



7.4. Test Result and Data

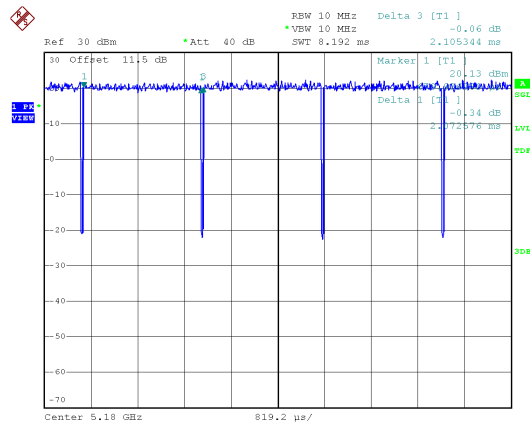
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
802.11a,6M	2.07	2.11	98.44%
802.11ac VHT20	1.93	1.97	98.33%
802.11ac VHT40	0.95	0.99	96.60%
802.11ac VHT80	0.46	0.50	92.70%

7.5. Measurement Methods

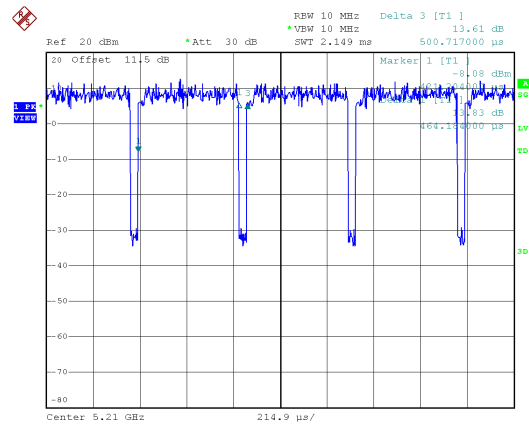
26 dB and 6dB Emission BW	KDB 789033 D02 v02r01, Section C
99% Occupied BW	KDB 789033 D02 v02r01, Section D
Conducted Output Power	KDB 789033 D02 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v02r01, Sections G and H



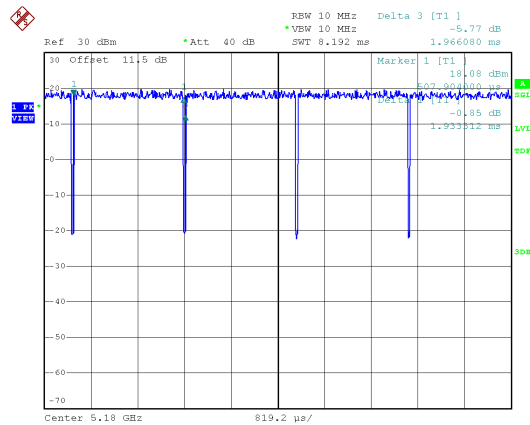
Modulation Type: 802.11a (6Mbps)



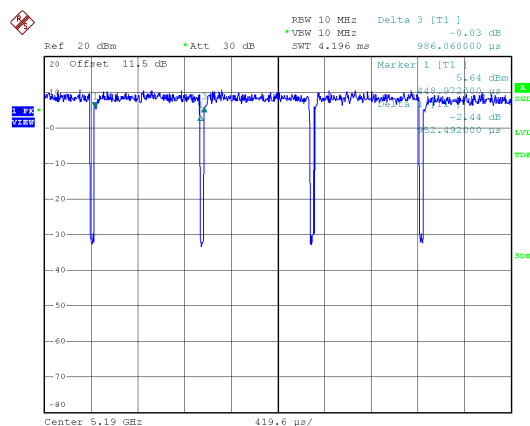
Modulation Type: 802.11ac VHT80 (29.3Mbps)



Modulation Type: 802.11ac VHT20 (6.5Mbps)



Modulation Type: 802.11ac VHT40 (13.5Mbps)





8. 6dB Bandwidth & 99% Occupied Bandwidth

8.1. Test Limit

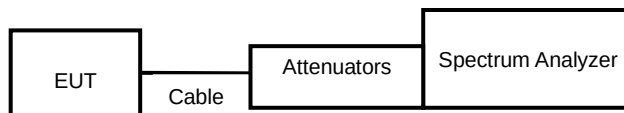
FCC §15.407

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

8.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

8.3. Test Setup Layout





8.4. Test Result and Data

In the 5.8G Band

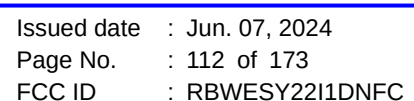
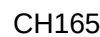
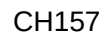
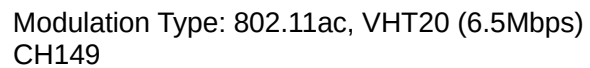
Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth(MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
11a	149	5745	15.15	16.26	0.50
11a	157	5785	15.12	16.02	0.50
11a	165	5825	15.33	16.29	0.50
11ac VHT20	149	5745	17.19	15.96	0.50
11ac VHT20	157	5785	16.20	16.53	0.50
11ac VHT20	165	5825	15.96	17.55	0.50
11ac VHT40	151	5755	35.10	35.46	0.50
11ac VHT40	159	5795	35.16	35.46	0.50
11ac VHT80	155	5775	73.80	75.12	0.50

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
11a	149	5745	22.26	23.43
11a	157	5785	21.39	19.80
11a	165	5825	16.86	25.38
11ac VHT20	149	5745	22.05	18.54
11ac VHT20	157	5785	21.48	20.13
11ac VHT20	165	5825	18.03	25.56
11ac VHT40	151	5755	38.70	36.96
11ac VHT40	159	5795	38.22	46.86
11ac VHT80	155	5775	75.96	76.20

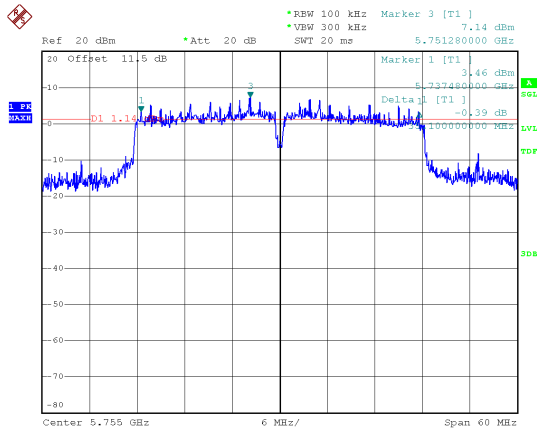
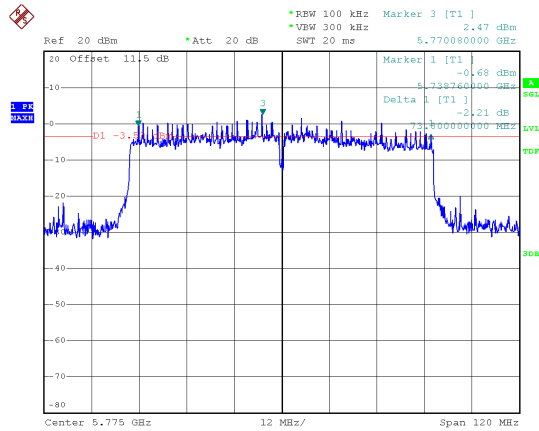


6dB Bandwidth, ANT A
Modulation Type: 802.11a (6Mbps)
CH149

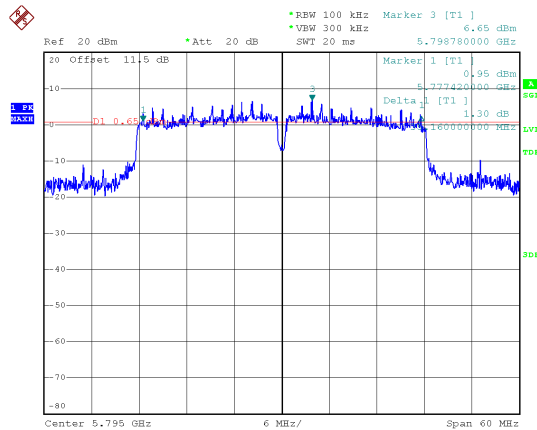




6dB Bandwidth

Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

CH159

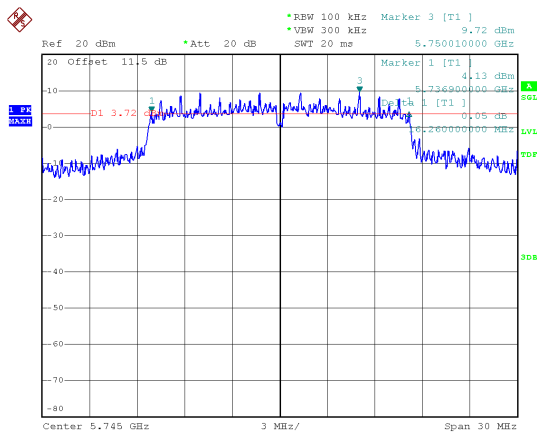




6dB Bandwidth, ANT B

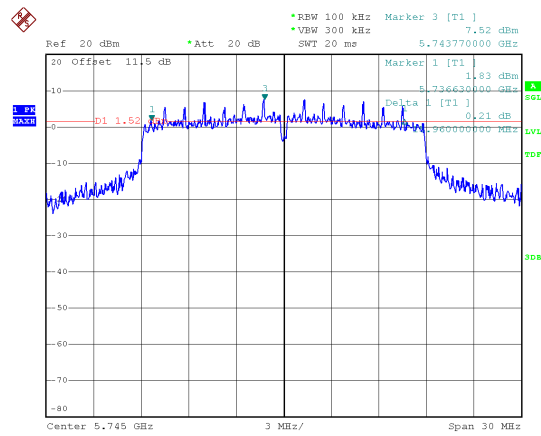
Modulation Type: 802.11a (6Mbps)

CH149

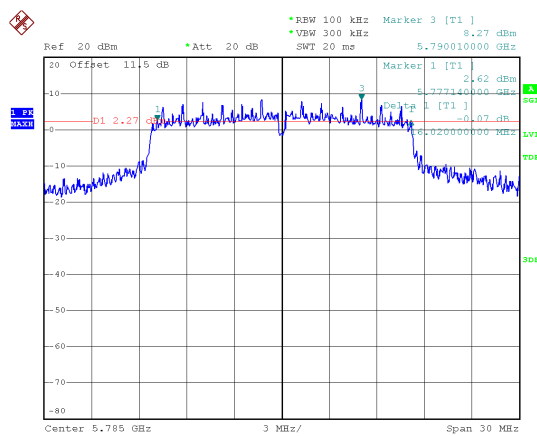


Modulation Type: 802.11ac, VHT20 (6.5Mbps)

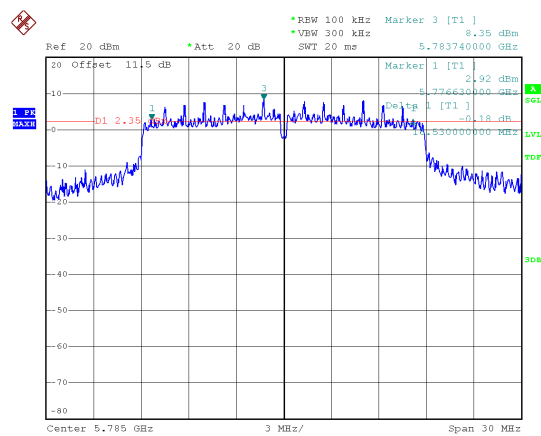
CH149



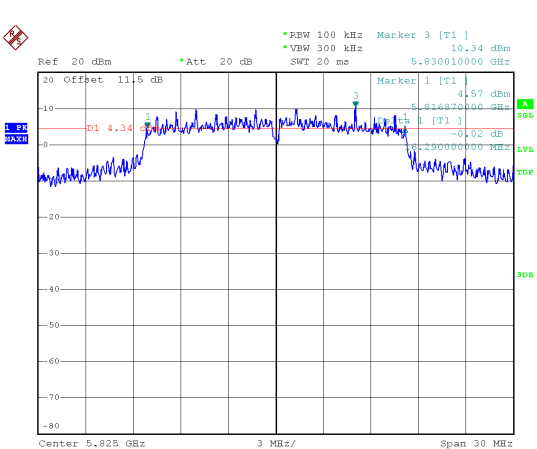
CH157



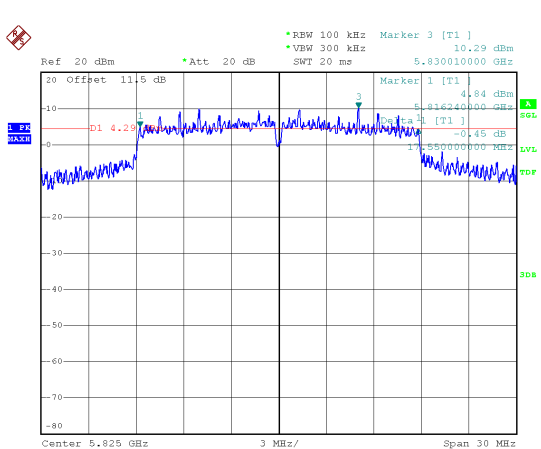
CH157



CH165



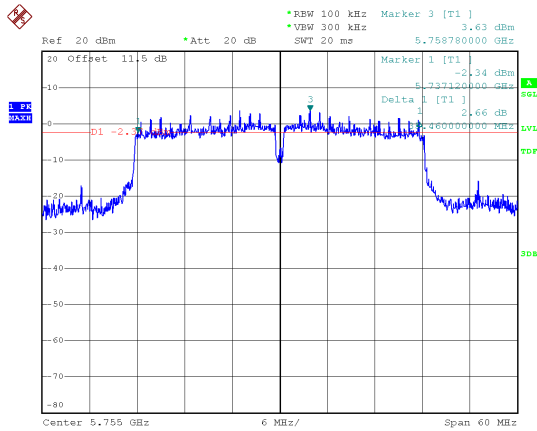
CH165



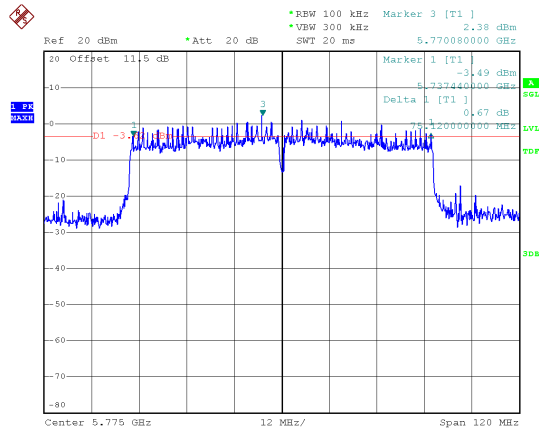


6dB Bandwidth

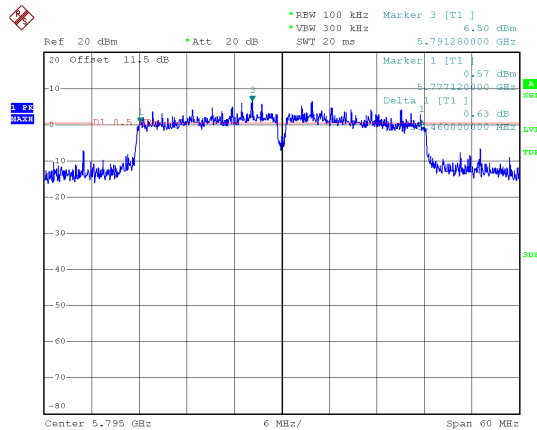
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

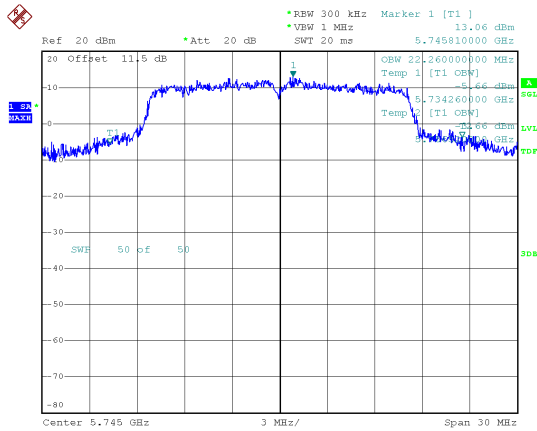


CH159

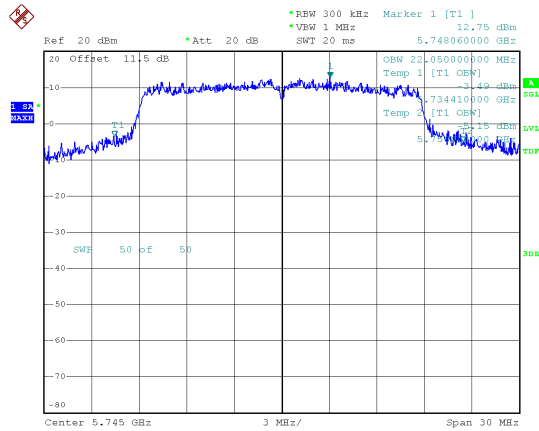




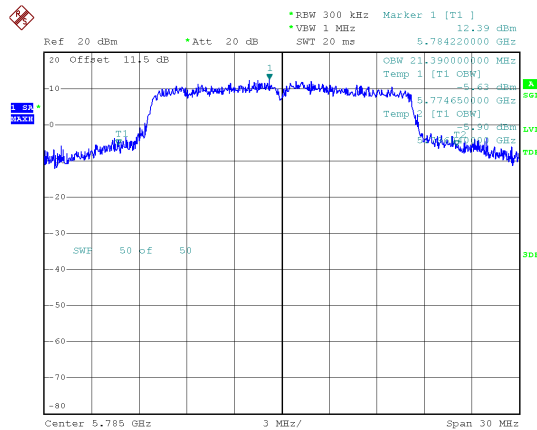
99% Occupied Bandwidth, ANT A
Modulation Type: 802.11a (6Mbps)
CH149



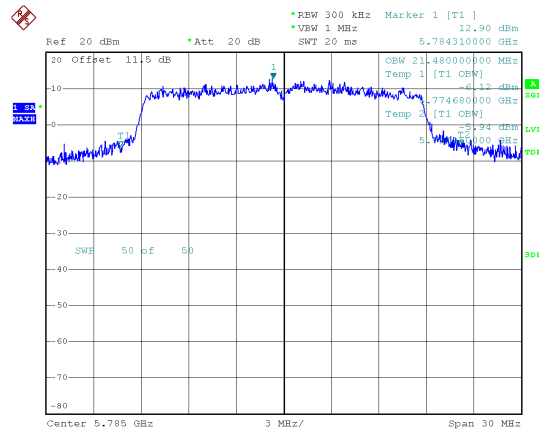
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



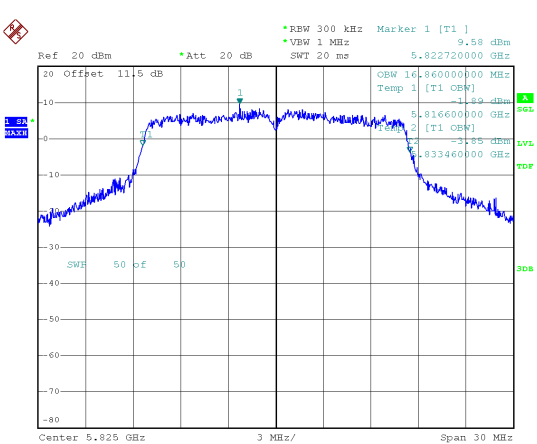
CH157



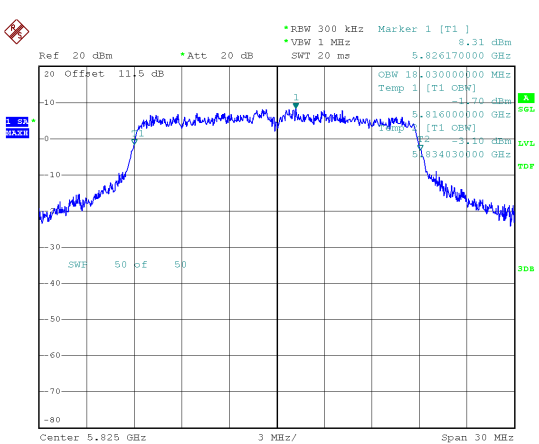
CH157



CH165

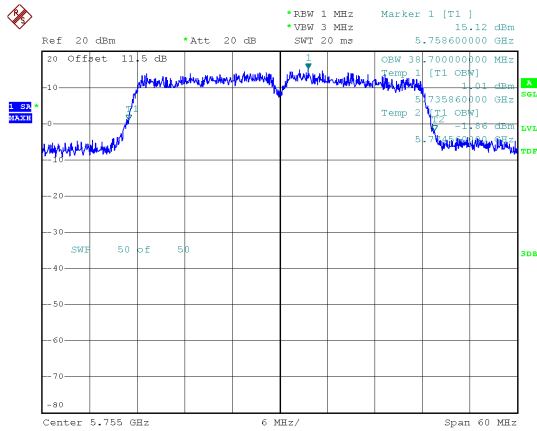
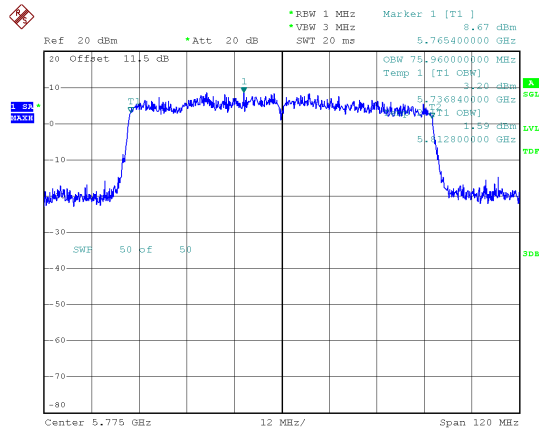


