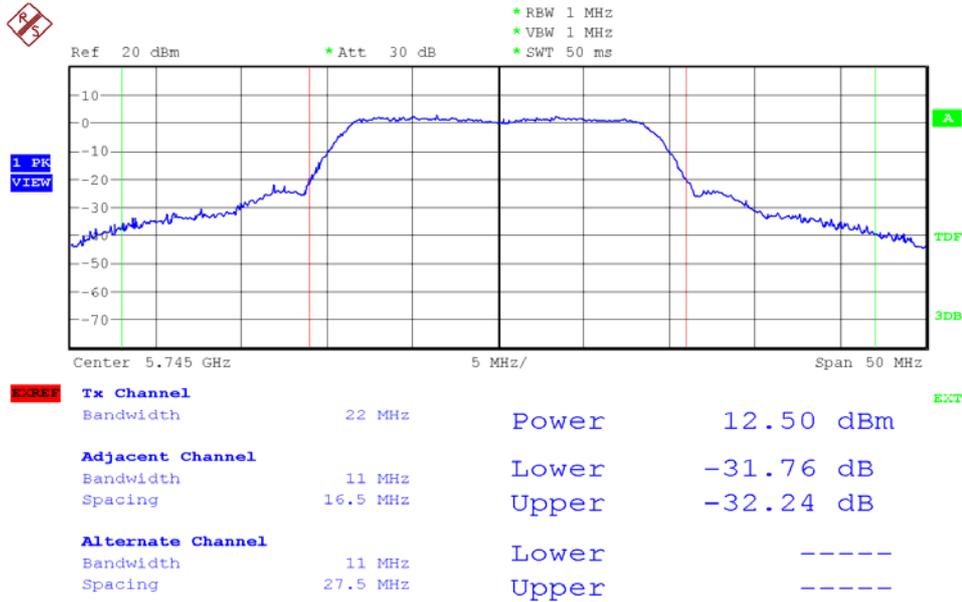
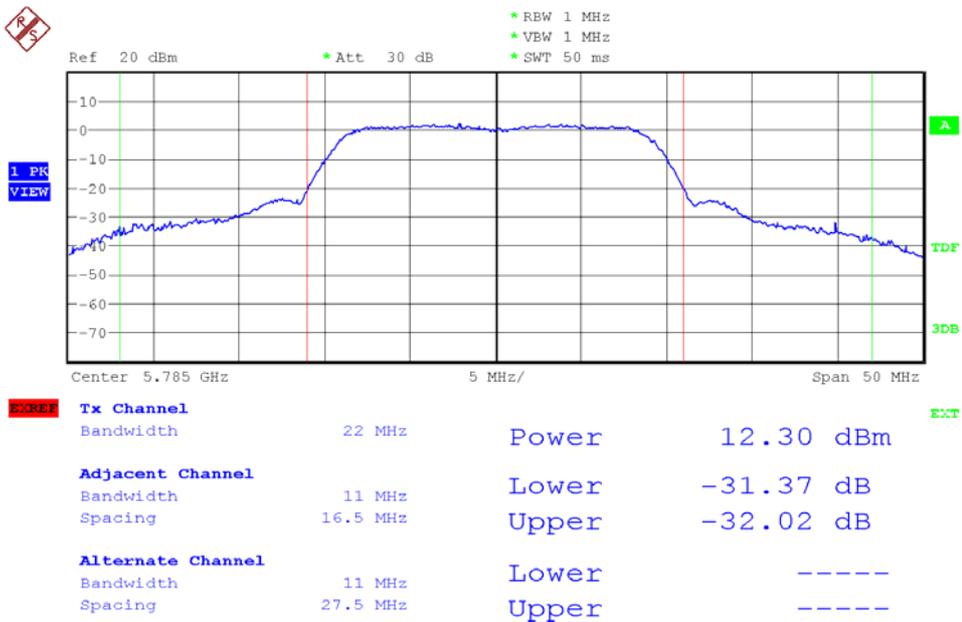




Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 149

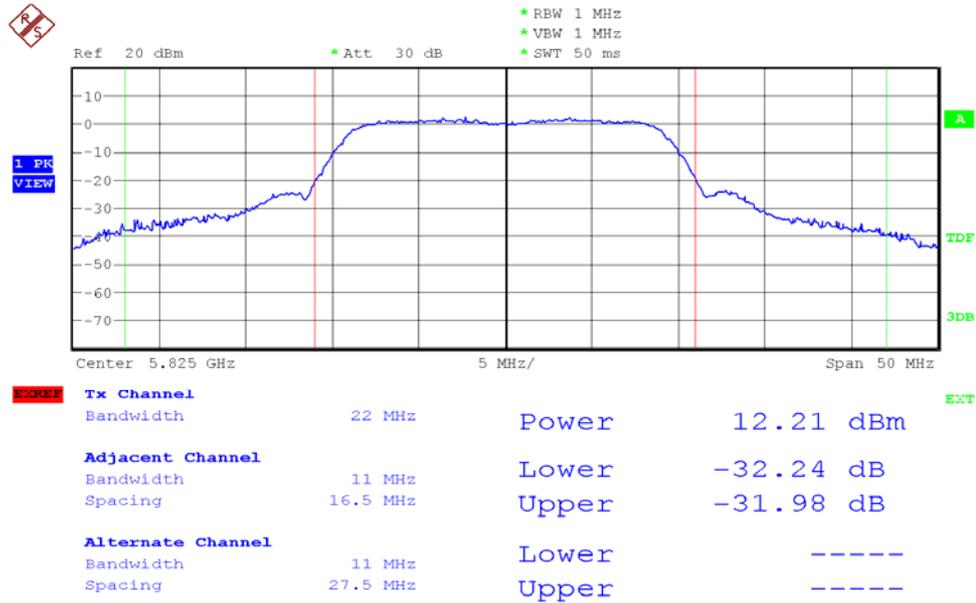


Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 157

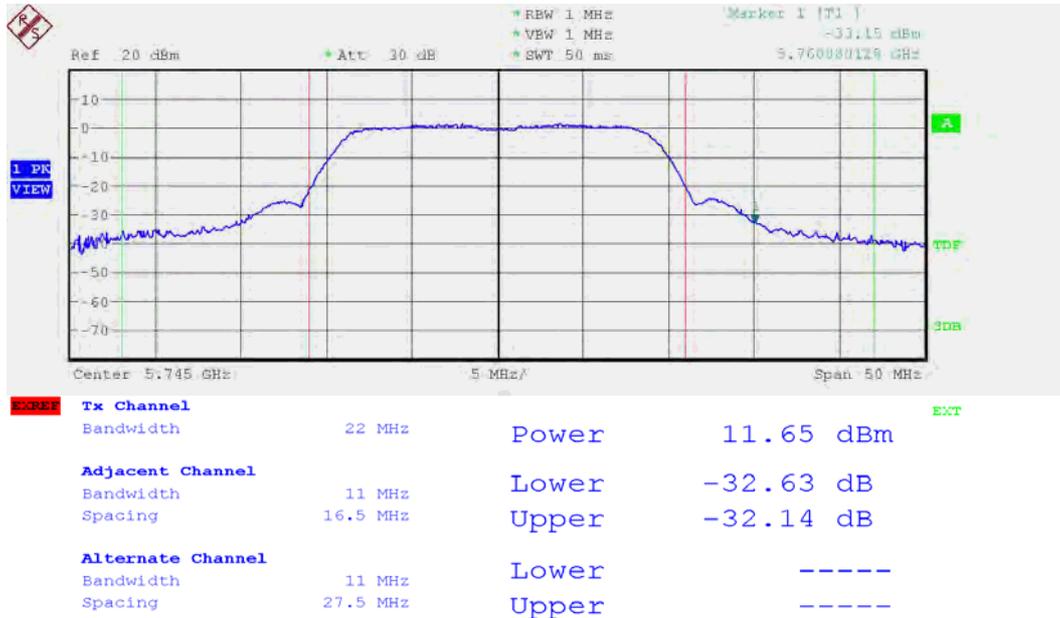




Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 165

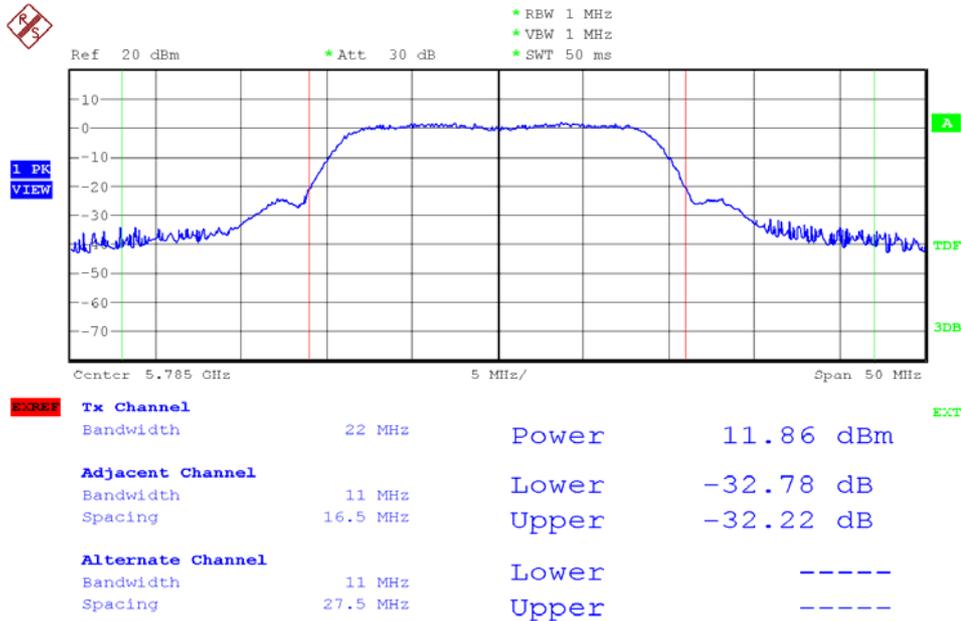


Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 149

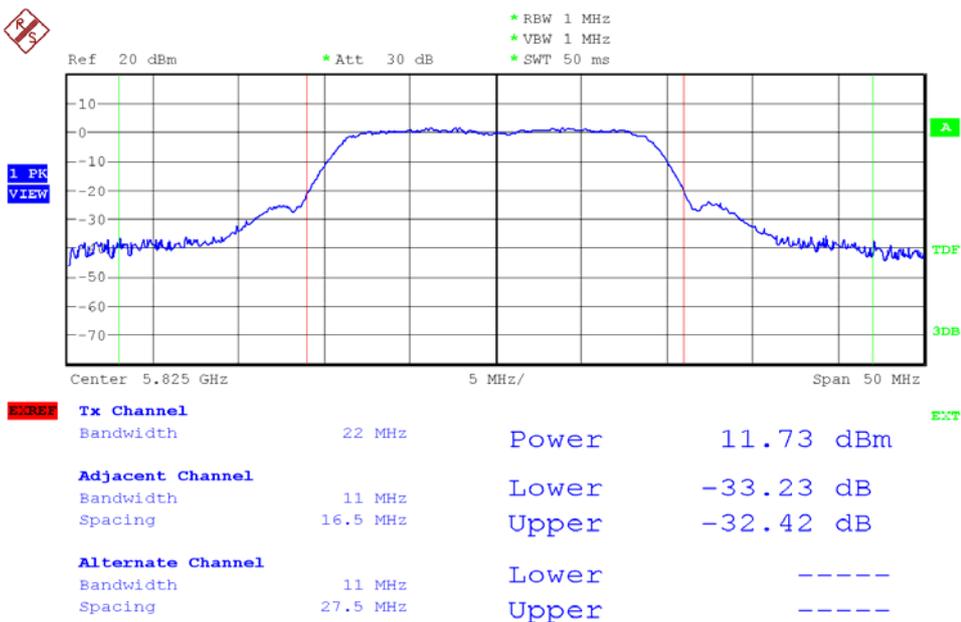




Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 157

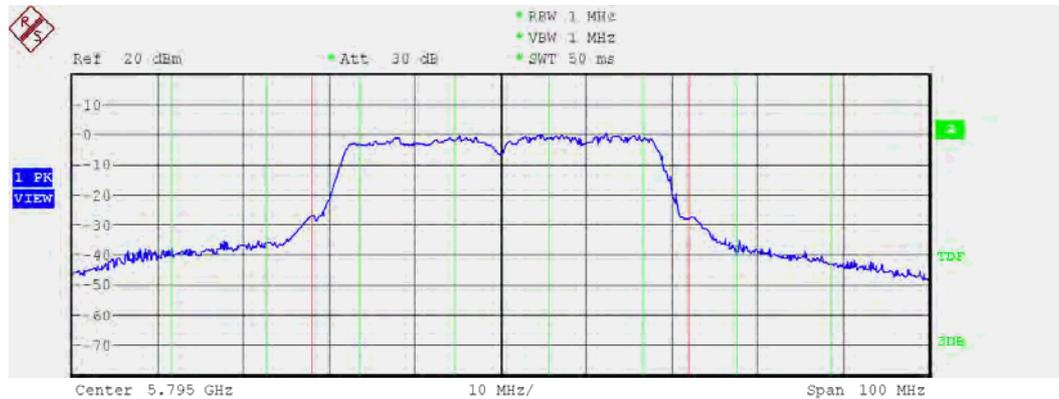


Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 165



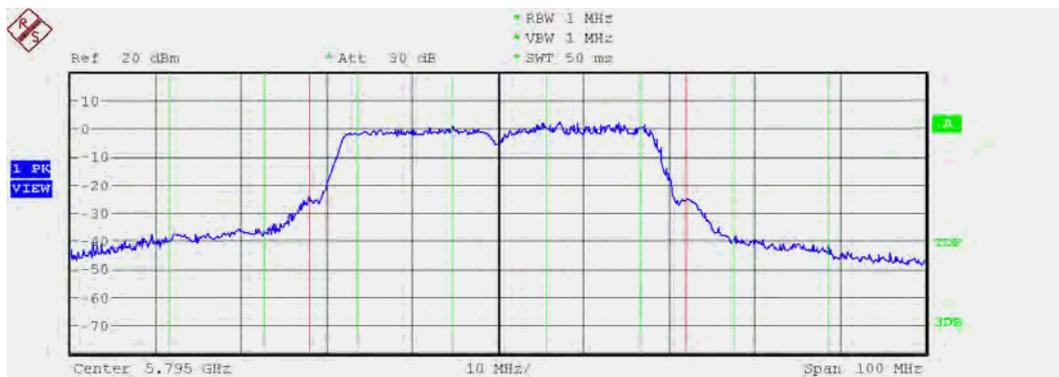


Modulation Standard: 802.11an HT40 (270Mbps), Ant R
Channel: 159



Tx Channel		Power	12.43 dBm
Bandwidth	44 MHz		
Adjacent Channel			
Bandwidth	22 MHz	Lower	-5.31 dB
Spacing	16.5 MHz	Upper	-3.85 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-14.40 dB
Spacing	27.5 MHz	Upper	-12.25 dB

