

FCC Part 15E Compliance Test Report

Test Report no.:	FCC15E_RM-1116_21	Date of Report:	13-Oct-2015
Number of pages:	198	Customer's Contact person:	Tia Melava
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FCC listing no.:	533467		
IC recognition no.:	661V-1		
Tested devices/ accessories:	Phone RM-1116 / Dummy Battery SD-241R / Headset WH-308		
FCC ID:	PYARM-1116	IC:	661X-RM1116
Supplement reports:	-		
Testing has been carried out in accordance with:	CFR 47, FCC rules Part 15 Subpart E, ANSI C63.4 (2014), DTS procedures KDB 789033 D02 v01, IC standards, RSS-210 (Issue 8, December 2010). Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		
Documentation:	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 Microsoft.		
Test Results:	The EUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document		
Date and signature for the contents:			

Timo Raiskio, System Manager, EMC

1. Summary for FCC Part 15E Compliance Test Report

Date of receipt	15-Jun-2015
Testing completed	05-Aug-2015
The customer's contact person	Tia Melava
Test Plan referred to	T:\Projects\RM-1085\TestPlan\RS_TestPlan_RM-1085.xlsm
Notes	-
Document name	T:\Projects\RM-1116\EMC\FCC15E_RM-1116_21.docx

1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/WCDMA/WLAN

The EUT is tested with maximum rated TX power.

Devices under tests

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-1085	004402742320777;059W5J6	2011	-	01063.00001.15244.09000	100012
Dummy Battery	SD-241R	-	V2	-	-	100016
Headset	WH-308	51251B1	-	-	-	100029

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(b)	A9.2	Spurious radiated emissions	NP
15.407(b)(6)	A9.2	AC powerline conducted emissions	NP
	A9.2	6dB(bandwidth)	PASSED
	A9.2	26dB(bandwidth)	PASSED
15.407(a)	A9.2	Maximum power spectral density	PASSED

The test results of RM-1085 are re-used for certification of the RM-1116. The table above indicates the results, which will be re-used.

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 Microsoft Laboratory.

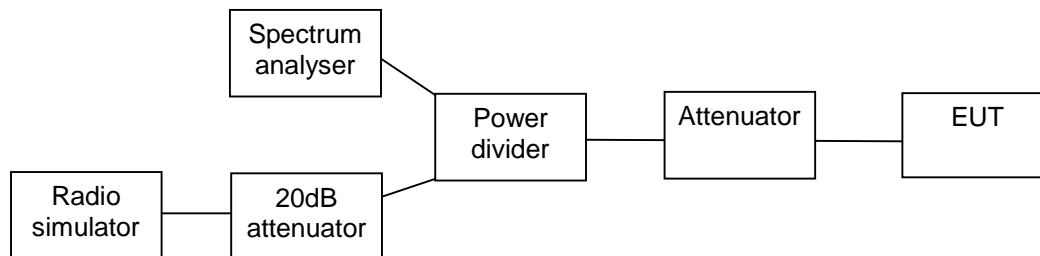
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2. Conducted peak output power (FCC §15.407(a), RSS-210 A9.2)

EUT with DUT number	RM-1085, DUT 100012
Accessories with DUT numbers	SD-241R, DUT 100016 ; WH-308, DUT 100029
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 47 / 101.9
Date of measurements	25-Jun-2015
Measured by	Jari Keto

2.1. Test Setup



2.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D02 v01 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	250 (24)	-	24
5250-5350	250 (24)	11+10 log B	24
5470-5725	250 (24)	11+10 log B	24
5725-5850	1000 (30)	-	30

2.3. Power results summary

Channel / fC [MHz]	Mode	Modulation	Data rate	Level [dBm]
36 / 5180	802.11a MAIN	BPSK	6 Mbps	13.39
36 / 5180	802.11a MAIN	BPSK	9 Mbps	13.34
36 / 5180	802.11a MAIN	QPSK	12 Mbps	13.31
36 / 5180	802.11a MAIN	QPSK	18 Mbps	13.45
36 / 5180	802.11a MAIN	16QAM	24 Mbps	13.6
36 / 5180	802.11a MAIN	16QAM	36 Mbps	13.08
36 / 5180	802.11a MAIN	64QAM	48 Mbps	11.12
36 / 5180	802.11a MAIN	64QAM	54 Mbps	11.09
36 / 5180	802.11n MAIN	BPSK	6.5 / 7.25 Mbps	13.58
36 / 5180	802.11n MAIN	QPSK	13.0 / 14.4 Mbps	13
36 / 5180	802.11n MAIN	QPSK	19.5 / 21.7 Mbps	13.22
36 / 5180	802.11n MAIN	16QAM	26.0 / 28.9 Mbps	13.17
36 / 5180	802.11n MAIN	16QAM	39.0 / 43.3 Mbps	13.15
36 / 5180	802.11n MAIN	64QAM	52.0 / 57.8 Mbps	11.13
36 / 5180	802.11n MAIN	64QAM	58.5 / 65.0 Mbps	11.23
36 / 5180	802.11n MAIN	64QAM	65.0 / 72.2 Mbps	10.2
36 / 5180	802.11ac MAIN	256QAM	78.0 / 86.7 Mbps	8.23
36+40 / 5190	802.11n MAIN	BPSK	13.5 / 15.0 Mbps	13.09
36+40 / 5190	802.11n MAIN	QPSK	27.0 / 30.0 Mbps	13.14
36+40 / 5190	802.11n MAIN	QPSK	40.5 / 45.0 Mbps	13.14
36+40 / 5190	802.11n MAIN	16QAM	54.0 / 60.0 Mbps	12.09
36+40 / 5190	802.11n MAIN	16QAM	81.0 / 90.0 Mbps	12.15
36+40 / 5190	802.11n MAIN	64QAM	108.0 / 120.0 Mbps	10.26
36+40 / 5190	802.11n MAIN	64QAM	121.5 / 135.0 Mbps	10.36
36+40 / 5190	802.11n MAIN	64QAM	135.0 / 150.0 Mbps	10.28
36+40 / 5190	802.11ac MAIN	256QAM	162.0 / 180.0 Mbps	8.37
36+40 / 5190	802.11ac MAIN	256QAM	180.0 / 200.0 Mbps	7.34
36-48 / 5210	802.11ac MAIN	BPSK	29.3 / 32.5 Mbps	11.88
36-48 / 5210	802.11ac MAIN	QPSK	58.5 / 65.0 Mbps	11.94
36-48 / 5210	802.11ac MAIN	QPSK	87.8 / 97.5 Mbps	11.93
36-48 / 5210	802.11ac MAIN	16QAM	117.0 / 130.0 Mbps	11.25
36-48 / 5210	802.11ac MAIN	16QAM	175.5 / 195.0 Mbps	11.2
36-48 / 5210	802.11ac MAIN	64QAM	234.0 / 260.0 Mbps	10.35
36-48 / 5210	802.11ac MAIN	64QAM	263.3 / 292.5 Mbps	10.33
36-48 / 5210	802.11ac MAIN	64QAM	292.5 / 325.0 Mbps	9.43
36-48 / 5210	802.11ac MAIN	256QAM	351.0 / 390.0 Mbps	8.18
36-48 / 5210	802.11ac MAIN	256QAM	390.0 / 433.3 Mbps	7.26
36 / 5180	802.11a AUX	BPSK	6 Mbps	13.8
36 / 5180	802.11a AUX	BPSK	9 Mbps	13.76
36 / 5180	802.11a AUX	QPSK	12 Mbps	13.73
36 / 5180	802.11a AUX	QPSK	18 Mbps	13.84
36 / 5180	802.11a AUX	16QAM	24 Mbps	14.02
36 / 5180	802.11a AUX	16QAM	36 Mbps	13.58
36 / 5180	802.11a AUX	64QAM	48 Mbps	11.69
36 / 5180	802.11a AUX	64QAM	54 Mbps	11.63
36 / 5180	802.11n AUX	BPSK	6.5 / 7.25 Mbps	14.1

36 / 5180	802.11n AUX	QPSK	13.0 / 14.4 Mbps	13.42
36 / 5180	802.11n AUX	QPSK	19.5 / 21.7 Mbps	13.64
36 / 5180	802.11n AUX	16QAM	26.0 / 28.9 Mbps	13.68
36 / 5180	802.11n AUX	16QAM	39.0 / 43.3 Mbps	13.69
36 / 5180	802.11n AUX	64QAM	52.0 / 57.8 Mbps	11.72
36 / 5180	802.11n AUX	64QAM	58.5 / 65.0 Mbps	11.79
36 / 5180	802.11n AUX	64QAM	65.0 / 72.2 Mbps	10.74
36 / 5180	802.11ac AUX	256QAM	78.0 / 86.7 Mbps	8.89
36+40 / 5190	802.11n AUX	BPSK	13.5 / 15.0 Mbps	13.71
36+40 / 5190	802.11n AUX	QPSK	27.0 / 30.0 Mbps	13.74
36+40 / 5190	802.11n AUX	QPSK	40.5 / 45.0 Mbps	13.73
36+40 / 5190	802.11n AUX	16QAM	54.0 / 60.0 Mbps	12.87
36+40 / 5190	802.11n AUX	16QAM	81.0 / 90.0 Mbps	12.93
36+40 / 5190	802.11n AUX	64QAM	108.0 / 120.0 Mbps	10.9
36+40 / 5190	802.11n AUX	64QAM	121.5 / 135.0 Mbps	11.01
36+40 / 5190	802.11n AUX	64QAM	135.0 / 150.0 Mbps	10.93
36+40 / 5190	802.11ac AUX	256QAM	162.0 / 180.0 Mbps	9.06
36+40 / 5190	802.11ac AUX	256QAM	180.0 / 200.0 Mbps	7.86
36-48 / 5210	802.11ac AUX	BPSK	29.3 / 32.5 Mbps	12.53
36-48 / 5210	802.11ac AUX	QPSK	58.5 / 65.0 Mbps	12.62
36-48 / 5210	802.11ac AUX	QPSK	87.8 / 97.5 Mbps	12.62
36-48 / 5210	802.11ac AUX	16QAM	117.0 / 130.0 Mbps	11.87
36-48 / 5210	802.11ac AUX	16QAM	175.5 / 195.0 Mbps	11.83
36-48 / 5210	802.11ac AUX	64QAM	234.0 / 260.0 Mbps	11.04
36-48 / 5210	802.11ac AUX	64QAM	263.3 / 292.5 Mbps	11
36-48 / 5210	802.11ac AUX	64QAM	292.5 / 325.0 Mbps	10.12
36-48 / 5210	802.11ac AUX	256QAM	351.0 / 390.0 Mbps	9.02
36-48 / 5210	802.11ac AUX	256QAM	390.0 / 433.3 Mbps	8.03
40 / 5200	802.11n main	BPSK	6.5 / 7.25 Mbps	12.63
48 / 5240	802.11n main	BPSK	6.5 / 7.25 Mbps	12.86
52 / 5260	802.11n main	BPSK	6.5 / 7.25 Mbps	13.08
60 / 5300	802.11n main	BPSK	6.5 / 7.25 Mbps	13.12
64 / 5320	802.11n main	BPSK	6.5 / 7.25 Mbps	13.18
100 / 5500	802.11n main	BPSK	6.5 / 7.25 Mbps	13.48
116 / 5580	802.11n main	BPSK	6.5 / 7.25 Mbps	13.87
140 / 5700	802.11n main	BPSK	6.5 / 7.25 Mbps	13.63
149 / 5745	802.11n main	BPSK	6.5 / 7.25 Mbps	21.75
157 / 5785	802.11n main	BPSK	6.5 / 7.25 Mbps	21.87
165 / 5825	802.11n main	BPSK	6.5 / 7.25 Mbps	21.64
44+48 / 5230	802.11n main	BPSK	13.5 / 15.0 Mbps	12.39
52+56 / 5270	802.11n main	BPSK	13.5 / 15.0 Mbps	12.61
60+64 / 5310	802.11n main	BPSK	13.5 / 15.0 Mbps	12.78
100+104 / 5510	802.11n main	BPSK	13.5 / 15.0 Mbps	13.26
108+112 / 5550	802.11n main	BPSK	13.5 / 15.0 Mbps	13.36
132+136 / 5670	802.11n main	BPSK	13.5 / 15.0 Mbps	13.4
149+153 / 5755	802.11n main	BPSK	13.5 / 15.0 Mbps	21.49
157+161 / 5795	802.11n main	BPSK	13.5 / 15.0 Mbps	21.63
52-64 / 5290	802.11ac main	BPSK	29.3 / 32.5 Mbps	11.39

100-112 / 5530	802.11ac main	BPSK	29.3 / 32.5 Mbps	12.2
149-161 / 5775	802.11ac main	BPSK	29.3 / 32.5 Mbps	20.92
40 / 5200	802.11a main	16QAM	24 Mbps	12.69
48 / 5240	802.11a main	16QAM	24 Mbps	12.85
52 / 5260	802.11a main	16QAM	24 Mbps	13.07
60 / 5300	802.11a main	16QAM	24 Mbps	13.08
64 / 5320	802.11a main	16QAM	24 Mbps	13.13
100 / 5500	802.11a main	16QAM	24 Mbps	13.62
116 / 5580	802.11a main	16QAM	24 Mbps	13.98
140 / 5700	802.11a main	16QAM	24 Mbps	13.86
149 / 5745	802.11a main	16QAM	24 Mbps	22.14
157 / 5785	802.11a main	16QAM	24 Mbps	22.21
165 / 5825	802.11a main	16QAM	24 Mbps	21.79
44+48 / 5230	802.11n main	QPSK	27.0 / 30.0 Mbps	12.37
52+56 / 5270	802.11n main	QPSK	27.0 / 30.0 Mbps	12.63
60+64 / 5310	802.11n main	QPSK	27.0 / 30.0 Mbps	12.83
100+104 / 5510	802.11n main	QPSK	27.0 / 30.0 Mbps	13.29
108+112 / 5550	802.11n main	QPSK	27.0 / 30.0 Mbps	13.41
132+136 / 5670	802.11n main	QPSK	27.0 / 30.0 Mbps	13.39
149+153 / 5755	802.11n main	QPSK	27.0 / 30.0 Mbps	21.26
157+161 / 5795	802.11n main	QPSK	27.0 / 30.0 Mbps	21.39
52-64 / 5290	802.11ac main	QPSK	58.5 / 65.0 Mbps	11.48
100-112 / 5530	802.11ac main	QPSK	58.5 / 65.0 Mbps	12.29
149-161 / 5775	802.11ac main	QPSK	58.5 / 65.0 Mbps	20.48
40 / 5200	802.11n Aux	BPSK	6.5 / 7.25 Mbps	13.64
48 / 5240	802.11n Aux	BPSK	6.5 / 7.25 Mbps	13.82
52 / 5260	802.11n Aux	BPSK	6.5 / 7.25 Mbps	13.99
60 / 5300	802.11n Aux	BPSK	6.5 / 7.25 Mbps	13.93
64 / 5320	802.11n Aux	BPSK	6.5 / 7.25 Mbps	13.95
100 / 5500	802.11n Aux	BPSK	6.5 / 7.25 Mbps	13.95
116 / 5580	802.11n Aux	BPSK	6.5 / 7.25 Mbps	14.14
140 / 5700	802.11n Aux	BPSK	6.5 / 7.25 Mbps	14.05
149 / 5745	802.11n Aux	BPSK	6.5 / 7.25 Mbps	22.29
157 / 5785	802.11n Aux	BPSK	6.5 / 7.25 Mbps	22.35
165 / 5825	802.11n Aux	BPSK	6.5 / 7.25 Mbps	22.27
44+48 / 5230	802.11n Aux	BPSK	13.5 / 15.0 Mbps	13.64
52+56 / 5270	802.11n Aux	BPSK	13.5 / 15.0 Mbps	13.61
60+64 / 5310	802.11n Aux	BPSK	13.5 / 15.0 Mbps	13.66
100+104 / 5510	802.11n Aux	BPSK	13.5 / 15.0 Mbps	13.8
108+112 / 5550	802.11n Aux	BPSK	13.5 / 15.0 Mbps	13.8
132+136 / 5670	802.11n Aux	BPSK	13.5 / 15.0 Mbps	13.77
149+153 / 5755	802.11n Aux	BPSK	13.5 / 15.0 Mbps	21.88
157+161 / 5795	802.11n Aux	BPSK	13.5 / 15.0 Mbps	22.14
52-64 / 5290	802.11ac Aux	BPSK	29.3 / 32.5 Mbps	12.26
100-112 / 5530	802.11ac Aux	BPSK	29.3 / 32.5 Mbps	12.68
149-161 / 5775	802.11ac Aux	BPSK	29.3 / 32.5 Mbps	21.37
40 / 5200	802.11a Aux	16QAM	24 Mbps	13.7
48 / 5240	802.11a Aux	16QAM	24 Mbps	13.98

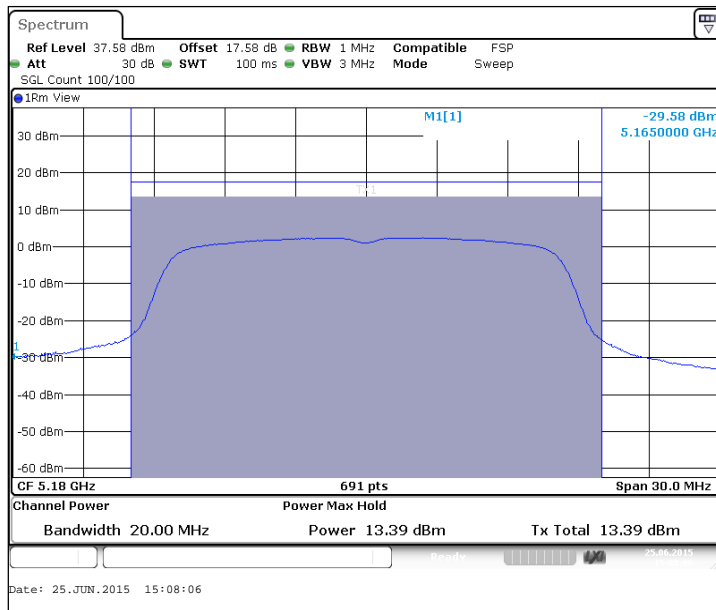
52 / 5260	802.11a Aux	16QAM	24 Mbps	14.09
60 / 5300	802.11a Aux	16QAM	24 Mbps	13.88
64 / 5320	802.11a Aux	16QAM	24 Mbps	13.91
100 / 5500	802.11a Aux	16QAM	24 Mbps	14.12
116 / 5580	802.11a Aux	16QAM	24 Mbps	14.3
140 / 5700	802.11a Aux	16QAM	24 Mbps	14.18
149 / 5745	802.11a Aux	16QAM	24 Mbps	22.61
157 / 5785	802.11a Aux	16QAM	24 Mbps	22.75
165 / 5825	802.11a Aux	16QAM	24 Mbps	22.64
44+48 / 5230	802.11n Aux	QPSK	27.0 / 30.0 Mbps	13.69
52+56 / 5270	802.11n Aux	QPSK	27.0 / 30.0 Mbps	13.64
60+64 / 5310	802.11n Aux	QPSK	27.0 / 30.0 Mbps	13.72
100+104 / 5510	802.11n Aux	QPSK	27.0 / 30.0 Mbps	13.8
108+112 / 5550	802.11n Aux	QPSK	27.0 / 30.0 Mbps	13.82
132+136 / 5670	802.11n Aux	QPSK	27.0 / 30.0 Mbps	13.76
149+153 / 5755	802.11n Aux	QPSK	27.0 / 30.0 Mbps	21.6
157+161 / 5795	802.11n Aux	QPSK	27.0 / 30.0 Mbps	21.97
52-64 / 5290	802.11ac Aux	QPSK	58.5 / 65.0 Mbps	12.33
100-112 / 5530	802.11ac Aux	QPSK	58.5 / 65.0 Mbps	12.73
149-161 / 5775	802.11ac Aux	QPSK	58.5 / 65.0 Mbps	20.88

2.4. 5 GHz RLAN Test results

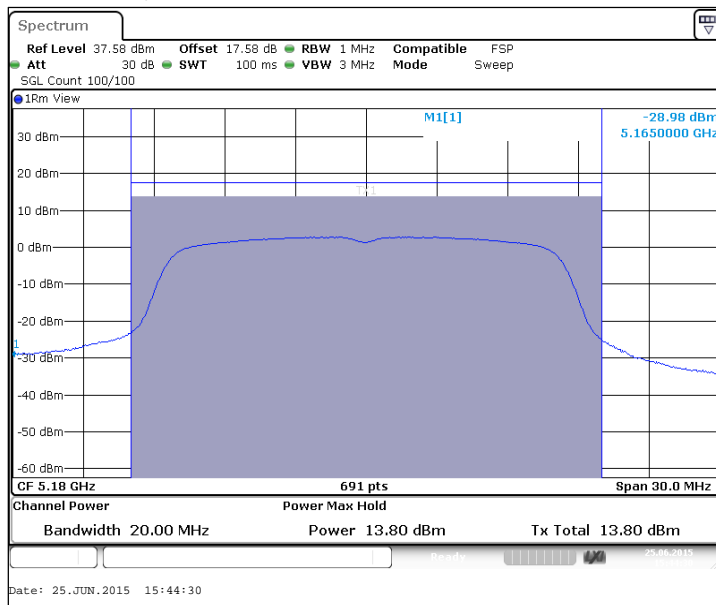
2.4.1 802.11a mode, BPSK modulation, 6 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.39	21.827	PASSED
36 / 5180 AUX	13.8	23.988	PASSED

Channel 36 / 5180MHz



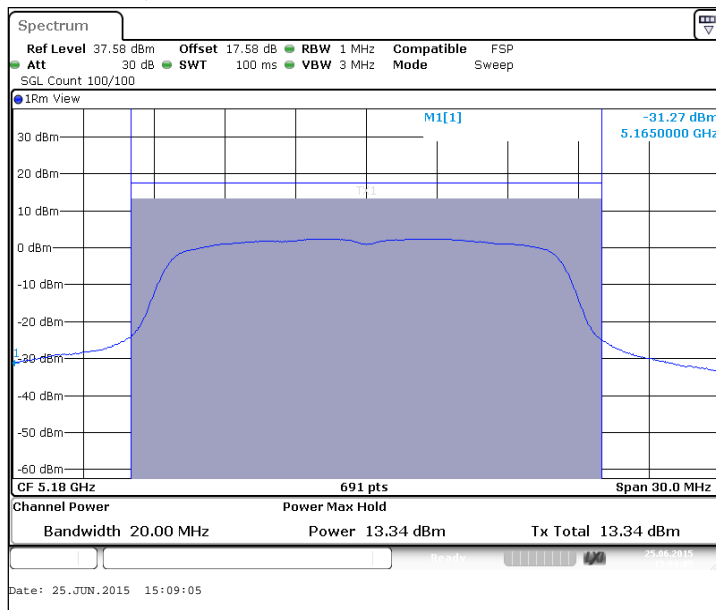
Channel 36 / 5180MHz



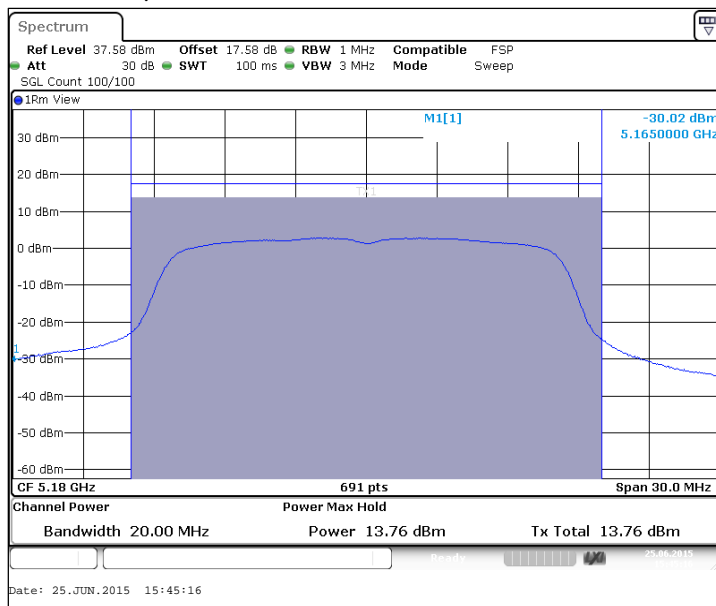
2.4.2 802.11a mode, BPSK modulation, 9 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.34	21.577	PASSED
36 / 5180 AUX	13.76	23.768	PASSED

Channel 36 / 5180MHz



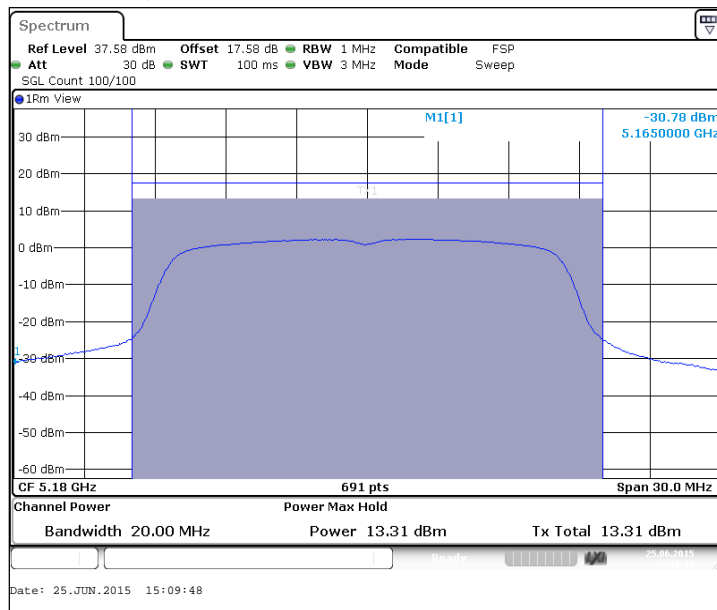
Channel 36 / 5180MHz



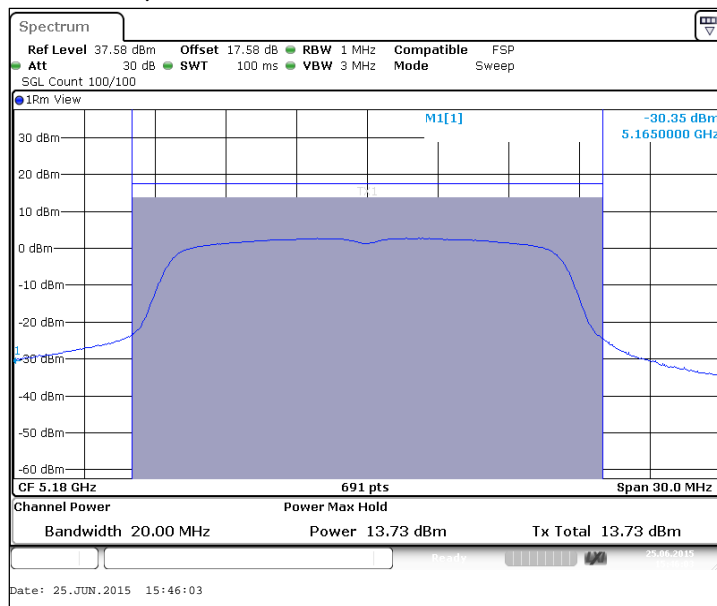
2.4.3 802.11a mode, QPSK modulation, 12 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.31	21.429	PASSED
36 / 5180 AUX	13.73	23.605	PASSED

Channel 36 / 5180MHz



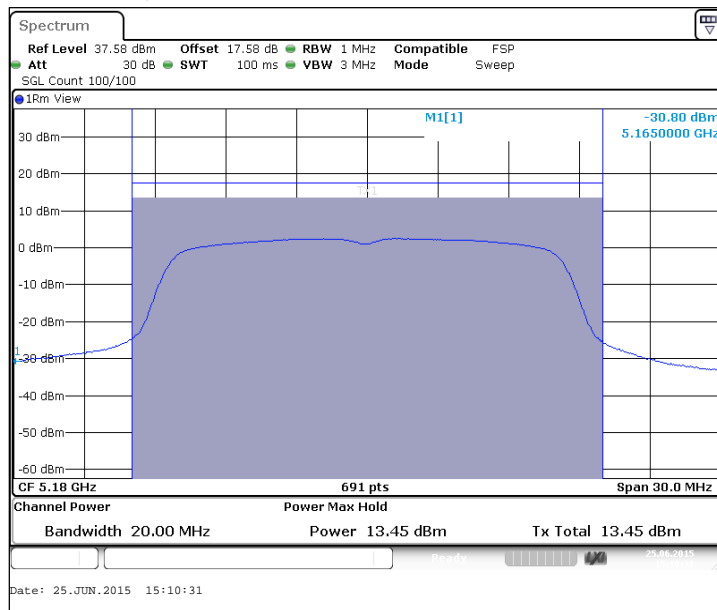
Channel 36 / 5180MHz



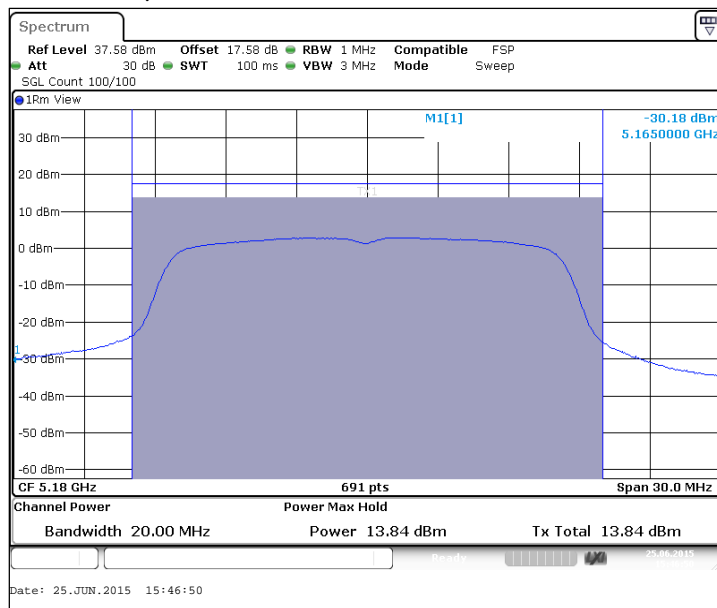
2.4.4 802.11a mode, QPSK modulation, 18 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.45	22.131	PASSED
36 / 5180 AUX	13.84	24.21	PASSED

Channel 36 / 5180MHz



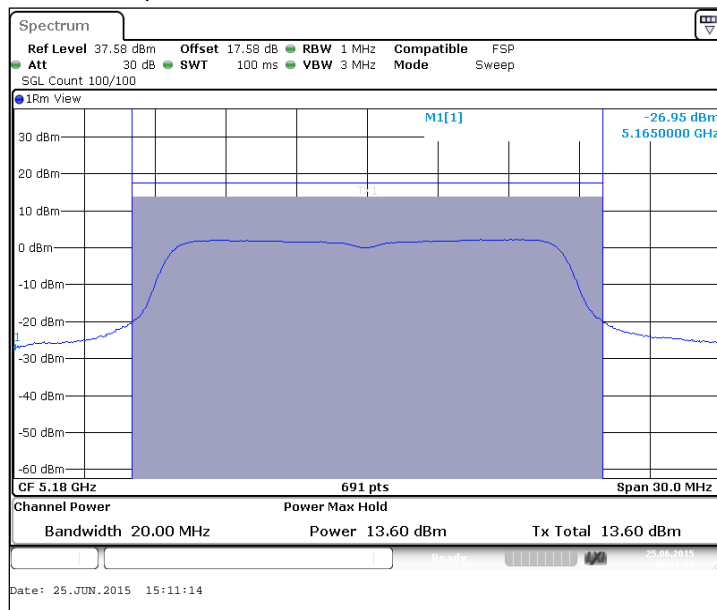
Channel 36 / 5180MHz



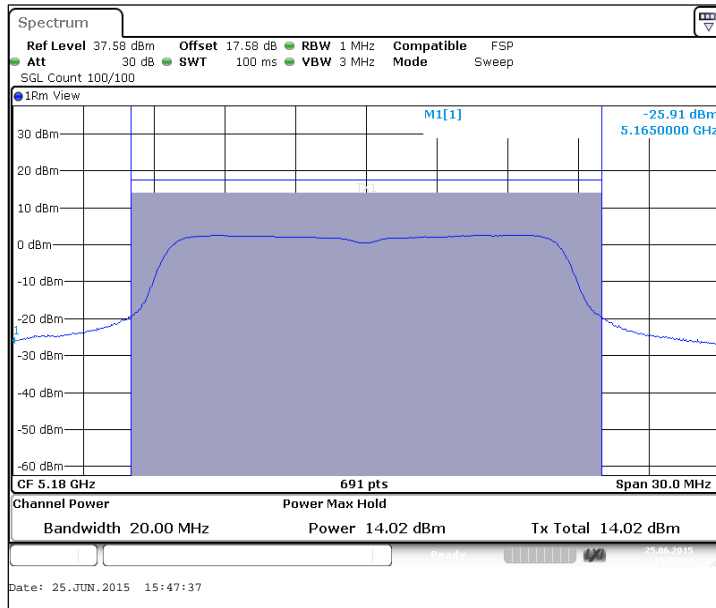
2.4.5 802.11a mode, 16QAM modulation, 24 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.6	22.909	PASSED
36 / 5180 AUX	14.02	25.235	PASSED
40 / 5200 main	12.69	18.578	PASSED
48 / 5240 main	12.85	19.275	PASSED
52 / 5260 main	13.07	20.277	PASSED
60 / 5300 main	13.08	20.324	PASSED
64 / 5320 main	13.13	20.559	PASSED
100 / 5500 main	13.62	23.014	PASSED
116 / 5580 main	13.98	25.003	PASSED
140 / 5700 main	13.86	24.322	PASSED
149 / 5745 main	22.14	163.682	PASSED
157 / 5785 main	22.21	166.341	PASSED
165 / 5825 main	21.79	151.008	PASSED

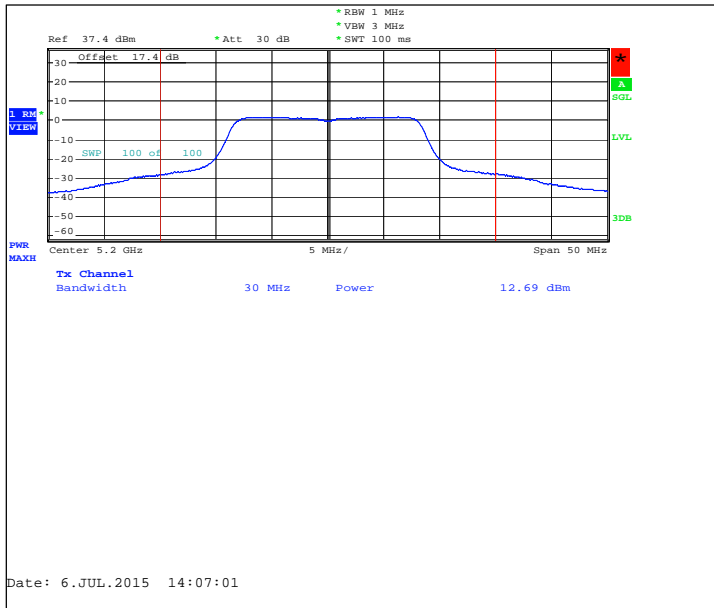
Channel 36 / 5180MHz



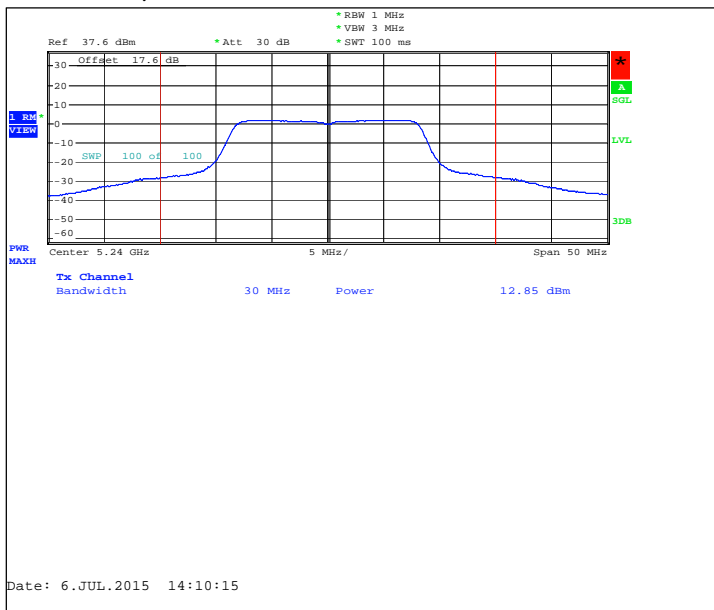
Channel 36 / 5180MHz



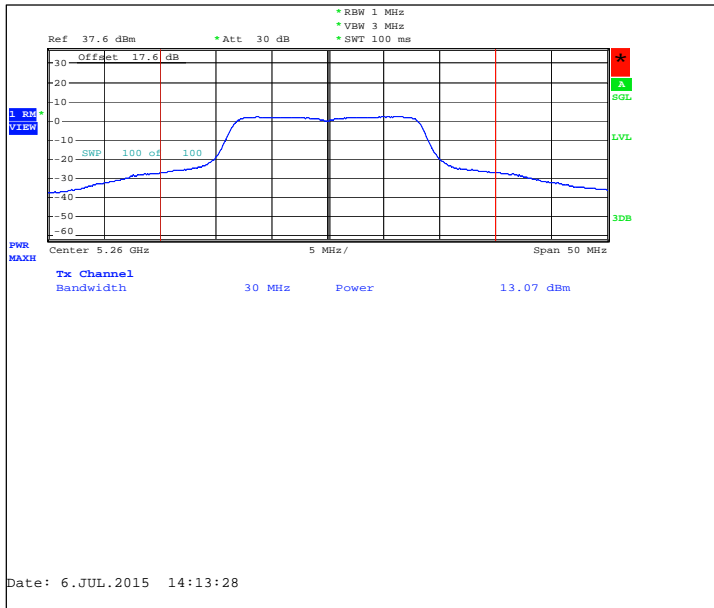
Channel 40 / 5200MHz



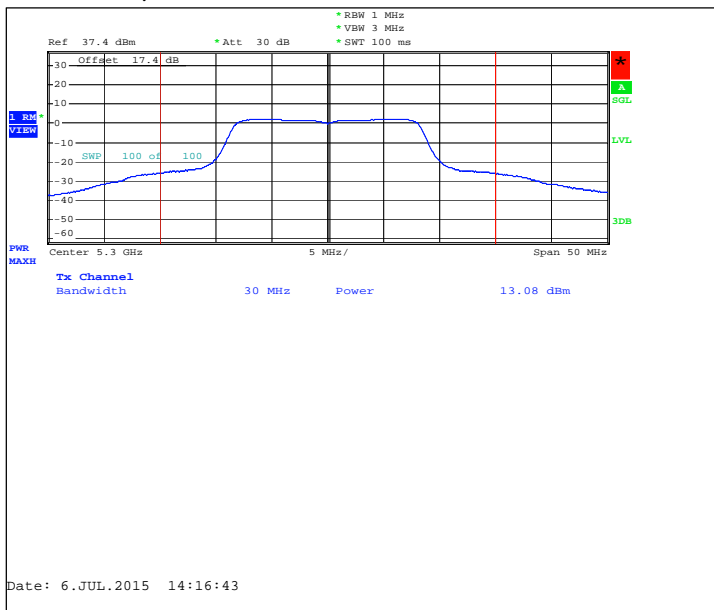
Channel 48 / 5240MHz



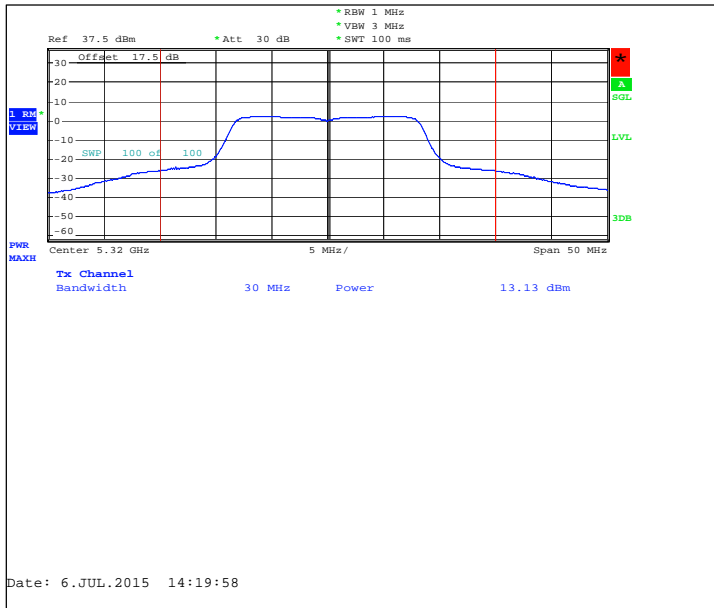
Channel 52 / 5260MHz



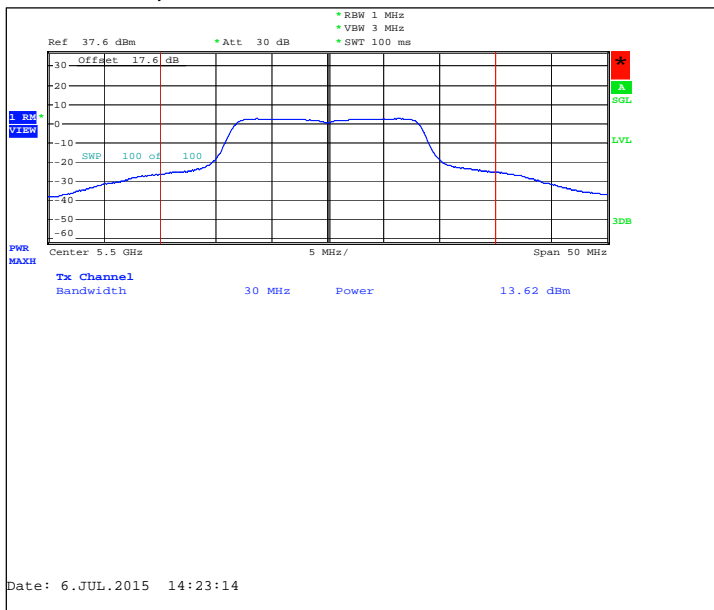
Channel 60 / 5300MHz



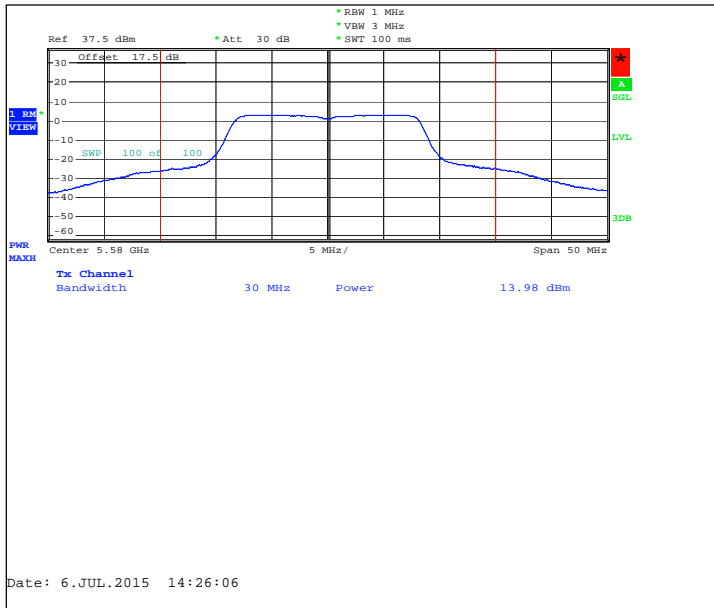
Channel 64 / 5320MHz



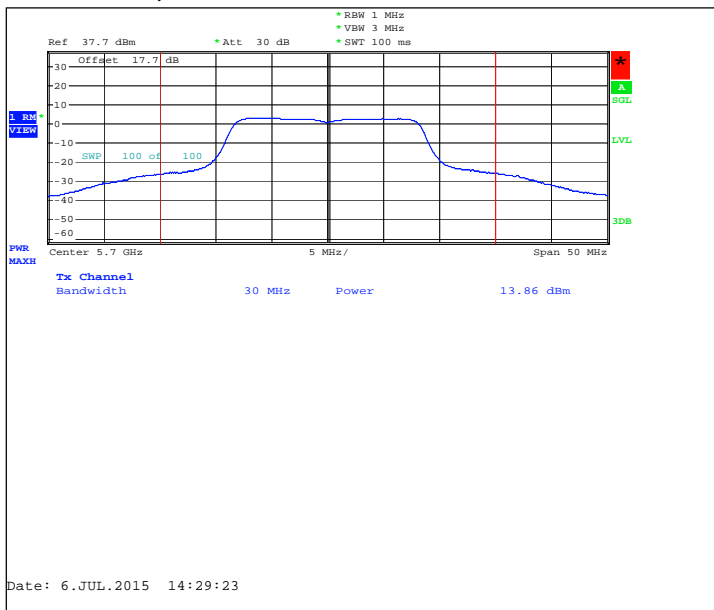
Channel 100 / 5500MHz



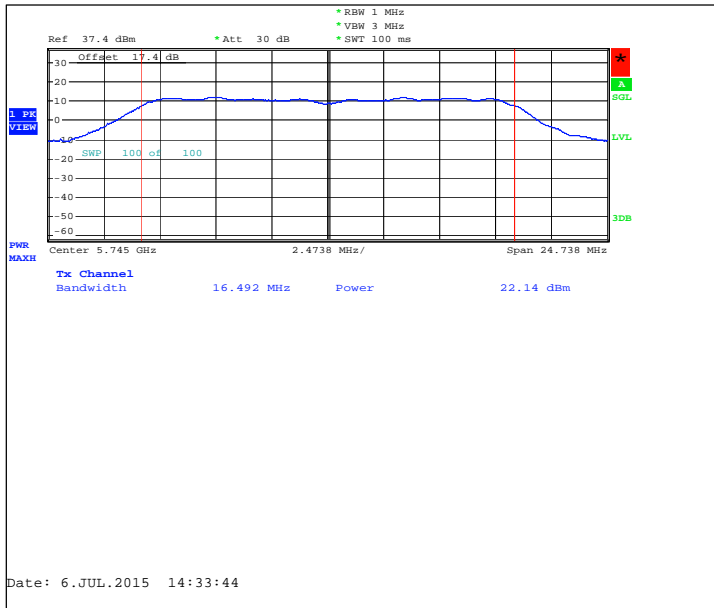
Channel 116 / 5580MHz



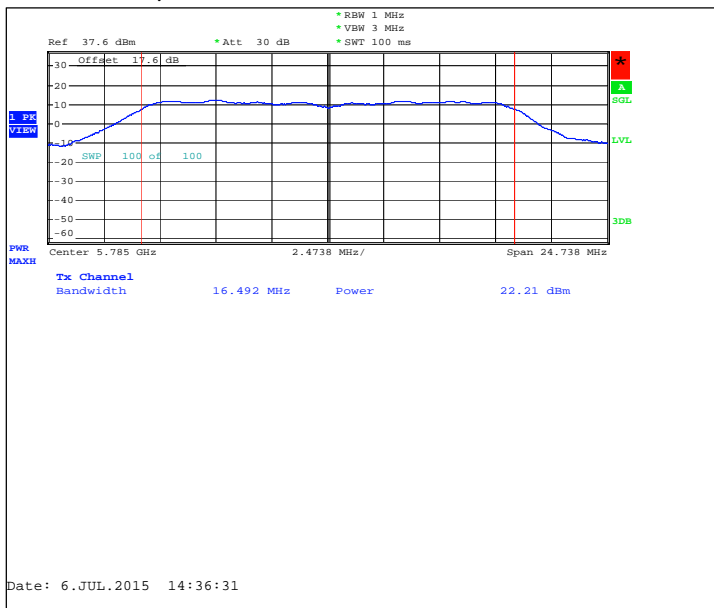
Channel 140 / 5700MHz



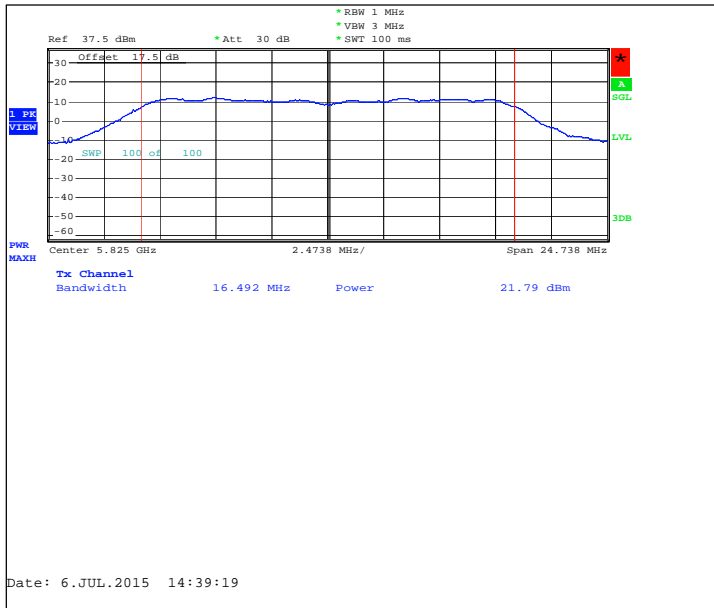
Channel 149 / 5745MHz



Channel 157 / 5785MHz



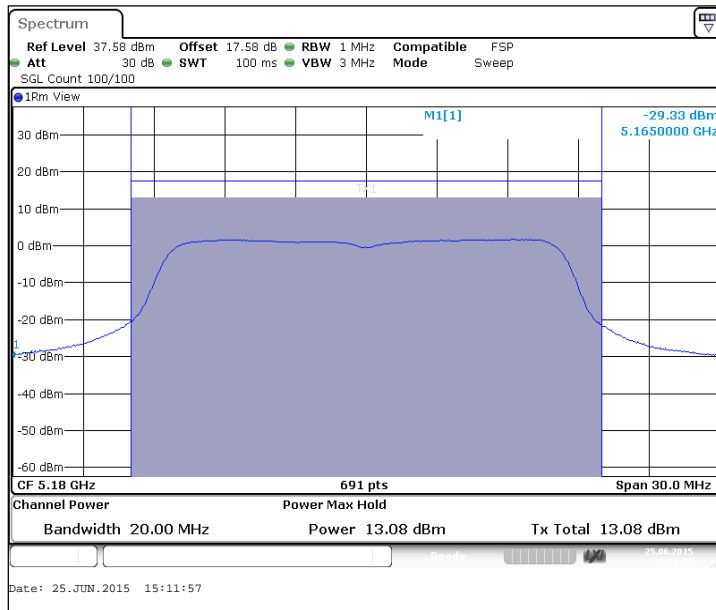
Channel 165 / 5825MHz



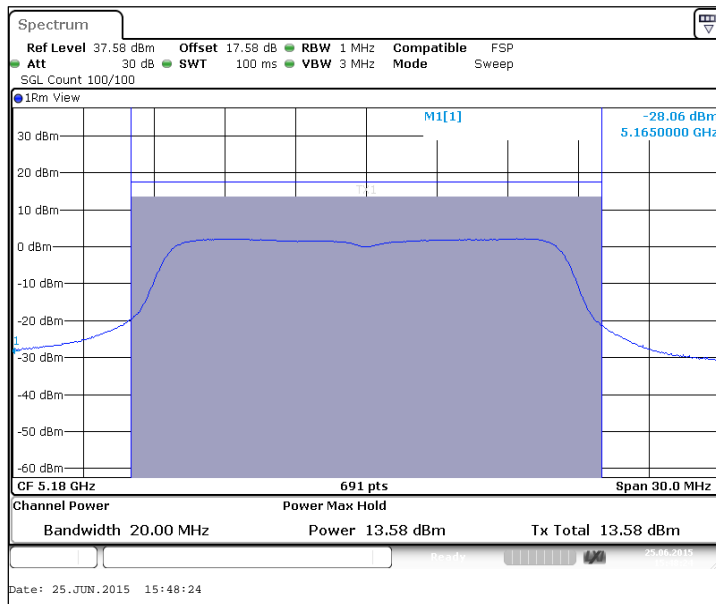
2.4.6 802.11a mode, 16QAM modulation, 36 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.08	20.324	PASSED
36 / 5180 AUX	13.58	22.803	PASSED

Channel 36 / 5180MHz



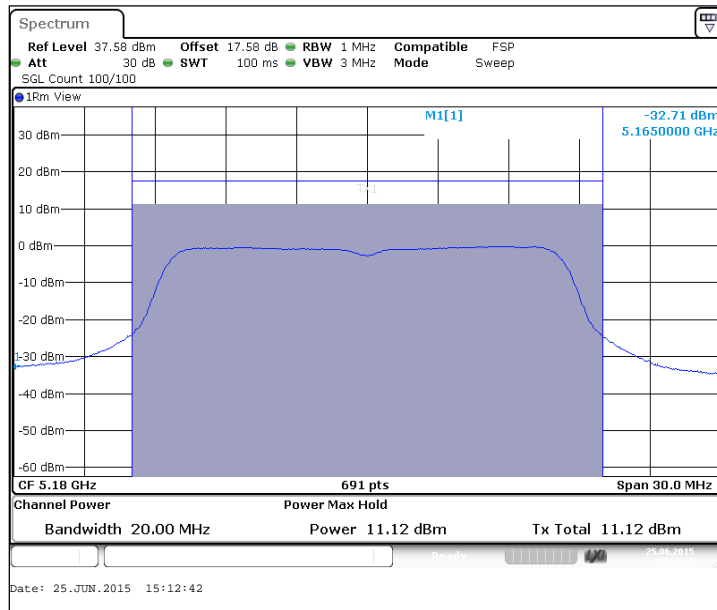
Channel 36 / 5180MHz



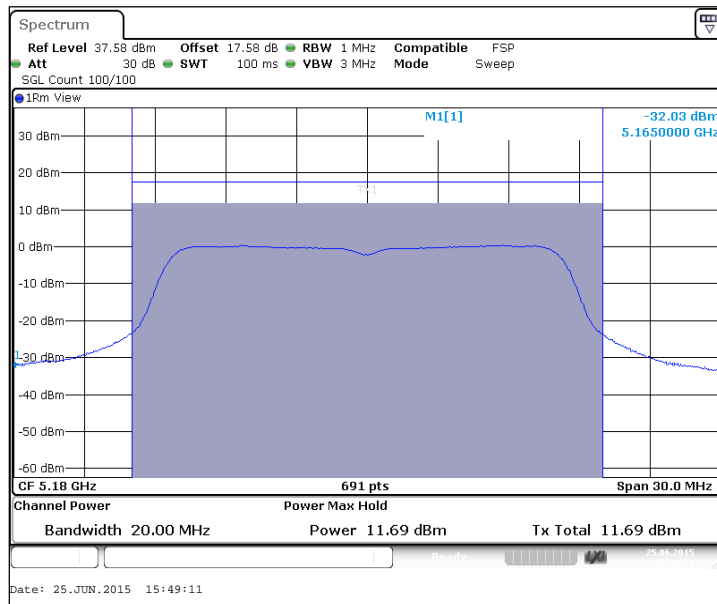
2.4.7 802.11a mode, 64QAM modulation, 48 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	11.12	12.942	PASSED
36 / 5180 AUX	11.69	14.757	PASSED

Channel 36 / 5180MHz



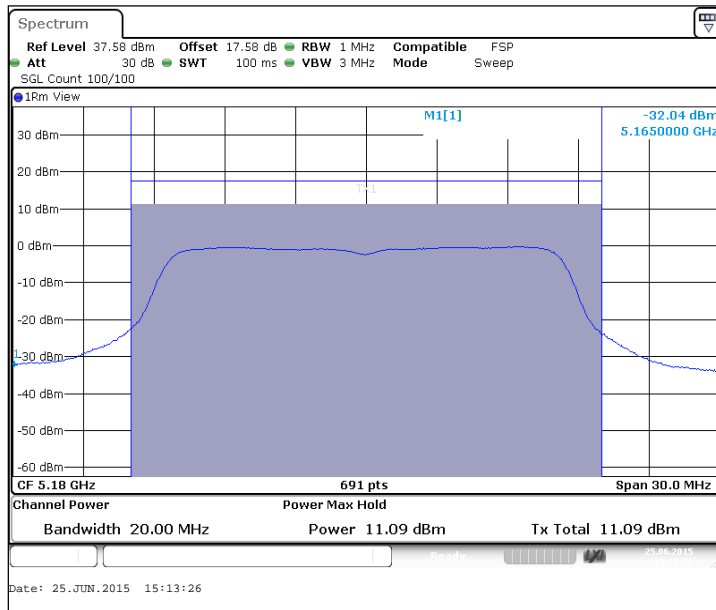
Channel 36 / 5180MHz



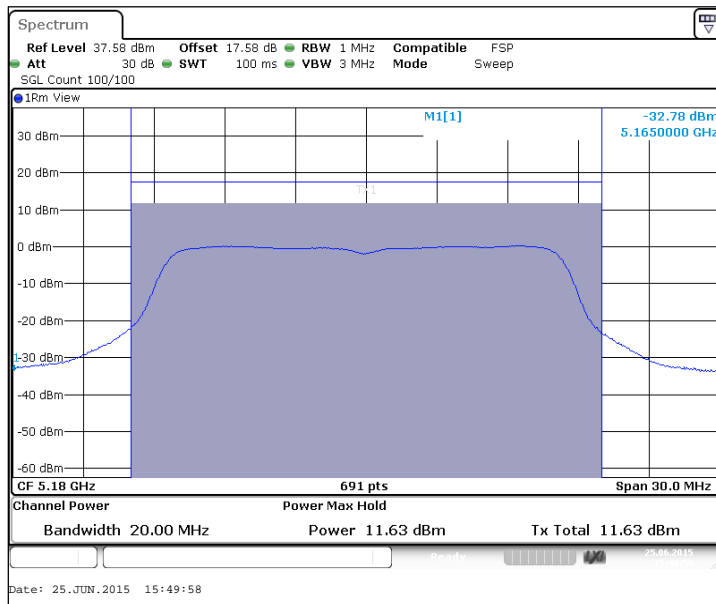
2.4.8 802.11a mode, 64QAM modulation, 54 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	11.09	12.853	PASSED
36 / 5180 AUX	11.63	14.555	PASSED

Channel 36 / 5180MHz



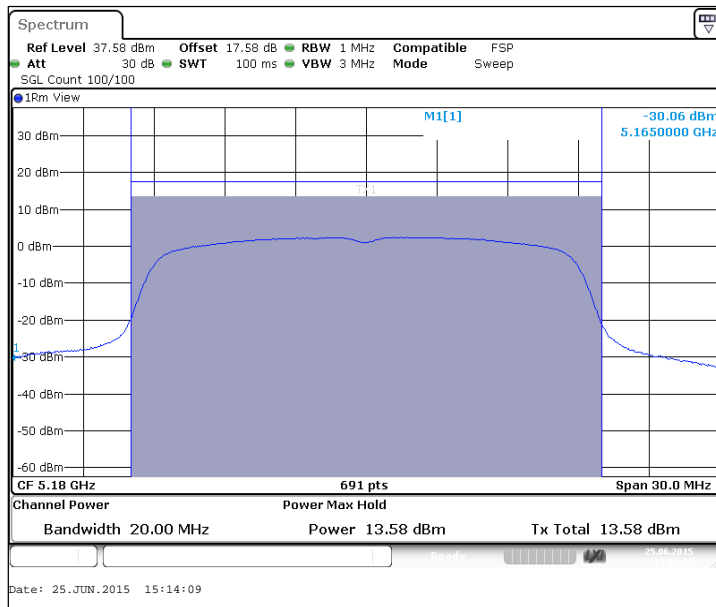
Channel 36 / 5180MHz



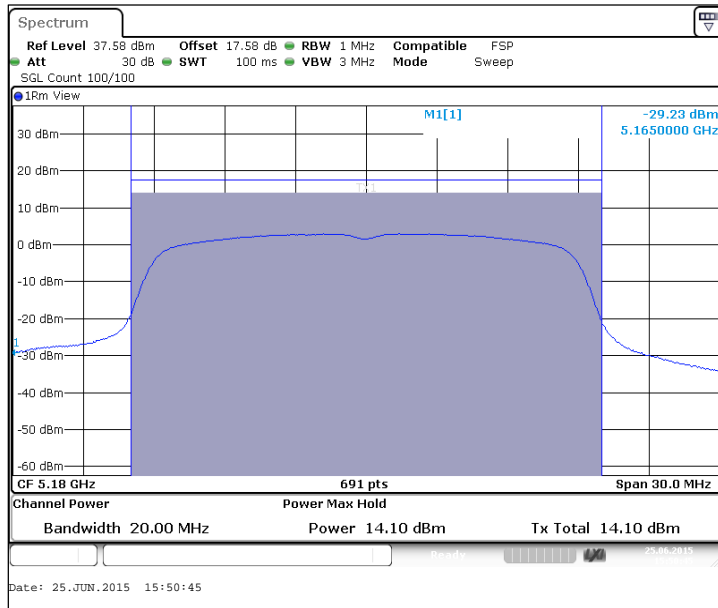
2.4.9 802.11n mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.58	22.803	PASSED
36 / 5180 AUX	14.1	25.704	PASSED
40 / 5200 main	12.63	18.323	PASSED
48 / 5240 main	12.86	19.32	PASSED
52 / 5260 main	13.08	20.324	PASSED
60 / 5300 main	13.12	20.512	PASSED
64 / 5320 main	13.18	20.797	PASSED
100 / 5500 main	13.48	22.284	PASSED
116 / 5580 main	13.87	24.378	PASSED
140 / 5700 main	13.63	23.067	PASSED
149 / 5745 main	21.75	149.624	PASSED
157 / 5785 main	21.87	153.815	PASSED
165 / 5825 main	21.64	145.881	PASSED

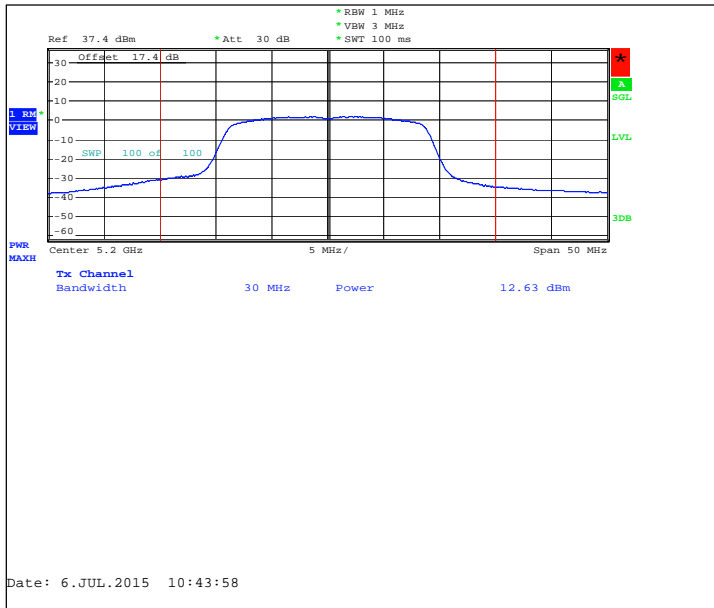
Channel 36 / 5180MHz



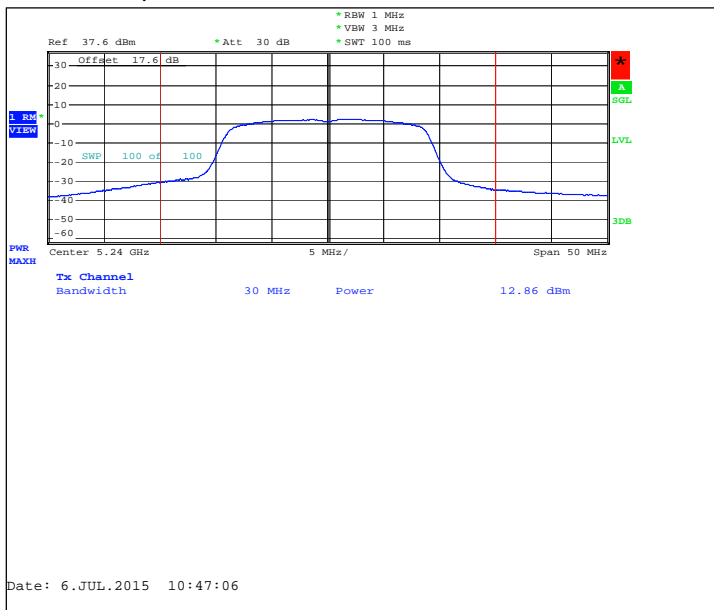
Channel 36 / 5180MHz



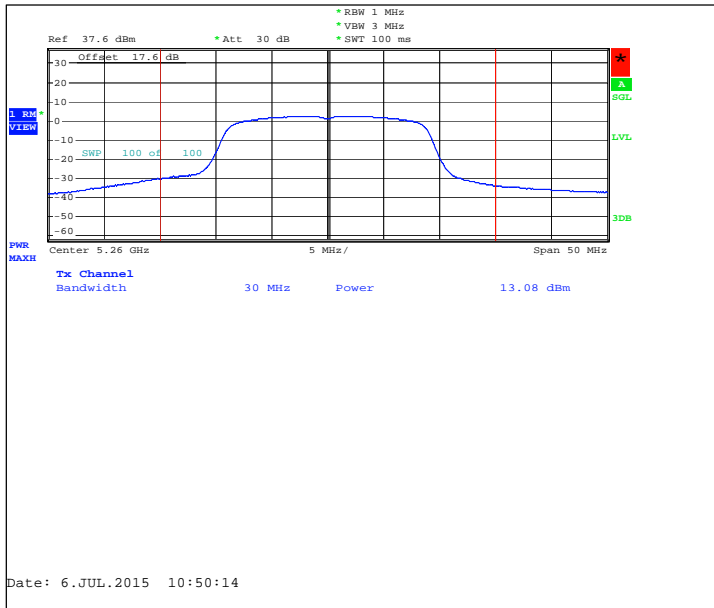
Channel 40 / 5200MHz



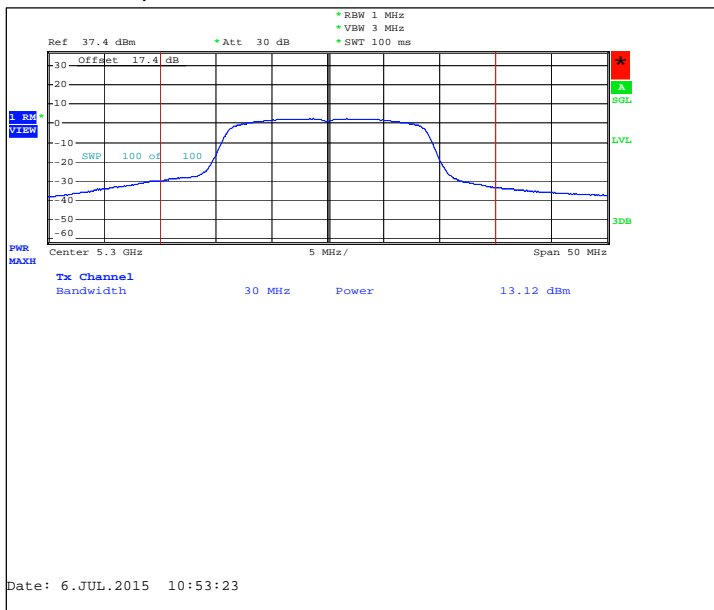
Channel 48 / 5240MHz



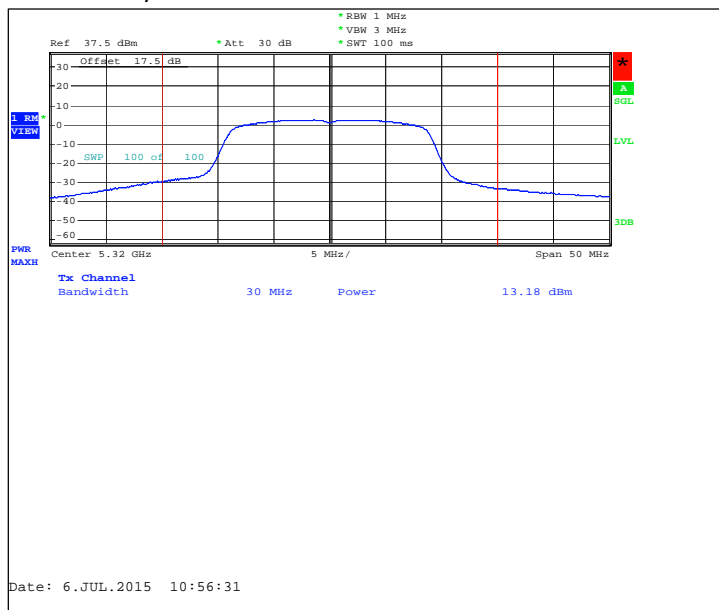
Channel 52 / 5260MHz



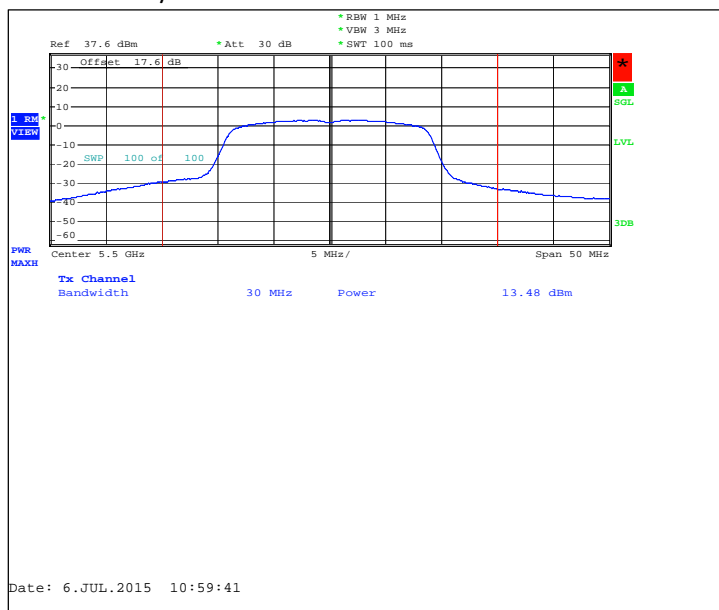
Channel 60 / 5300MHz



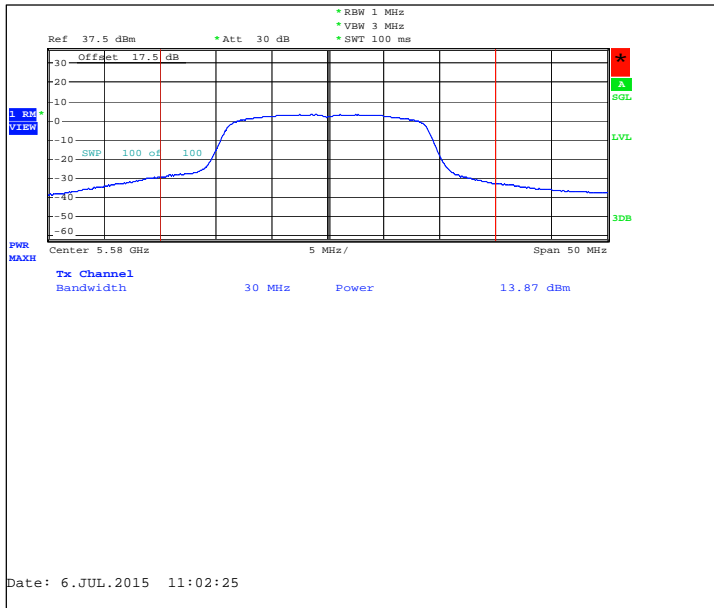
Channel 64 / 5320MHz



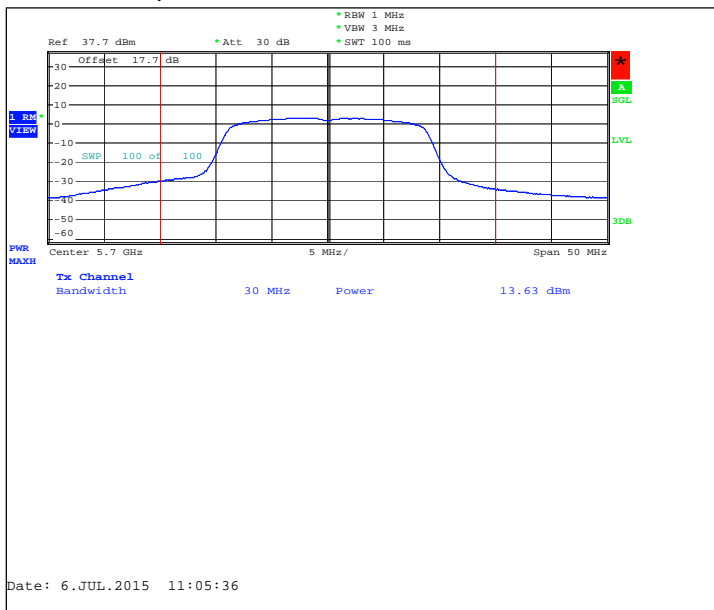
Channel 100 / 5500MHz



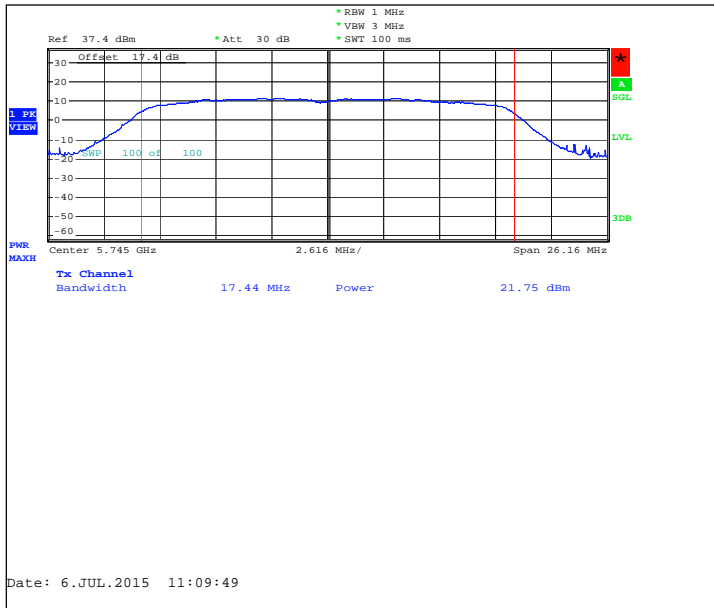
Channel 116 / 5580MHz



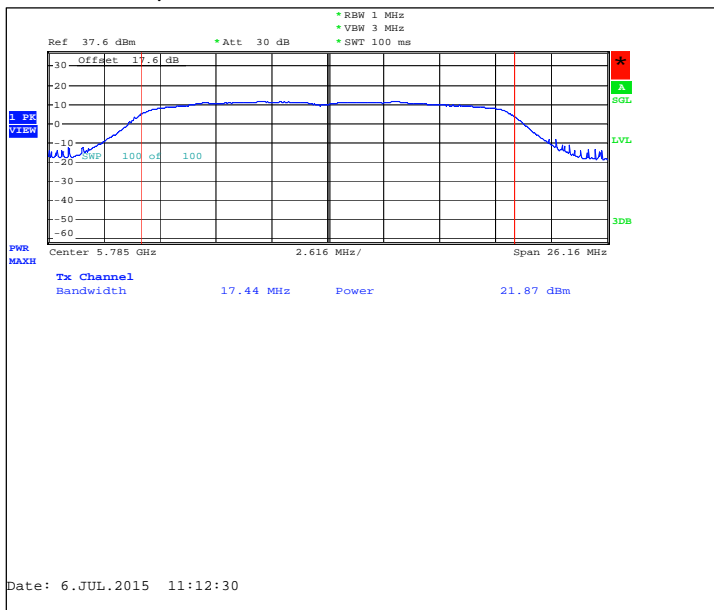
Channel 140 / 5700MHz



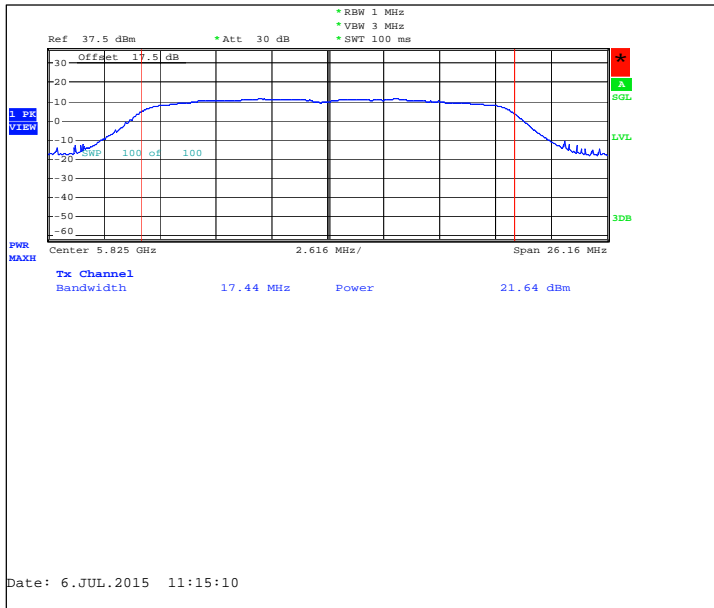
Channel 149 / 5745MHz



Channel 157 / 5785MHz



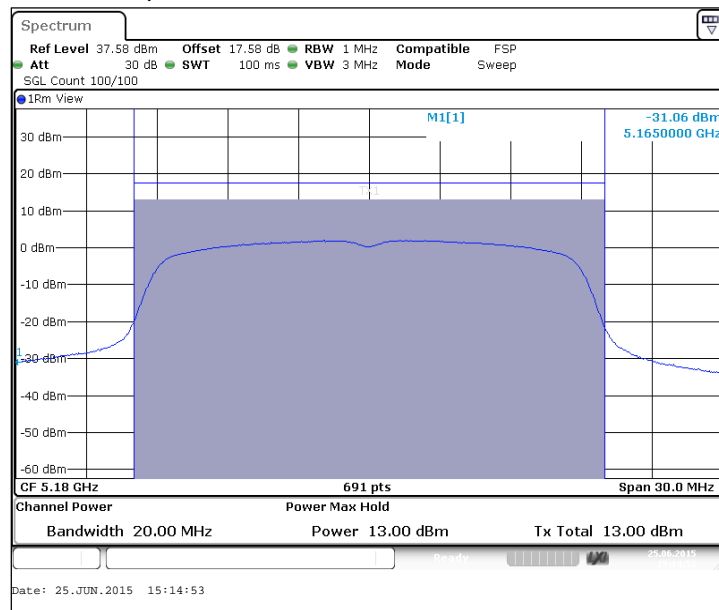
Channel 165 / 5825MHz



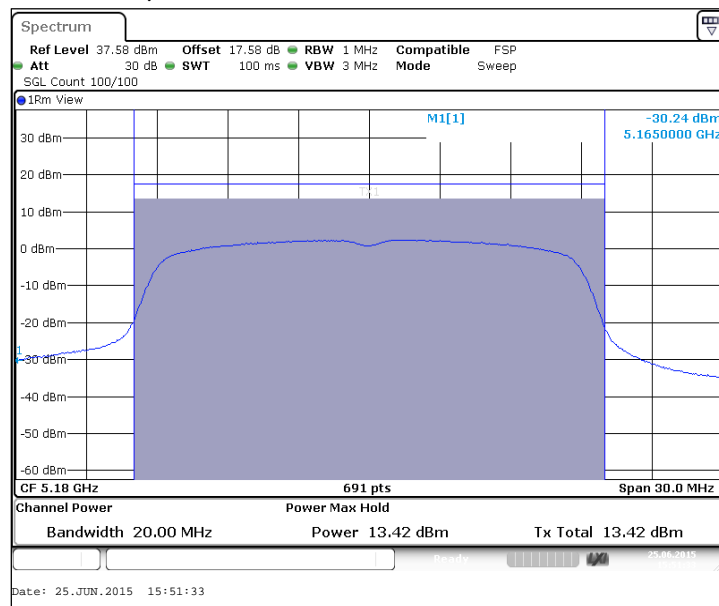
2.4.10 802.11n mode, QPSK modulation, 13.0 / 14.4 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13	19.953	PASSED
36 / 5180 AUX	13.42	21.979	PASSED