CH165

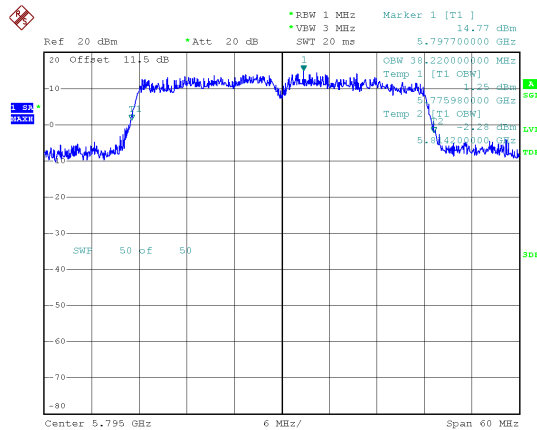




99% Occupied Bandwidth

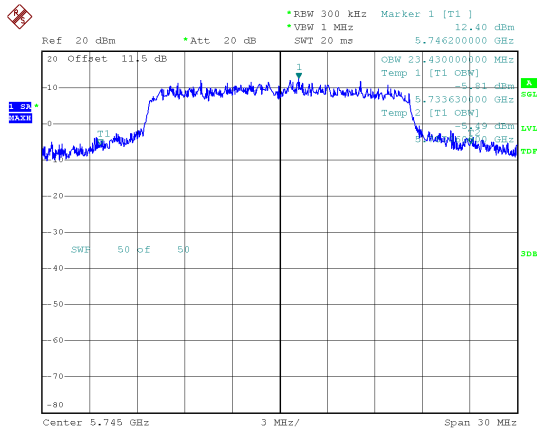
Modulation Type: 802.11ac, VHT40 (13.5Mbps)
CH151Modulation Type: 802.11ac, VHT80 (29.3Mbps)
CH155

CH159

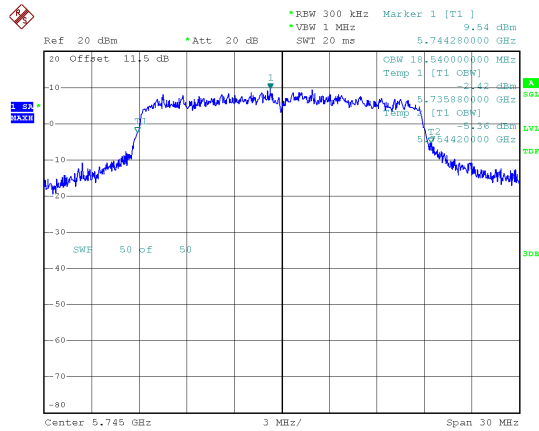




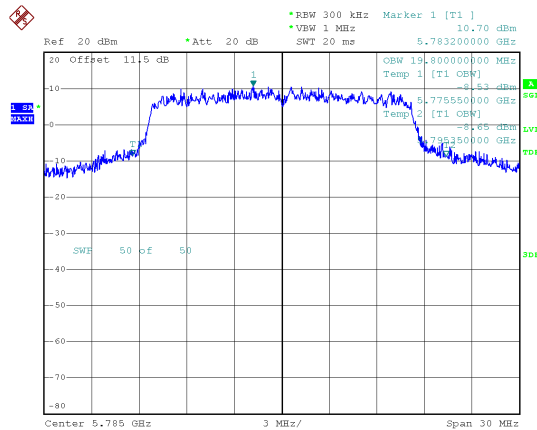
99% Occupied Bandwidth, ANT B
Modulation Type: 802.11a (6Mbps)
CH149



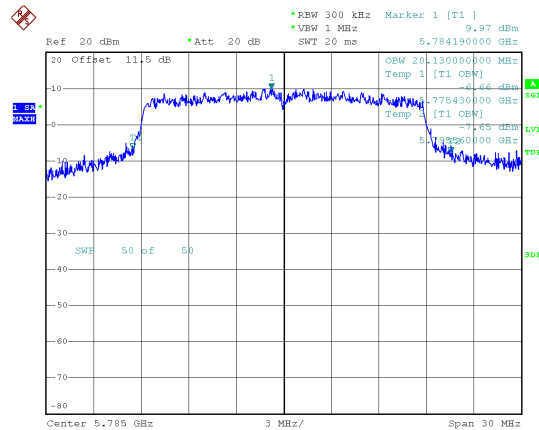
Modulation Type: 802.11ac, VHT20 (6.5Mbps)
CH149



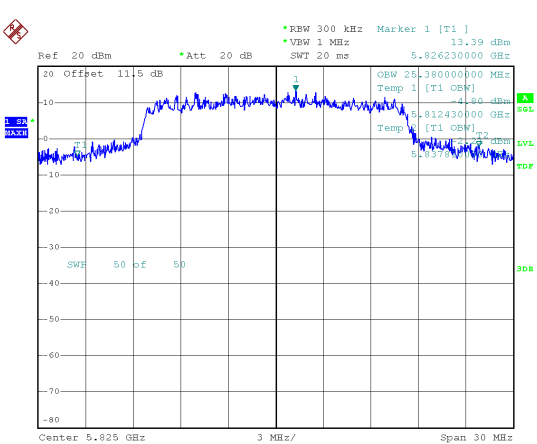
CH157



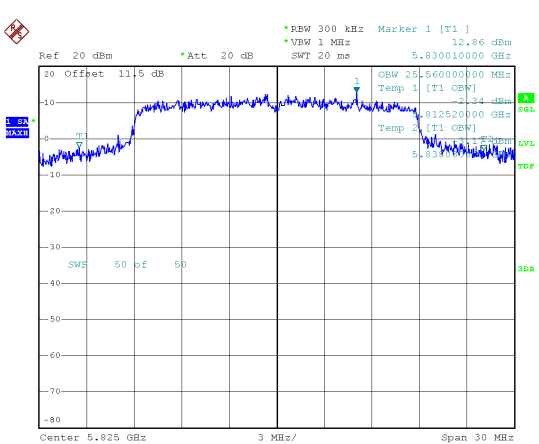
CH157



CH165



CH165





9. 26dB Bandwidth & 99% Occupied Bandwidth

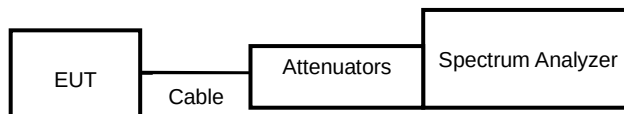
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW = approximately 1% of the emission bandwidth, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

9.3. Test Setup Layout





9.4. Test Result and Data

In the 5.2G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
			ANT A	ANT B
11a	36	5180	26.05	24.65
11a	40	5200	27.15	25.05
11a	48	5240	26.55	24.25
11ac VHT20	36	5180	29.4	28
11ac VHT20	40	5200	28.7	26.4
11ac VHT20	48	5240	29.95	27.85
11ac VHT40	38	5190	41.9	42
11ac VHT40	46	5230	79.9	67.3
11ac VHT80	42	5210	83.36	82.88

In the 5.3G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
			ANT A	ANT B
11a	52	5260	26.7	24.05
11a	60	5300	26.55	22.55
11a	64	5320	25.4	23.5
11ac VHT20	52	5260	29.65	24.35
11ac VHT20	60	5300	29.45	24.45
11ac VHT20	64	5320	29.5	24.6
11ac VHT40	54	5270	74.4	42.8
11ac VHT40	62	5310	41.9	42
11ac VHT80	58	5290	84	82.72



In the 5.5G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
			ANT A	ANT B
11a	100	5500	23.95	23.75
11a	120	5600	25.15	26.5
11a	140	5700	22.5	22.6
11ac VHT20	100	5500	24.1	23.9
11ac VHT20	120	5600	25.45	28.5
11ac VHT20	140	5700	23.9	23.8
11ac VHT40	102	5510	42	42.1
11ac VHT40	118	5590	43	61
11ac VHT40	134	5670	42.1	42.3
11ac VHT80	106	5530	83.68	82.72
11ac VHT80	122	5610	85.76	84.48



In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
11a	36	5180	16.95	16.77
11a	40	5200	17.25	16.89
11a	48	5240	17.10	16.77
11ac VHT20	36	5180	18.33	18.06
11ac VHT20	40	5200	18.27	18.03
11ac VHT20	48	5240	18.48	18.00
11ac VHT40	38	5190	36.54	36.60
11ac VHT40	46	5230	37.74	37.08
11ac VHT80	42	5210	75.72	75.72

In the 5.3G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
11a	52	5260	17.04	16.71
11a	60	5300	17.04	16.71
11a	64	5320	16.98	16.74
11ac VHT20	52	5260	18.48	17.94
11ac VHT20	60	5300	18.39	17.91
11ac VHT20	64	5320	18.30	17.97
11ac VHT40	54	5270	37.38	36.78
11ac VHT40	62	5310	36.60	36.60
11ac VHT80	58	5290	75.84	75.72

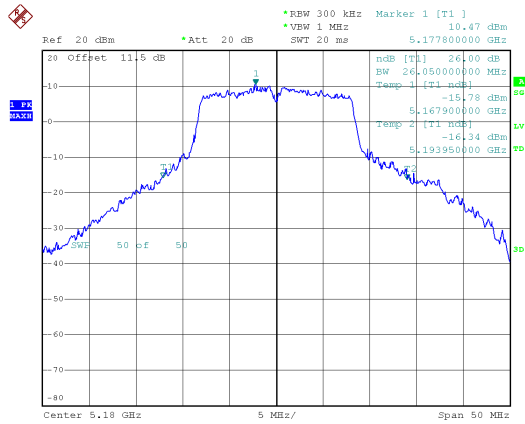


In the 5.5G Band

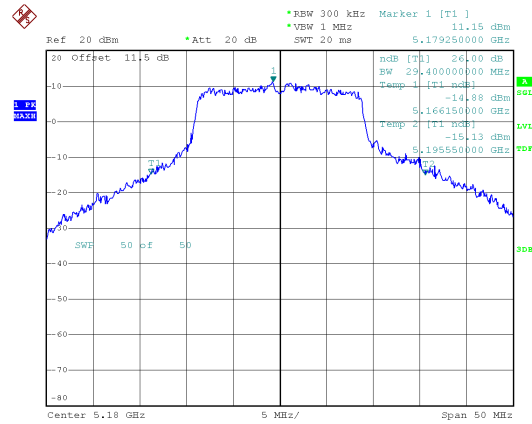
Modulation Type	Channel	Frequency (MHz)	99% Bandwidth(MHz)	
			ANT A	ANT B
11a	100	5500	16.77	16.74
11a	120	5600	16.86	16.98
11a	140	5700	16.71	16.71
11ac VHT20	100	5500	17.94	17.88
11ac VHT20	120	5600	18.00	18.12
11ac VHT20	140	5700	17.88	17.88
11ac VHT40	102	5510	36.54	36.54
11ac VHT40	118	5590	36.72	39.90
11ac VHT40	134	5670	36.60	36.60
11ac VHT80	106	5530	75.72	75.60
11ac VHT80	122	5610	75.96	76.20



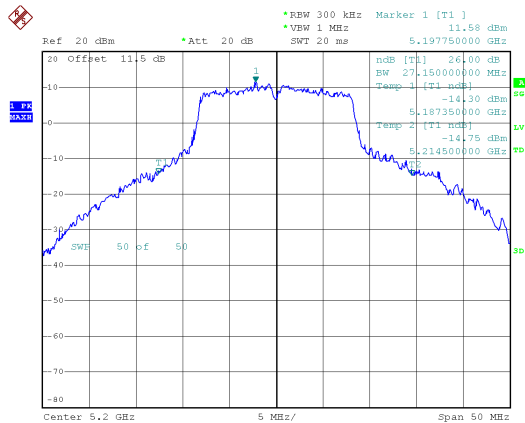
26dB Bandwidth Band 1, ANT A
Modulation Type: 802.11a (6Mbps)
CH36



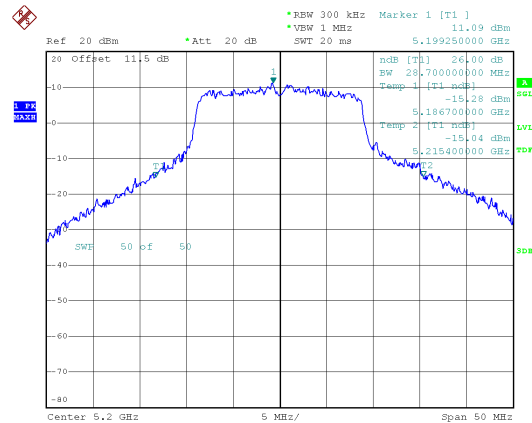
802.11ac VHT20 (6.5Mbps)
CH36



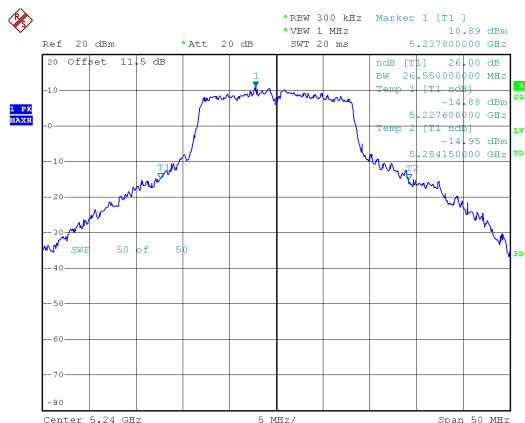
CH40



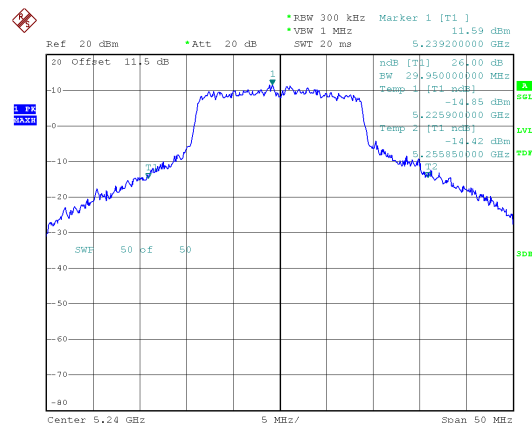
CH40



CH48

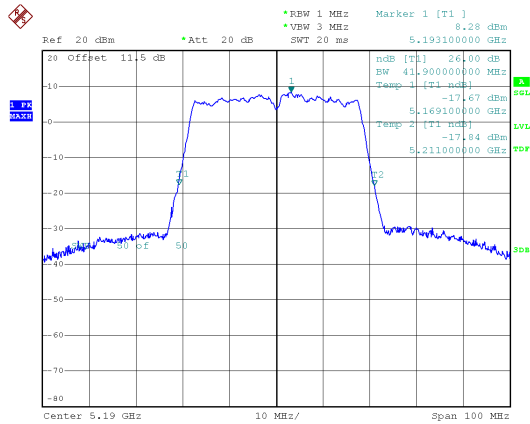
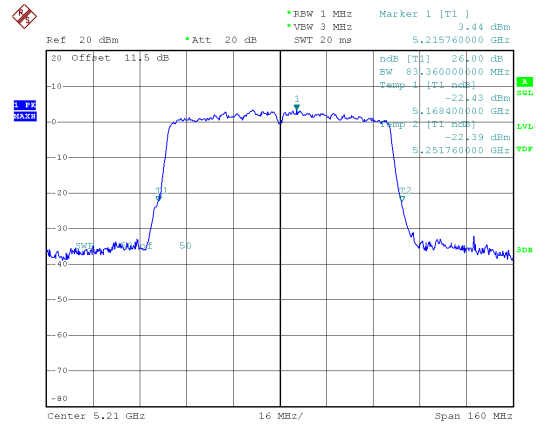


CH48

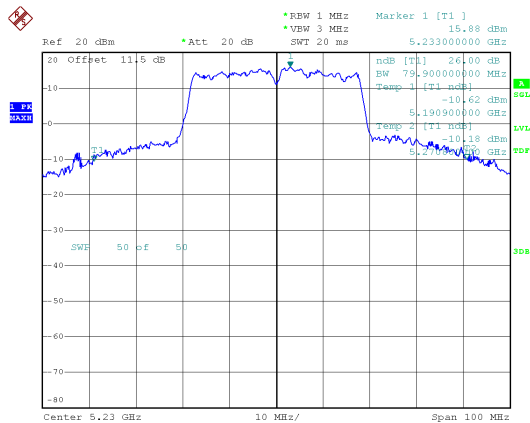




26dB Bandwidth Band 1

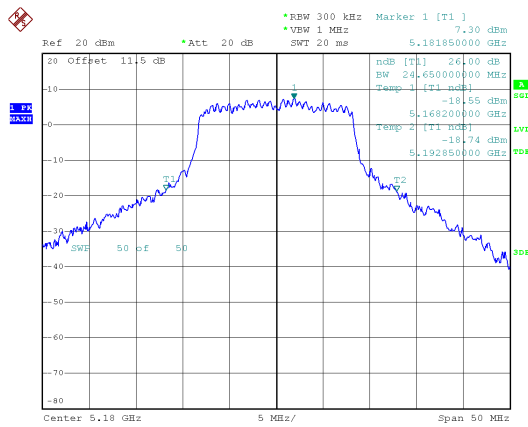
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42

CH46

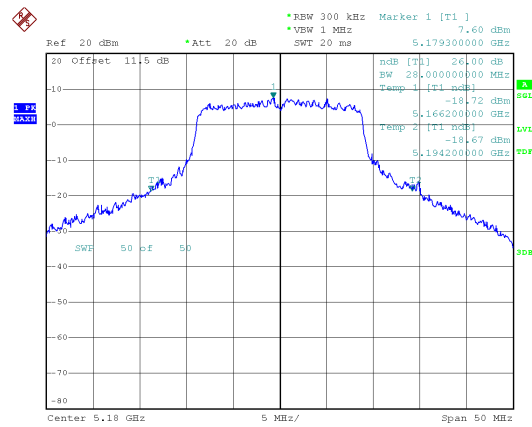




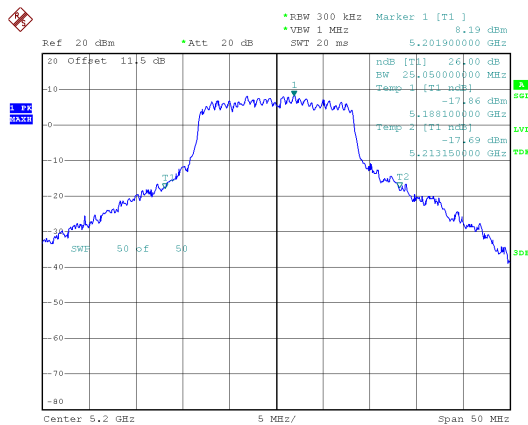
26dB Bandwidth Band 1, ANT B
Modulation Type: 802.11a (6Mbps)
CH36



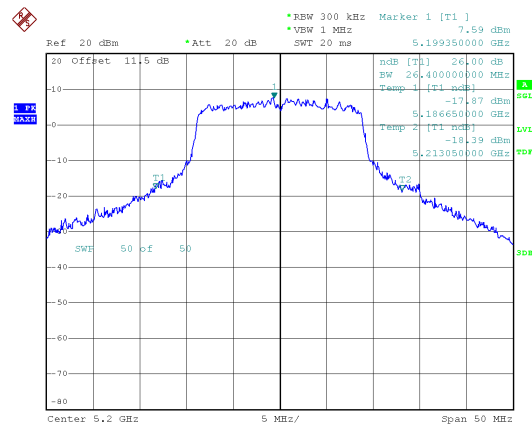
802.11ac VHT20 (6.5Mbps)
CH36



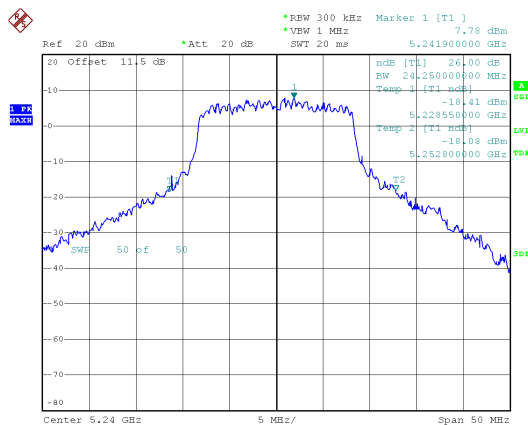
CH40



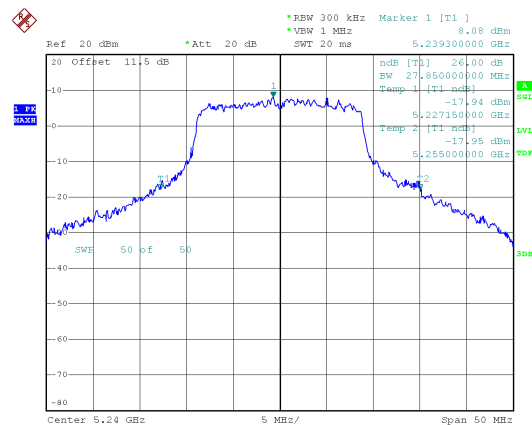
CH40



CH48

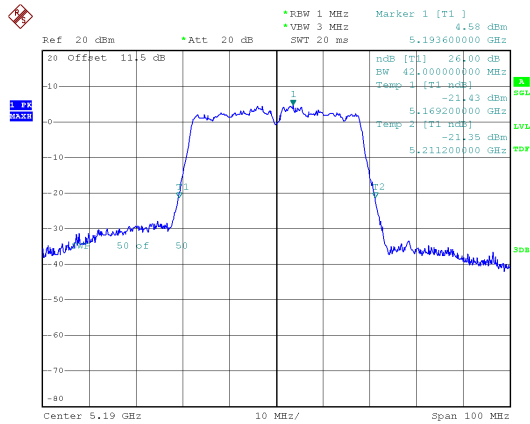
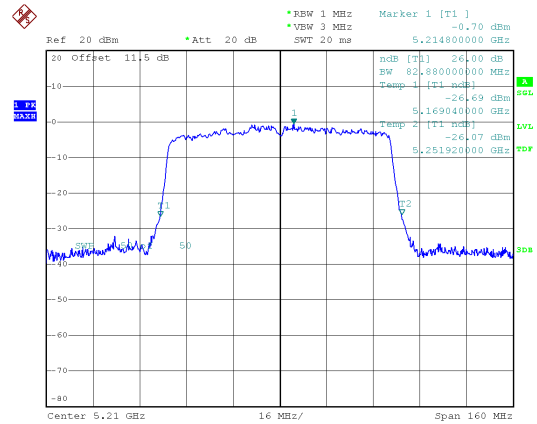


CH48

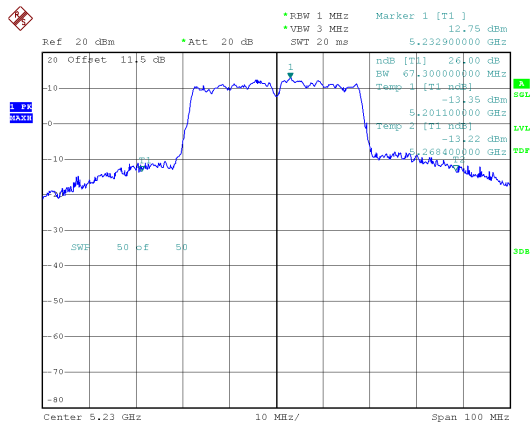




26dB Bandwidth Band 1

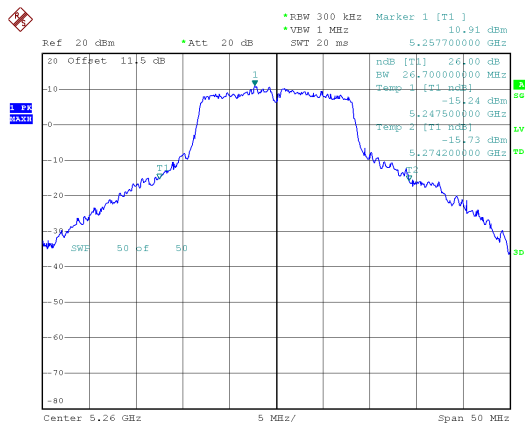
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42