Modulation Standard: 802.11an HT40 (270Mbps), Ant L
Channel: 159



Tx Channel		Power	13.71 dBm
Bandwidth	44 MHz		
Adjacent Channel			
Bandwidth	22 MHz	Lower	-5.13 dB
Spacing	16.5 MHz	Upper	-3.83 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-14.22 dB
Spacing	27.5 MHz	Upper	-12.39 dB



8. Power Spectral Density

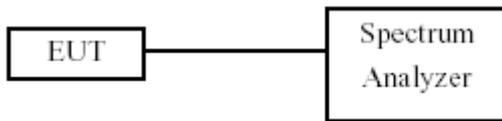
8.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

8.2 Test Procedures

- a. The transmitter output was connected to spectrum analyzer.
- b. The spectrum analyzer's resolution bandwidth were set at 3KHz RBW and 30KHz VBW as that of the fundamental frequency. Set the sweep time=span/3KHz.
- c. The power spectral density was measured and recorded.
- d. The Sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

8.3 Test Setup Layout



8.4 Measurement Equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2009/02/21	2010/02/20



8.5 Test Result and Data

Test Date: Mar. 06, 2009

Temperature: 25°C

Atmospheric pressure: 1025 hPa

Humidity: 49%

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)		
			Ant R	Ant L	Ant R+L
802.11b (11Mbps)	01	2412	-4.88	-6.13	
	06	2437	-5.23	-6.89	
	11	2462	-6.80	-5.55	
802.11g (54Mbps)	01	2412	-11.23	-15.93	
	06	2437	-10.69	-16.96	
	11	2462	-15.45	-14.70	
			Ant R	Ant L	Ant R+L
802.11n HT20 (130Mbps)	01	2412	-14.81	-22.26	-14.09
	06	2437	-19.29	-21.36	-17.19
	11	2462	-17.07	-21.94	-15.85
802.11n HT40 (270Mbps)	03	2422	-24.67	-24.07	-21.35
	06	2437	-28.42	-30.14	-26.19
	09	2452	-30.22	-31.26	-27.70

Test Date: Mar. 13, 2009

Temperature: 25°C

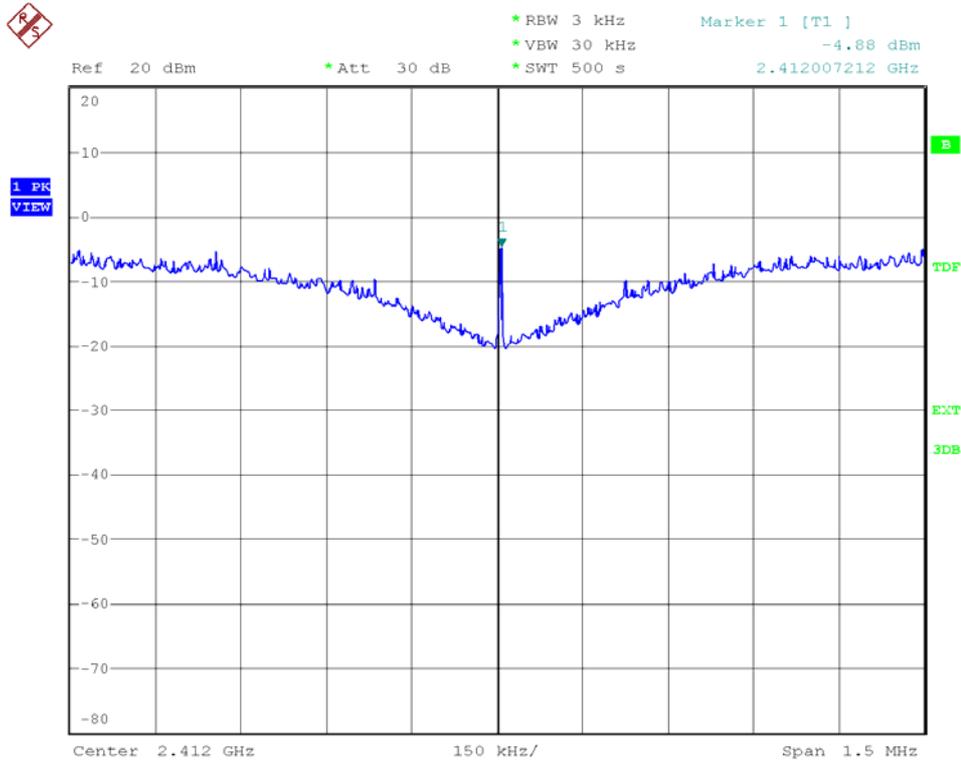
Atmospheric pressure: 1025 hPa

Humidity: 49%

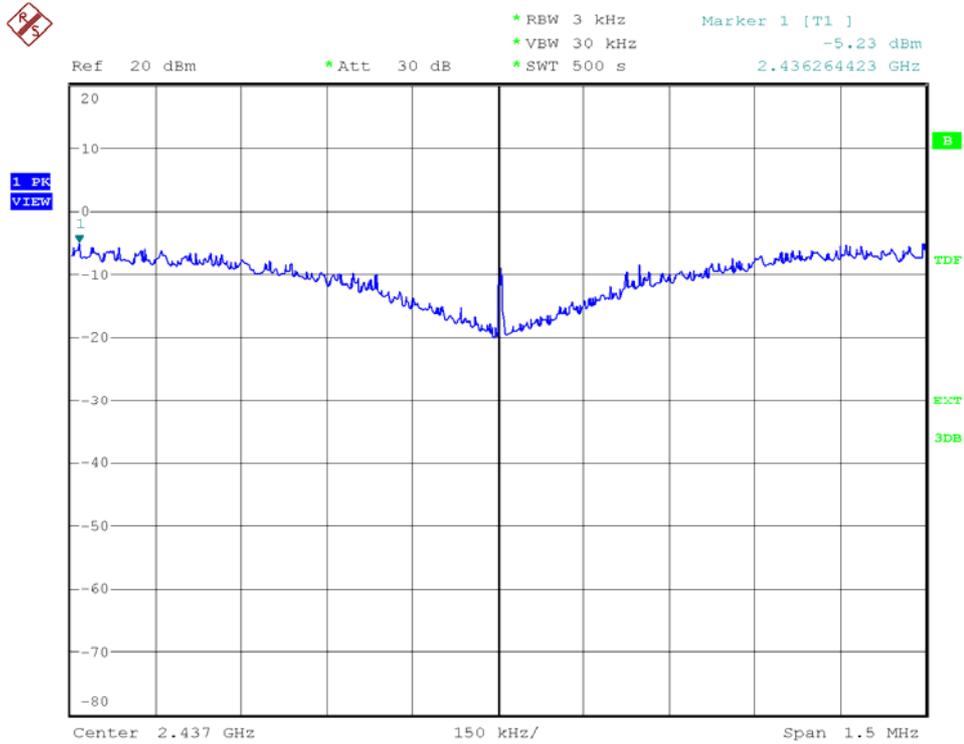
Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)		
			Ant R	Ant L	Ant R+L
802.11a (6Mbps)	149	5745	-19.04	-17.70	
	157	5785	-18.52	-17.02	
	165	5825	-17.87	-17.36	
			Ant R	Ant L	Ant R+L
802.11an HT20 (130Mbps)	149	5745	-21.73	-21.99	-18.85
	157	5785	-22.20	-21.13	-18.62
	165	5825	-21.60	-19.63	-17.49
802.11an HT40 (270Mbps)	159	5795	-25.84	-25.50	-22.66