Channel 36 / 5180MHz



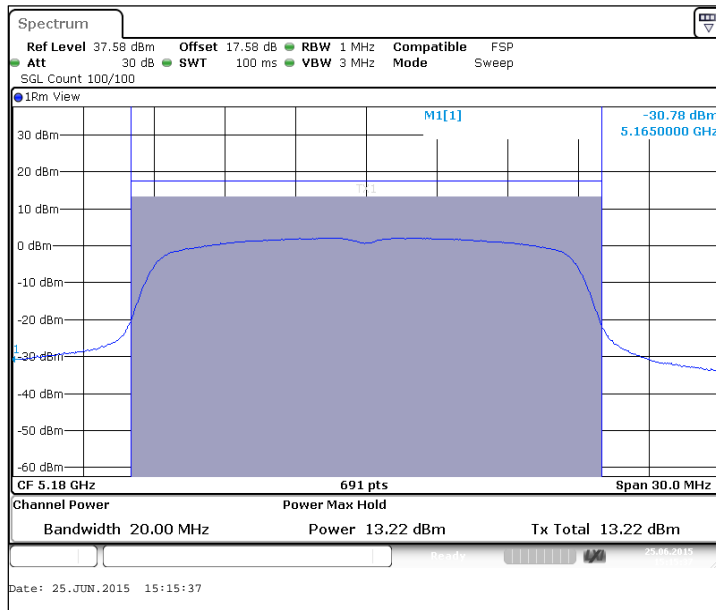
Channel 36 / 5180MHz



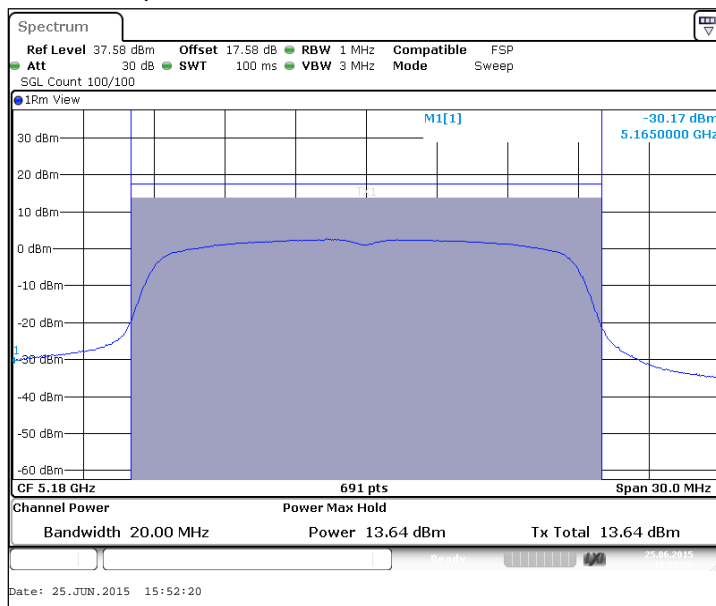
2.4.11 802.11n mode, QPSK modulation, 19.5 / 21.7 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.22	20.989	PASSED
36 / 5180 AUX	13.64	23.121	PASSED

Channel 36 / 5180MHz



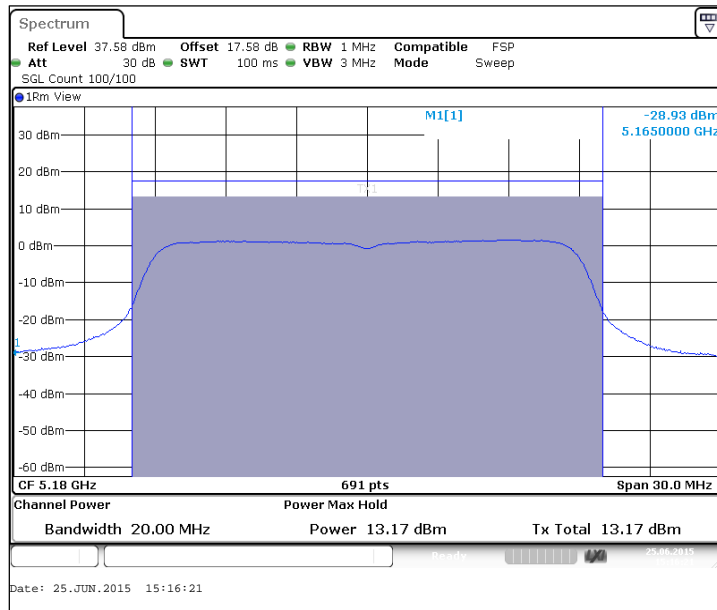
Channel 36 / 5180MHz



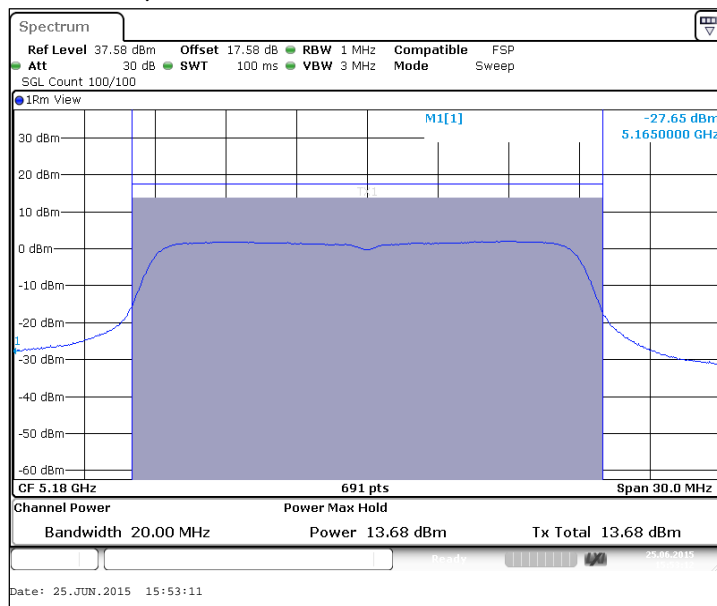
2.4.12 802.11n mode, 16QAM modulation, 26.0 / 28.9 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.17	20.749	PASSED
36 / 5180 AUX	13.68	23.335	PASSED

Channel 36 / 5180MHz



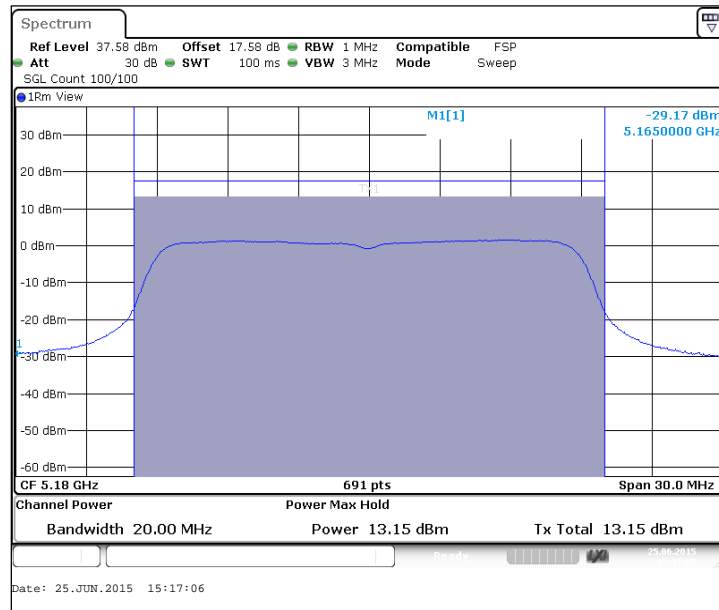
Channel 36 / 5180MHz



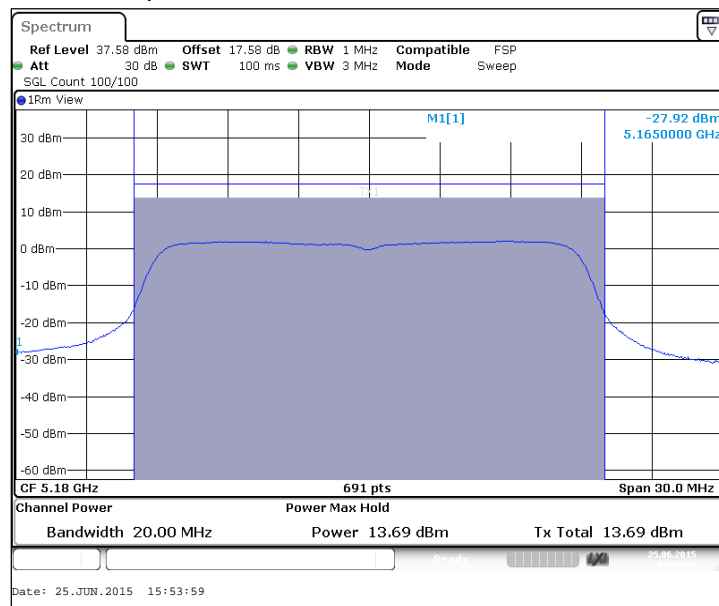
2.4.13 802.11n mode, 16QAM modulation, 39.0 / 43.3 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	13.15	20.654	PASSED
36 / 5180 AUX	13.69	23.388	PASSED

Channel 36 / 5180MHz



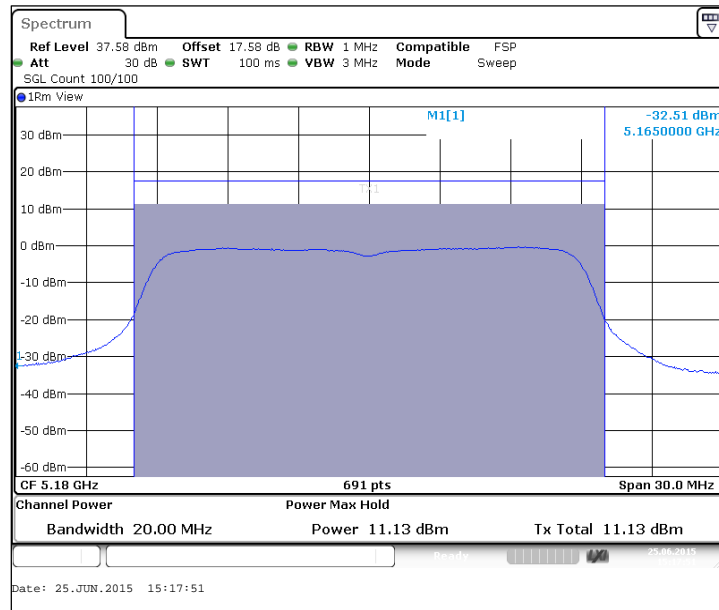
Channel 36 / 5180MHz



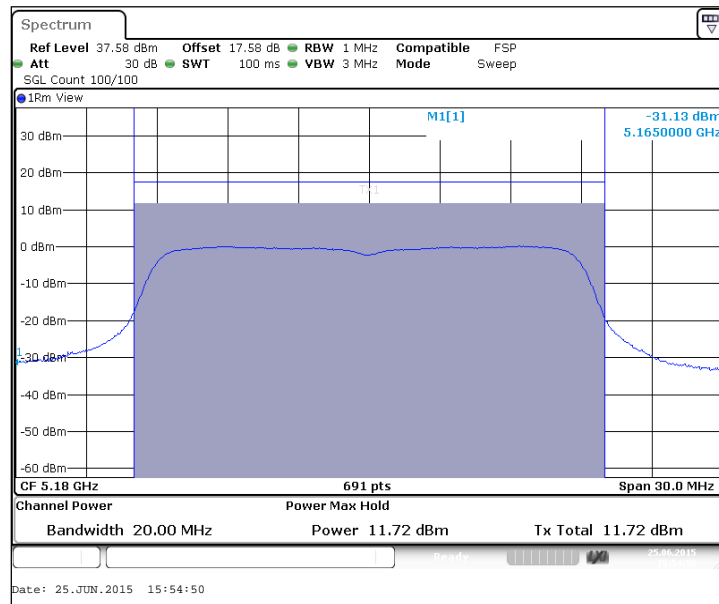
2.4.14 802.11n mode, 64QAM modulation, 52.0 / 57.8 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	11.13	12.972	PASSED
36 / 5180 AUX	11.72	14.859	PASSED

Channel 36 / 5180MHz



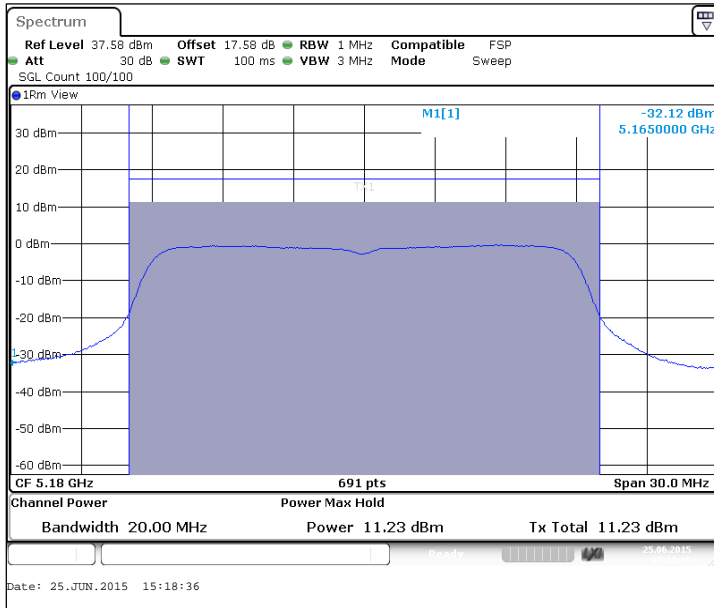
Channel 36 / 5180MHz



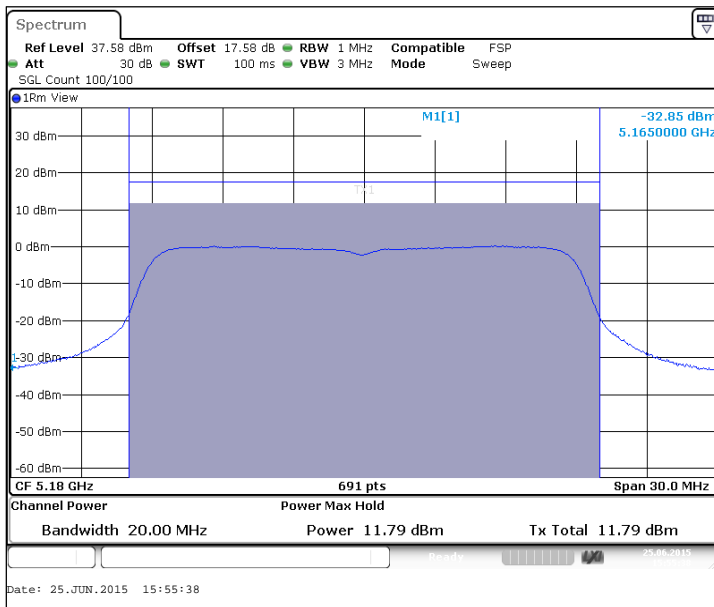
2.4.15 802.11n mode, 64QAM modulation, 58.5 / 65.0 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	11.23	13.274	PASSED
36 / 5180 AUX	11.79	15.101	PASSED

Channel 36 / 5180MHz



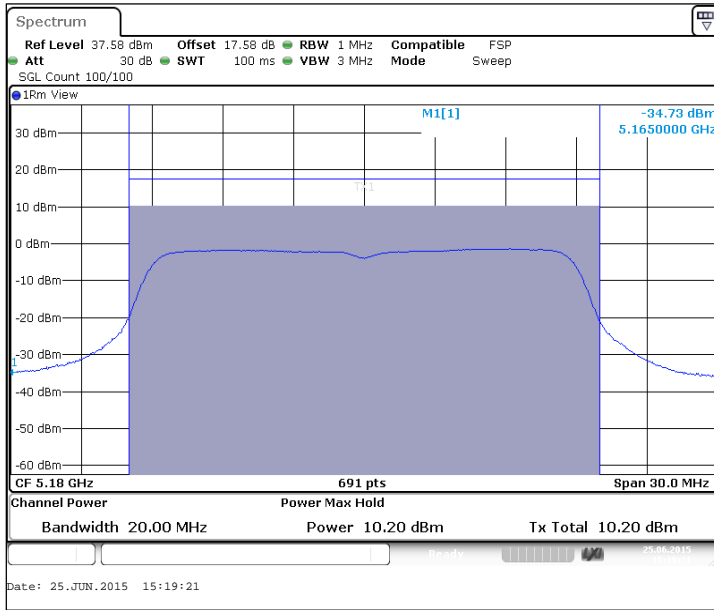
Channel 36 / 5180MHz



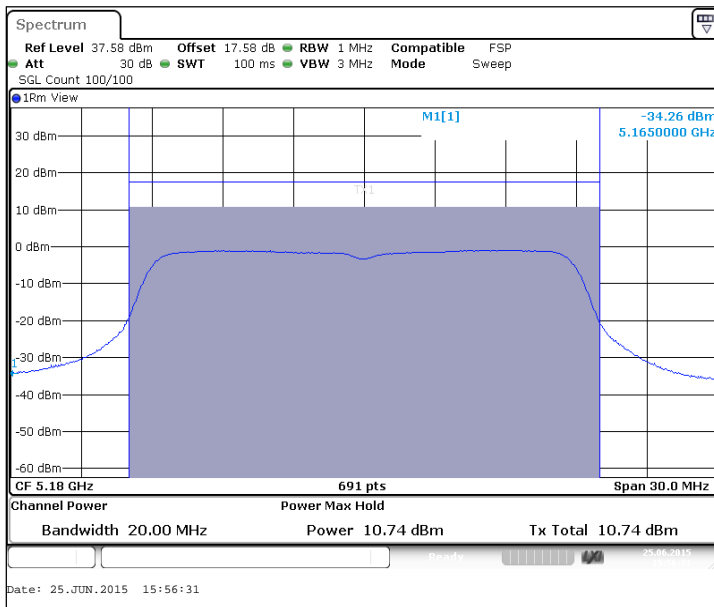
2.4.16 802.11n mode, 64QAM modulation, 65.0 / 72.2 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	10.2	10.471	PASSED
36 / 5180 AUX	10.74	11.858	PASSED

Channel 36 / 5180MHz



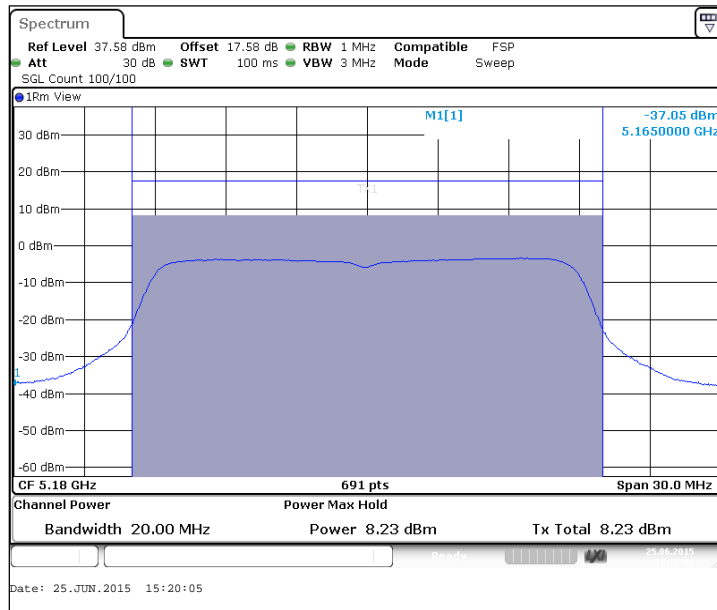
Channel 36 / 5180MHz



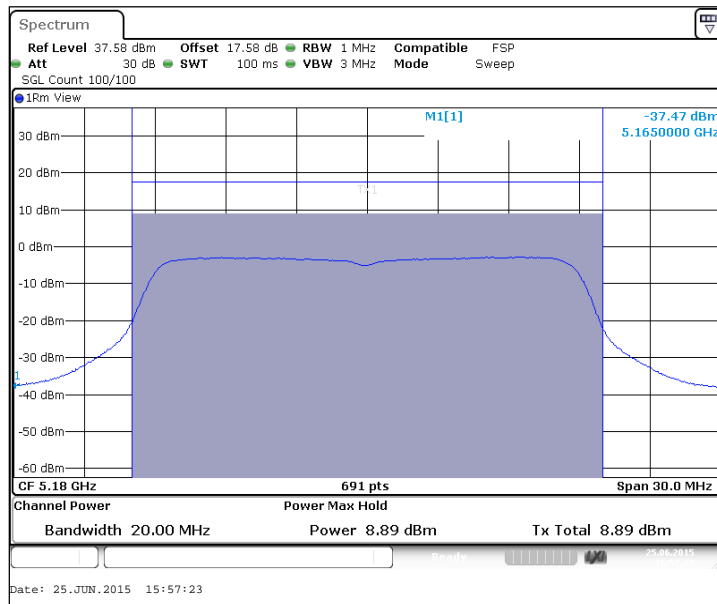
2.4.17 802.11ac mode, 256QAM modulation, 78.0 / 86.7 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36 / 5180 MAIN	8.23	6.653	PASSED
36 / 5180 AUX	8.89	7.745	PASSED

Channel 36 / 5180MHz



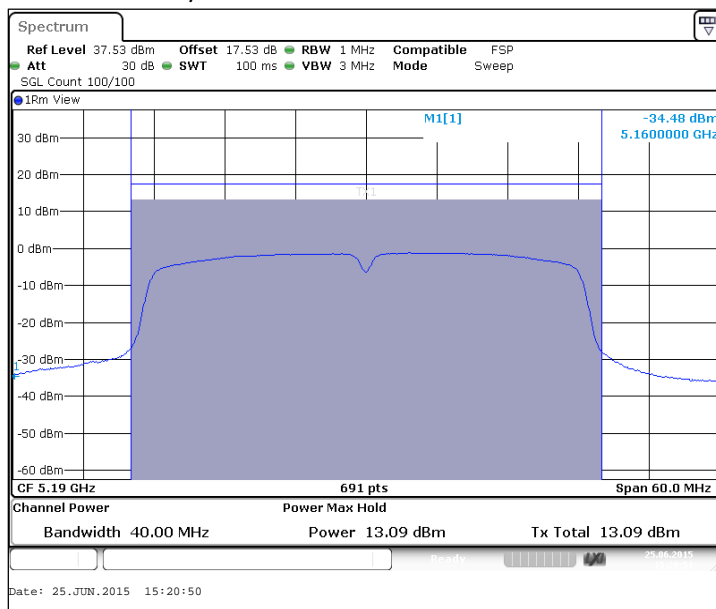
Channel 36 / 5180MHz



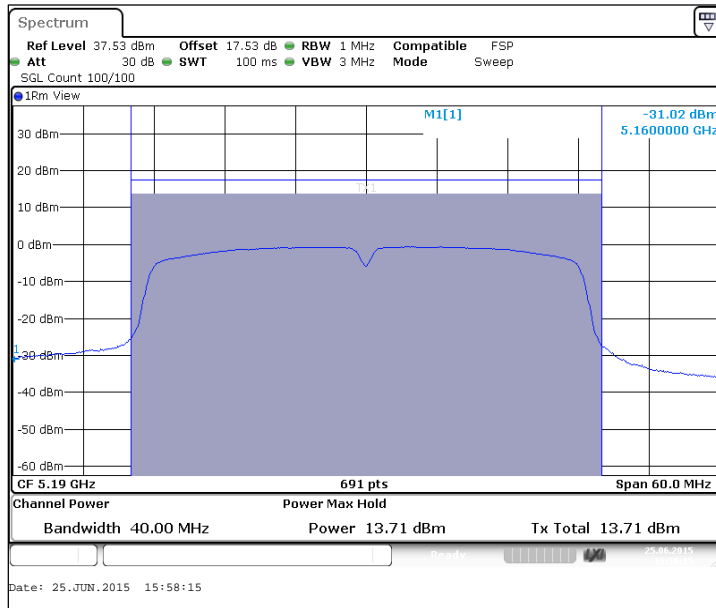
2.4.18 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	13.09	20.37	PASSED
36+40 / 5190 AUX	13.71	23.496	PASSED
44+48 / 5230 main	12.39	17.338	PASSED
52+56 / 5270 main	12.61	18.239	PASSED
60+64 / 5310 main	12.78	18.967	PASSED
100+104 / 5510 main	13.26	21.184	PASSED
108+112 / 5550 main	13.36	21.677	PASSED
132+136 / 5670 main	13.4	21.878	PASSED
149+153 / 5755 main	21.49	140.929	PASSED
157+161 / 5795 main	21.63	145.546	PASSED

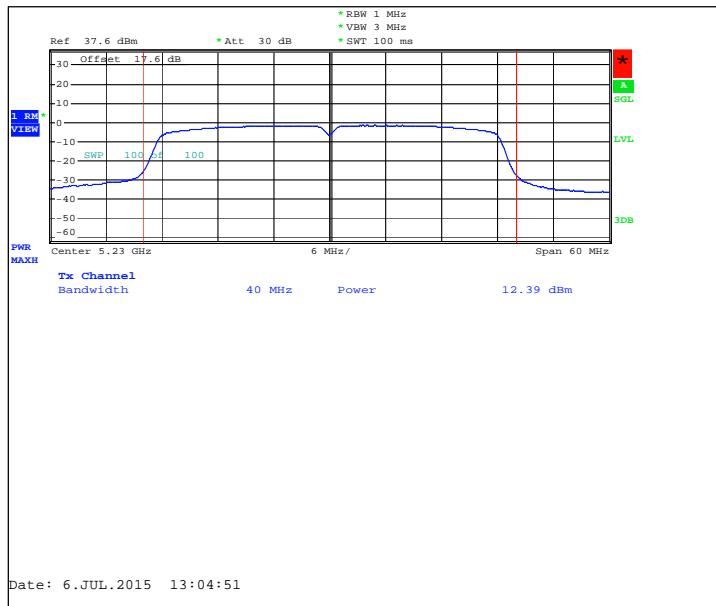
Channel 36+40 / 5190MHz



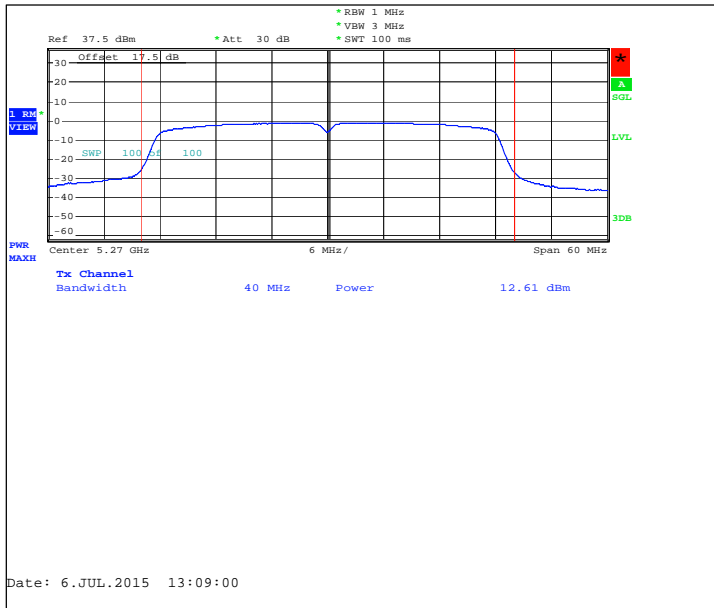
Channel 36+40 / 5190MHz



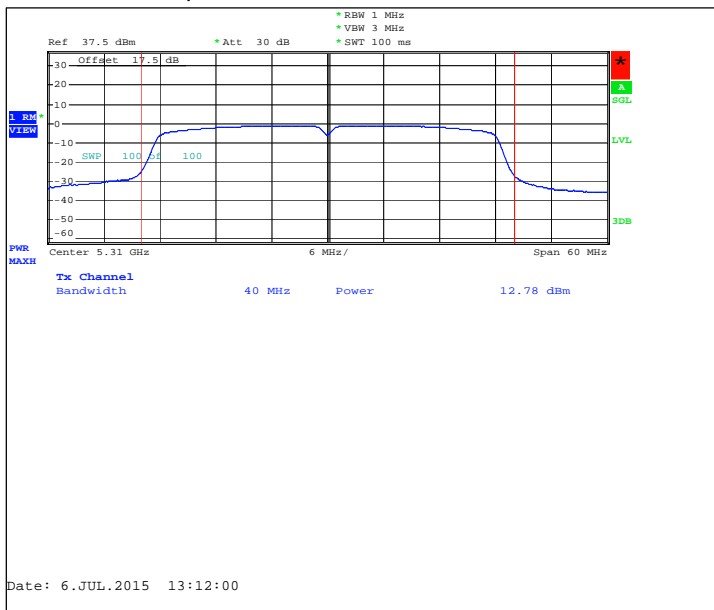
Channel 44+48 / 5230MHz



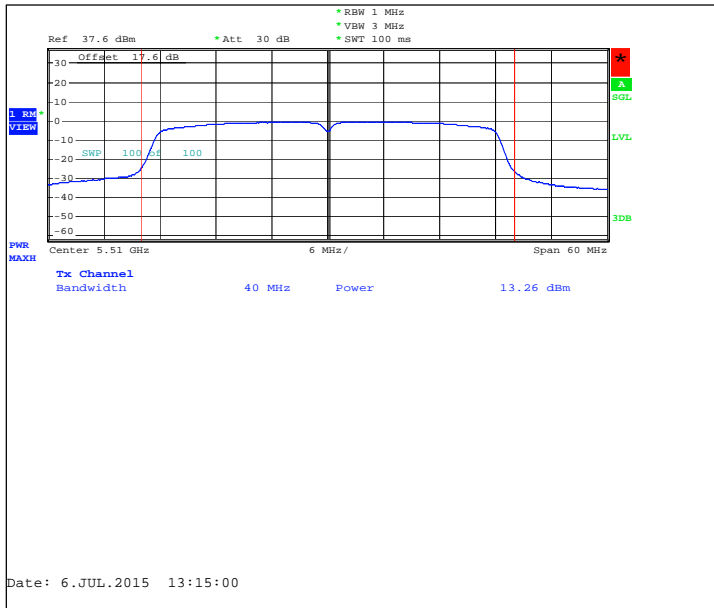
Channel 52+56 / 5270MHz



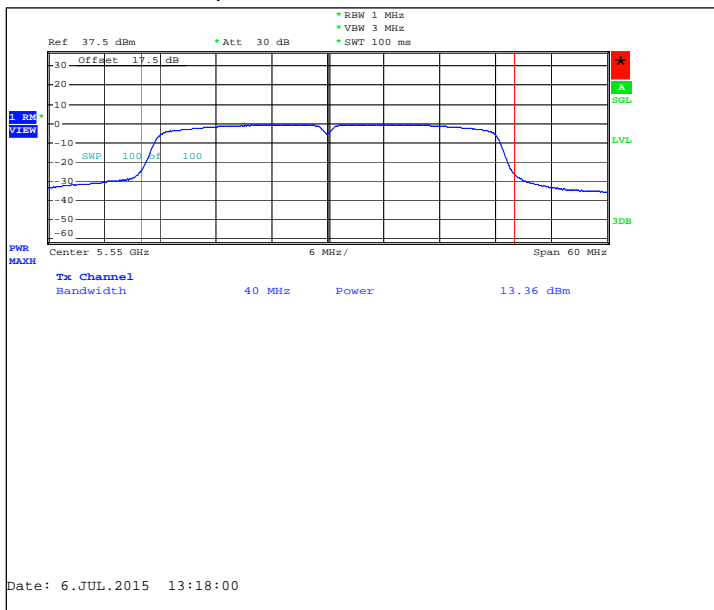
Channel 60+64 / 5310MHz



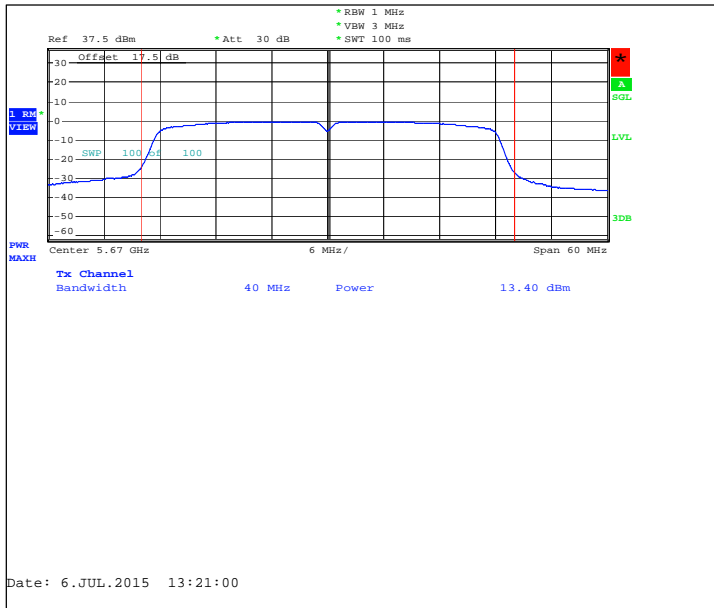
Channel 100+104 / 5510MHz



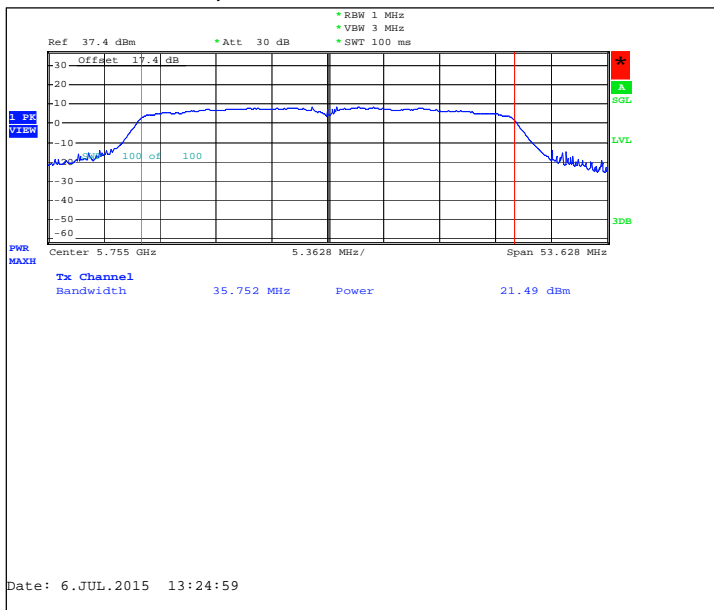
Channel 108+112 / 5550MHz



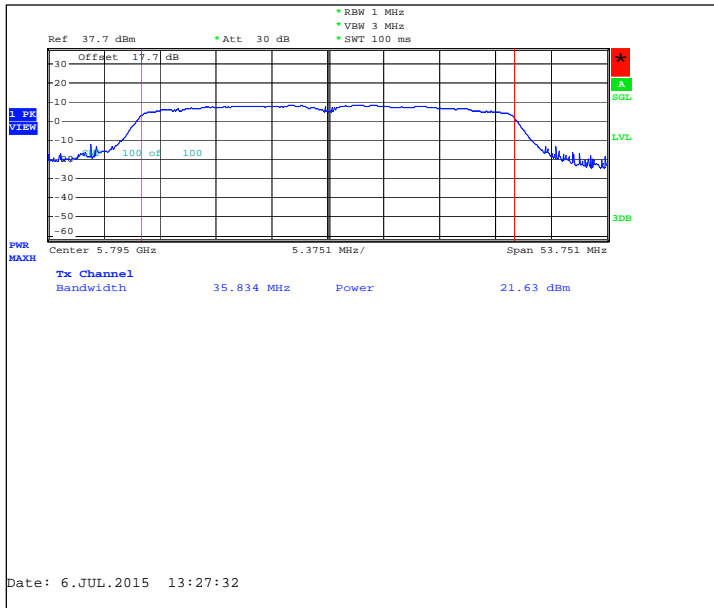
Channel 132+136 / 5670MHz



Channel 149+153 / 5755MHz



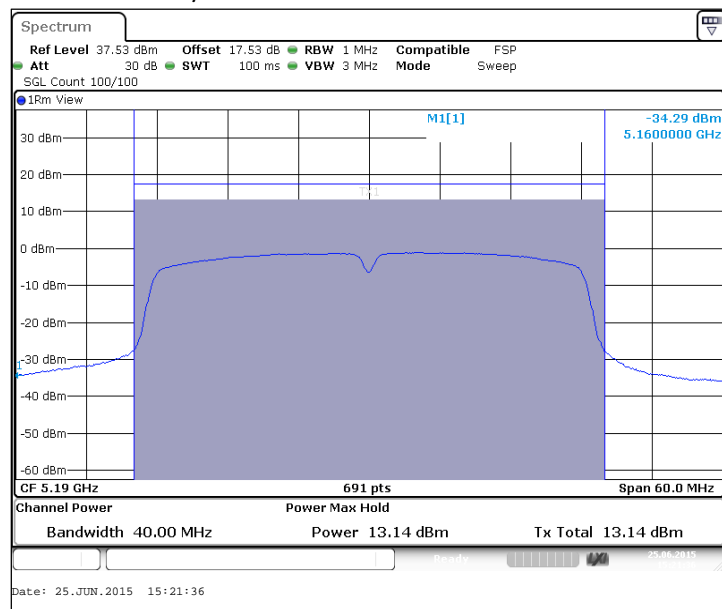
Channel 157+161 / 5795MHz



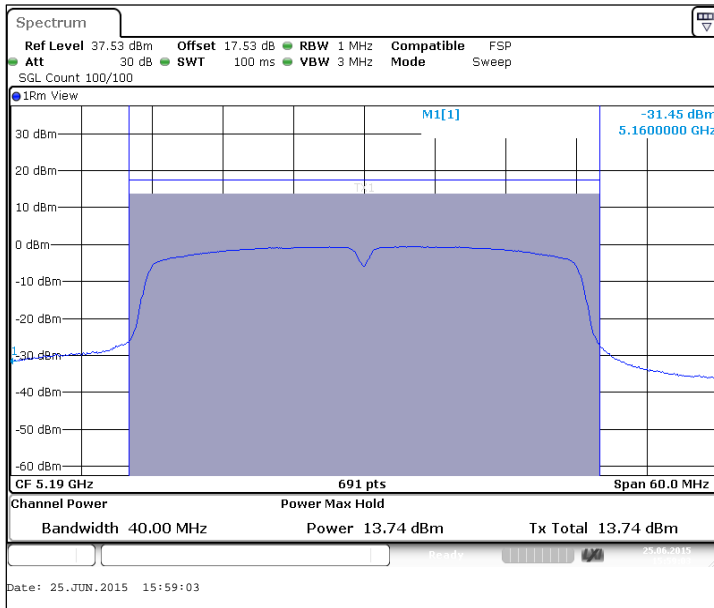
2.4.19 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	13.14	20.606	PASSED
36+40 / 5190 AUX	13.74	23.659	PASSED
44+48 / 5230 main	12.37	17.258	PASSED
52+56 / 5270 main	12.63	18.323	PASSED
60+64 / 5310 main	12.83	19.187	PASSED
100+104 / 5510 main	13.29	21.33	PASSED
108+112 / 5550 main	13.41	21.928	PASSED
132+136 / 5670 main	13.39	21.827	PASSED
149+153 / 5755 main	21.26	133.66	PASSED
157+161 / 5795 main	21.39	137.721	PASSED

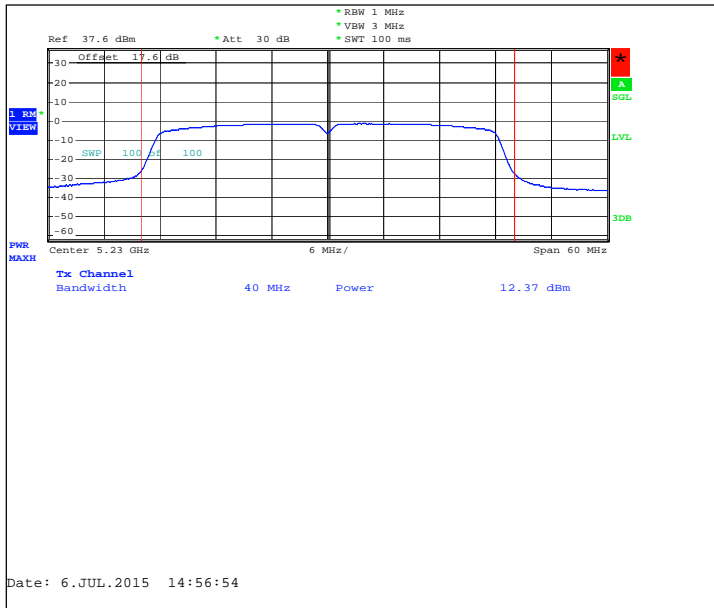
Channel 36+40 / 5190MHz



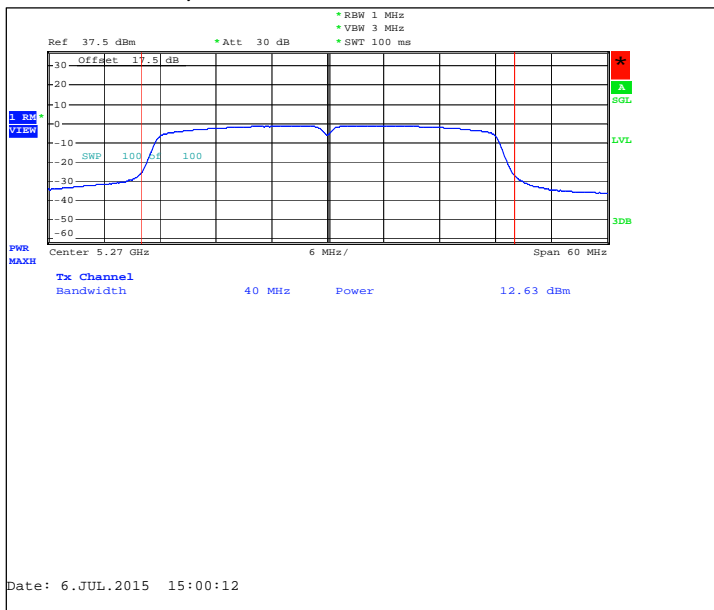
Channel 36+40 / 5190MHz



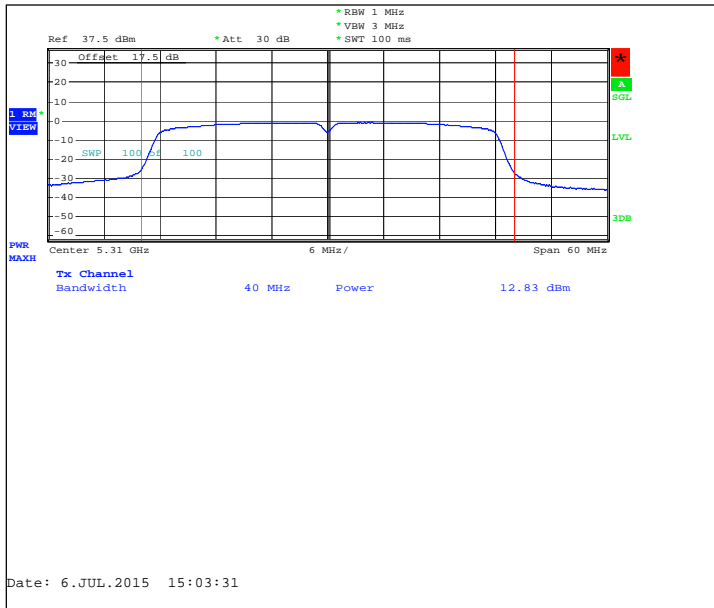
Channel 44+48 / 5230MHz



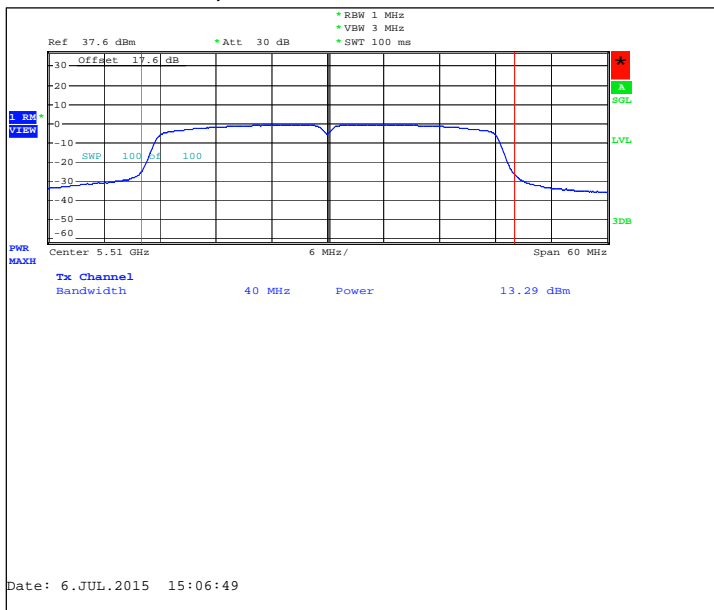
Channel 52+56 / 5270MHz



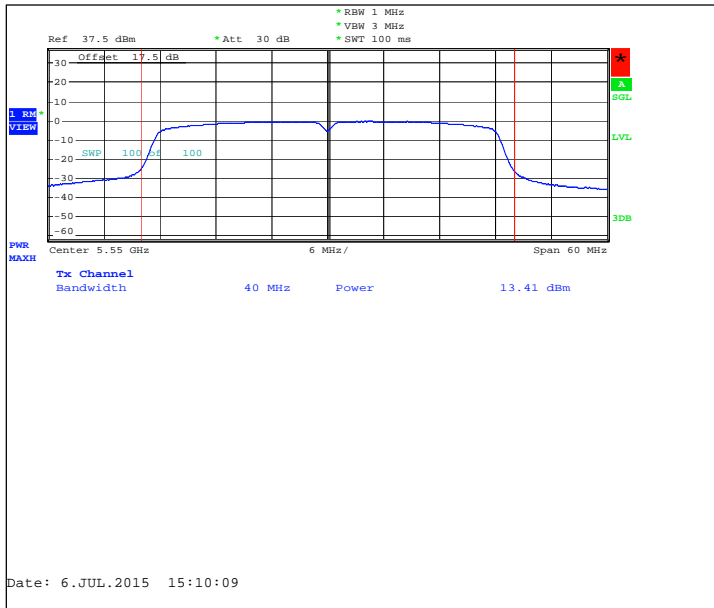
Channel 60+64 / 5310MHz



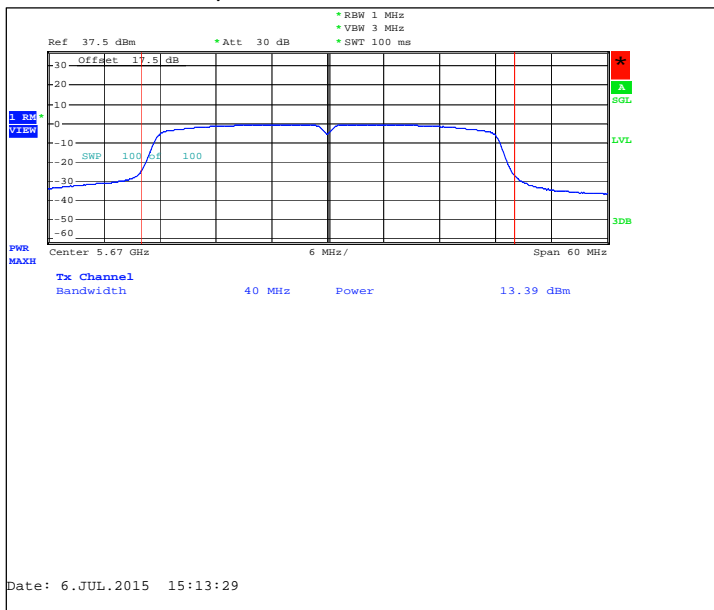
Channel 100+104 / 5510MHz



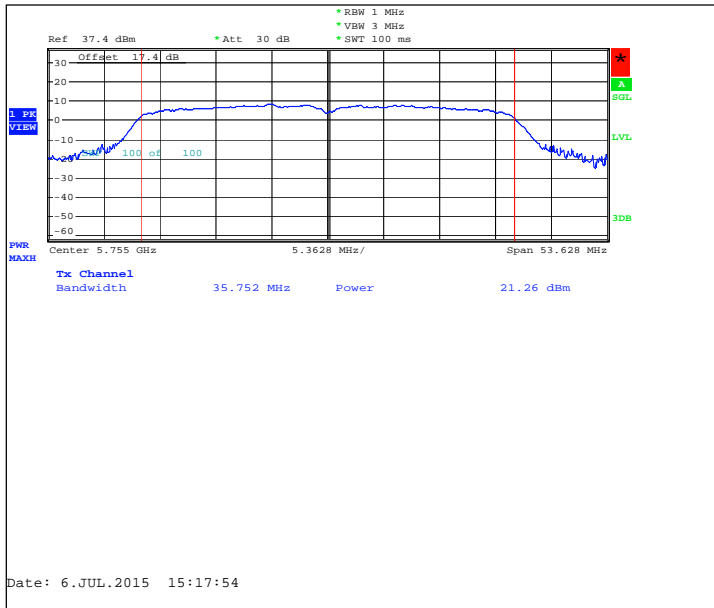
Channel 108+112 / 5550MHz



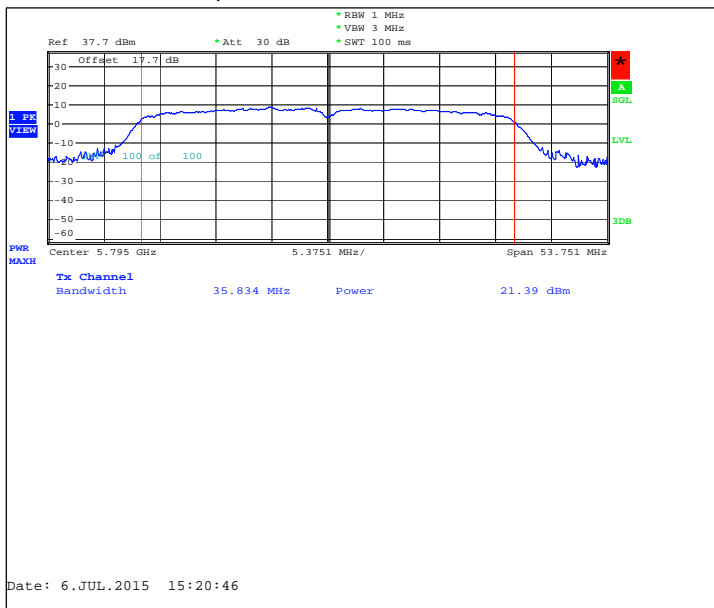
Channel 132+136 / 5670MHz



Channel 149+153 / 5755MHz



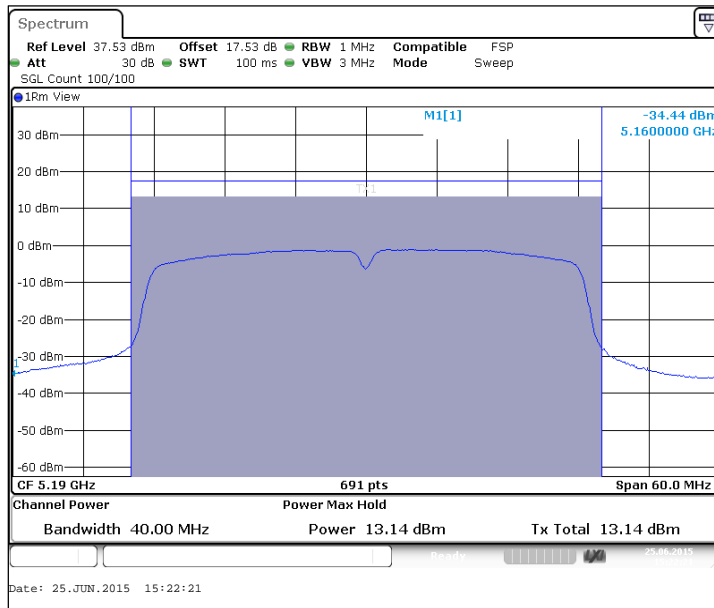
Channel 157+161 / 5795MHz



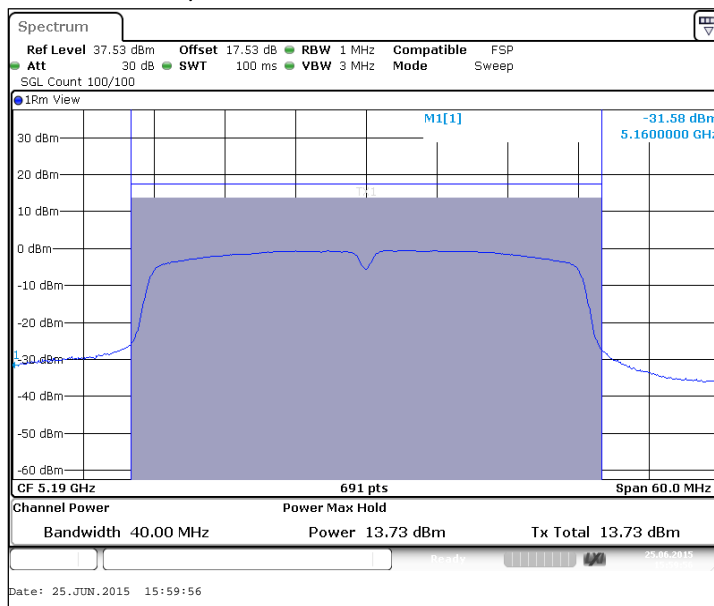
2.4.20 802.11n mode, QPSK modulation, 40.5 / 45.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	13.14	20.606	PASSED
36+40 / 5190 AUX	13.73	23.605	PASSED

Channel 36+40 / 5190MHz



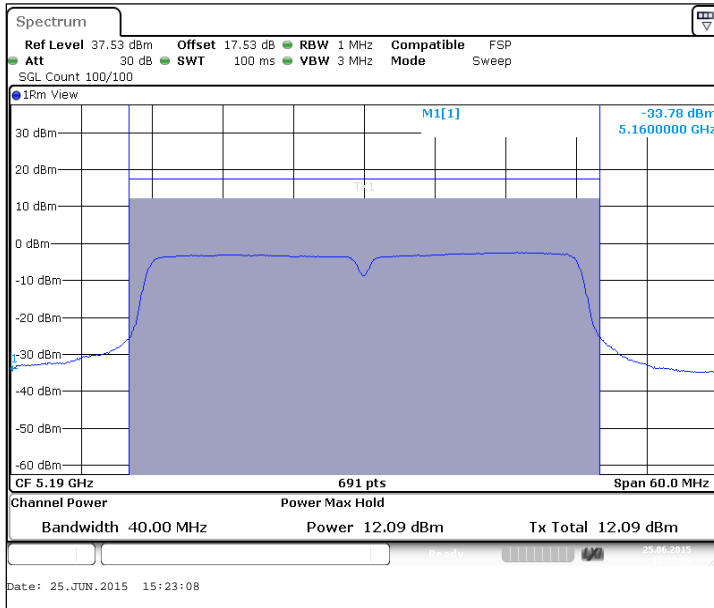
Channel 36+40 / 5190MHz



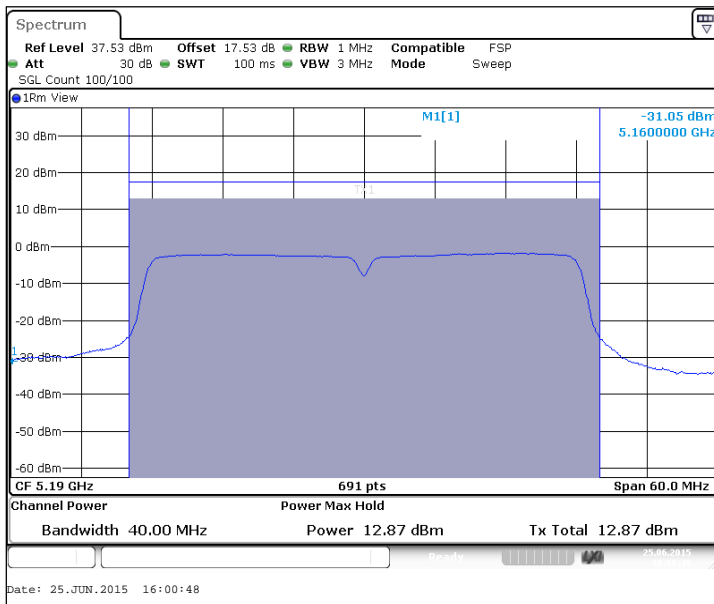
2.4.21 802.11n mode, 16QAM modulation, 54.0 / 60.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	12.09	16.181	PASSED
36+40 / 5190 AUX	12.87	19.364	PASSED

Channel 36+40 / 5190MHz



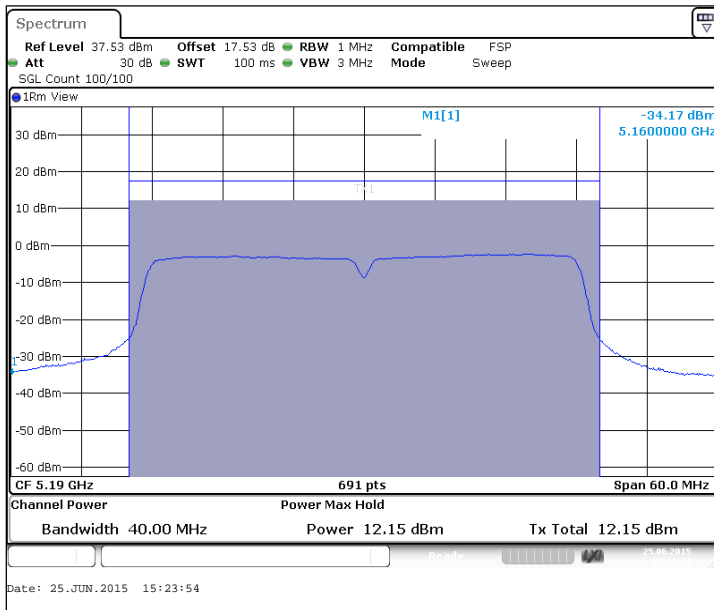
Channel 36+40 / 5190MHz



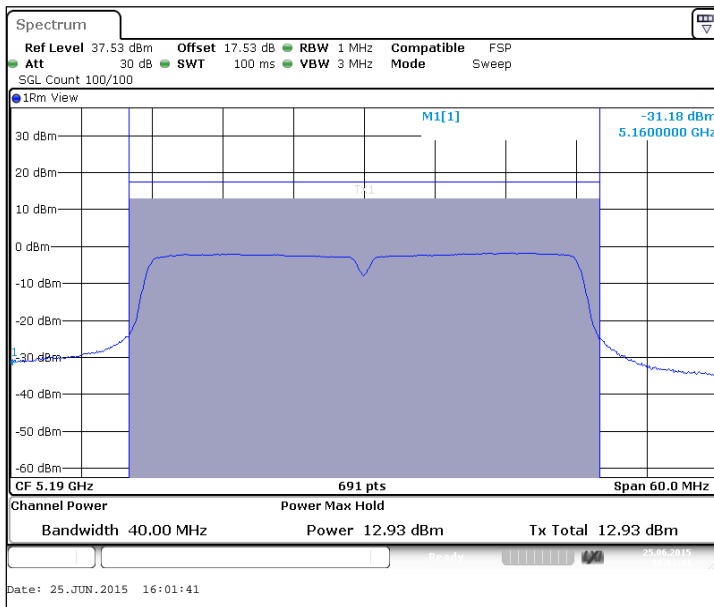
2.4.22 802.11n mode, 16QAM modulation, 81.0 / 90.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	12.15	16.406	PASSED
36+40 / 5190 AUX	12.93	19.634	PASSED

Channel 36+40 / 5190MHz



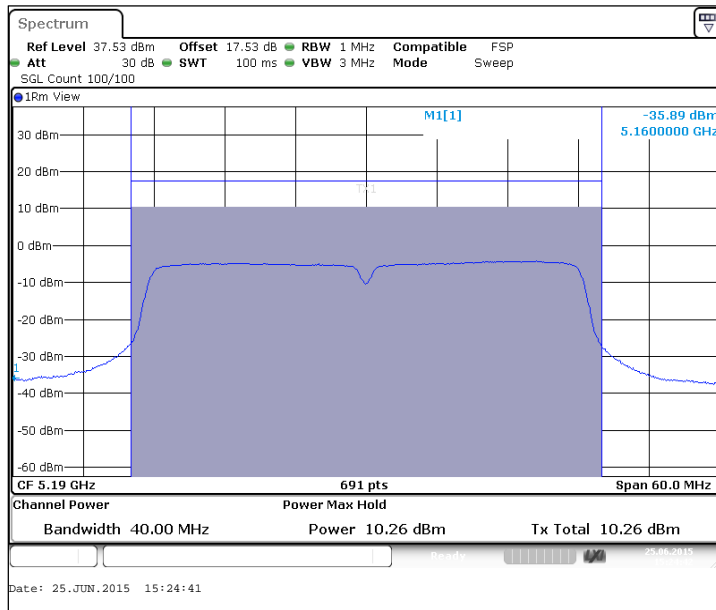
Channel 36+40 / 5190MHz



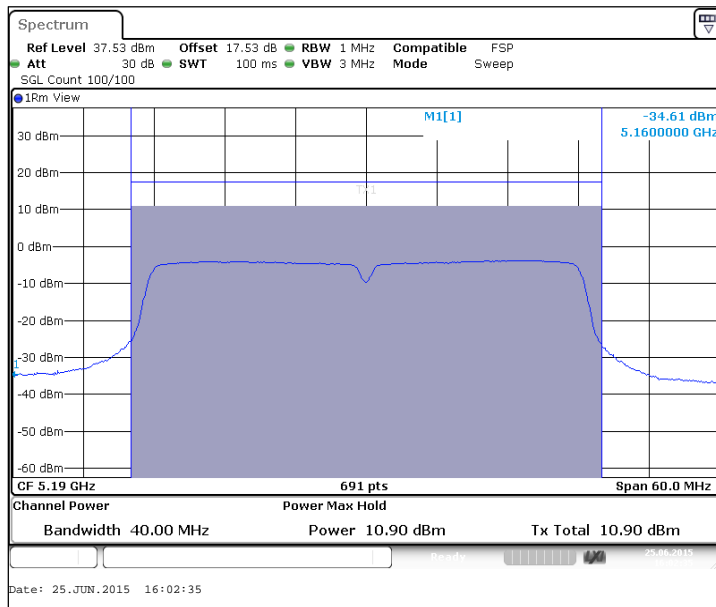
2.4.23 802.11n mode, 64QAM modulation, 108.0 / 120.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	10.26	10.617	PASSED
36+40 / 5190 AUX	10.9	12.303	PASSED

Channel 36+40 / 5190MHz



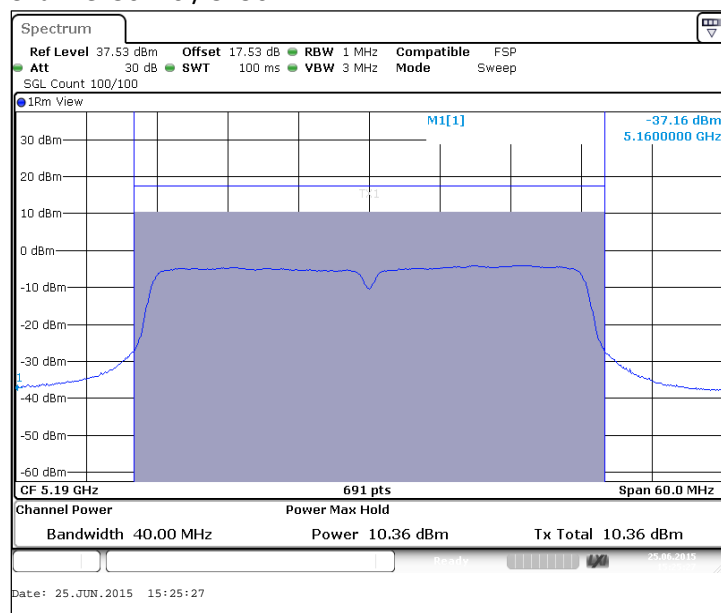
Channel 36+40 / 5190MHz



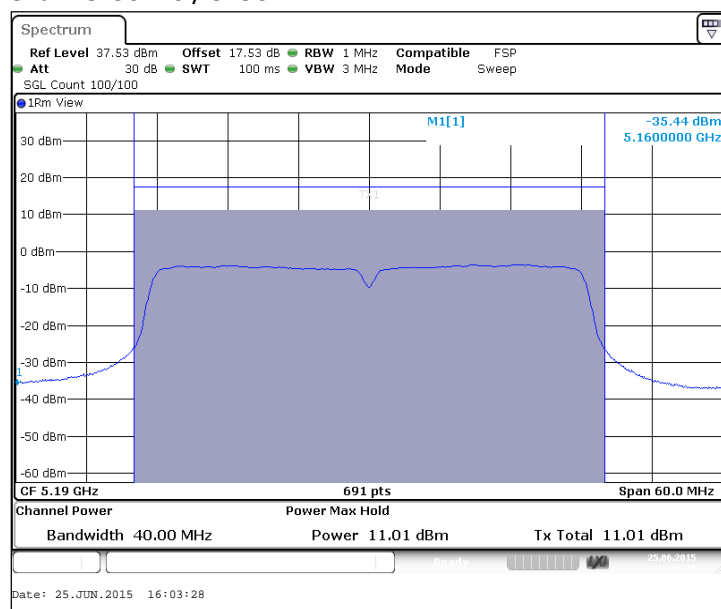
2.4.24 802.11n mode, 64QAM modulation, 121.5 / 135.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	10.36	10.864	PASSED
36+40 / 5190 AUX	11.01	12.618	PASSED

Channel 36+40 / 5190MHz



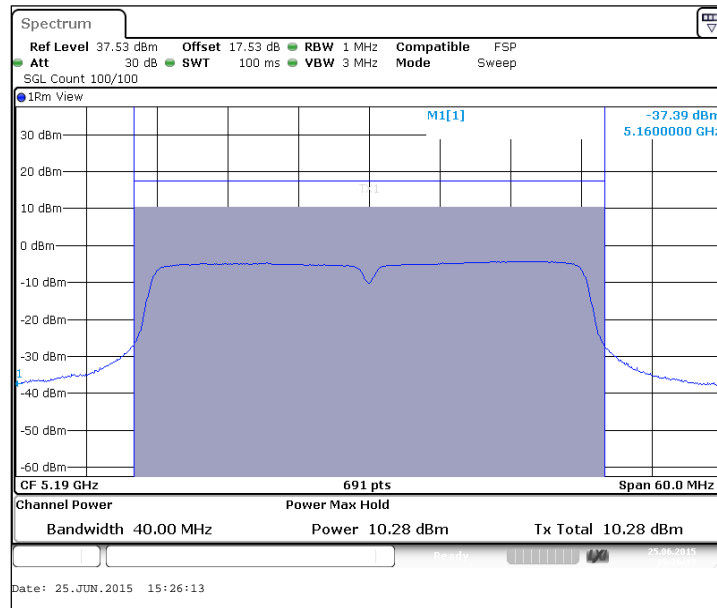
Channel 36+40 / 5190MHz



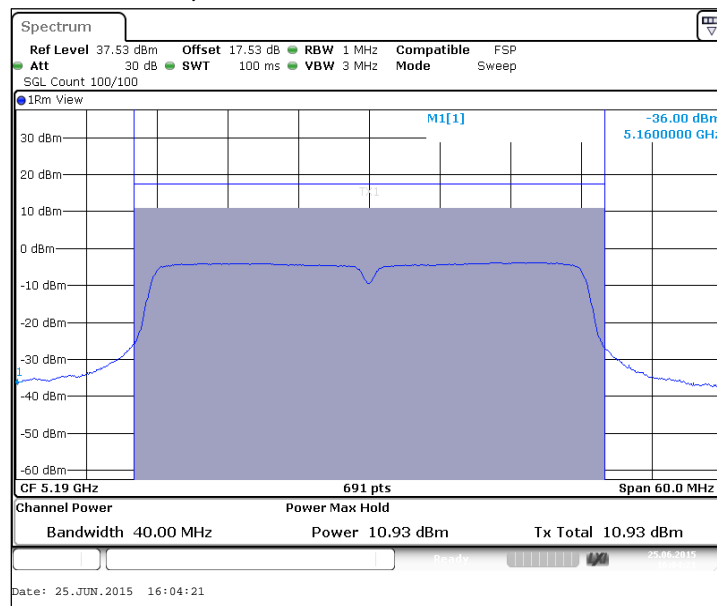
2.4.25 802.11n mode, 64QAM modulation, 135.0 / 150.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	10.28	10.666	PASSED
36+40 / 5190 AUX	10.93	12.388	PASSED