CH46

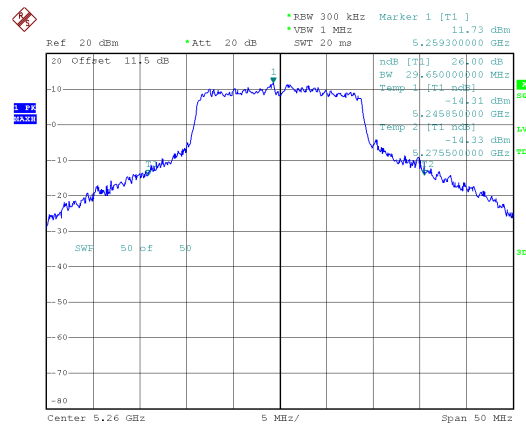




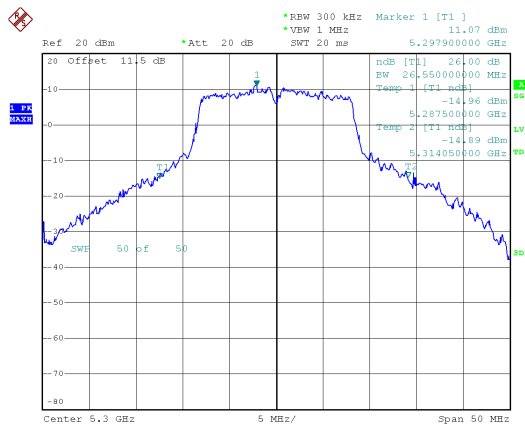
26dB Bandwidth Band 2, ANT A
Modulation Type: 802.11a (6Mbps)
CH52



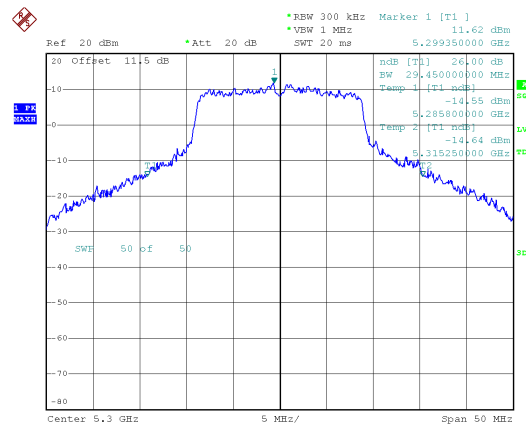
802.11ac VHT20 (6.5Mbps)
CH52



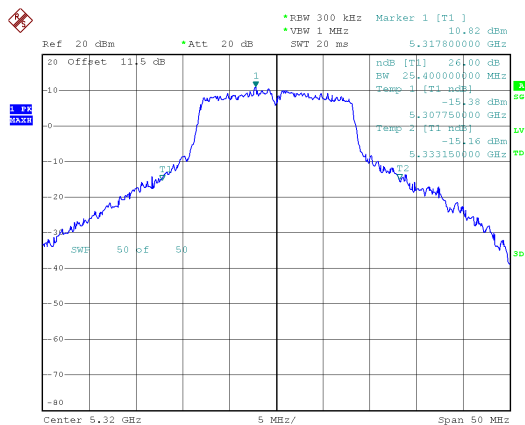
CH60



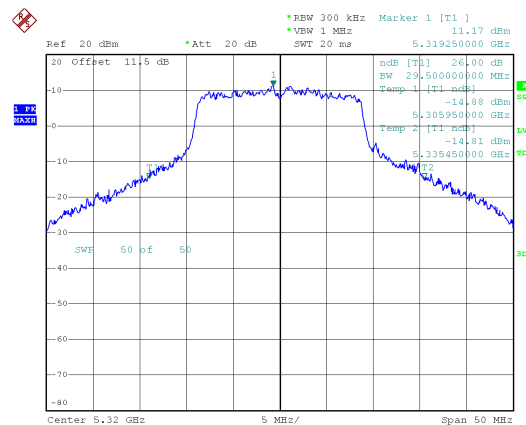
CH60



CH64



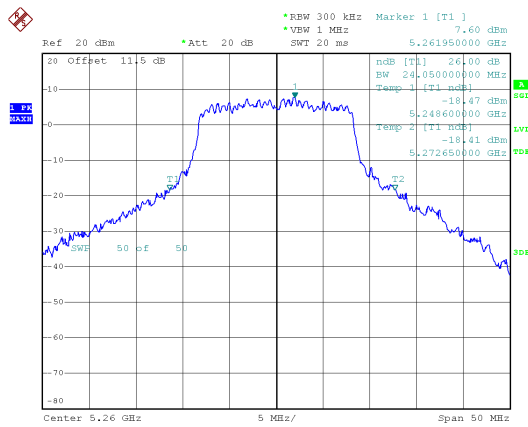
CH64



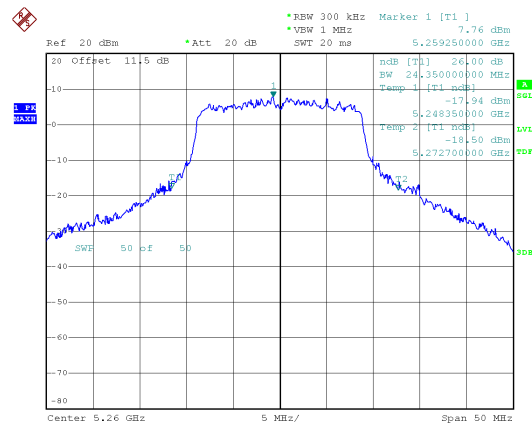




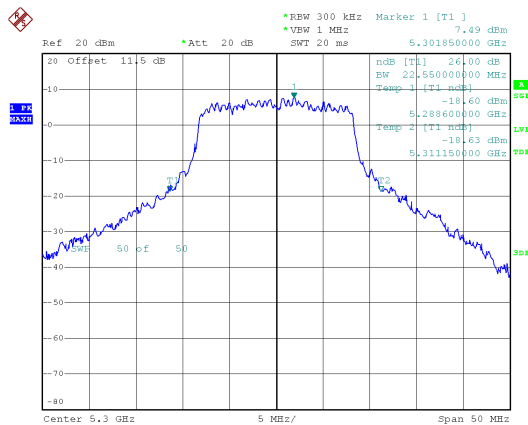
26dB Bandwidth Band 2, ANT B
Modulation Type: 802.11a (6Mbps)
CH52



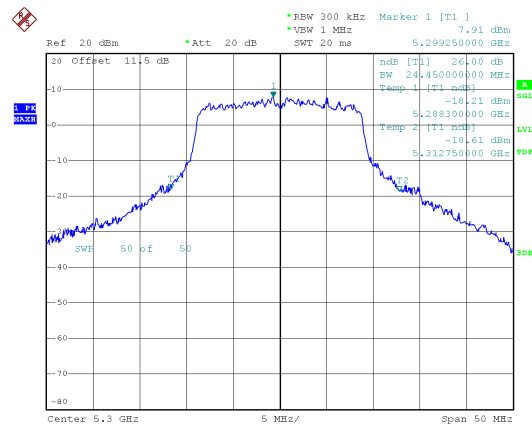
802.11ac VHT20 (6.5Mbps)
CH52



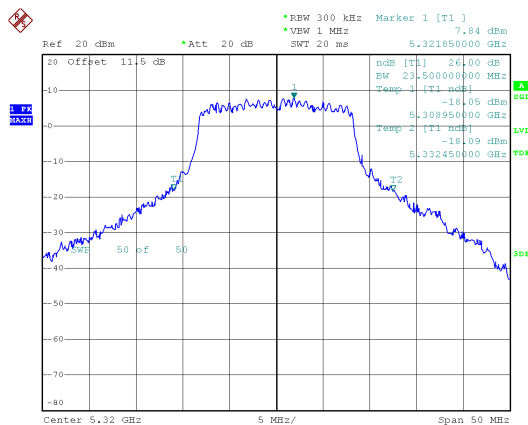
CH60



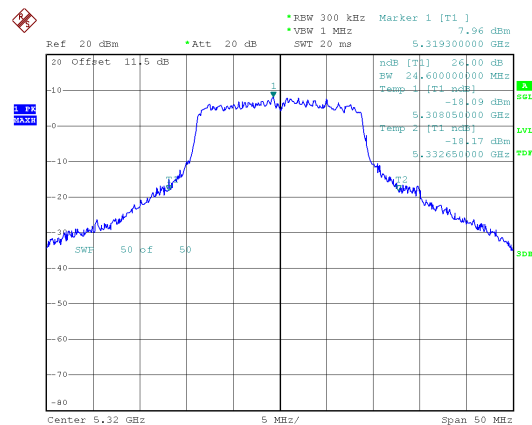
CH60



CH64

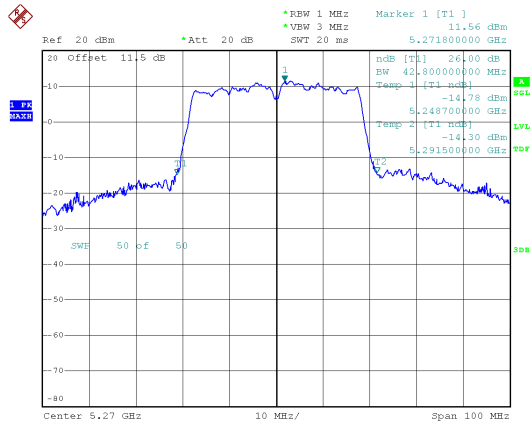
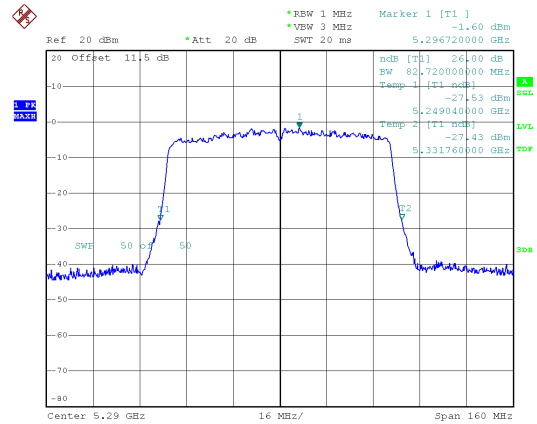


CH64

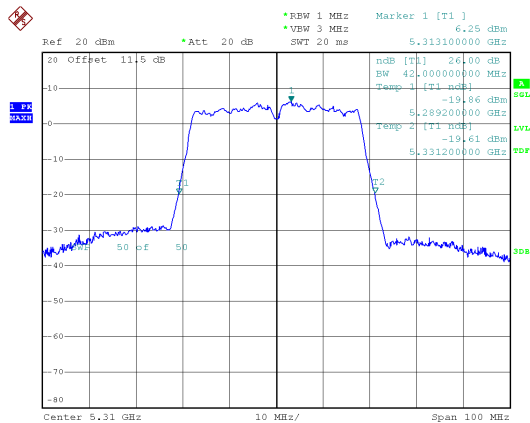




26dB Bandwidth Band 2

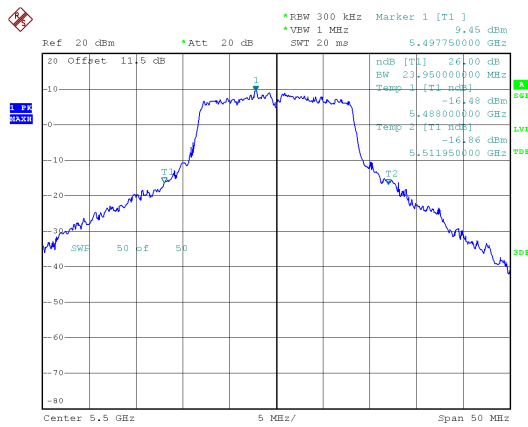
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH54Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH58

CH62

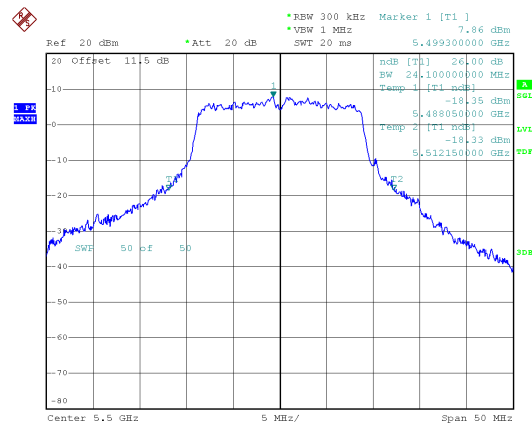




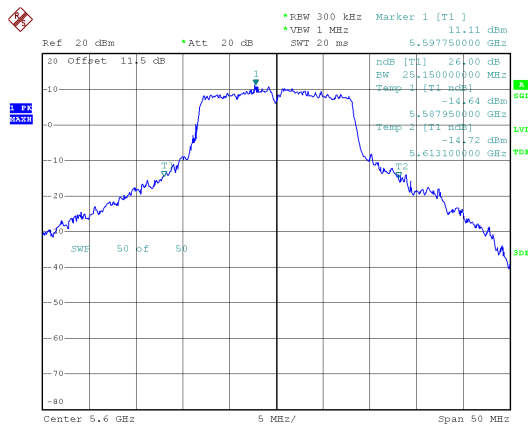
26dB Bandwidth Band 3, ANT A
Modulation Type: 802.11a (6Mbps)
CH100



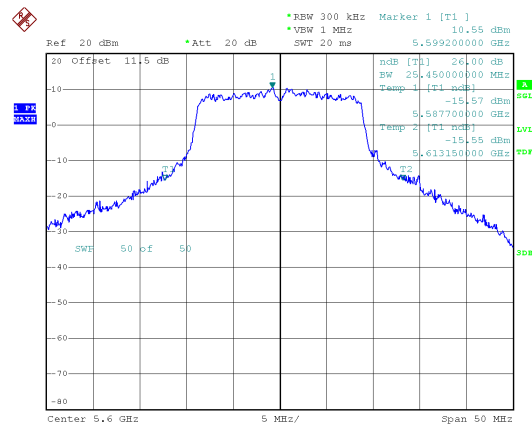
802.11ac VHT20 (6.5Mbps)
CH100



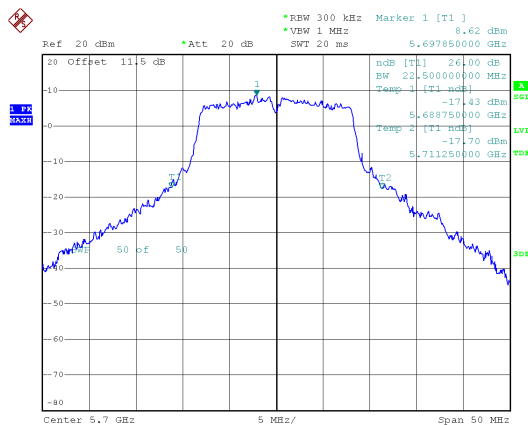
CH120



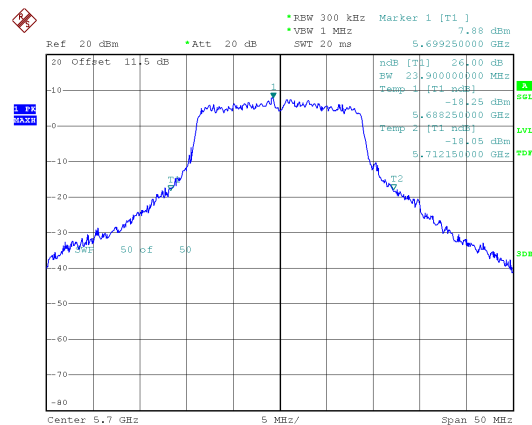
CH120



CH140

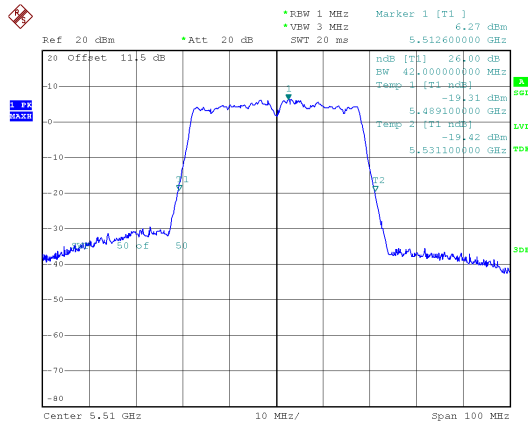
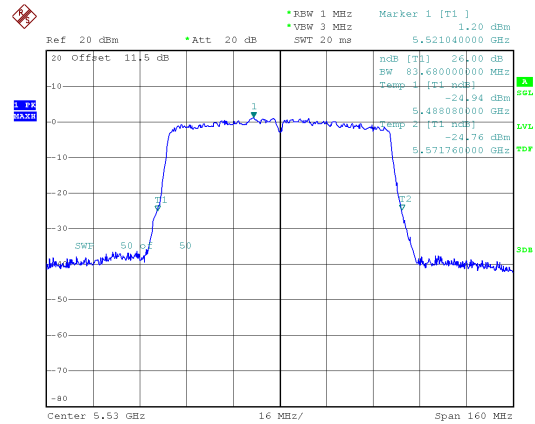


CH140

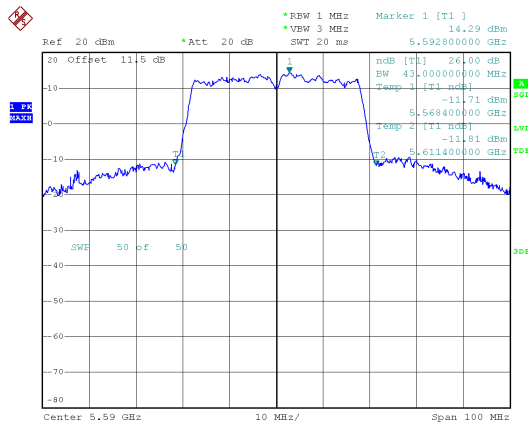




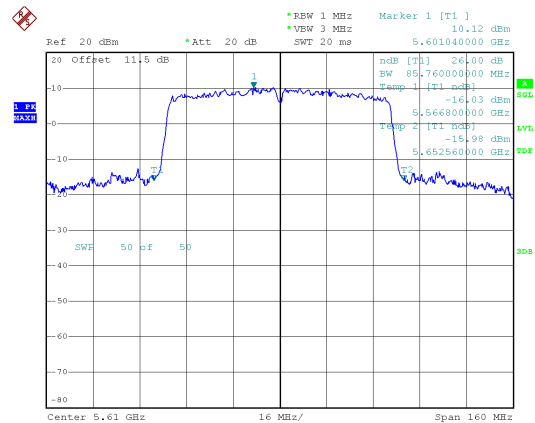
26dB Bandwidth Band 3

Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH102Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH106

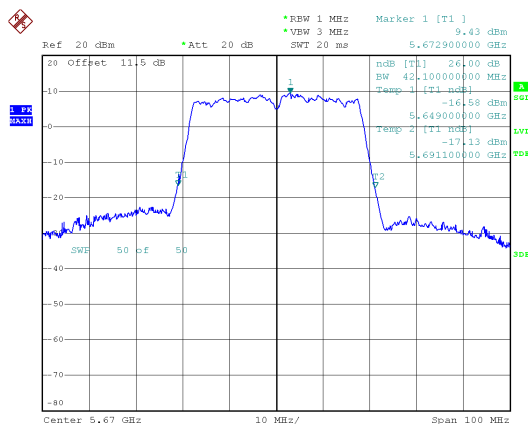
CH118



CH122

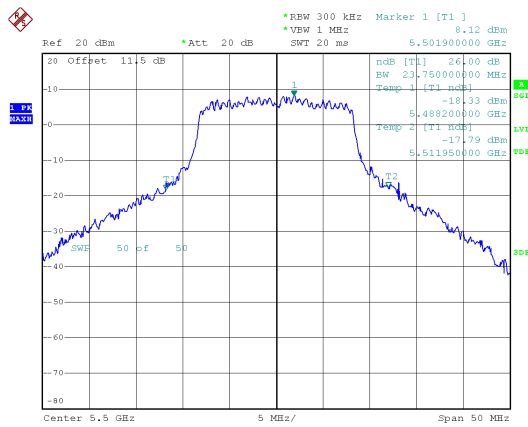


CH134

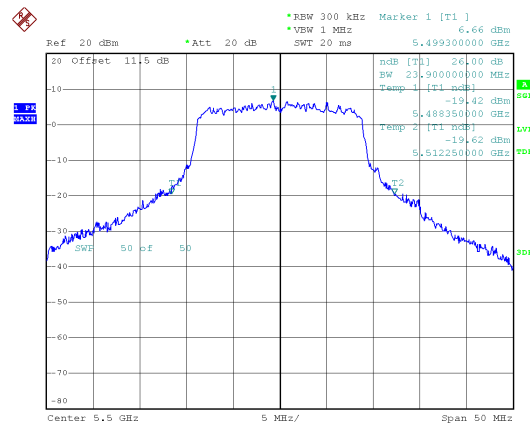




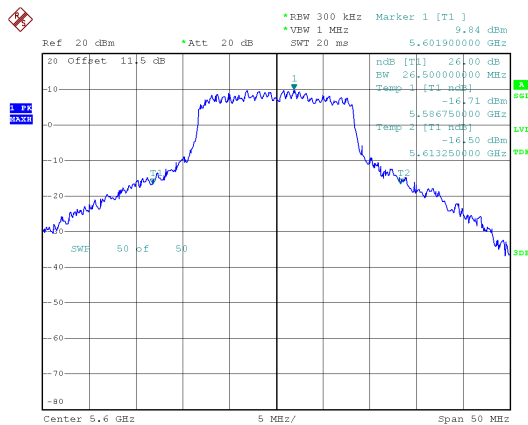
26dB Bandwidth Band 3, ANT B
Modulation Type: 802.11a (6Mbps)
CH100