Modulation Standard: 802.11b (11Mbps), Ant R
Channel: 01

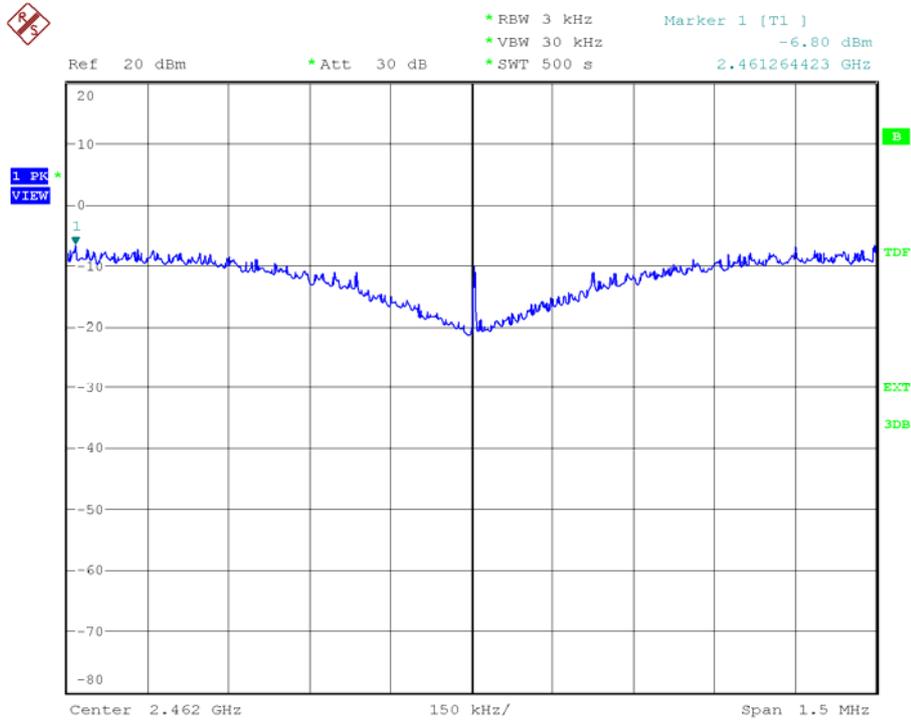


Modulation Standard: 802.11b (11Mbps), Ant R
Channel: 06

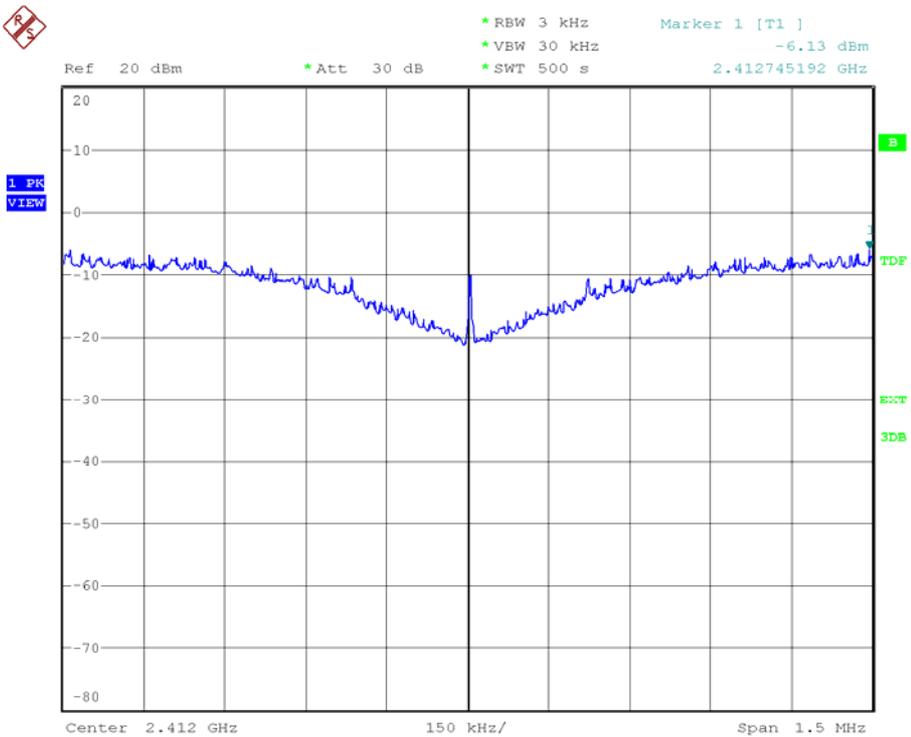




Modulation Standard: 802.11b (11Mbps), Ant R
Channel: 11

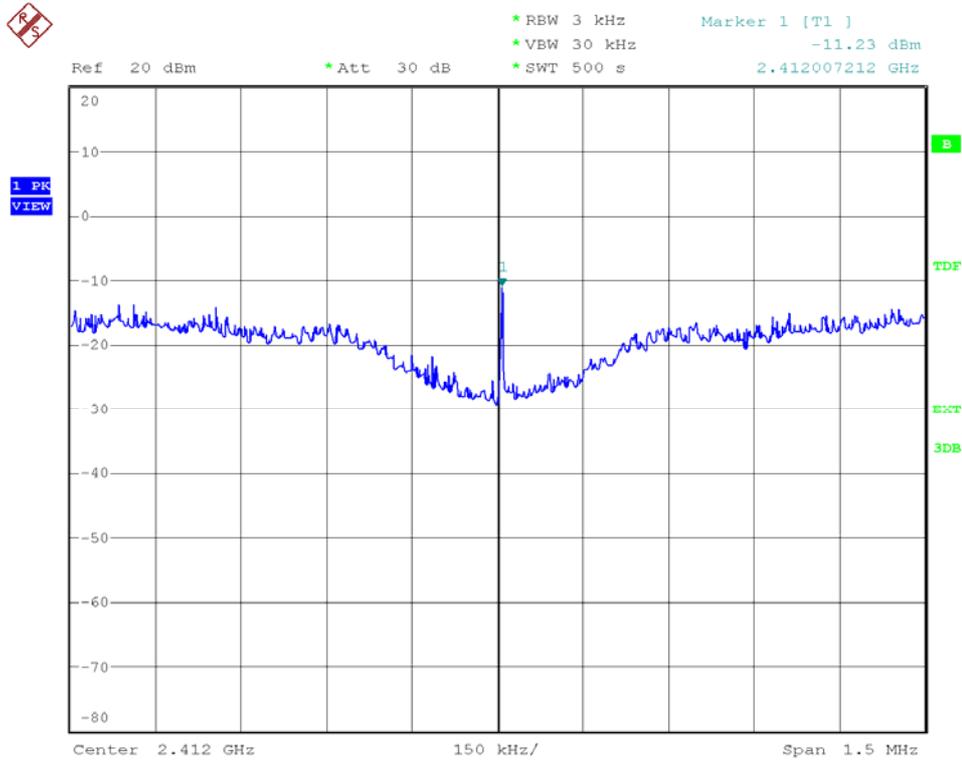