Channel 36+40 / 5190MHz



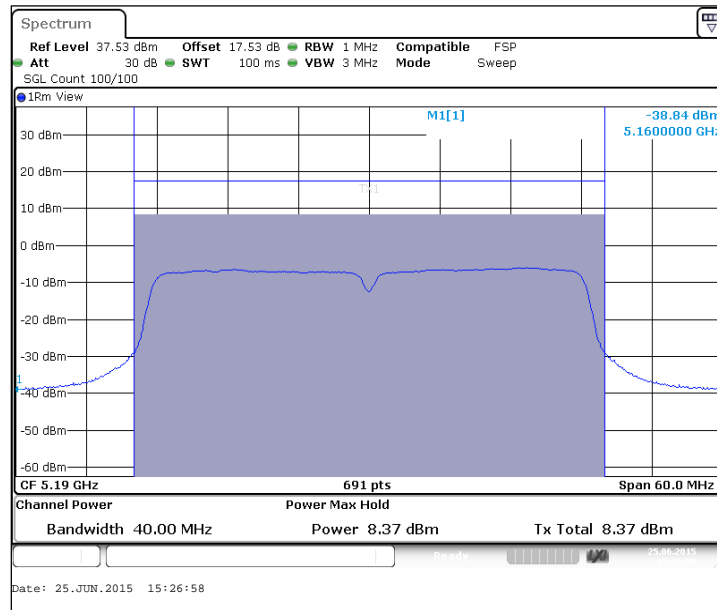
Channel 36+40 / 5190MHz



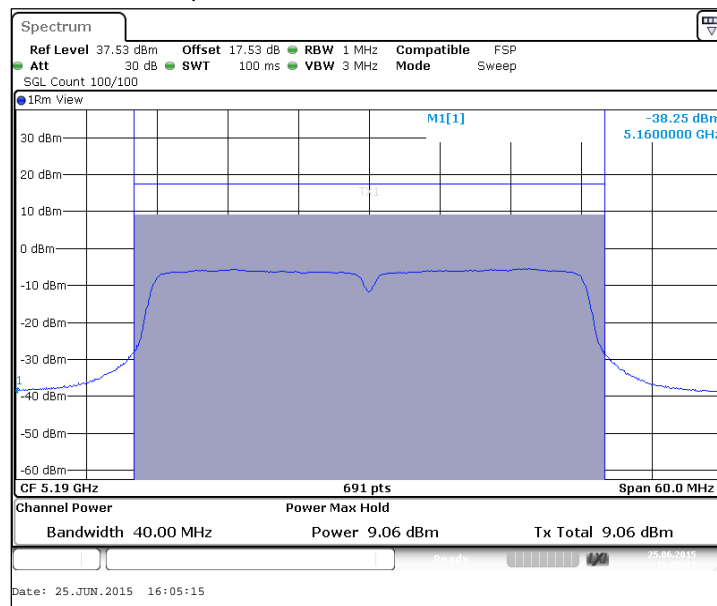
2.4.26 802.11ac mode, 256QAM modulation, 162.0 / 180.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	8.37	6.871	PASSED
36+40 / 5190 AUX	9.06	8.054	PASSED

Channel 36+40 / 5190MHz



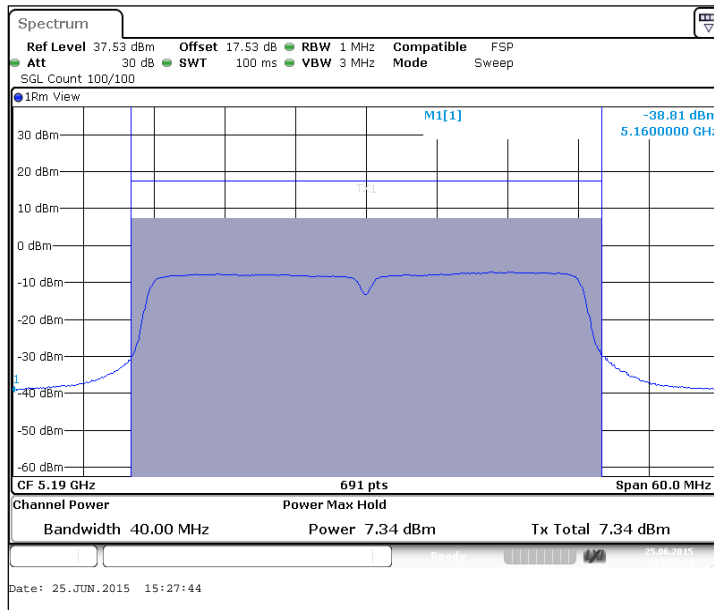
Channel 36+40 / 5190MHz



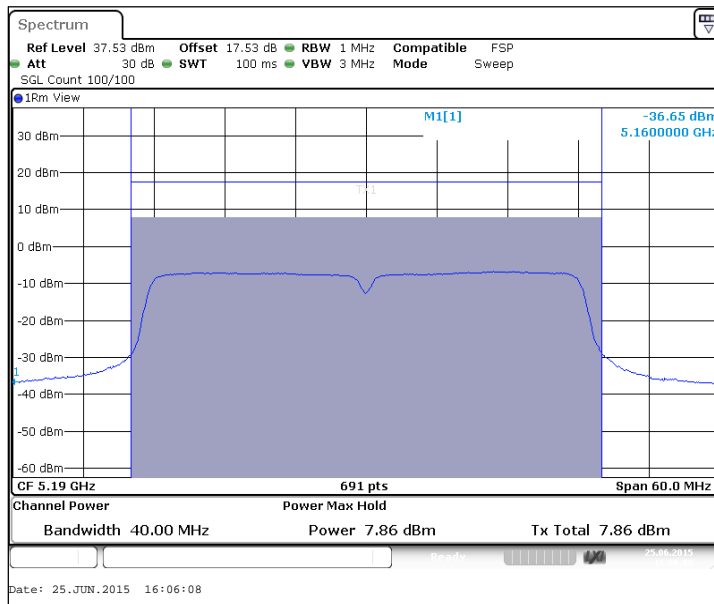
2.4.27 802.11ac mode, 256QAM modulation, 180.0 / 200.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36+40 / 5190 MAIN	7.34	5.42	PASSED
36+40 / 5190 AUX	7.86	6.109	PASSED

Channel 36+40 / 5190MHz



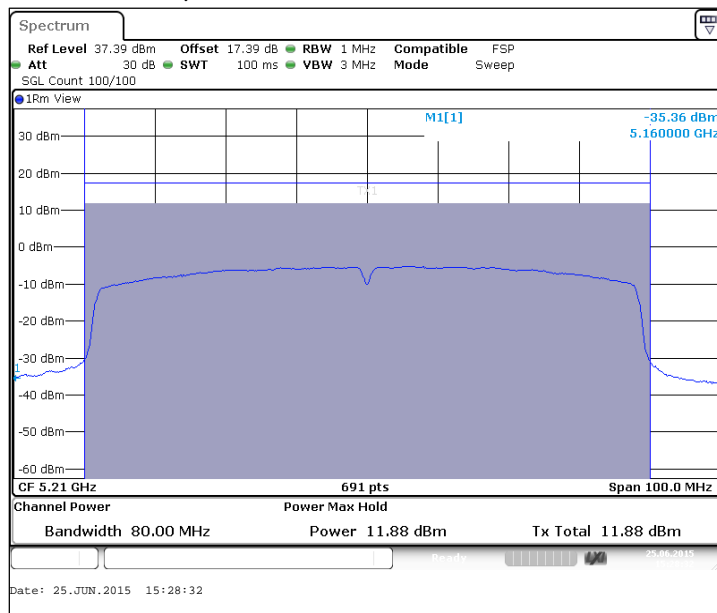
Channel 36+40 / 5190MHz



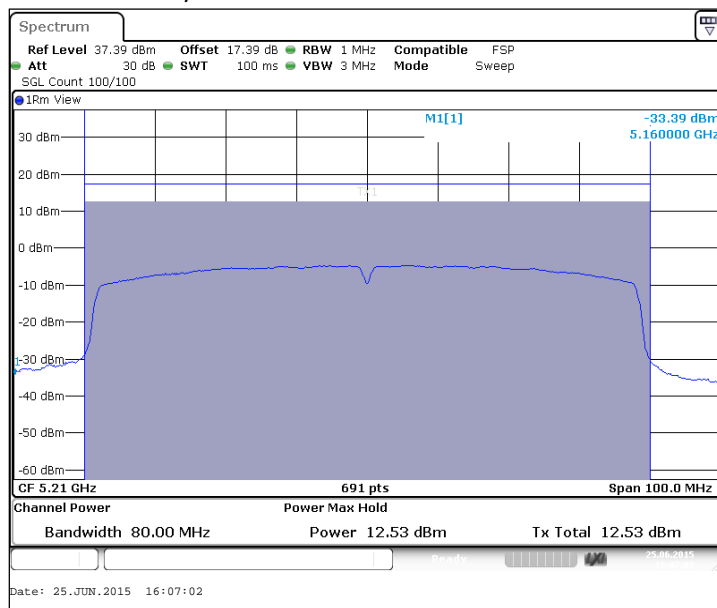
2.4.28 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	11.88	15.417	PASSED
36-48 / 5210 AUX	12.53	17.906	PASSED
52-64 / 5290 main	11.39	13.772	PASSED
100-112 / 5530 main	12.2	16.596	PASSED
149-161 / 5775 main	20.92	123.595	PASSED

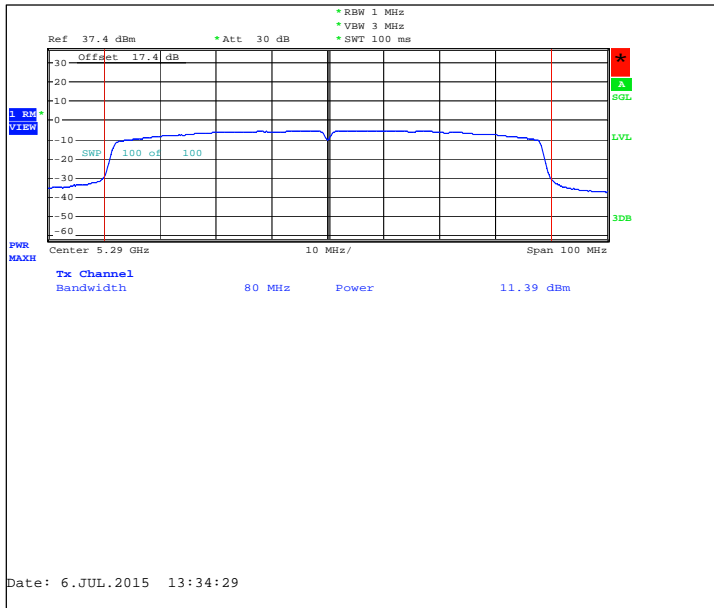
Channel 36-48 / 5210MHz



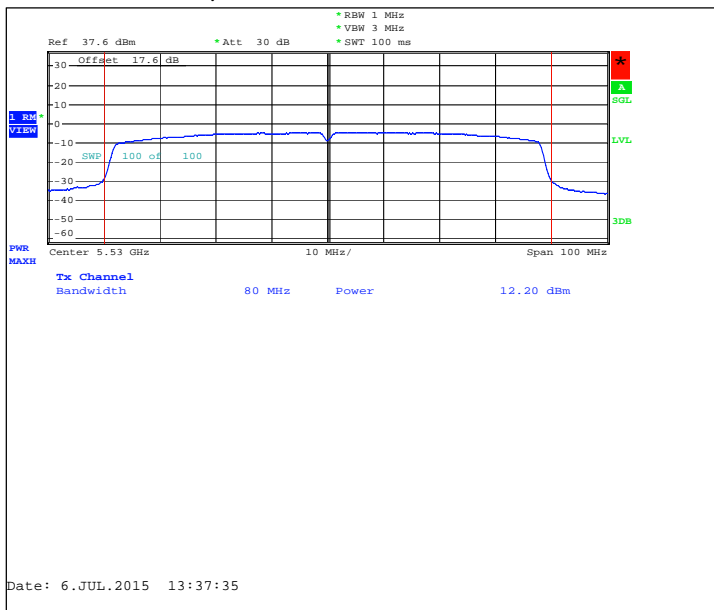
Channel 36-48 / 5210MHz



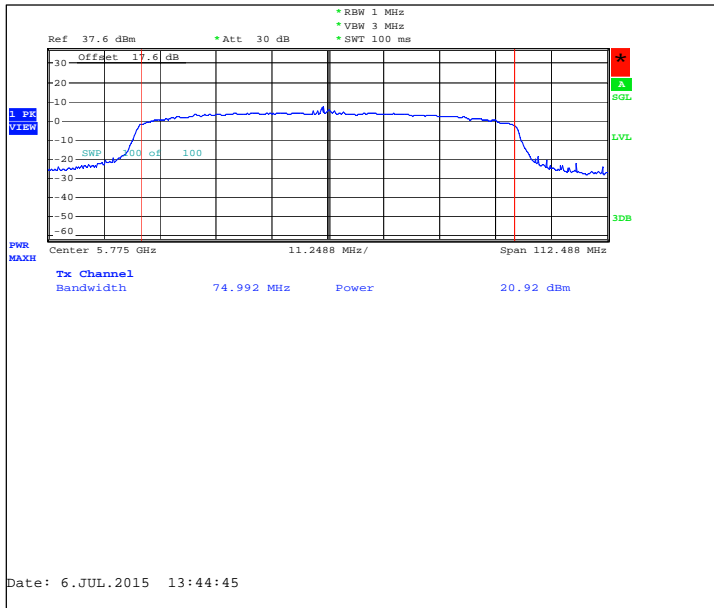
Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz



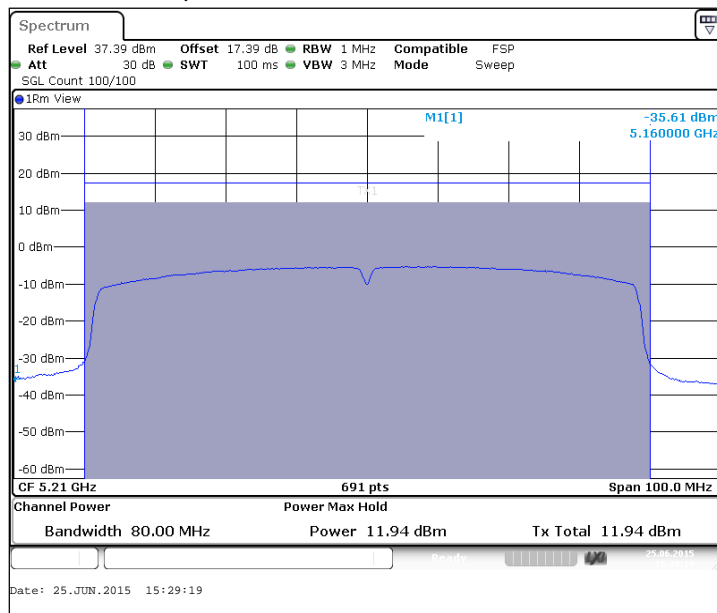
Channel 149-161 / 5775MHz



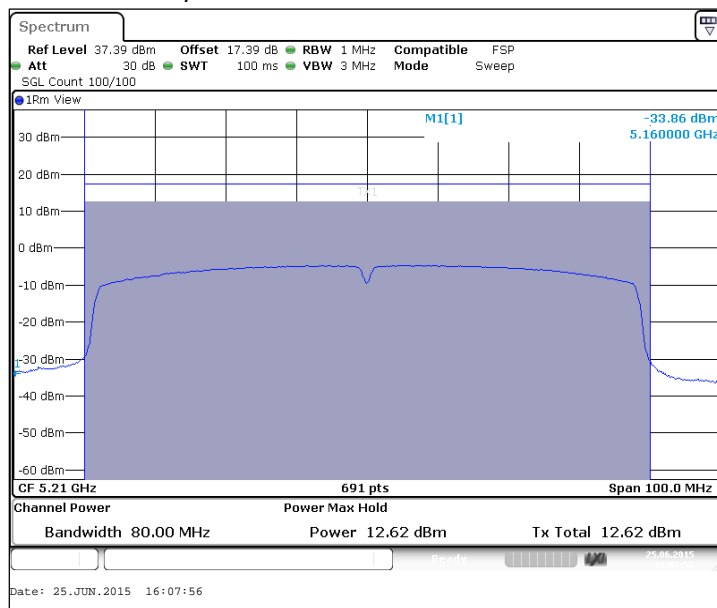
2.4.29 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	11.94	15.631	PASSED
36-48 / 5210 AUX	12.62	18.281	PASSED
52-64 / 5290 main	11.48	14.06	PASSED
100-112 / 5530 main	12.29	16.943	PASSED
149-161 / 5775 main	20.48	111.686	PASSED

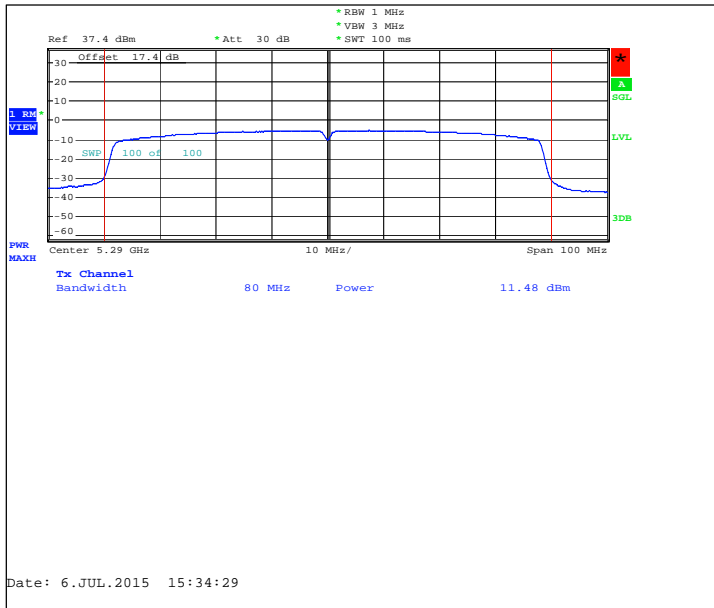
Channel 36-48 / 5210MHz



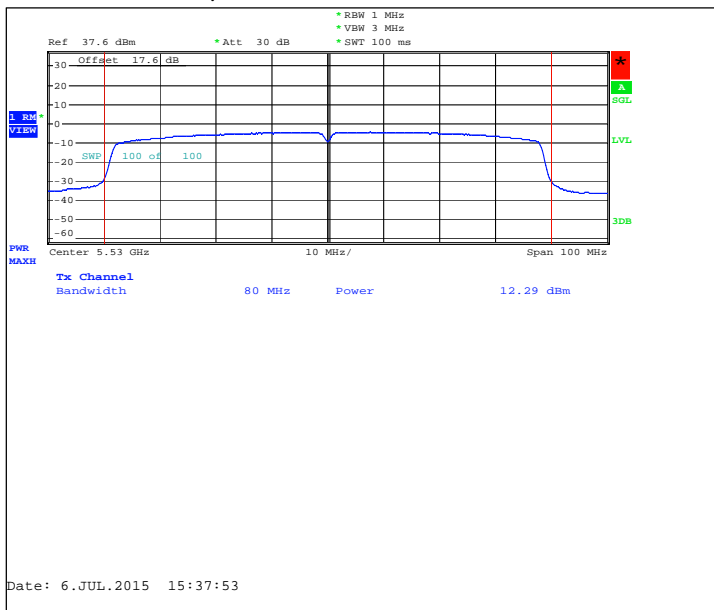
Channel 36-48 / 5210MHz



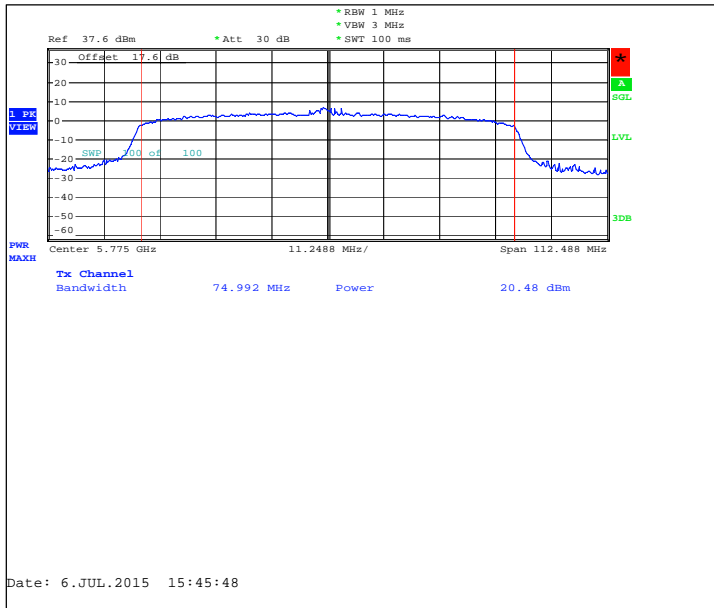
Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz



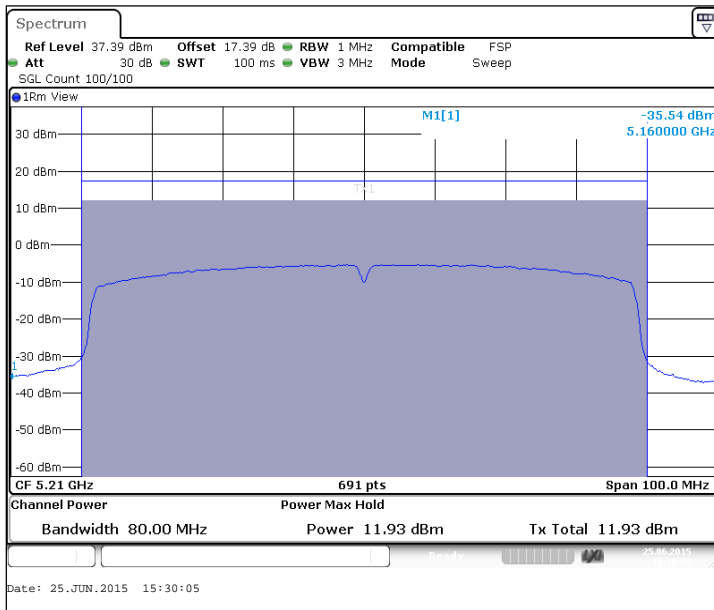
Channel 149-161 / 5775MHz



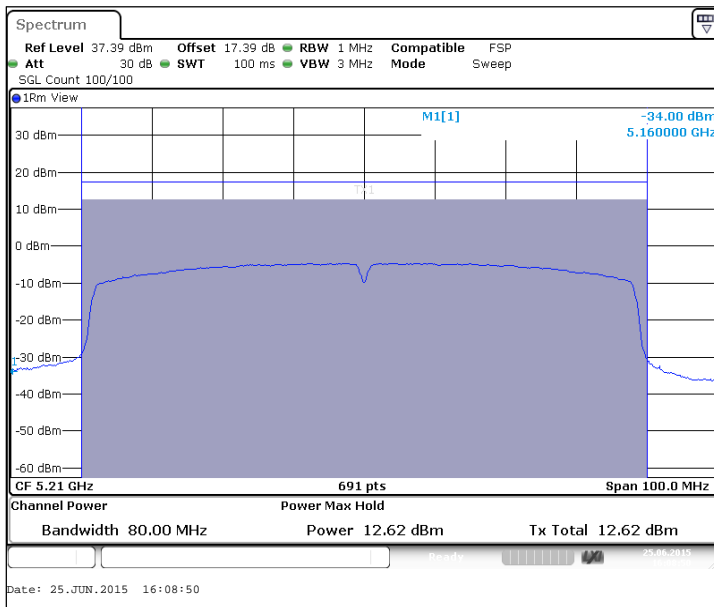
2.4.30 802.11ac mode, QPSK modulation, 87.8 / 97.5 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	11.93	15.596	PASSED
36-48 / 5210 AUX	12.62	PASSED	

Channel 36-48 / 5210MHz



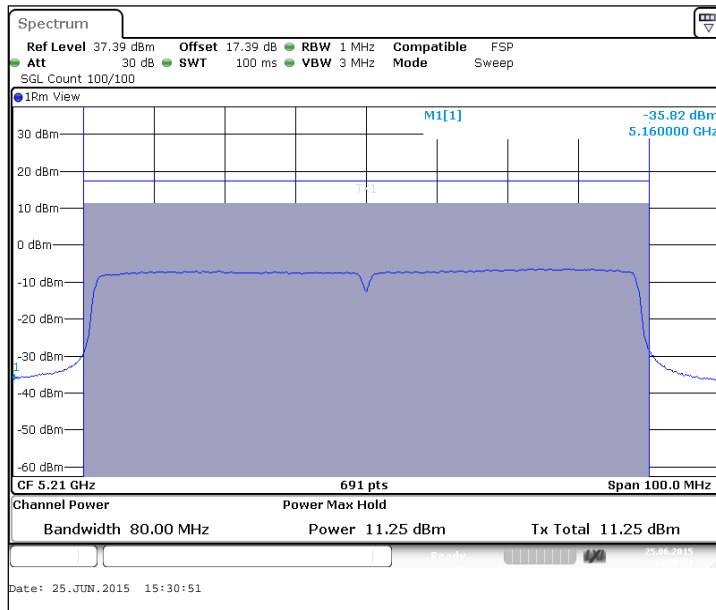
Channel 36-48 / 5210MHz



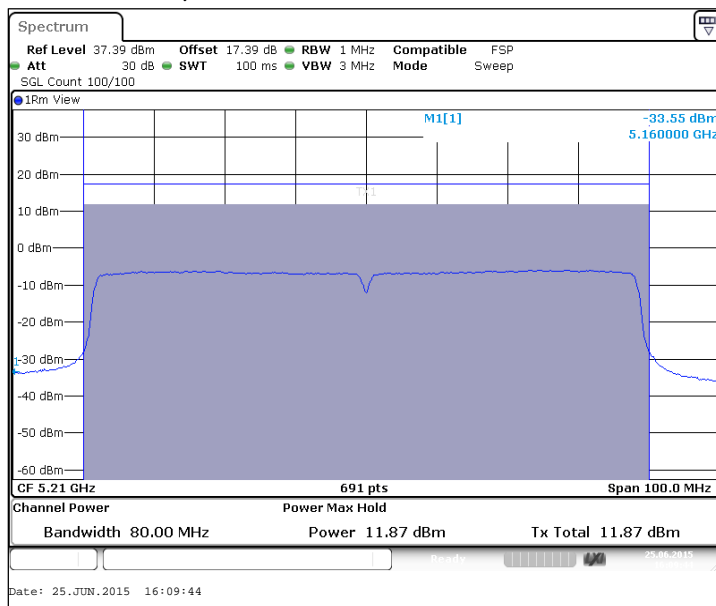
2.4.31 802.11ac mode, 16QAM modulation, 117.0 / 130.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	11.25	13.335	PASSED
36-48 / 5210 AUX	11.87	15.382	PASSED

Channel 36-48 / 5210MHz



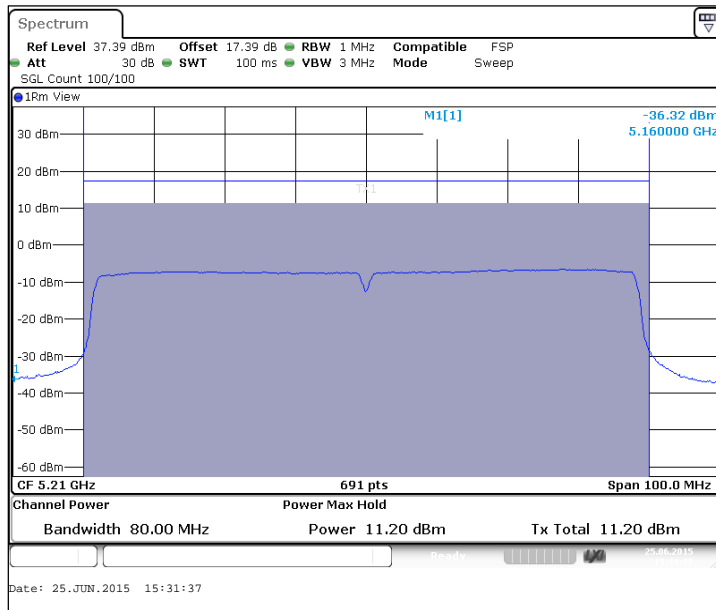
Channel 36-48 / 5210MHz



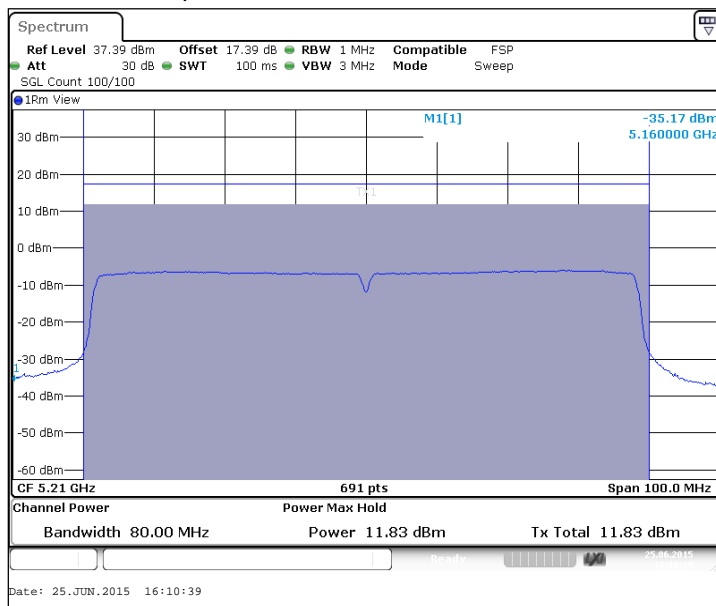
2.4.32 802.11ac mode, 16QAM modulation, 175.5 / 195.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	11.2	13.183	PASSED
36-48 / 5210 AUX	11.83	15.241	PASSED

Channel 36-48 / 5210MHz



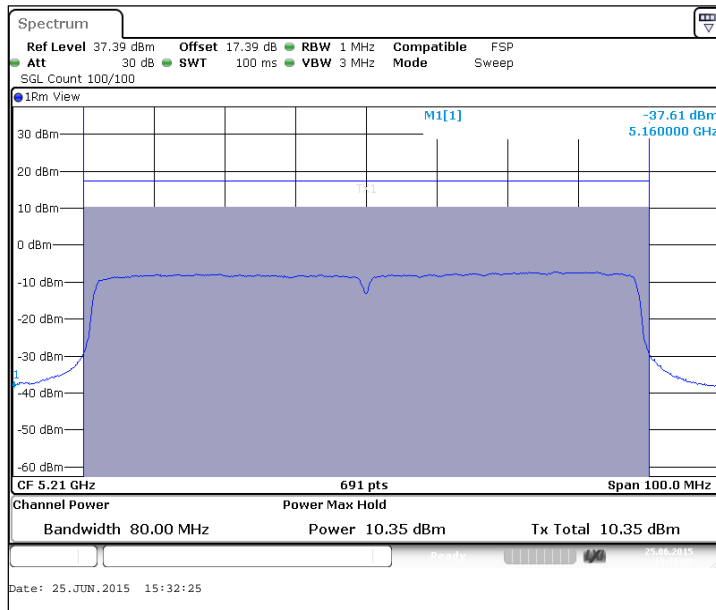
Channel 36-48 / 5210MHz



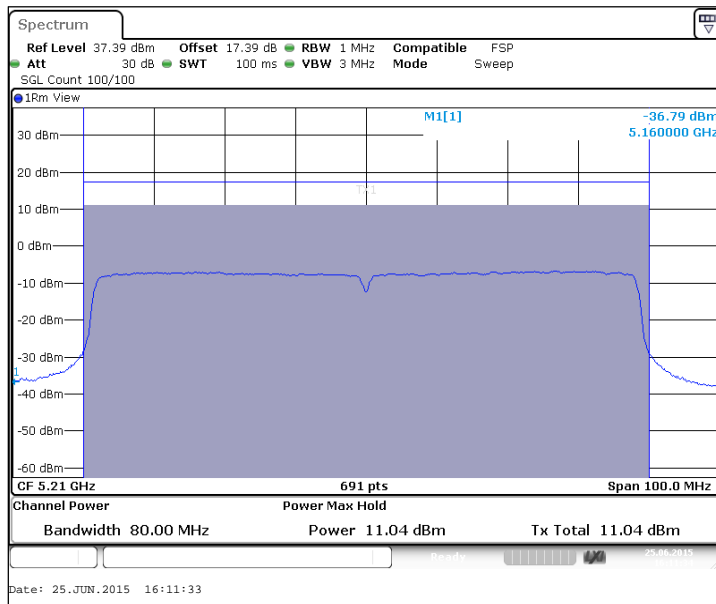
2.4.33 802.11ac mode, 64QAM modulation, 234.0 / 260.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	10.35	10.839	PASSED
36-48 / 5210 AUX	11.04	PASSED	

Channel 36-48 / 5210MHz



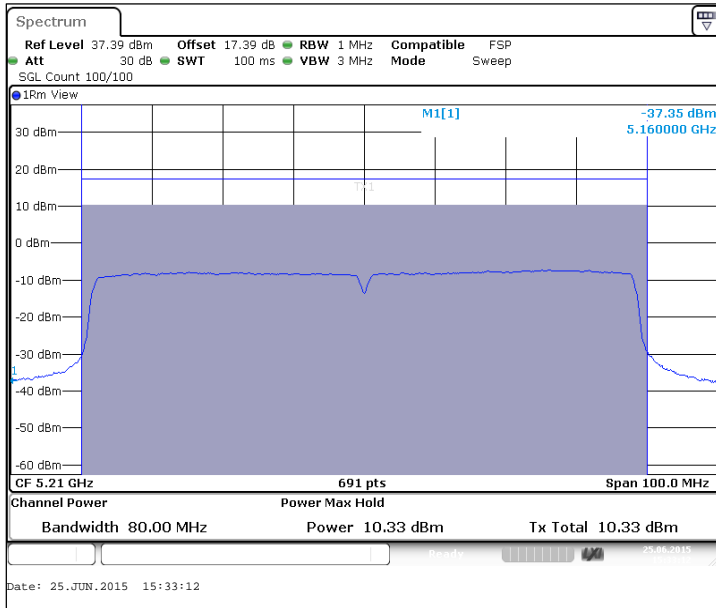
Channel 36-48 / 5210MHz



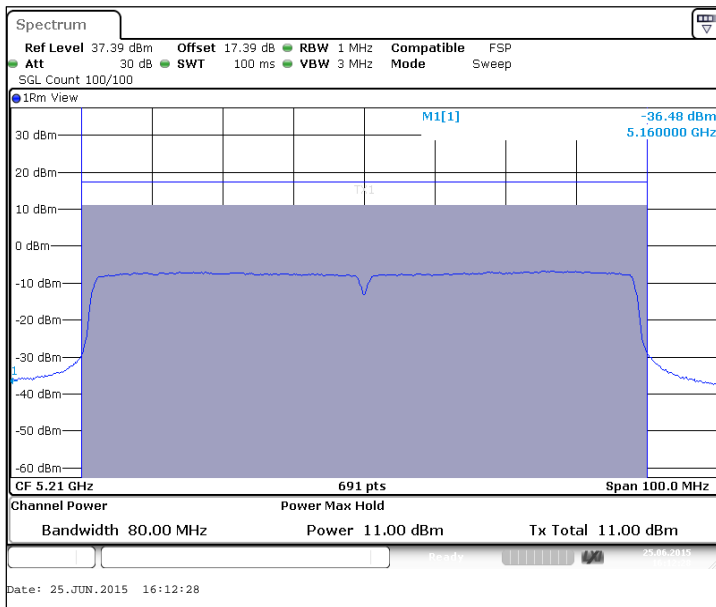
2.4.34 802.11ac mode, 64QAM modulation, 263.3 / 292.5 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	10.33	10.789	PASSED
36-48 / 5210 AUX	11	12.589	PASSED

Channel 36-48 / 5210MHz



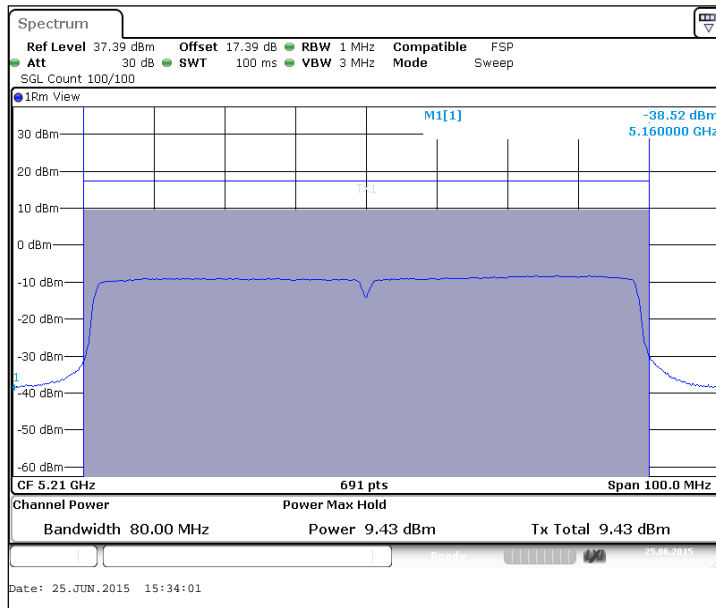
Channel 36-48 / 5210MHz



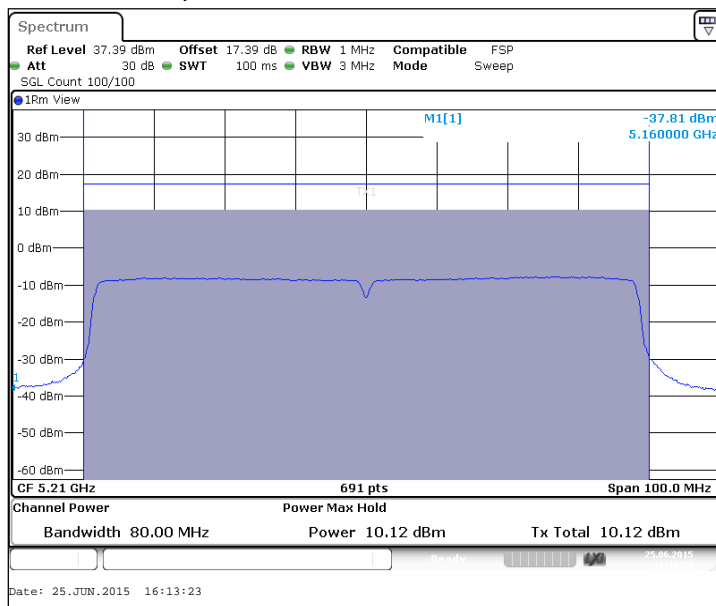
2.4.35 802.11ac mode, 64QAM modulation, 292.5 / 325.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	9.43	8.77	PASSED
36-48 / 5210 AUX	10.12	10.28	PASSED

Channel 36-48 / 5210MHz



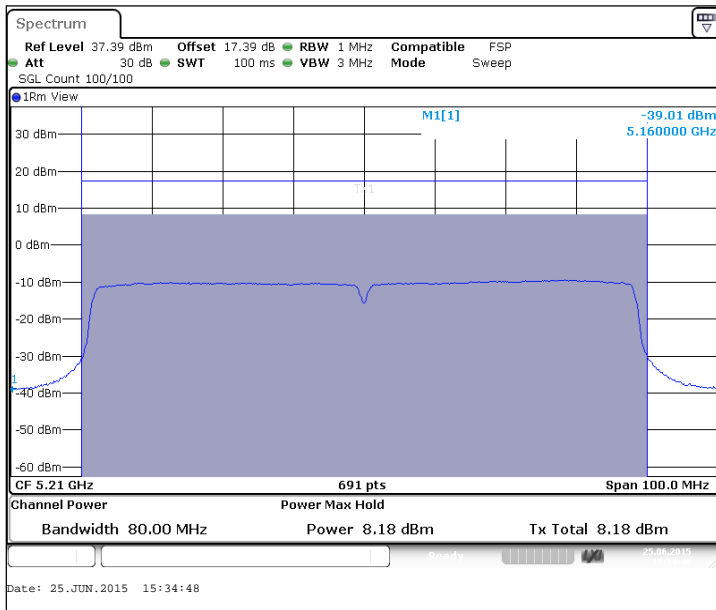
Channel 36-48 / 5210MHz



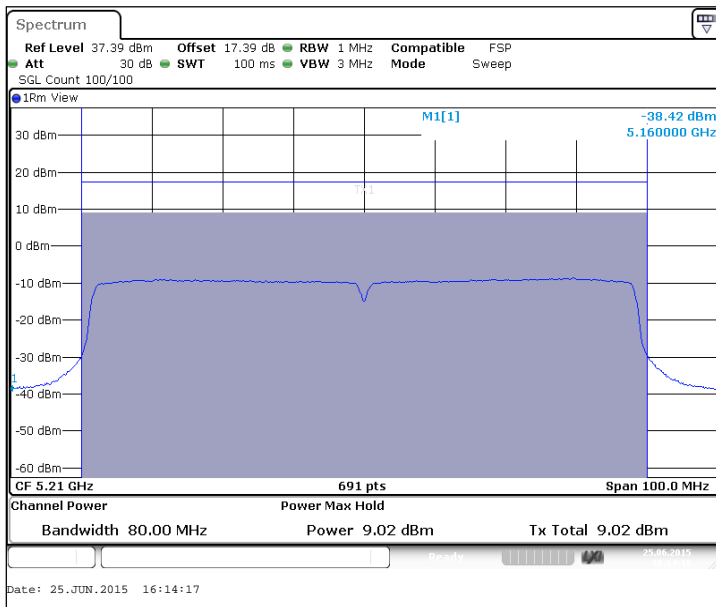
2.4.36 802.11ac mode, 256QAM modulation, 351.0 / 390.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	8.18	6.577	PASSED
36-48 / 5210 AUX	9.02	7.98	PASSED

Channel 36-48 / 5210MHz



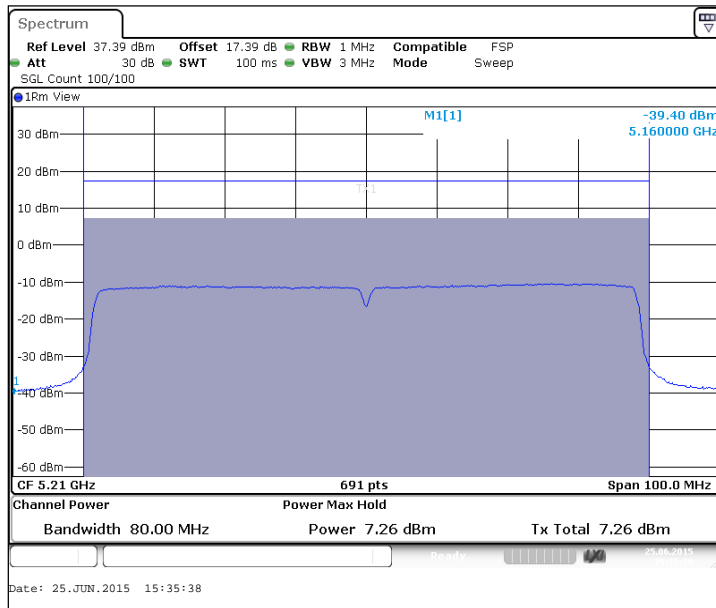
Channel 36-48 / 5210MHz



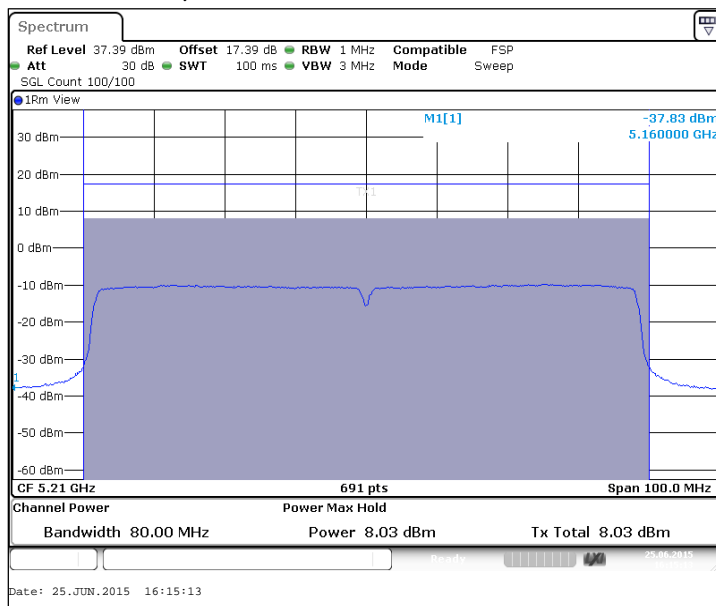
2.4.37 802.11ac mode, 256QAM modulation, 390.0 / 433.3 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
36-48 / 5210 MAIN	7.26	5.321	PASSED
36-48 / 5210 AUX	8.03	6.353	PASSED

Channel 36-48 / 5210MHz



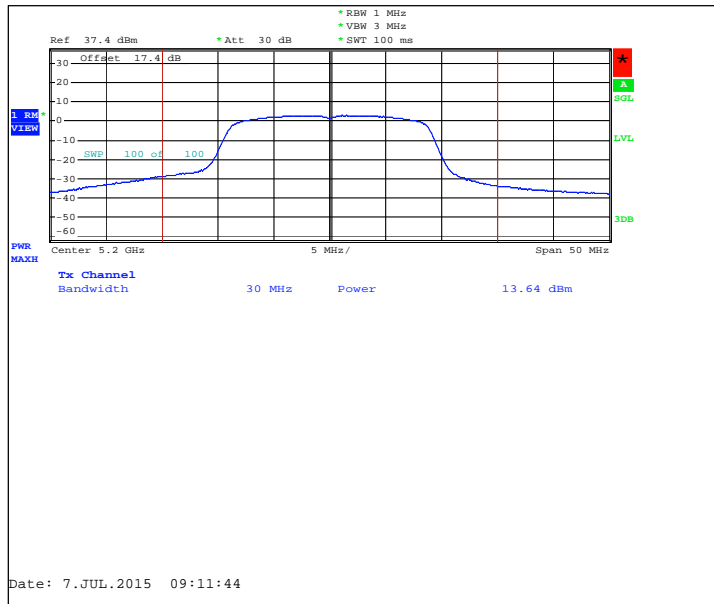
Channel 36-48 / 5210MHz



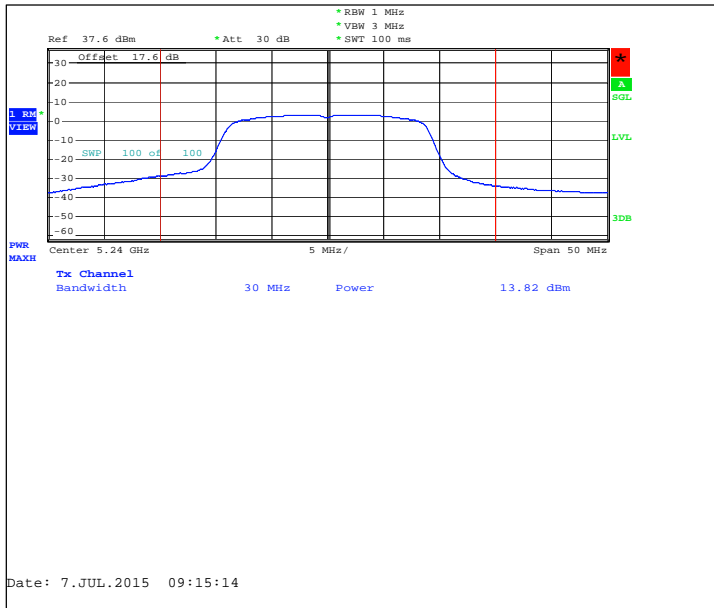
2.4.38 802.11n Aux mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
40 / 5200	13.64	23.121	PASSED
48 / 5240	13.82	24.099	PASSED
52 / 5260	13.99	25.061	PASSED
60 / 5300	13.93	24.717	PASSED
64 / 5320	13.95	24.831	PASSED
100 / 5500	13.95	24.831	PASSED
116 / 5580	14.14	25.942	PASSED
140 / 5700	14.05	25.41	PASSED
149 / 5745	22.29	169.434	PASSED
157 / 5785	22.35	171.791	PASSED
165 / 5825	22.27	168.655	PASSED

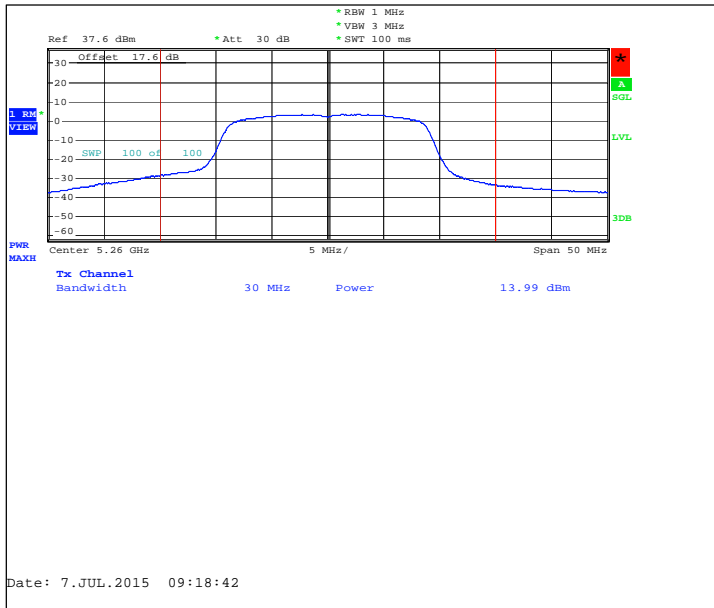
Channel 40 / 5200MHz



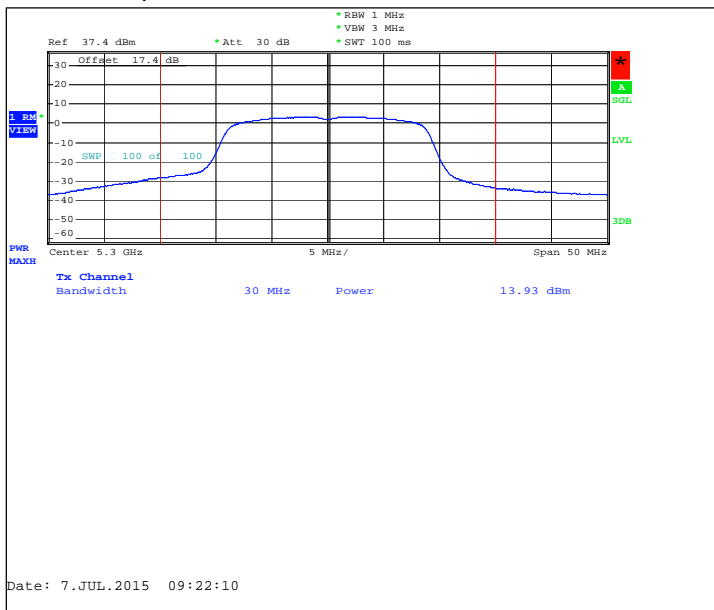
Channel 48 / 5240MHz



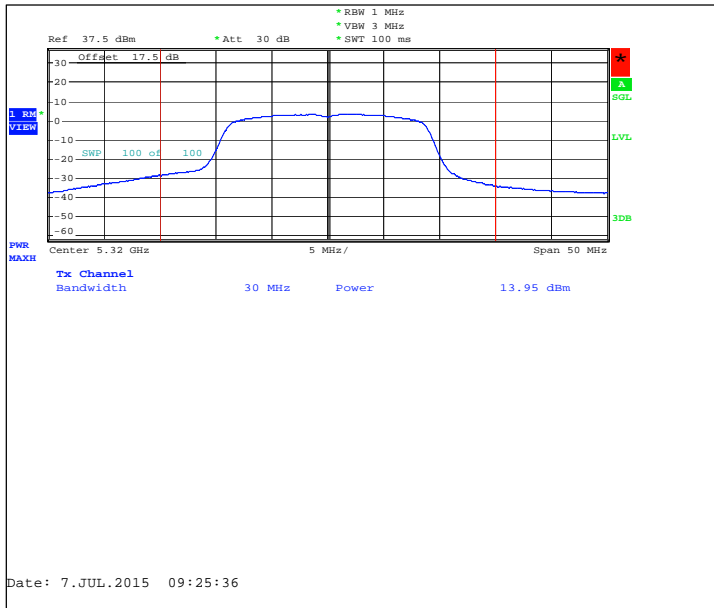
Channel 52 / 5260MHz



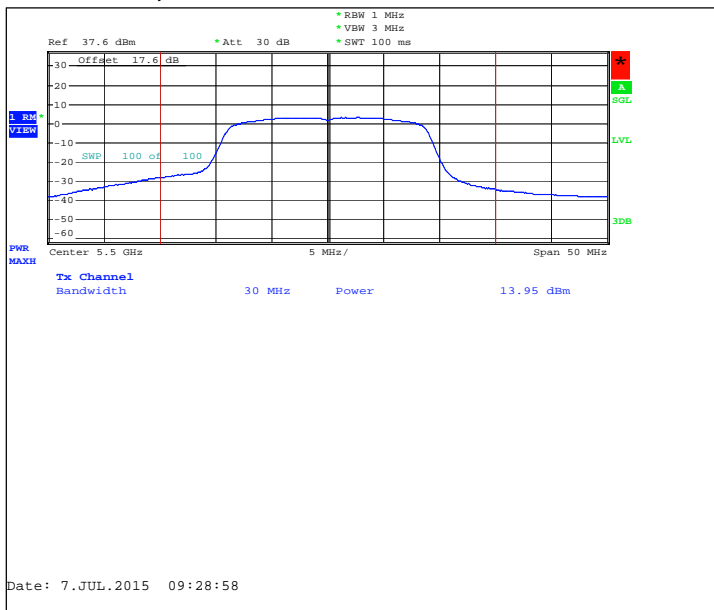
Channel 60 / 5300MHz



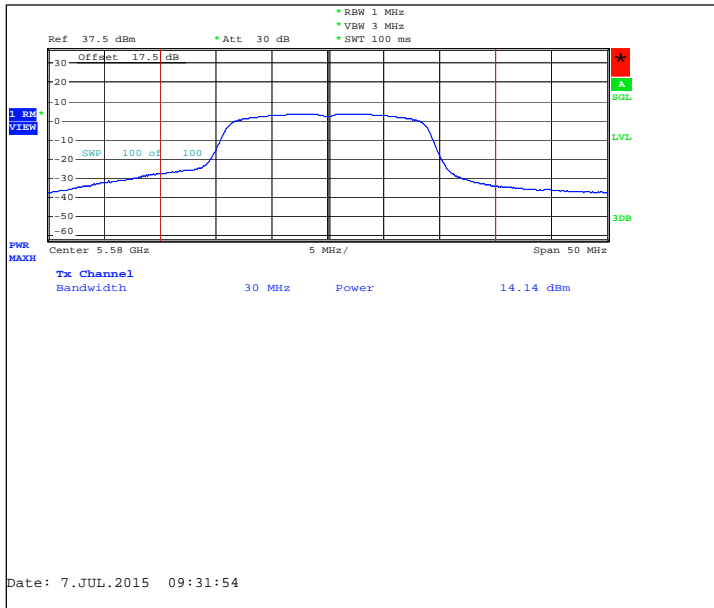
Channel 64 / 5320MHz



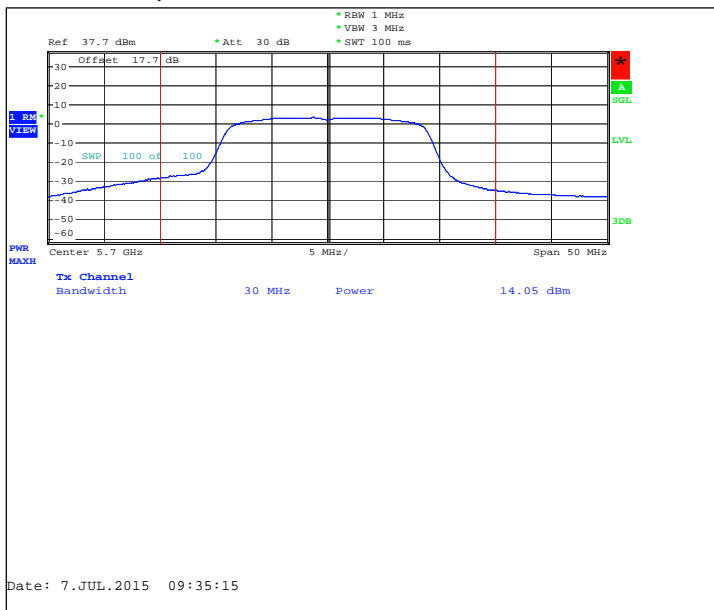
Channel 100 / 5500MHz



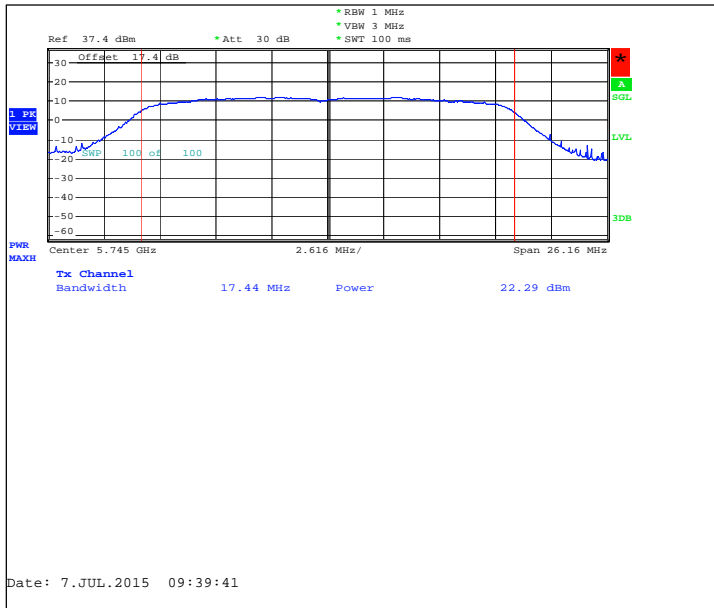
Channel 116 / 5580MHz



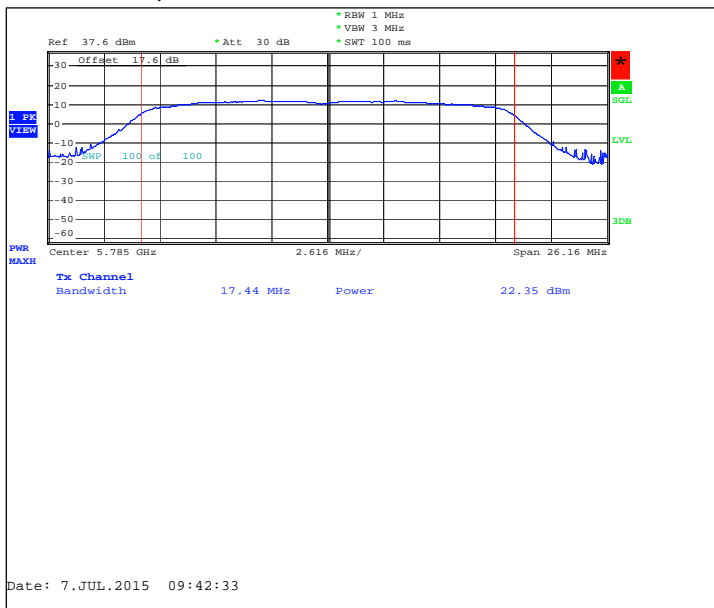
Channel 140 / 5700MHz



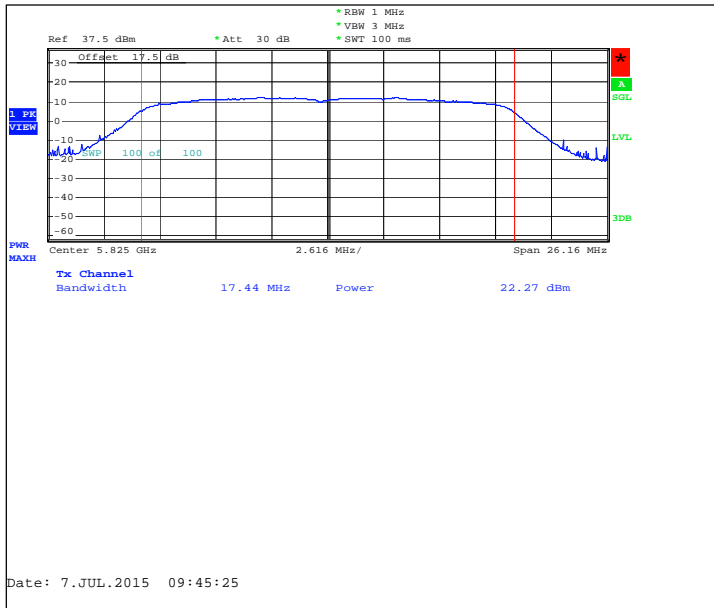
Channel 149 / 5745MHz



Channel 157 / 5785MHz



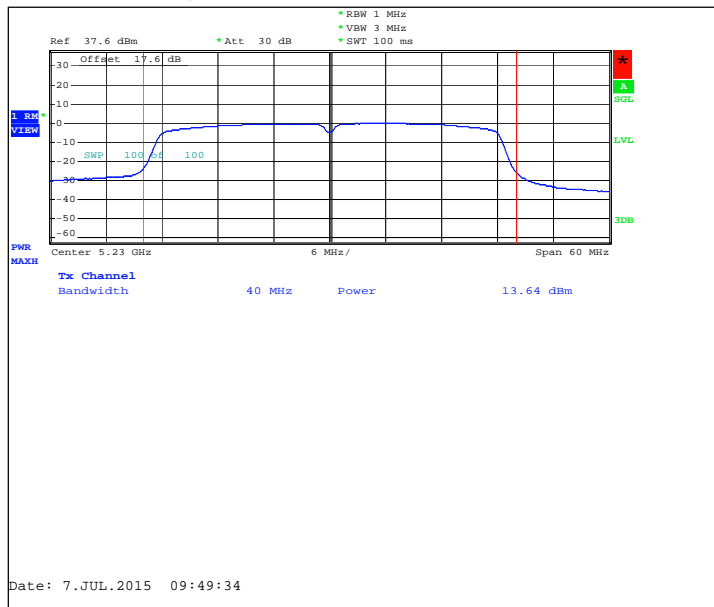
Channel 165 / 5825MHz



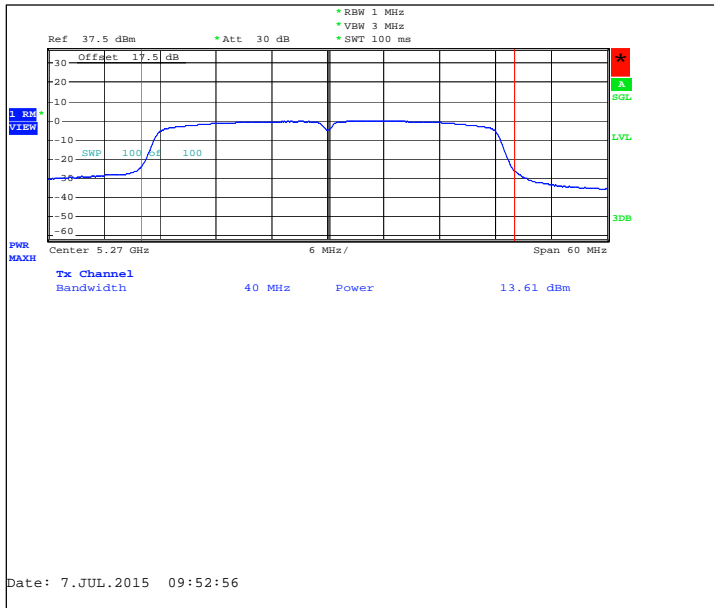
2.4.39 802.11n Aux mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
44+48 / 5230	13.64	23.121	PASSED
52+56 / 5270	13.61	22.961	PASSED
60+64 / 5310	13.66	23.227	PASSED
100+104 / 5510	13.8	23.988	PASSED
108+112 / 5550	13.8	23.988	PASSED
132+136 / 5670	13.77	23.823	PASSED
149+153 / 5755	21.88	154.17	PASSED
157+161 / 5795	22.14	163.682	PASSED

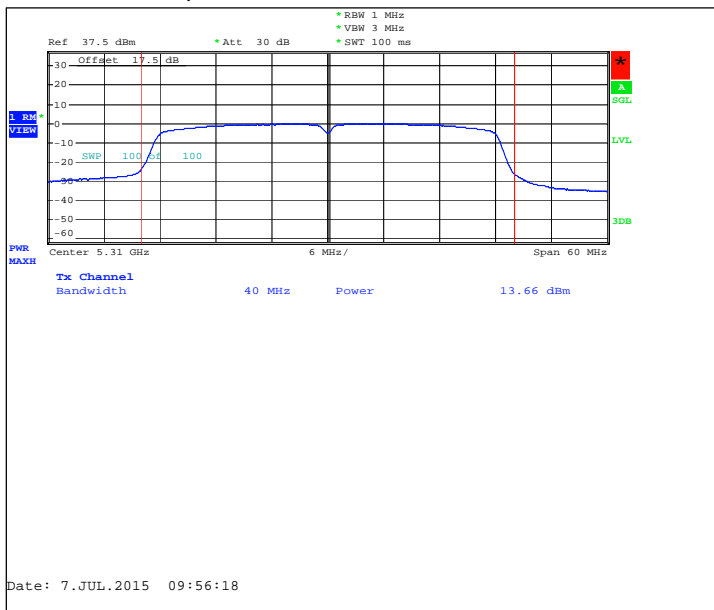
Channel 44+48 / 5230MHz



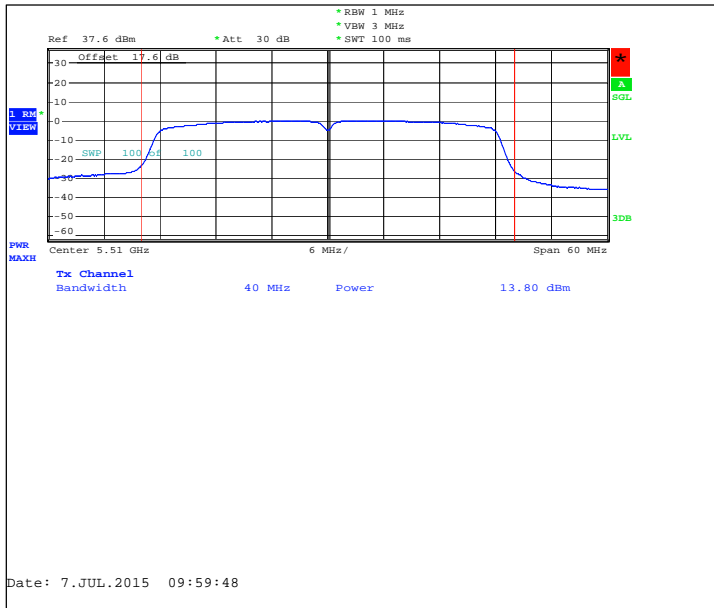
Channel 52+56 / 5270MHz



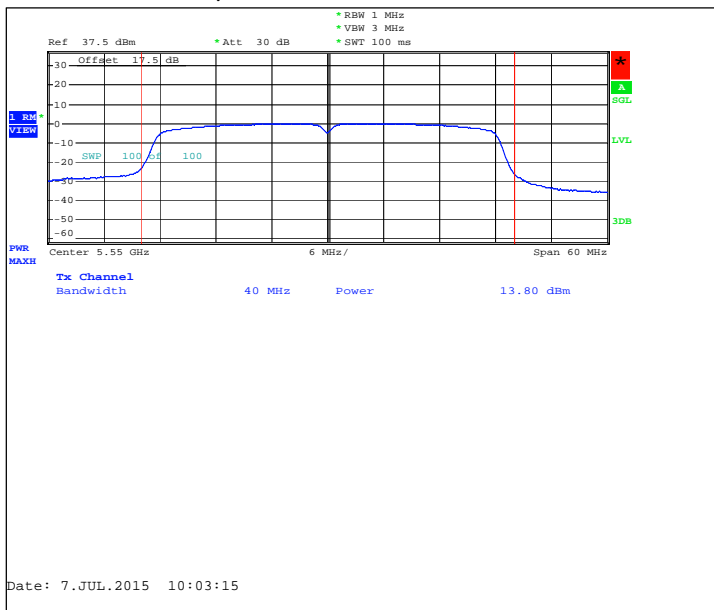
Channel 60+64 / 5310MHz



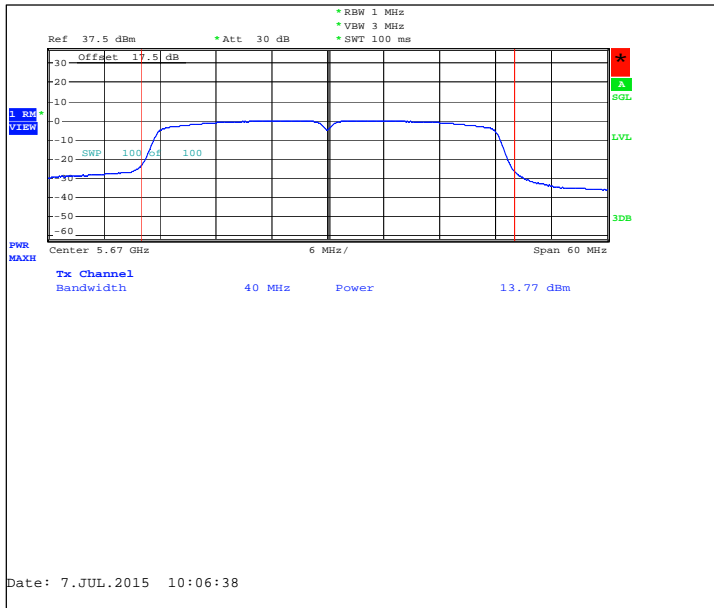
Channel 100+104 / 5510MHz



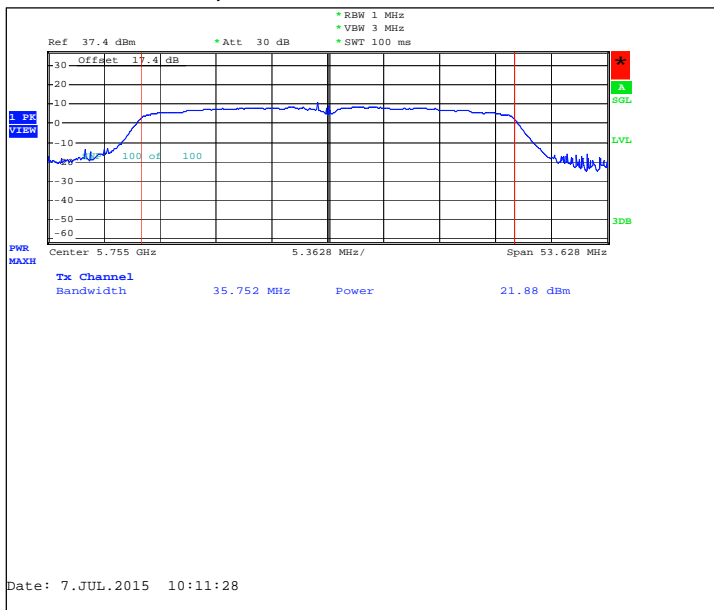
Channel 108+112 / 5550MHz



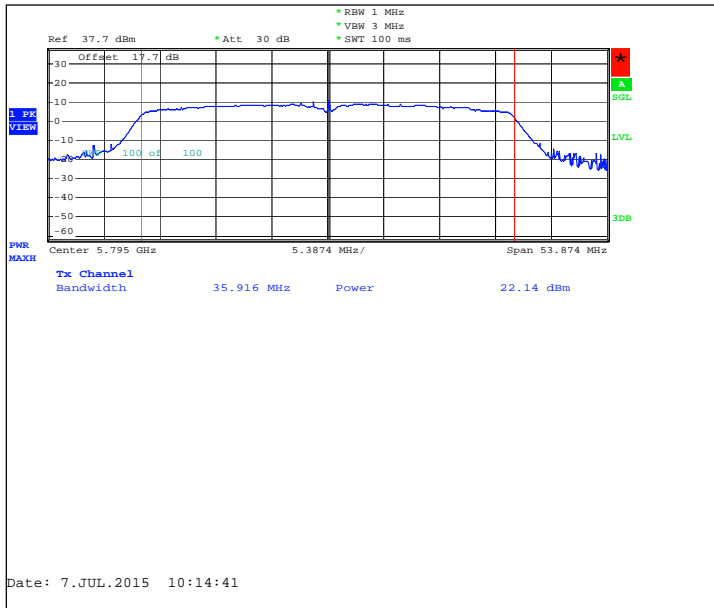
Channel 132+136 / 5670MHz



Channel 149+153 / 5755MHz



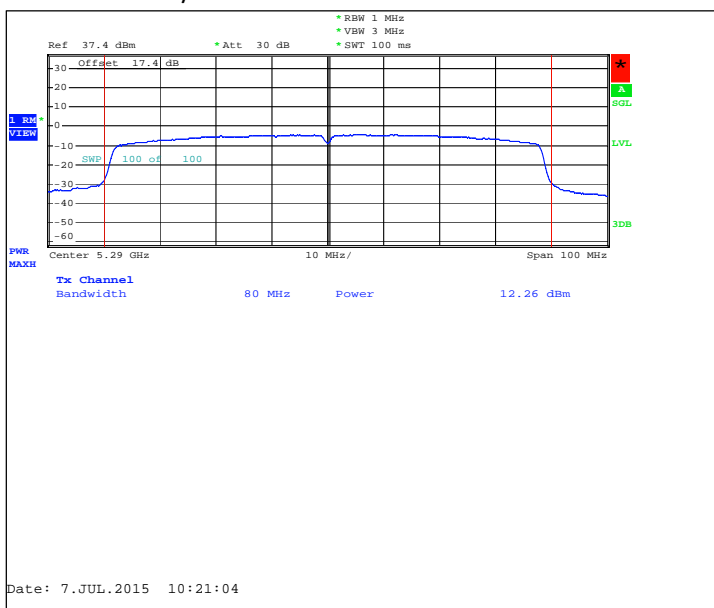
Channel 157+161 / 5795MHz



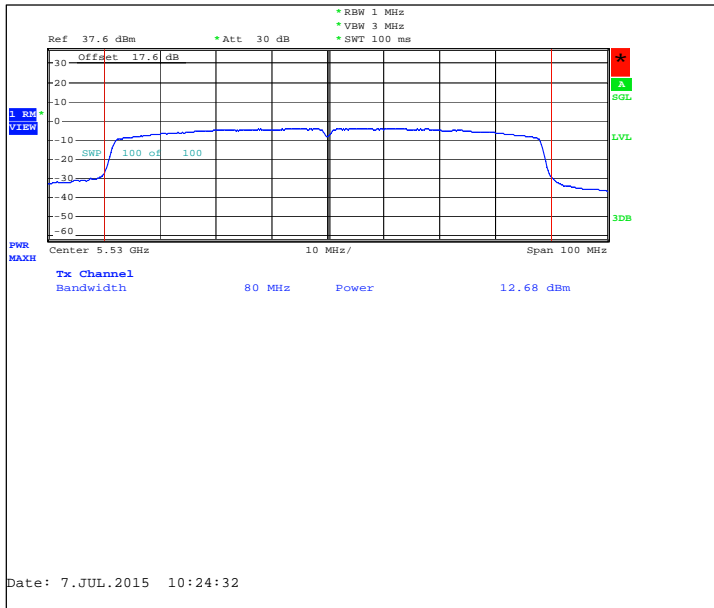
2.4.40 802.11ac Aux mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
52-64 / 5290	12.26	16.827	PASSED
100-112 / 5530	12.68	18.535	PASSED
149-161 / 5775	21.37	137.088	PASSED

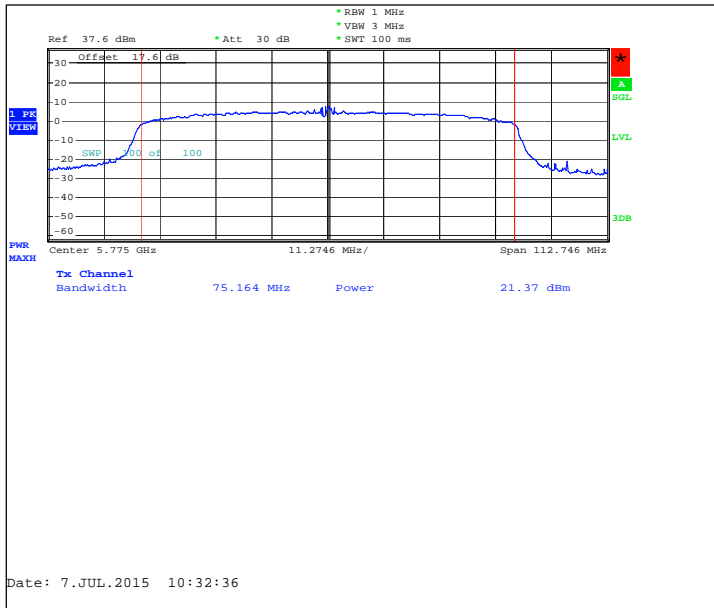
Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz



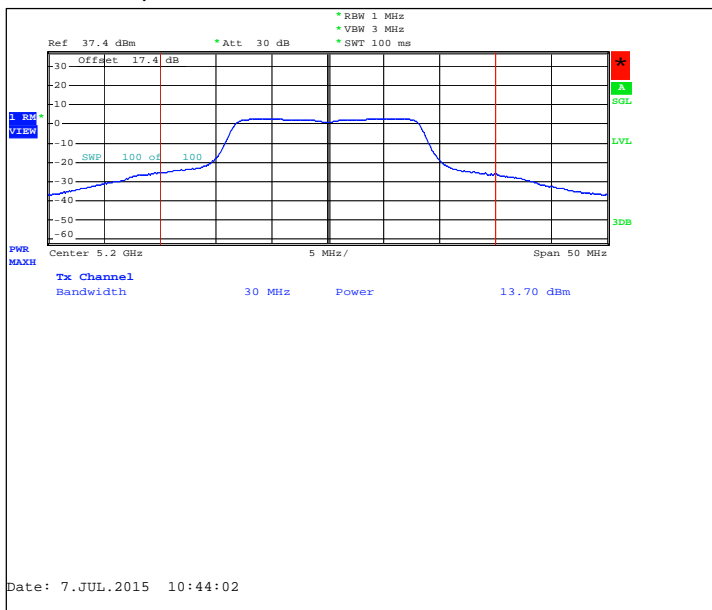
Channel 149-161 / 5775MHz



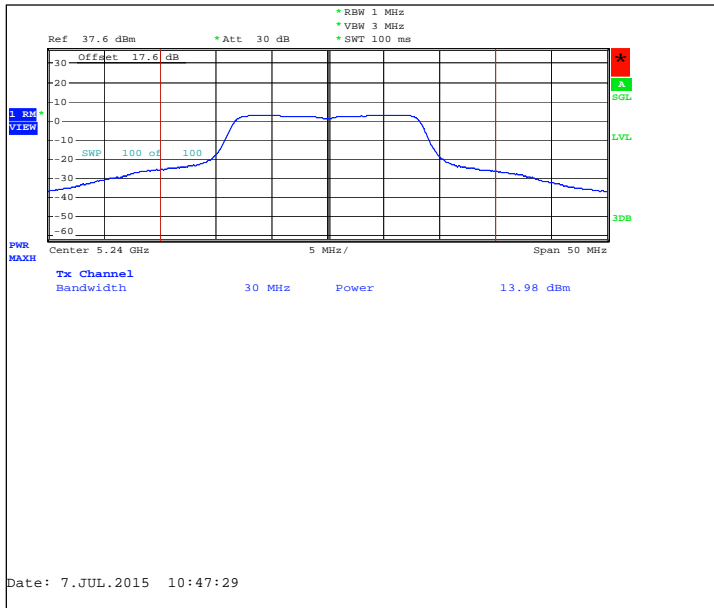
2.4.41 802.11a Aux mode, 16QAM modulation, 24 Mbps data rate

Channel / f _c [MHz]	P [dBm]	P [mW]	Result
40 / 5200	13.7	23.442	PASSED
48 / 5240	13.98	25.003	PASSED
52 / 5260	14.09	25.645	PASSED
60 / 5300	13.88	24.434	PASSED
64 / 5320	13.91	24.604	PASSED
100 / 5500	14.12	25.823	PASSED
116 / 5580	14.3	26.915	PASSED
140 / 5700	14.18	26.182	PASSED
149 / 5745	22.61	182.39	PASSED
157 / 5785	22.75	188.365	PASSED
165 / 5825	22.64	183.654	PASSED

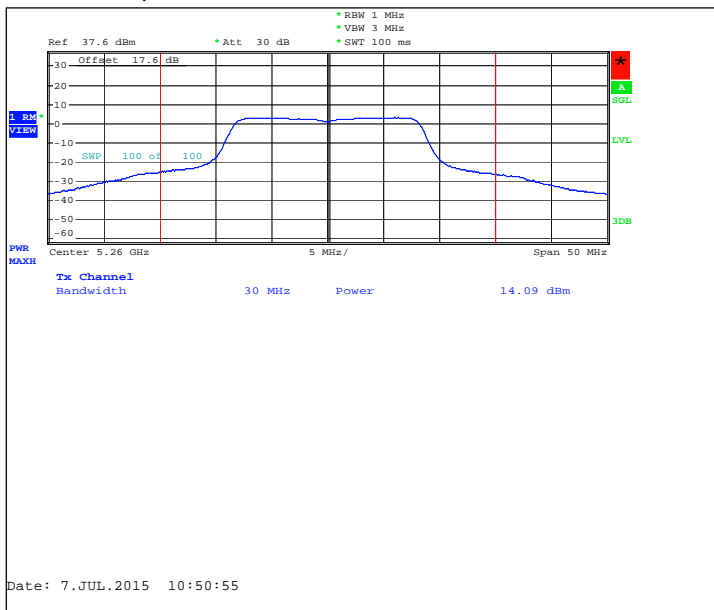
Channel 40 / 5200MHz



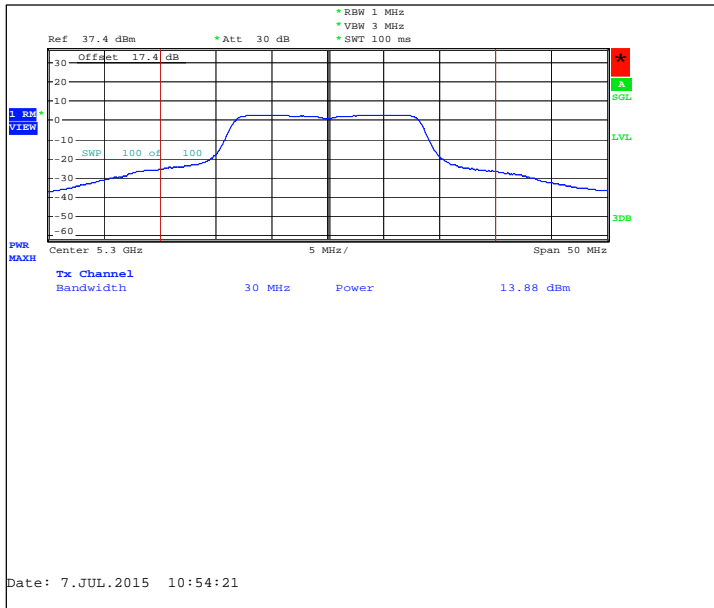
Channel 48 / 5240MHz



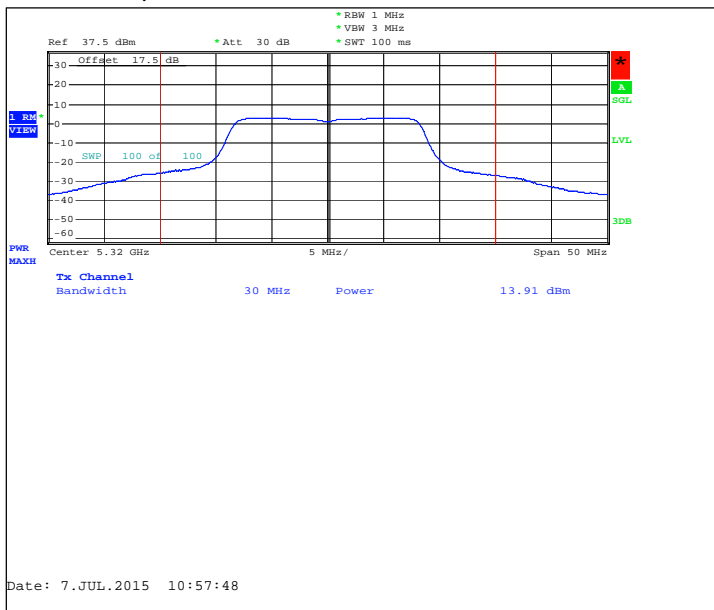
Channel 52 / 5260MHz



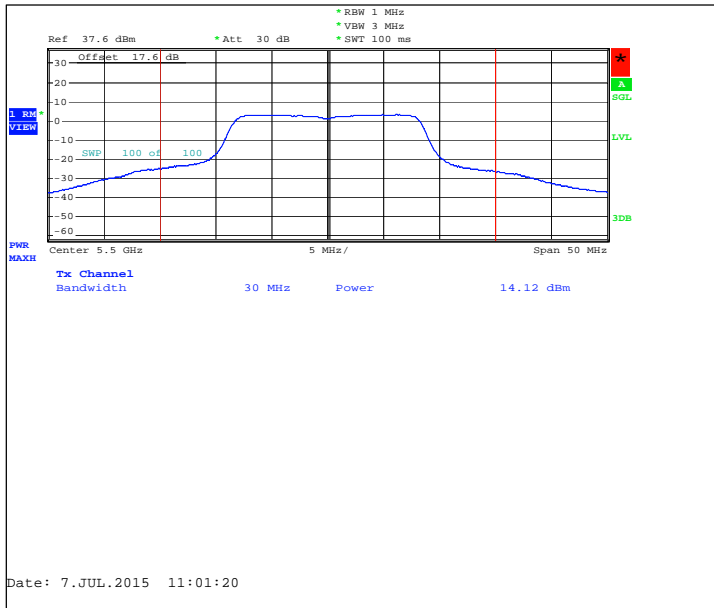
Channel 60 / 5300MHz



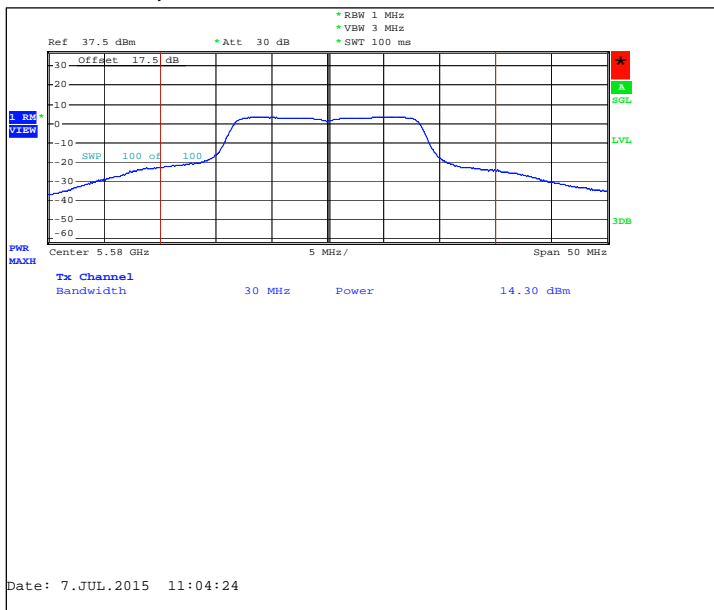
Channel 64 / 5320MHz



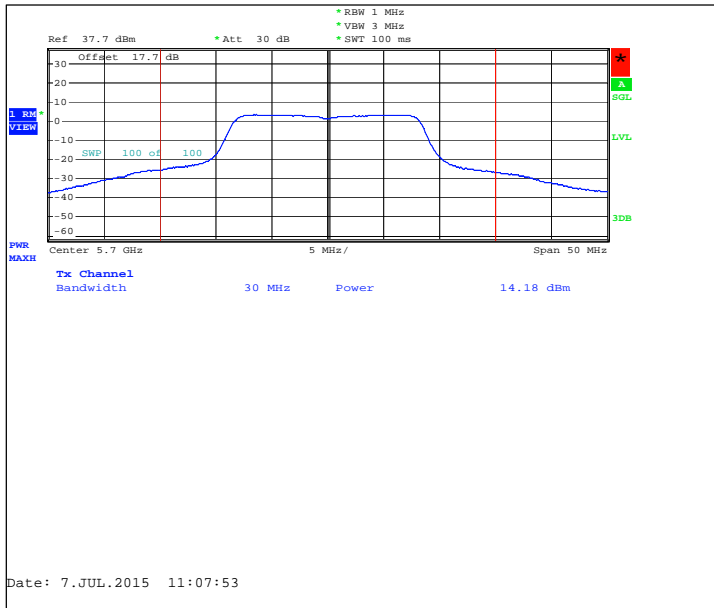
Channel 100 / 5500MHz



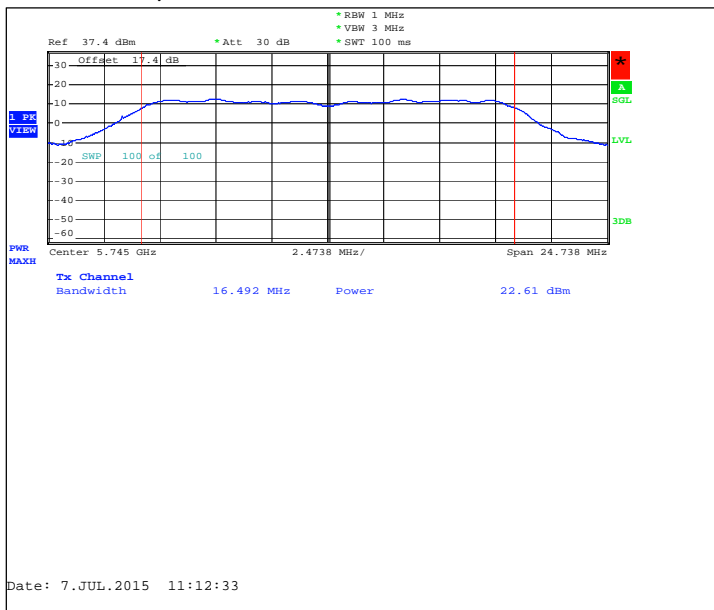
Channel 116 / 5580MHz



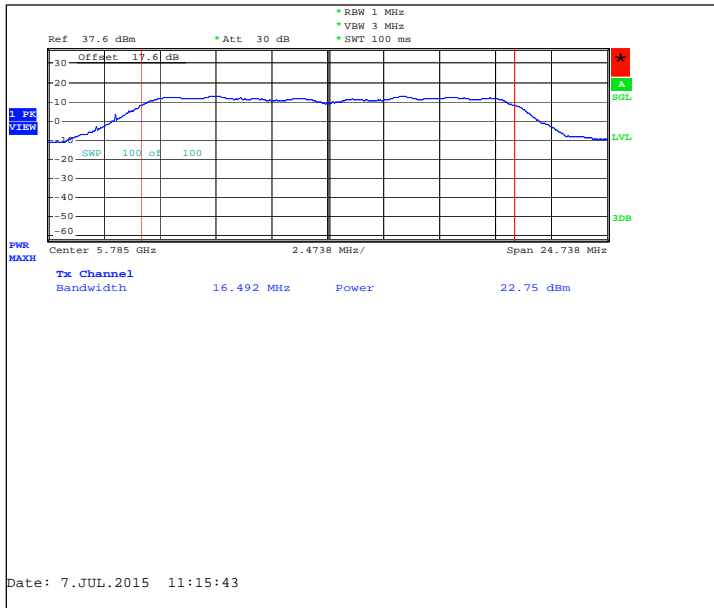
Channel 140 / 5700MHz



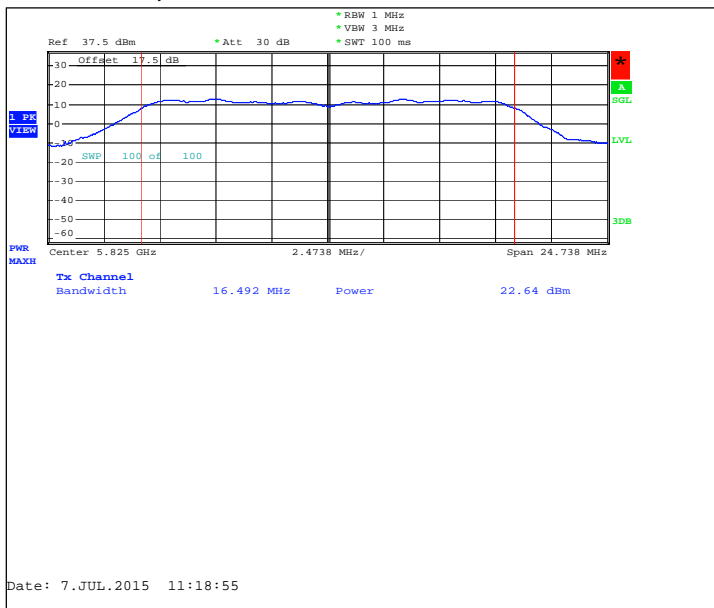
Channel 149 / 5745MHz



Channel 157 / 5785MHz



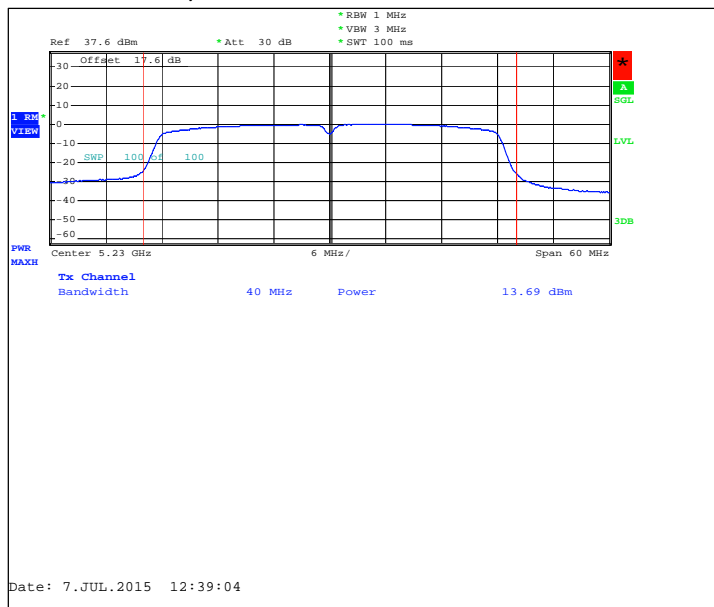
Channel 165 / 5825MHz



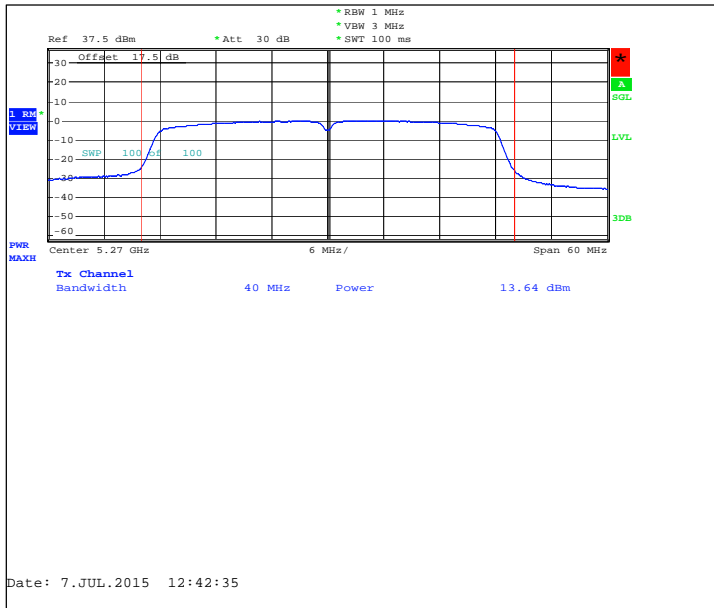
2.4.42 802.11n Aux mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
44+48 / 5230	13.69	23.388	PASSED
52+56 / 5270	13.64	23.121	PASSED
60+64 / 5310	13.72	23.55	PASSED
100+104 / 5510	13.8	23.988	PASSED
108+112 / 5550	13.82	24.099	PASSED
132+136 / 5670	13.76	23.768	PASSED
149+153 / 5755	21.6	144.544	PASSED
157+161 / 5795	21.97	157.398	PASSED

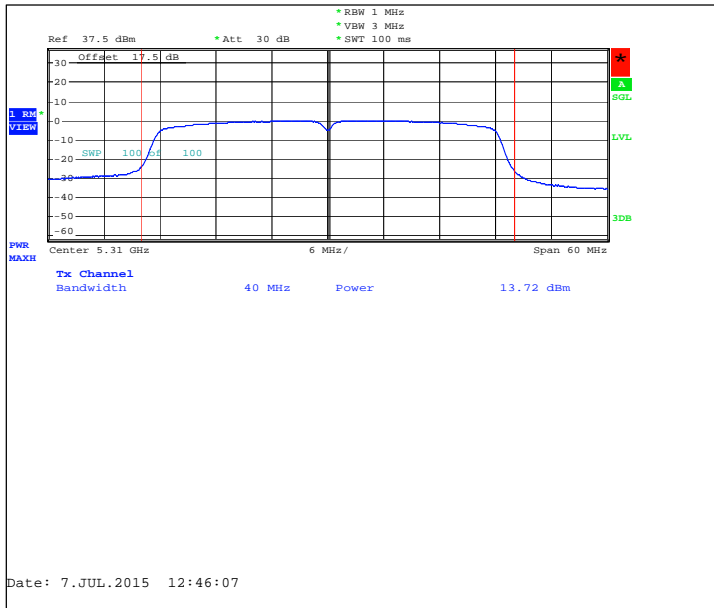
Channel 44+48 / 5230MHz



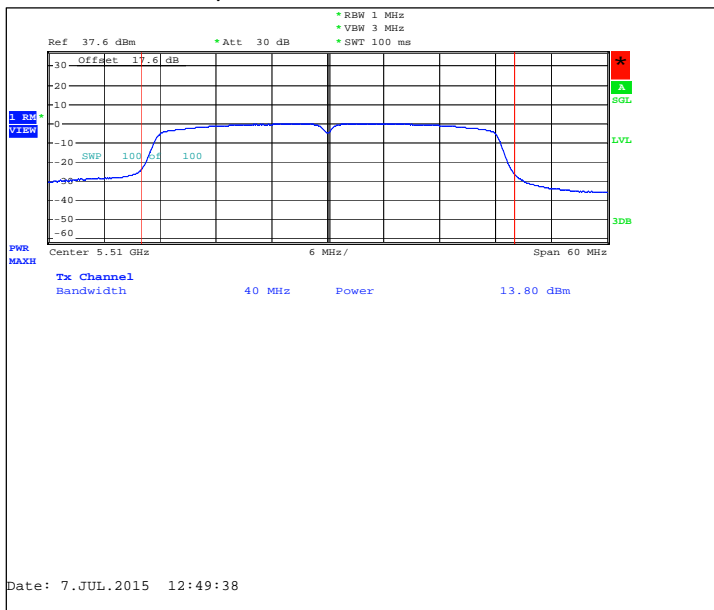
Channel 52+56 / 5270MHz



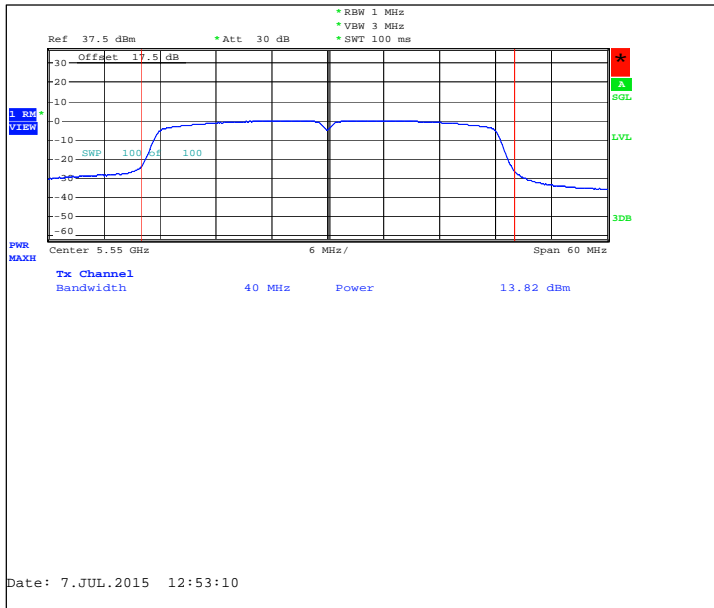
Channel 60+64 / 5310MHz



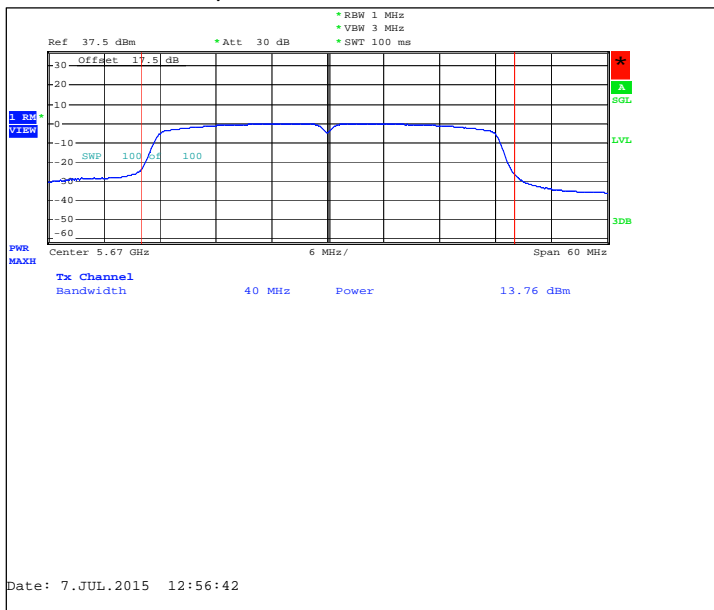
Channel 100+104 / 5510MHz



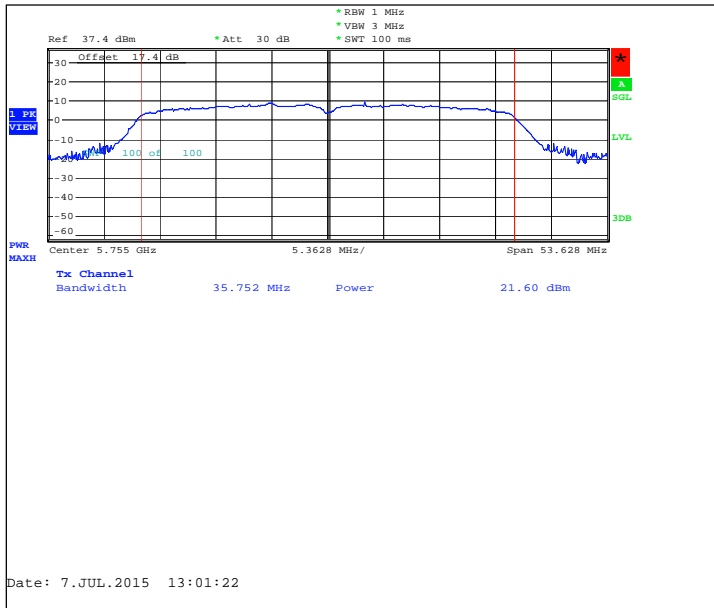
Channel 108+112 / 5550MHz



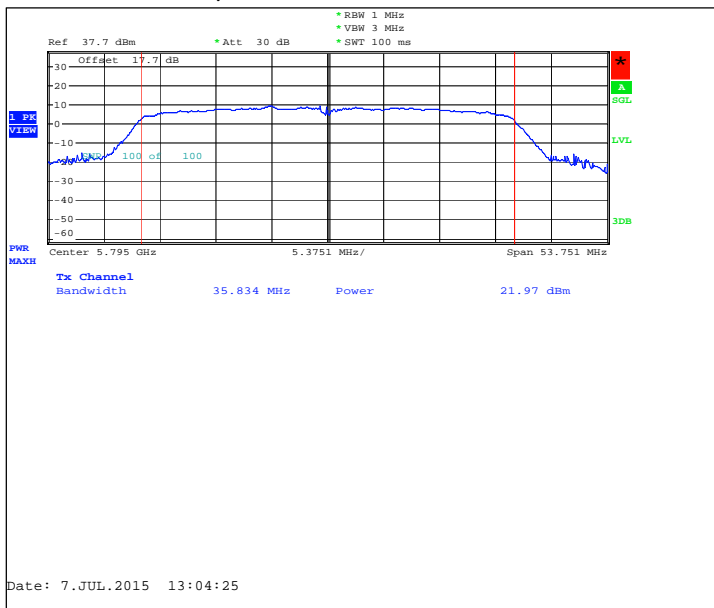
Channel 132+136 / 5670MHz



Channel 149+153 / 5755MHz



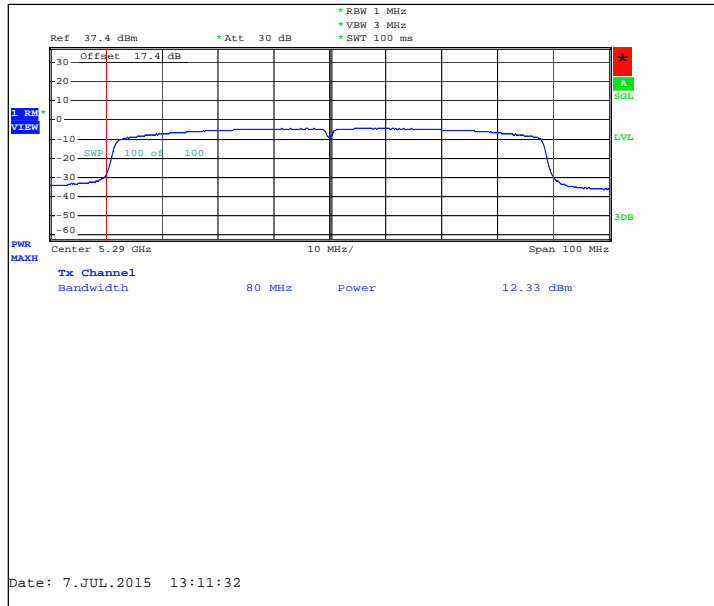
Channel 157+161 / 5795MHz



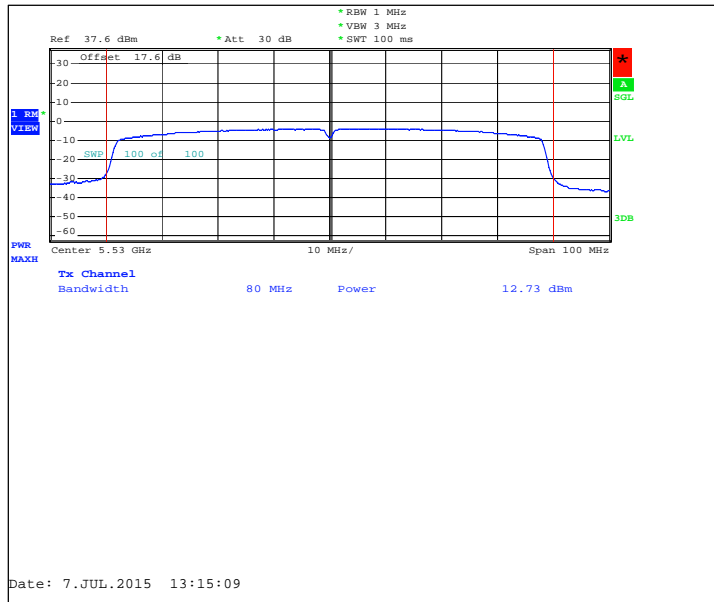
2.4.43 802.11ac Aux mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / fc [MHz]	P [dBm]	P [mW]	Result
52-64 / 5290	12.33	17.1	PASSED
100-112 / 5530	12.73	18.75	PASSED
149-161 / 5775	20.88	122.462	PASSED

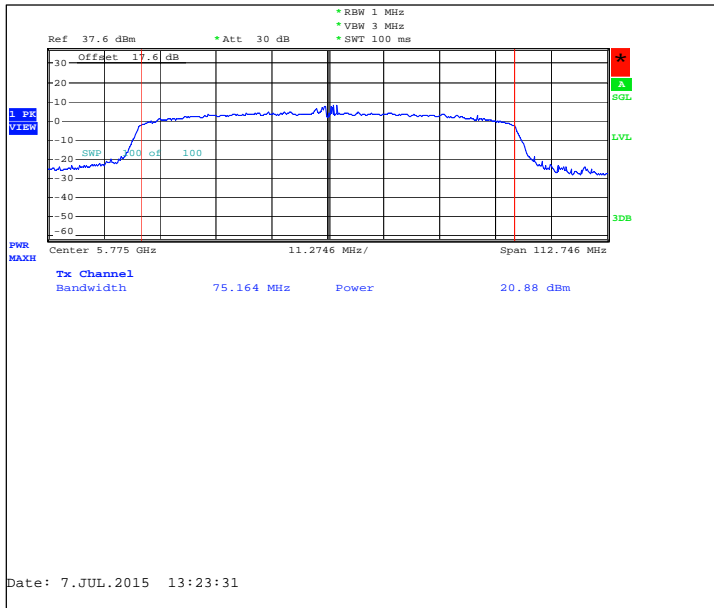
Channel 52-64 / 5290MHz



Channel 100-112 / 5530MHz



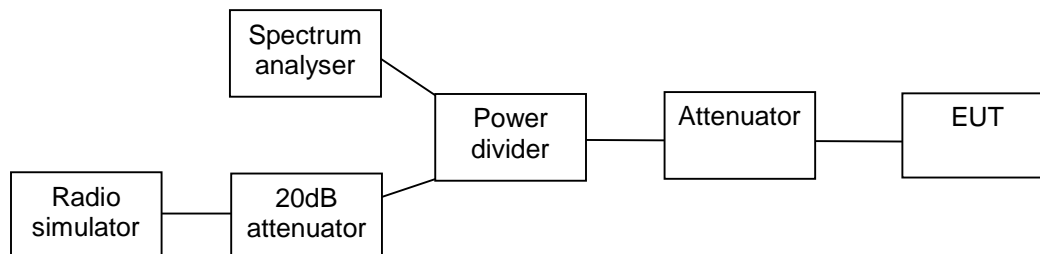
Channel 149-161 / 5775MHz



3. 6dB(bandwidth) (FCC § , RSS-210 A9.2)

EUT with DUT number	RM-1085, DUT 100012
Accessories with DUT numbers	SD-241R, DUT 100016 ; WH-308, DUT 100029
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 47 / 101.9
Date of measurements	06-Jul-2015
Measured by	Jari Keto

3.1. Test Setup



3.2. Test method and limit

The measurement is made according to DTS procedures KDB 558074 and IC standard RSS-210.

Limits for 6 dB bandwidth measurements

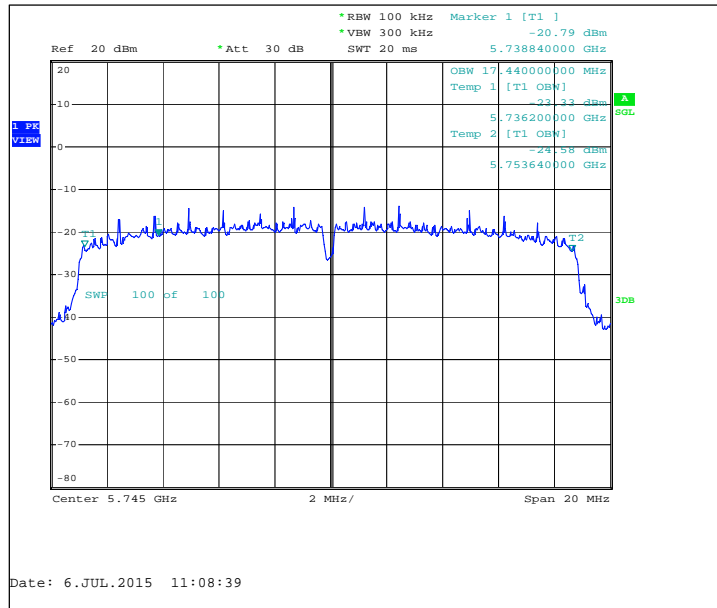
Limit [kHz]
>= 500

3.3. 5 GHz RLAN Test results

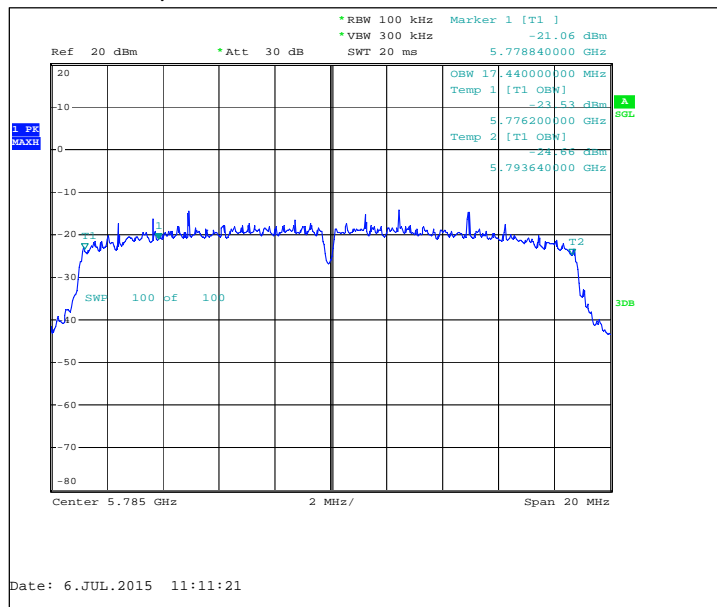
3.3.1 802.11n mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

Channel / f _c [MHz]	6 dB bandwidth [kHz]	Result
149 / 5745 main	17440	PASSED
157 / 5785 main	17440	PASSED
165 / 5825 main	17440	PASSED

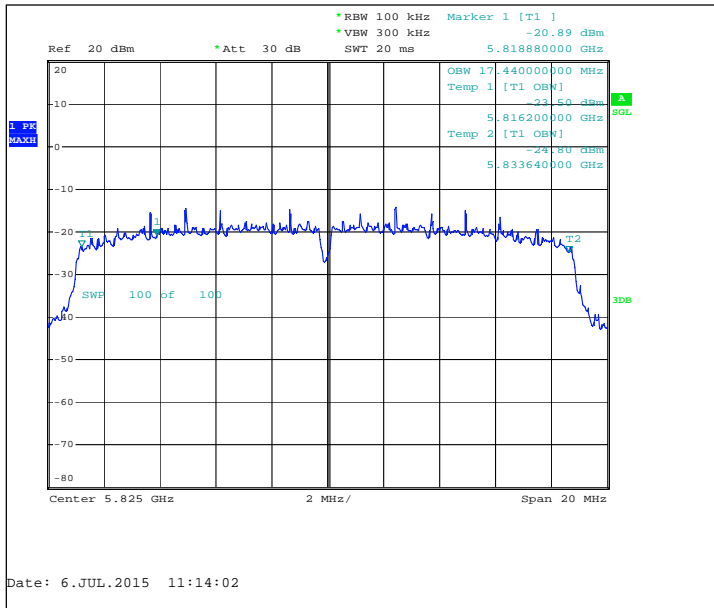
Channel 149 / 5745MHz



Channel 157 / 5785MHz



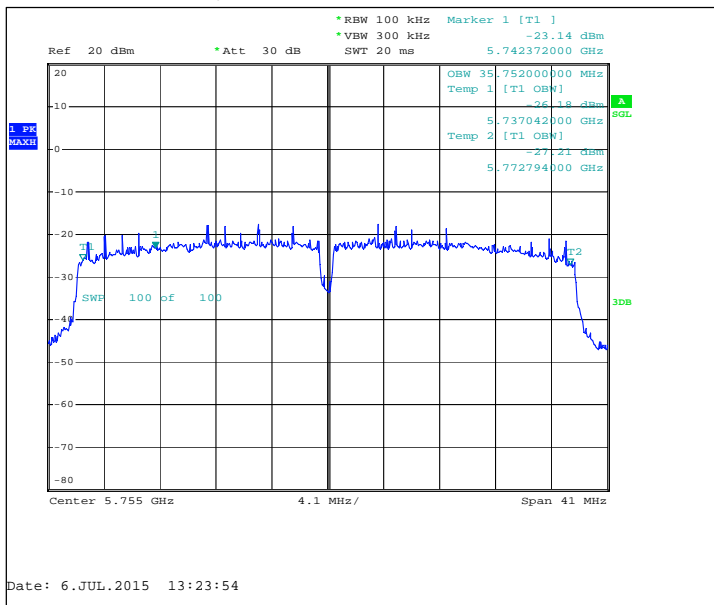
Channel 165 / 5825MHz



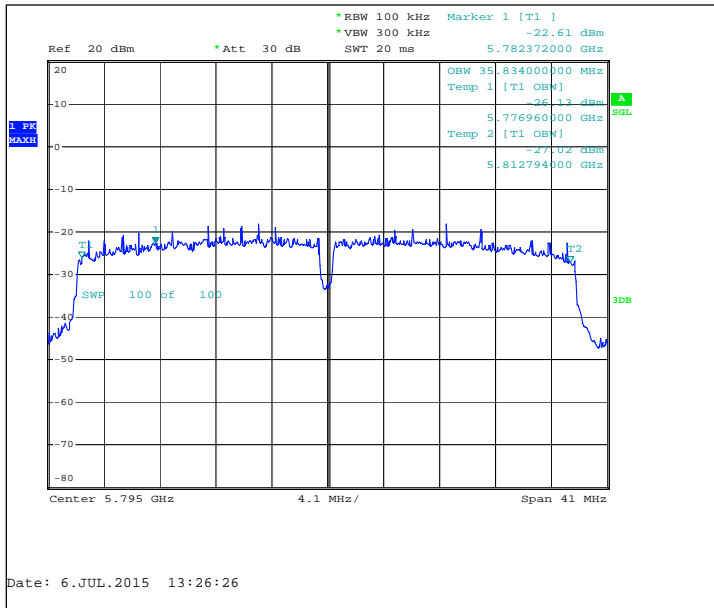
3.3.2 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149+153 / 5755 main	35752	PASSED
157+161 / 5795 main	35834	PASSED

Channel 149+153 / 5755MHz



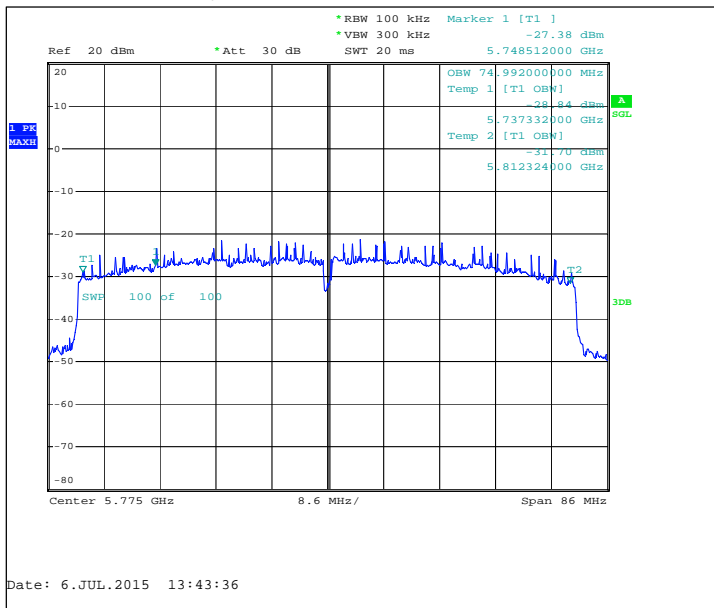
Channel 157+161 / 5795MHz



3.3.3 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / f _c [MHz]	6 dB bandwidth [kHz]	Result
149-161 / 5775 main	74992	PASSED

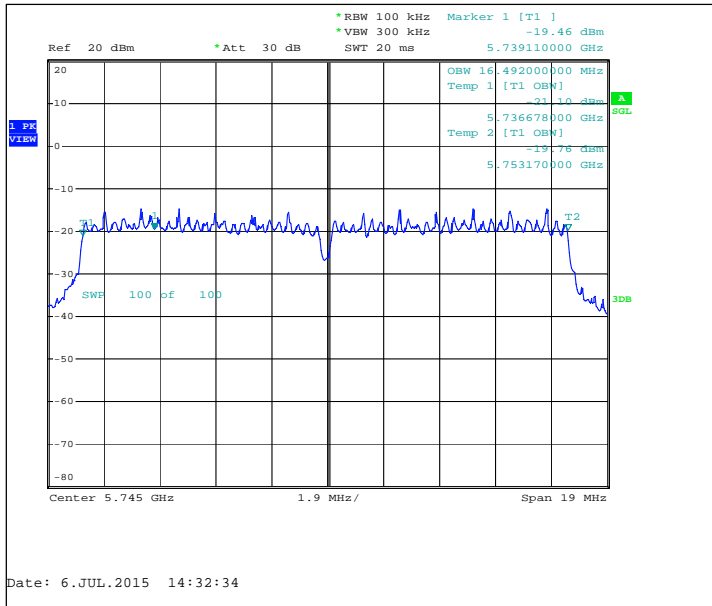
Channel 149-161 / 5775MHz



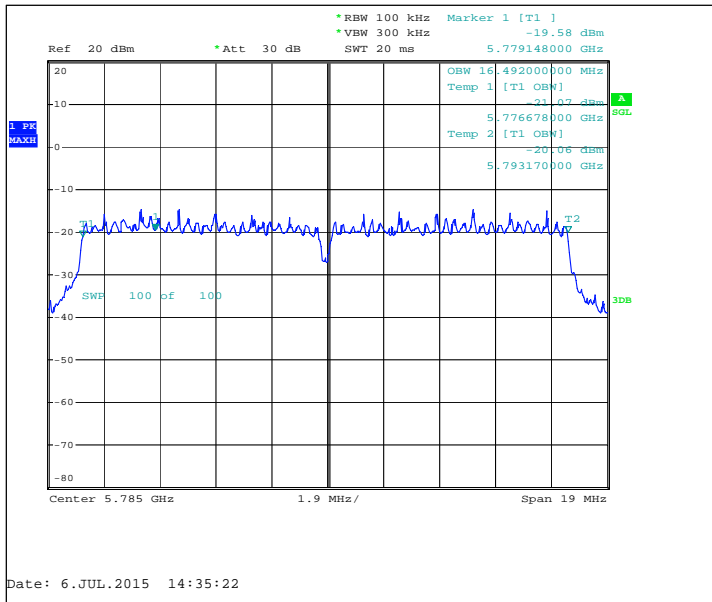
3.3.4 802.11a mode, 16QAM modulation, 24 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149 / 5745 main	16492	PASSED
157 / 5785 main	16492	PASSED
165 / 5825 main	16492	PASSED

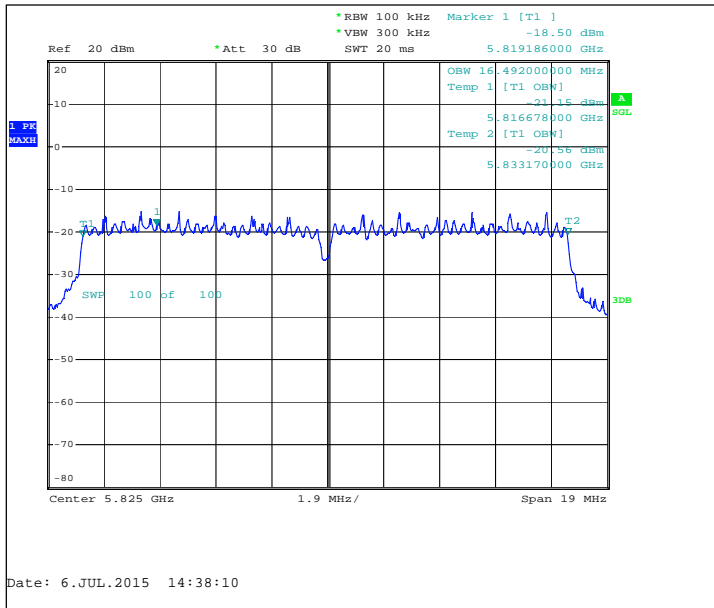
Channel 149 / 5745MHz



Channel 157 / 5785MHz



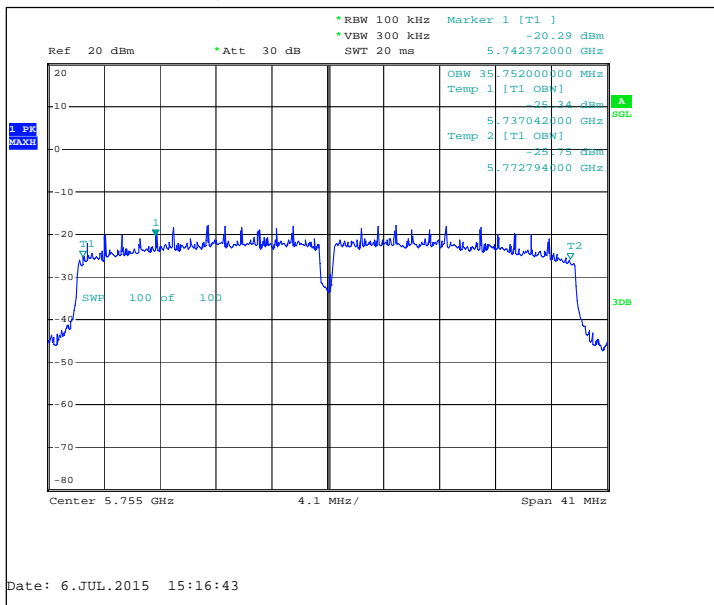
Channel 165 / 5825MHz



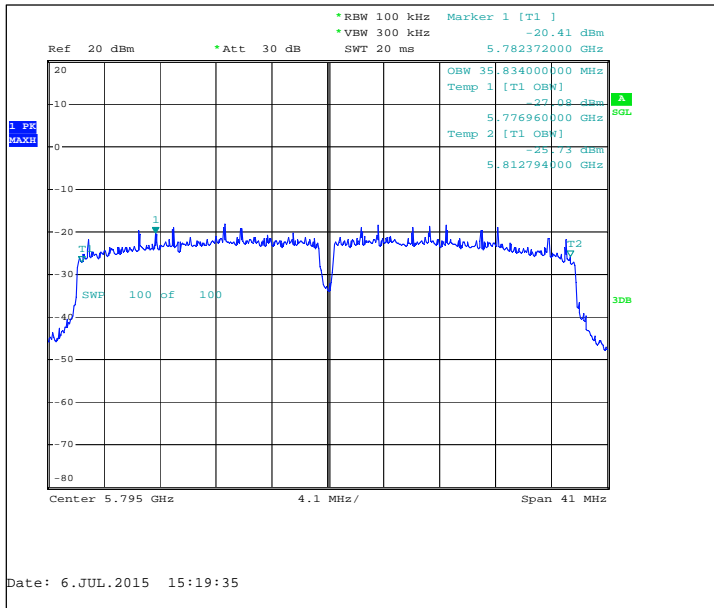
3.3.5 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149+153 / 5755 main	35752	PASSED
157+161 / 5795 main	35834	PASSED

Channel 149+153 / 5755MHz



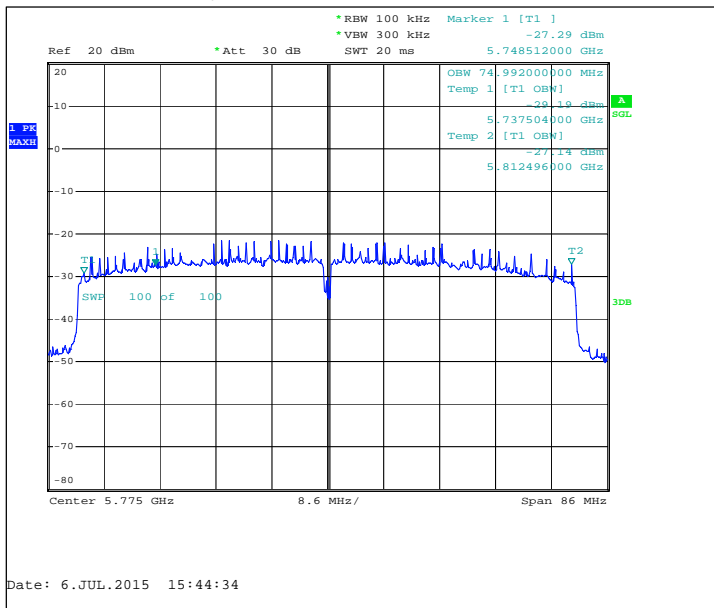
Channel 157+161 / 5795MHz



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

Channel / f _c [MHz]	6 dB bandwidth [kHz]	Result
149-161 / 5775 main	74992	PASSED

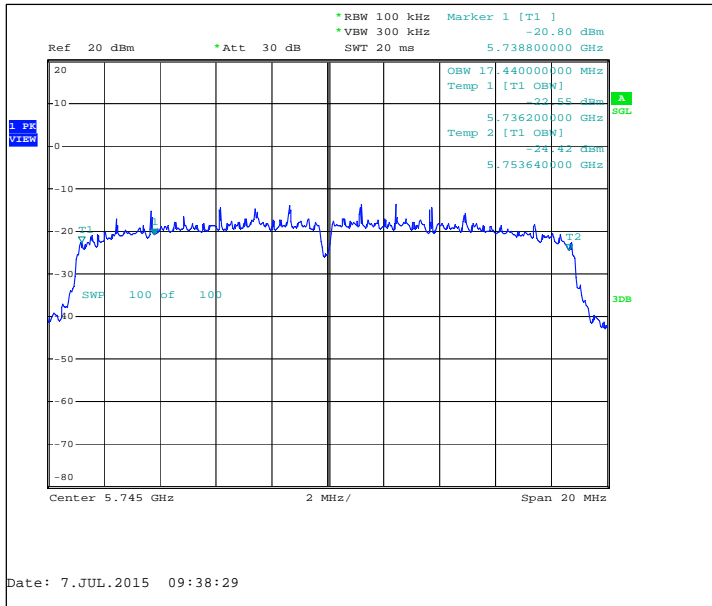
Channel 149-161 / 5775MHz



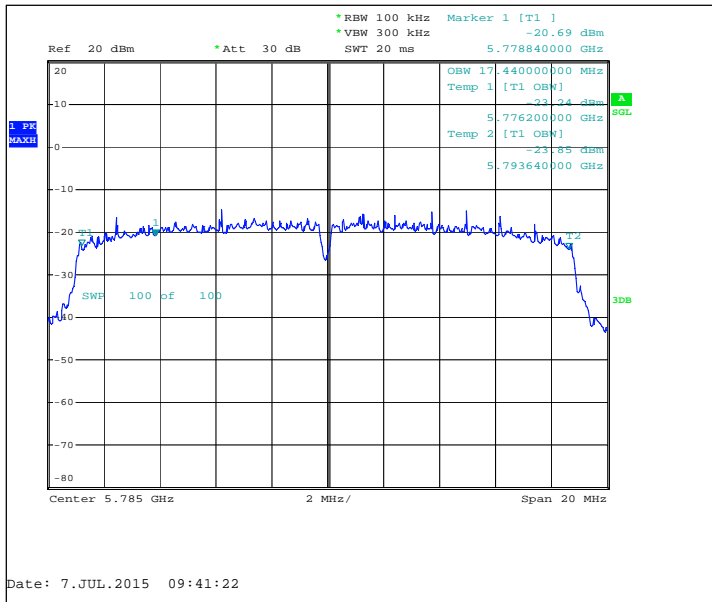
3.3.7 802.11n Aux mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149 / 5745	17440	PASSED
157 / 5785	17440	PASSED
165 / 5825	17440	PASSED

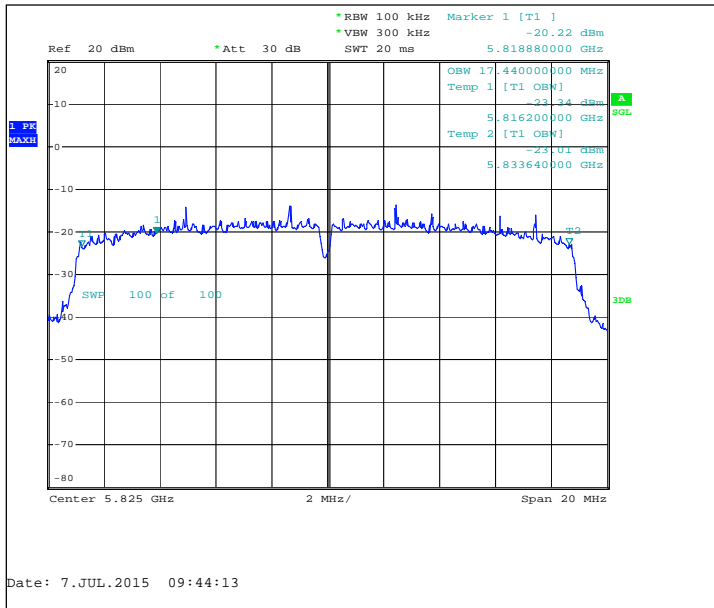
Channel 149 / 5745MHz



Channel 157 / 5785MHz



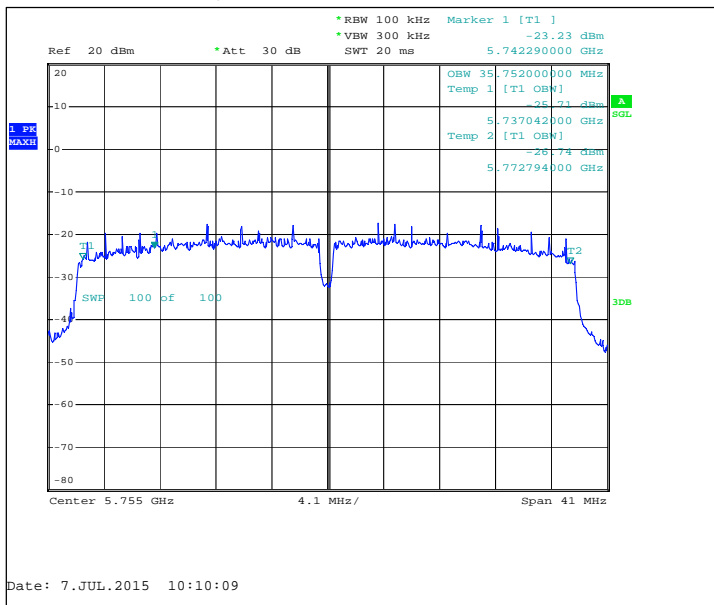
Channel 165 / 5825MHz



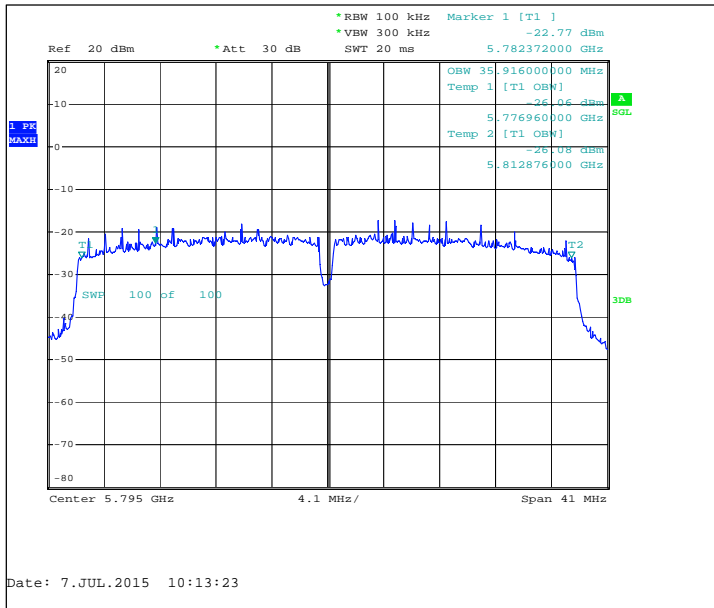
3.3.8 802.11n Aux mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149+153 / 5755	35752	PASSED
157+161 / 5795	35916	PASSED

Channel 149+153 / 5755MHz



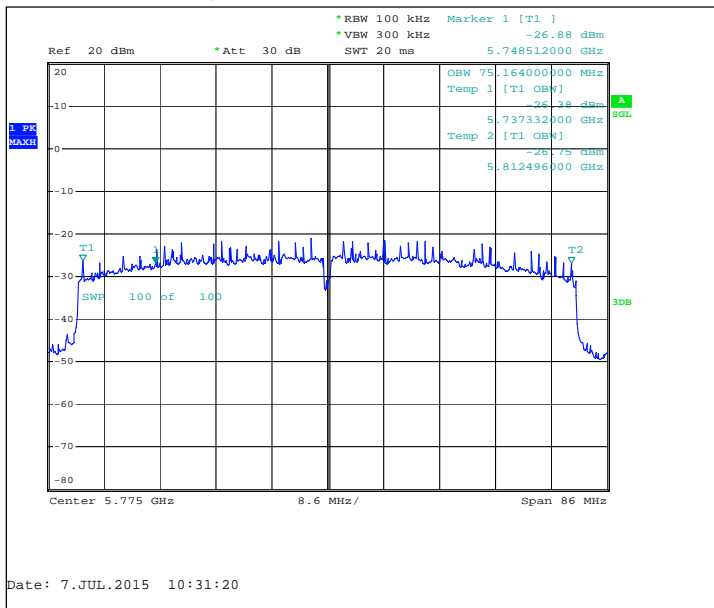
Channel 157+161 / 5795MHz



3.3.9 802.11ac Aux mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149-161 / 5775	75164	PASSED

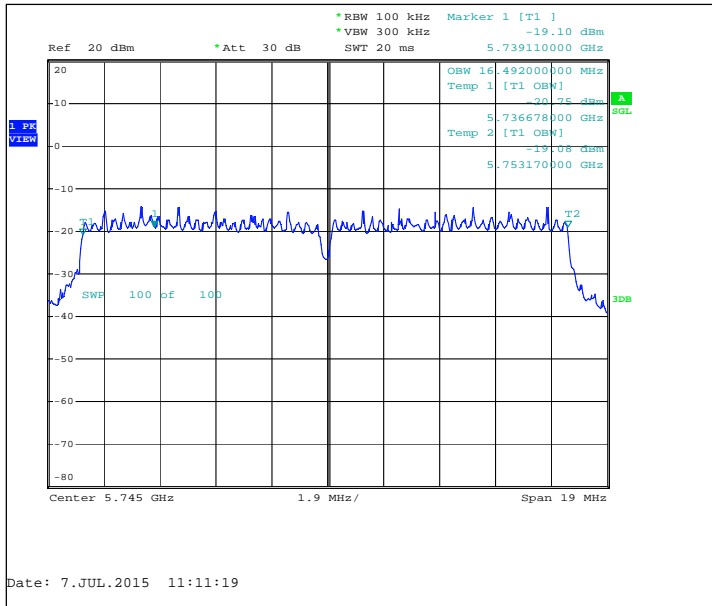
Channel 149-161 / 5775MHz



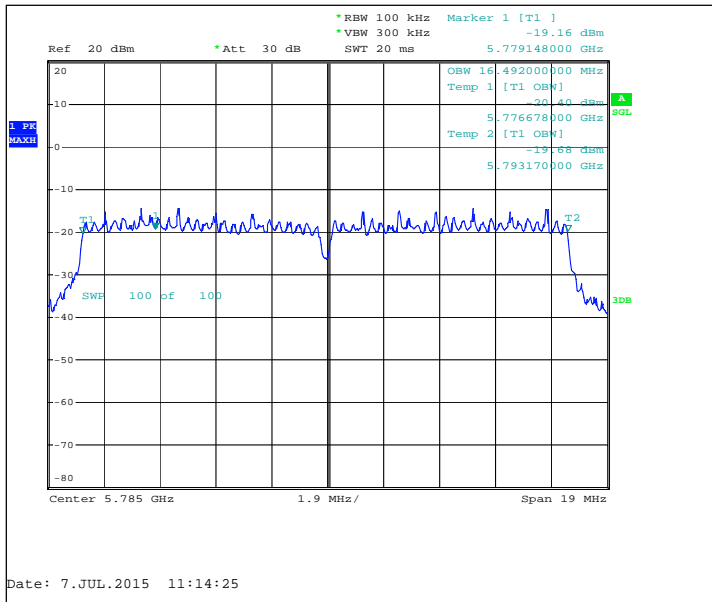
3.3.10 802.11a Aux mode, 16QAM modulation, 24 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149 / 5745	16492	PASSED
157 / 5785	16492	PASSED
165 / 5825	16492	PASSED

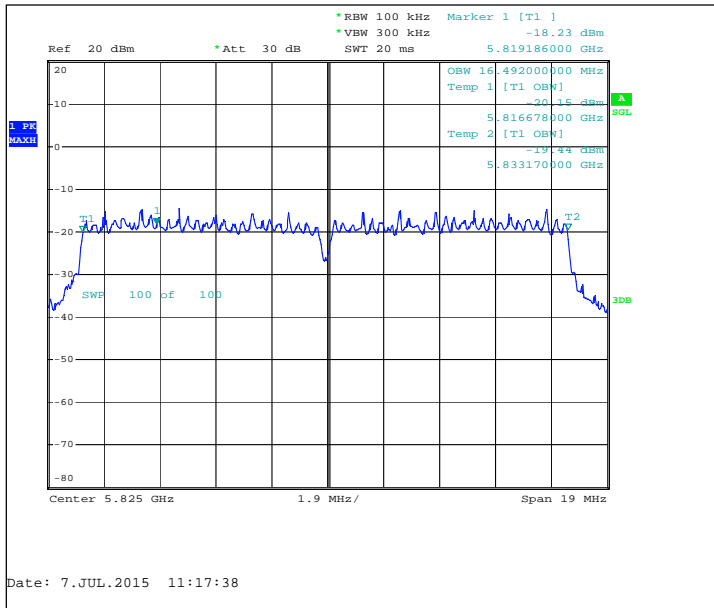
Channel 149 / 5745MHz



Channel 157 / 5785MHz



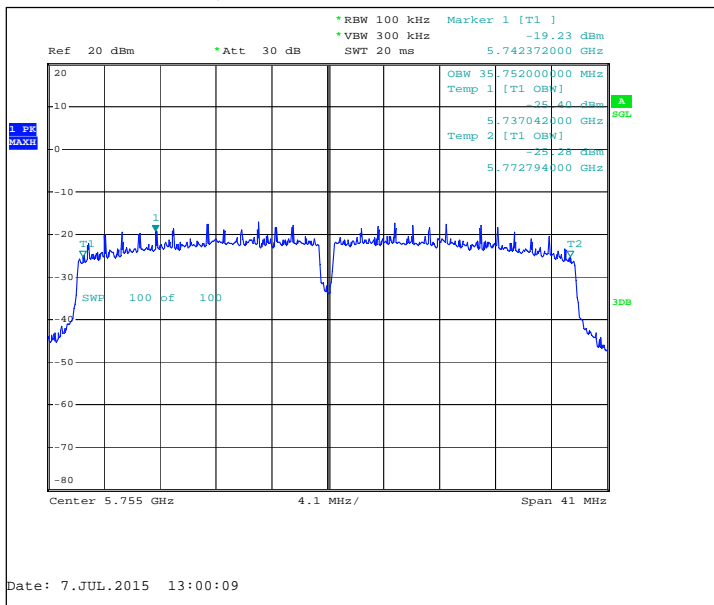
Channel 165 / 5825MHz



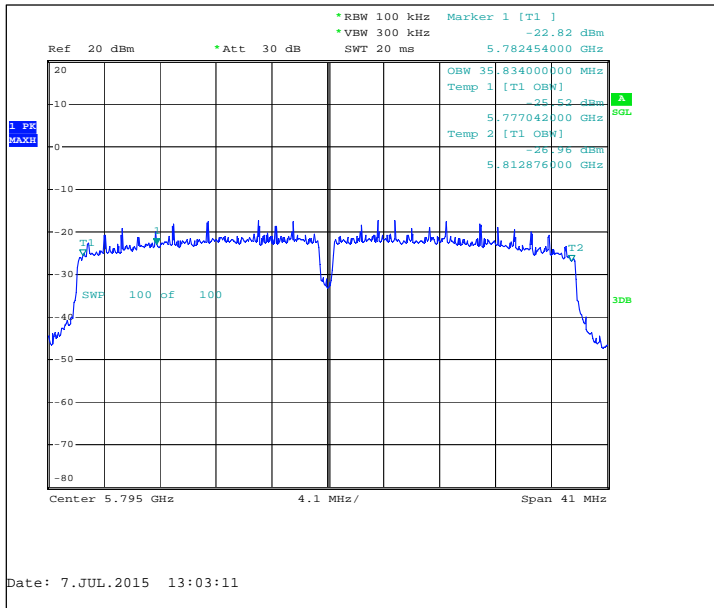
3.3.11 802.11n Aux mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149+153 / 5755	35752	PASSED
157+161 / 5795	35834	PASSED

Channel 149+153 / 5755MHz



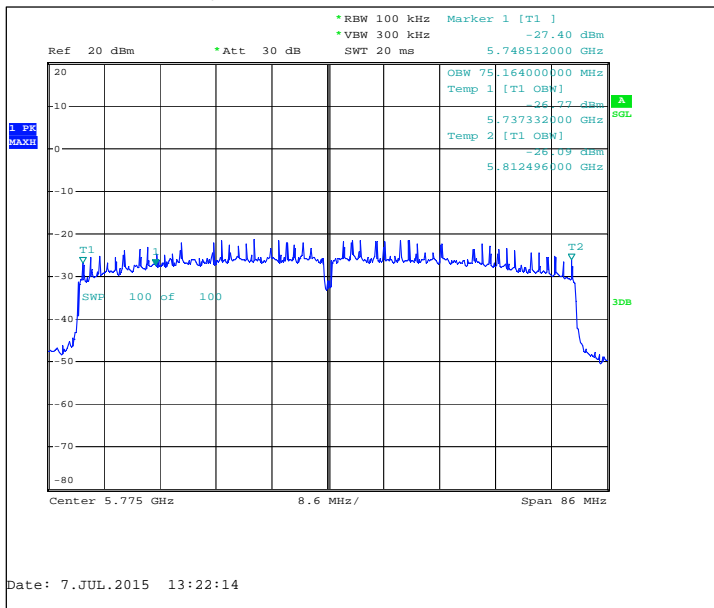
Channel 157+161 / 5795MHz



3.3.12 802.11ac Aux mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / fc [MHz]	6 dB bandwidth [kHz]	Result
149-161 / 5775	75164	PASSED

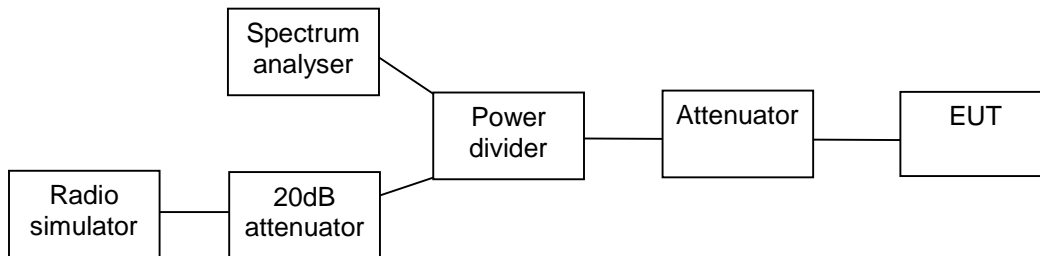
Channel 149-161 / 5775MHz



4. 26dB(bandwidth)

EUT with DUT number	RM-1085, DUT 100012
Accessories with DUT numbers	SD-241R, DUT 100016 ; WH-308, DUT 100029
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 47 / 101.9
Date of measurements	06-Jul-2015
Measured by	Jari Keto

4.1. Test Setup



4.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D02 v01 and IC standard RSS-210.