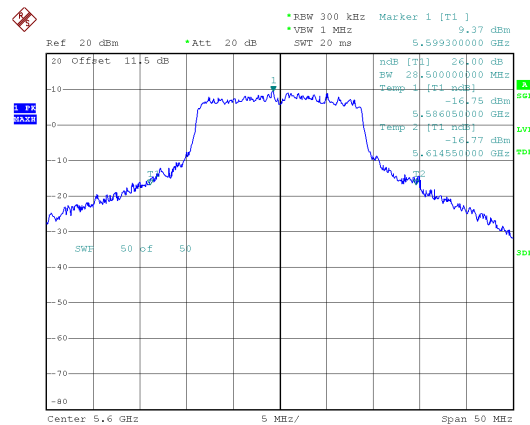
802.11ac VHT20 (6.5Mbps)
CH100



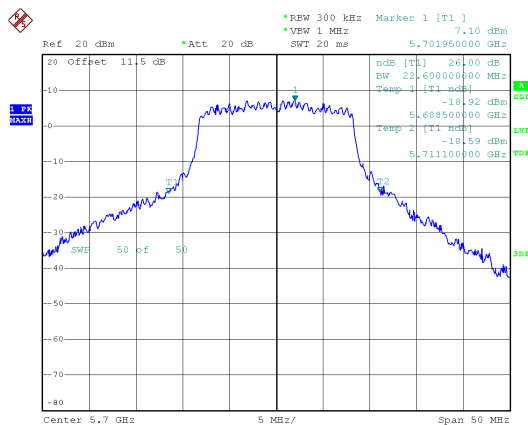
CH120



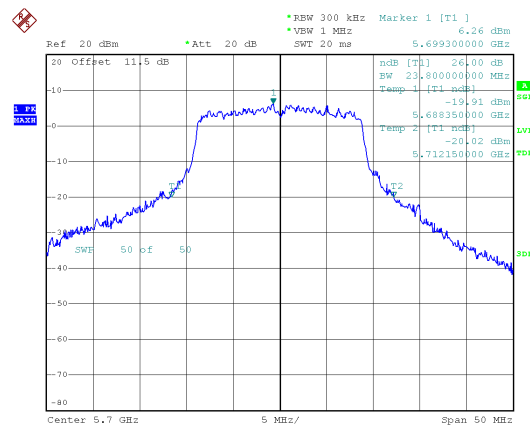
CH120



CH140

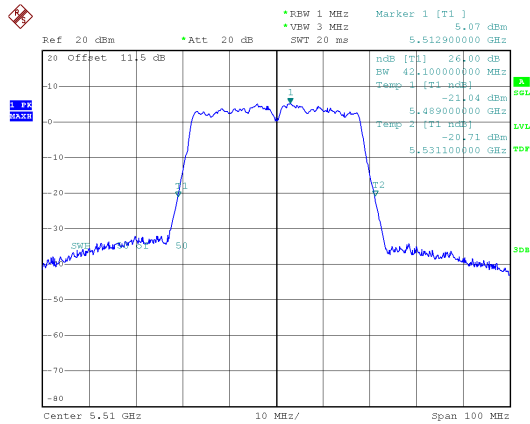
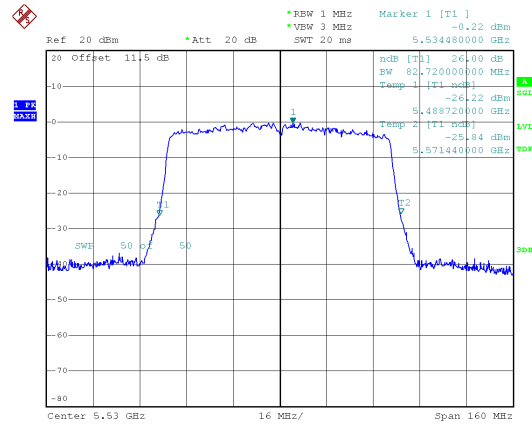


CH140

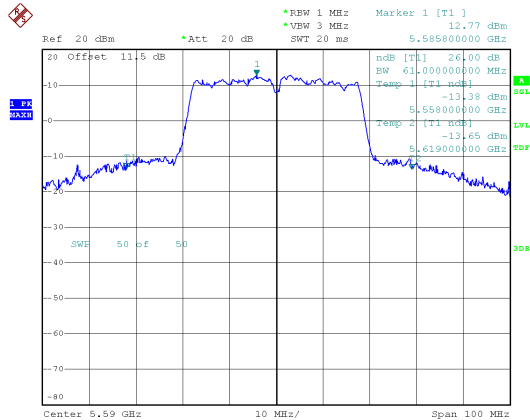




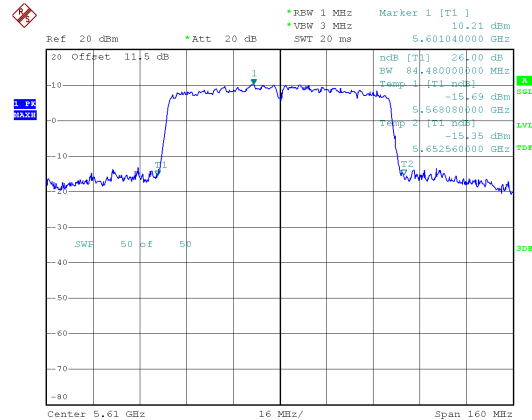
26dB Bandwidth Band 3

Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH102Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH106

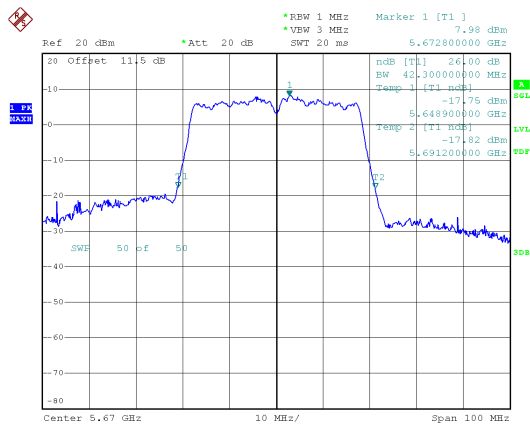
CH118



CH122



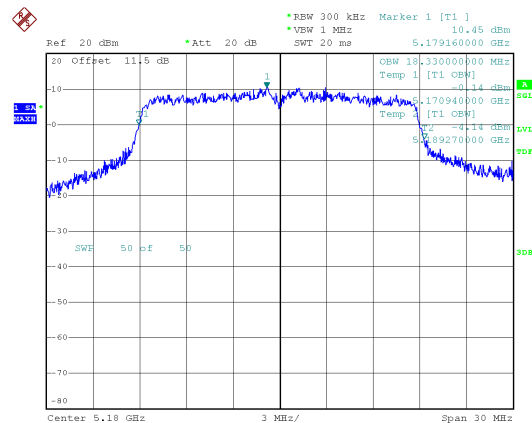
CH134





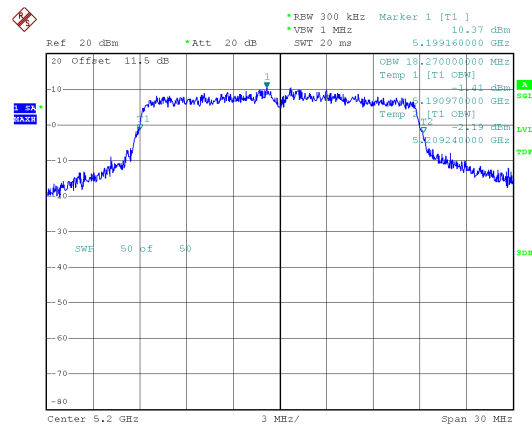
99% Bandwidth Band 1, ANT A
Modulation Type: 802.11a (6Mbps)
CH36

802.11ac VHT20 (6.5Mbps)
CH36



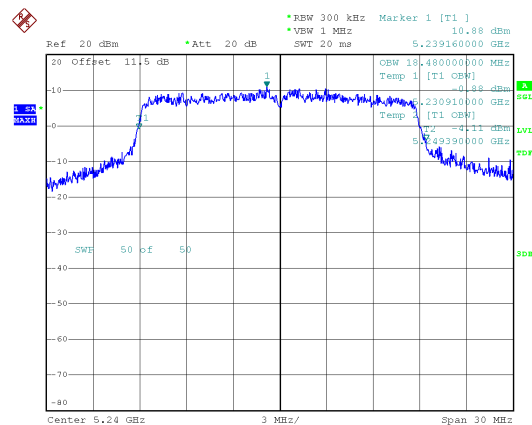
CH40

CH40



CH48

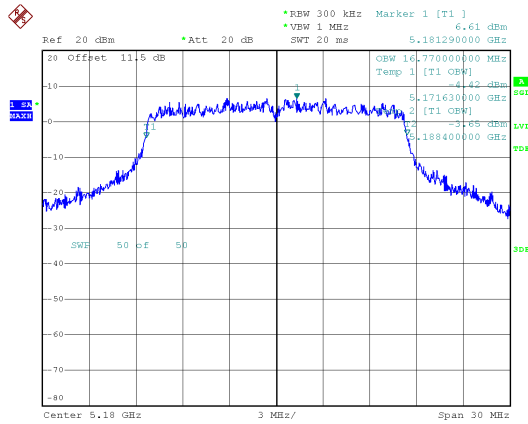
CH48



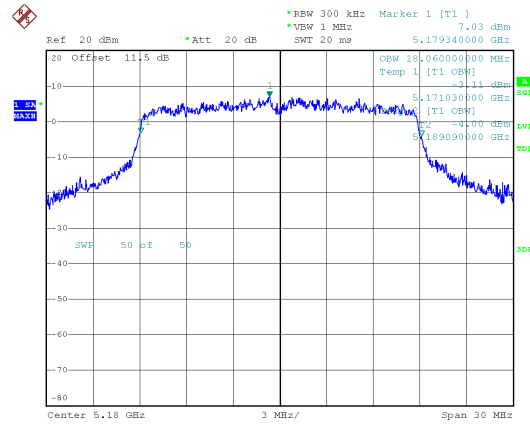




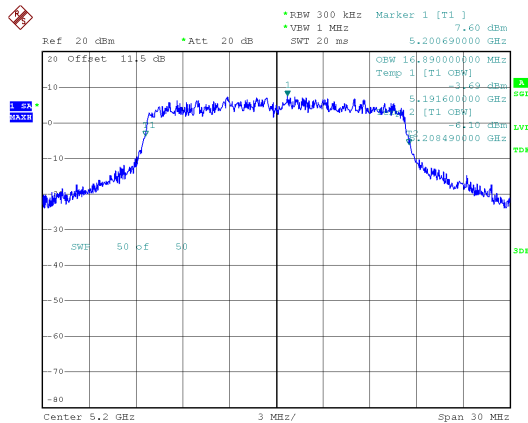
99% Bandwidth Band 1, ANT B
Modulation Type: 802.11a (6Mbps)
CH36



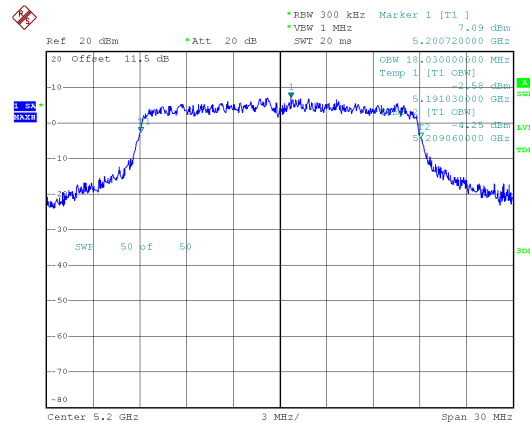
802.11ac VHT20 (6.5Mbps)
CH36



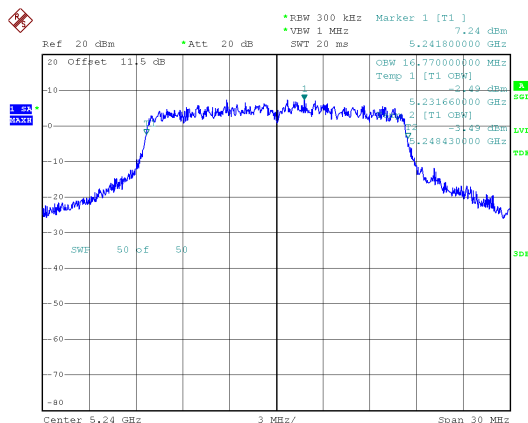
CH40



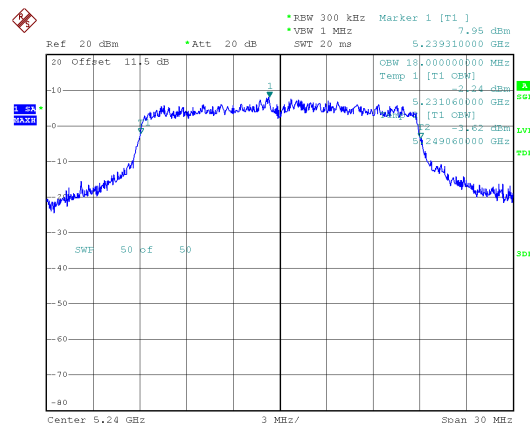
CH40



CH48

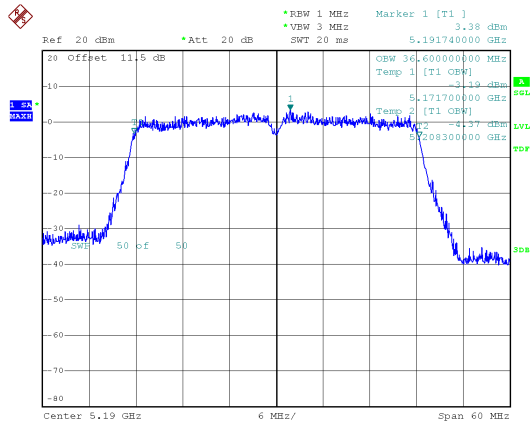
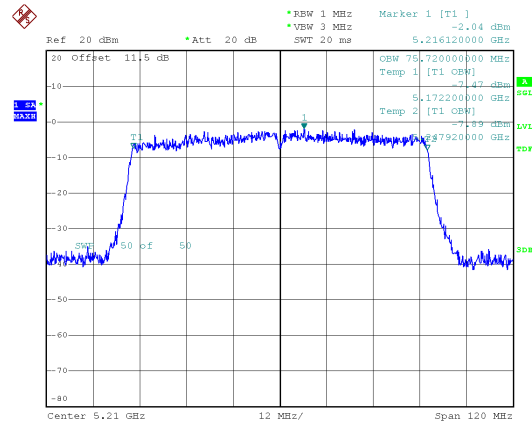


CH48

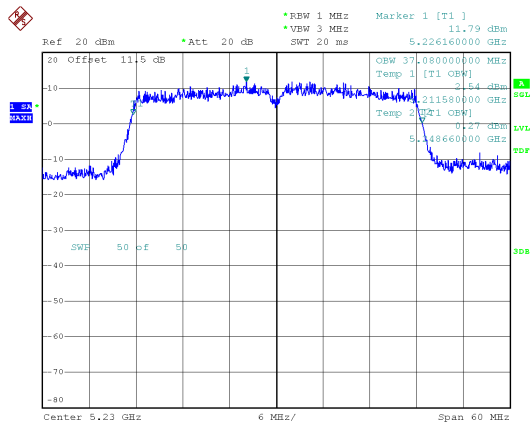




99% Bandwidth Band 1

Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH38Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH42

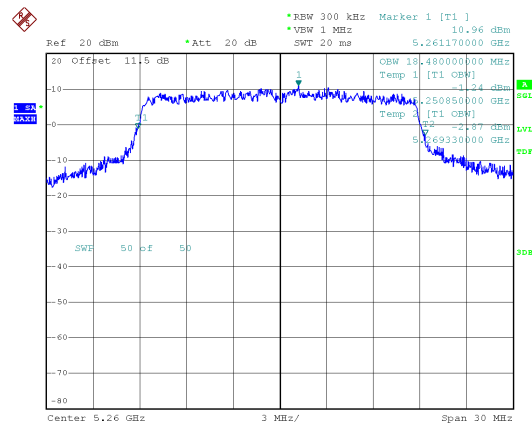
CH46





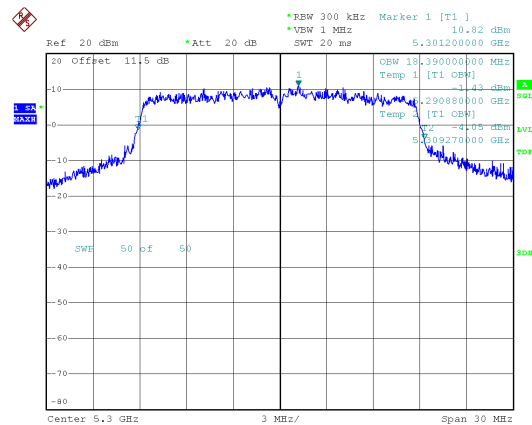
99% Bandwidth Band 2, ANT A
Modulation Type: 802.11a (6Mbps)
CH52

802.11ac VHT20 (6.5Mbps)
CH52



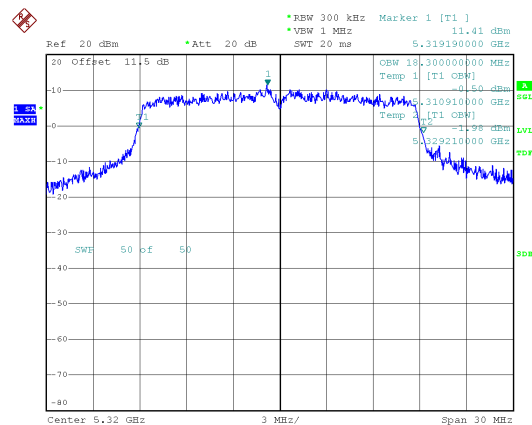
CH60

CH60



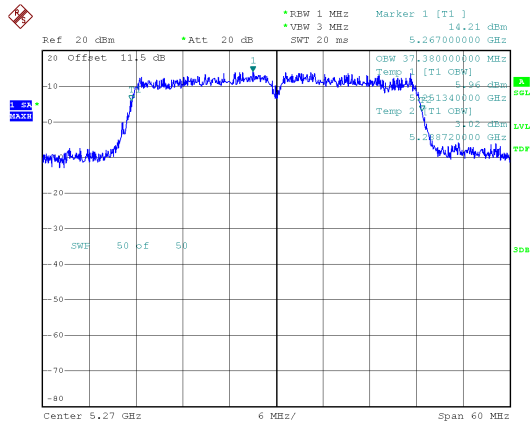
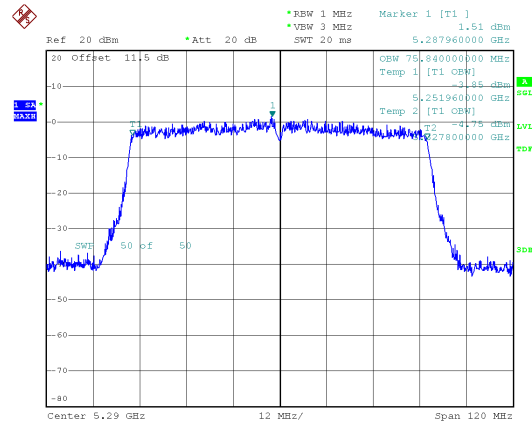
CH64

CH64

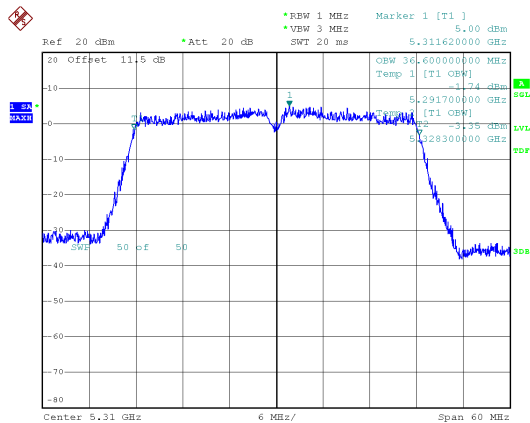




99% Bandwidth Band 2

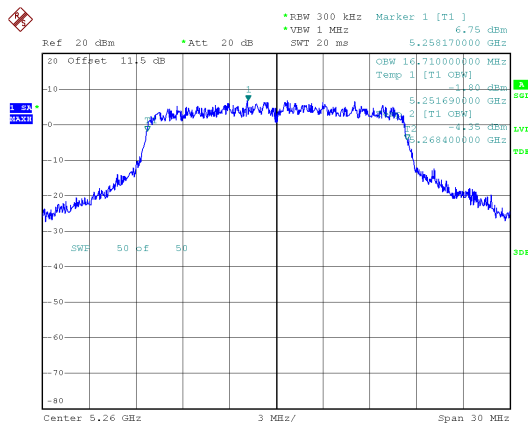
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH54Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH58

CH62

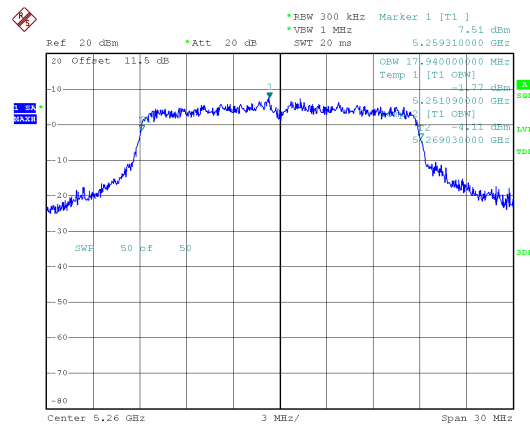




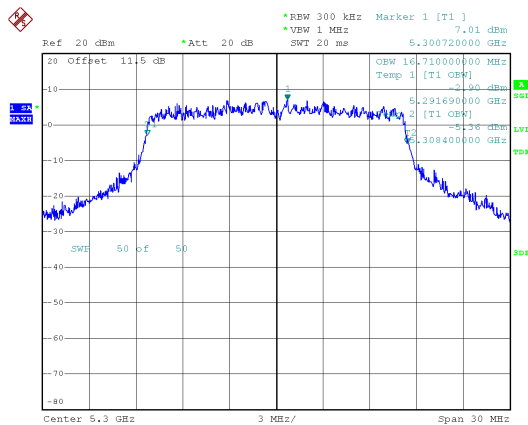
99% Bandwidth Band 2, ANT B
Modulation Type: 802.11a (6Mbps)
CH52