Modulation Standard: 802.11b (11Mbps), Ant L
Channel: 01

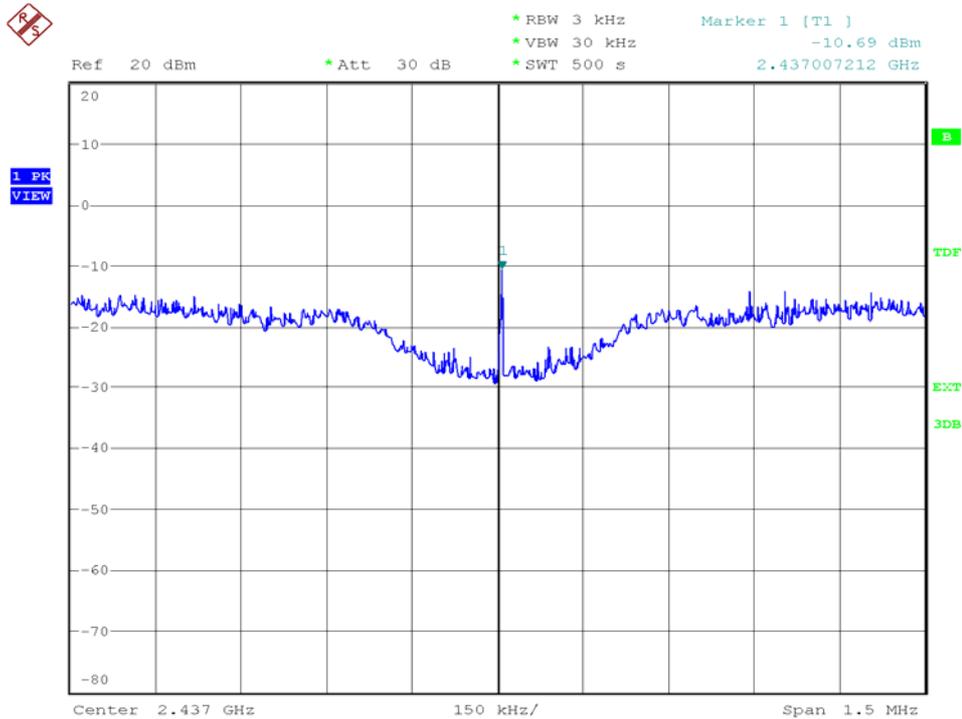




Modulation Standard: 802.11g (54Mbps), Ant R
Channel: 01

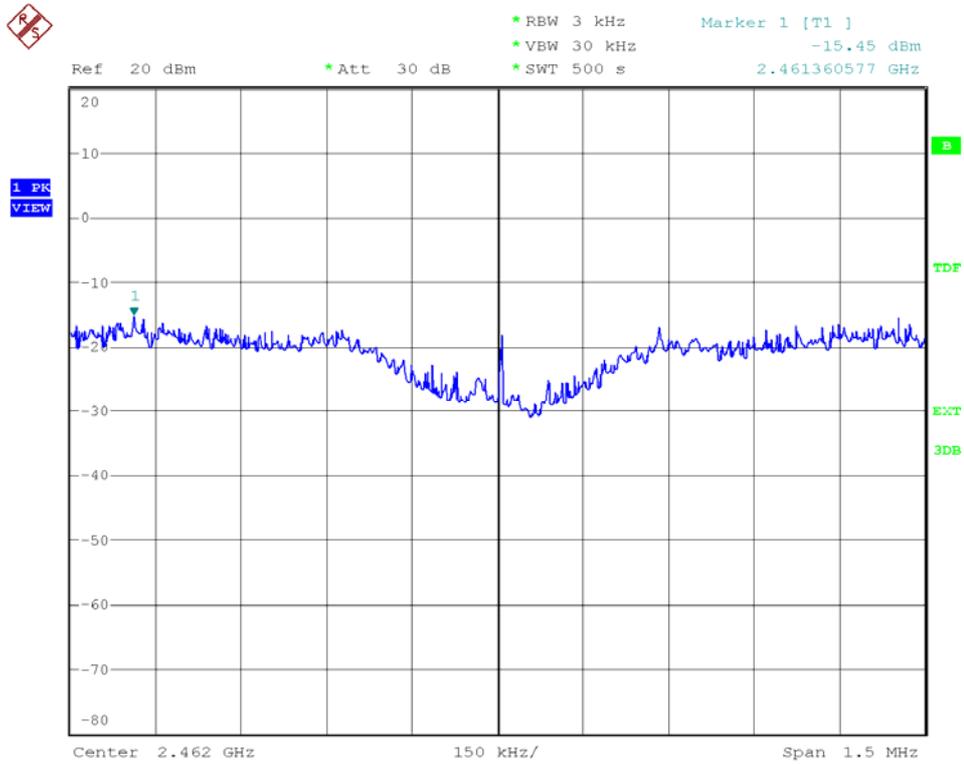


Modulation Standard: 802.11g (54Mbps), Ant R
Channel: 06

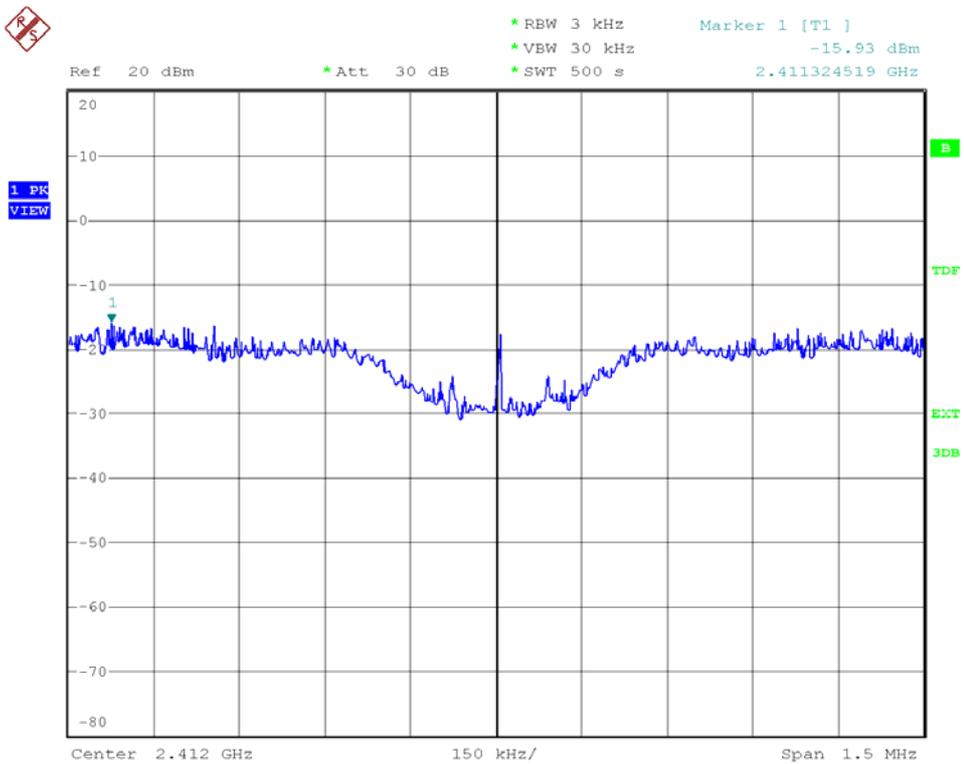