Limits for 26 dB bandwidth measurements

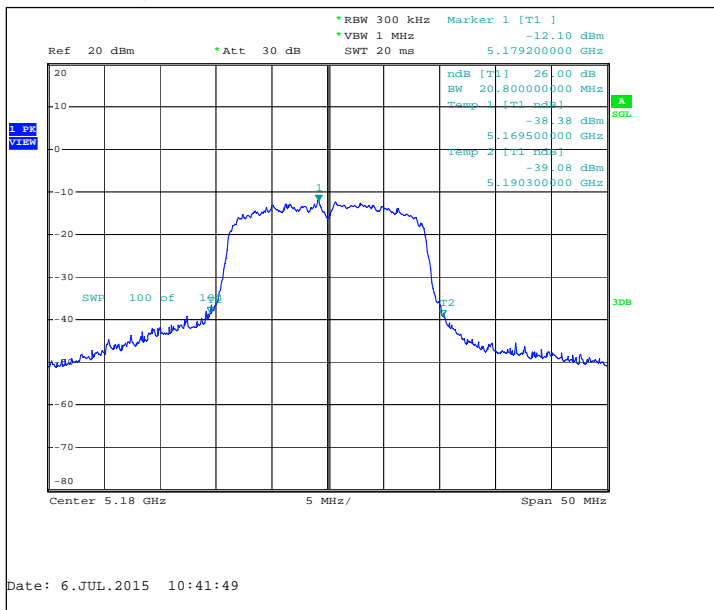
Limit [kHz]
No limit

4.3. 5 GHz RLAN Test results

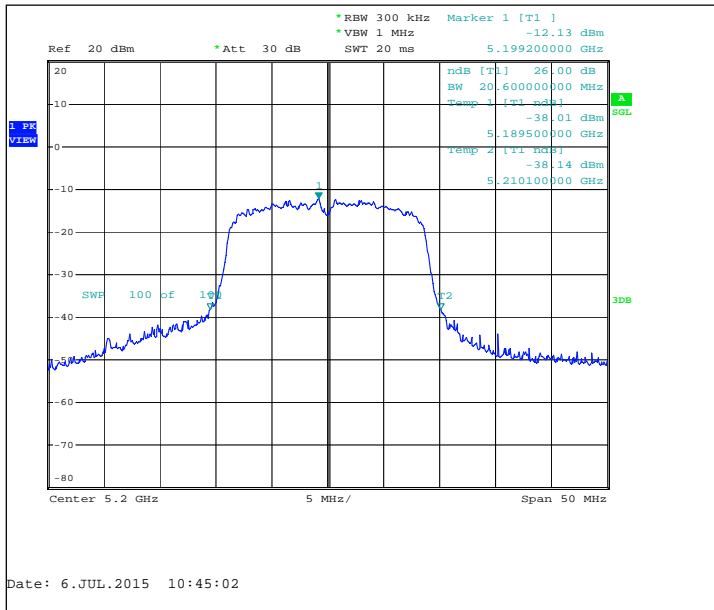
4.3.1 802.11n mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

Channel / f _c [MHz]	26 dB bandwidth [kHz]	Result
36 / 5180 main	20800	PASSED
40 / 5200 main	20600	PASSED
48 / 5240 main	20700	PASSED
52 / 5260 main	21000	PASSED
60 / 5300 main	21100	PASSED
64 / 5320 main	20900	PASSED
100 / 5500 main	20900	PASSED
116 / 5580 main	20900	PASSED
140 / 5700 main	20900	PASSED

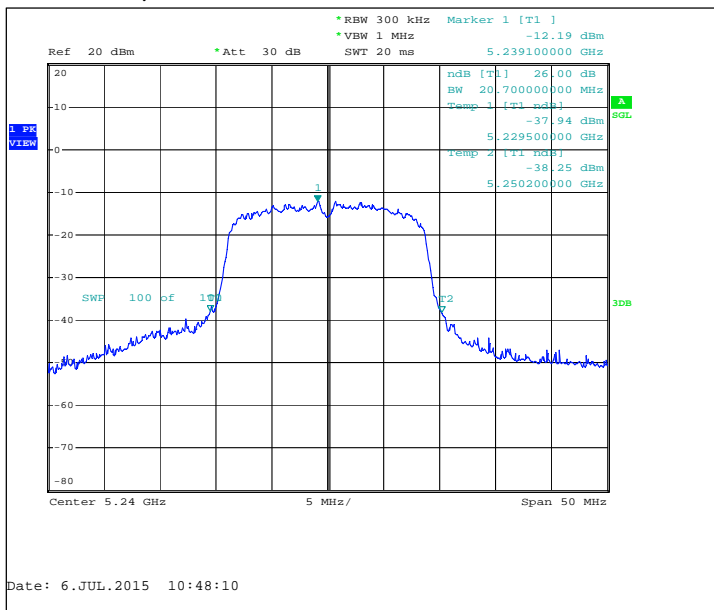
Channel 36 / 5180MHz



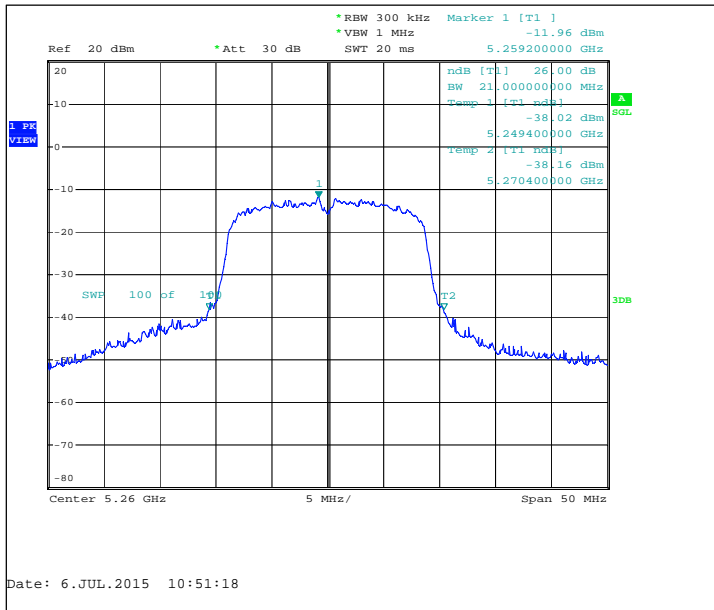
Channel 40 / 5200MHz



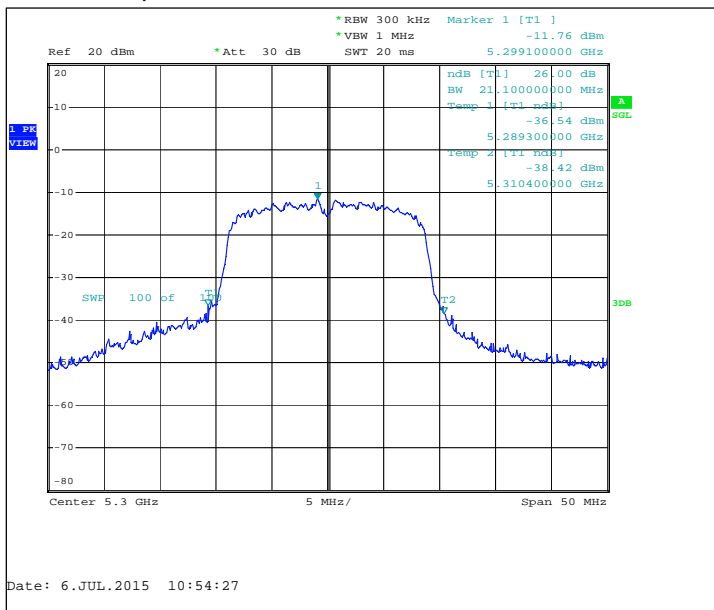
Channel 48 / 5240MHz



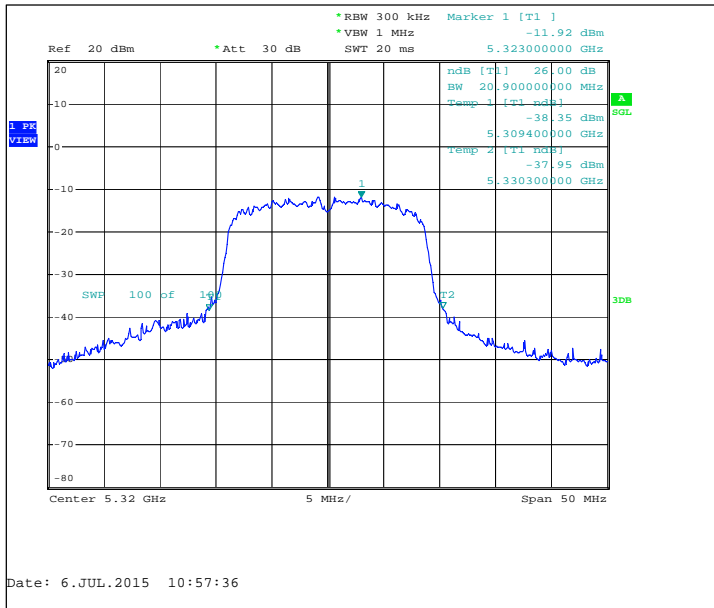
Channel 52 / 5260MHz



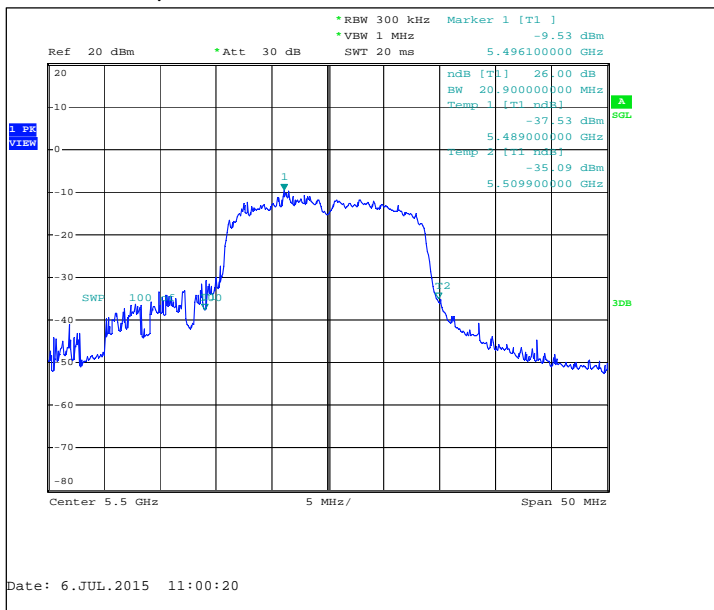
Channel 60 / 5300MHz



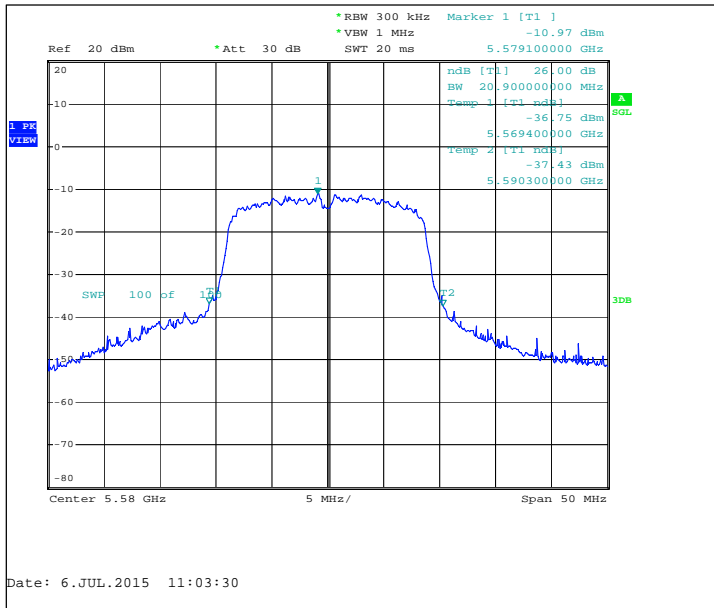
Channel 64 / 5320MHz



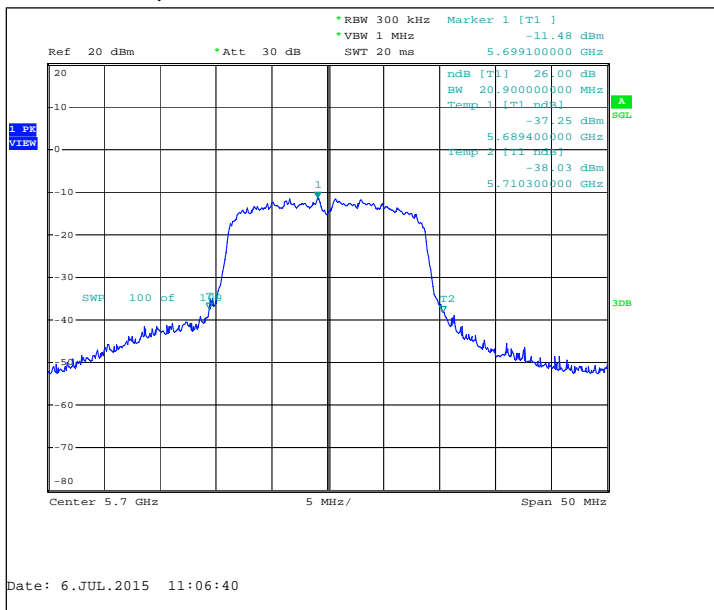
Channel 100 / 5500MHz



Channel 116 / 5580MHz



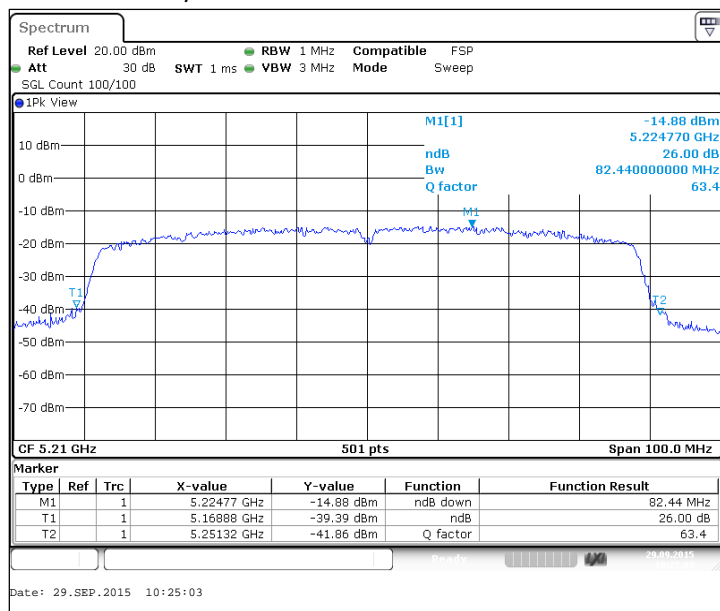
Channel 140 / 5700MHz



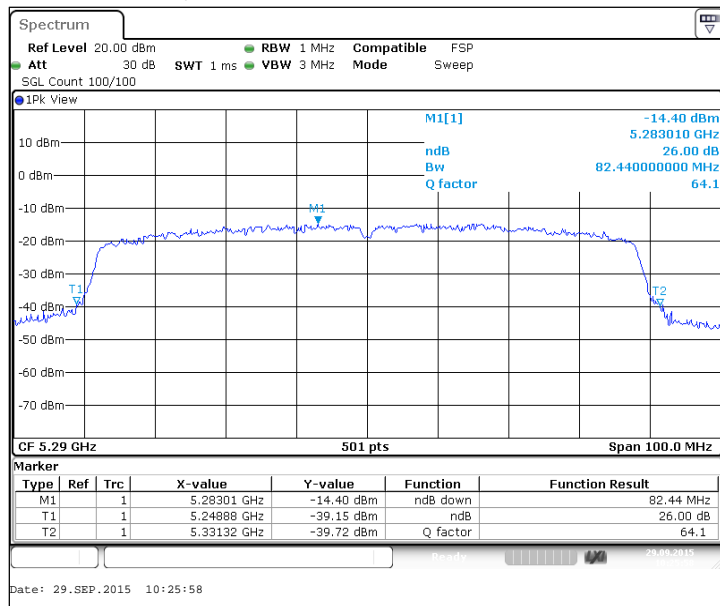
4.3.2 802.11ac Main mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210	82440	PASSED
52-64 / 5290	82440	PASSED
100-112 / 5530	83030	PASSED

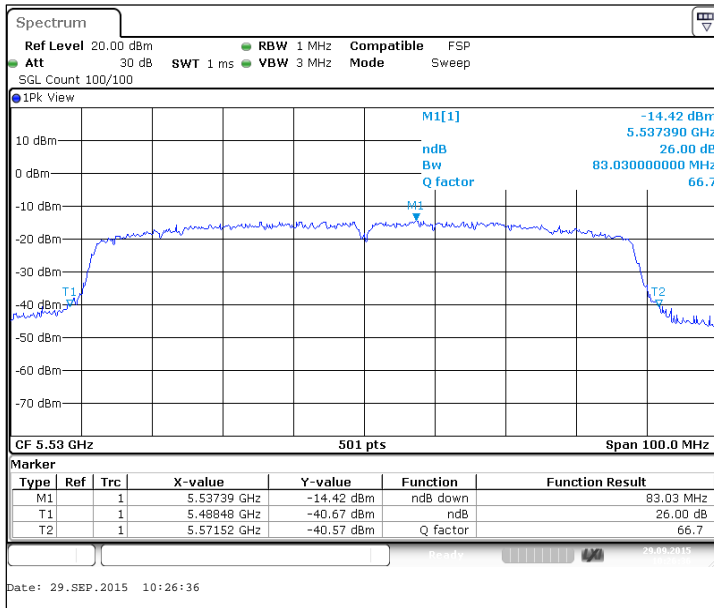
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



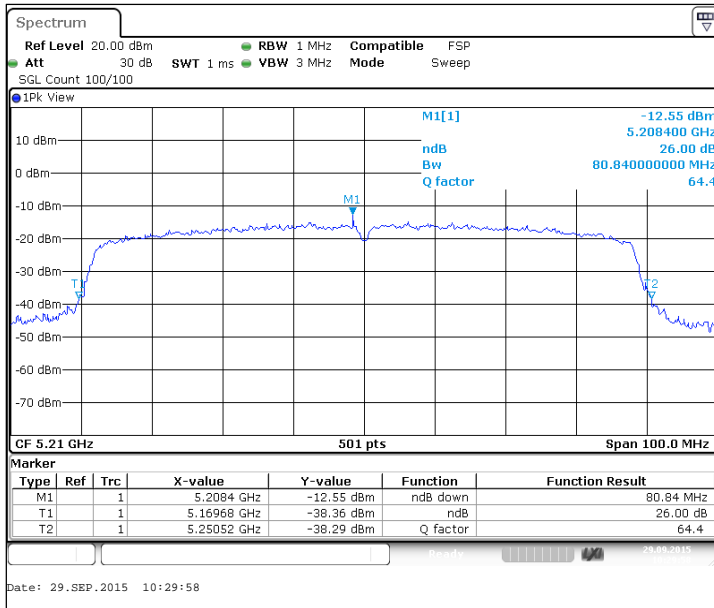
Channel 100-112 / 5530MHz



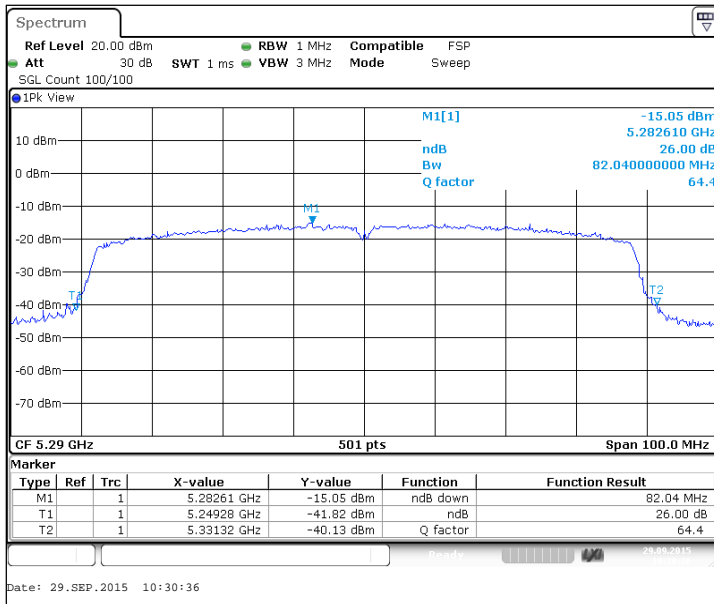
4.3.3 802.11ac Main mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210	80840	PASSED
52-64 / 5290	82040	PASSED
100-112 / 5530	81440	PASSED

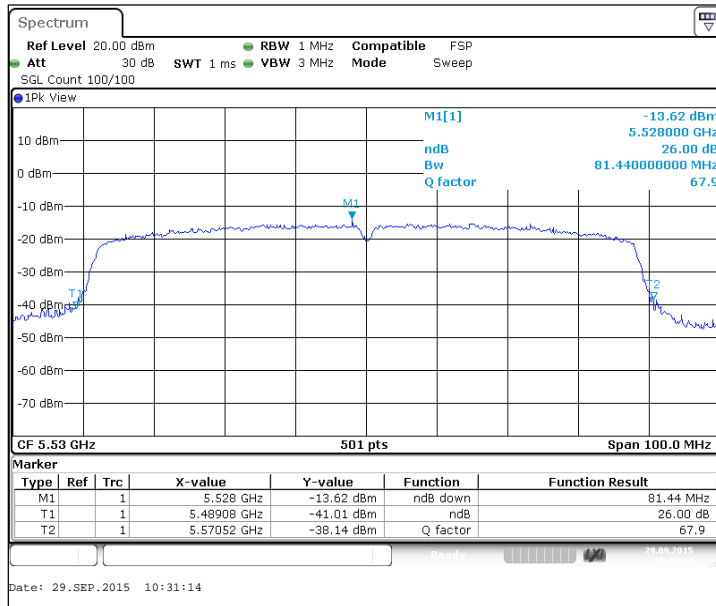
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



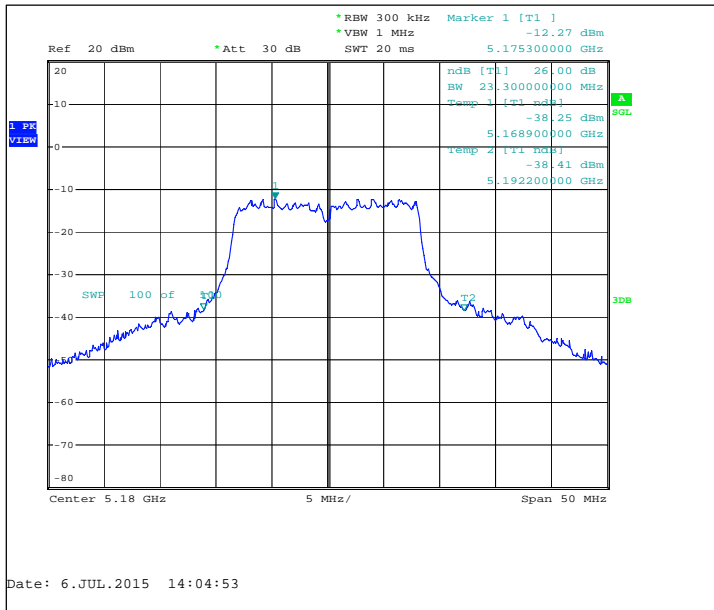
Channel 100-112 / 5530MHz



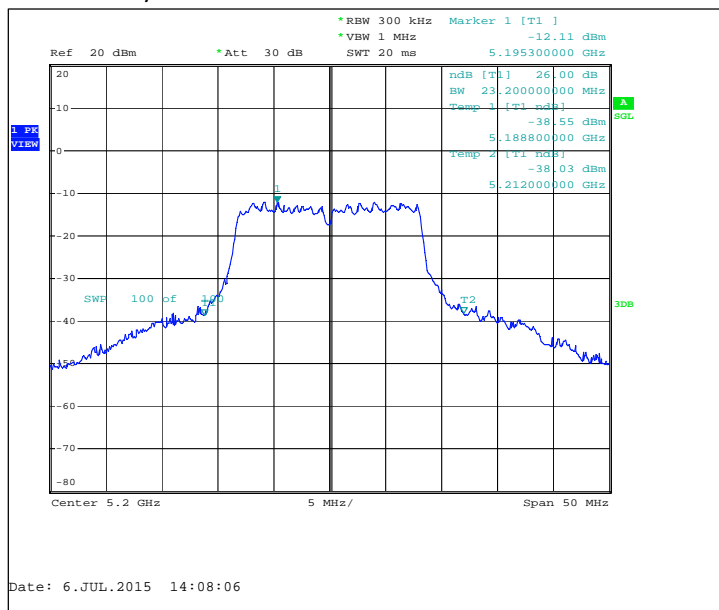
4.3.4 802.11a mode, 16QAM modulation, 24 Mbps data rate

Channel / f _c [MHz]	26 dB bandwidth [kHz]	Result
36 / 5180 main	23300	PASSED
40 / 5200 main	23200	PASSED
48 / 5240 main	23400	PASSED
52 / 5260 main	23300	PASSED
60 / 5300 main	25400	PASSED
64 / 5320 main	25700	PASSED
100 / 5500 main	22600	PASSED
116 / 5580 main	24200	PASSED
140 / 5700 main	24000	PASSED

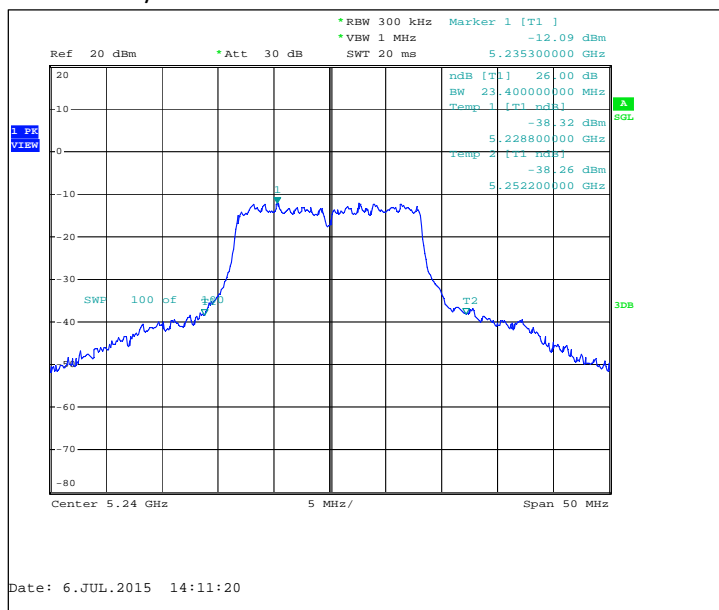
Channel 36 / 5180MHz



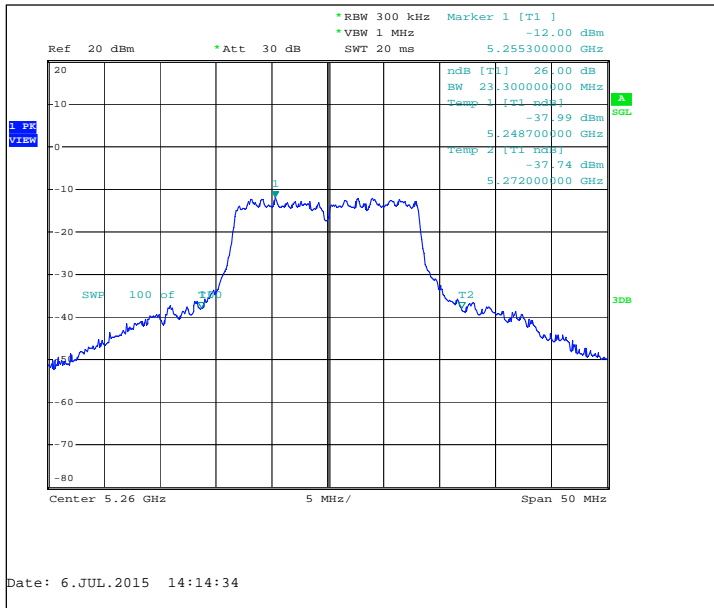
Channel 40 / 5200MHz



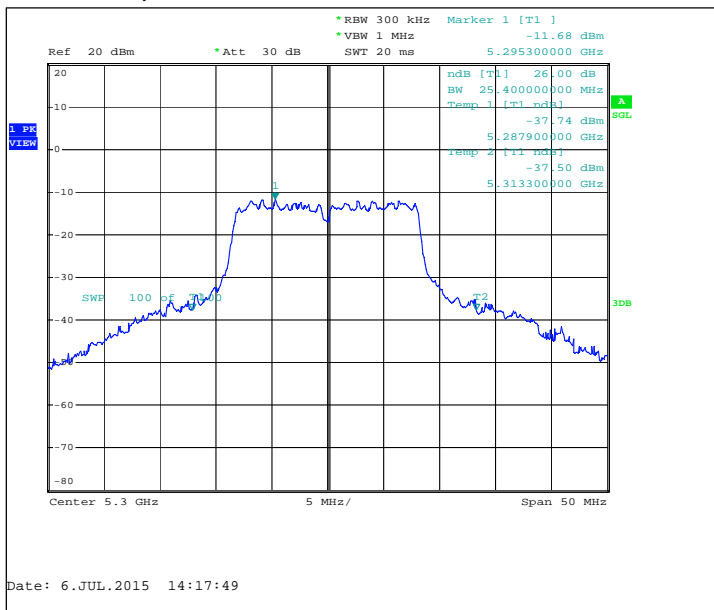
Channel 48 / 5240MHz



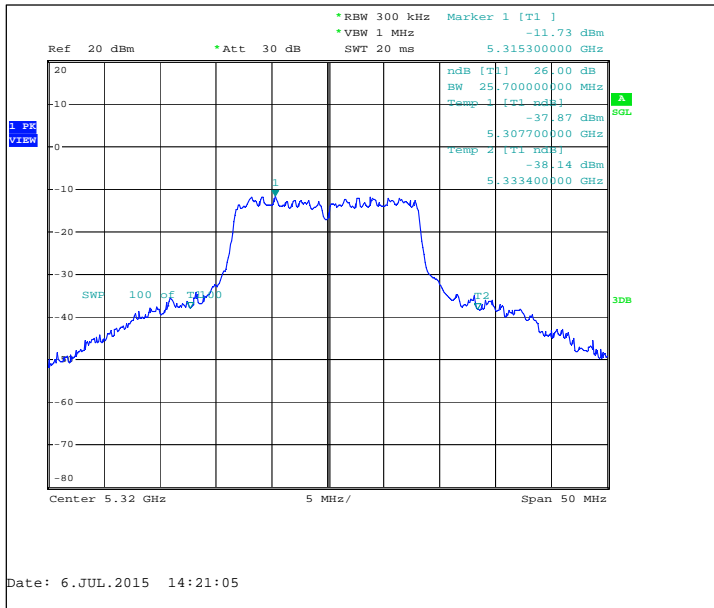
Channel 52 / 5260MHz



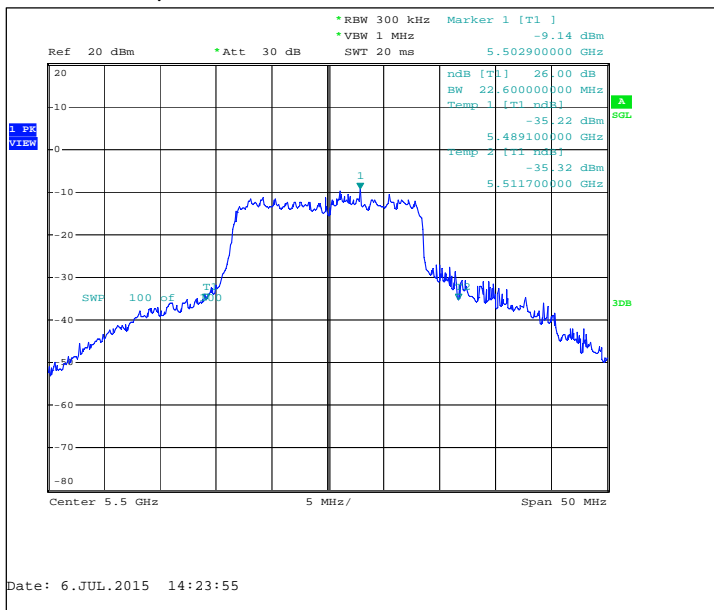
Channel 60 / 5300MHz



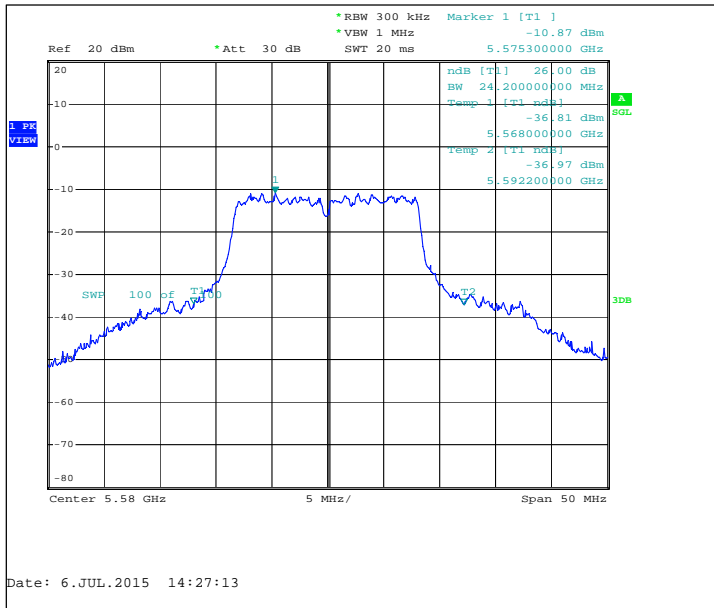
Channel 64 / 5320MHz



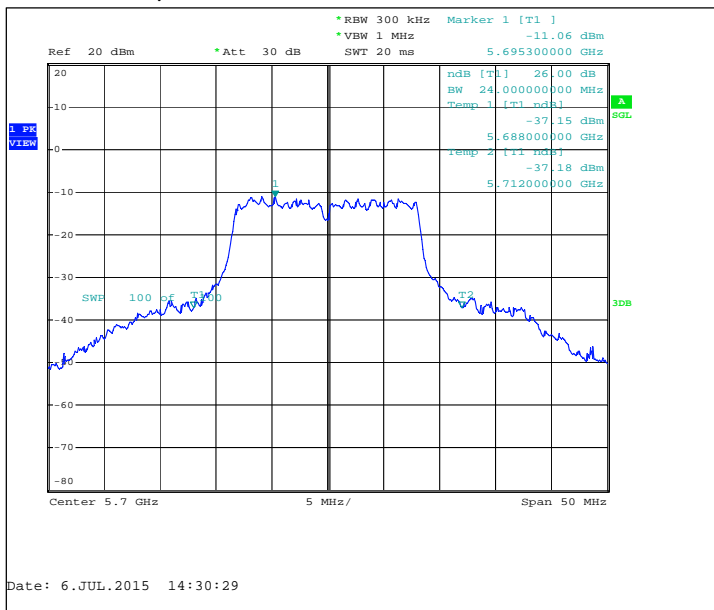
Channel 100 / 5500MHz



Channel 116 / 5580MHz



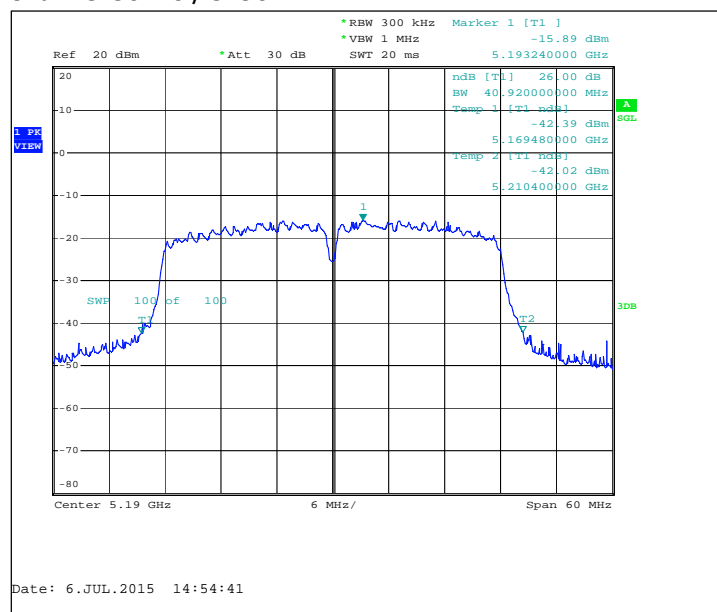
Channel 140 / 5700MHz



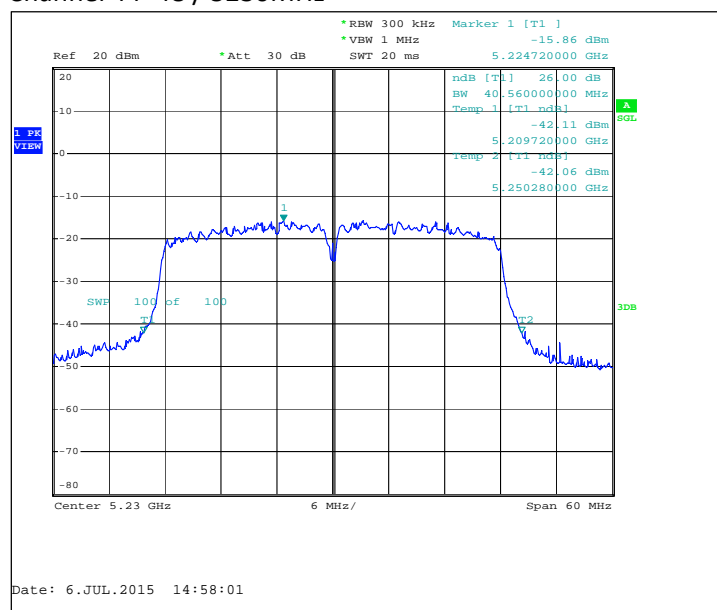
4.3.5 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / f _c [MHz]	26 dB bandwidth [kHz]	Result
36+40 / 5190 main	40920	PASSED
44+48 / 5230 main	40560	PASSED
52+56 / 5270 main	40920	PASSED
60+64 / 5310 main	40800	PASSED
100+104 / 5510 main	40680	PASSED
108+112 / 5550 main	40680	PASSED
132+136 / 5670 main	40560	PASSED

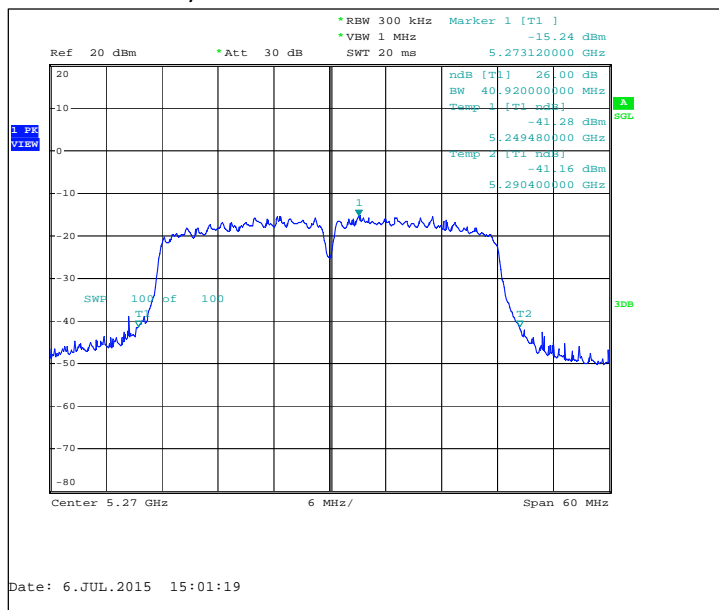
Channel 36+40 / 5190MHz



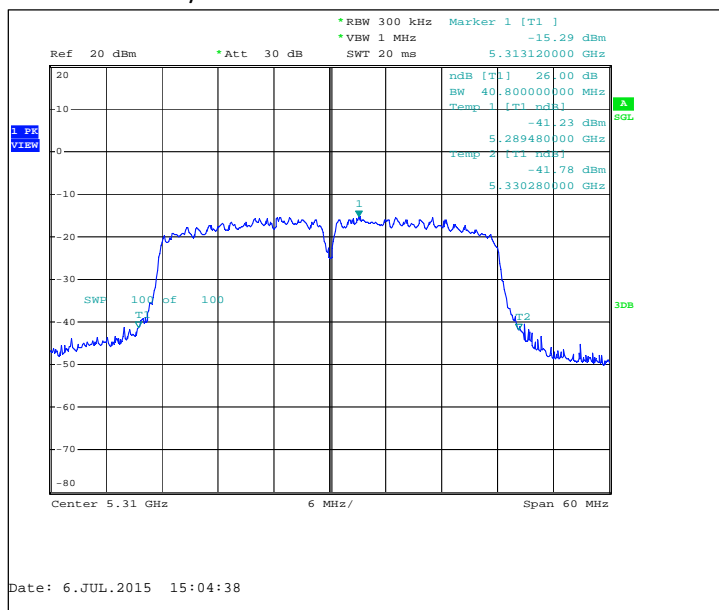
Channel 44+48 / 5230MHz



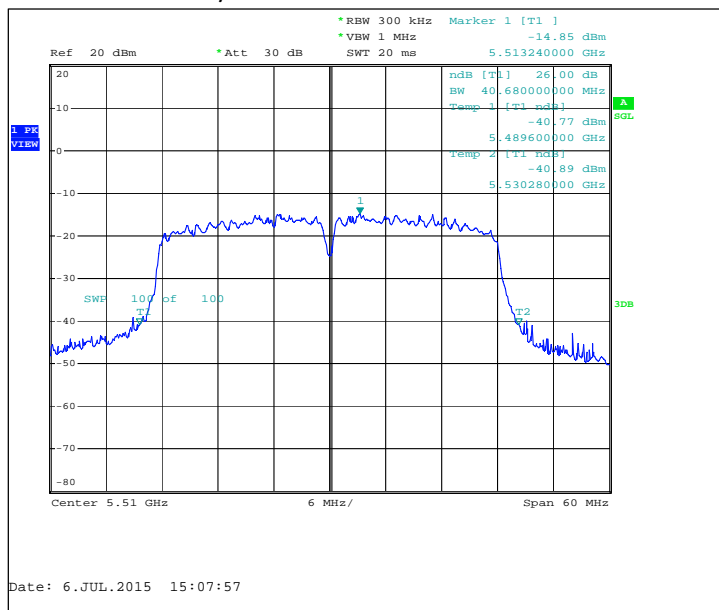
Channel 52+56 / 5270MHz



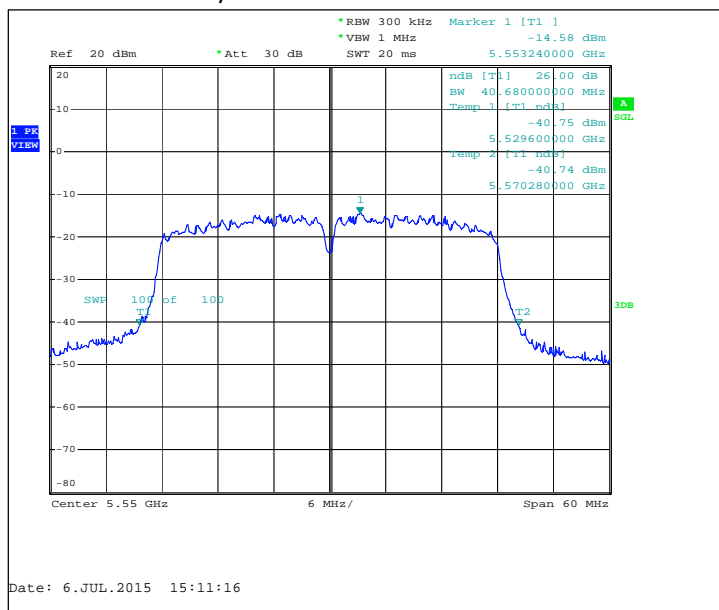
Channel 60+64 / 5310MHz



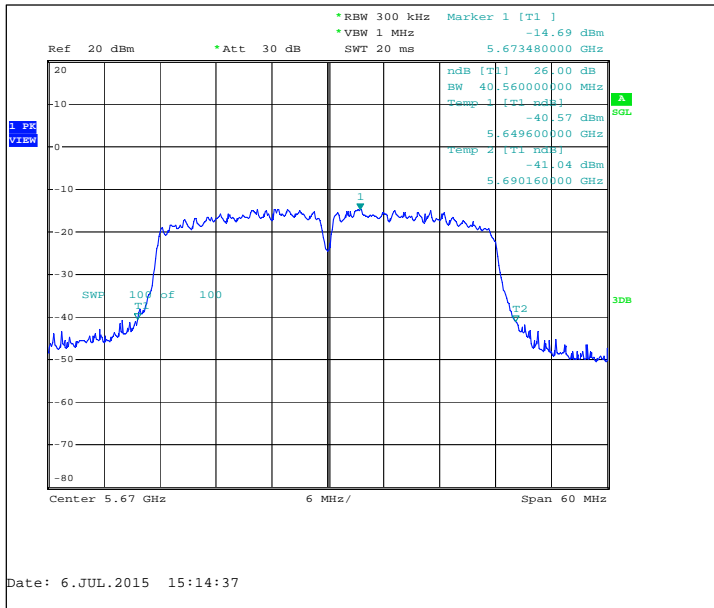
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



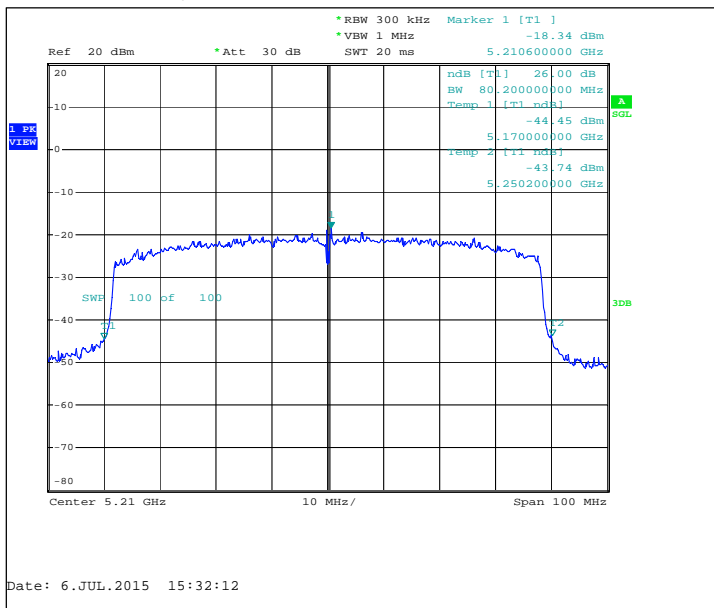
Channel 132+136 / 5670MHz



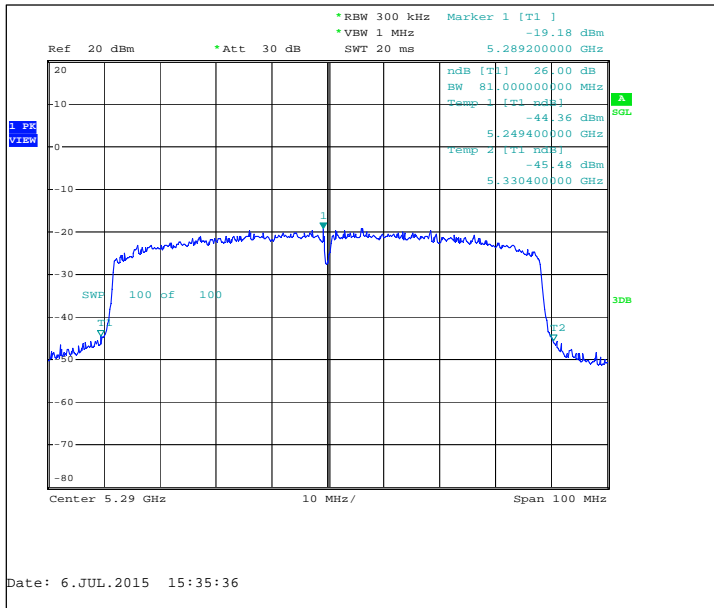
4.3.6 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / f _c [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210 main	80200	PASSED
52-64 / 5290 main	81000	PASSED
100-112 / 5530 main	81200	PASSED

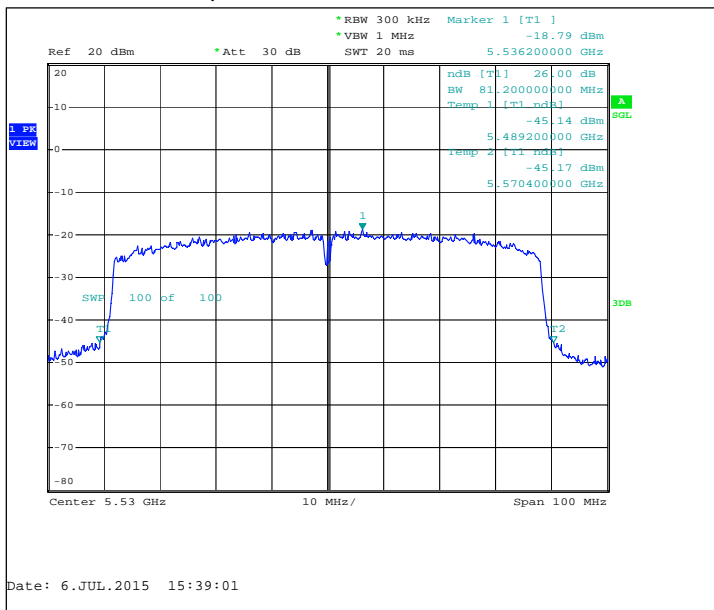
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



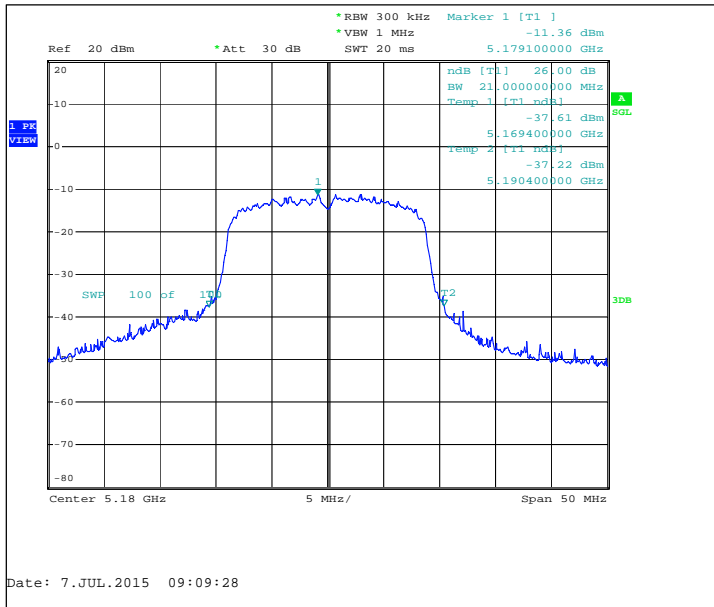
Channel 100-112 / 5530MHz



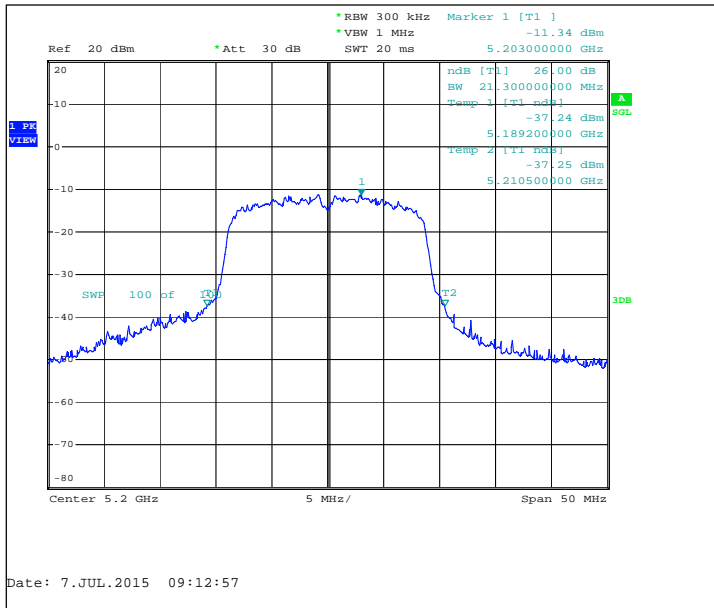
4.3.7 802.11n Aux mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36 / 5180	21000	PASSED
40 / 5200	21300	PASSED
48 / 5240	21100	PASSED
52 / 5260	21000	PASSED
60 / 5300	21000	PASSED
64 / 5320	21200	PASSED
100 / 5500	21100	PASSED
116 / 5580	21100	PASSED
140 / 5700	21000	PASSED

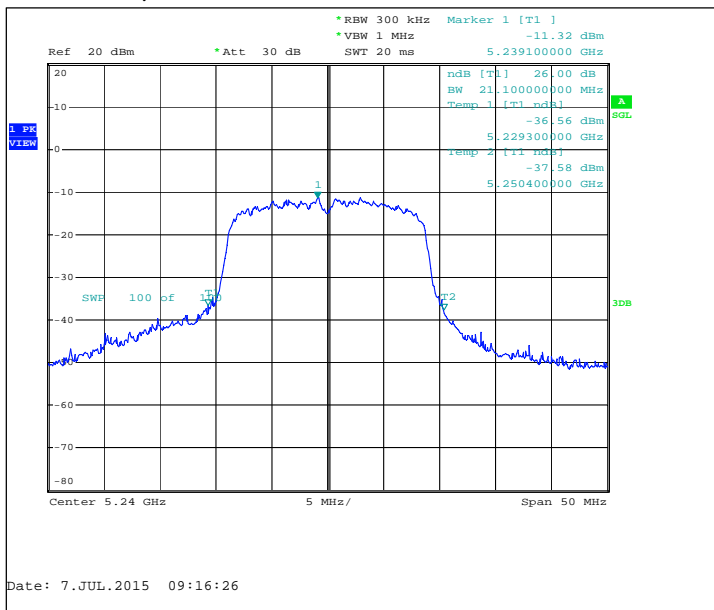
Channel 36 / 5180MHz



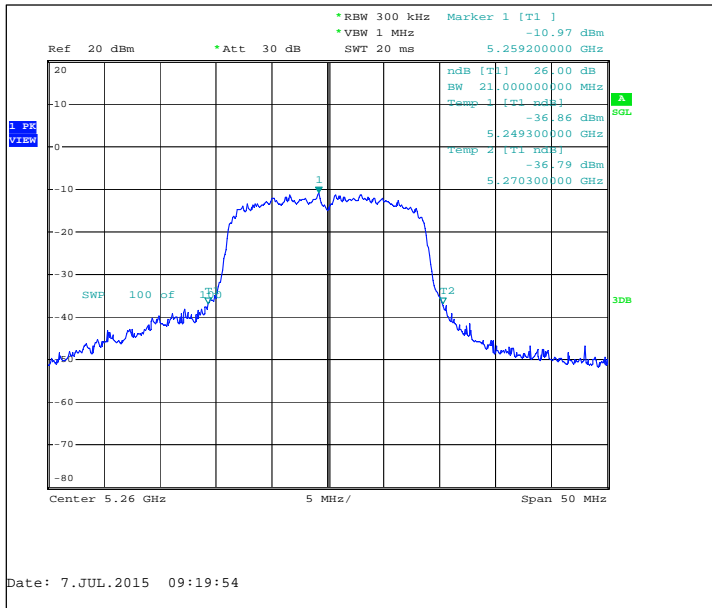
Channel 40 / 5200MHz



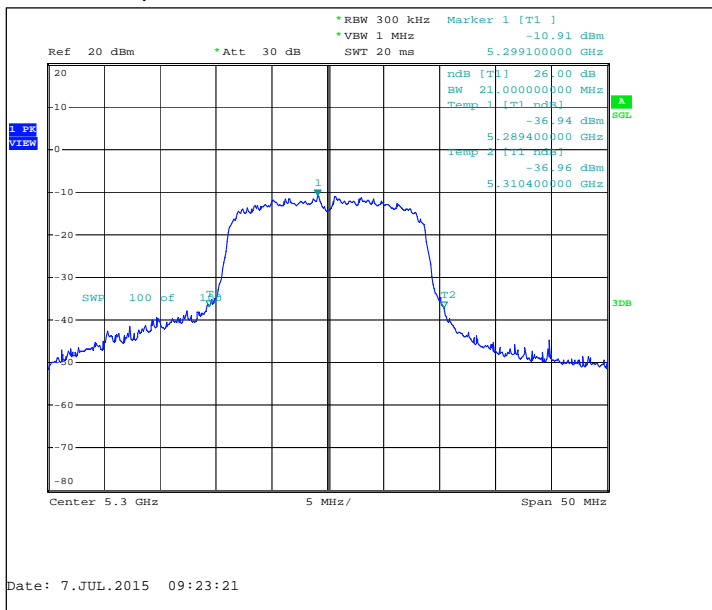
Channel 48 / 5240MHz



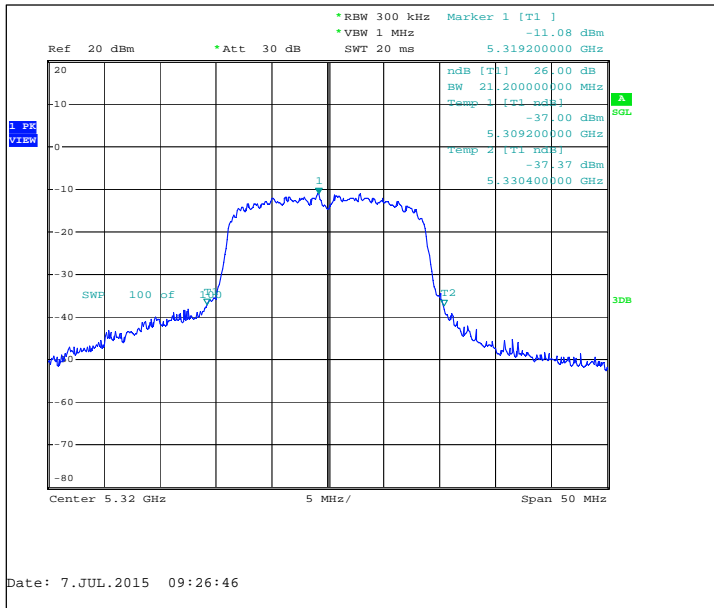
Channel 52 / 5260MHz



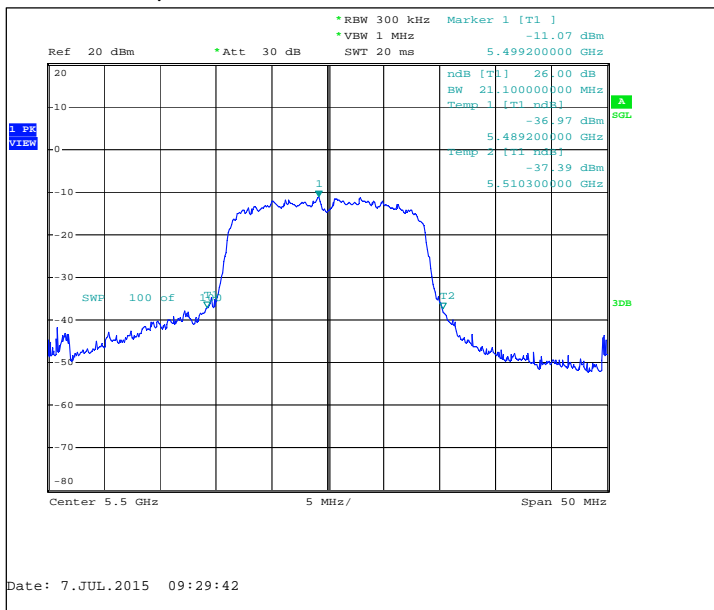
Channel 60 / 5300MHz



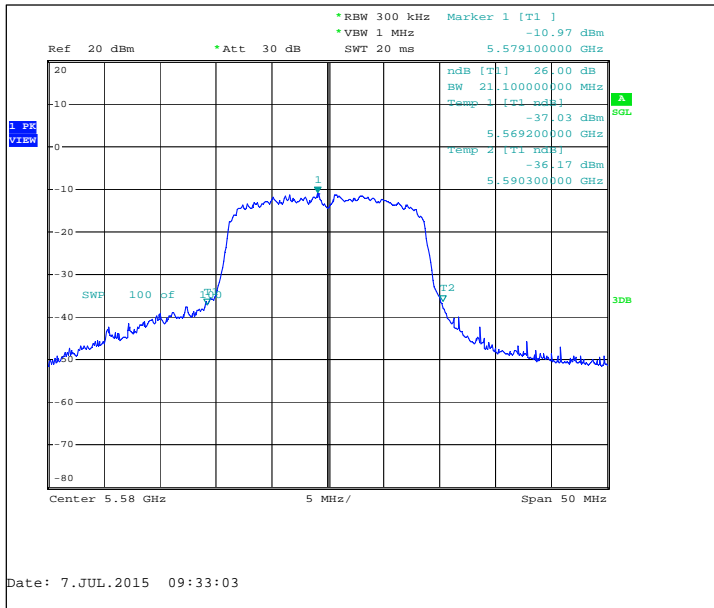
Channel 64 / 5320MHz



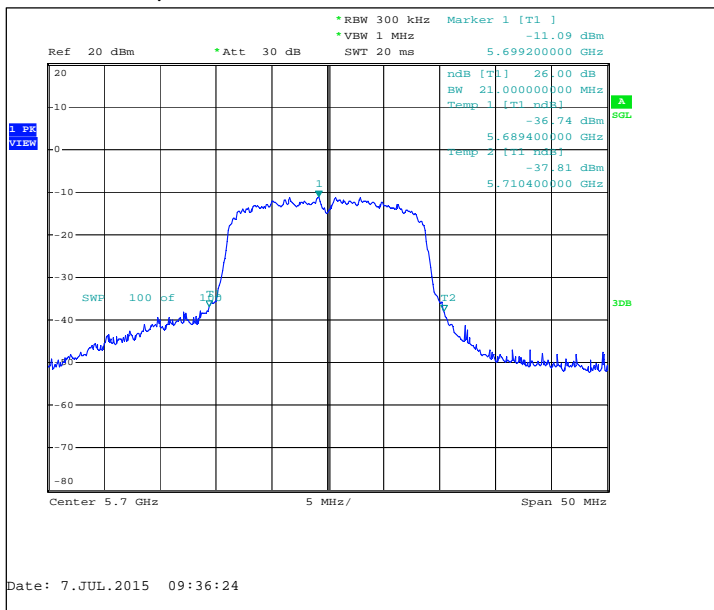
Channel 100 / 5500MHz



Channel 116 / 5580MHz



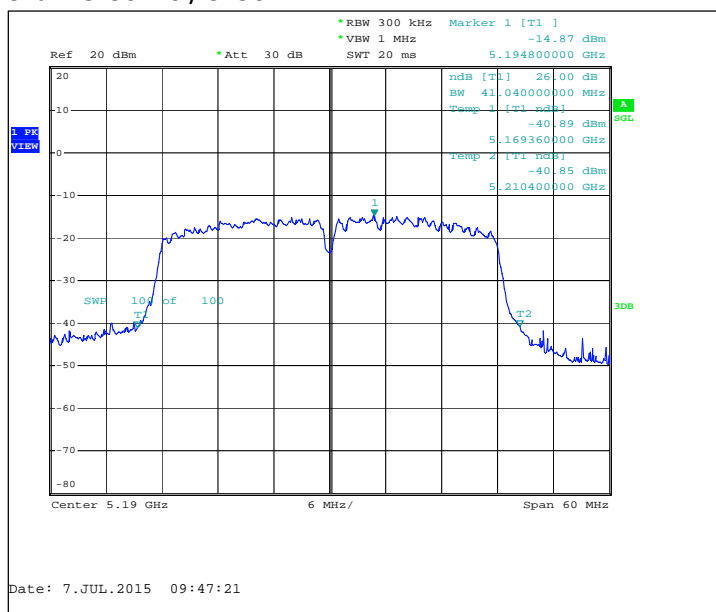
Channel 140 / 5700MHz



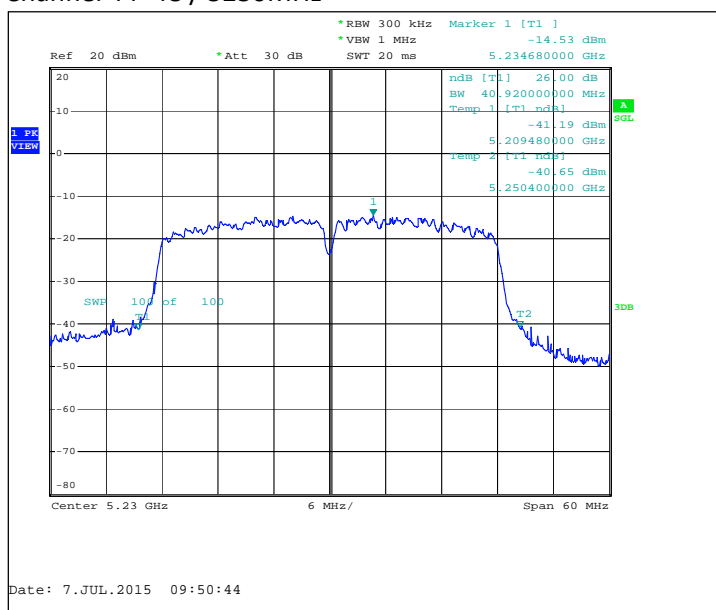
4.3.8 802.11n Aux mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36+40 / 5190	41040	PASSED
44+48 / 5230	40920	PASSED
52+56 / 5270	41040	PASSED
60+64 / 5310	41040	PASSED
100+104 / 5510	41160	PASSED
108+112 / 5550	41160	PASSED
132+136 / 5670	41040	PASSED

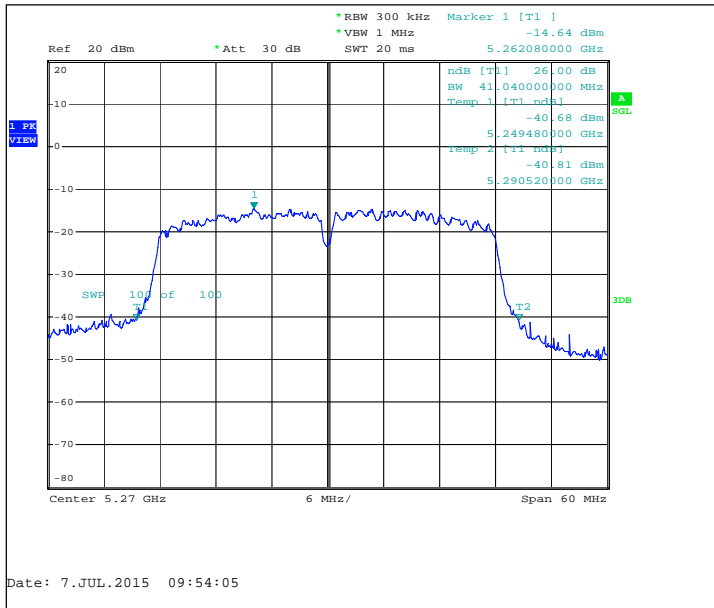
Channel 36+40 / 5190MHz



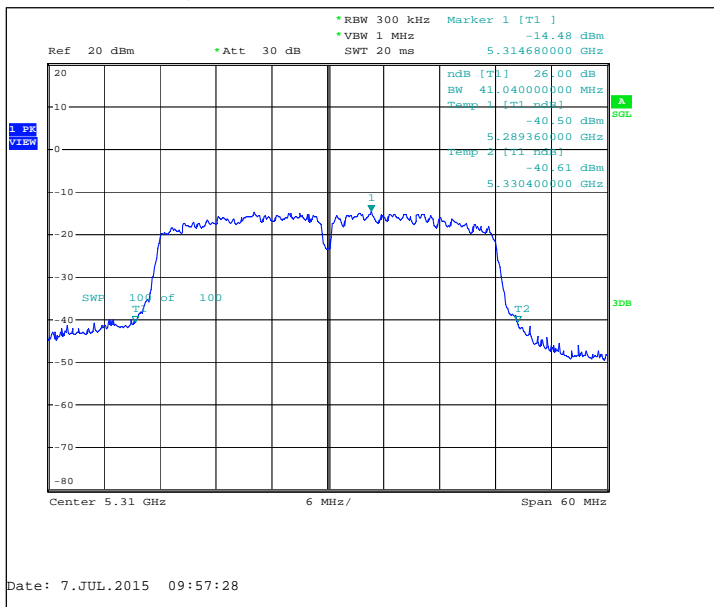
Channel 44+48 / 5230MHz



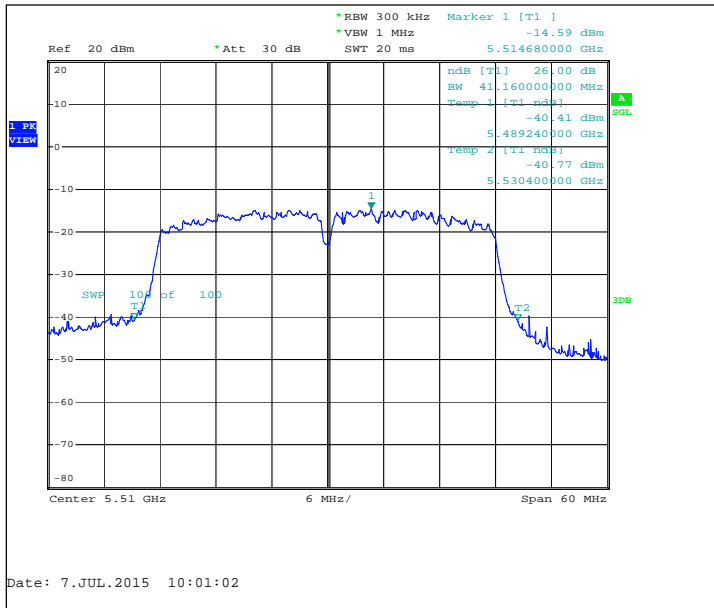
Channel 52+56 / 5270MHz



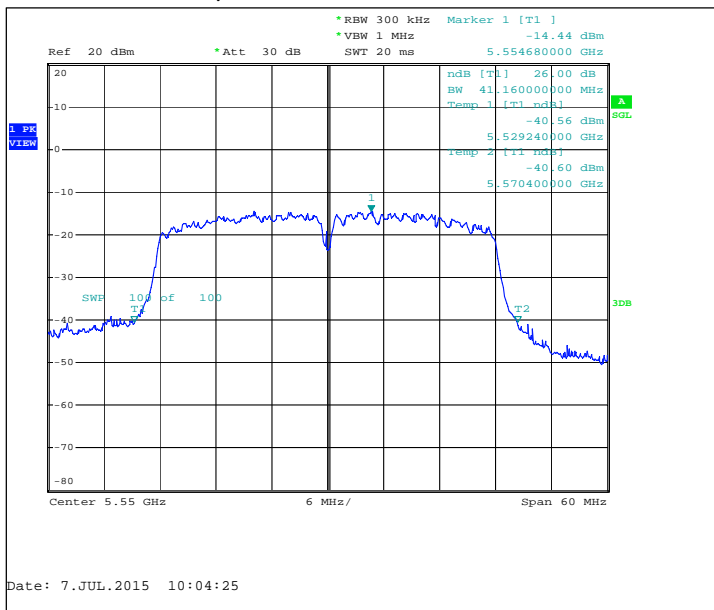
Channel 60+64 / 5310MHz



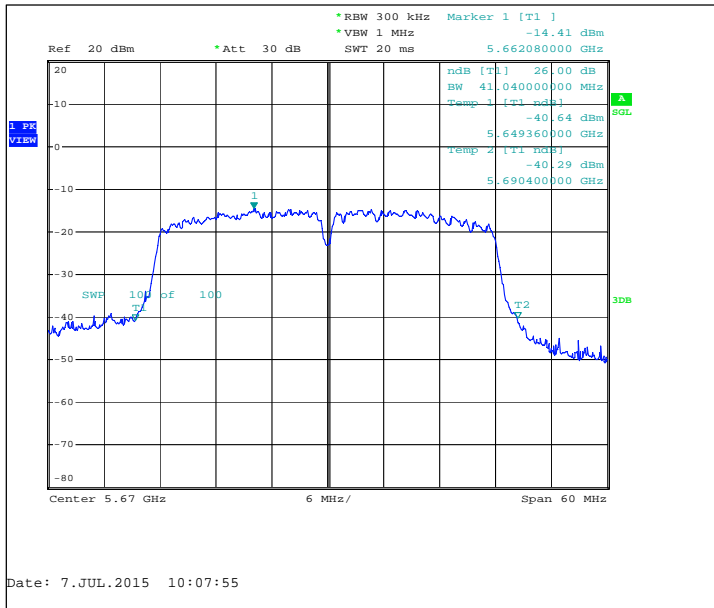
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



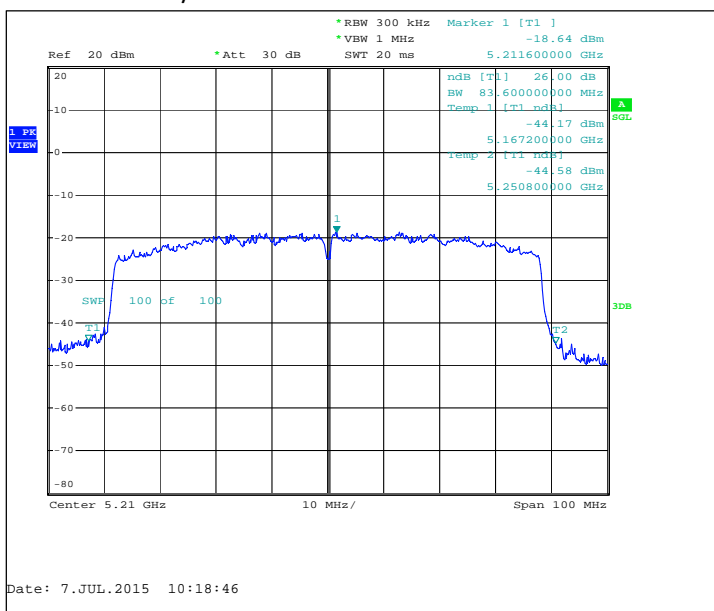
Channel 132+136 / 5670MHz



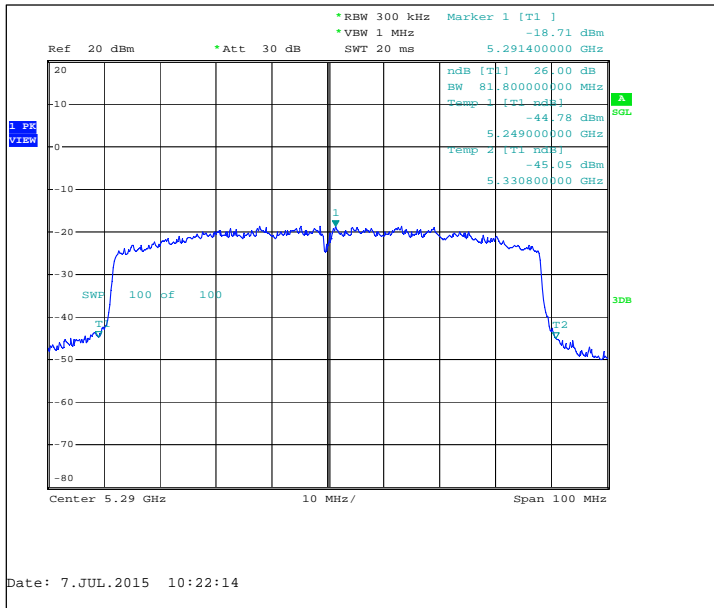
4.3.9 802.11ac Aux mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210	83600	PASSED
52-64 / 5290	81800	PASSED
100-112 / 5530	84200	PASSED

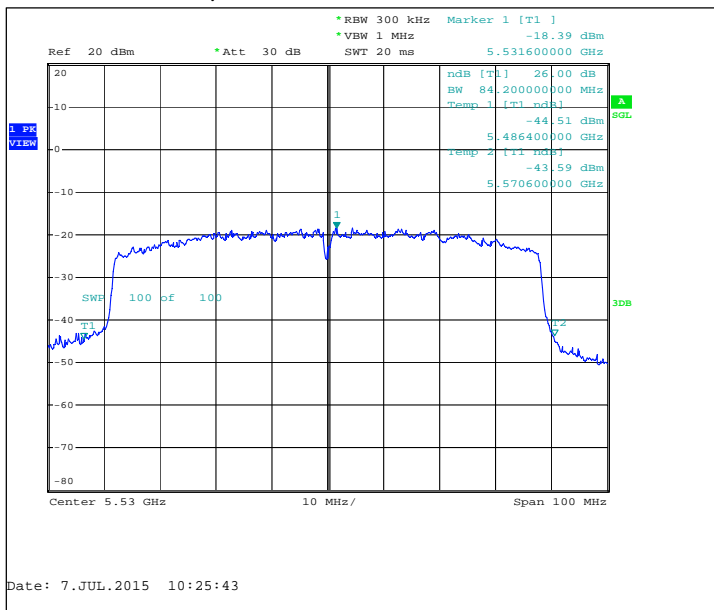
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