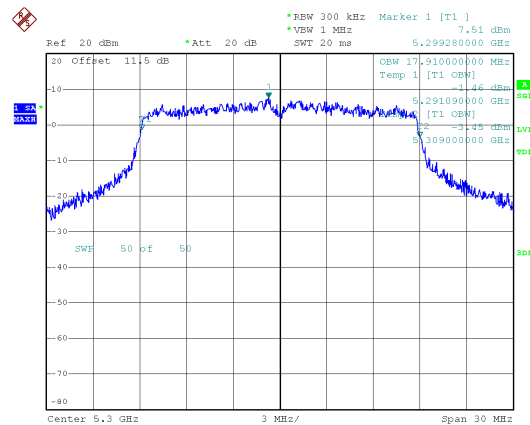
802.11ac VHT20 (6.5Mbps)
CH52



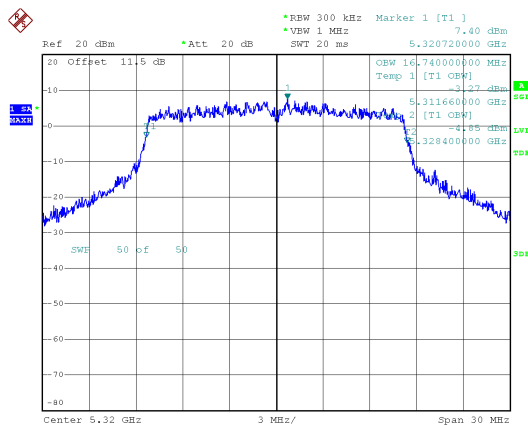
CH60



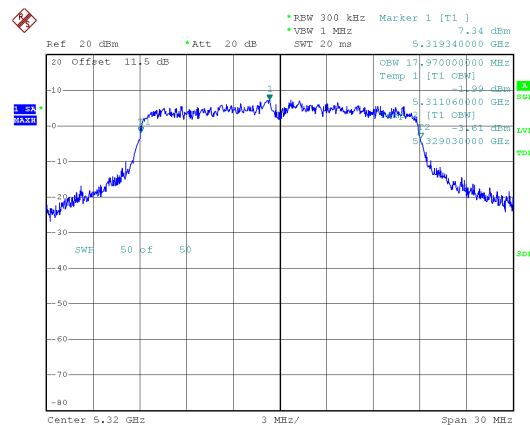
CH60



CH64



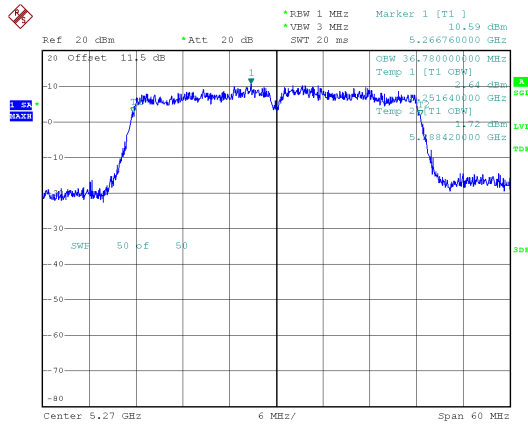
CH64



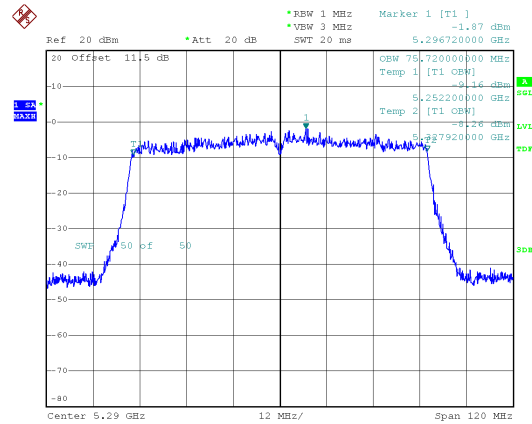


99% Bandwidth Band 2

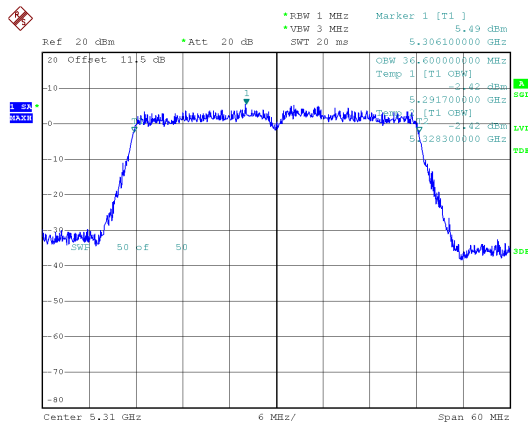
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH54



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH58

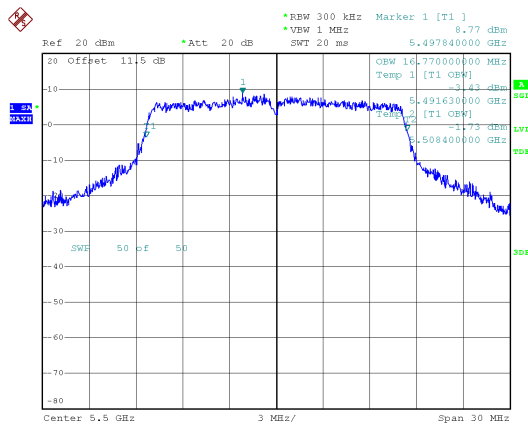


CH62

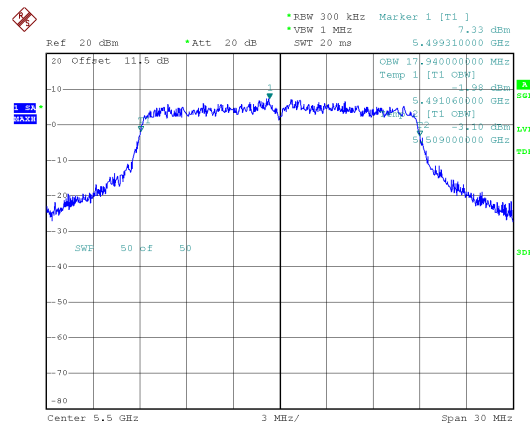




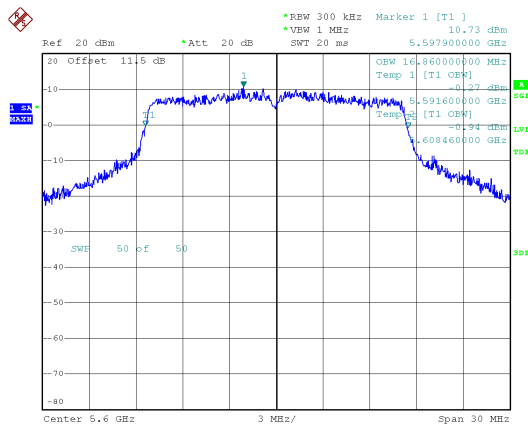
99% Bandwidth Band 3, ANT A
Modulation Type: 802.11a (6Mbps)
CH100



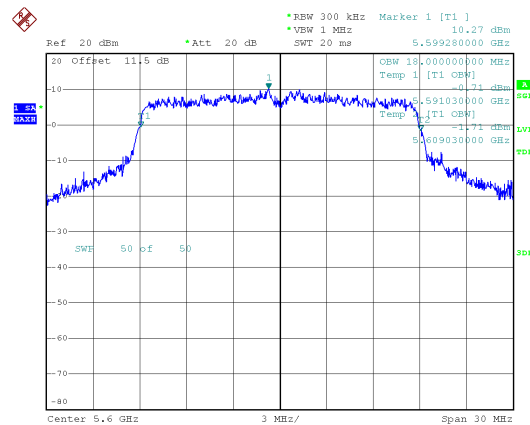
802.11ac VHT20 (6.5Mbps)
CH100



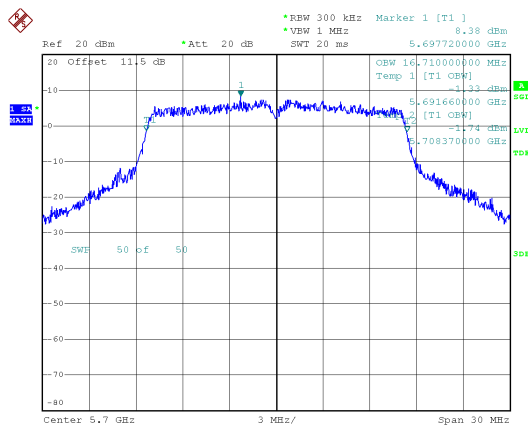
CH120



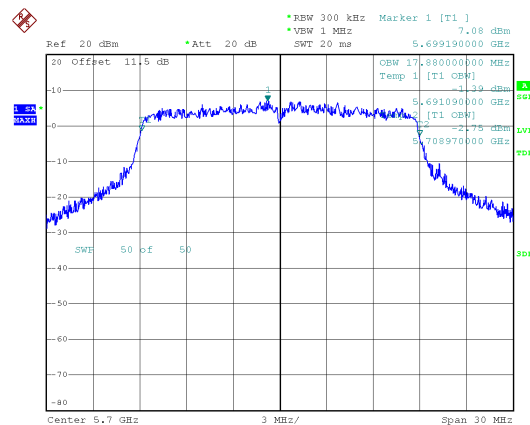
CH120



CH140

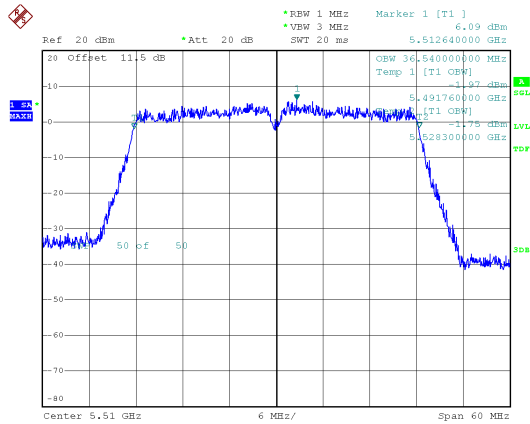
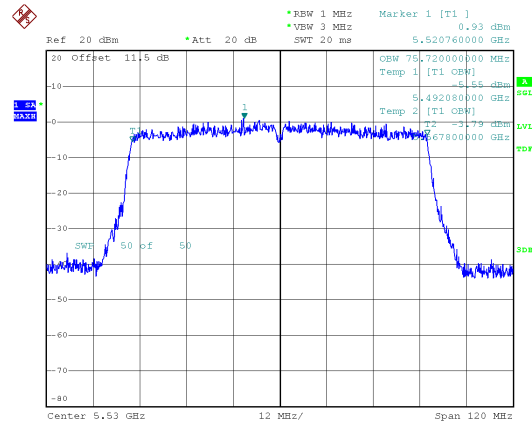


CH140

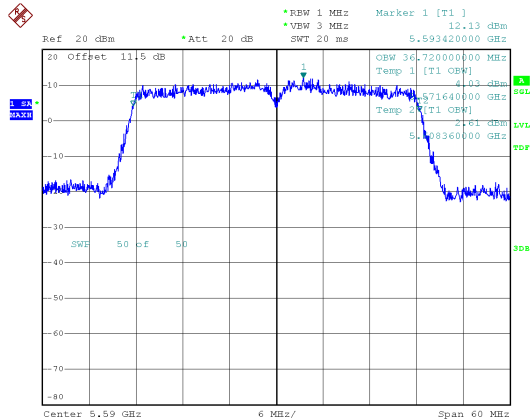




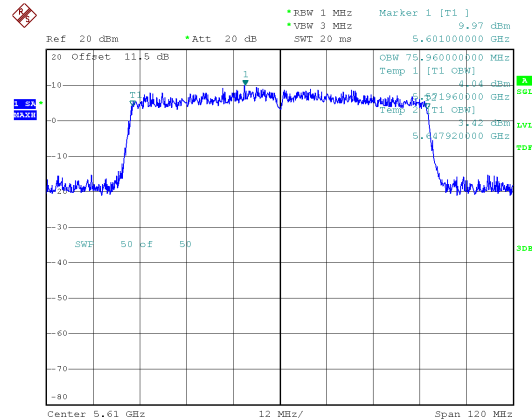
99% Bandwidth Band 3

Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH102Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH106

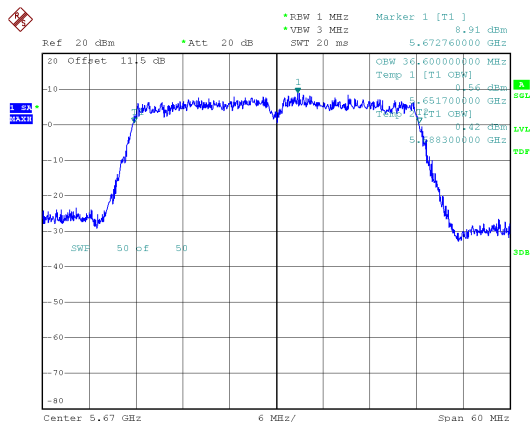
CH118



CH122

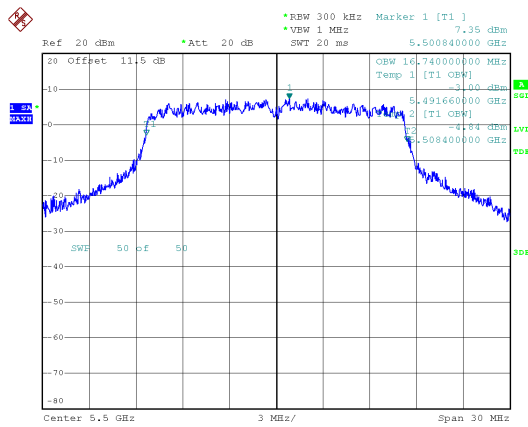


CH134

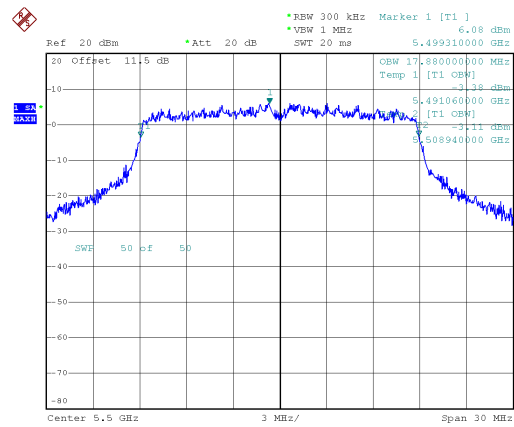




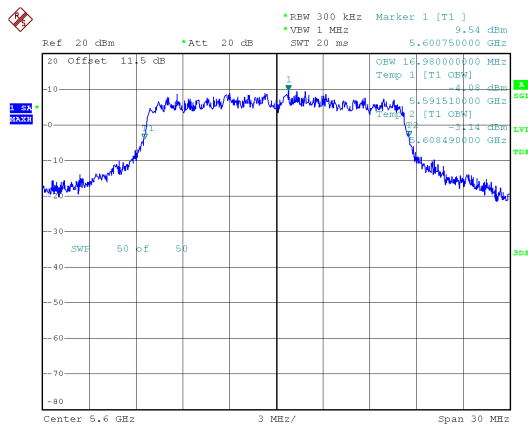
99% Bandwidth Band 3, ANT B
Modulation Type: 802.11a (6Mbps)
CH100



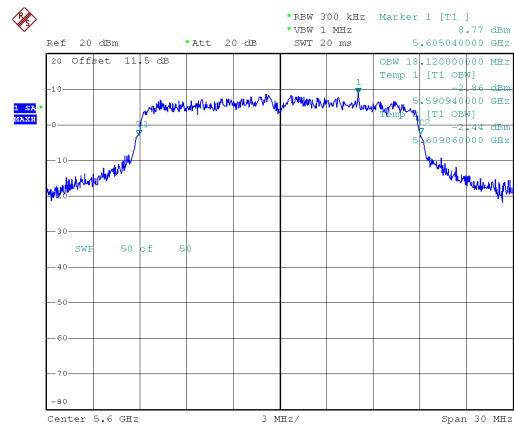
802.11ac VHT20 (6.5Mbps)
CH100



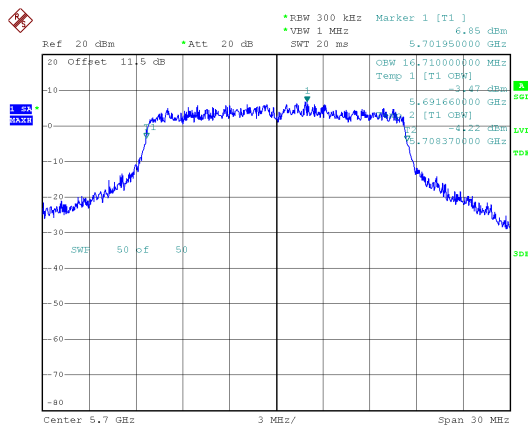
CH120



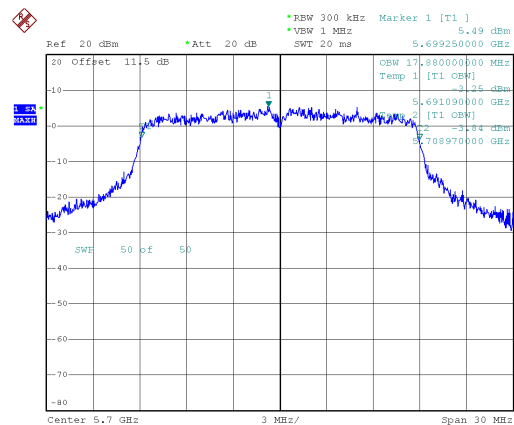
CH120



CH140

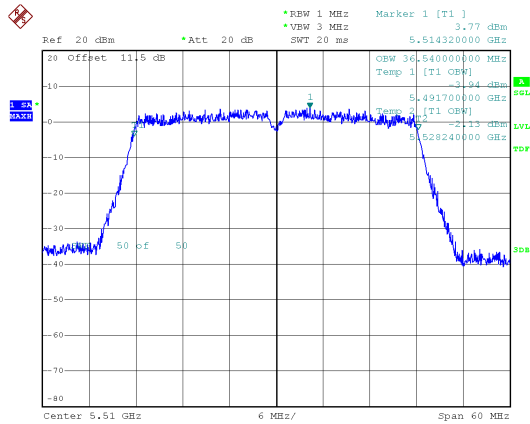
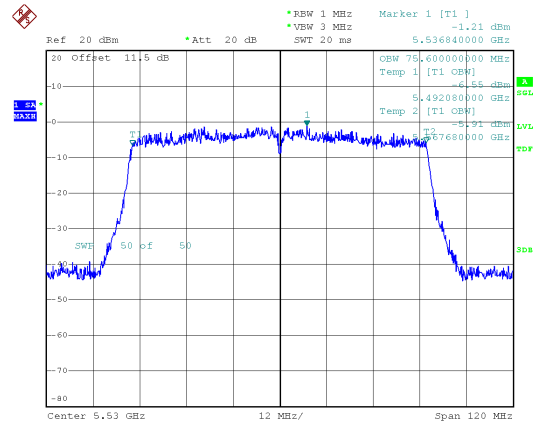


CH140

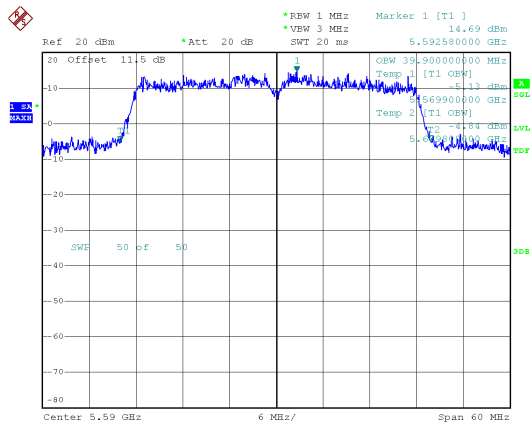




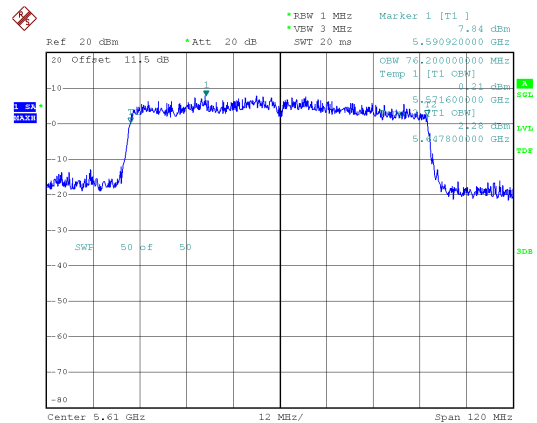
99% Bandwidth Band 3

Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH102Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH106

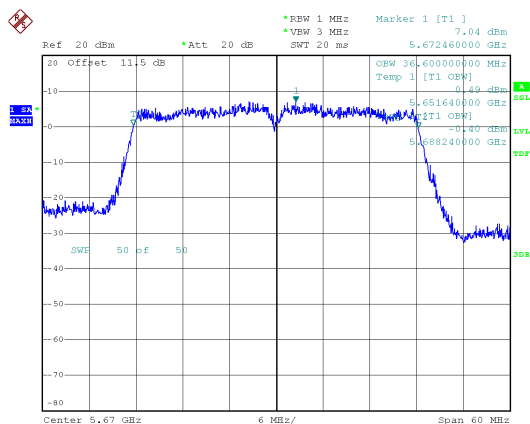
CH118



CH122



CH134





10. Average Power

10.1. Test Limit

Output Power:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).
☐	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
☒	client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



Frequency Band		Limit
☒	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☒	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

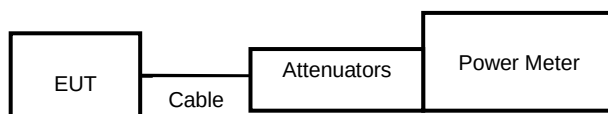
10.2.Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 12.3

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3.Test Setup Layout





10.4. Test Result and Data

In the 5.2G Band

Modulation Type	Data Rate	Conducted Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)		Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A	ANT B			
11a	6 Mbps	16	36	5180	17.88	14.46	19.51	89.302	24.00
11a	6 Mbps	17	40	5200	18.54	15.39	20.25	106.044	24.00
11a	6 Mbps	17	48	5240	18.21	14.98	19.90	97.699	24.00
11ac VHT20	NSS1-MCS0	17	36	5180	18.62	15.18	20.24	105.739	24.00
11ac VHT20	NSS1-MCS0	17	40	5200	18.55	15.20	20.20	104.727	24.00
11ac VHT20	NSS1-MCS0	18	48	5240	19.08	15.79	20.75	118.841	24.00
11ac VHT40	NSS1-MCS0	10.5	38	5190	12.61	9.22	14.25	26.595	24.00
11ac VHT40	NSS1-MCS0	18.5	46	5230	20.44	16.99	22.06	160.666	24.00
11ac VHT80	NSS1-MCS0	9.5	42	5210	11.38	7.22	12.79	19.013	24.00