Modulation Standard: 802.11g (54Mbps), Ant R
Channel: 11

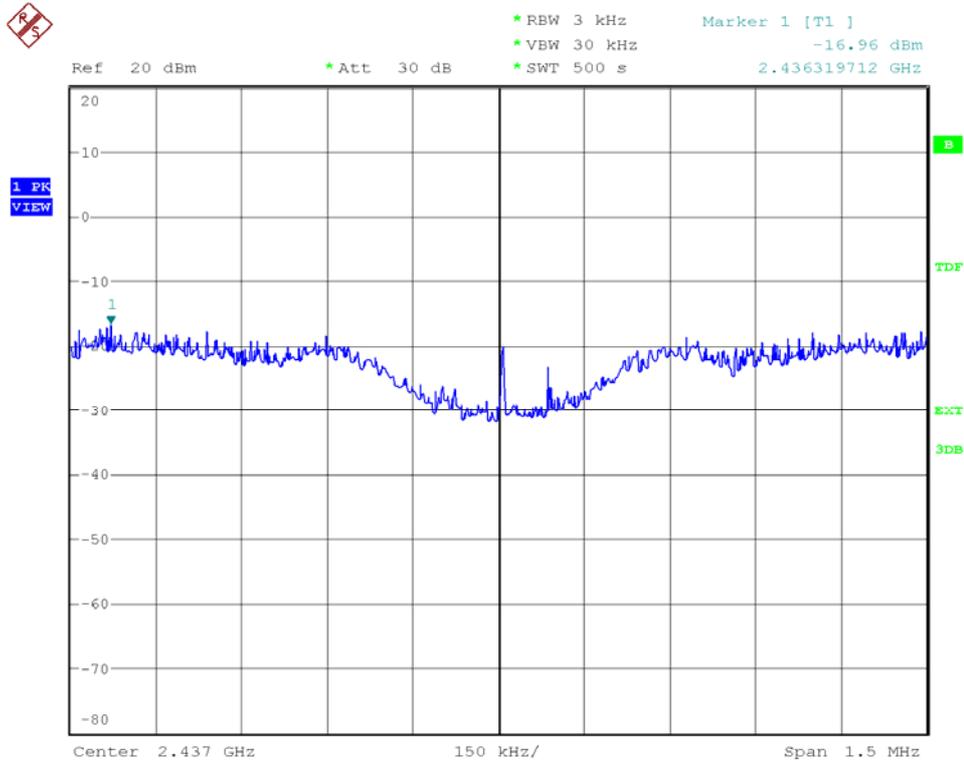


Modulation Standard: 802.11g (54Mbps), Ant L
Channel: 01

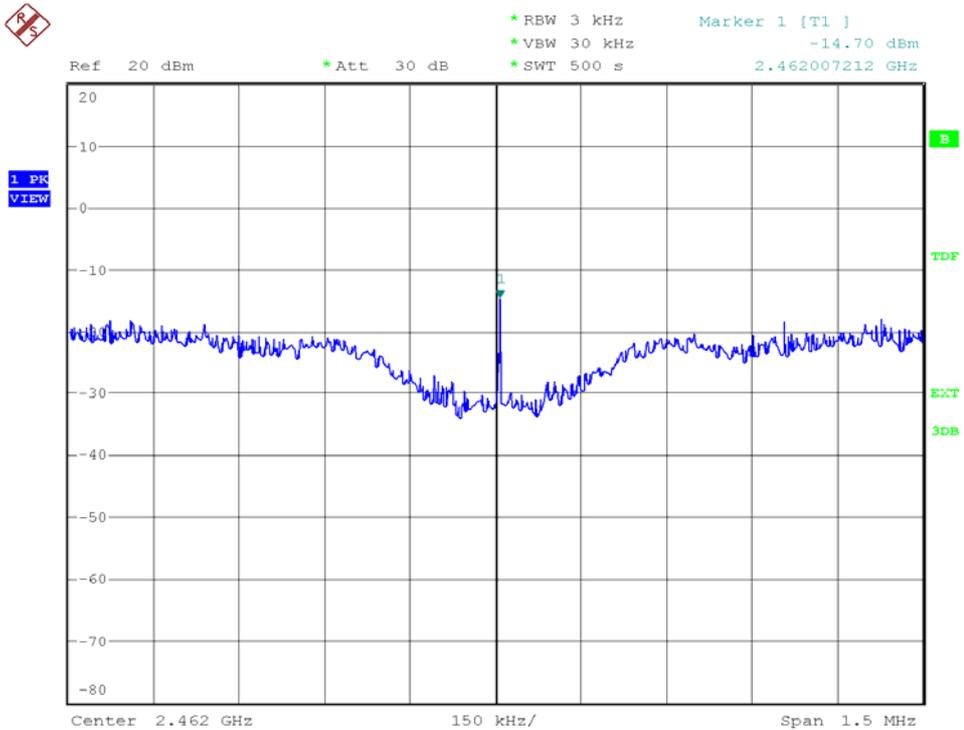




Modulation Standard: 802.11g (54Mbps), Ant L
Channel: 06

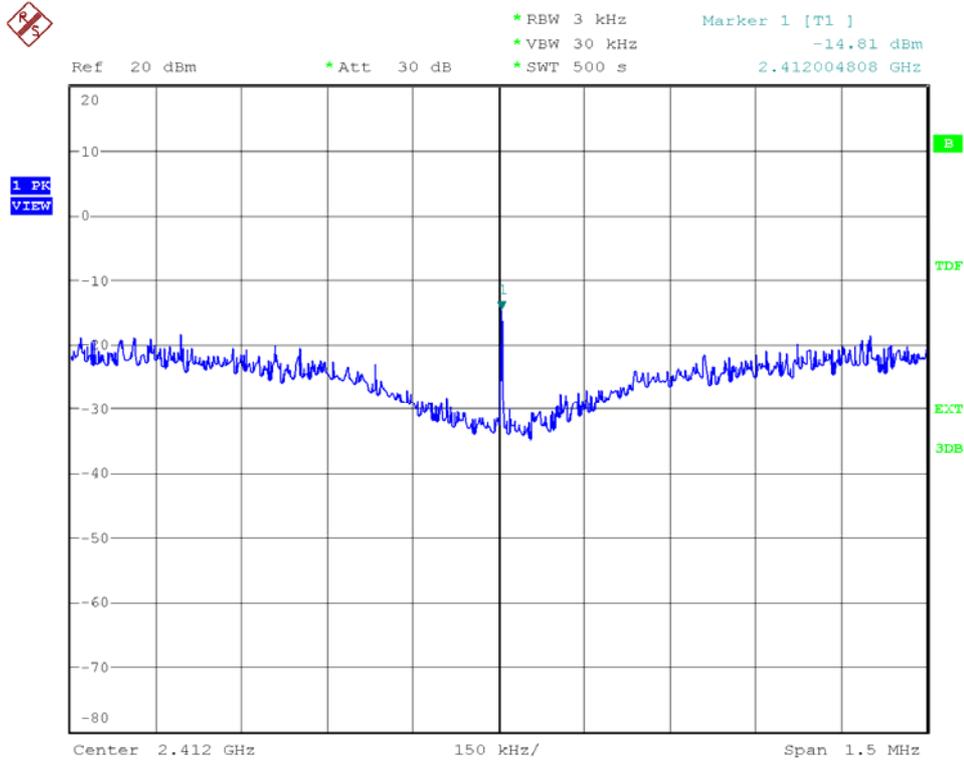