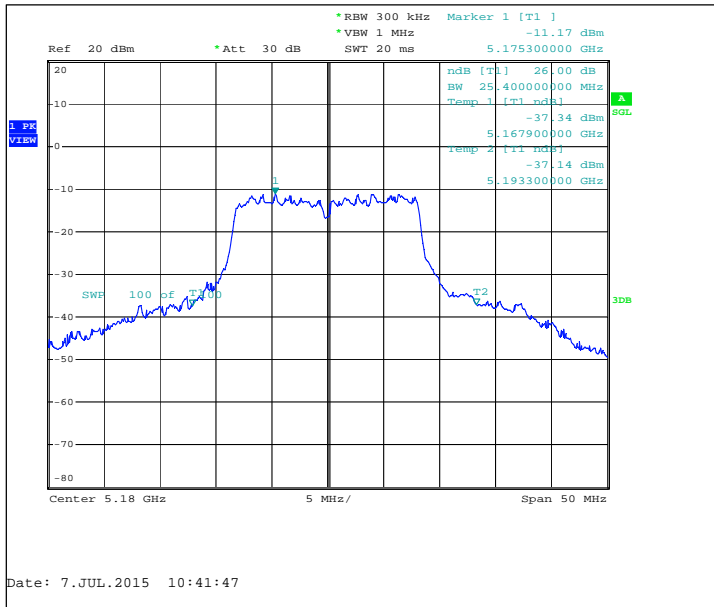
Channel 100-112 / 5530MHz



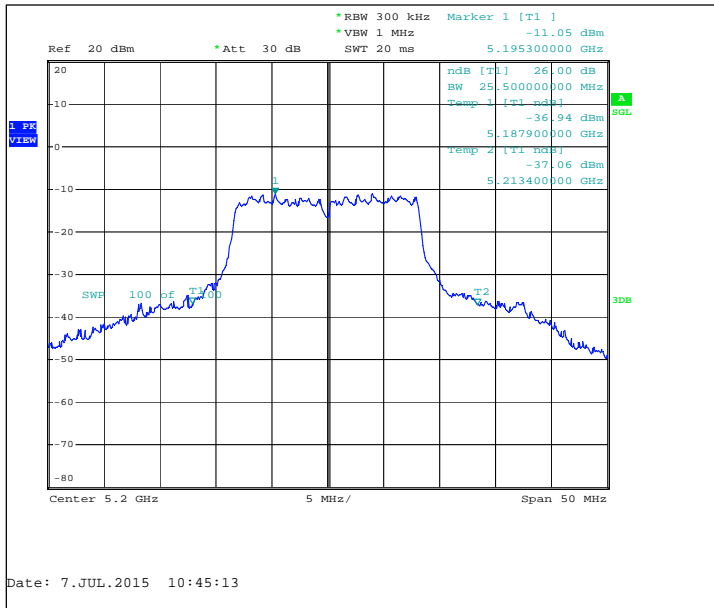
4.3.10 802.11a Aux mode, 16QAM modulation, 24 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36 / 5180	25400	PASSED
40 / 5200	25500	PASSED
48 / 5240	25100	PASSED
52 / 5260	24300	PASSED
60 / 5300	23800	PASSED
64 / 5320	24300	PASSED
100 / 5500	25100	PASSED
116 / 5580	25300	PASSED
140 / 5700	23700	PASSED

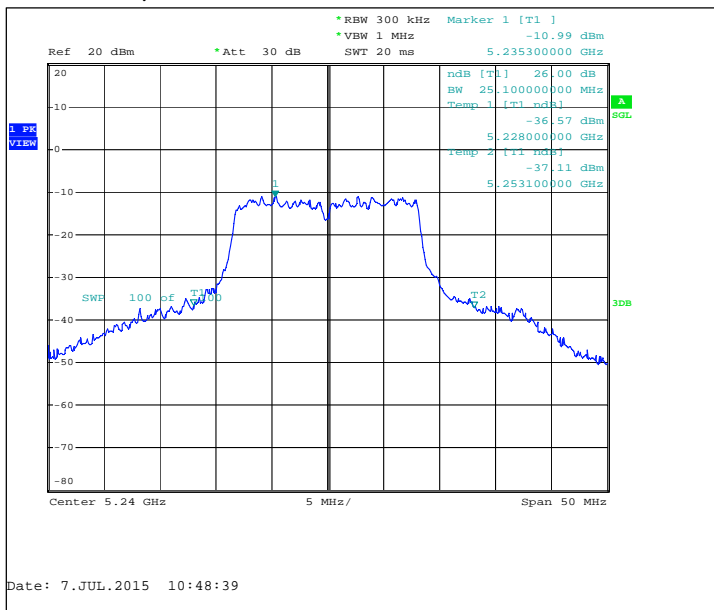
Channel 36 / 5180MHz



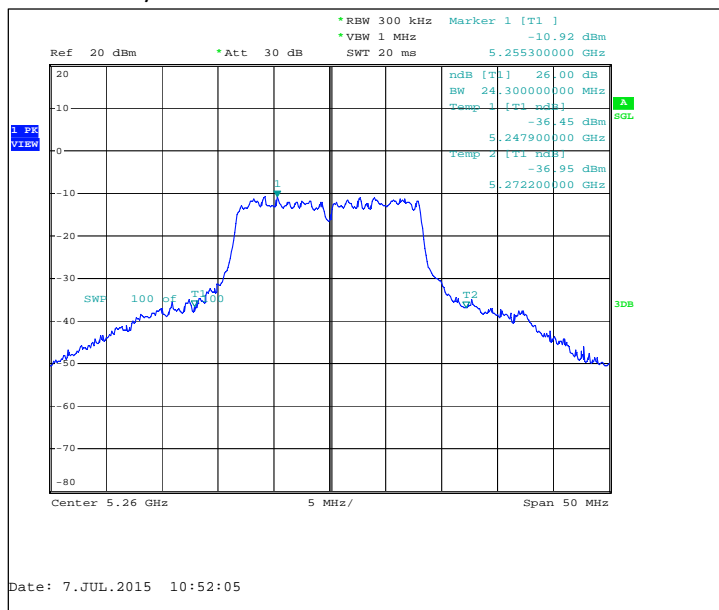
Channel 40 / 5200MHz



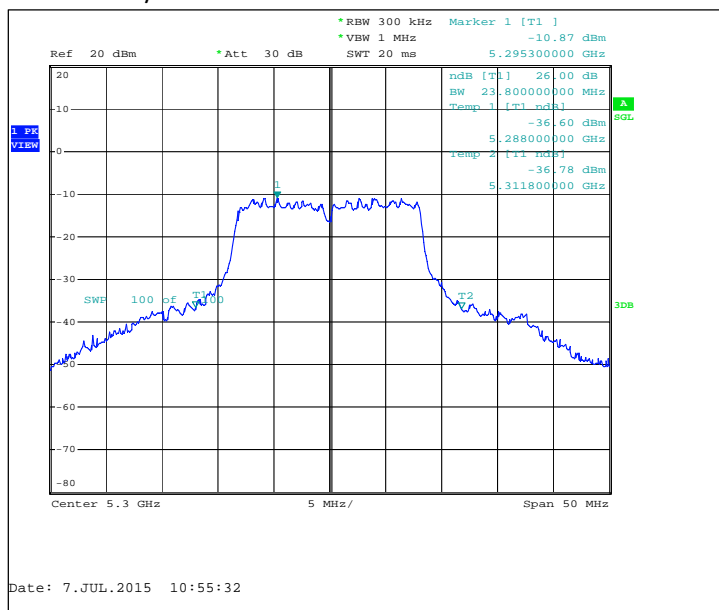
Channel 48 / 5240MHz



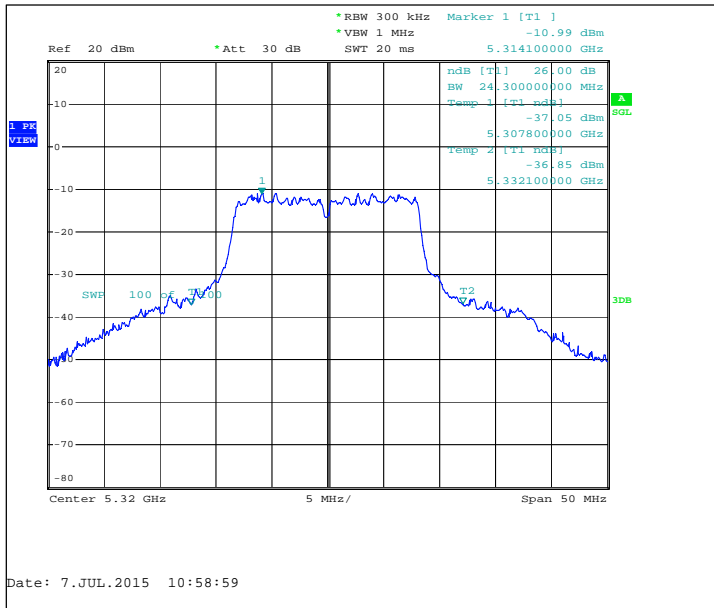
Channel 52 / 5260MHz



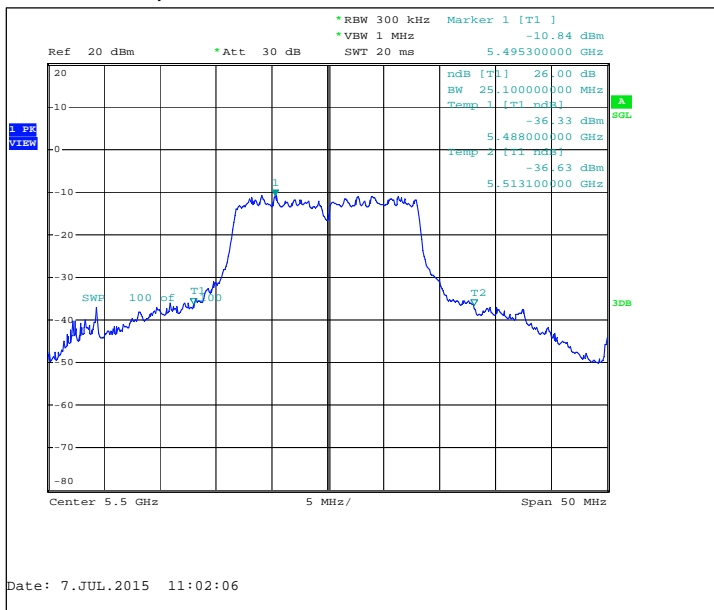
Channel 60 / 5300MHz



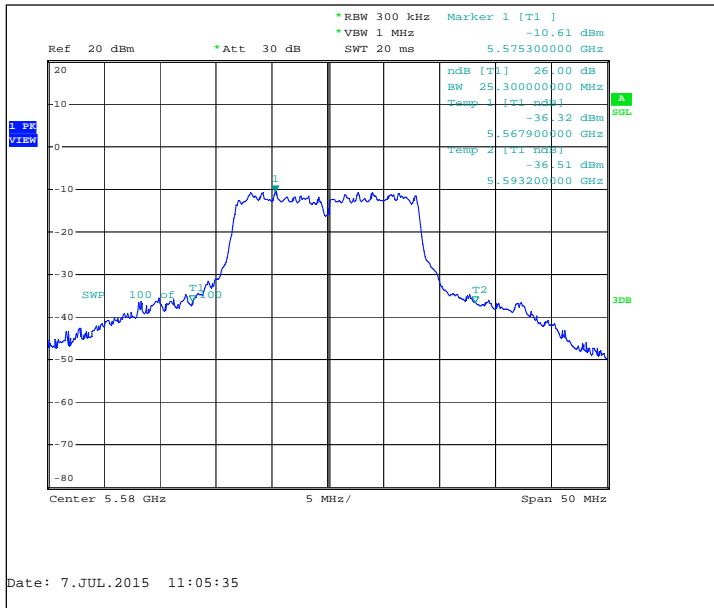
Channel 64 / 5320MHz



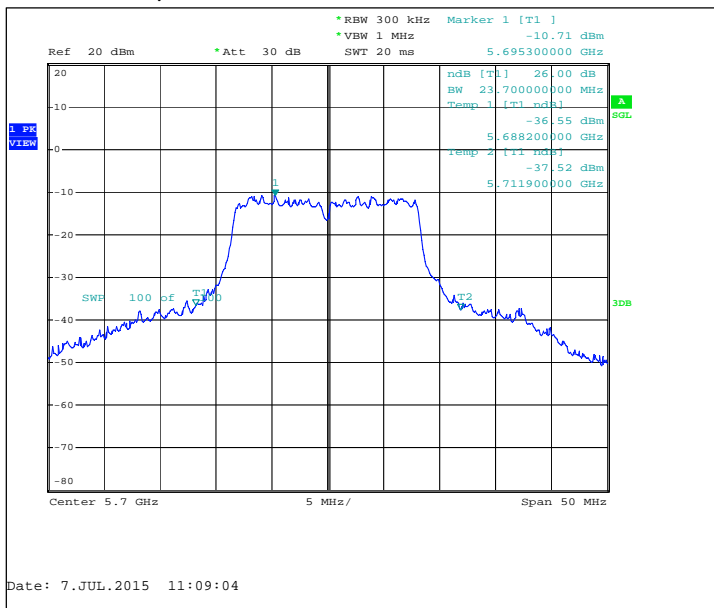
Channel 100 / 5500MHz



Channel 116 / 5580MHz



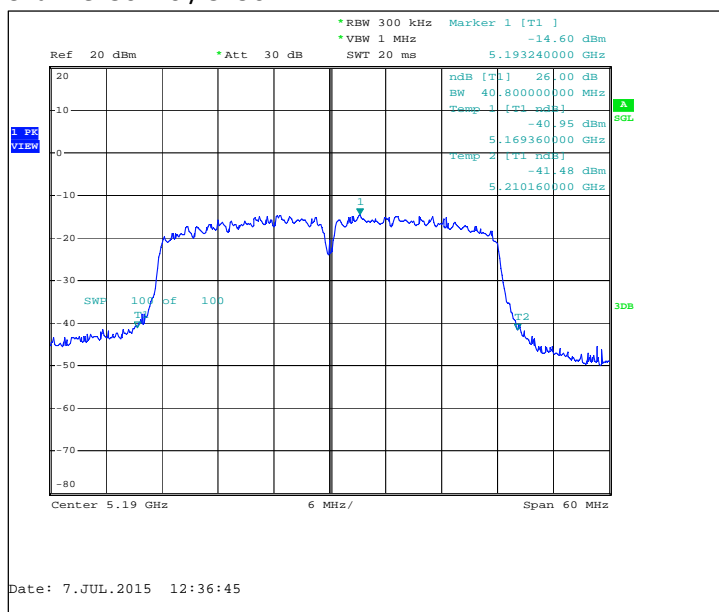
Channel 140 / 5700MHz



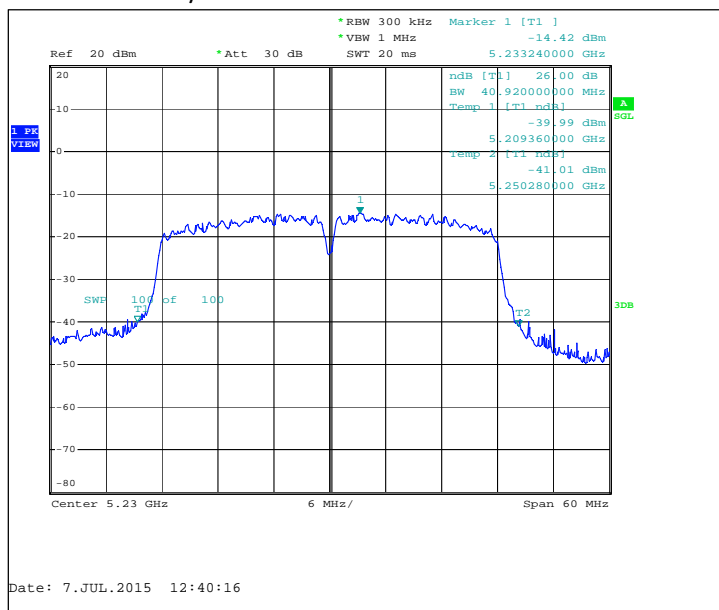
4.3.11 802.11n Aux mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36+40 / 5190	40800	PASSED
44+48 / 5230	40920	PASSED
52+56 / 5270	40800	PASSED
60+64 / 5310	40920	PASSED
100+104 / 5510	40440	PASSED
108+112 / 5550	40920	PASSED
132+136 / 5670	40920	PASSED

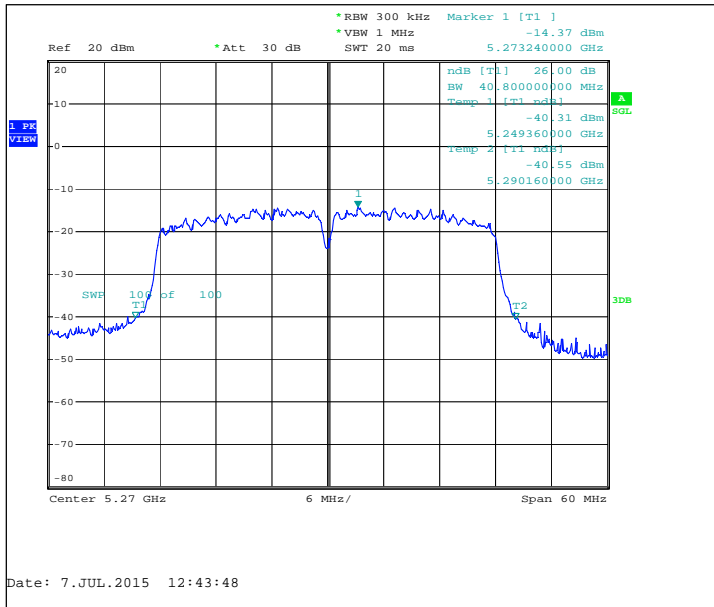
Channel 36+40 / 5190MHz



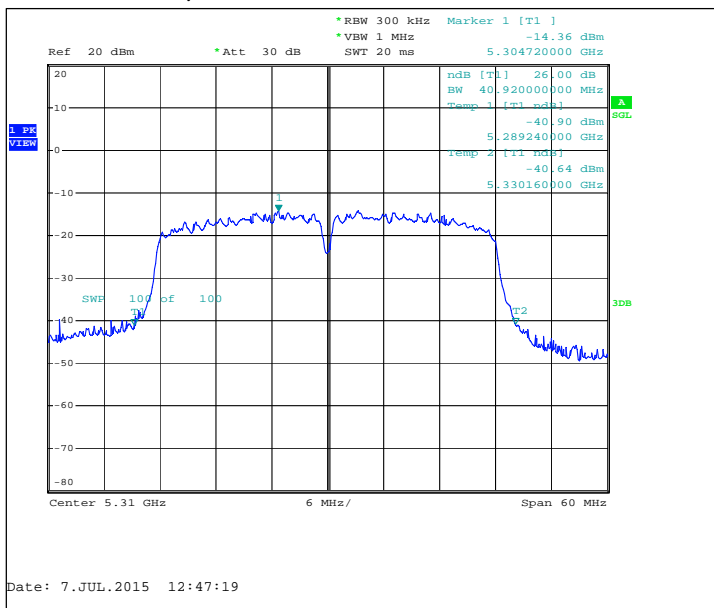
Channel 44+48 / 5230MHz



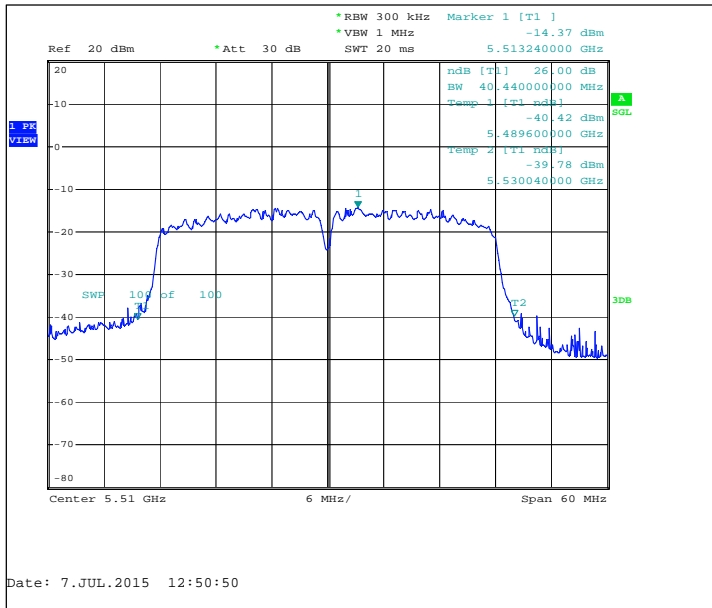
Channel 52+56 / 5270MHz



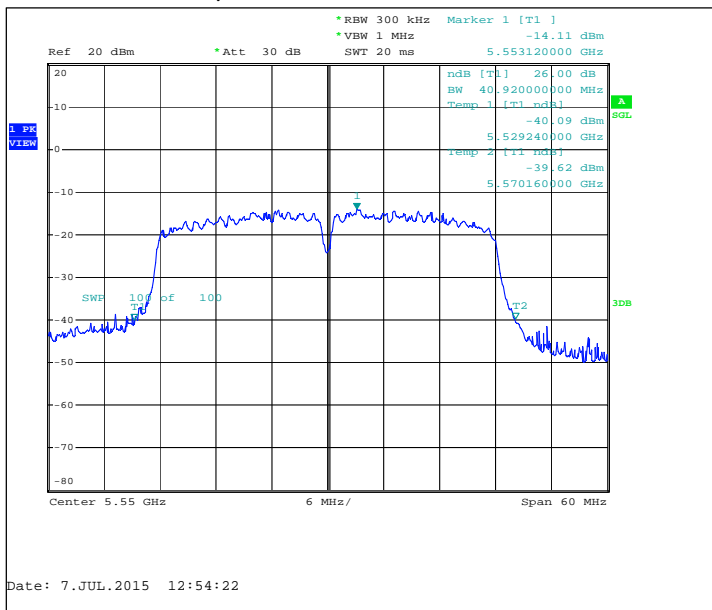
Channel 60+64 / 5310MHz



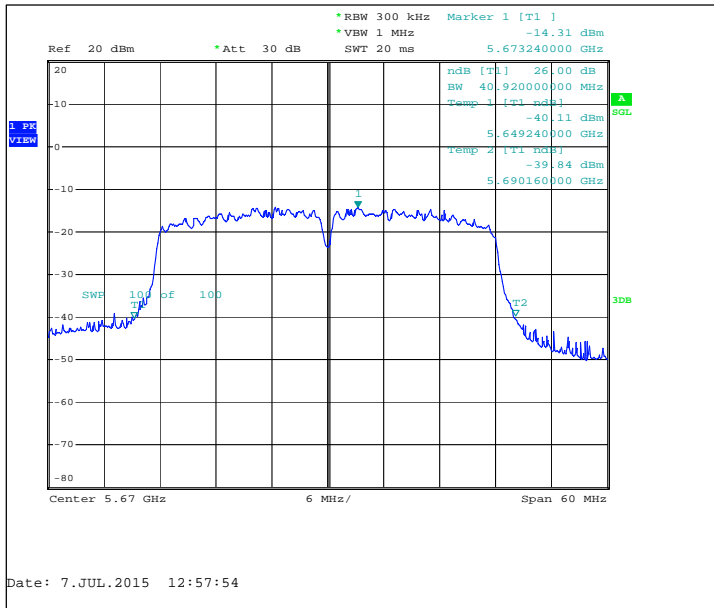
Channel 100+104 / 5510MHz



Channel 108+112 / 5550MHz



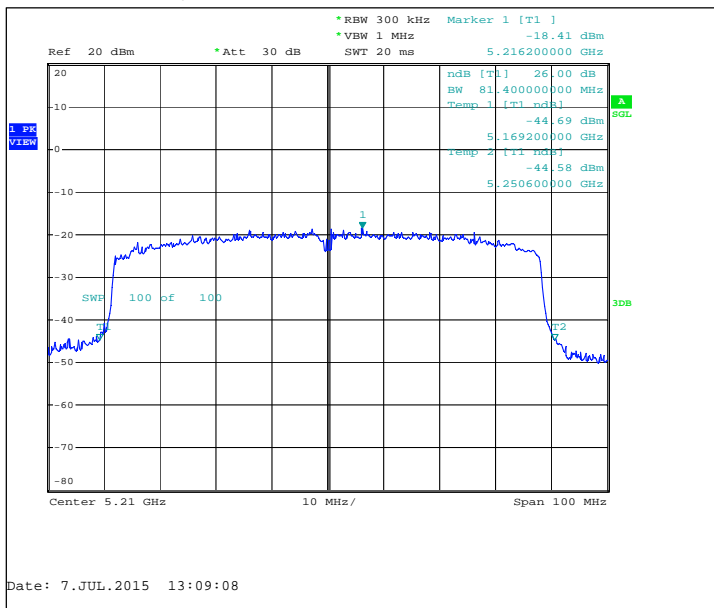
Channel 132+136 / 5670MHz



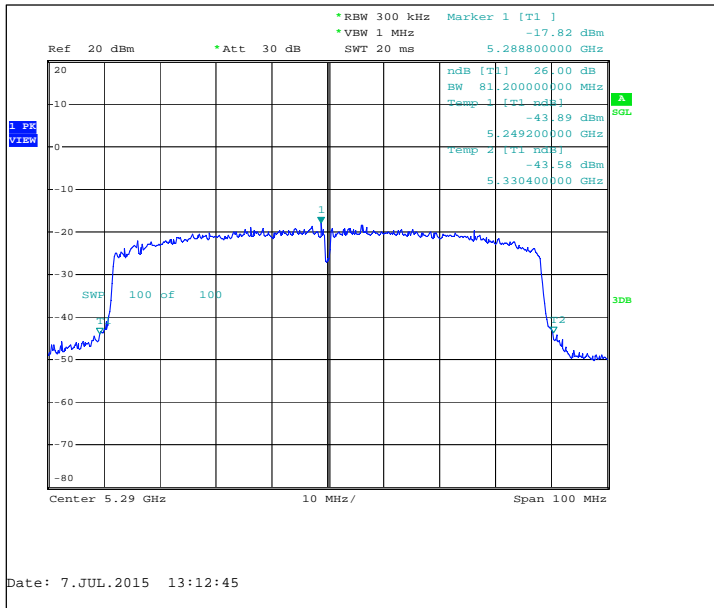
4.3.12 802.11ac Aux mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

Channel / fc [MHz]	26 dB bandwidth [kHz]	Result
36-48 / 5210	81400	PASSED
52-64 / 5290	81200	PASSED
100-112 / 5530	81600	PASSED

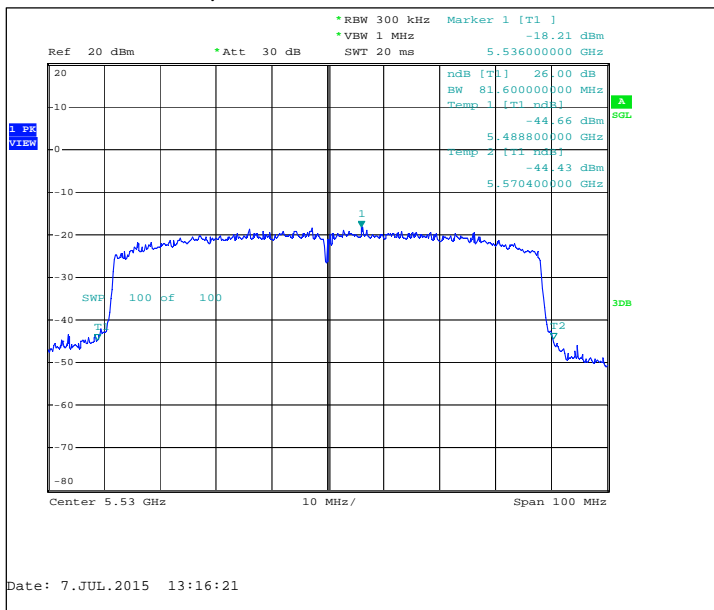
Channel 36-48 / 5210MHz



Channel 52-64 / 5290MHz



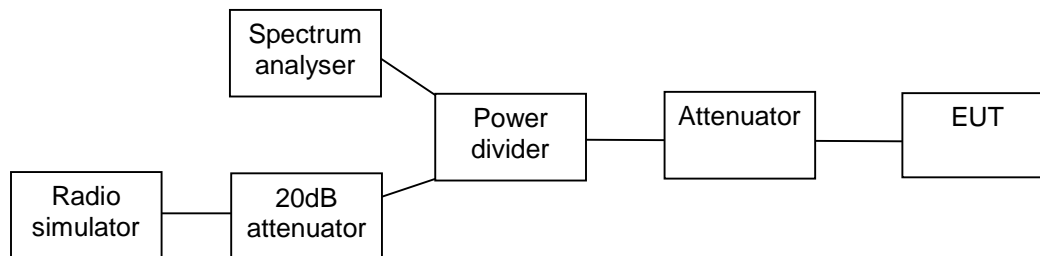
Channel 100-112 / 5530MHz



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

EUT with DUT number	RM-1085, DUT 100012
Accessories with DUT numbers	SD-241R, DUT 100016 ; WH-308, DUT 100029
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	20 / 47 / 101.9
Date of measurements	06-Jul-2015
Measured by	Jari Keto

5.1. Test Setup



5.2. Test method and limit

The measurement is made according to Public Notice KDB 789033 D02 v01 and IC standard RSS-210.

Limits for maximum power spectral density measurements

Frequency range [MHz]	Limit [dBm]
5150-5250	11 dBm / MHz
5250-5350	11 dBm / MHz
5470-5725	11 dBm / MHz
5725-5850	30 dBm / 500 kHz

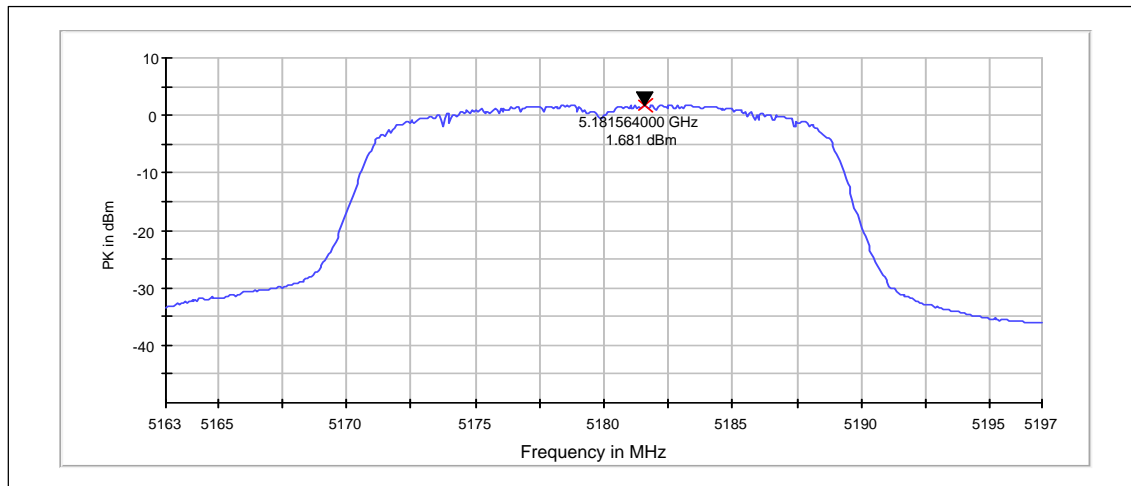
5.3. 5 GHz RLAN Test results

5.3.1 802.11n mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

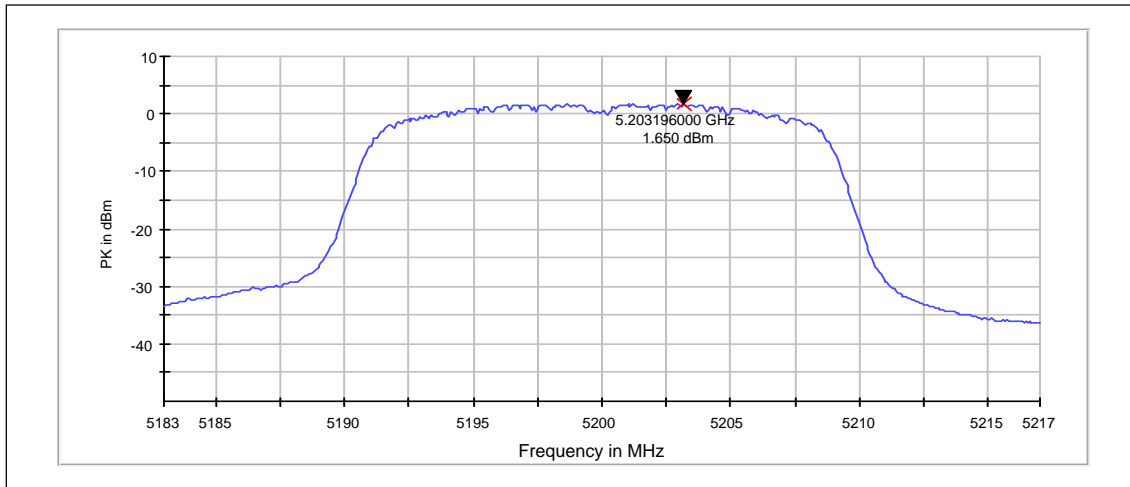
RMS detector, Video averaging

Channel / fc [MHz]	P [dBm]	Result
36 / 5180 main	1.68	PASSED
40 / 5200 main	1.65	PASSED
48 / 5240 main	1.9	PASSED
52 / 5260 main	2.05	PASSED
60 / 5300 main	2.07	PASSED
64 / 5320 main	2.17	PASSED
100 / 5500 main	2.45	PASSED
116 / 5580 main	2.85	PASSED
140 / 5700 main	2.75	PASSED
149 / 5745 main	9.47	PASSED
157 / 5785 main	6.53	PASSED
165 / 5825 main	5.84	PASSED

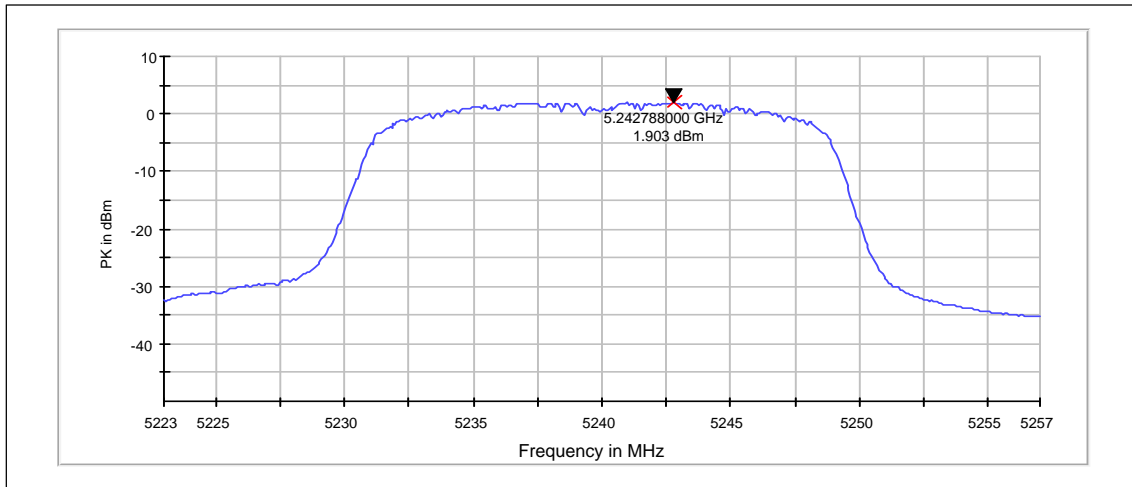
Channel 36 / 5180MHz (RBW: 1 MHz, VBW: 3 MHz)



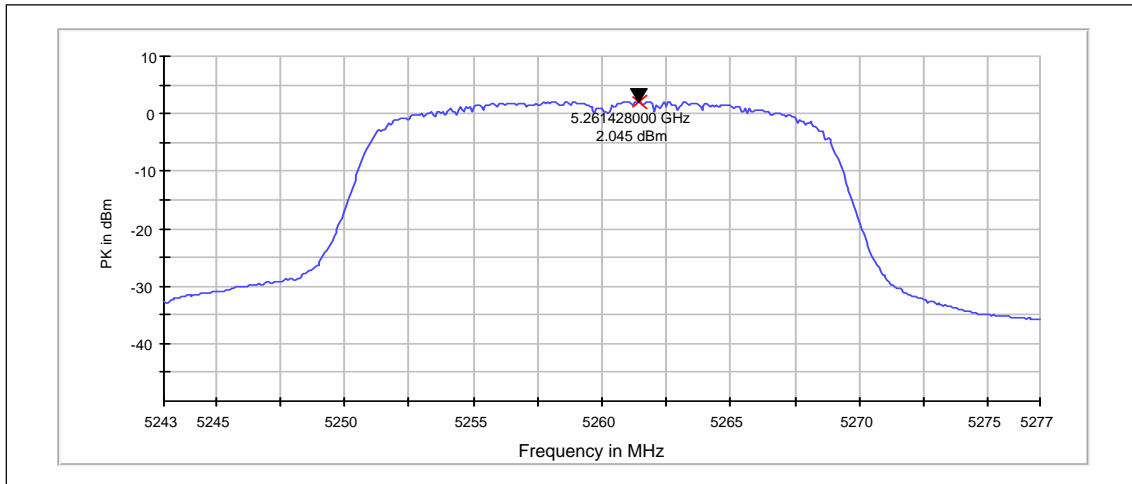
Channel 40 / 5200MHz (RBW: 1 MHz, VBW: 3 MHz)



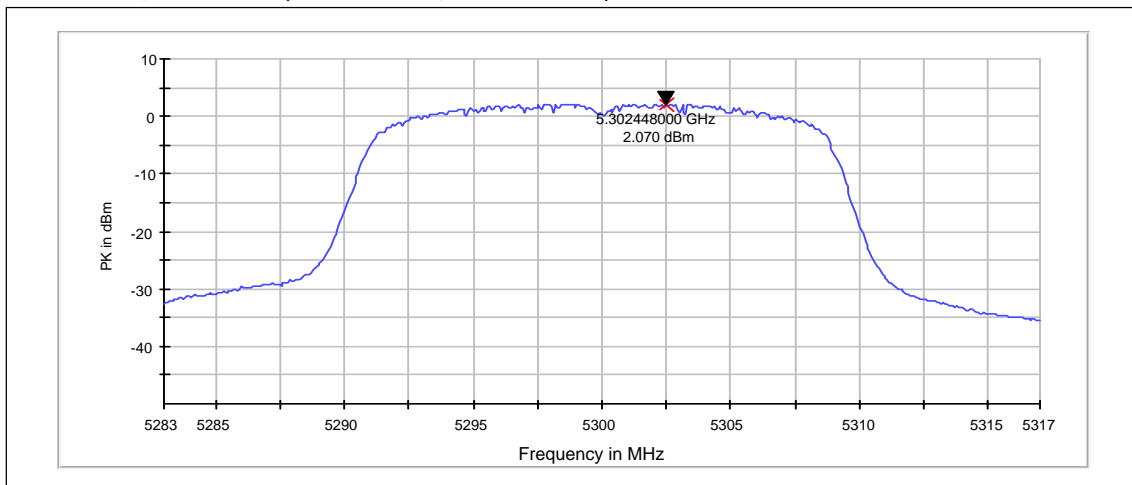
Channel 48 / 5240MHz (RBW: 1 MHz, VBW: 3 MHz)



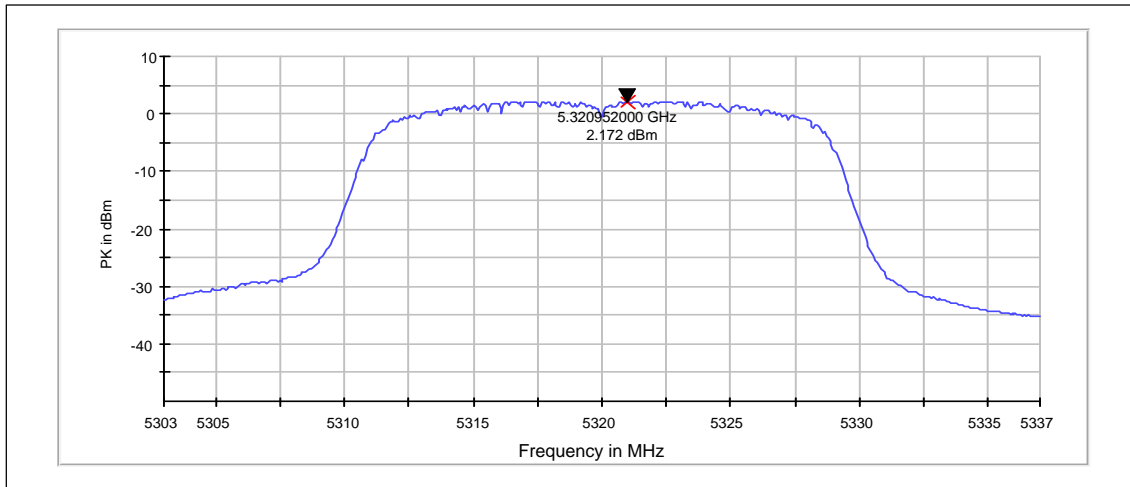
Channel 52 / 5260MHz (RBW: 1 MHz, VBW: 3 MHz)



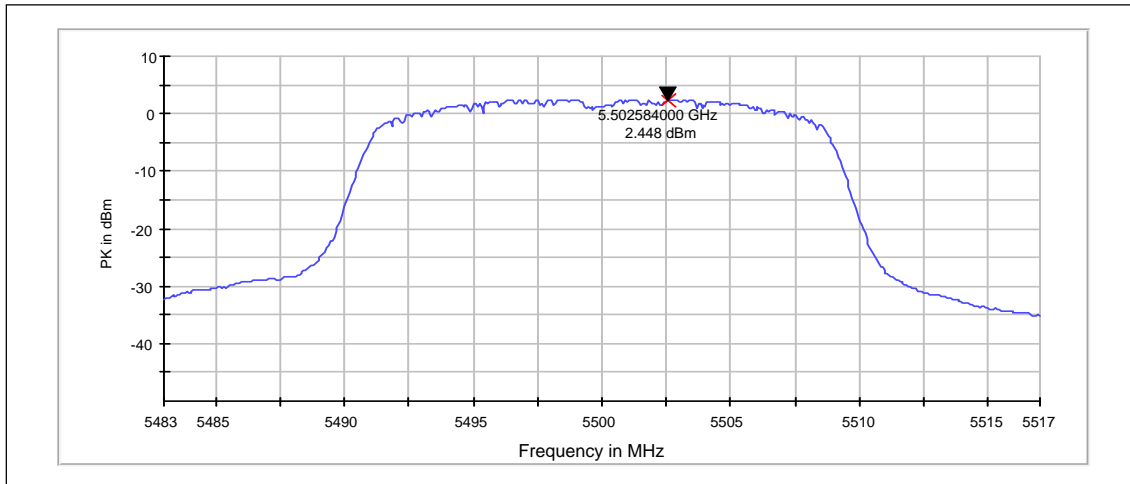
Channel 60 / 5300MHz (RBW: 1 MHz, VBW: 3 MHz)



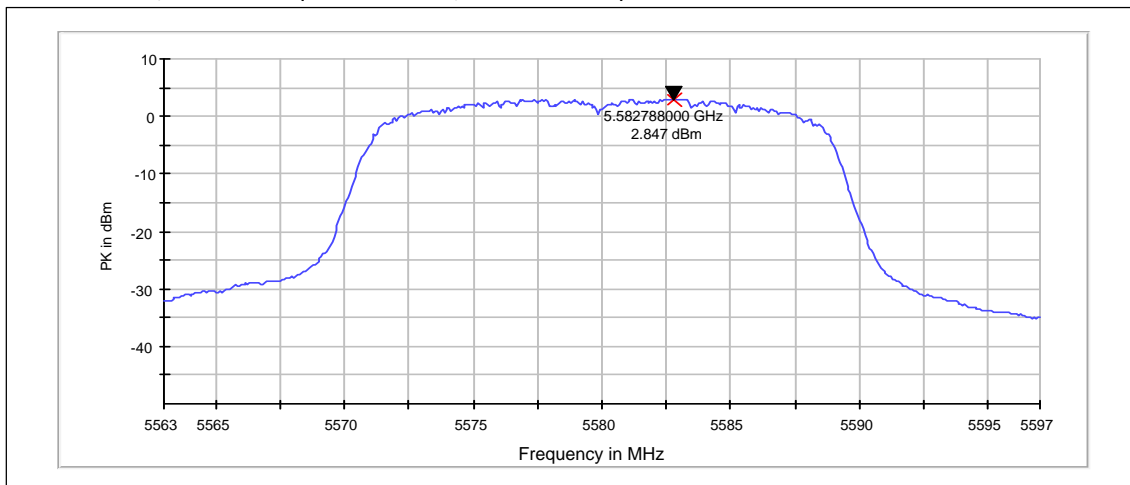
Channel 64 / 5320MHz (RBW: 1 MHz, VBW: 3 MHz)



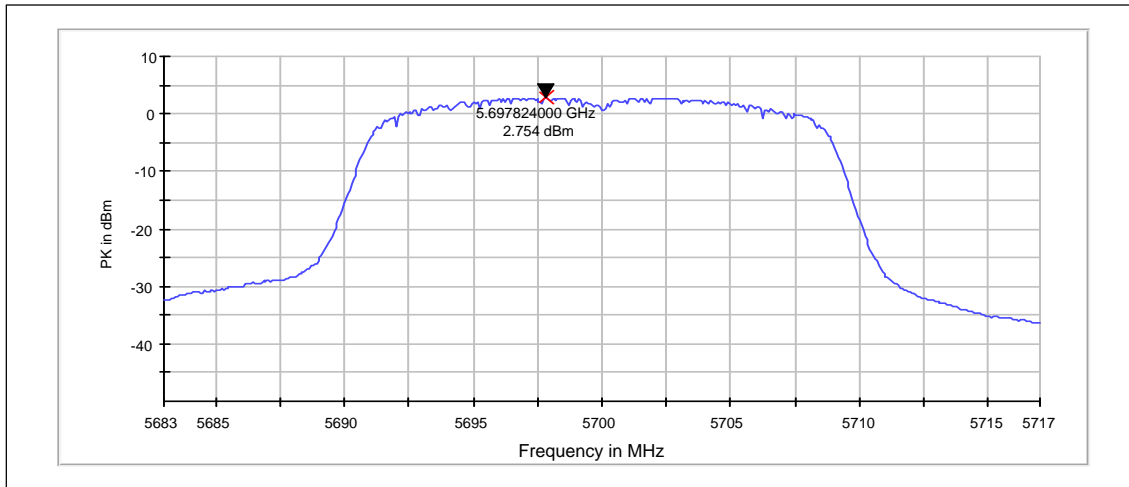
Channel 100 / 5500MHz (RBW: 1 MHz, VBW: 3 MHz)



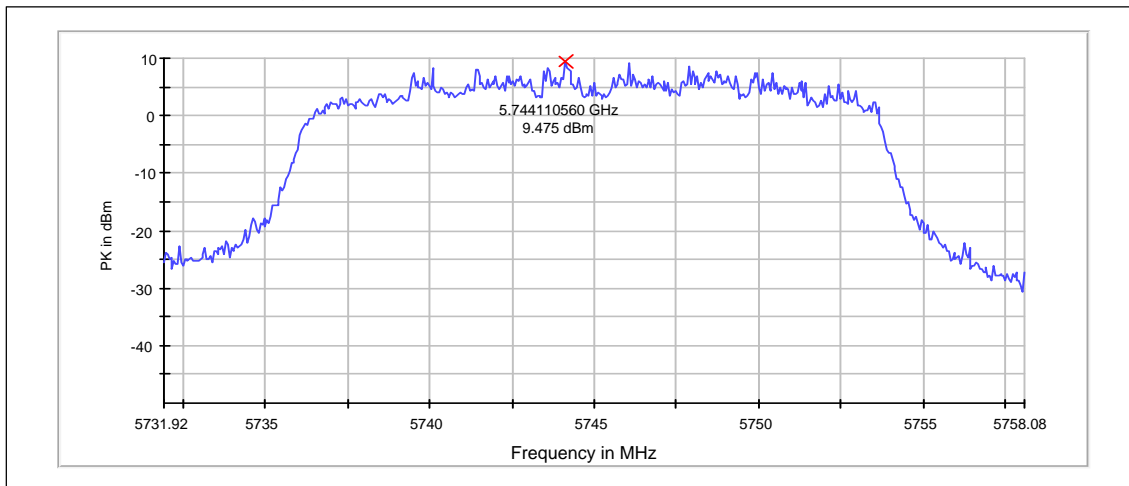
Channel 116 / 5580MHz (RBW: 1 MHz, VBW: 3 MHz)



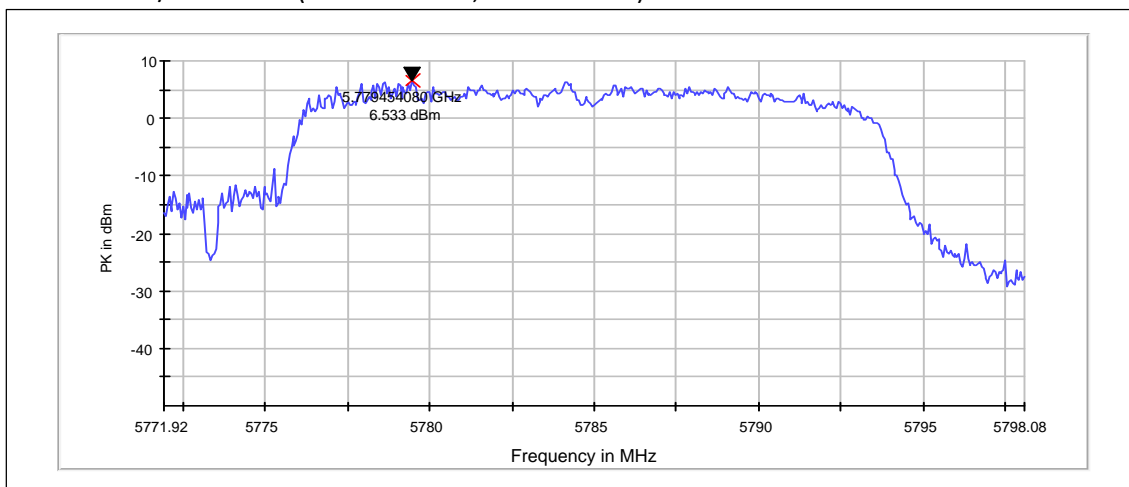
Channel 140 / 5700MHz (RBW: 1 MHz, VBW: 3 MHz)



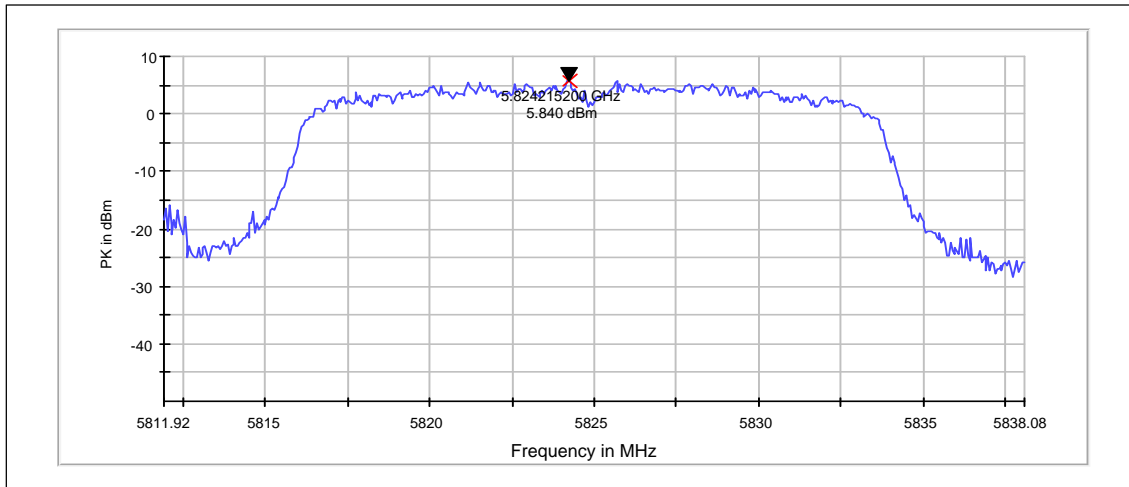
Channel 149 / 5745MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157 / 5785MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 165 / 5825MHz (RBW: 500 kHz, VBW: 3 MHz)

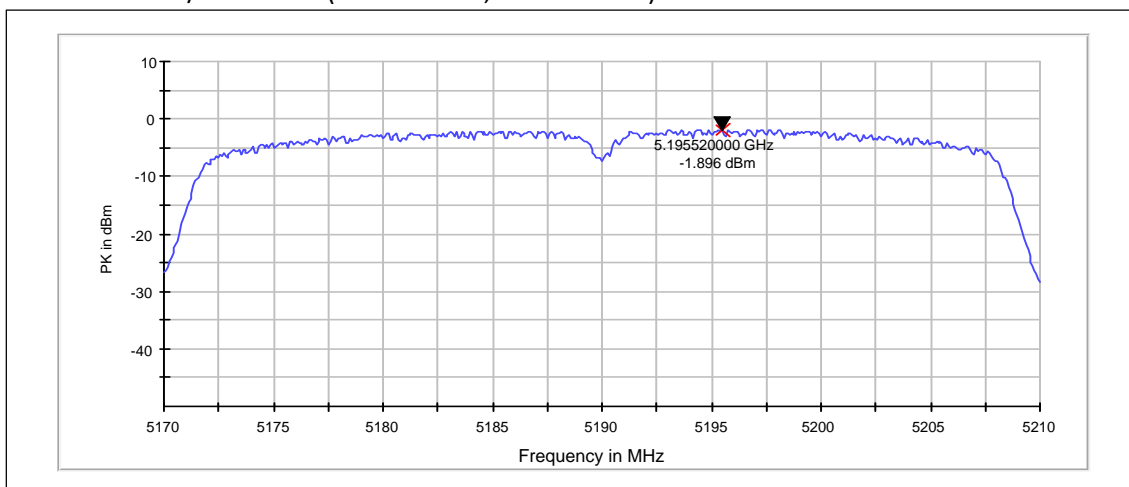


5.3.2 802.11n mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

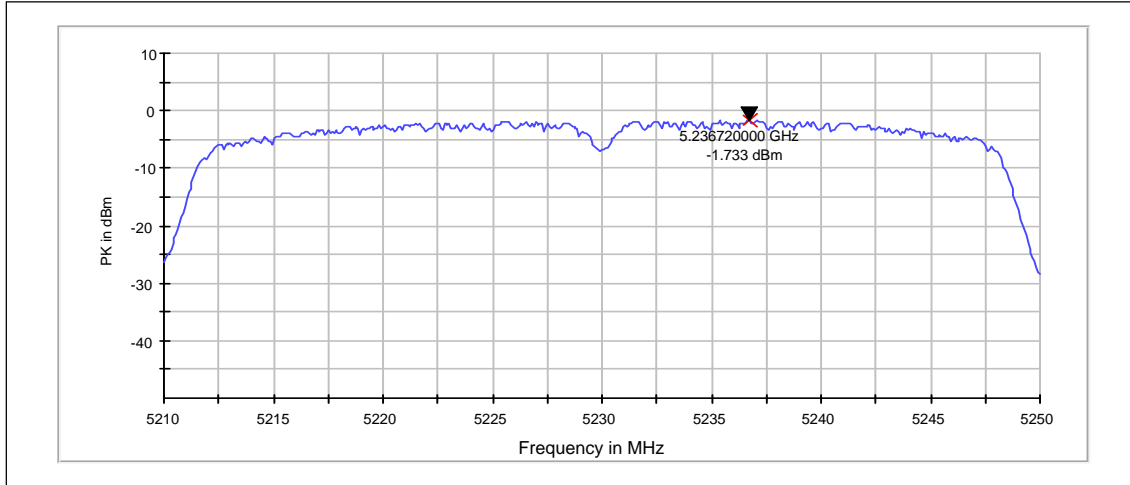
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36+40 / 5190 main	-1.9	PASSED
44+48 / 5230 main	-1.73	PASSED
52+56 / 5270 main	-1.54	PASSED
60+64 / 5310 main	-1.37	PASSED
100+104 / 5510 main	-0.85	PASSED
108+112 / 5550 main	-0.79	PASSED
132+136 / 5670 main	-0.75	PASSED
149+153 / 5755 main	6.63	PASSED
157+161 / 5795 main	8.49	PASSED

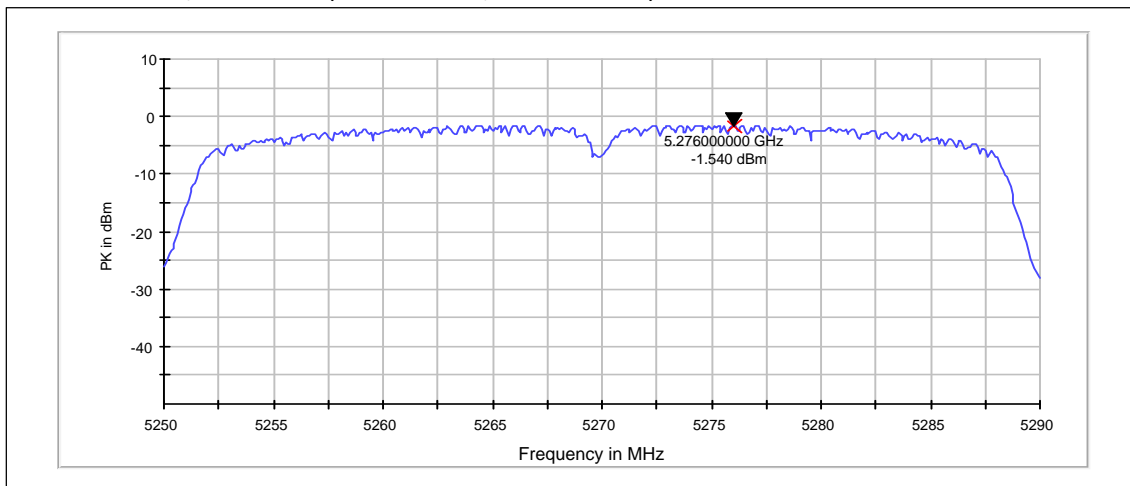
Channel 36+40 / 5190MHz (RBW: 1 MHz, VBW: 3 MHz)



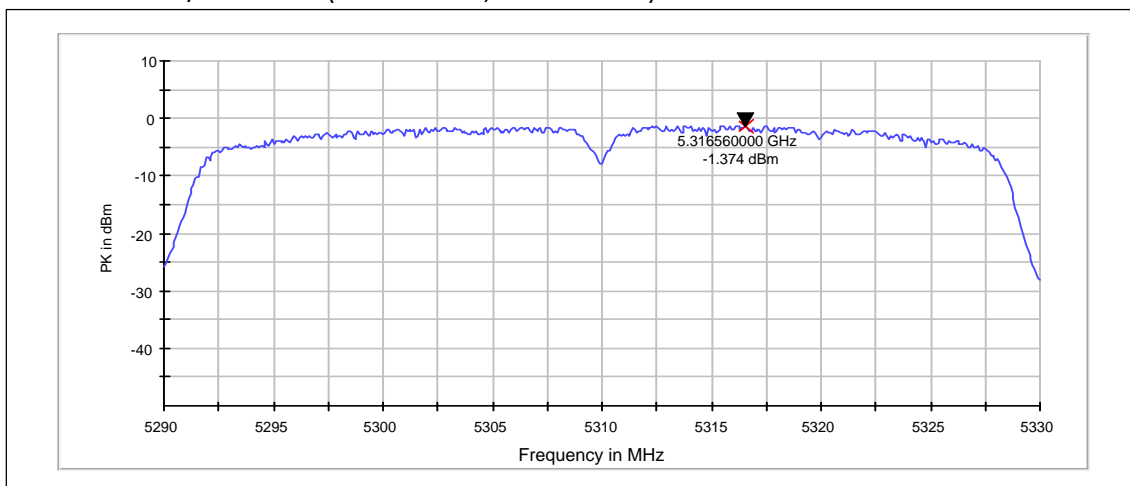
Channel 44+48 / 5230MHz (RBW: 1 MHz, VBW: 3 MHz)



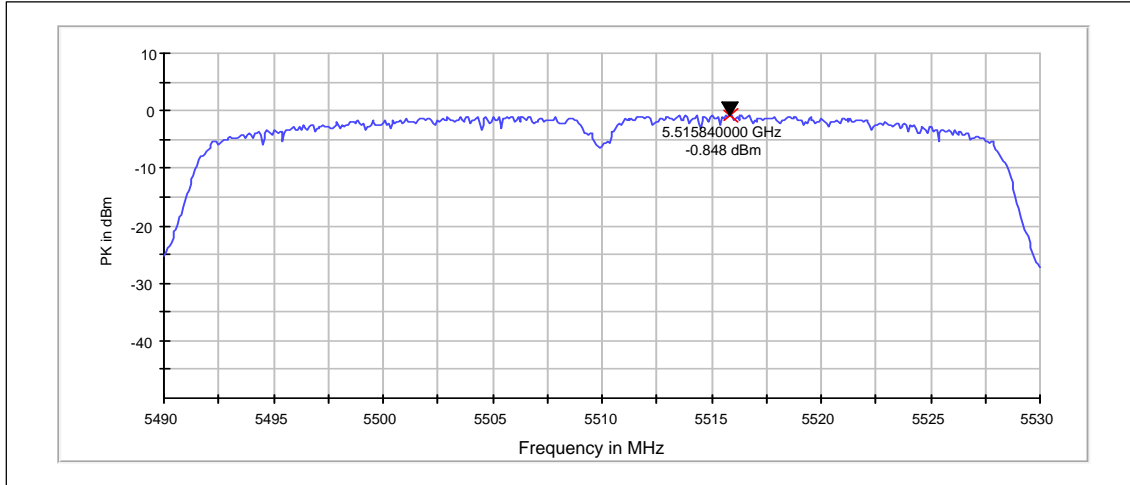
Channel 52+56 / 5270MHz (RBW: 1 MHz, VBW: 3 MHz)



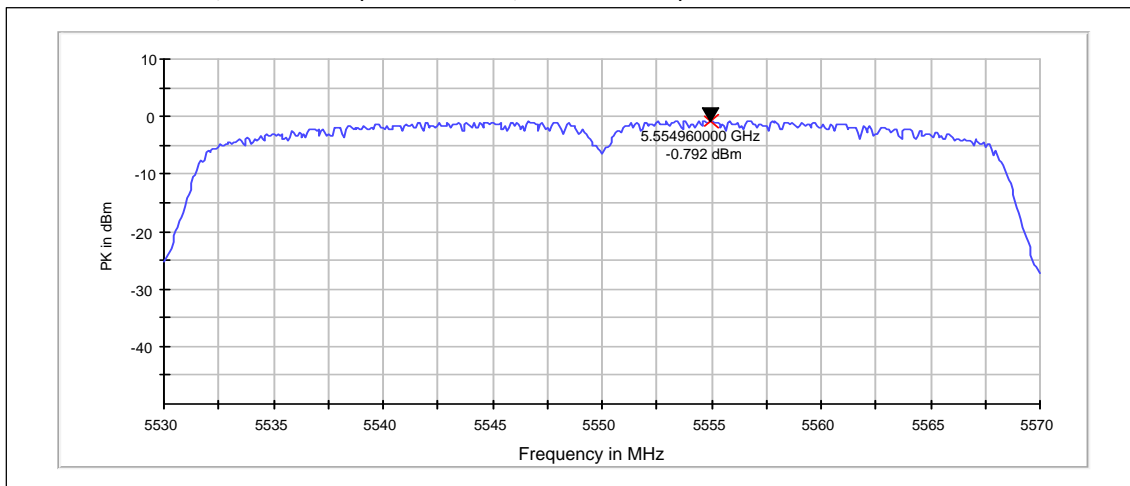
Channel 60+64 / 5310MHz (RBW: 1 MHz, VBW: 3 MHz)



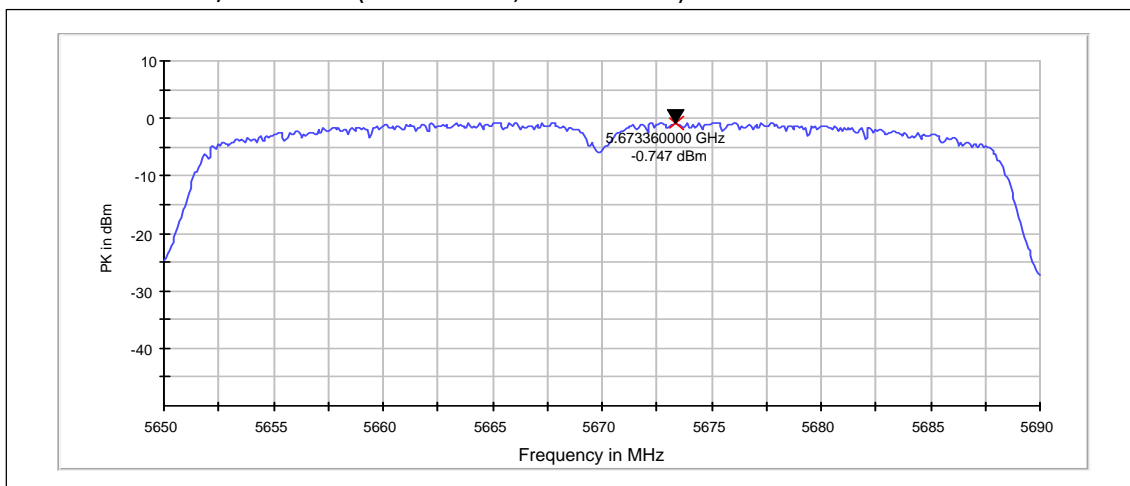
Channel 100+104 / 5510MHz (RBW: 1 MHz, VBW: 3 MHz)



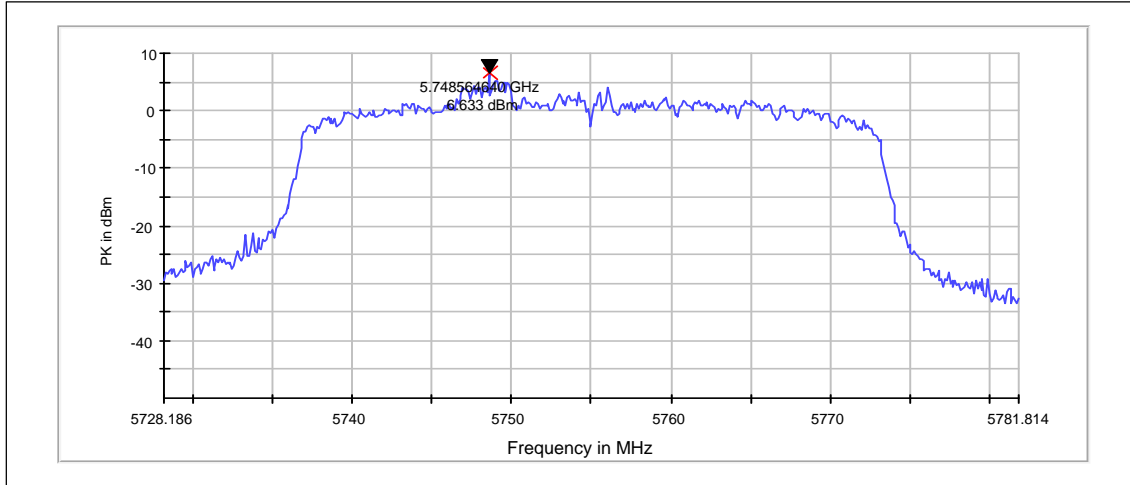
Channel 108+112 / 5550MHz (RBW: 1 MHz, VBW: 3 MHz)



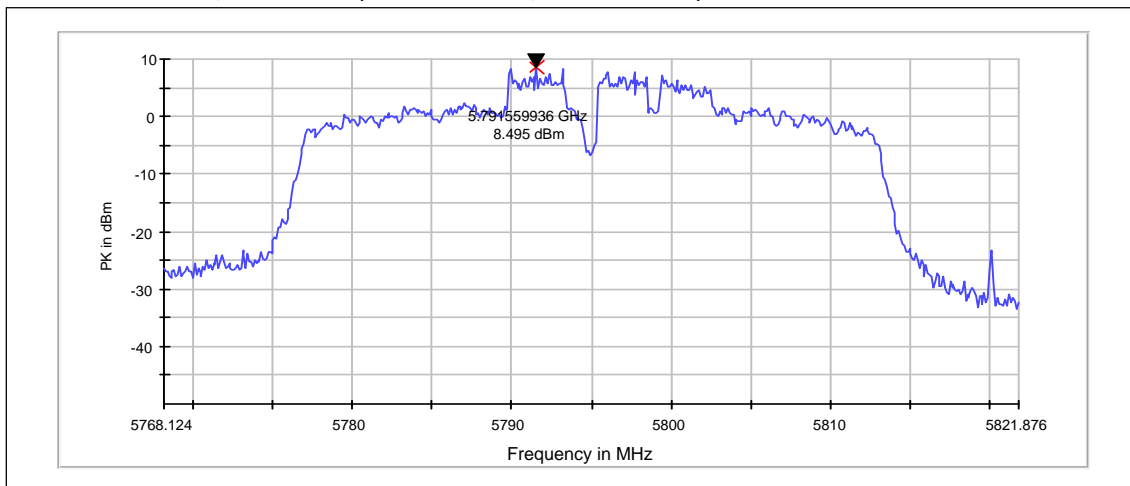
Channel 132+136 / 5670MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149+153 / 5755MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157+161 / 5795MHz (RBW: 500 kHz, VBW: 3 MHz)

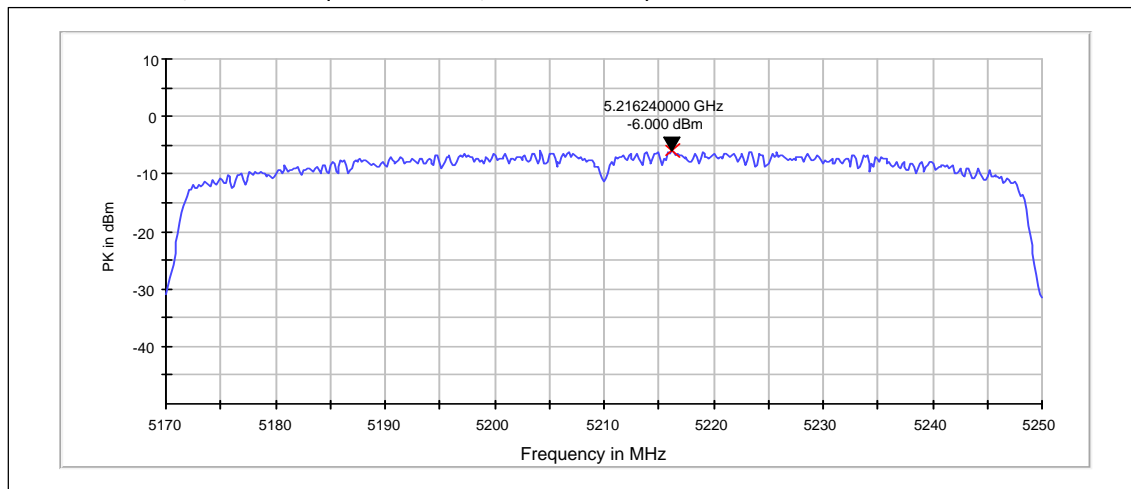


5.3.3 802.11ac mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

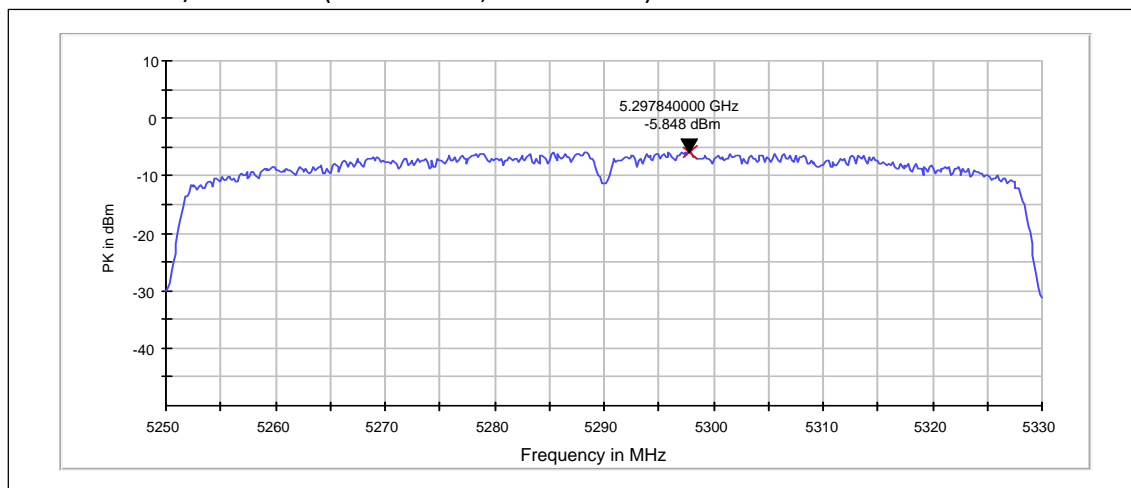
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36-48 / 5210 main	-6	PASSED
52-64 / 5290 main	-5.85	PASSED
100-112 / 5530 main	-4.97	PASSED
149-161 / 5775 main	-1.63	PASSED

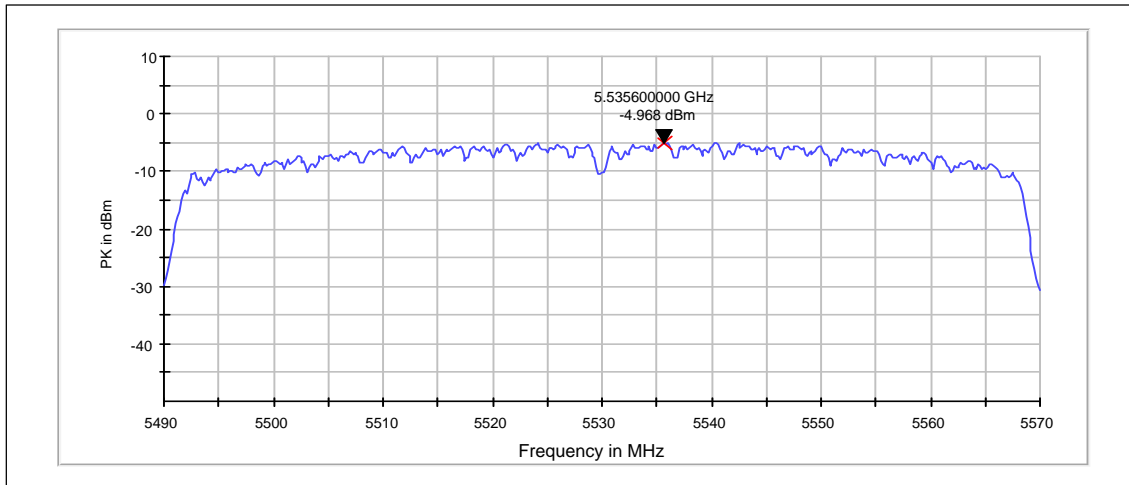
Channel 36-48 / 5210MHz (RBW: 1 MHz, VBW: 3 MHz)



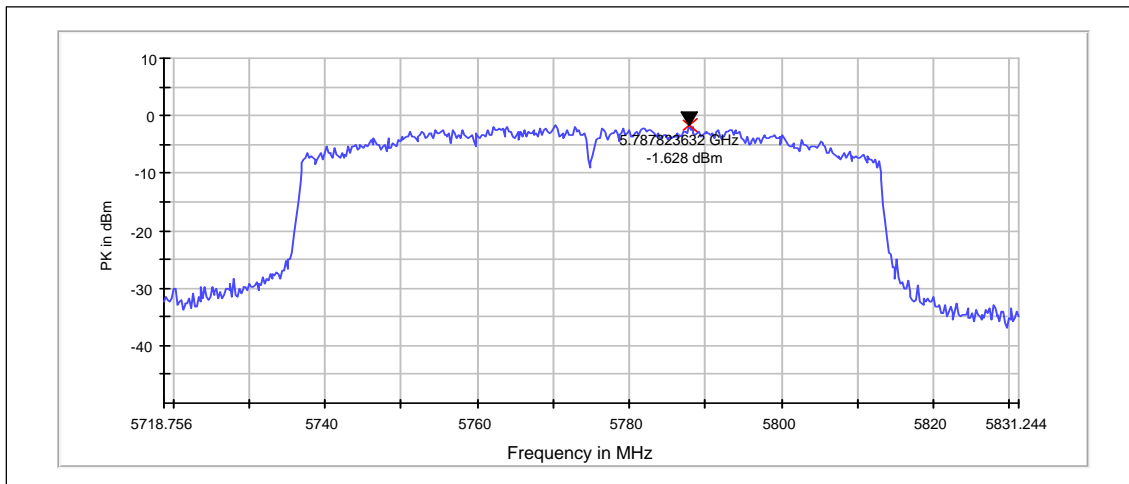
Channel 52-64 / 5290MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 100-112 / 5530MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149-161 / 5775MHz (RBW: 500 kHz, VBW: 3 MHz)