In the 5.3G Band

Modulation Type	Data Rate	Conducted Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)		Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A	ANT B			
11a	6 Mbps	17	52	5260	18.33	14.43	19.81	95.810	24.00
11a	6 Mbps	17	60	5300	18.37	14.76	19.94	98.629	24.00
11a	6 Mbps	17	64	5320	18.14	14.55	19.72	93.673	24.00
11ac VHT20	NSS1-MCS0	18	52	5260	19.20	15.40	20.71	117.850	24.00
11ac VHT20	NSS1-MCS0	18	60	5300	19.17	15.33	20.67	116.723	24.00
11ac VHT20	NSS1-MCS0	18	64	5320	18.90	15.47	20.53	112.862	24.00
11ac VHT40	NSS1-MCS0	18	54	5270	20.06	15.88	21.46	140.117	24.00
11ac VHT40	NSS1-MCS0	12	62	5310	13.61	10.40	15.31	33.926	24.00
11ac VHT80	NSS1-MCS0	8	58	5290	9.82	6.05	11.34	13.621	24.00



In the 5.5G Band

Modulation Type	Data Rate	Conducted Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)		Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A	ANT B			
11a	6 Mbps	16	100	5500	16.05	14.59	18.39	69.046	24.00
11a	6 Mbps	18	120	5600	17.27	16.14	19.75	94.448	24.00
11a	6 Mbps	16	140	5700	15.47	13.75	17.70	58.951	24.00
11ac VHT20	NSS1-MCS0	15	100	5500	14.92	13.63	17.33	54.113	24.00
11ac VHT20	NSS1-MCS0	18	120	5600	17.14	15.96	19.60	91.206	24.00
11ac VHT20	NSS1-MCS0	15.5	140	5700	14.66	12.85	16.86	48.517	24.00
11ac VHT40	NSS1-MCS0	10	102	5510	10.50	8.71	12.71	18.650	24.00
11ac VHT40	NSS1-MCS0	18	118	5590	18.08	16.63	20.43	110.294	24.00
11ac VHT40	NSS1-MCS0	14	134	5670	13.95	12.31	16.22	41.853	24.00
11ac VHT80	NSS1-MCS0	8.5	106	5530	8.49	6.65	10.68	11.687	24.00
11ac VHT80	NSS1-MCS0	17.5	122	5610	17.23	15.88	19.62	91.570	24.00

In the 5.8G Band

Modulation Type	Data Rate	Conducted Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)		Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A	ANT B			
11a	6 Mbps	21	149	5745	19.31	17.50	21.51	141.544	30.00
11a	6 Mbps	21	157	5785	19.98	17.07	21.77	150.474	30.00
11a	6 Mbps	21	165	5825	17.24	18.78	21.09	128.476	30.00
11ac VHT20	NSS1-MCS0	21	149	5745	20.61	19.18	22.96	197.874	30.00
11ac VHT20	NSS1-MCS0	21	157	5785	20.17	19.82	23.01	199.932	30.00
11ac VHT20	NSS1-MCS0	21	165	5825	18.45	20.16	22.40	173.737	30.00
11ac VHT40	NSS1-MCS0	20	151	5755	20.31	19.11	22.76	188.869	30.00
11ac VHT40	NSS1-MCS0	20	159	5795	19.97	19.49	22.75	188.232	30.00
11ac VHT80	NSS1-MCS0	17.5	155	5775	16.70	15.87	19.32	85.410	30.00



11. Power Spectral Density

11.1. Test Limit

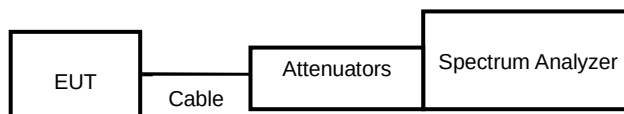
PSD:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	17 dBm/MHz
☐	Indoor access point	17 dBm/MHz
☐	Fixed point-to-point access points	17 dBm/MHz
☒	Mobile and portable client devices	11 dBm/MHz
☐	5.725~5.85 GHz	11 dBm/MHz
☐	5.470-5.725 GHz	11 dBm/MHz
☒	5.725~5.85 GHz	30 dBm/500kHz

11.2. Test Procedure

Reference to KDB789033 D02 General UNII Test Procedures New Rules v02r01

11.3. Test Setup Layout





11.4. Test Result and Data

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Meas PSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B				
11a	36	5180	6.81	3.47	8.46	0.00	8.46	9.68
11a	40	5200	7.72	4.33	9.36	0.00	9.36	9.68
11a	48	5240	7.21	3.78	8.84	0.00	8.84	9.68
11ac VHT20	36	5180	7.46	4.02	9.08	0.00	9.08	9.68
11ac VHT20	40	5200	7.19	4.00	8.89	0.00	8.89	9.68
11ac VHT20	48	5240	7.64	4.46	9.35	0.00	9.35	9.68
11ac VHT40	38	5190	-1.43	-4.51	0.31	0.15	0.46	9.68
11ac VHT40	46	5230	6.17	2.91	7.85	0.15	8.00	9.68
11ac VHT80	42	5210	-5.90	-10.29	-4.55	0.33	-4.22	9.68

In the 5.3G Band

Modulation Type	Channel	Frequency (MHz)	Meas PSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B				
11a	52	5260	7.23	3.77	8.85	0.00	8.85	9.66
11a	60	5300	7.39	3.86	8.98	0.00	8.98	9.66
11a	64	5320	7.05	3.89	8.76	0.00	8.76	9.66
11ac VHT20	52	5260	7.71	4.09	9.28	0.00	9.28	9.66
11ac VHT20	60	5300	7.80	4.26	9.39	0.00	9.39	9.66
11ac VHT20	64	5320	7.52	4.36	9.23	0.00	9.23	9.66
11ac VHT40	54	5270	5.57	1.64	7.05	0.15	7.20	9.66
11ac VHT40	62	5310	-0.89	-3.67	0.95	0.15	1.10	9.66
11ac VHT80	58	5290	-7.61	-11.18	-6.03	0.33	-5.70	9.66



In the 5.5G Band

Modulation Type	Channel (MHz)	Frequency (MHz)	Meas PSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B				
11a	100	5500	5.71	4.30	8.07	0.00	8.07	9.79
11a	120	5600	7.32	5.89	9.67	0.00	9.67	9.79
11a	140	5700	4.97	3.31	7.23	0.00	7.23	9.79
11ac VHT20	100	5500	4.30	3.06	6.73	0.00	6.73	9.79
11ac VHT20	120	5600	6.77	5.71	9.28	0.00	9.28	9.79
11ac VHT20	140	5700	4.01	2.51	6.33	0.00	6.33	9.79
11ac VHT40	102	5510	-3.14	-4.49	-0.75	0.15	-0.60	9.79
11ac VHT40	118	5590	4.68	3.21	7.02	0.15	7.17	9.79
11ac VHT40	134	5670	-0.28	-1.68	2.09	0.15	2.24	9.79
11ac VHT80	106	5530	-8.11	-9.82	-5.87	0.33	-5.54	9.79
11ac VHT80	122	5610	0.77	-1.07	2.96	0.33	3.29	9.79

In the 5.8G Band

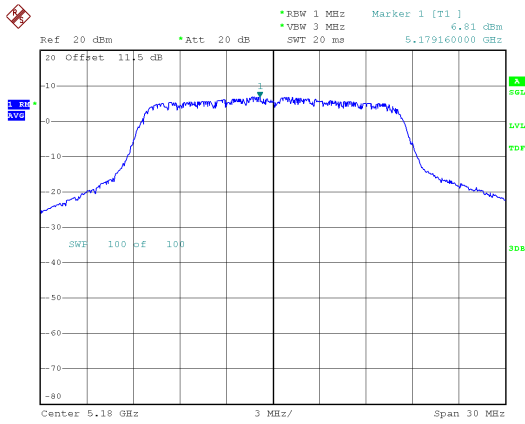
Modulation Type	Channel (MHz)	Frequency (MHz)	Meas PSD (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log(500KHz/RBW) CF (dB)	Total Corr'd PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)
			ANT A	ANT B					
11a	149	5745	10.03	8.74	12.44	0.00	-3.01	9.43	28.83
11a	157	5785	9.50	7.45	11.61	0.00	-3.01	8.59	28.83
11a	165	5825	5.57	9.30	10.83	0.00	-3.01	7.82	28.83
11ac VHT20	149	5745	9.61	6.10	11.21	0.00	-3.01	8.20	28.83
11ac VHT20	157	5785	9.26	7.15	11.34	0.00	-3.01	8.33	28.83
11ac VHT20	165	5825	5.29	8.96	10.51	0.00	-3.01	7.50	28.83
11ac VHT40	151	5755	6.11	2.73	7.75	0.15	-3.01	4.89	28.83
11ac VHT40	159	5795	5.64	5.33	8.50	0.15	-3.01	5.64	28.83
11ac VHT80	155	5775	-0.25	-0.72	2.53	0.33	-3.01	-0.15	28.83



Band 1, ANT A

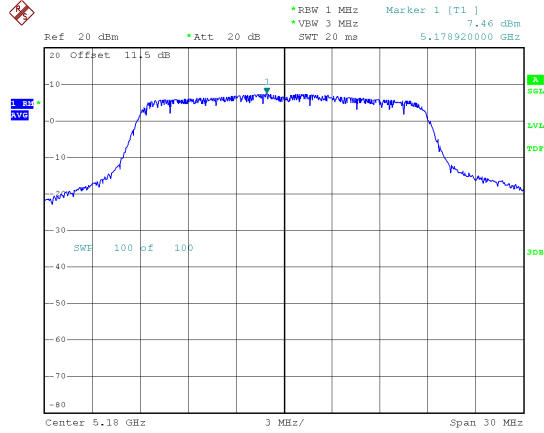
Modulation Type: 802.11a (6Mbps)

CH36

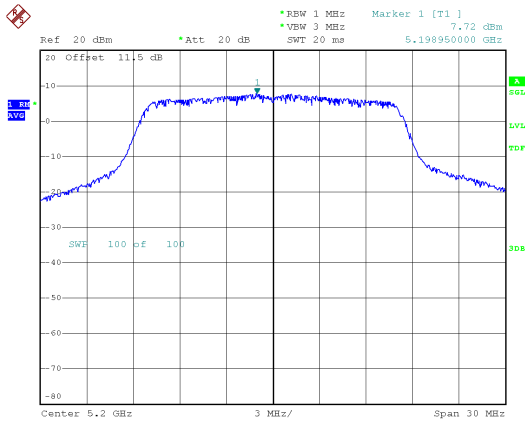


Modulation Type: 802.11ac VHT20 (6.5Mbps)

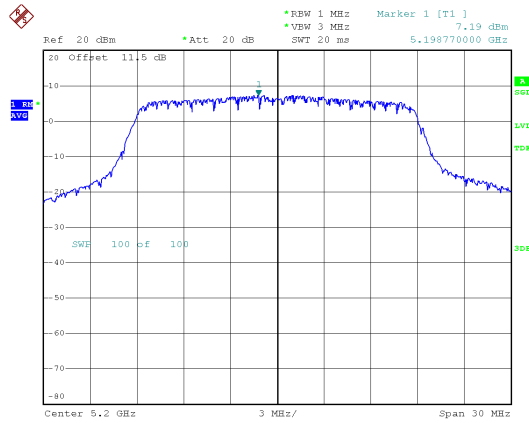
CH36



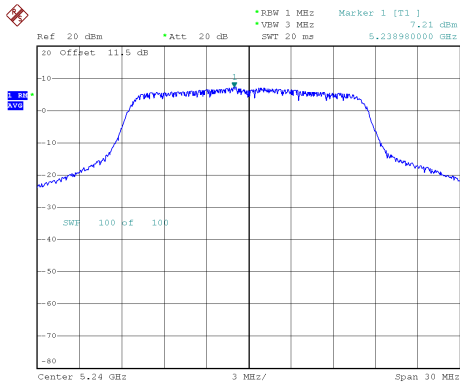
CH40



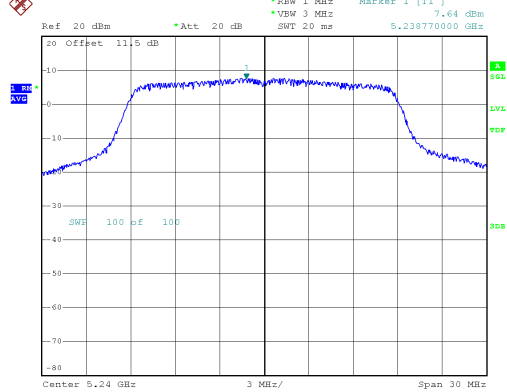
CH40



CH48



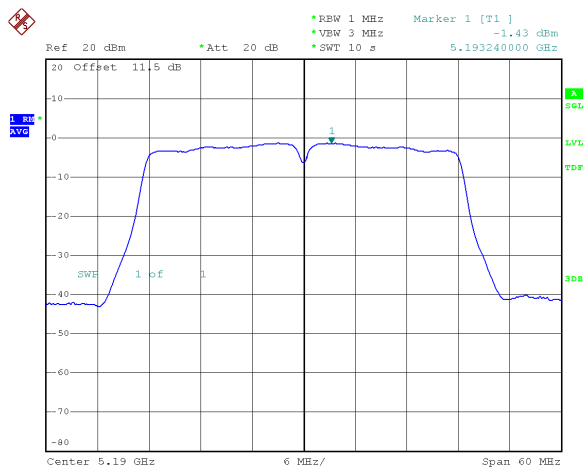
CH48





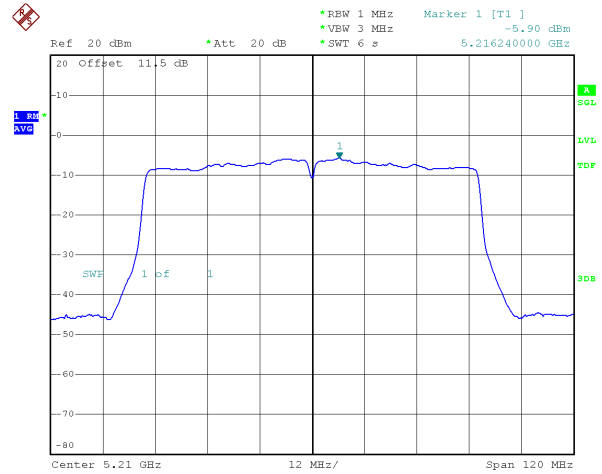
Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38

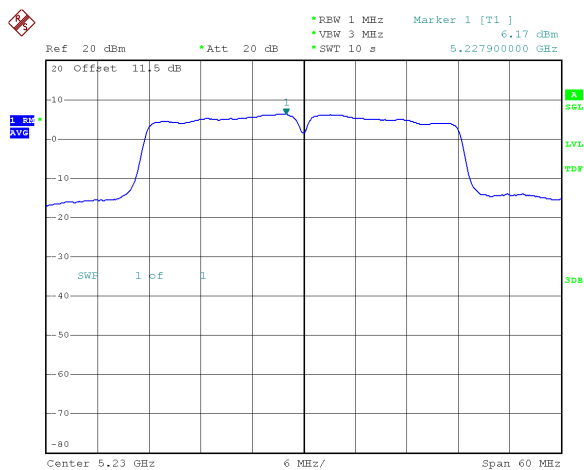


Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

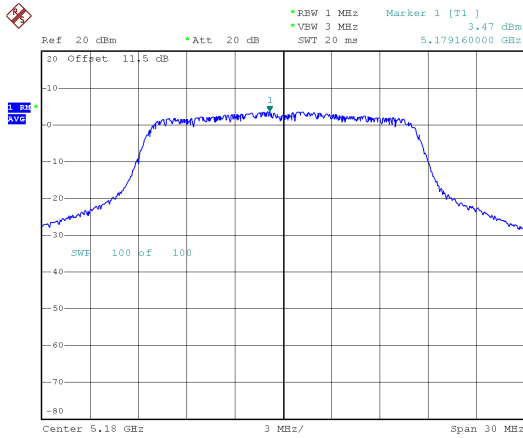




Band 1, ANT B

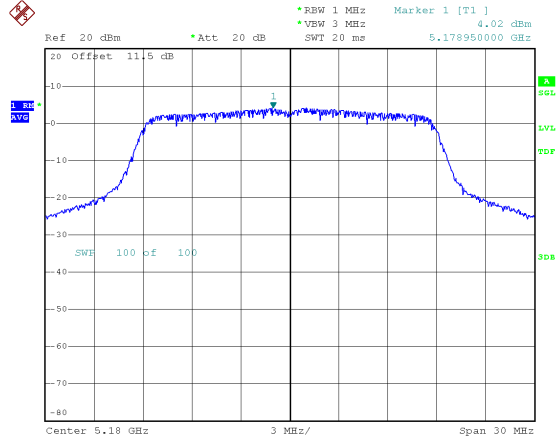
Modulation Type: 802.11a (6Mbps)

CH36

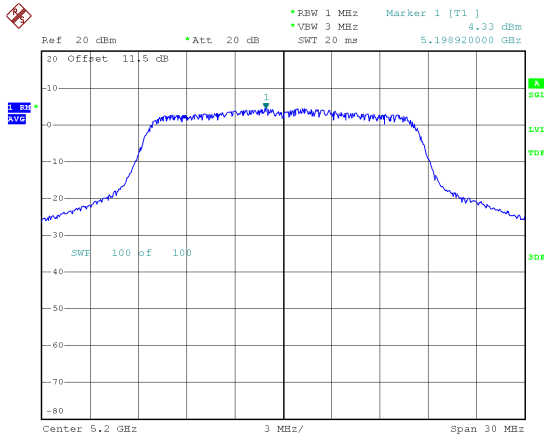


Modulation Type: 802.11ac VHT20 (6.5Mbps)

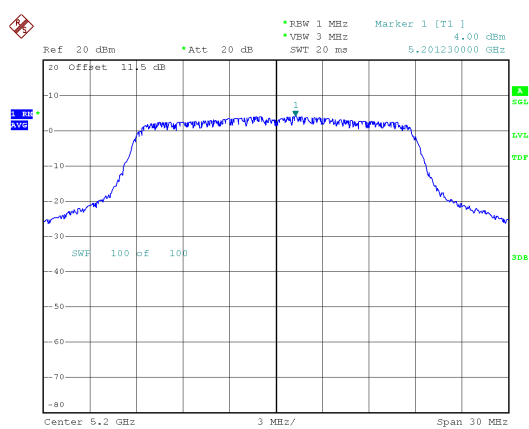
CH36



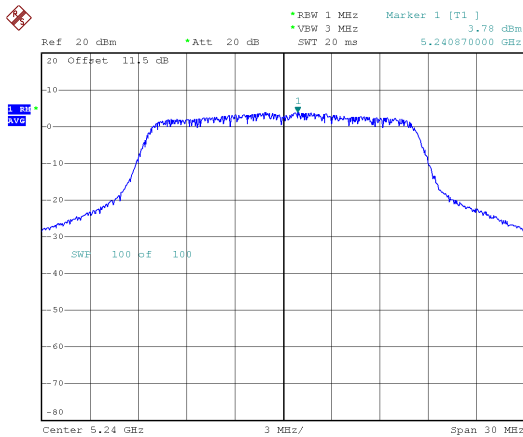
CH40



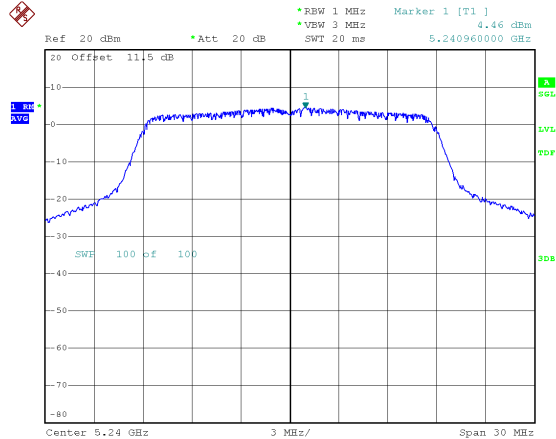
CH40



CH48



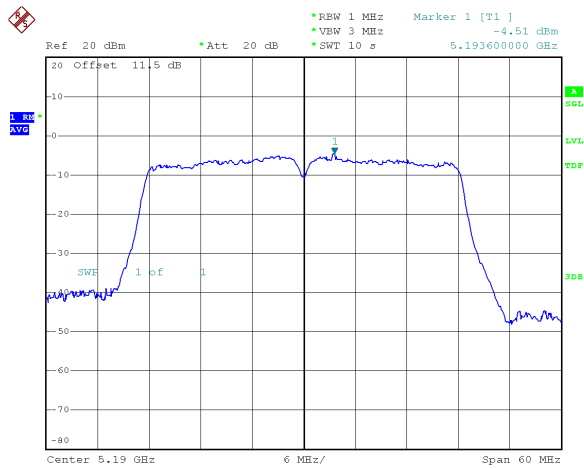
CH48





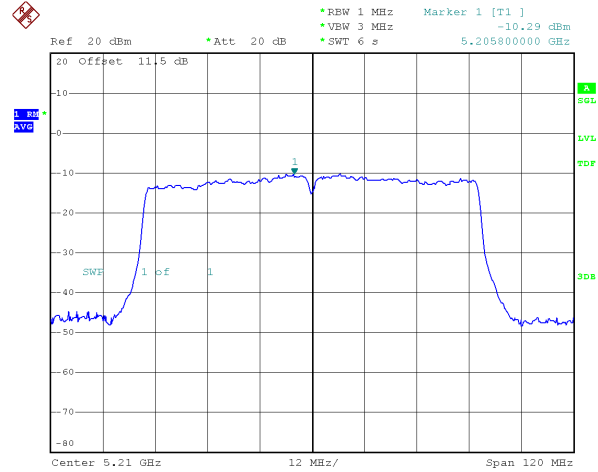
Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38