Modulation Standard: 802.11g (54Mbps), Ant L
Channel: 11

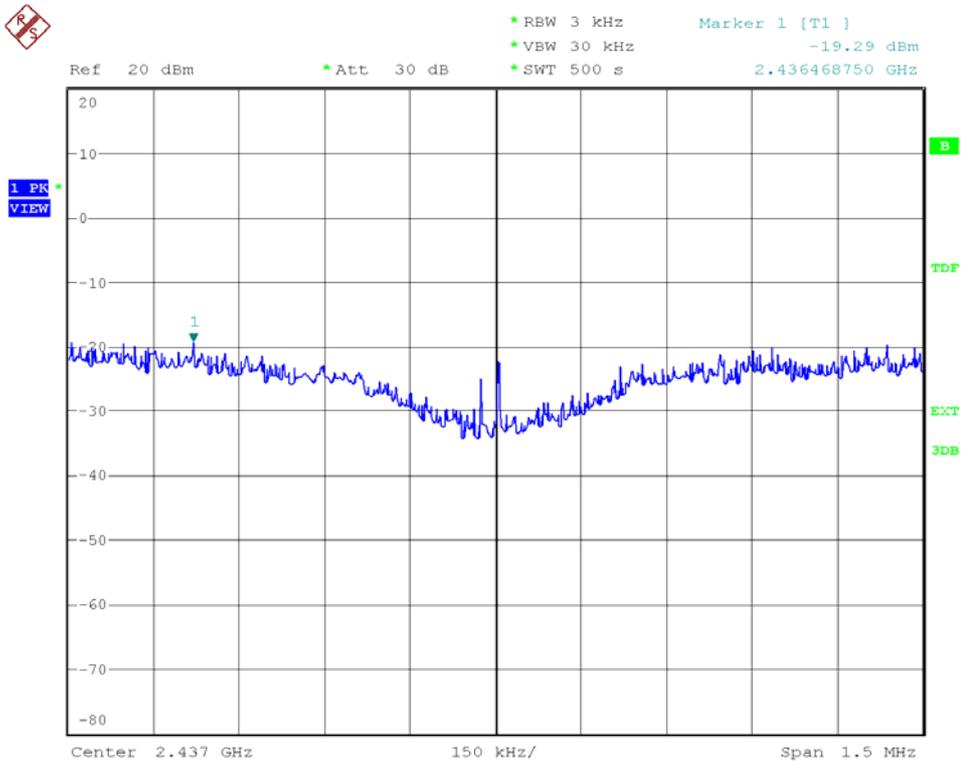




Modulation Standard: 802.11n HT20 (130Mbps), Ant R
Channel: 01

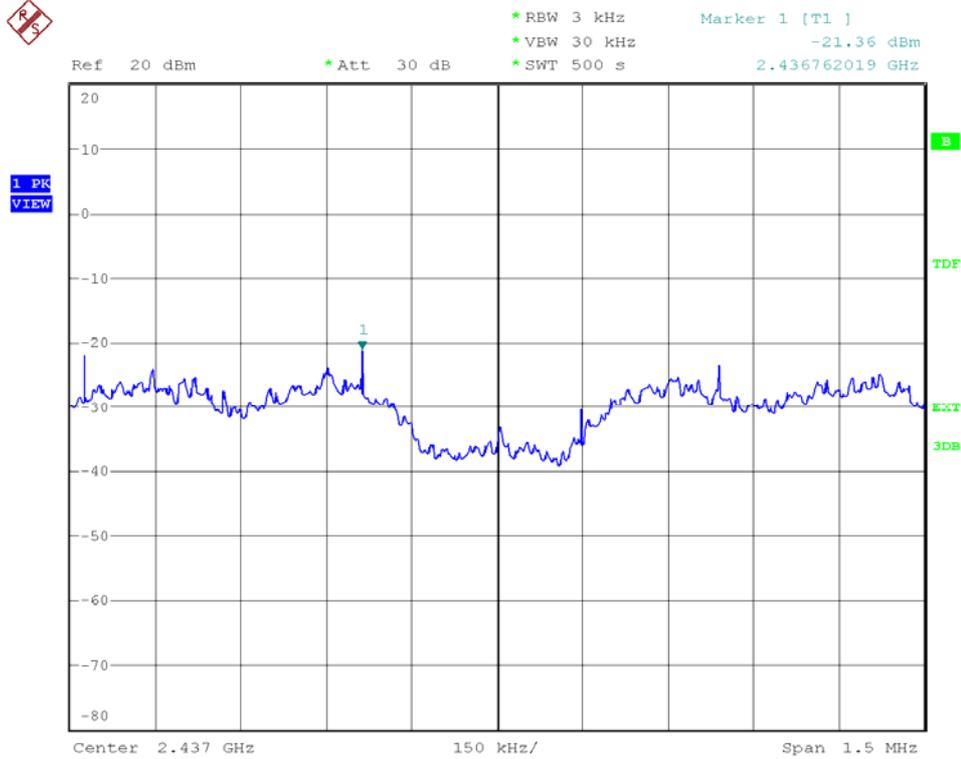


Modulation Standard: 802.11n HT20 (130Mbps), Ant R
Channel: 06