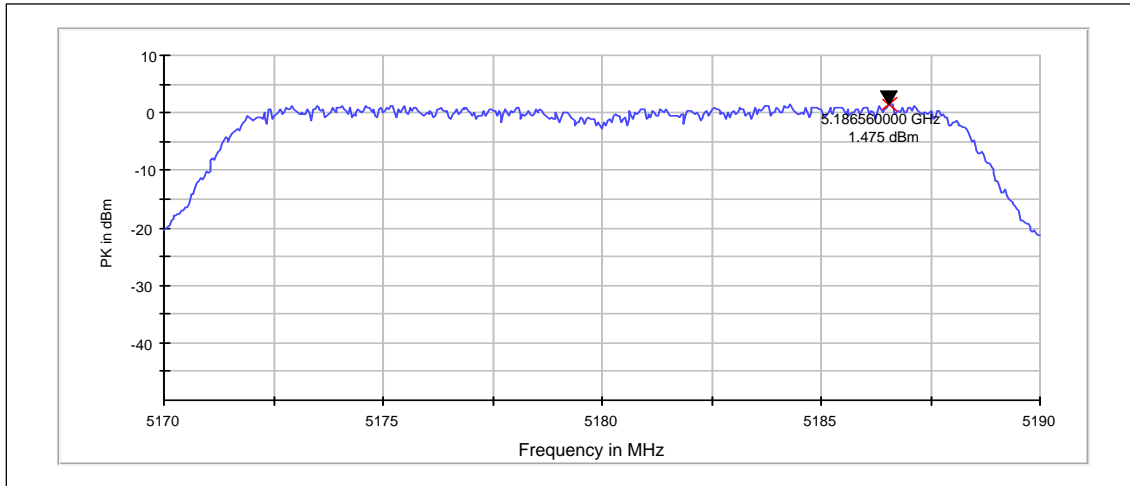
5.3.4 802.11a mode, 16QAM modulation, 24 Mbps data rate

RMS detector, Video averaging

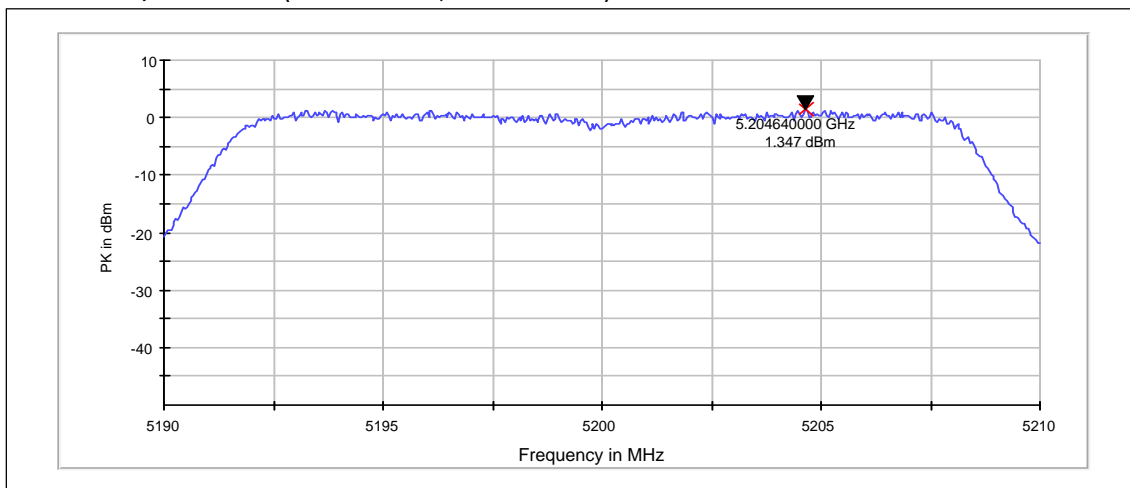
Channel / f _c [MHz]	P [dBm]	Result
36 / 5180 main	1.47	PASSED
40 / 5200 main	1.35	PASSED
48 / 5240 main	1.52	PASSED
52 / 5260 main	1.63	PASSED
60 / 5300 main	1.76	PASSED
64 / 5320 main	1.75	PASSED
100 / 5500 main	2.29	PASSED
116 / 5580 main	2.6	PASSED
140 / 5700 main	2.65	PASSED
149 / 5745 main	7.38	PASSED

157 / 5785 main	6.6	PASSED
165 / 5825 main	6.21	PASSED

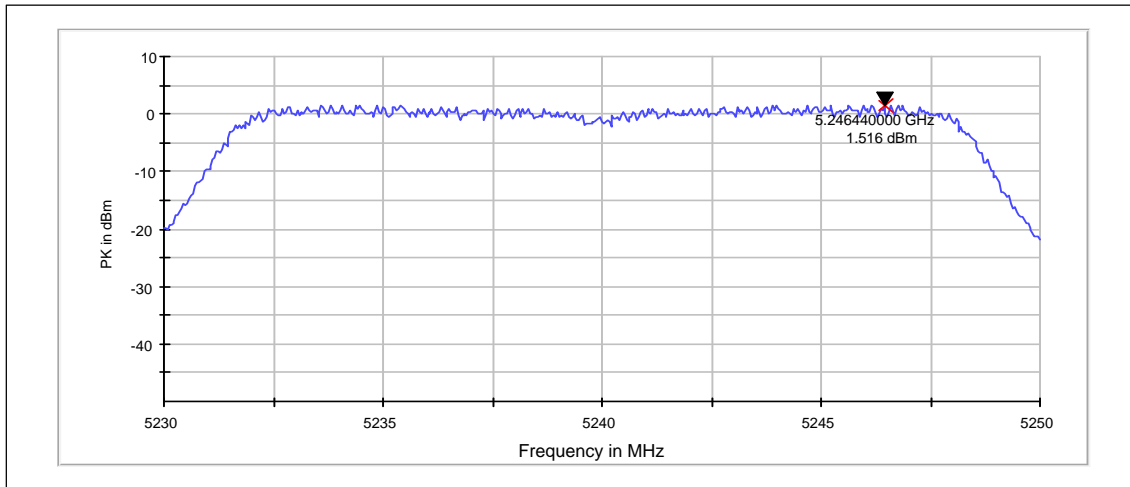
Channel 36 / 5180MHz (RBW: 1 MHz, VBW: 3 MHz)



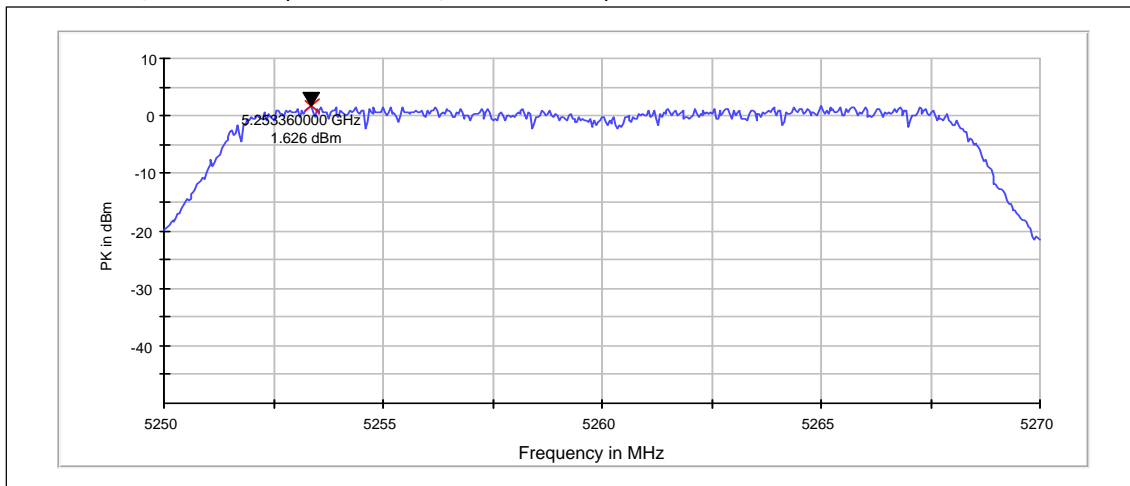
Channel 40 / 5200MHz (RBW: 1 MHz, VBW: 3 MHz)



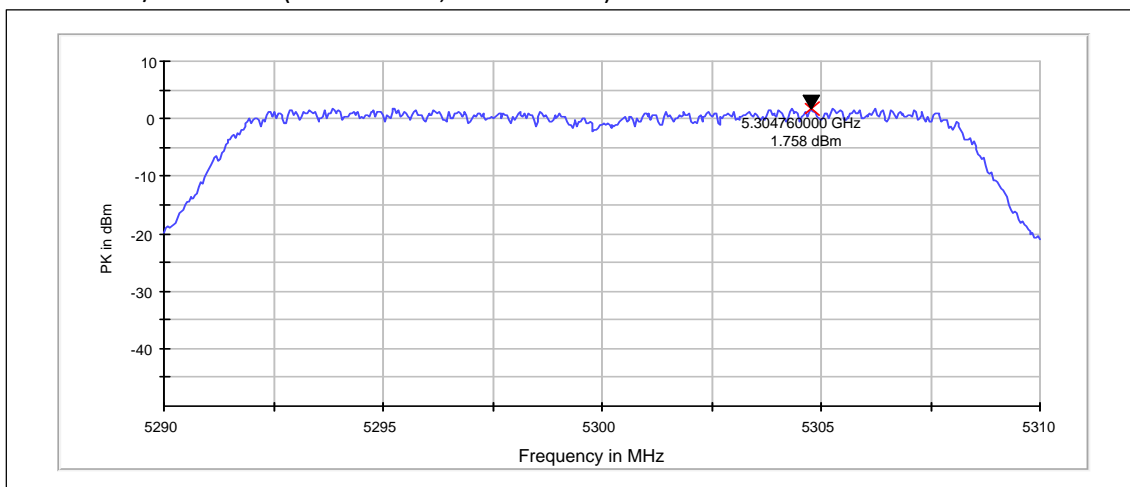
Channel 48 / 5240MHz (RBW: 1 MHz, VBW: 3 MHz)



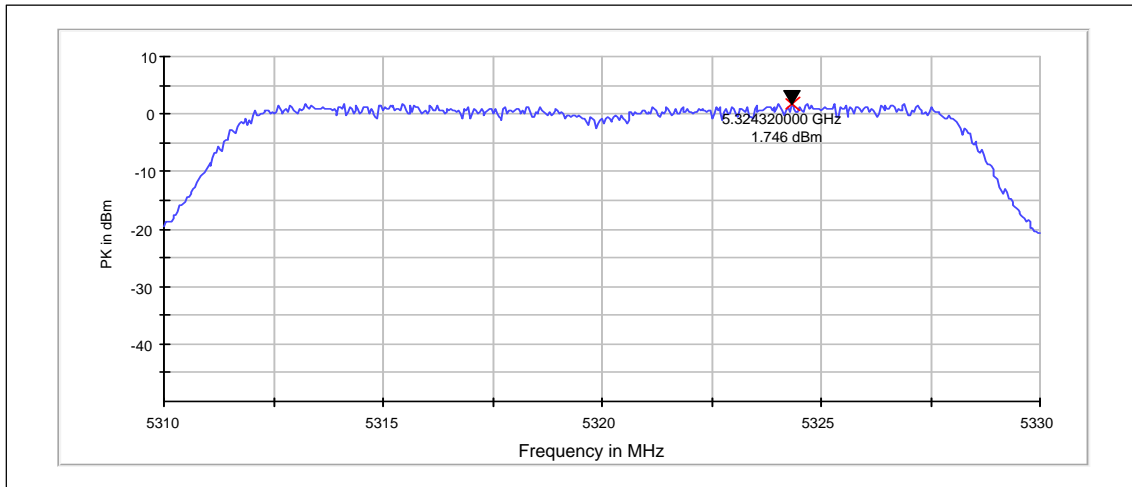
Channel 52 / 5260MHz (RBW: 1 MHz, VBW: 3 MHz)



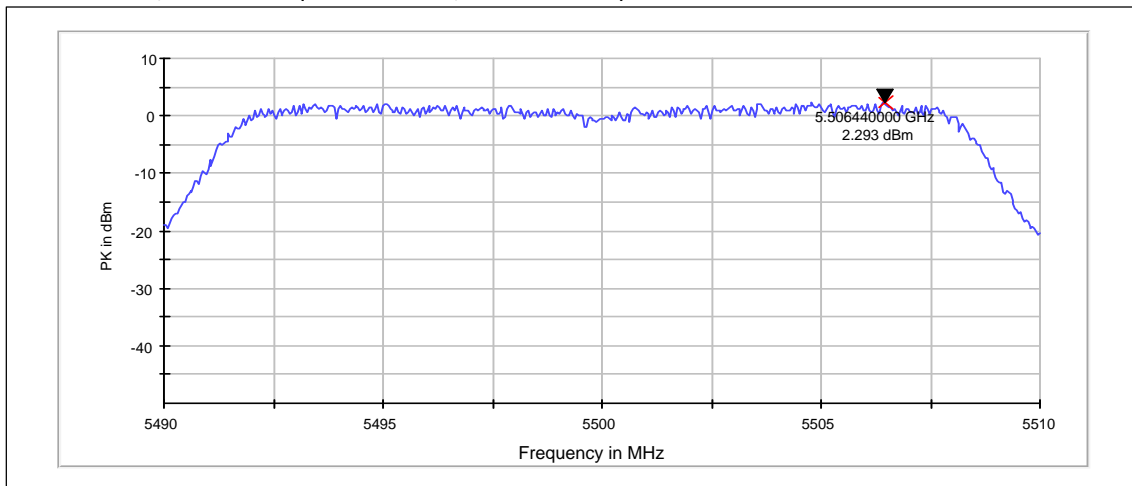
Channel 60 / 5300MHz (RBW: 1 MHz, VBW: 3 MHz)



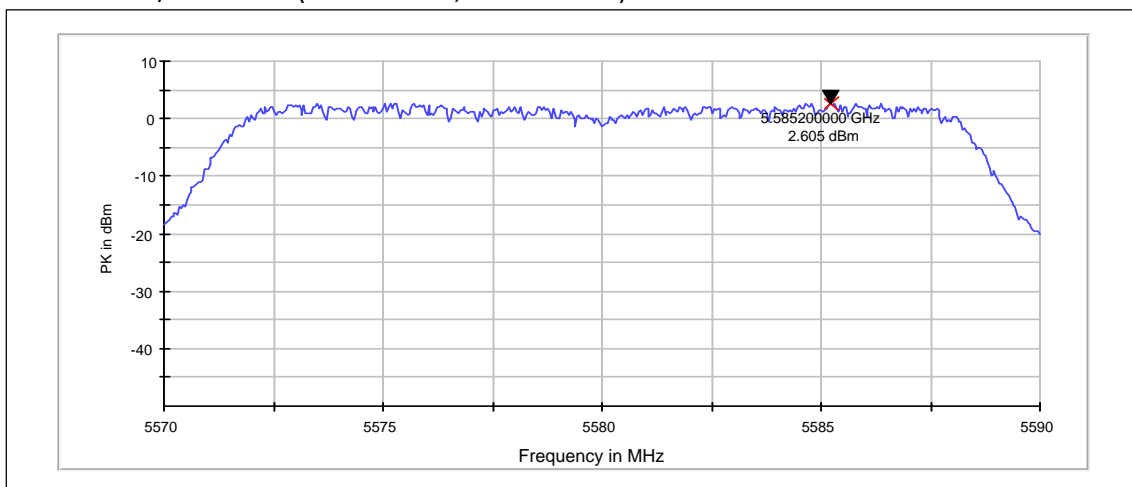
Channel 64 / 5320MHz (RBW: 1 MHz, VBW: 3 MHz)



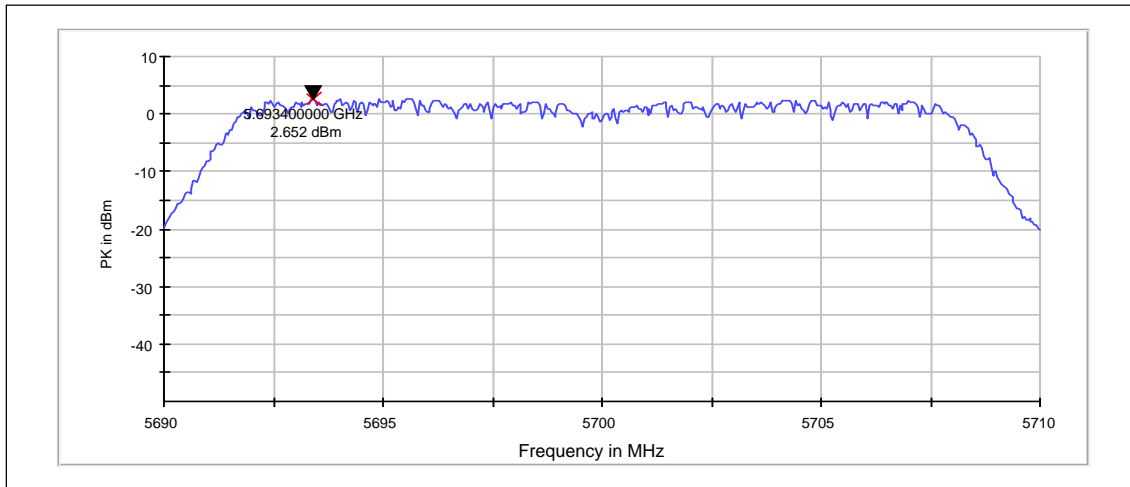
Channel 100 / 5500MHz (RBW: 1 MHz, VBW: 3 MHz)



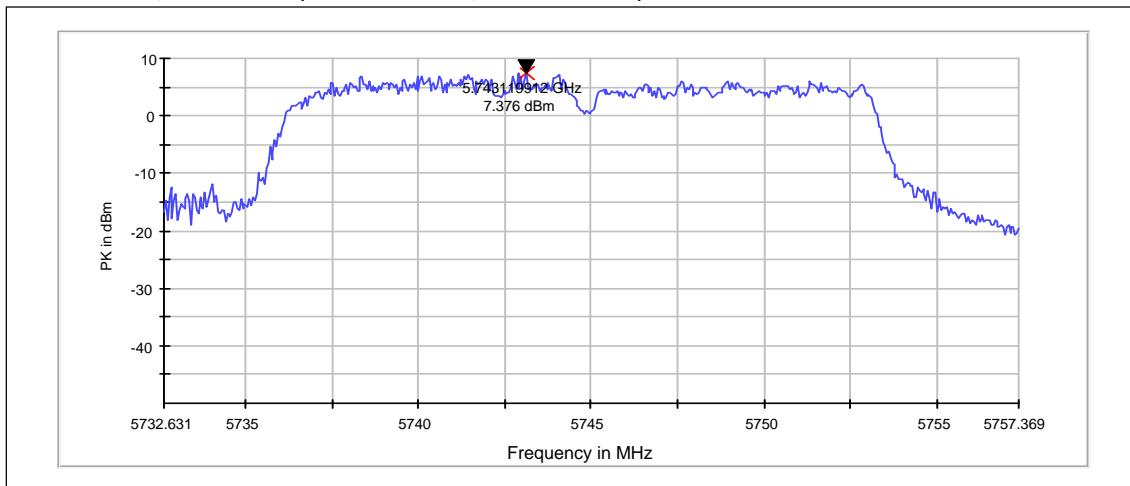
Channel 116 / 5580MHz (RBW: 1 MHz, VBW: 3 MHz)



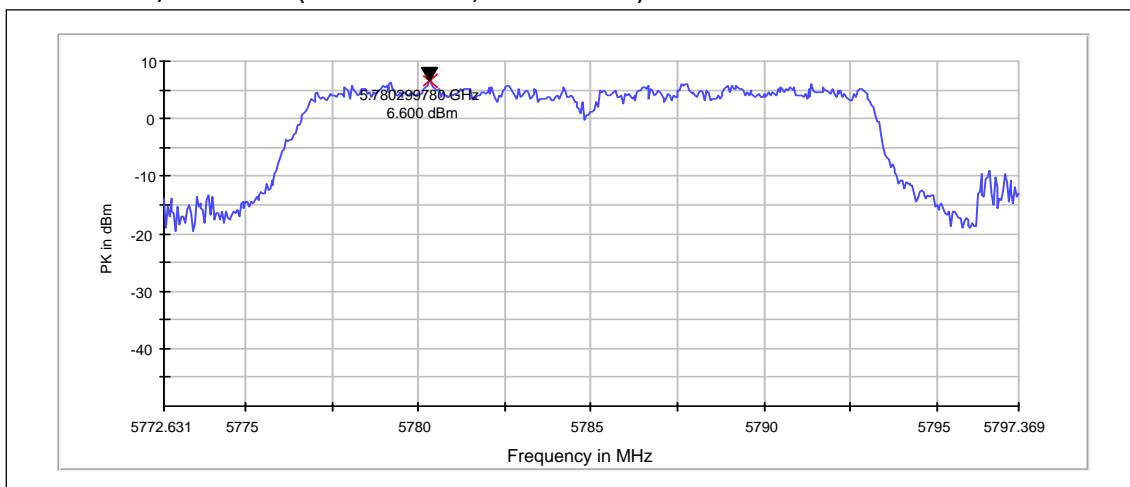
Channel 140 / 5700MHz (RBW: 1 MHz, VBW: 3 MHz)



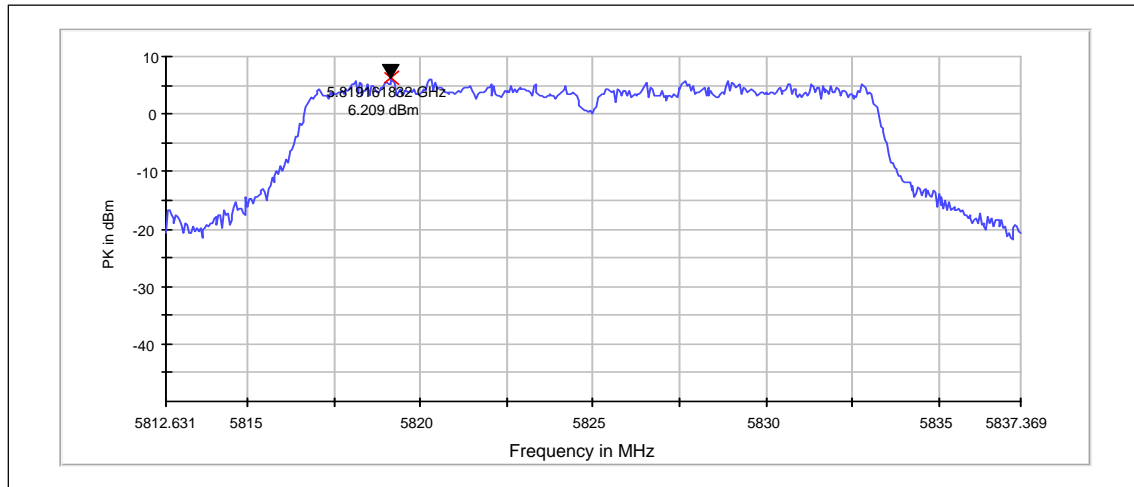
Channel 149 / 5745MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157 / 5785MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 165 / 5825MHz (RBW: 500 kHz, VBW: 3 MHz)

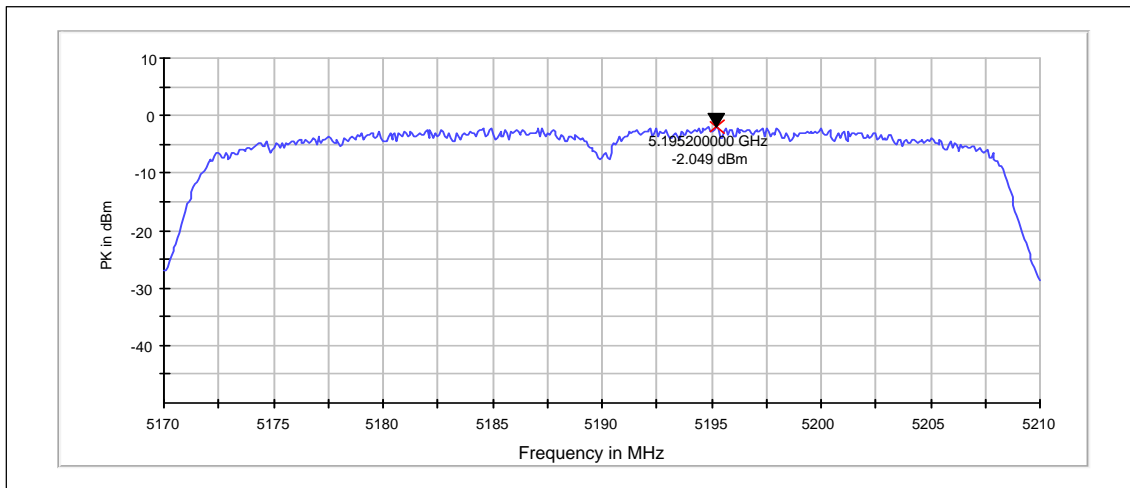


5.3.5 802.11n mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

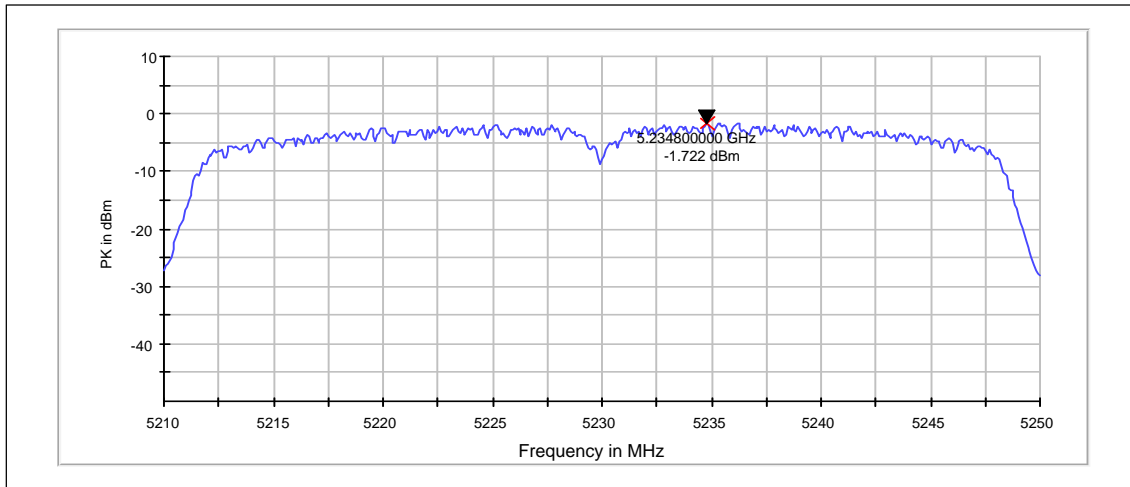
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36+40 / 5190 main	-2.05	PASSED
44+48 / 5230 main	-1.72	PASSED
52+56 / 5270 main	-1.6	PASSED
60+64 / 5310 main	-1.36	PASSED
100+104 / 5510 main	-0.75	PASSED
108+112 / 5550 main	-0.88	PASSED
132+136 / 5670 main	-0.7	PASSED
149+153 / 5755 main	8.31	PASSED
157+161 / 5795 main	2.75	PASSED

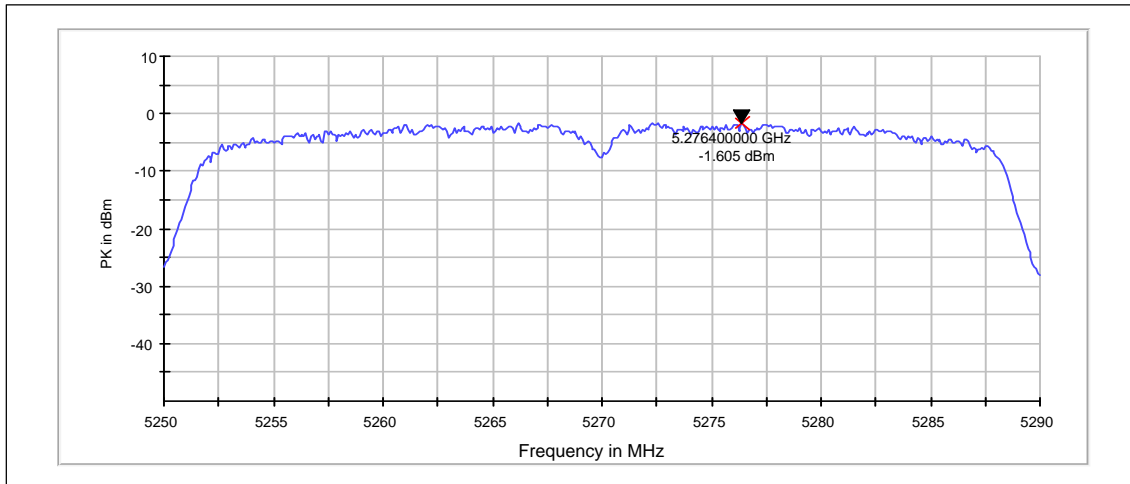
Channel 36+40 / 5190MHz (RBW: 1 MHz, VBW: 3 MHz)



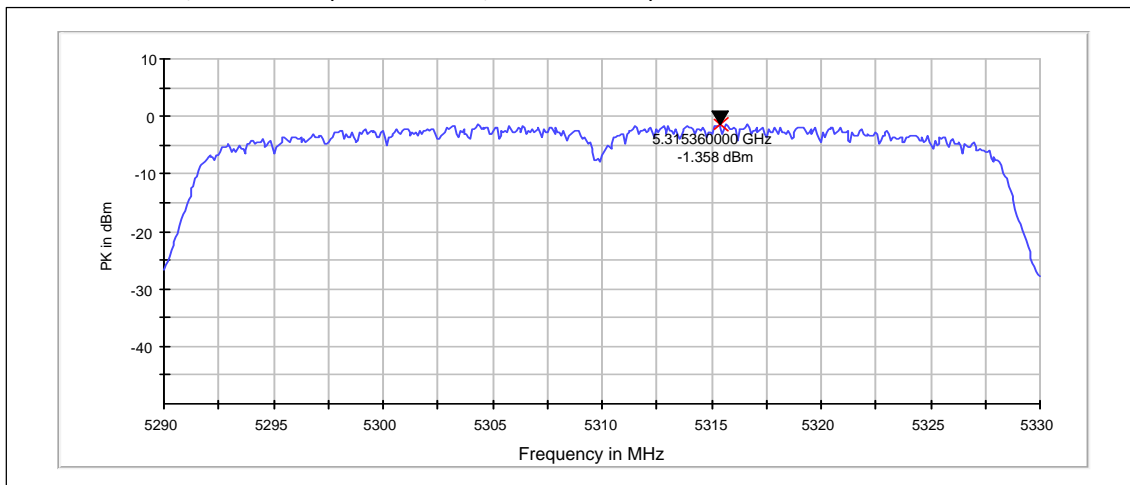
Channel 44+48 / 5230MHz (RBW: 1 MHz, VBW: 3 MHz)



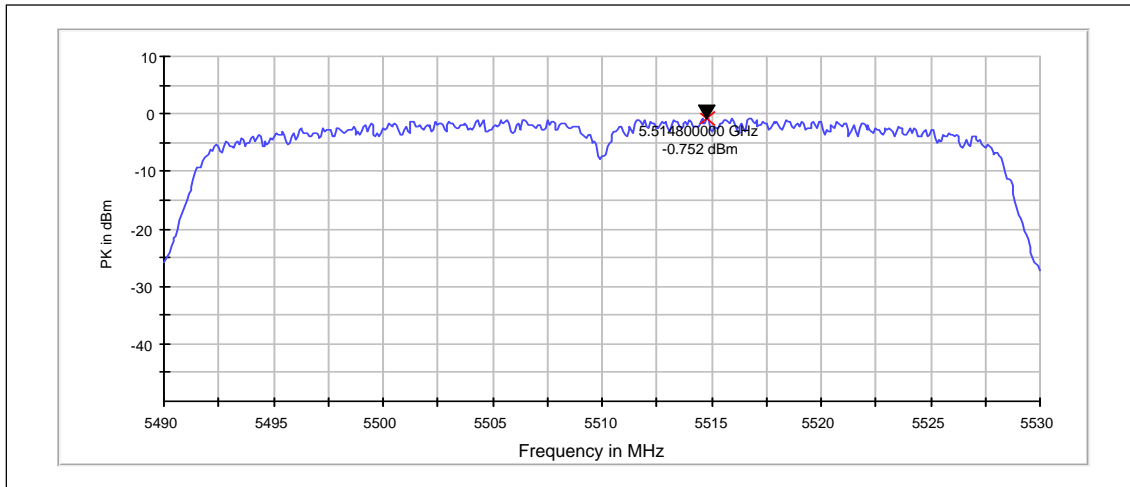
Channel 52+56 / 5270MHz (RBW: 1 MHz, VBW: 3 MHz)



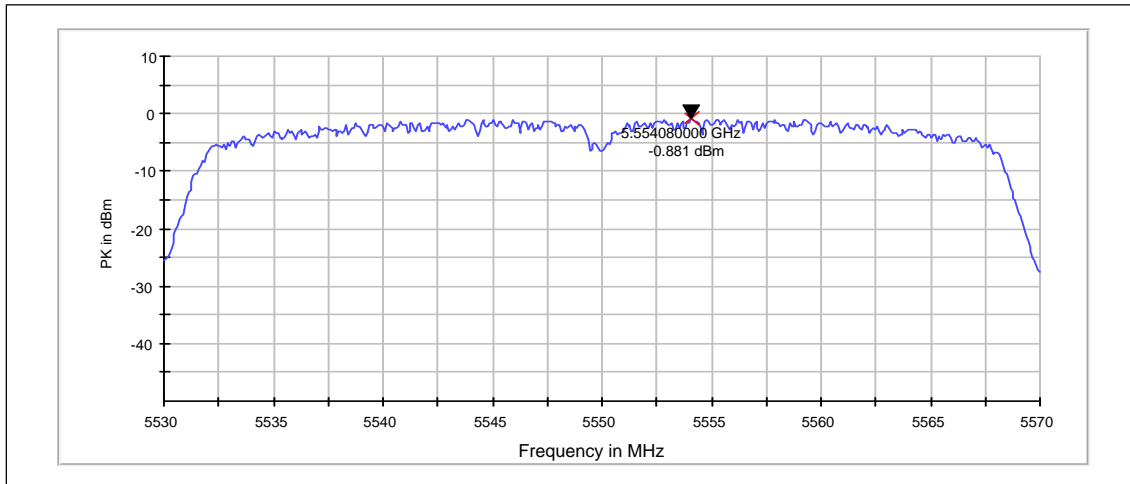
Channel 60+64 / 5310MHz (RBW: 1 MHz, VBW: 3 MHz)



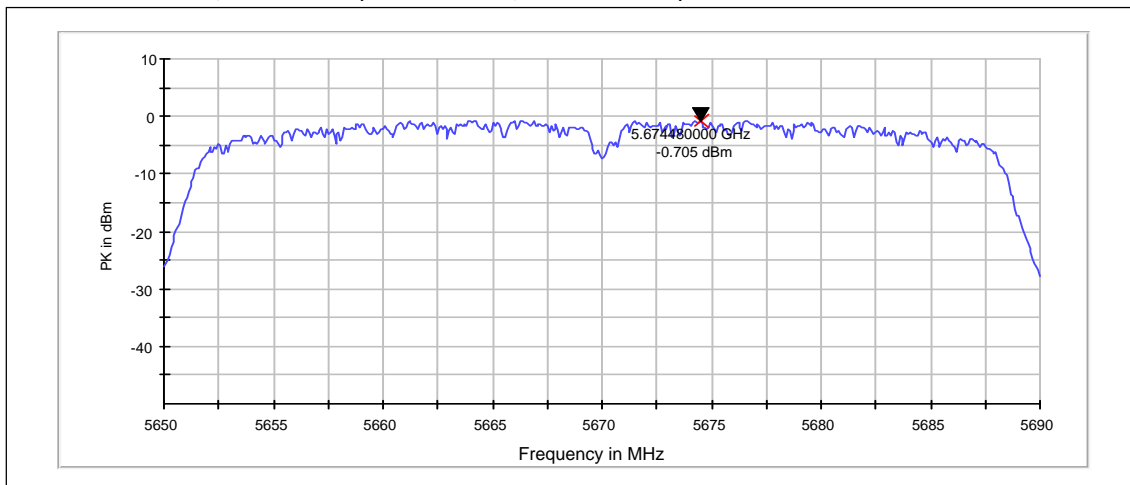
Channel 100+104 / 5510MHz (RBW: 1 MHz, VBW: 3 MHz)



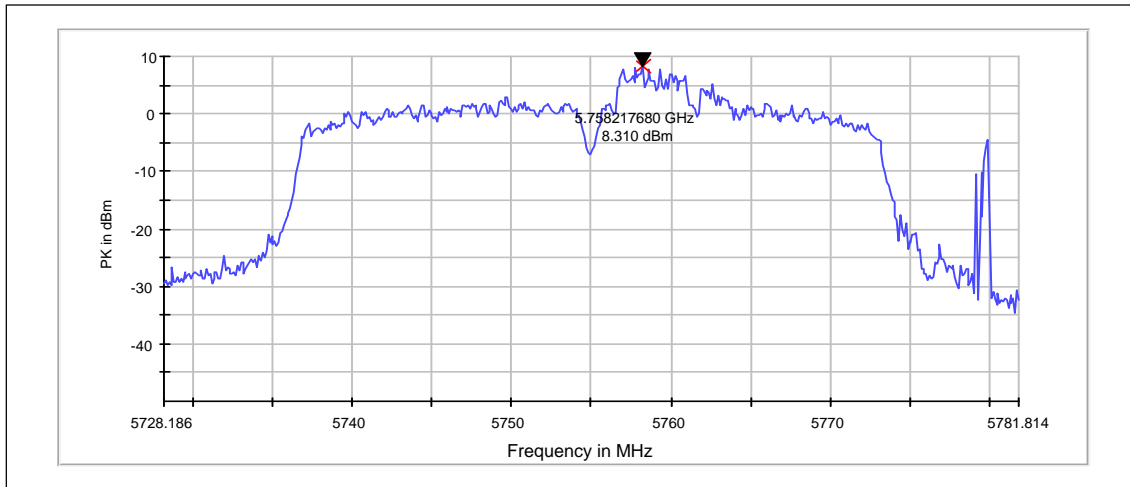
Channel 108+112 / 5550MHz (RBW: 1 MHz, VBW: 3 MHz)



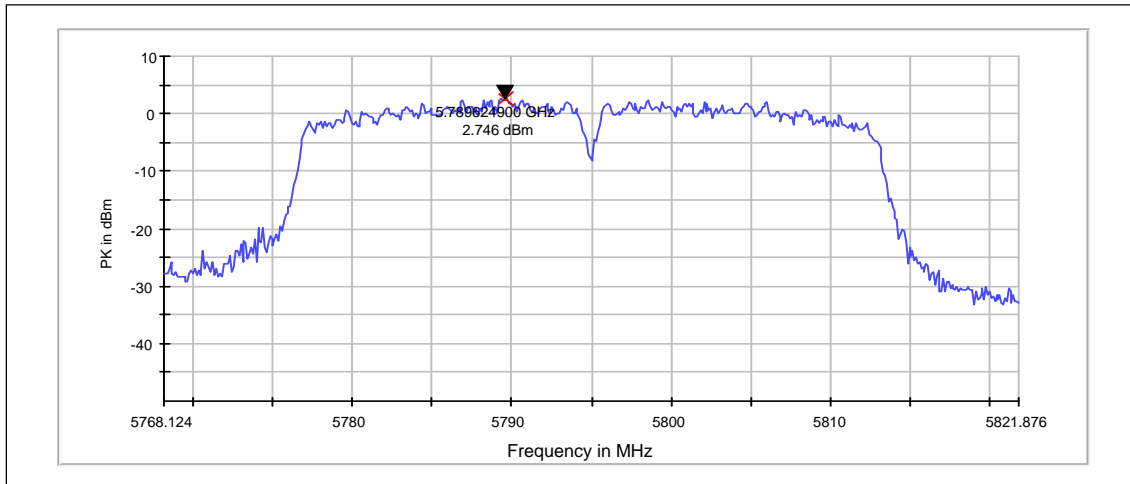
Channel 132+136 / 5670MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149+153 / 5755MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157+161 / 5795MHz (RBW: 500 kHz, VBW: 3 MHz)

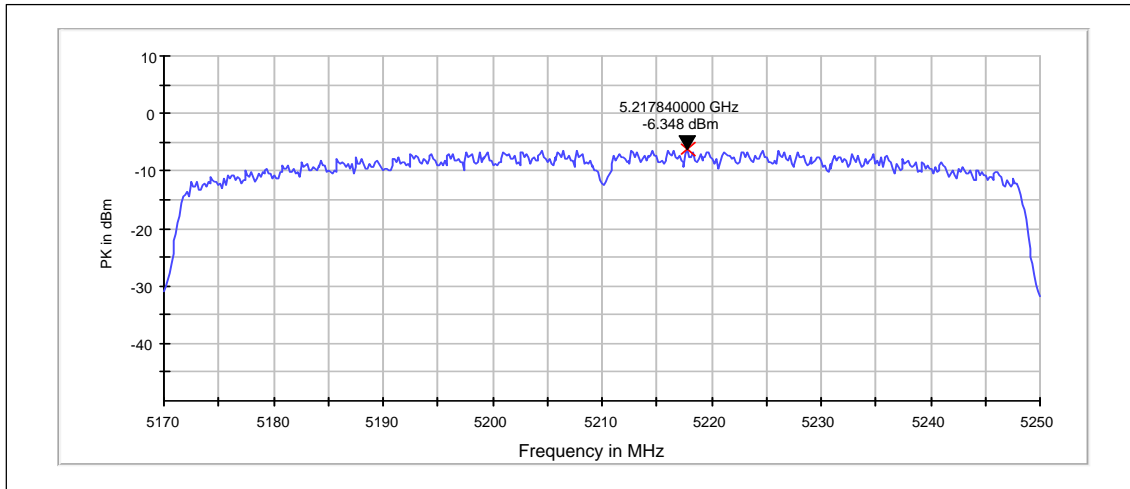


5.3.6 802.11ac mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

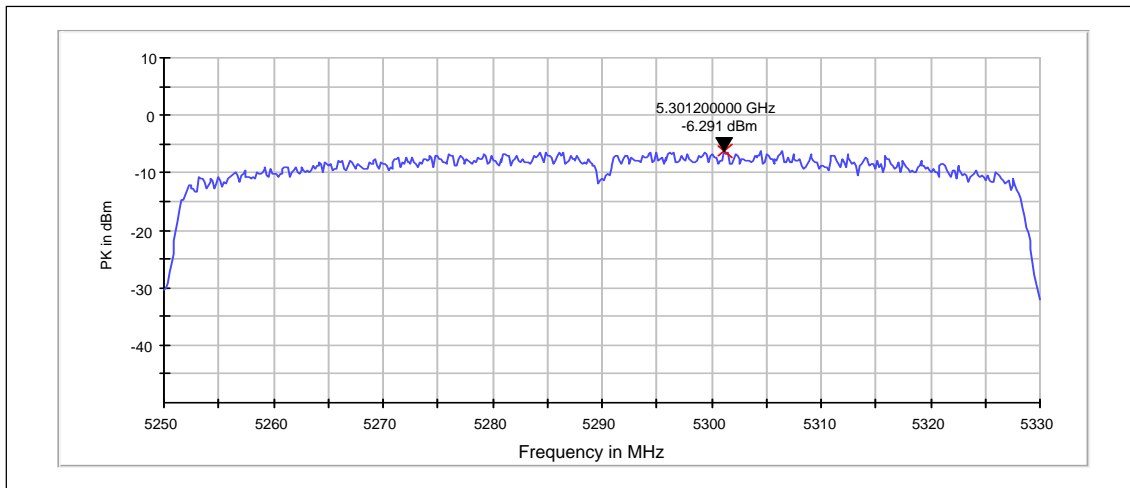
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36-48 / 5210 main	-6.35	PASSED
52-64 / 5290 main	-6.29	PASSED
100-112 / 5530 main	-5.46	PASSED
149-161 / 5775 main	-1.12	PASSED

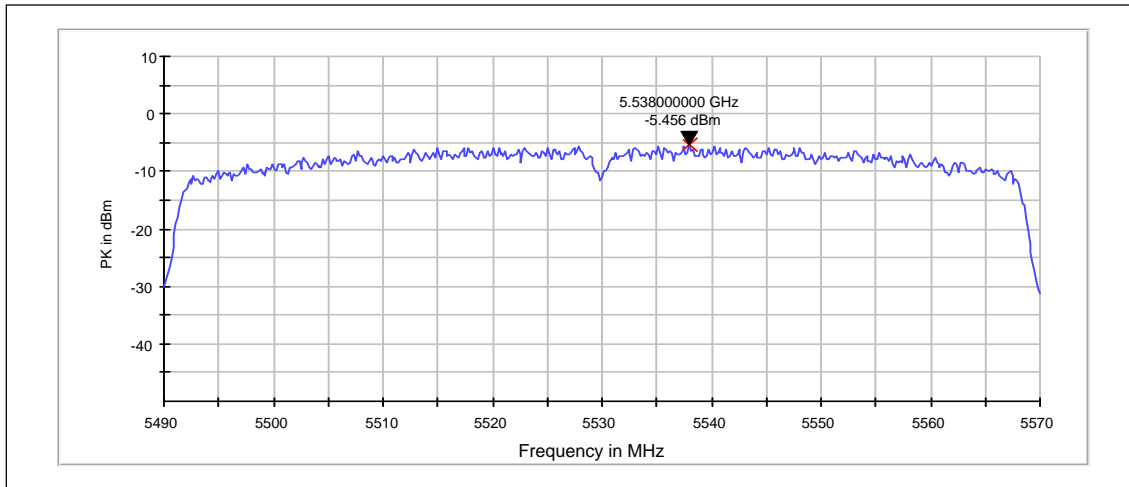
Channel 36-48 / 5210MHz (RBW: 1 MHz, VBW: 3 MHz)



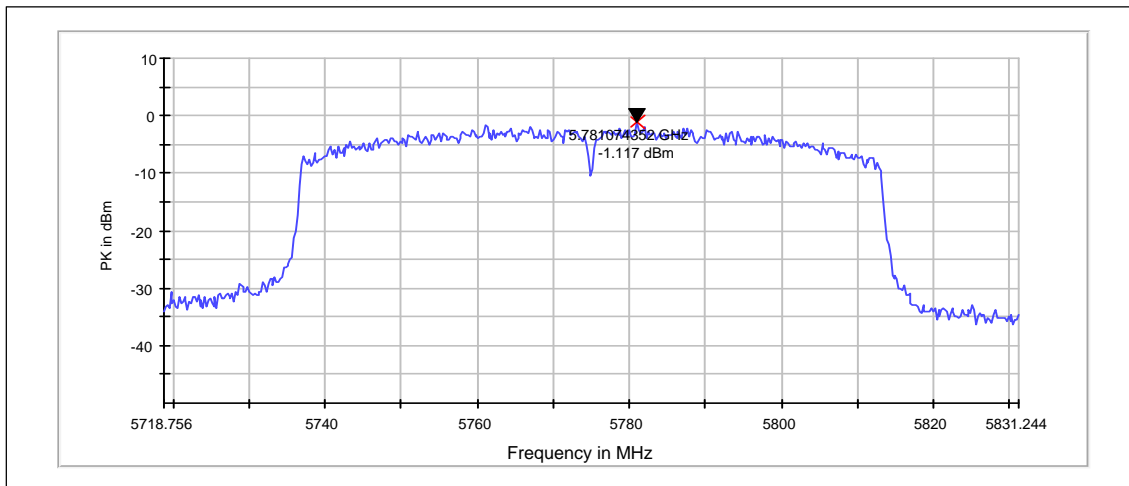
Channel 52-64 / 5290MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 100-112 / 5530MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149-161 / 5775MHz (RBW: 500 kHz, VBW: 3 MHz)



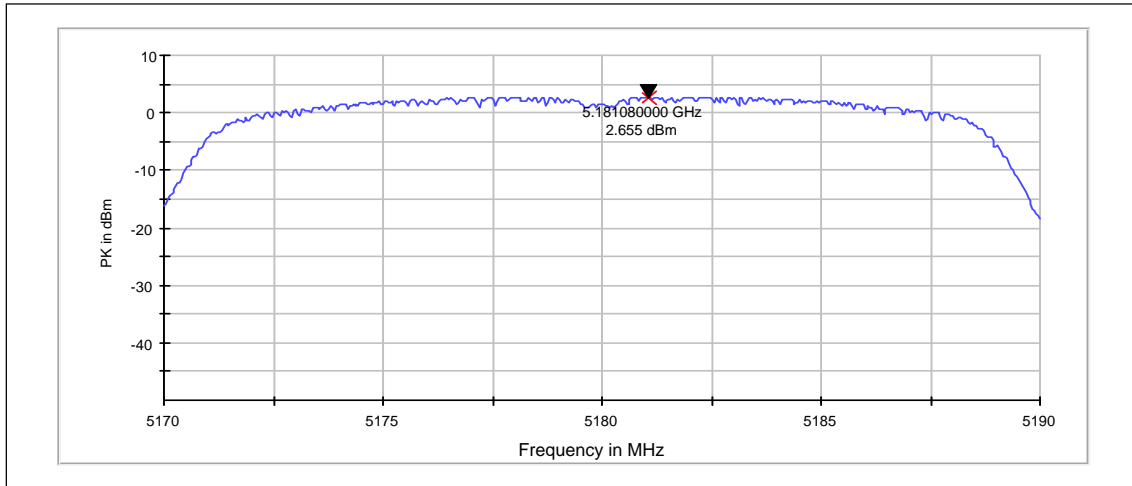
5.3.7 802.11n Aux mode, BPSK modulation, 6.5 / 7.25 Mbps data rate

RMS detector, Video averaging

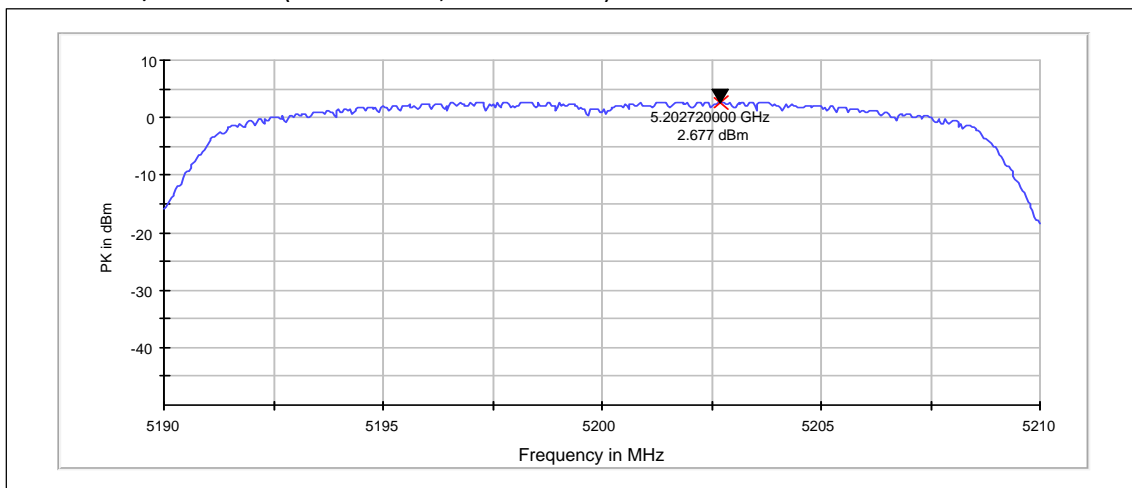
Channel / f _c [MHz]	P [dBm]	Result
36 / 5180	2.65	PASSED
40 / 5200	2.68	PASSED
48 / 5240	2.86	PASSED
52 / 5260	2.94	PASSED
60 / 5300	2.94	PASSED
64 / 5320	2.94	PASSED
100 / 5500	2.89	PASSED
116 / 5580	3.12	PASSED
140 / 5700	3.06	PASSED
149 / 5745	9.17	PASSED

157 / 5785	9.82	PASSED
165 / 5825	9.65	PASSED

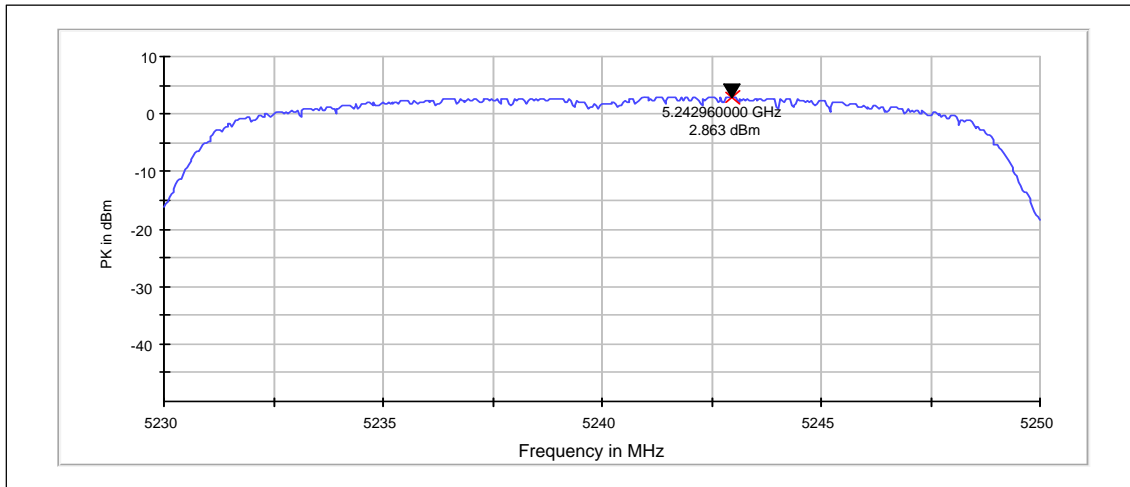
Channel 36 / 5180MHz (RBW: 1 MHz, VBW: 3 MHz)



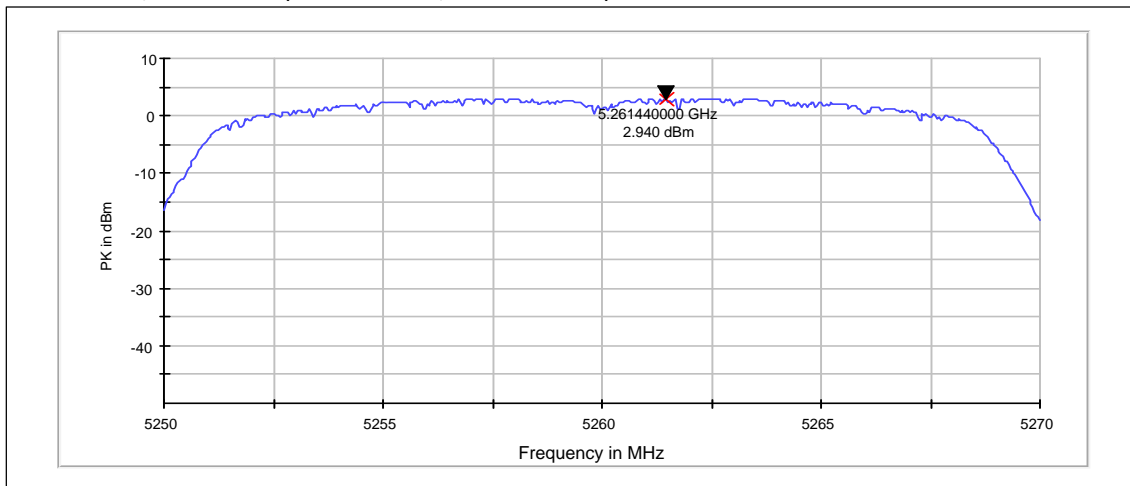
Channel 40 / 5200MHz (RBW: 1 MHz, VBW: 3 MHz)



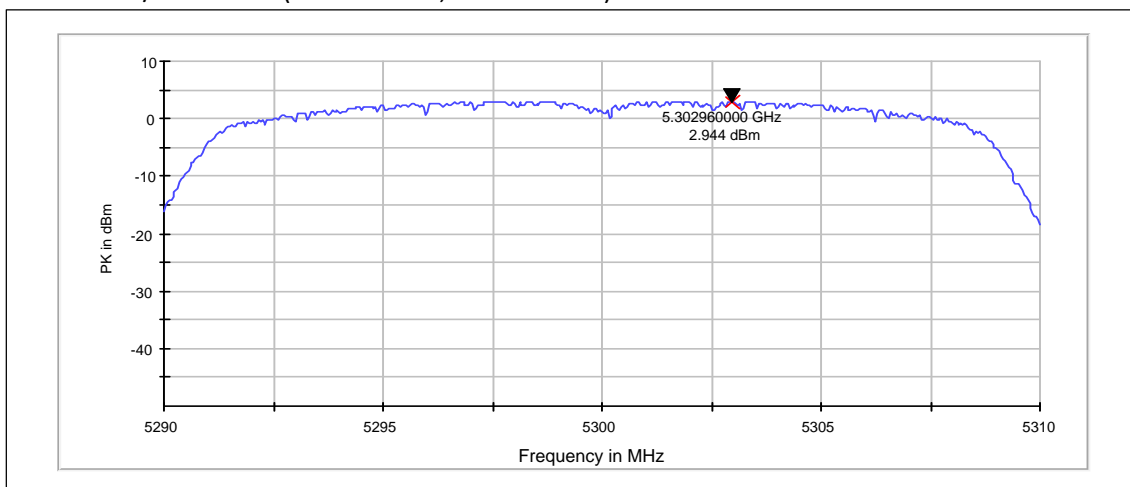
Channel 48 / 5240MHz (RBW: 1 MHz, VBW: 3 MHz)



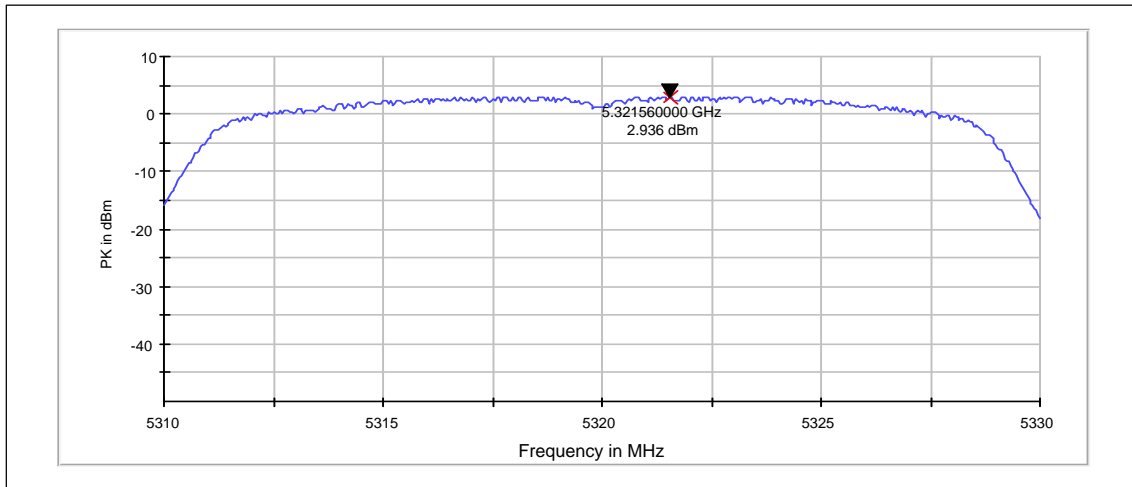
Channel 52 / 5260MHz (RBW: 1 MHz, VBW: 3 MHz)



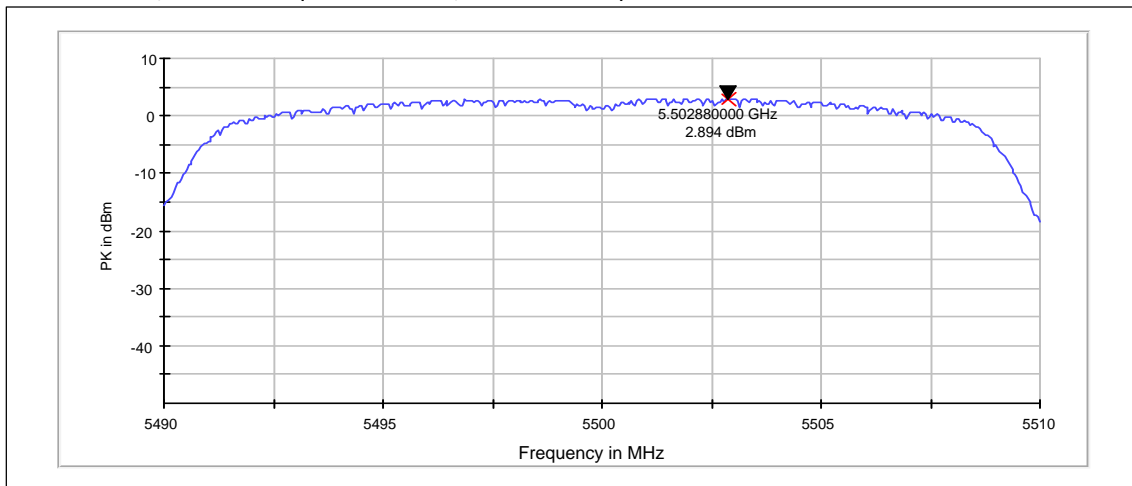
Channel 60 / 5300MHz (RBW: 1 MHz, VBW: 3 MHz)



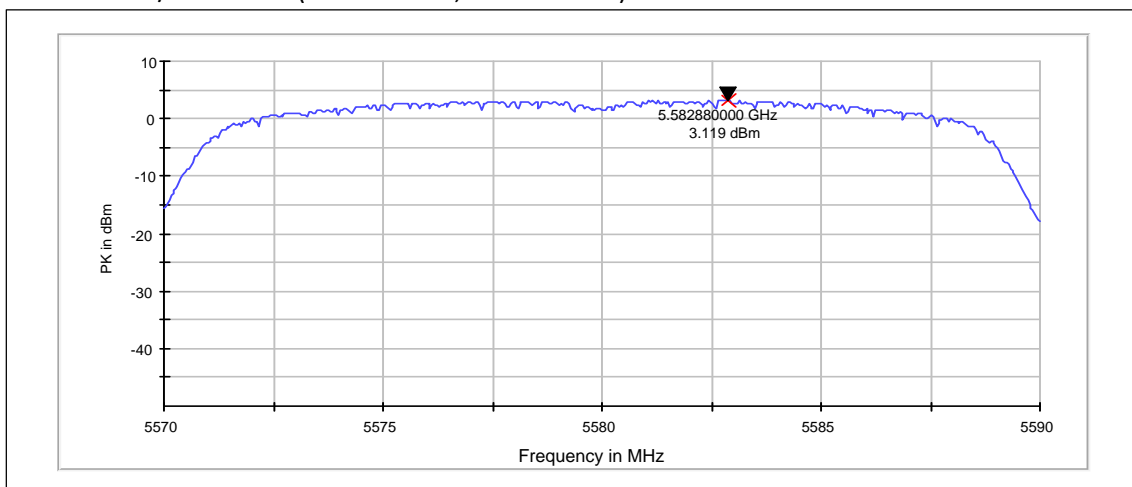
Channel 64 / 5320MHz (RBW: 1 MHz, VBW: 3 MHz)



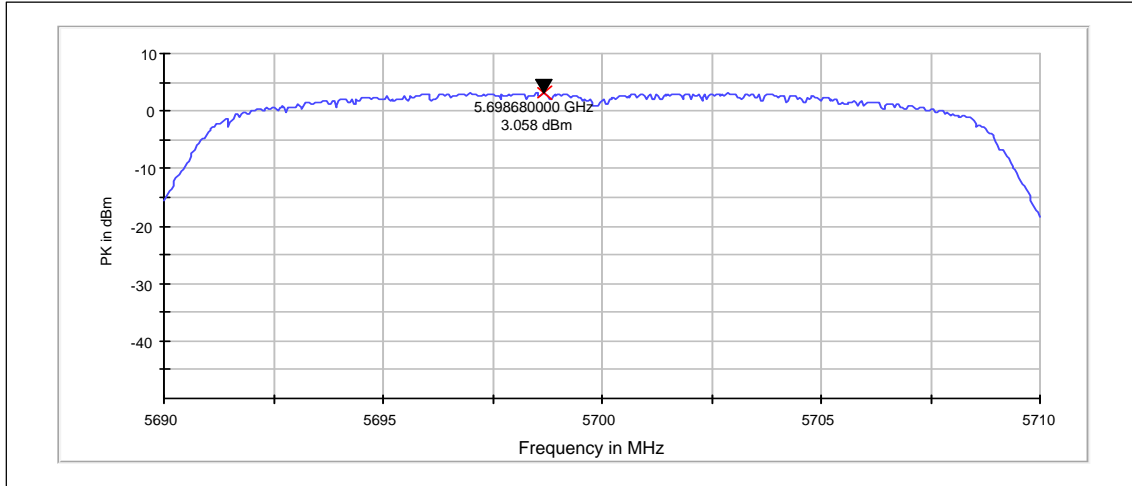
Channel 100 / 5500MHz (RBW: 1 MHz, VBW: 3 MHz)



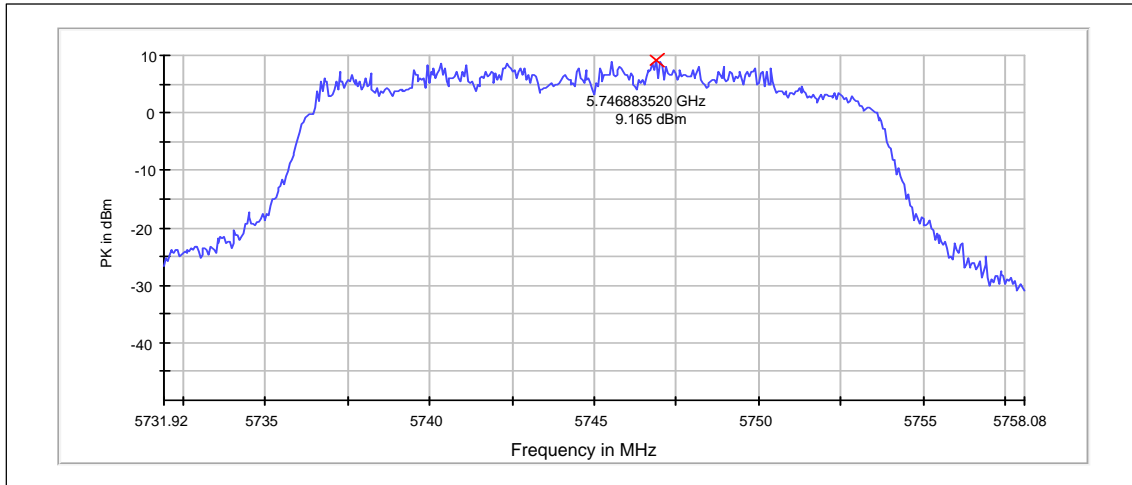
Channel 116 / 5580MHz (RBW: 1 MHz, VBW: 3 MHz)



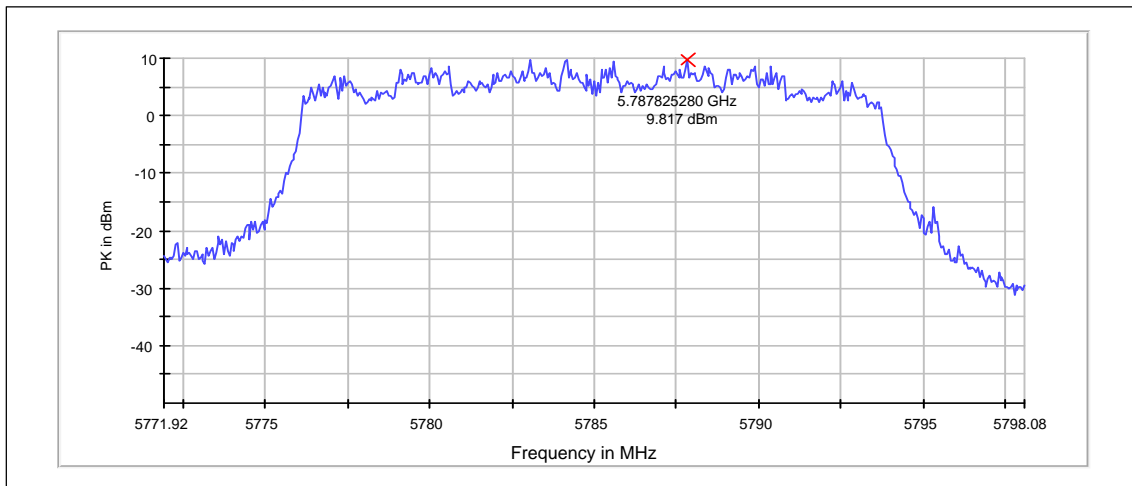
Channel 140 / 5700MHz (RBW: 1 MHz, VBW: 3 MHz)



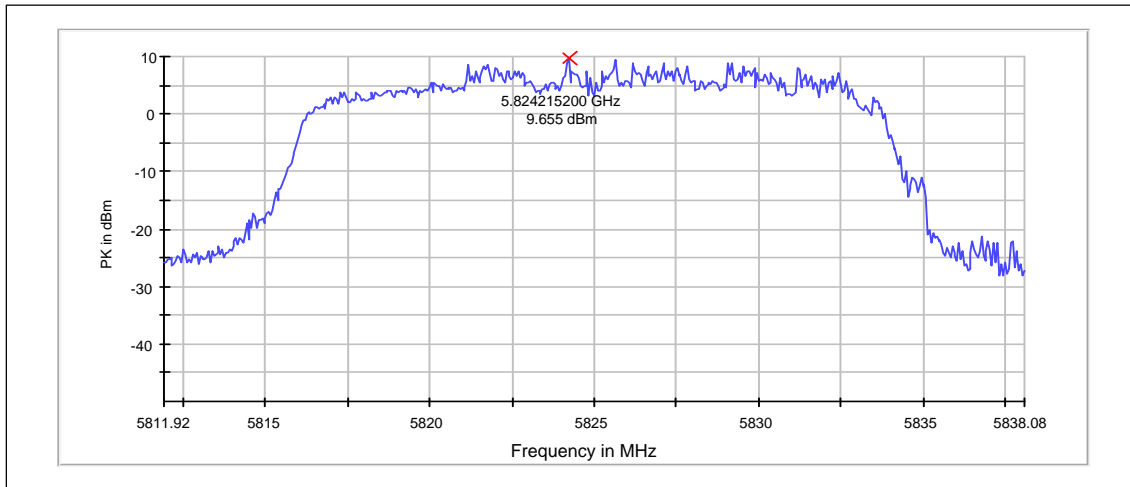
Channel 149 / 5745MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157 / 5785MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 165 / 5825MHz (RBW: 500 kHz, VBW: 3 MHz)

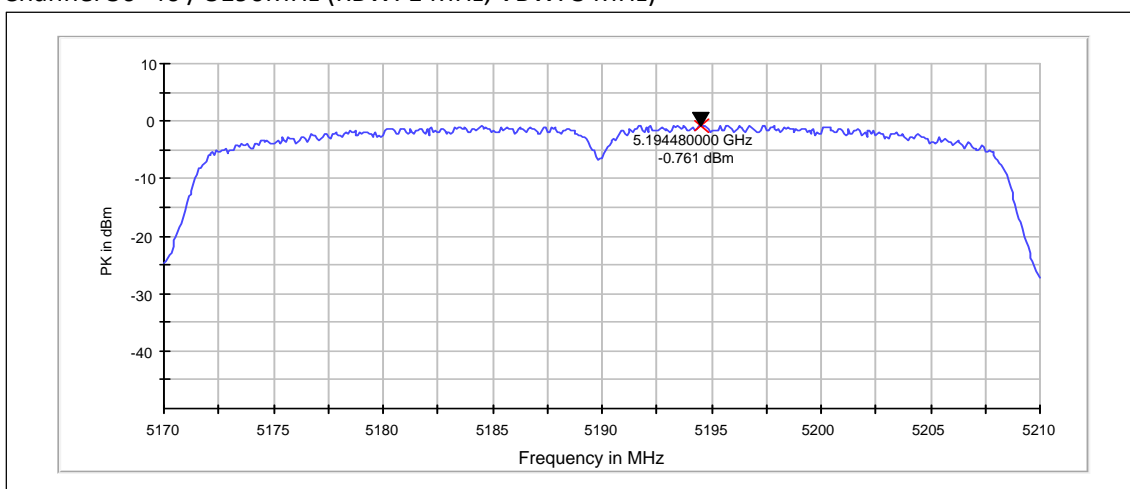


5.3.8 802.11n Aux mode, BPSK modulation, 13.5 / 15.0 Mbps data rate

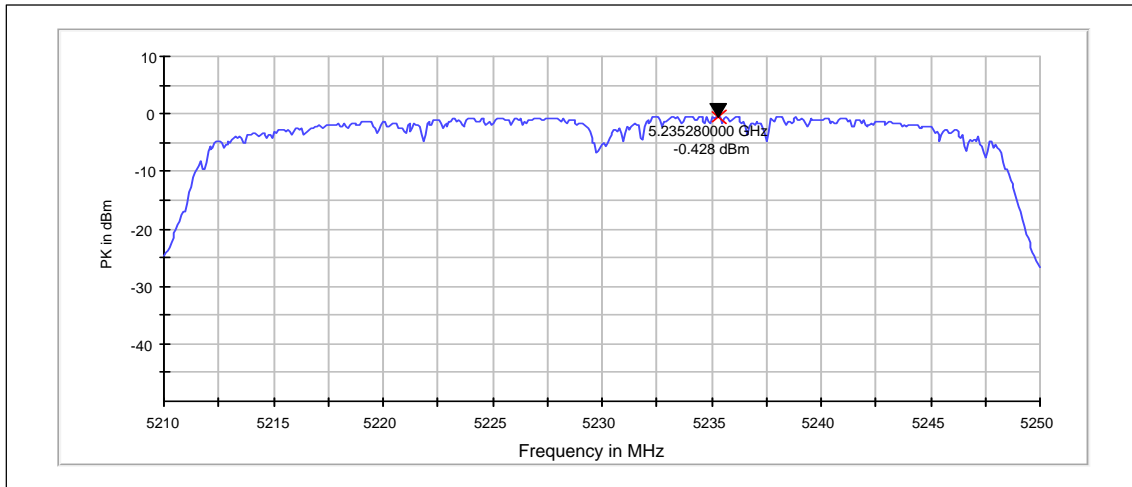
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36+40 / 5190	-0.76	PASSED
44+48 / 5230	-0.43	PASSED
52+56 / 5270	-0.53	PASSED
60+64 / 5310	-0.47	PASSED
100+104 / 5510	-0.29	PASSED
108+112 / 5550	-0.46	PASSED
132+136 / 5670	-0.3	PASSED
149+153 / 5755	2.97	PASSED
157+161 / 5795	8.27	PASSED