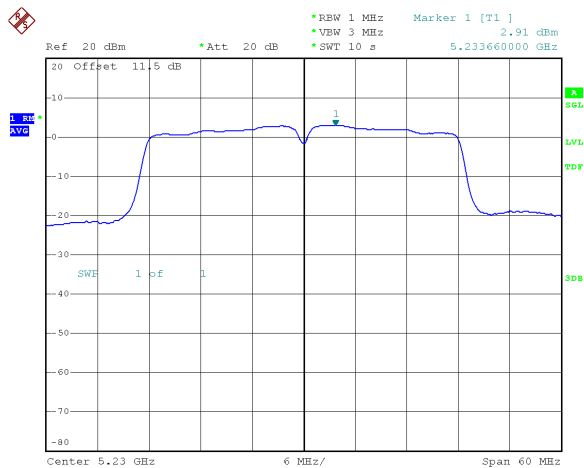


Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42

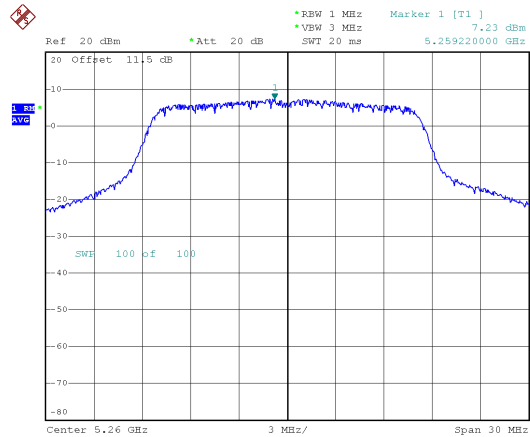


CH46

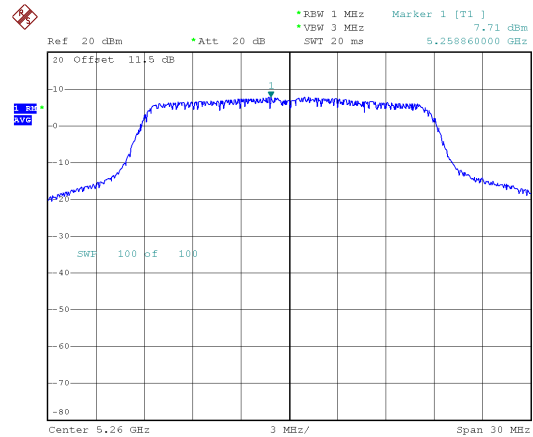




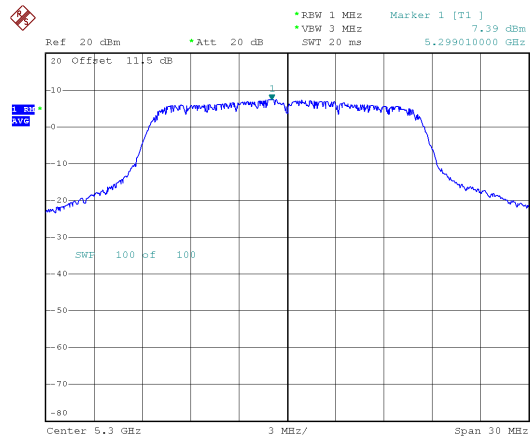
Band 2, ANT A
Modulation Type: 802.11a (6Mbps)
CH52



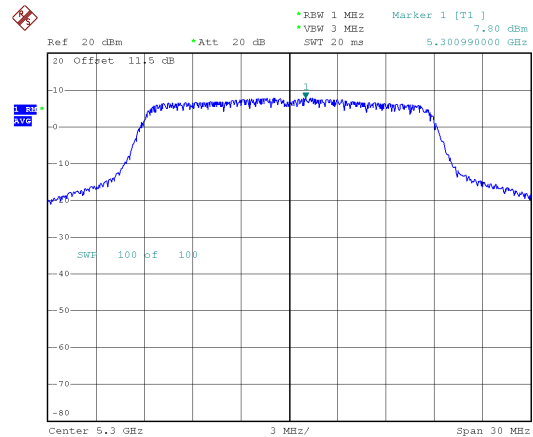
802.11ac VHT20 (6.5Mbps)
CH52



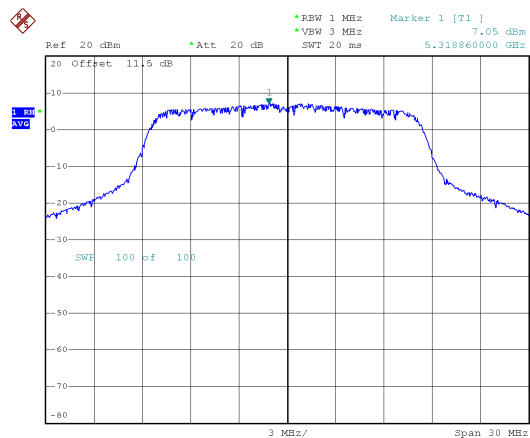
CH60



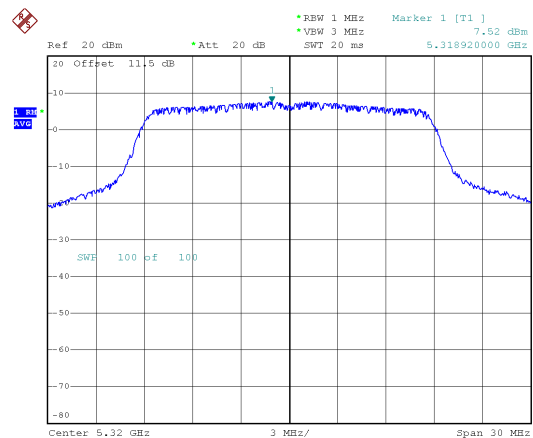
CH60



CH64

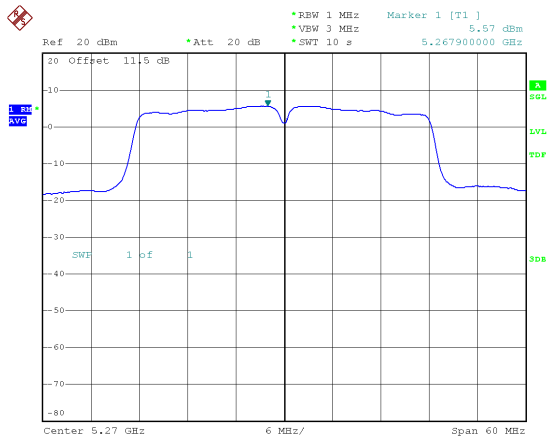


CH64

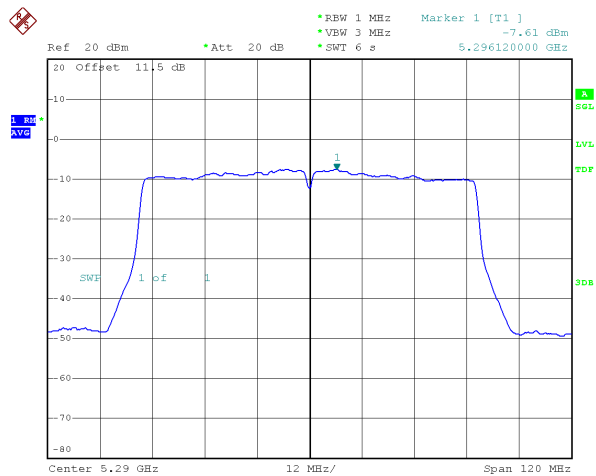




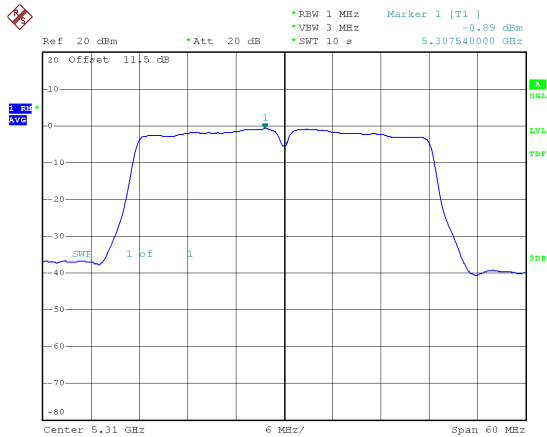
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH54



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH58

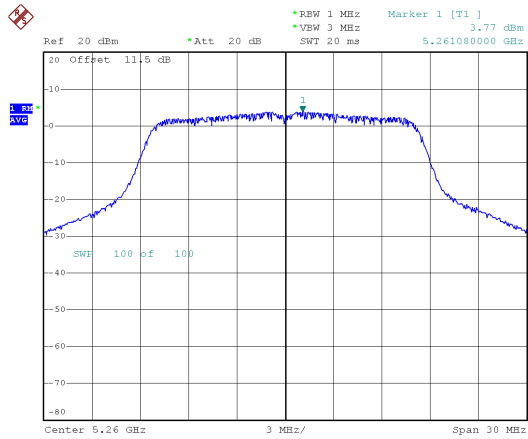


CH62

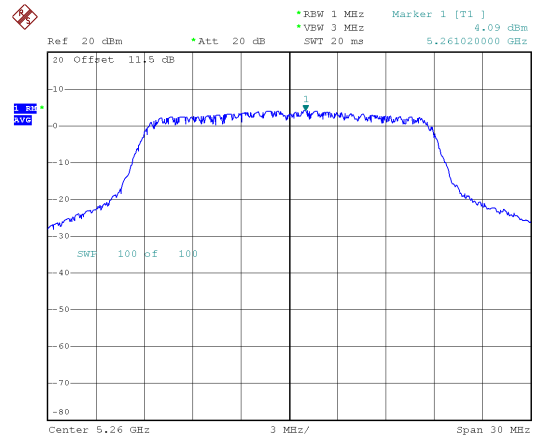




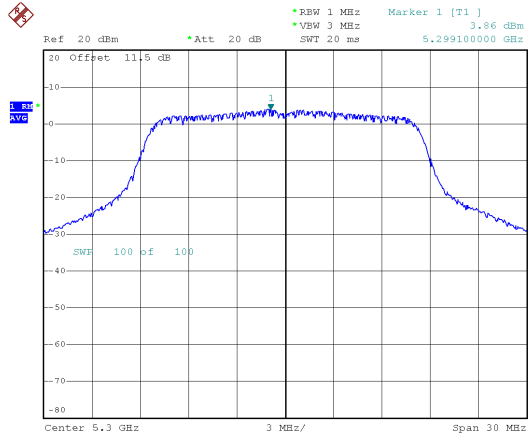
Band 2, ANT B
Modulation Type: 802.11a (6Mbps)
CH52



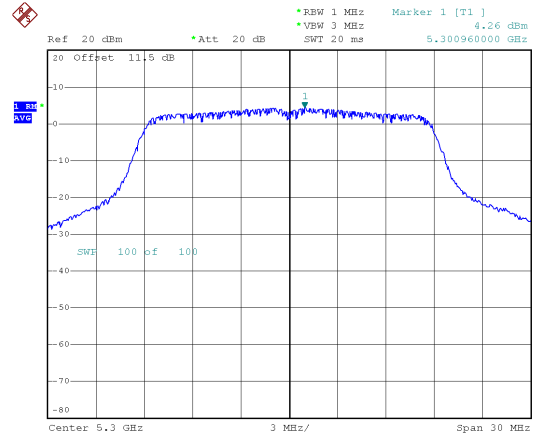
802.11ac VHT20 (6.5Mbps)
CH52



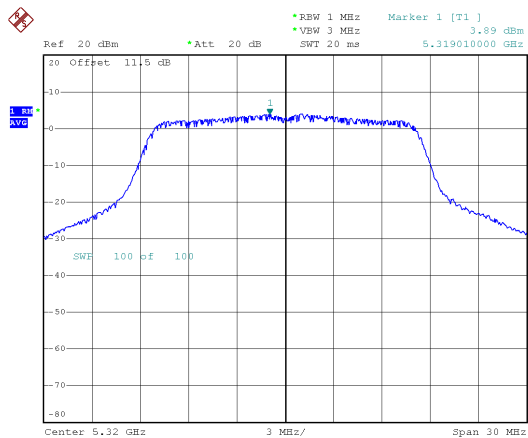
CH60



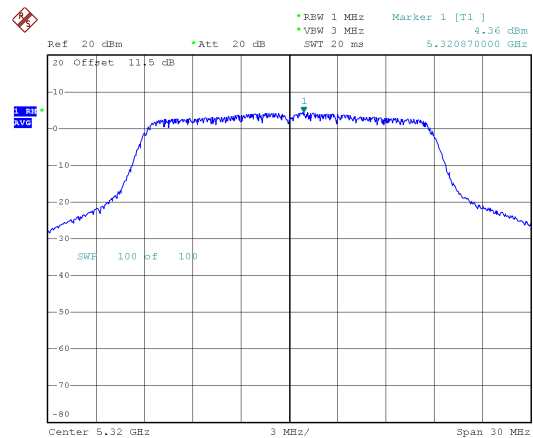
CH60



CH64

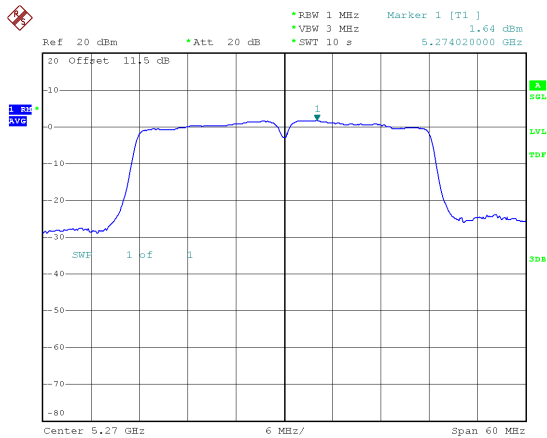


CH64

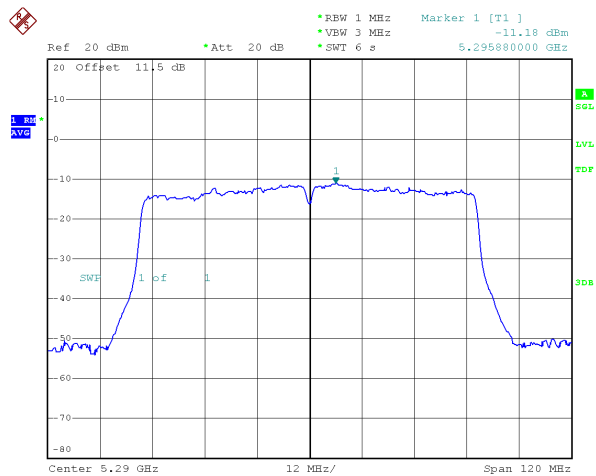




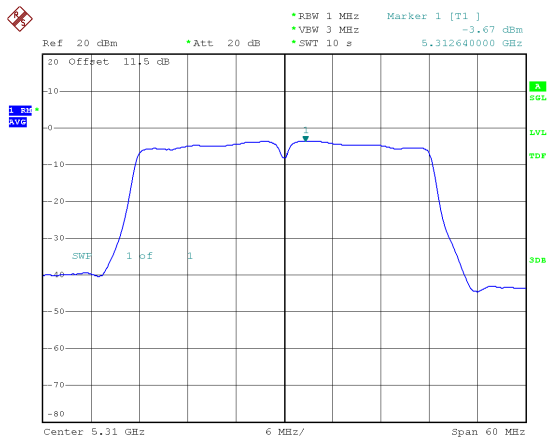
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH54



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH58



CH62

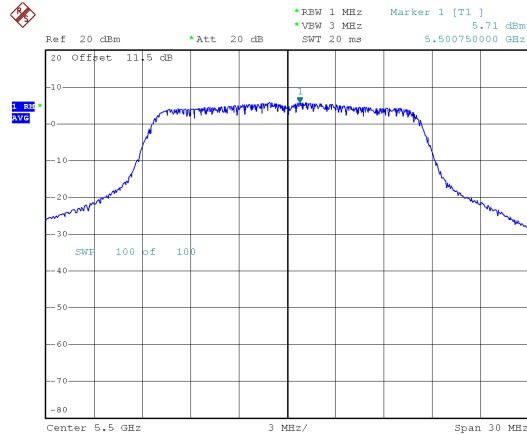




Band 3, ANT A

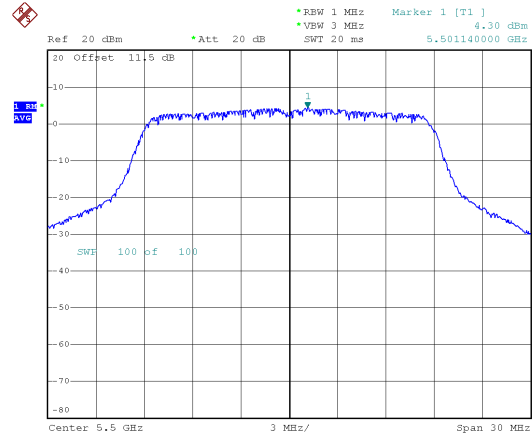
Modulation Type: 802.11a (6Mbps)

CH100

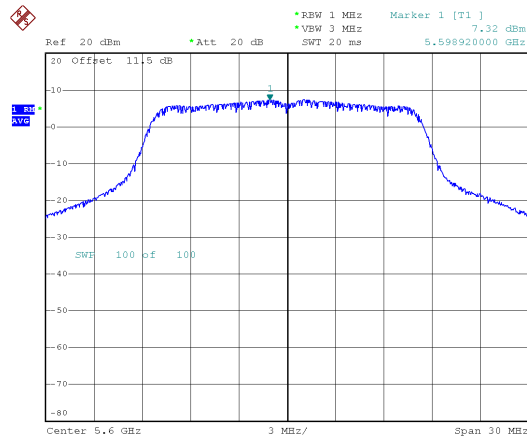


802.11ac VHT20 (6.5Mbps)

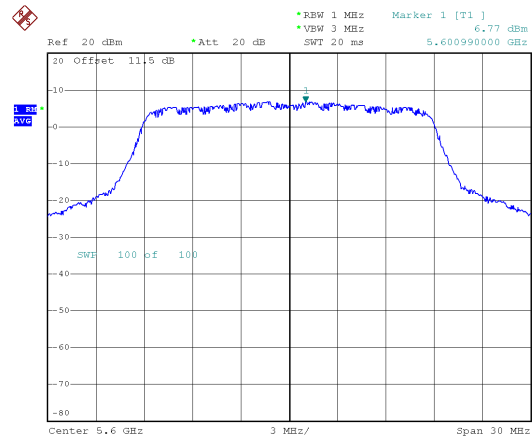
CH100



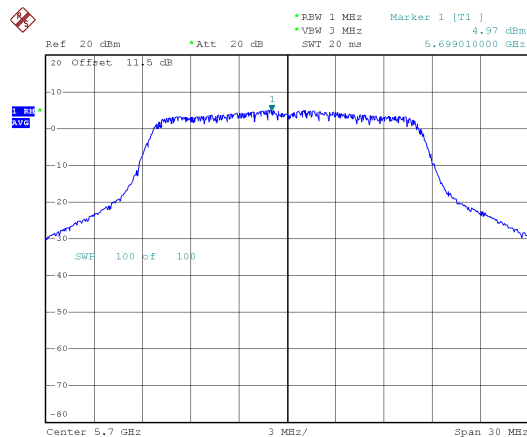
CH120



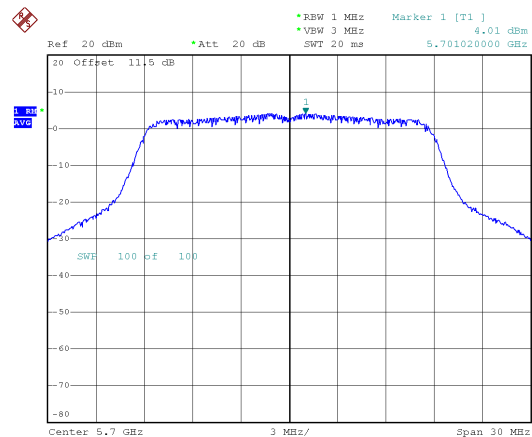
CH120



CH140

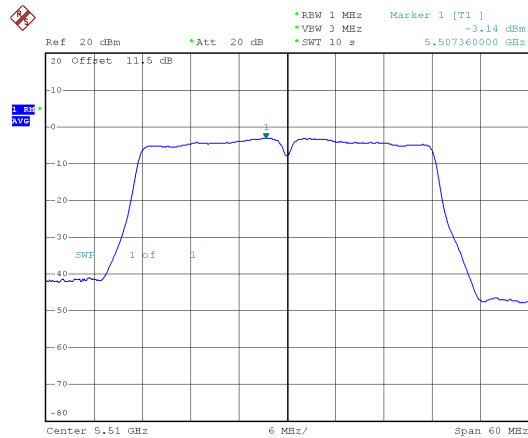


CH140

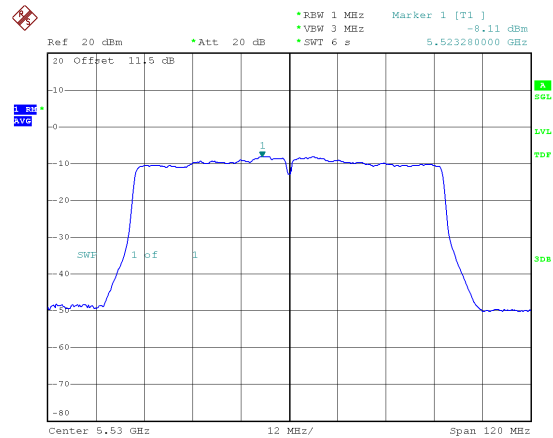




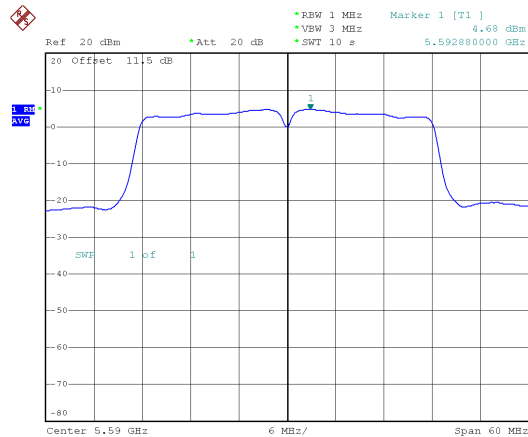
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH102



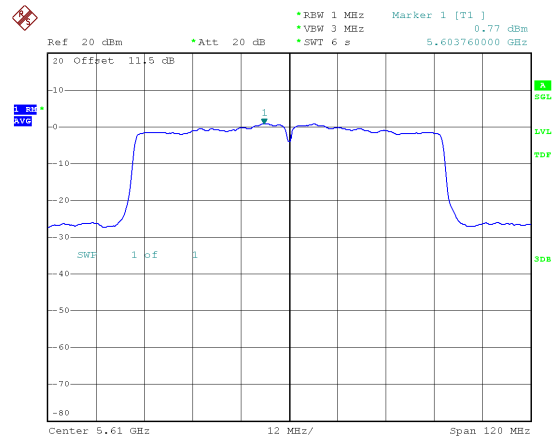
Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH106



