457	Relay Switch Unit	TS-RSP	R&S	22/24/27, 15C, 15B
7459	Relay Switch Unit	TS-RSP	R&S	22/24/27, 15C, 15B
5729	Relay Switch Unit	TS-RSP	R&S	22/24/27, 15C, 15B
5728	EMI Receiver	ESIB26	R&S	22/24/27, 15C, 15B
4406	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
7602	Communication Tester	CMW500	R&S	22/24/27, 15C, 15B
7151	Bluetooth Tester	CBT	R&S	15B
3406	Controller	Sc99V	Sunol	22/24/27, 15C, 15B
-	Controller	G-1000DXC	Yaesu	22/24/27, 15C, 15B
-	Computer Controller	GS-232B	Yaesu	22/24/27, 15C, 15B
7040	Preamplifier	TS-PR3	R&S	22/24/27, 15C, 15B
-	Preamplifier	AMF-6D-020180-29-20P	Miteq	22/24/27, 15C, 15B
-	Preamplifier	AMF-4D-01000800-30-29P	Miteq	22/24/27, 15C, 15B
-	Preamplifier	AMF-5F-18002650-25-10P	Miteq	22/24/27, 15C, 15B
-	High Pass Filter	4HC1700-1-KK	R&S	22
-	High Pass Filter	F-15041	RLC	22/24/27, 15C
-	Band Reject Filter	WRCA824/849-0,2-6SS	Wainwright	22
-	Band Reject Filter	WRCC1800/2000-0.2-10SS	Wainwright	24
-	Band Reject Filter	WRCG2400/2483-2390/2493-35/10SS	Wainwright	15C
-	Band Reject Filter	WRCG832/838-825/845-40/5SS	Wainwright	22
-	Band Reject Filter	WRCG1729.4/1735.4-1722.4/1742.4-40/6SS	Wainwright	27

Eq. No	Equipment	Type	Manufacturer	Used in
-	Band Reject Filter	WRCG1877/1883 - 1870/1890-40/6SS	Wainwright	24
-	Notch Filter	WRCD1880-1.1.25/50-10SS	Wainwright	22/24/27
-	Notch Filter	WRCT902.4-0.4/40-8SS	Wainwright	-
Planned	Notch Filter	WRCJV2531/2539-2523/2547-60/12SS	Wainwright	22/24/27
-	GPS RX Antenna w/AMP	L1A-PM-NF	GPS Source	15C
-	GPS Inline amplifier	A11M-V-NF-NM	GPS Source	15C
-	GPS signal Splitter	S12-P110/5-NF	GPS Source	15C
-	GPS TX Antenna	L1P-PV-NF	GPS Source	15C