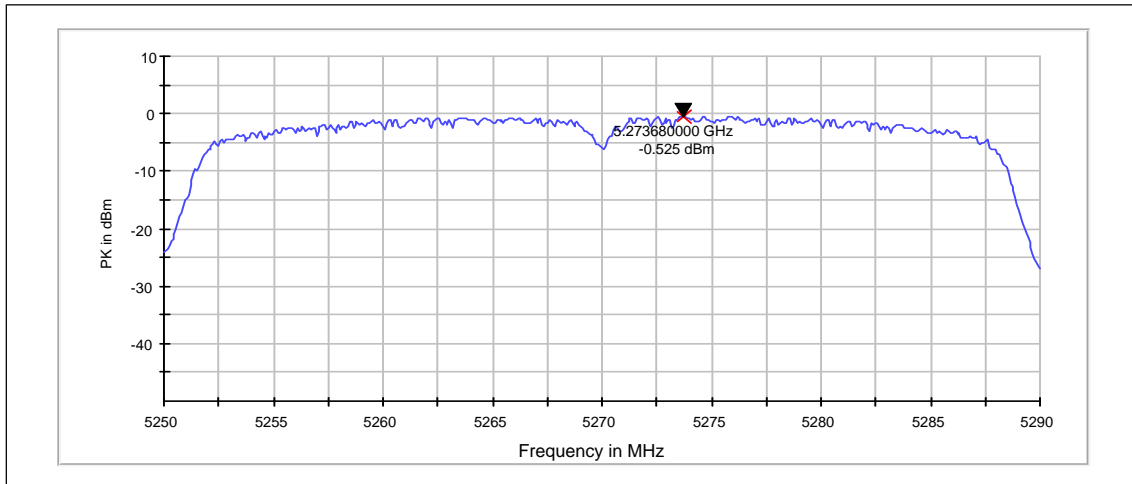
Channel 36+40 / 5190MHz (RBW: 1 MHz, VBW: 3 MHz)



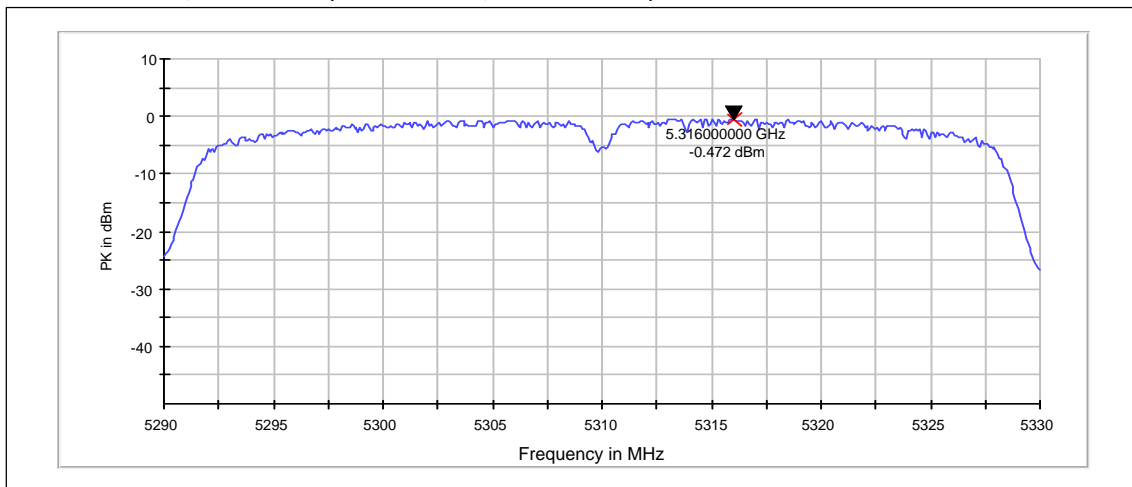
Channel 44+48 / 5230MHz (RBW: 1 MHz, VBW: 3 MHz)



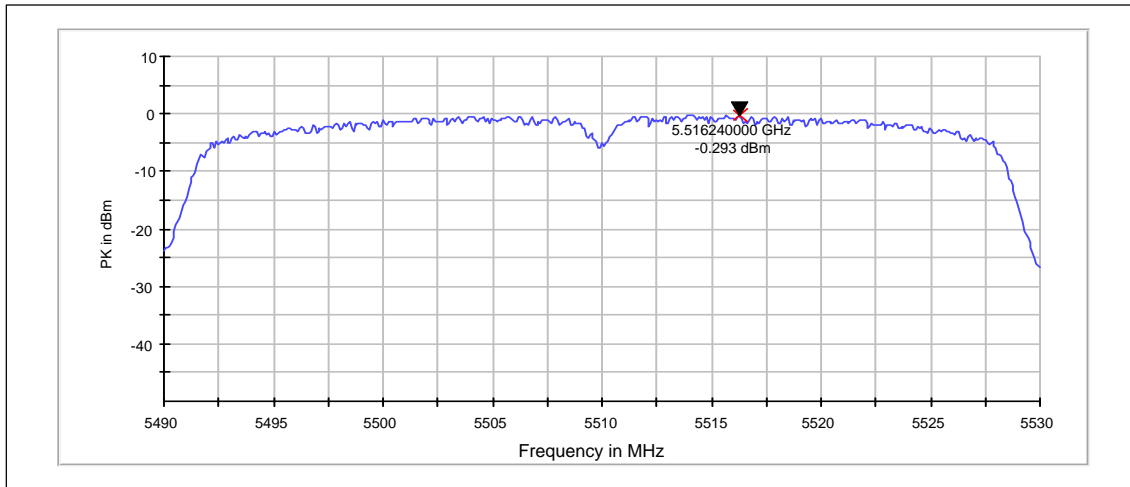
Channel 52+56 / 5270MHz (RBW: 1 MHz, VBW: 3 MHz)



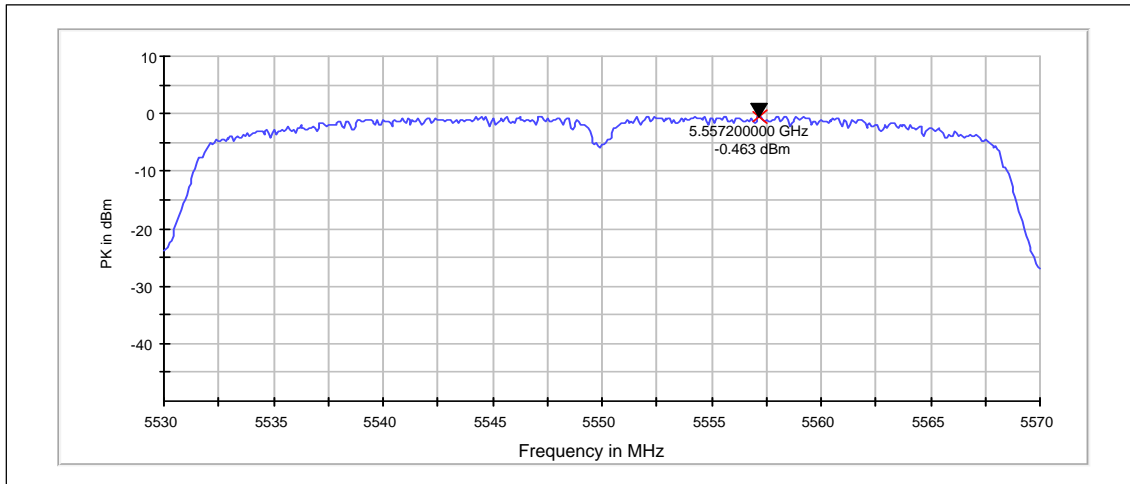
Channel 60+64 / 5310MHz (RBW: 1 MHz, VBW: 3 MHz)



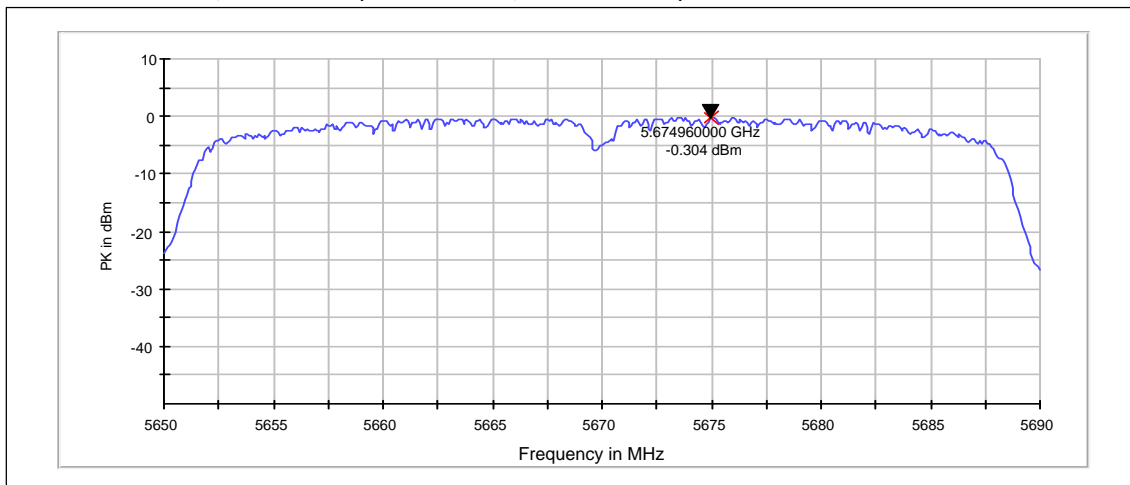
Channel 100+104 / 5510MHz (RBW: 1 MHz, VBW: 3 MHz)



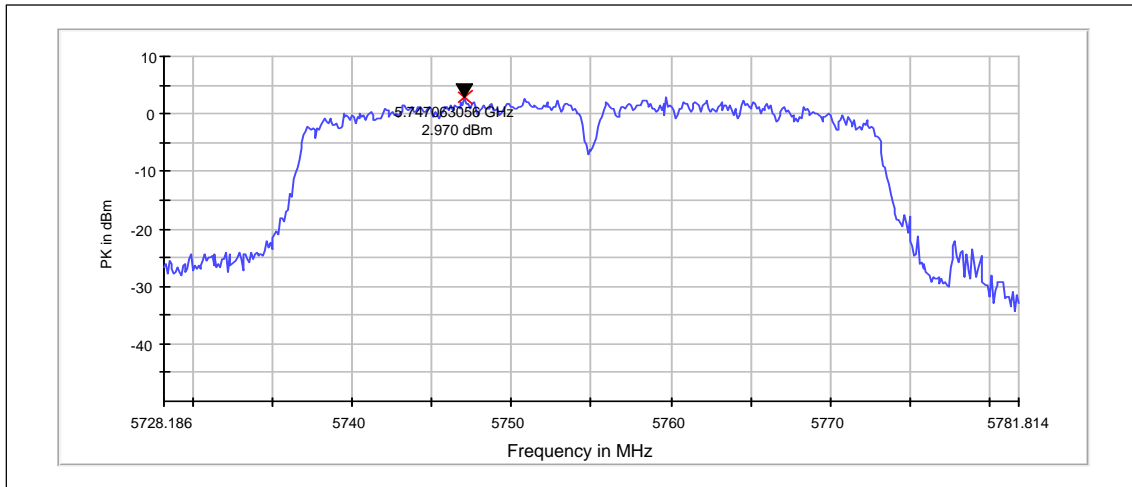
Channel 108+112 / 5550MHz (RBW: 1 MHz, VBW: 3 MHz)



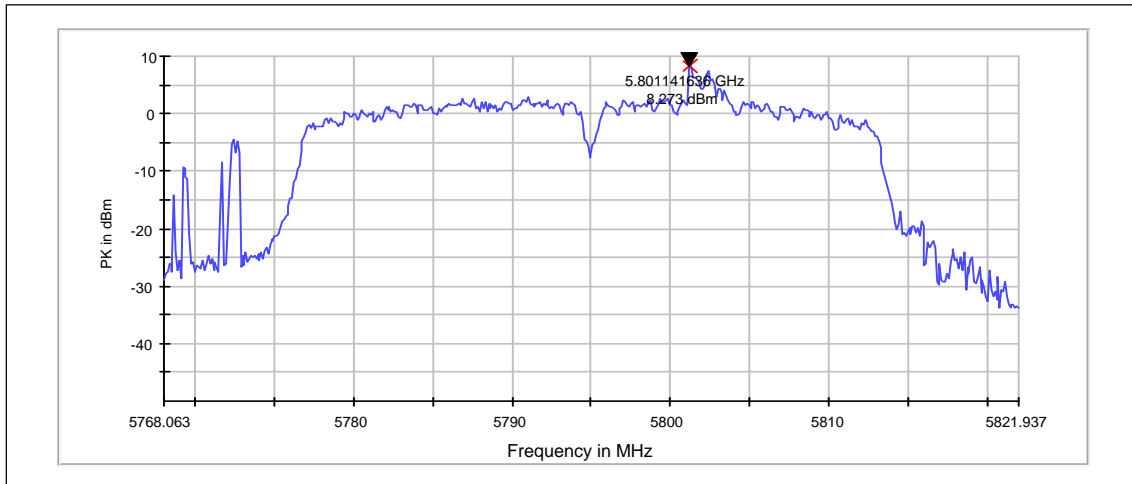
Channel 132+136 / 5670MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149+153 / 5755MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157+161 / 5795MHz (RBW: 500 kHz, VBW: 3 MHz)

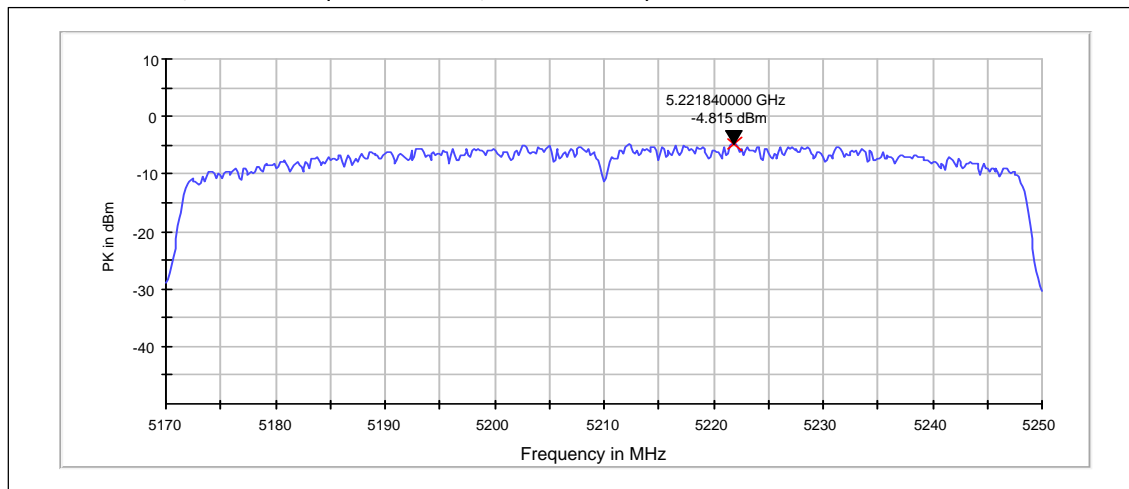


5.3.9 802.11ac Aux mode, BPSK modulation, 29.3 / 32.5 Mbps data rate

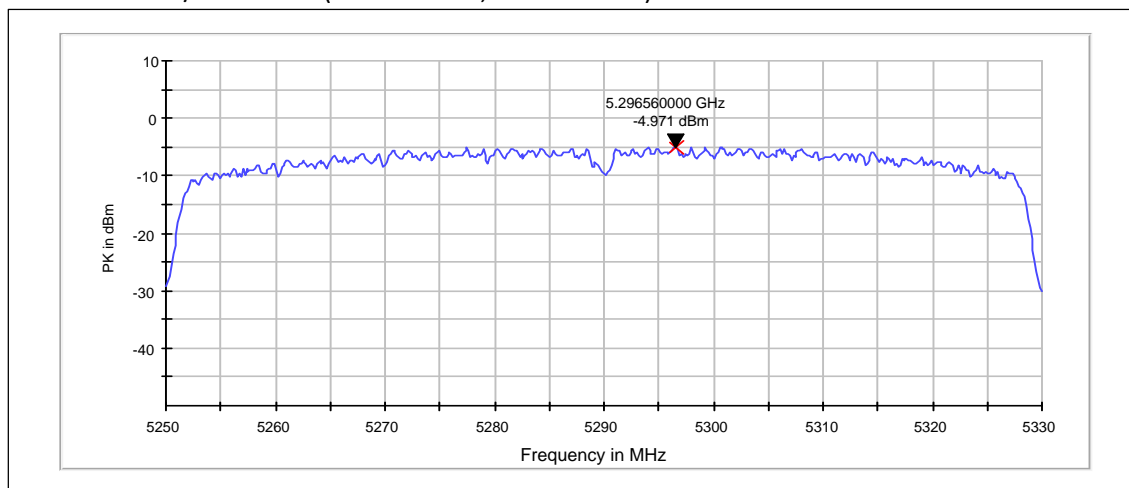
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36-48 / 5210	-4.82	PASSED
52-64 / 5290	-4.97	PASSED
100-112 / 5530	-4.61	PASSED
149-161 / 5775	-1.14	PASSED

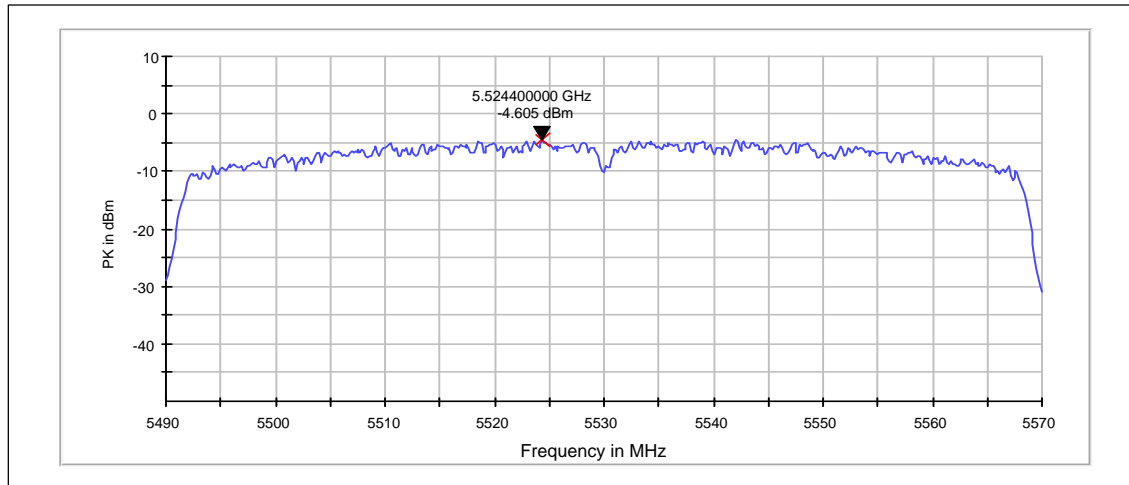
Channel 36-48 / 5210MHz (RBW: 1 MHz, VBW: 3 MHz)



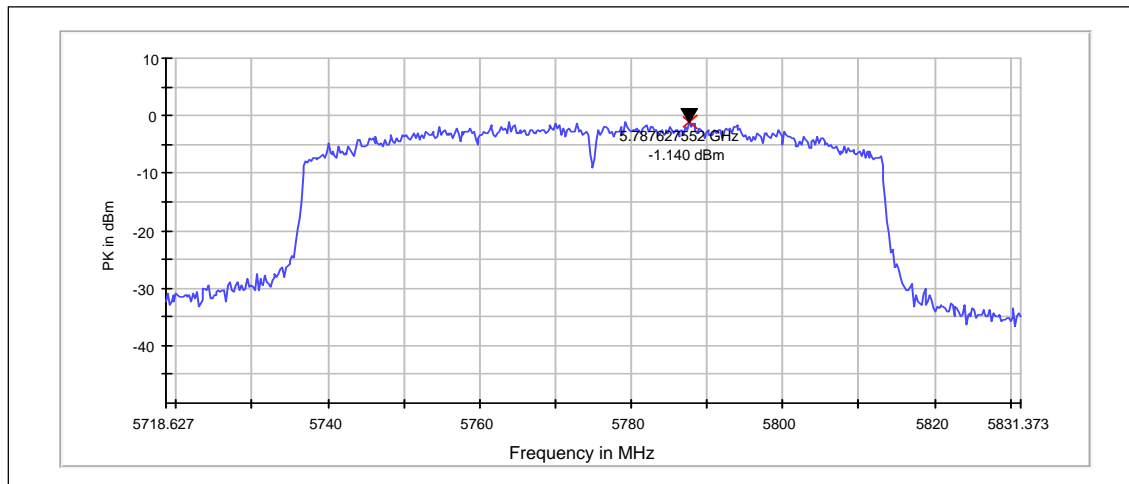
Channel 52-64 / 5290MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 100-112 / 5530MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149-161 / 5775MHz (RBW: 500 kHz, VBW: 3 MHz)



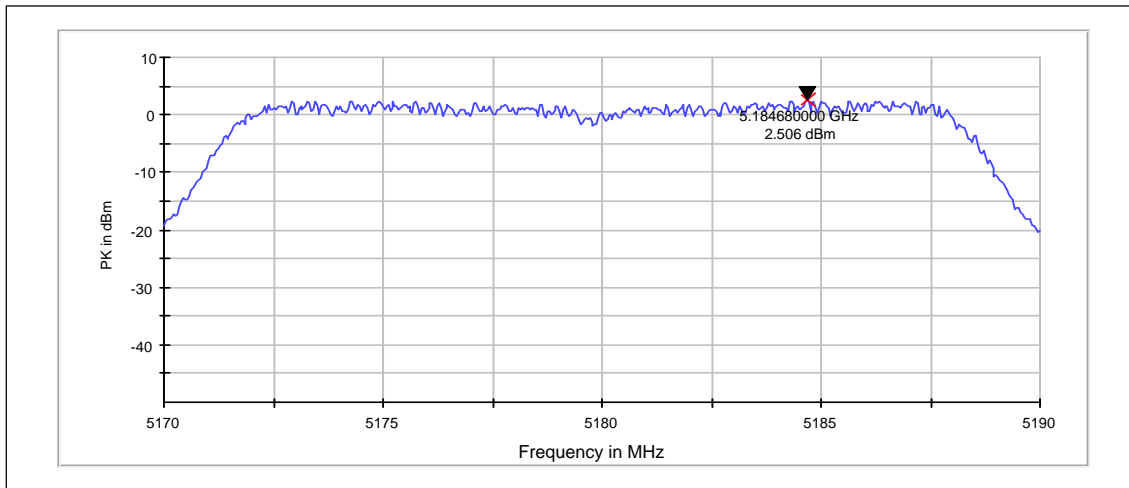
5.3.10 802.11a Aux mode, 16QAM modulation, 24 Mbps data rate

RMS detector, Video averaging

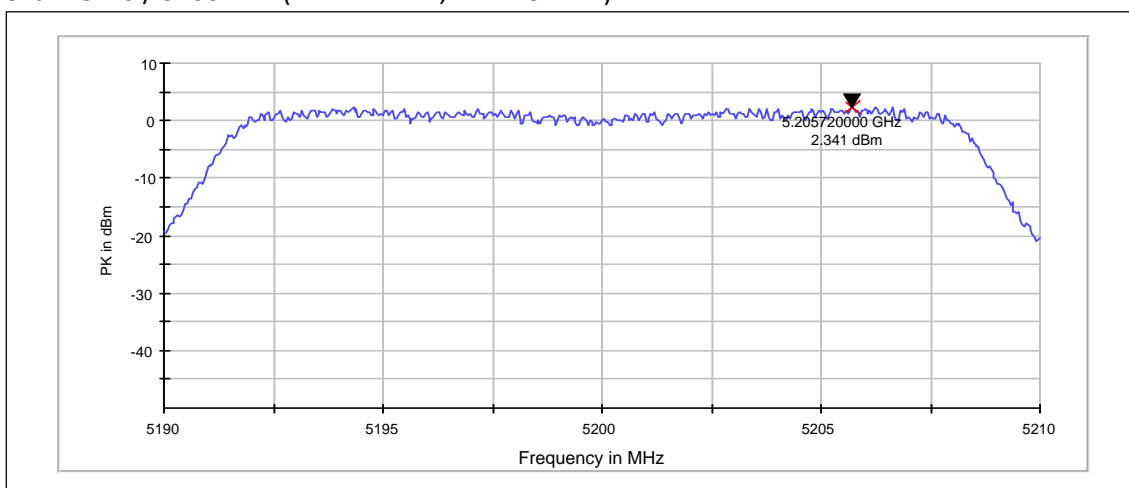
Channel / f _c [MHz]	P [dBm]	Result
36 / 5180	2.51	PASSED
40 / 5200	2.34	PASSED
48 / 5240	2.69	PASSED
52 / 5260	2.74	PASSED
60 / 5300	2.51	PASSED
64 / 5320	2.62	PASSED
100 / 5500	2.76	PASSED
116 / 5580	3.02	PASSED
140 / 5700	2.86	PASSED
149 / 5745	10.02	PASSED

157 / 5785	6.84	PASSED
165 / 5825	10.17	PASSED

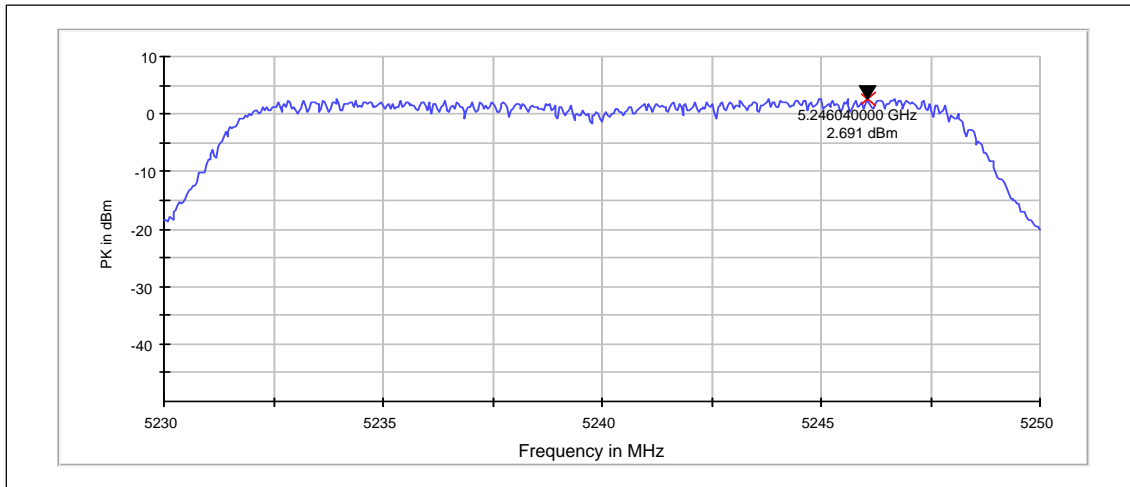
Channel 36 / 5180MHz (RBW: 1 MHz, VBW: 3 MHz)



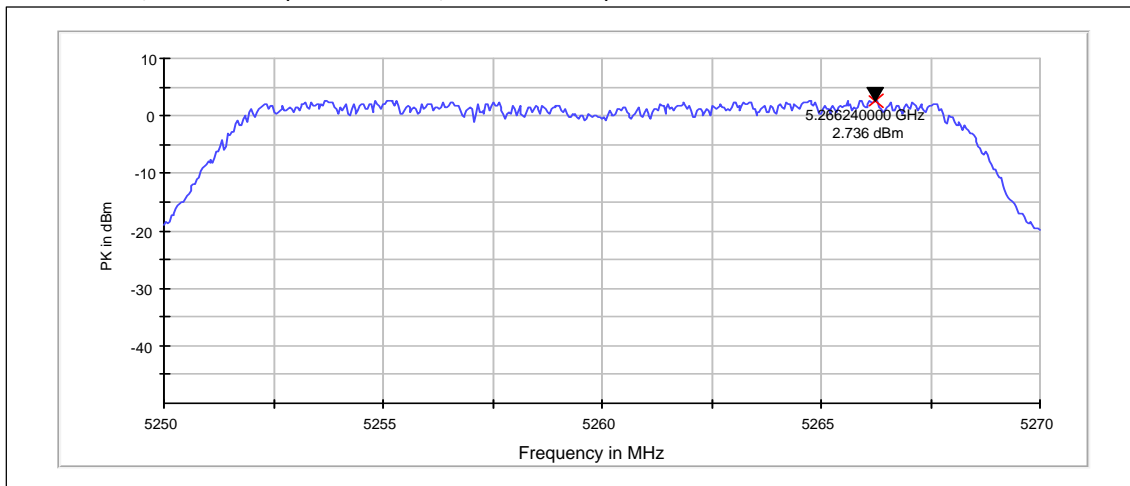
Channel 40 / 5200MHz (RBW: 1 MHz, VBW: 3 MHz)



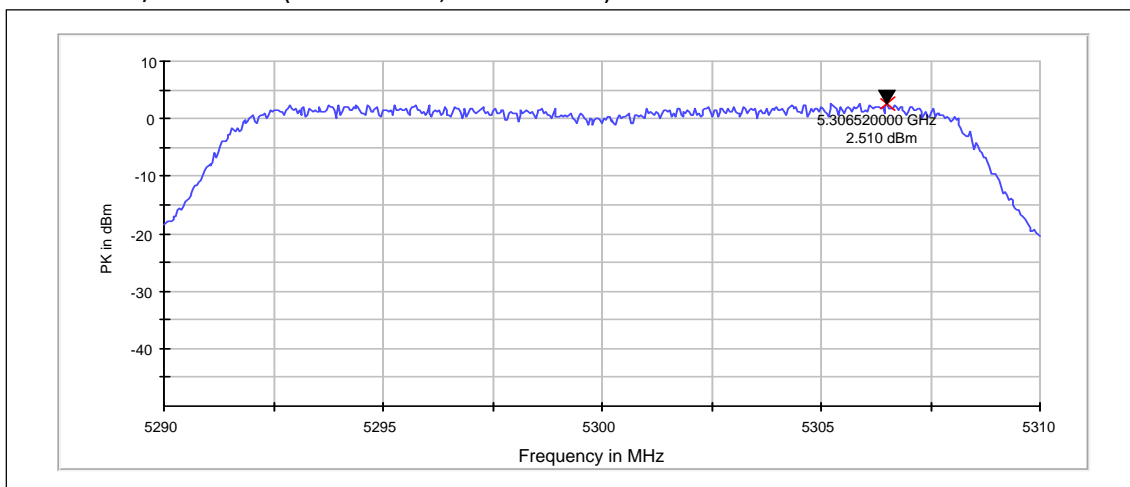
Channel 48 / 5240MHz (RBW: 1 MHz, VBW: 3 MHz)



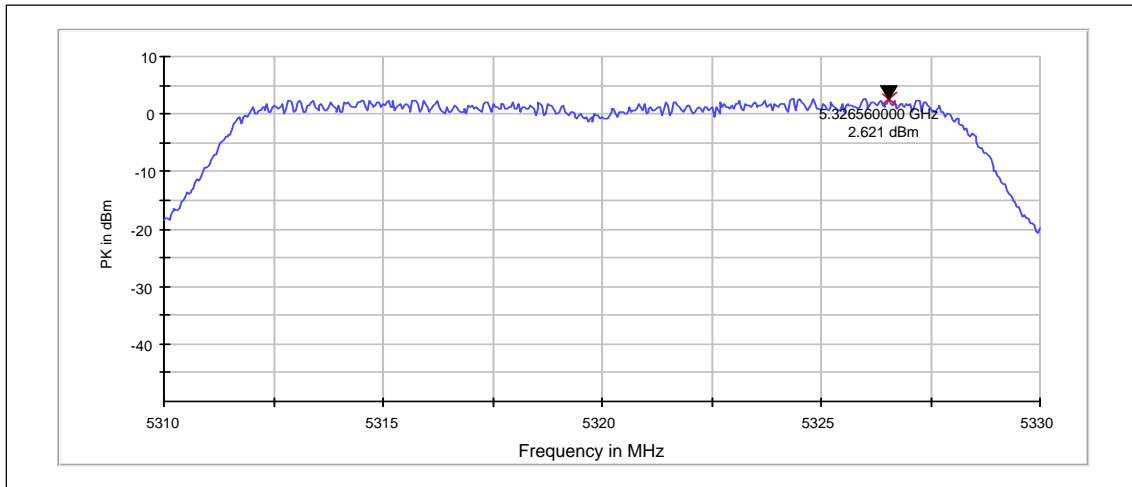
Channel 52 / 5260MHz (RBW: 1 MHz, VBW: 3 MHz)



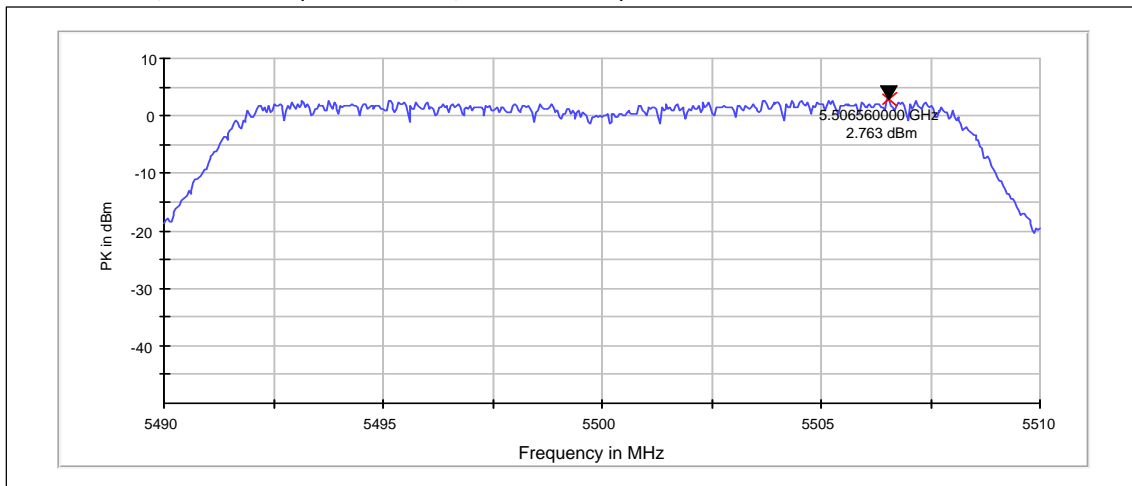
Channel 60 / 5300MHz (RBW: 1 MHz, VBW: 3 MHz)



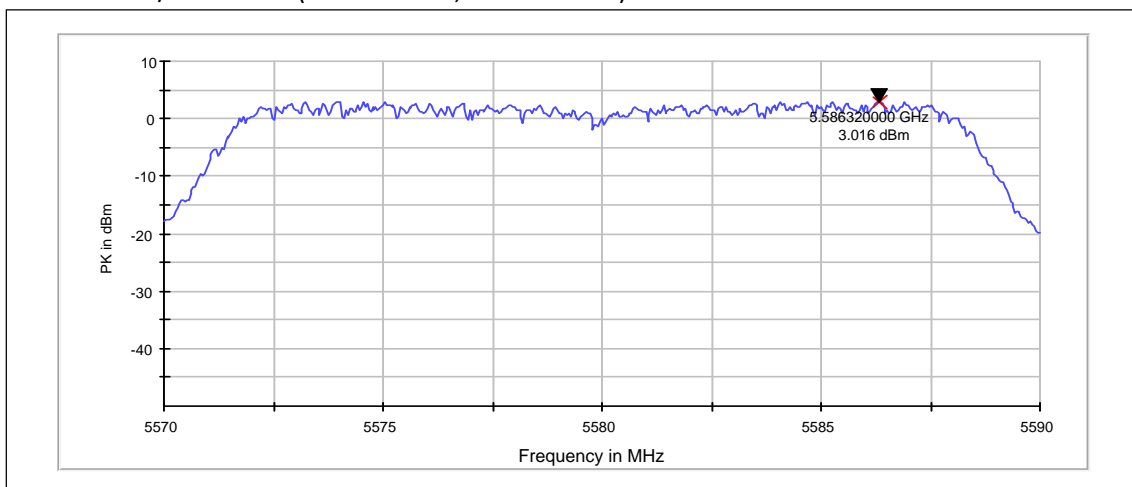
Channel 64 / 5320MHz (RBW: 1 MHz, VBW: 3 MHz)



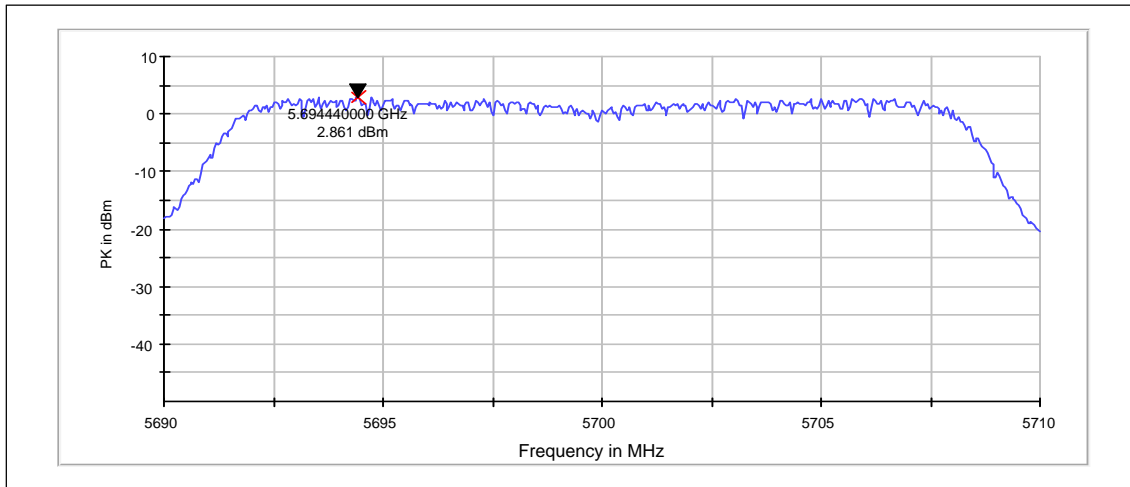
Channel 100 / 5500MHz (RBW: 1 MHz, VBW: 3 MHz)



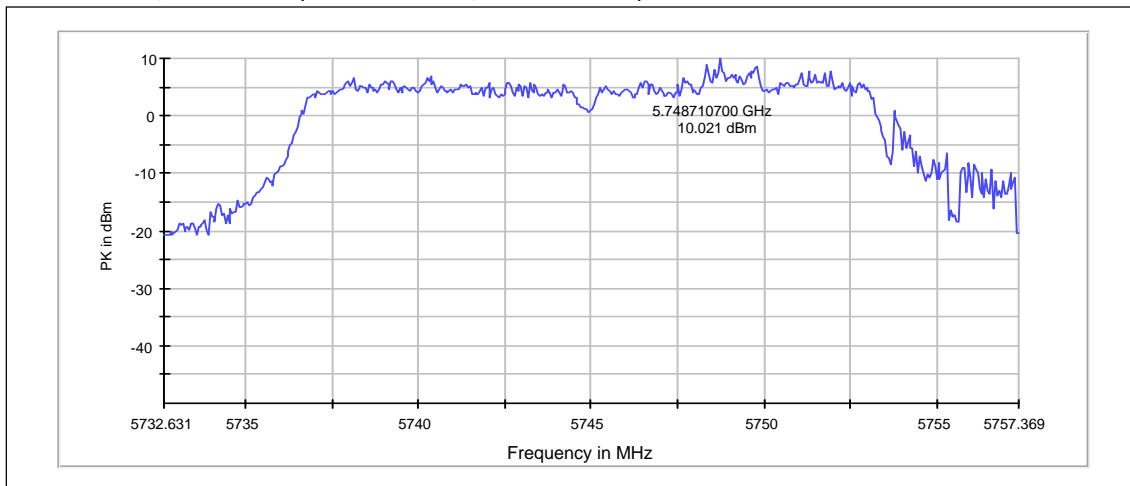
Channel 116 / 5580MHz (RBW: 1 MHz, VBW: 3 MHz)



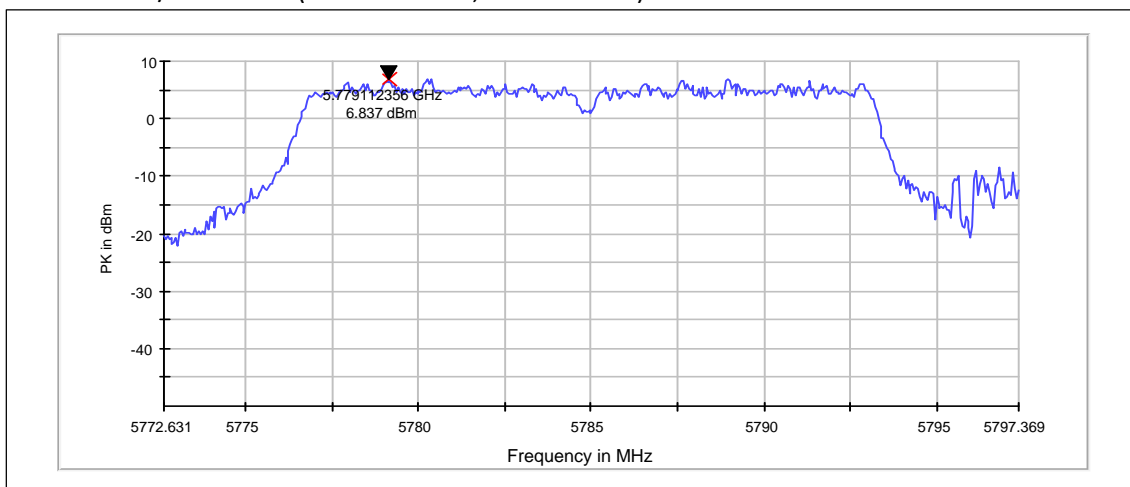
Channel 140 / 5700MHz (RBW: 1 MHz, VBW: 3 MHz)



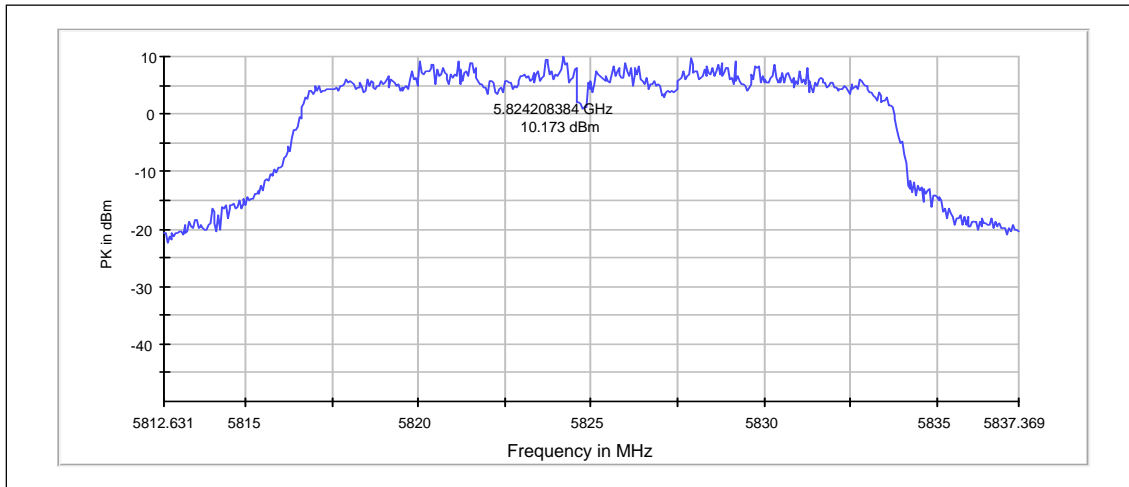
Channel 149 / 5745MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157 / 5785MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 165 / 5825MHz (RBW: 500 kHz, VBW: 3 MHz)

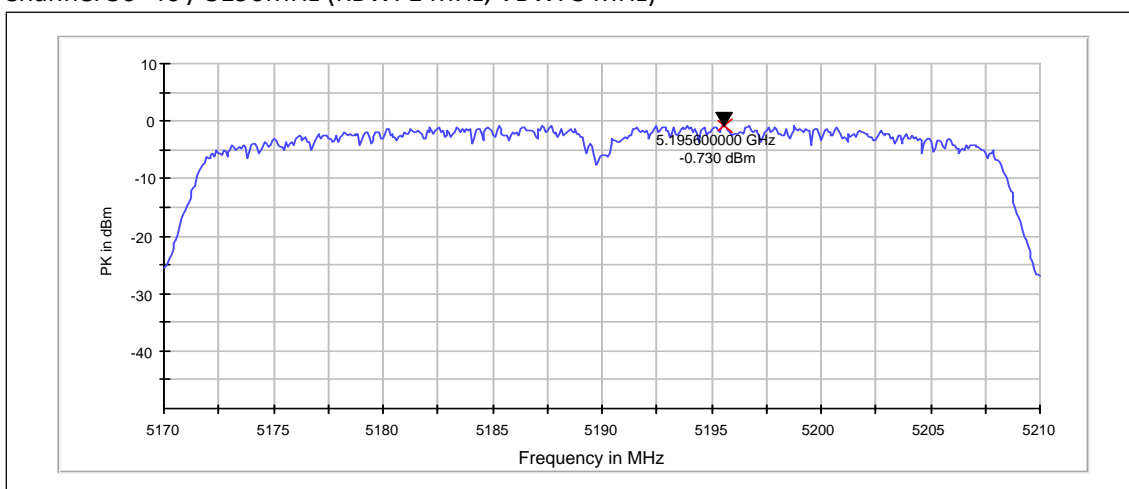


5.3.11 802.11n Aux mode, QPSK modulation, 27.0 / 30.0 Mbps data rate

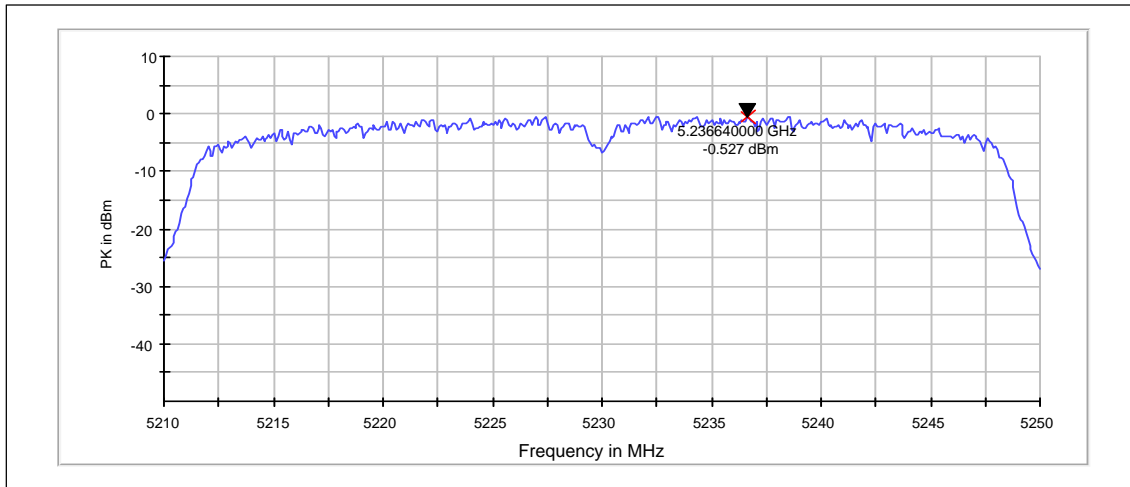
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36+40 / 5190	-0.73	PASSED
44+48 / 5230	-0.53	PASSED
52+56 / 5270	-0.61	PASSED
60+64 / 5310	-0.6	PASSED
100+104 / 5510	-0.35	PASSED
108+112 / 5550	-0.4	PASSED
132+136 / 5670	-0.4	PASSED
149+153 / 5755	8.7	PASSED
157+161 / 5795	3.25	PASSED

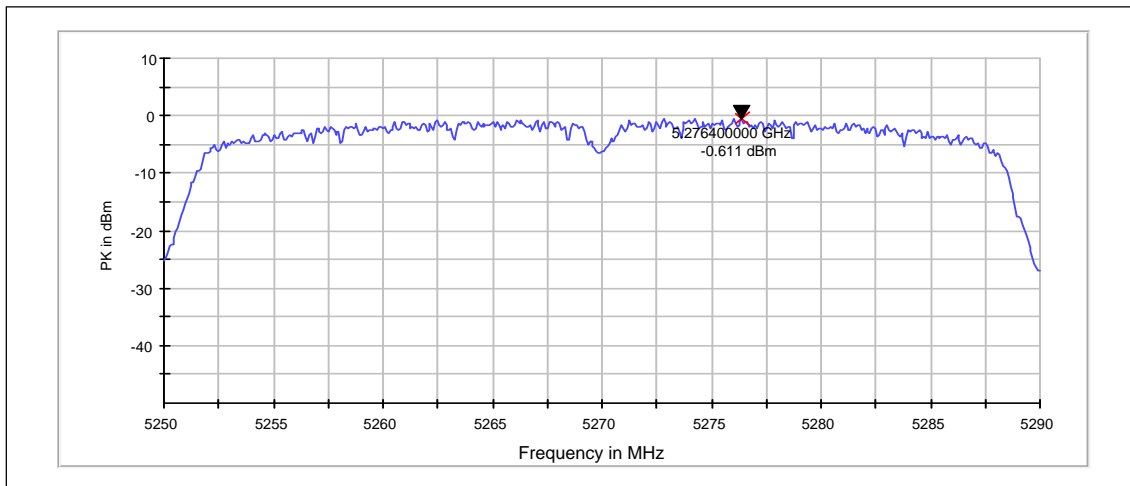
Channel 36+40 / 5190MHz (RBW: 1 MHz, VBW: 3 MHz)



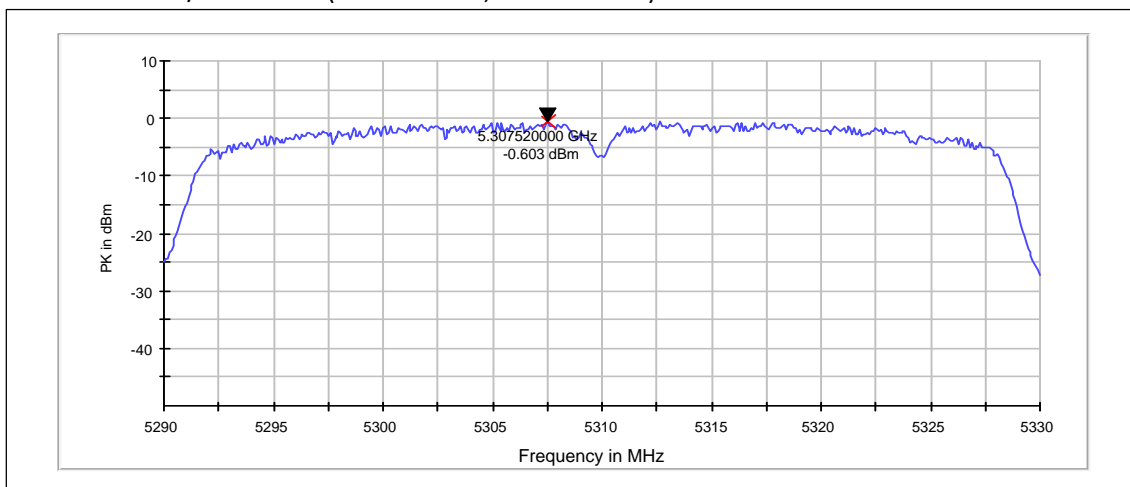
Channel 44+48 / 5230MHz (RBW: 1 MHz, VBW: 3 MHz)



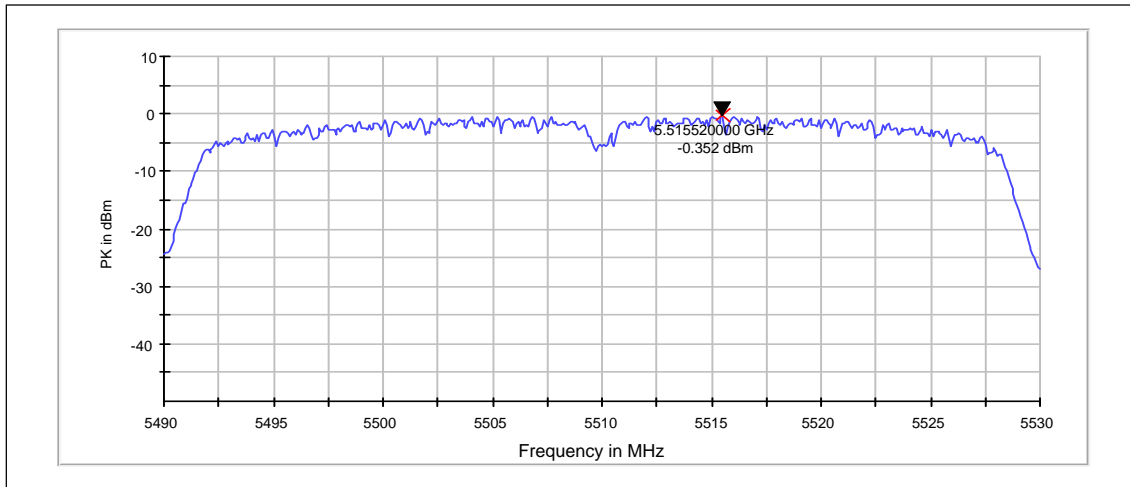
Channel 52+56 / 5270MHz (RBW: 1 MHz, VBW: 3 MHz)



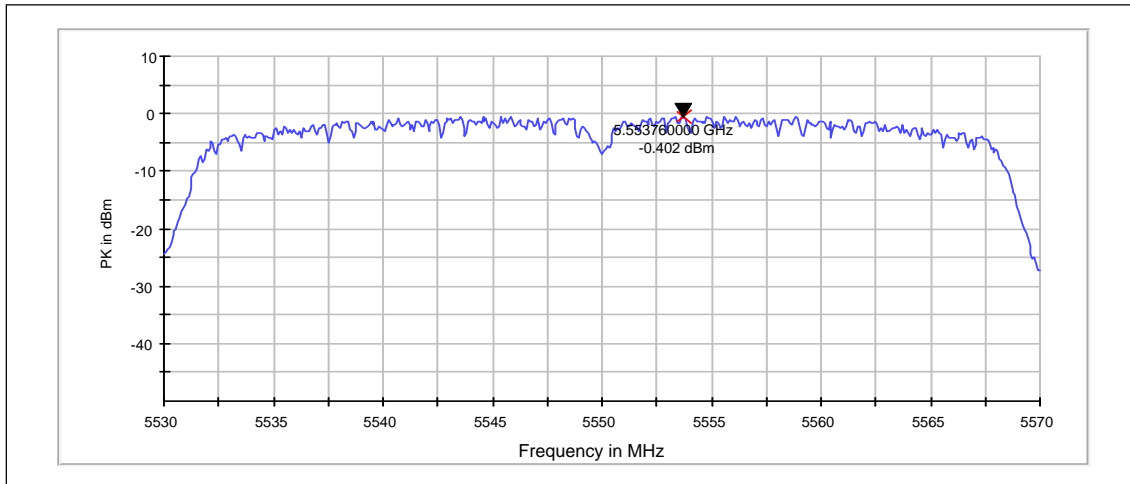
Channel 60+64 / 5310MHz (RBW: 1 MHz, VBW: 3 MHz)



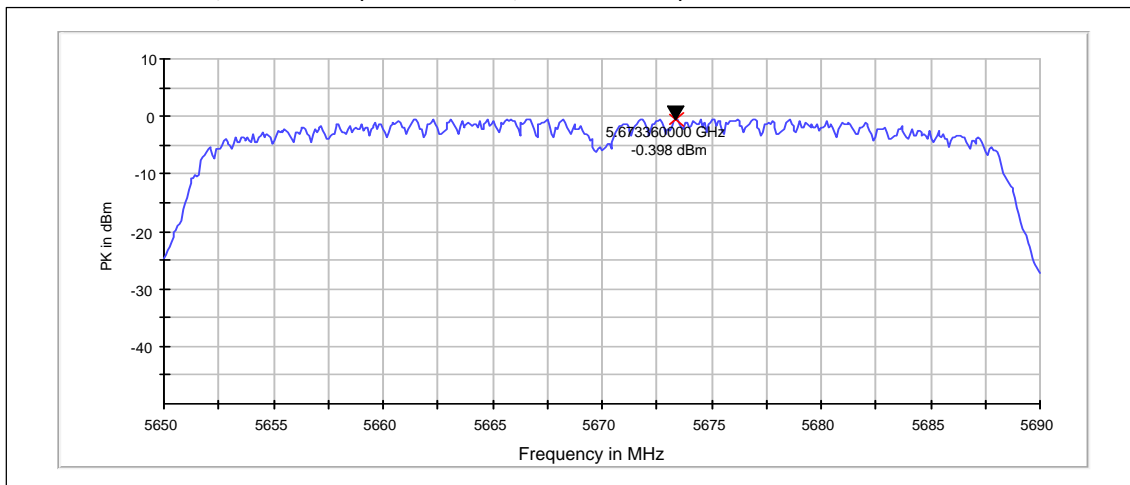
Channel 100+104 / 5510MHz (RBW: 1 MHz, VBW: 3 MHz)



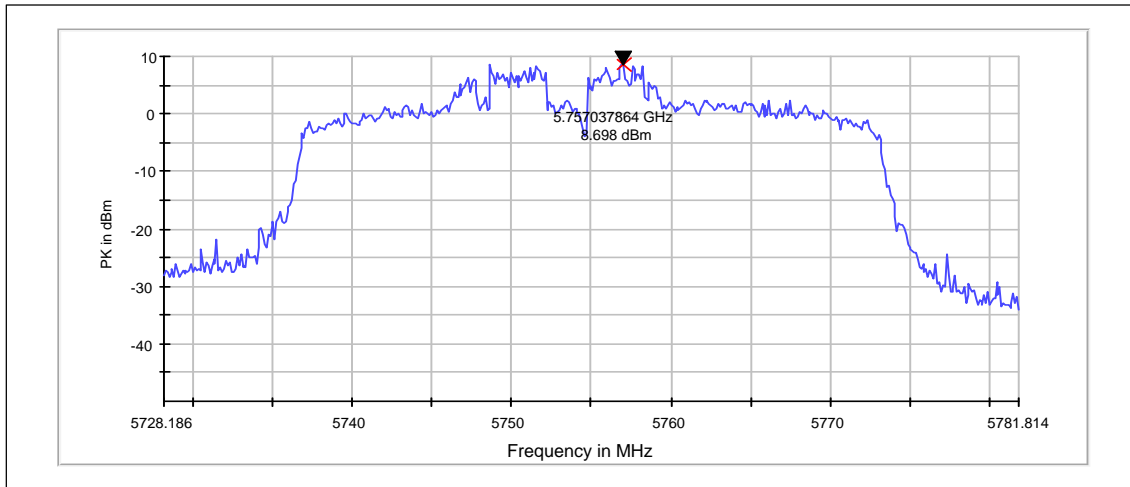
Channel 108+112 / 5550MHz (RBW: 1 MHz, VBW: 3 MHz)



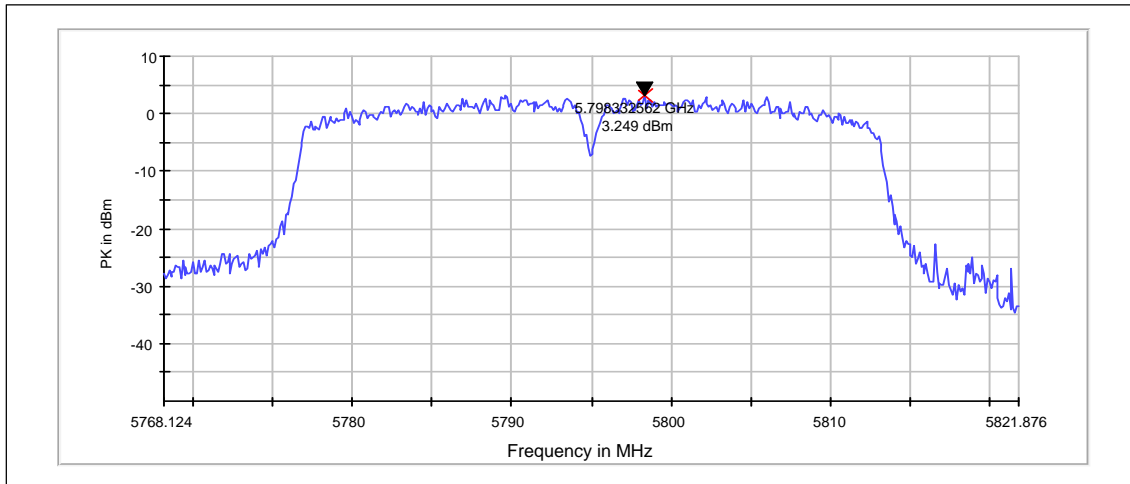
Channel 132+136 / 5670MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149+153 / 5755MHz (RBW: 500 kHz, VBW: 3 MHz)



Channel 157+161 / 5795MHz (RBW: 500 kHz, VBW: 3 MHz)

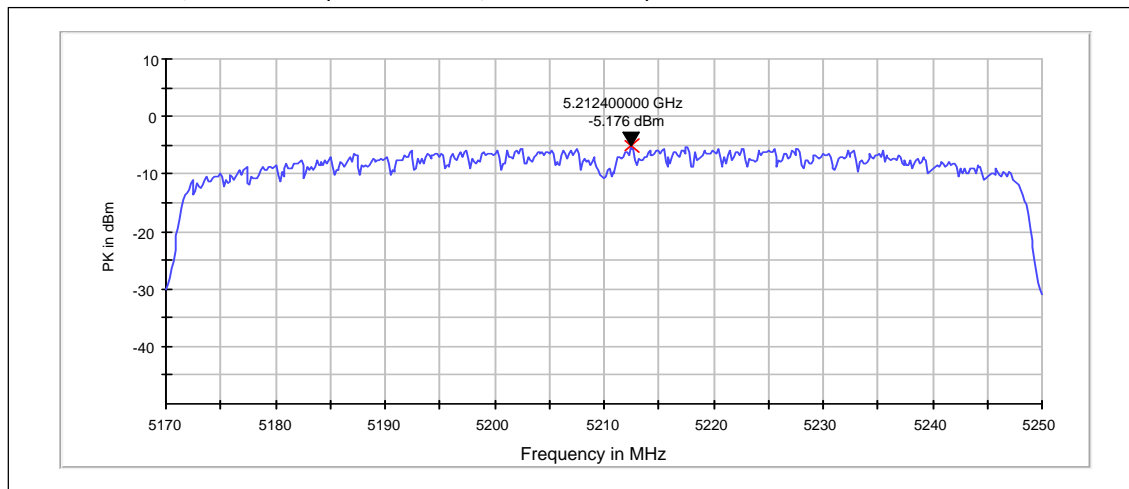


5.3.12 802.11ac Aux mode, QPSK modulation, 58.5 / 65.0 Mbps data rate

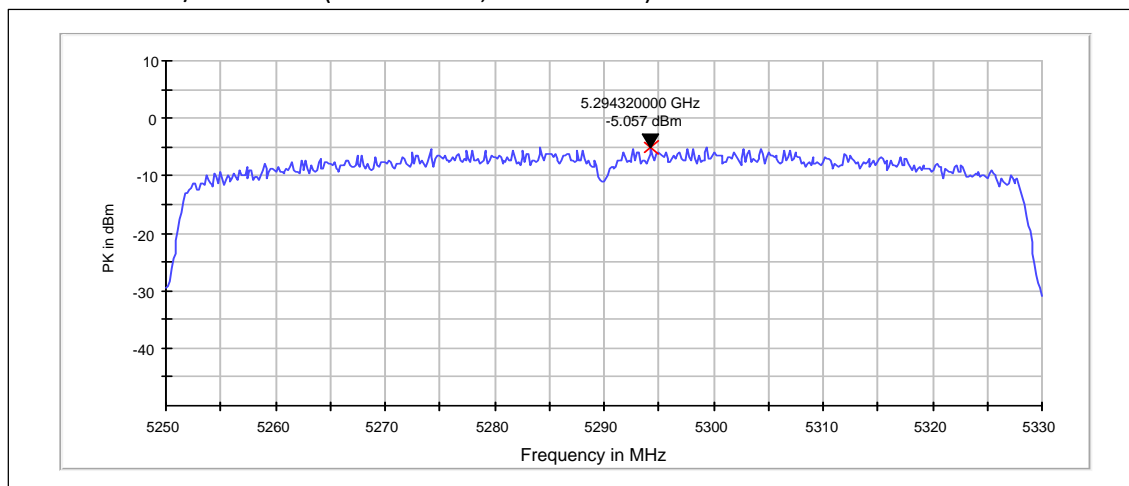
RMS detector, Video averaging

Channel / f _c [MHz]	P [dBm]	Result
36-48 / 5210	-5.18	PASSED
52-64 / 5290	-5.06	PASSED
100-112 / 5530	-5.08	PASSED
149-161 / 5775	-0.54	PASSED

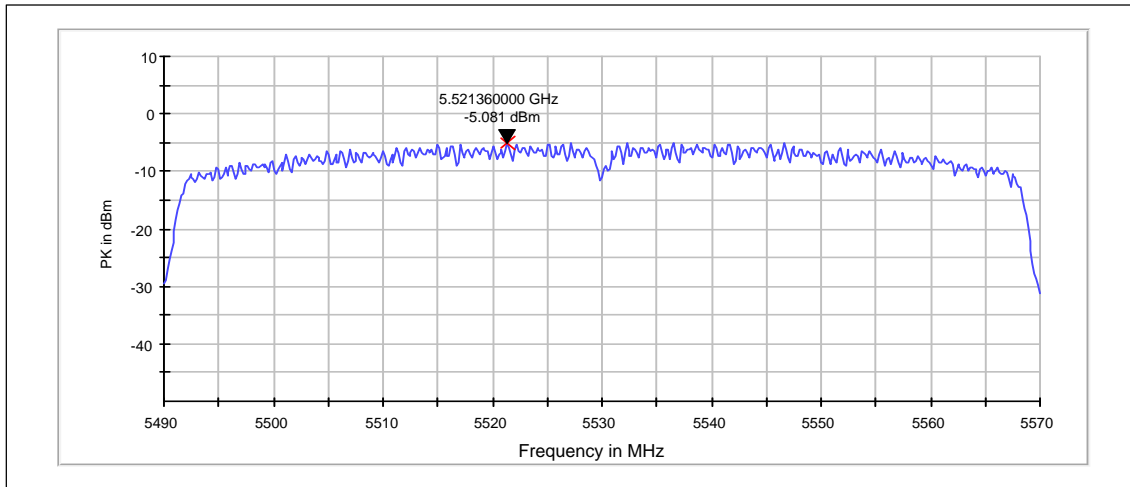
Channel 36-48 / 5210MHz (RBW: 1 MHz, VBW: 3 MHz)



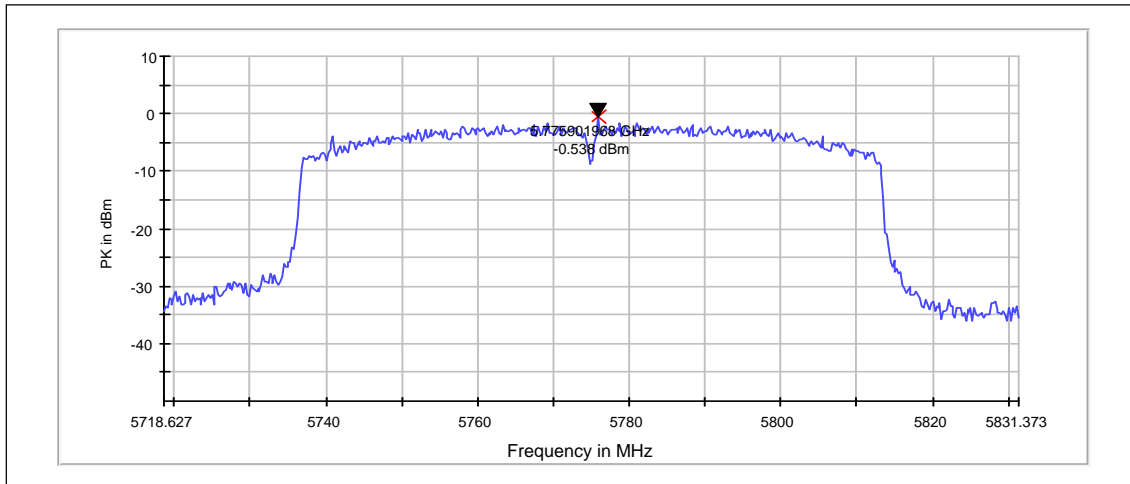
Channel 52-64 / 5290MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 100-112 / 5530MHz (RBW: 1 MHz, VBW: 3 MHz)



Channel 149-161 / 5775MHz (RBW: 500 kHz, VBW: 3 MHz)



6. Test Equipment

6.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
6039	USB Interface	5541765	Testo	22/24/27, 15C, 15B
6044	V-network	ESH3-Z6	R&S	-
2059	V-network	ESH3-Z6	R&S	-
1759	LISN 50 µH	ESH3-Z5	R&S	22/24/27, 15C, 15B
2097	Pulse Limiter	ESH3-Z2	R&S	22/24/27, 15C, 15B
1999	Receiver	ESIB26	R&S	22/24/27, 15C, 15B
2180	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
2390	Directional Coupler	DC2600	AR	-
-	RF immunity / Emission Software	EMC32	R&S	22/24/27, 15C, 15B
2060	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
1759	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
2039	Power Supply	PL330QMD	Thurlby	15C, 15B
6036	Data Logger	175-H2	Testo	22/24/27, 15C, 15B
2359	Temperature Test Chamber	VT4002	Vötsch	22/24/27
2352	Spectrum Analyzer	FSP-30	R&S	22/24/27, 15C
6109	Communication Tester	CMU200	R&S	22/24/27, 15C
6246	Power Supply	66332A	HP	22/24/27, 15C
1992	Signal Generator	83630B	Agilent	15C, 15B
6098	Signal Generator	8648C	Agilent	-
6046	Attenuator 10dB	8493C	Agilent	22/24/27, 15C
6047	Attenuator 20dB	8493C	Agilent	22/24/27, 15C
6045	Power splitter	11667B	Agilent	22/24/27, 15C
6247	Communication Tester	CBT	R&S	22/24/27, 15C 15B
6052	Communication Tester	CMU200	R&S	22/24/27, 15C 15B
6248	Power Supply	6632B	-	22/24/27, 15C 15B
6106	Spectrum Analyzer	FSP-30	R&S	22/24/27, 15C 15B
6113	Signal Generator	SMF100A	R&S	22/24/27, 15C 15B
6202	Temperature Test Chamber	VT4002	Vötsch	22/24/27, 15C 15B
6122	Power Splitter	11667B	Agilent	22/24/27, 15C 15B
6134	Attenuator 10dB	BW-S10-2W263+	Mini-Circuits	22/24/27, 15C
6136	Attenuator 20dB	BW-S20-2W263+	Mini-Circuits	22/24/27, 15C
6103	Bluetooth tester	CBT	R&S	22/24/27, 15C 15B
6250	Power Supply	6651A	Agilent	22/24/27, 15C 15B
6108	Communication Tester	CMU200	R&S	22/24/27, 15C 15B
6105	Spectrum Analyzer	FSV-30	R&S	22/24/27, 15C 15B
6251	Temperature Test Chamber	VT4002	Vötsch	22/24/27, 15C 15B
6243	Power Splitter	1167B	Agilent	22/24/27, 15C 15B
6245	Attenuator 10dB	BW-S10-2W263+	Mini-Circuits	22/24/27, 15C 15B
6244	Attenuator 20dB	BW-S20-2W263+	Mini-Circuits	22/24/27, 15C 15B

6.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
2388	Bluetooth Tester	CBT	R&S	15B
10479	Communication Tester	CMW500	R&S	22/24/27, 15C, 15B
2347	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
2009	Signal Generator	SMP 22	R&S	22/24/27, 15C, 15B
2348	Controller	G-1000DXC	Yaesu	22/24/27, 15C, 15B
2349	Computer Controller	g-1000DXC	Yaesu	22/24/27, 15C, 15B
2116	Controller	EMCO 2090	ETS	22/24/27, 15C, 15B
2109	Power Supply	PL330QMD	Thurlby	22/24/27, 15C, 15B
2353	Receiver	ESIB26	R&S	22/24/27, 15C, 15B
6115	Open switch and control unit	OSP 130	R&S	22/24/27, 15C 15B
6116	Open switch and control unit	OSP 150	R&S	22/24/27, 15C 15B

Eq. No	Equipment	Type	Manufacturer	Used in
6117	Open switch and control unit	OSP 150	R&S	22/24/27, 15C, 15B
6131	Notch Filter	WRCT902.4-0.4/40-8SS	Wainwright	22/24/27, 15C, 15B
6130	Notch Filter	WRCD1880-1.1.25/50-10SS	Wainwright	22/24/27
6159	Band Reject Filter	WRCD1747.8-0.4/40-5SS	Wainwright	22/24/27, 15C, 15B
6158	Band Reject Filter	WRCT836.6-0.4/40-8SS	Wainwright	22/24/27, 15C, 15B
6197	Band Reject Filter	WRCJV2531/2539-2523/2547-60/12SS	Wainwright	22/24/27, 15C, 15B
2231	Band Reject Filter	WRCG1947/1953-1940/1960-40/6SS	Wainwright	22/24/27, 15C, 15B
2391	Band Reject Filter	WRCG1729.4/1735.4-1722.4/1742.4-40/6SS	Wainwright	27
2386	Band Reject Filter	WRCG1764.4/1770.4-1760.4/1774.4-40/6SS	Wainwright	22/24/27, 15C, 15B
2385	Band Reject Filter	WRCG1744.4/1750.4-1740.4/1754.4-40/6SS	Wainwright	22/24/27, 15C, 15B
2357	Band Reject Filter	WRCG2400/2483-2390/2493-35/10SS	Wainwright	15C
2188	Preamplifier	AFS4-00100300-20-23P-6	Miteq	22/24/27, 15C, 15B
6195	High Pass Filter	-	Wainwright	22/24/27, 15C, 15B
2364	Band Reject Filter	WRCG1877/1883 - 1870/1890-40/6SS	Wainwright	24
2361	Anechoic Chamber	3 m Semi / Full Anechoic Chamber	Euroshield	22/24/27, 15C, 15B
6212	Antenna Array system	-	TCC	22/24/27, 15C, 15B
-	RF immunity / Emission Software	EMC32	R&S	22/24/27, 15C, 15B
6089	Antenna	HFH2-Z2	R&S	15C, 15B
2027	CDN	M2 (modified) DC1	MEB	22/24/27, 15C, 15B
2028	CDN	M3 (modified) DC2	MEB	22/24/27, 15C, 15B
2176	CDN	CDN 801-M3	Lüthi	22/24/27, 15C, 15B
2135	CDN	CDN 801-M3	Lüthi	22/24/27, 15C, 15B
2029	Power Supply	PL330	Thurlby	22/24/27, 15C
6038	Data Logger	Testo 580	Testo	22/24/27, 15C, 15B
6037	Data Logger	175-H2	Testo	22/24/27, 15C, 15B
6039	USB Interface	5541765	Testo	22/24/27, 15C, 15B

END OF REPORT