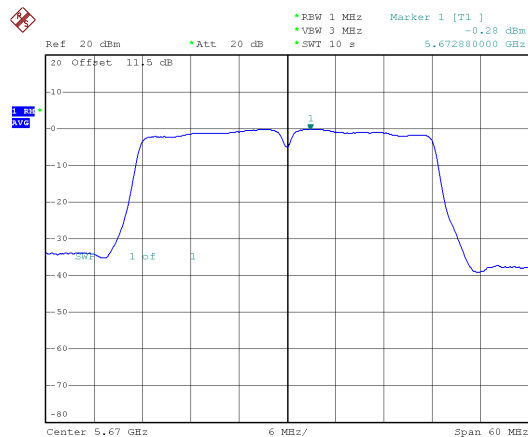
CH118



CH122



CH134

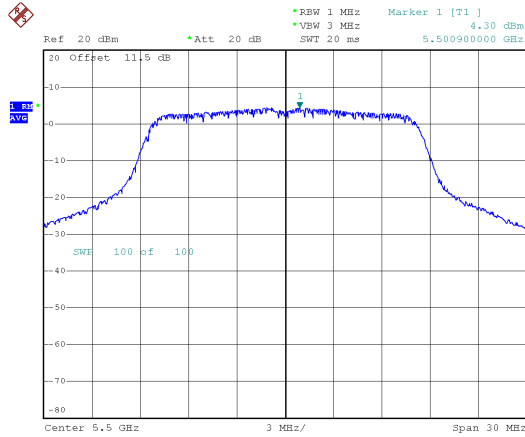




Band 3,ANT B

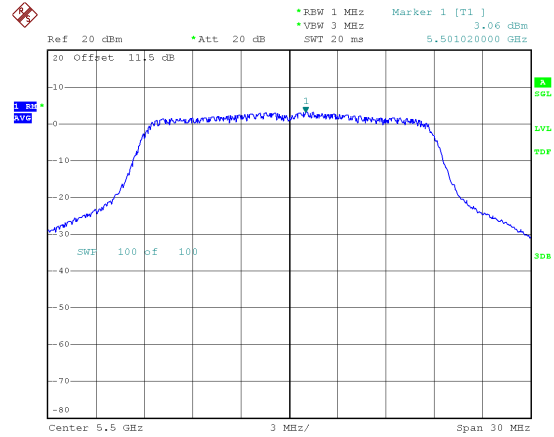
Modulation Type: 802.11a (6Mbps)

CH100

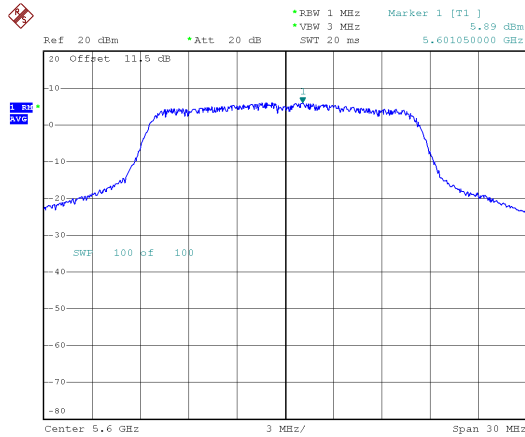


802.11ac VHT20 (6.5Mbps)

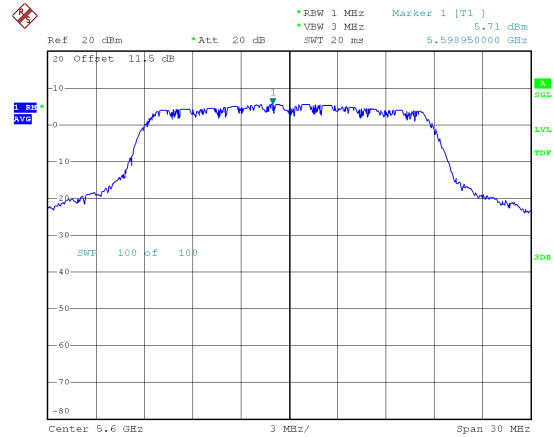
CH100



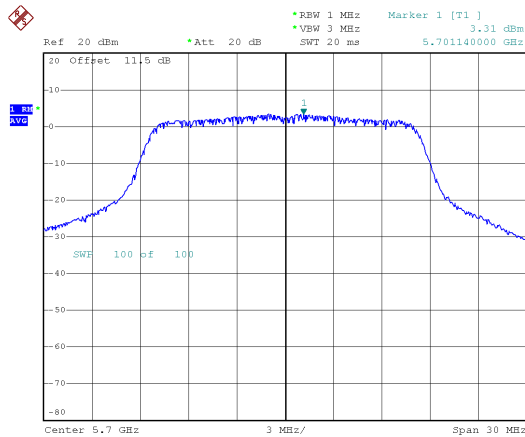
CH120



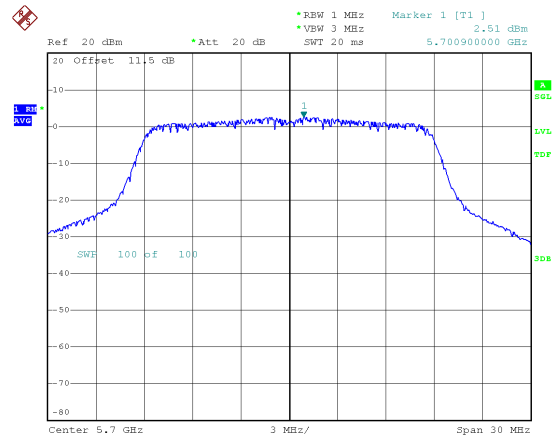
CH120



CH140

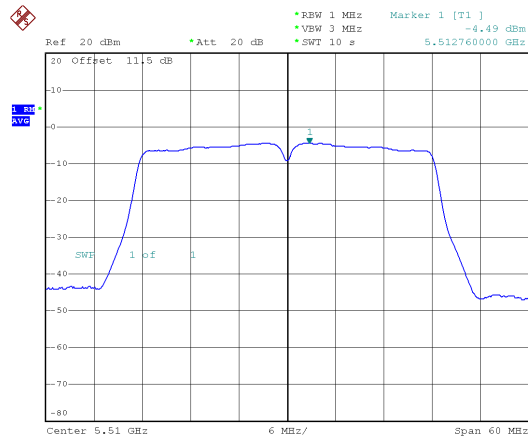


CH140

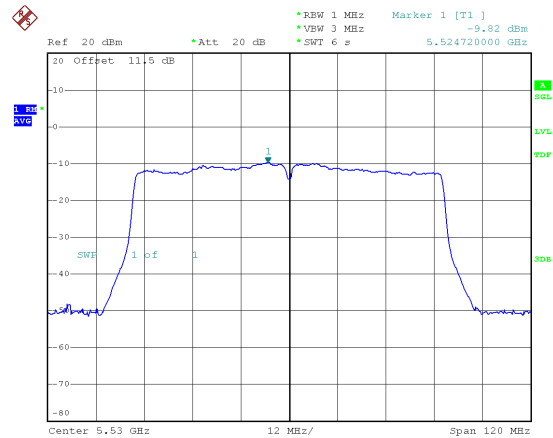




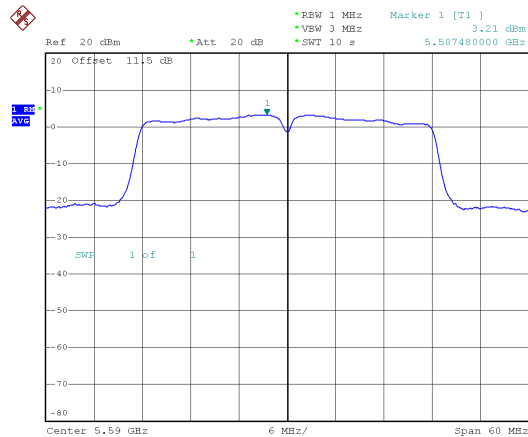
Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH102



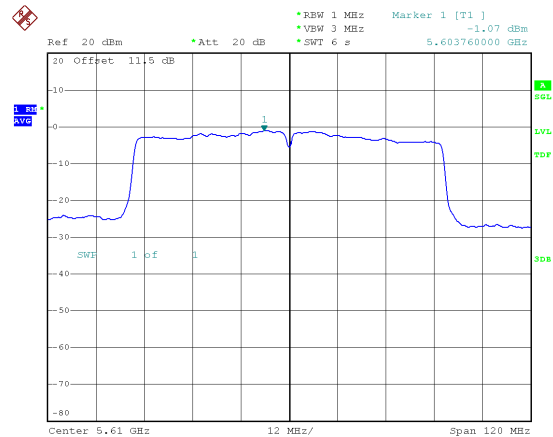
Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH106



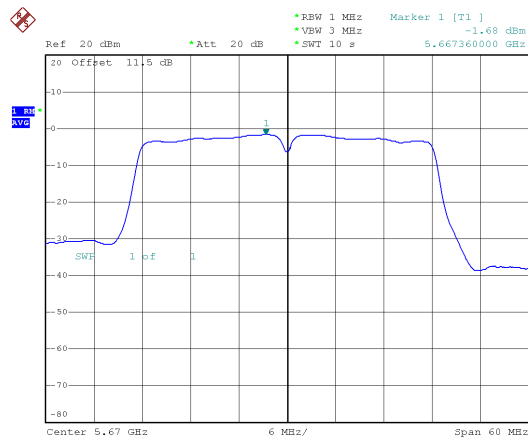
CH118



CH122



CH134

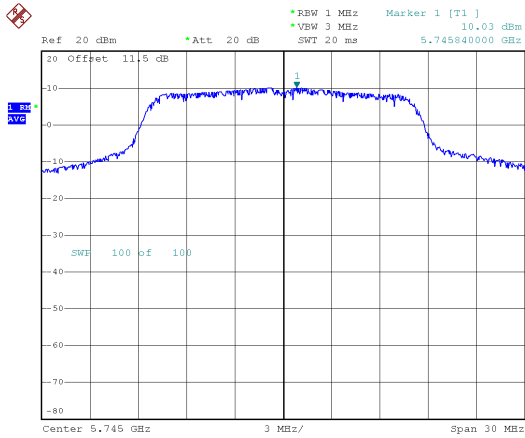




Band 4, ANT A

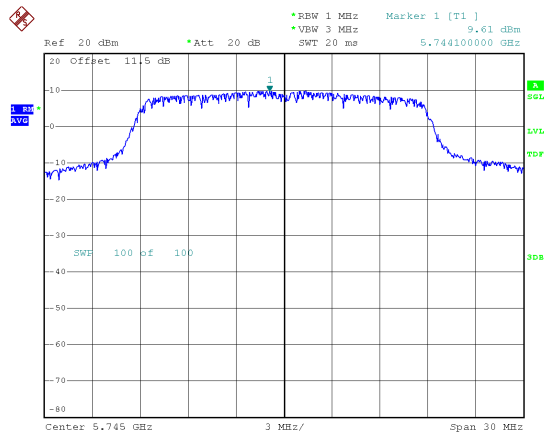
Modulation Type: 802.11a (6Mbps)

CH149

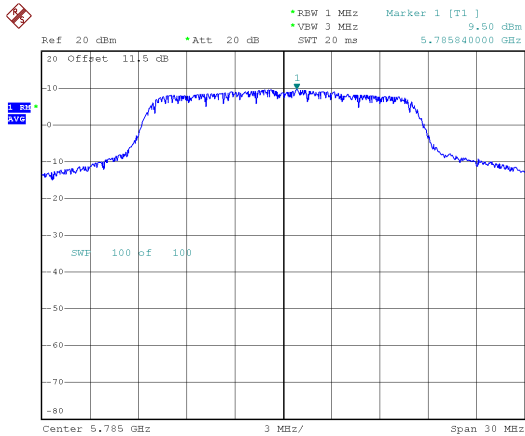


Modulation Type: 802.11ac VHT20 (6.5Mbps)

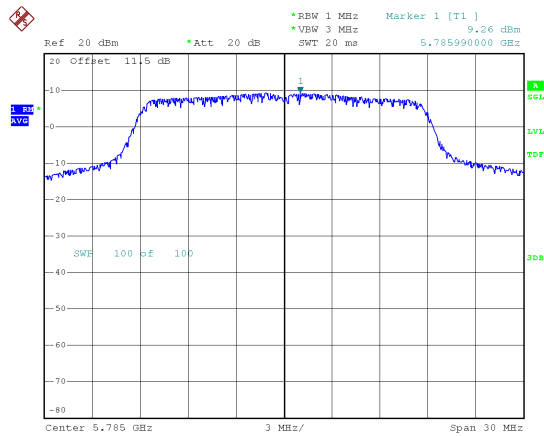
CH149



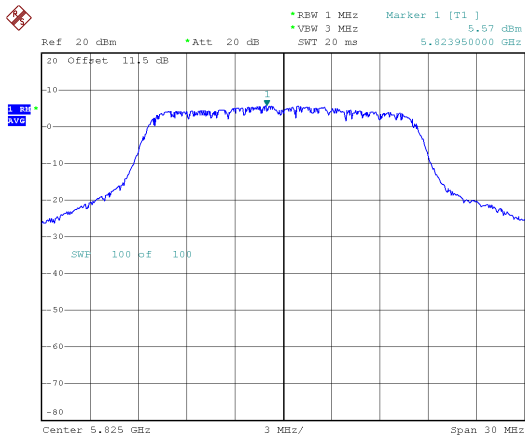
CH157



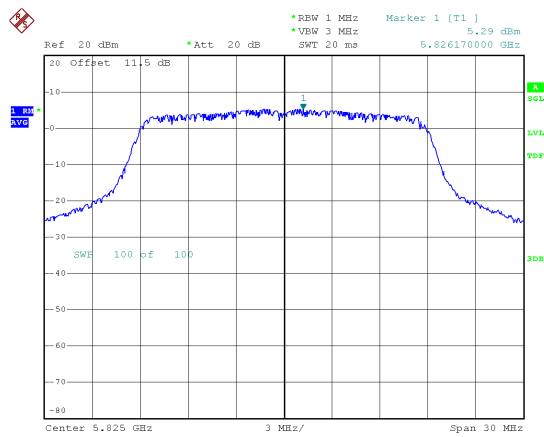
CH157



CH165



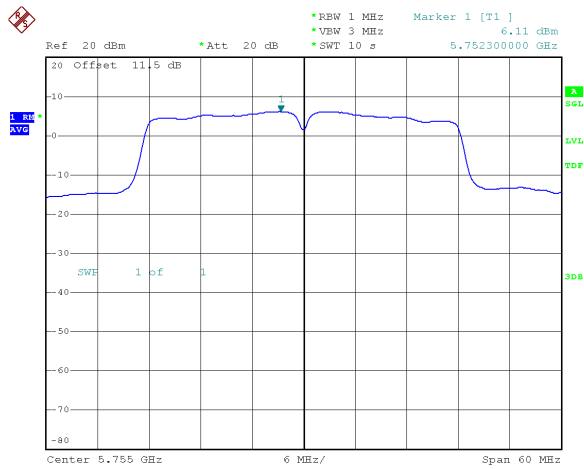
CH165





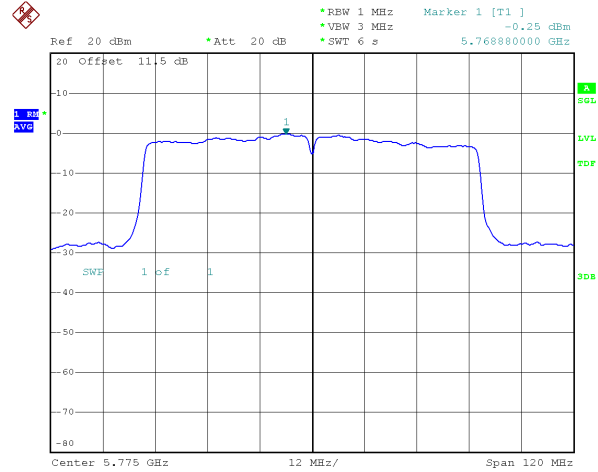
Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH151

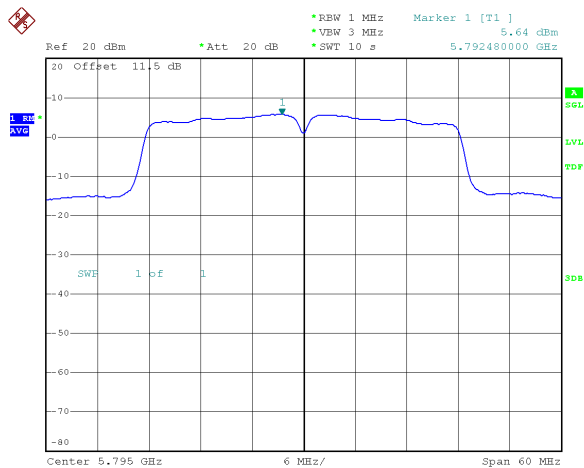


Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH155



CH159

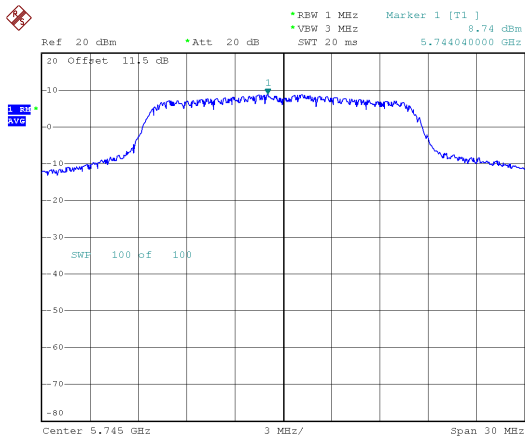




Band 4, ANT B

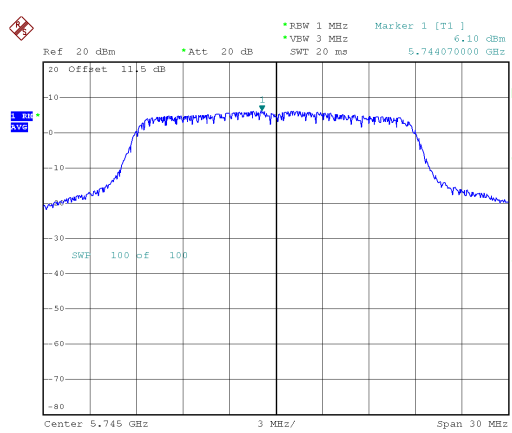
Modulation Type: 802.11a (6Mbps)

CH149

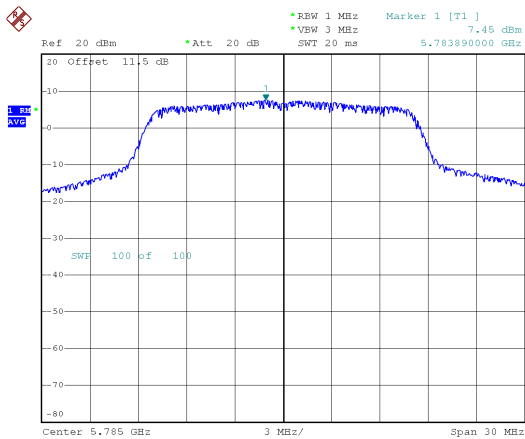


Modulation Type: 802.11ac VHT20 (6.5Mbps)

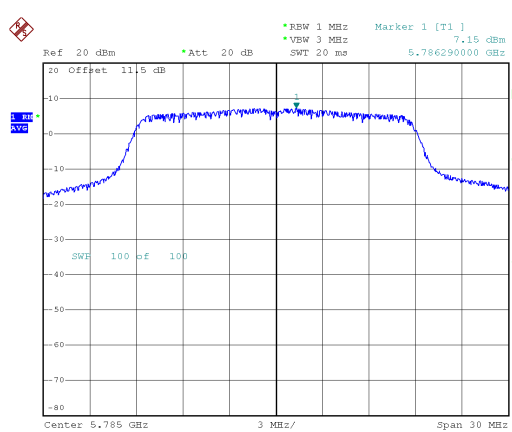
CH149



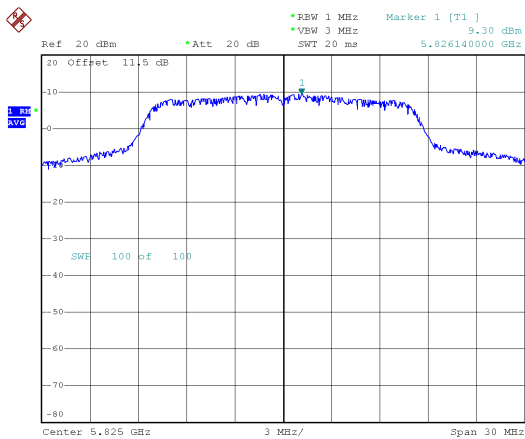
CH157



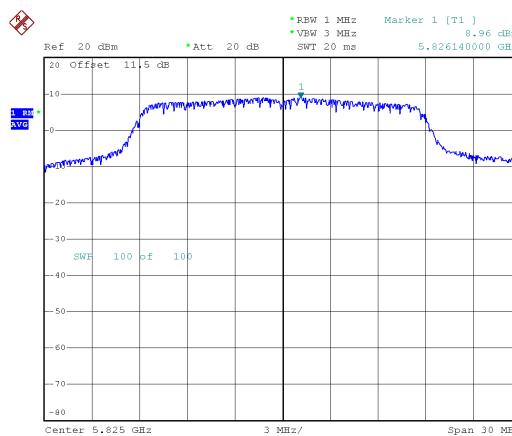
CH157



CH165



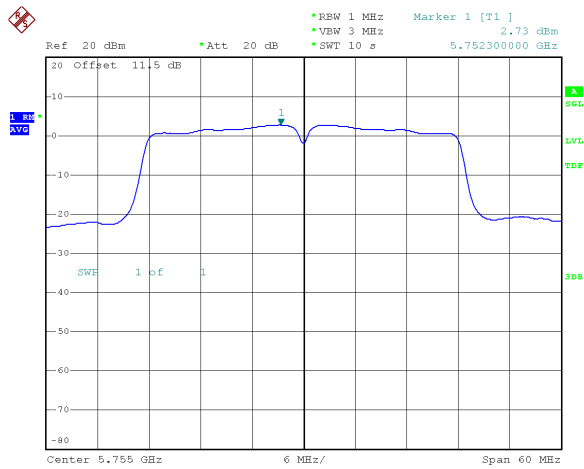
CH165





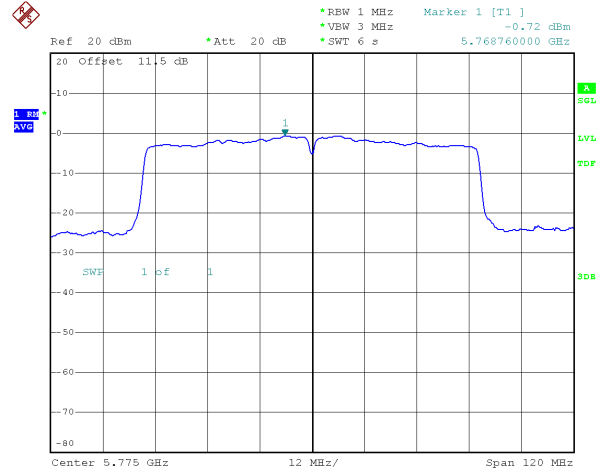
Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH155



CH159