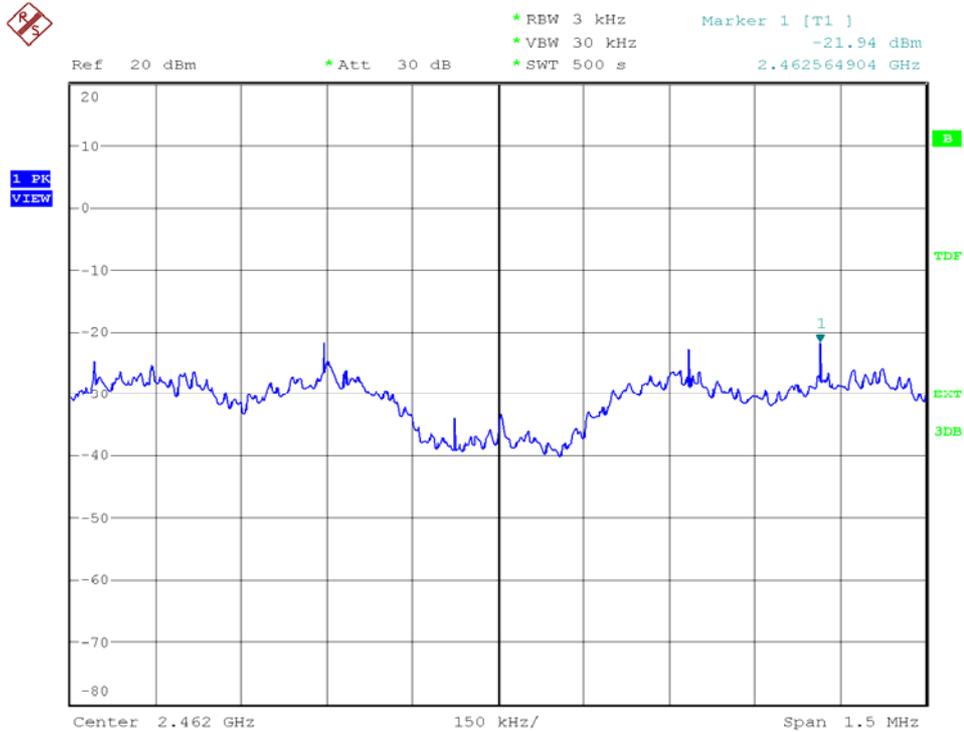




Modulation Standard: 802.11n HT20 (130Mbps), Ant L
Channel: 06

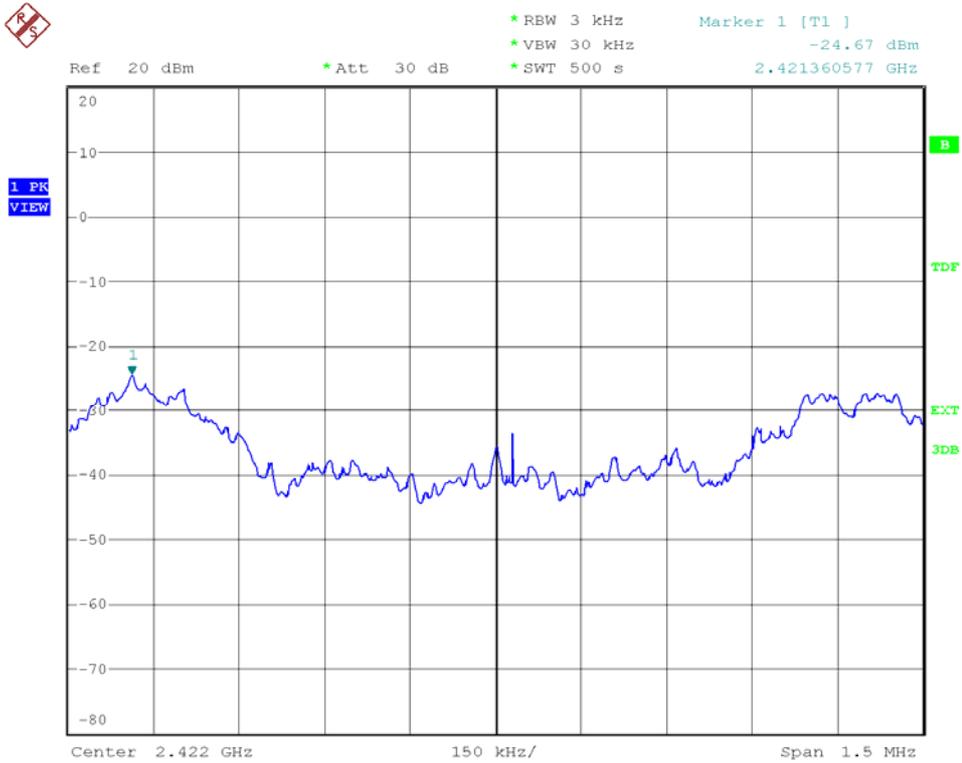


Modulation Standard: 802.11n HT20 (130Mbps), Ant L
Channel: 11

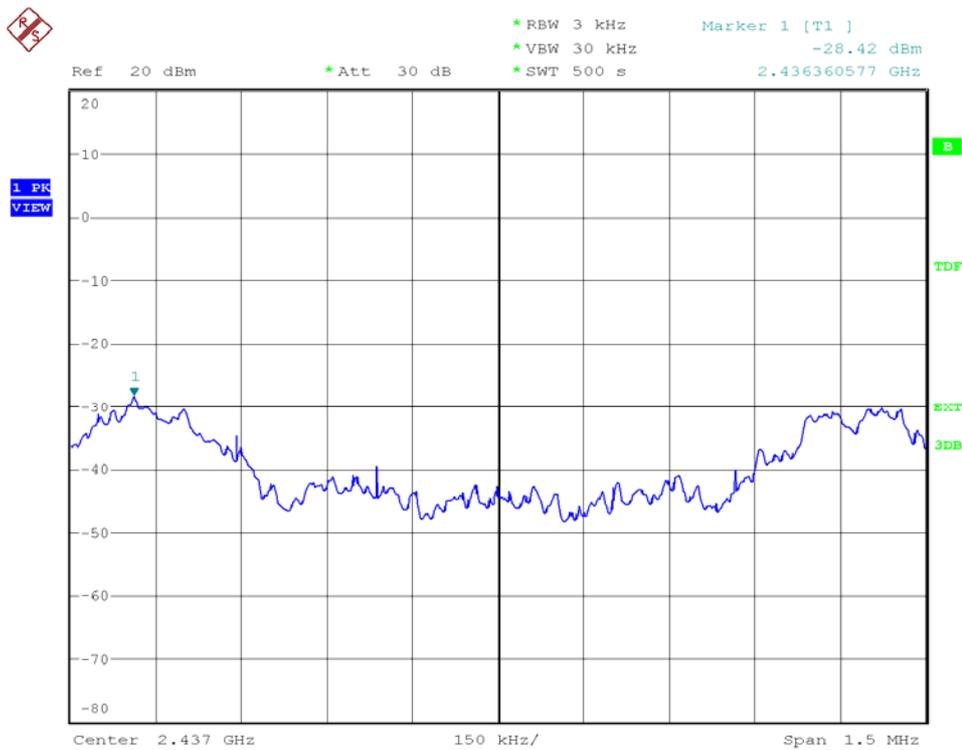




Modulation Standard: 802.11n HT40 (270Mbps), Ant R
Channel: 03

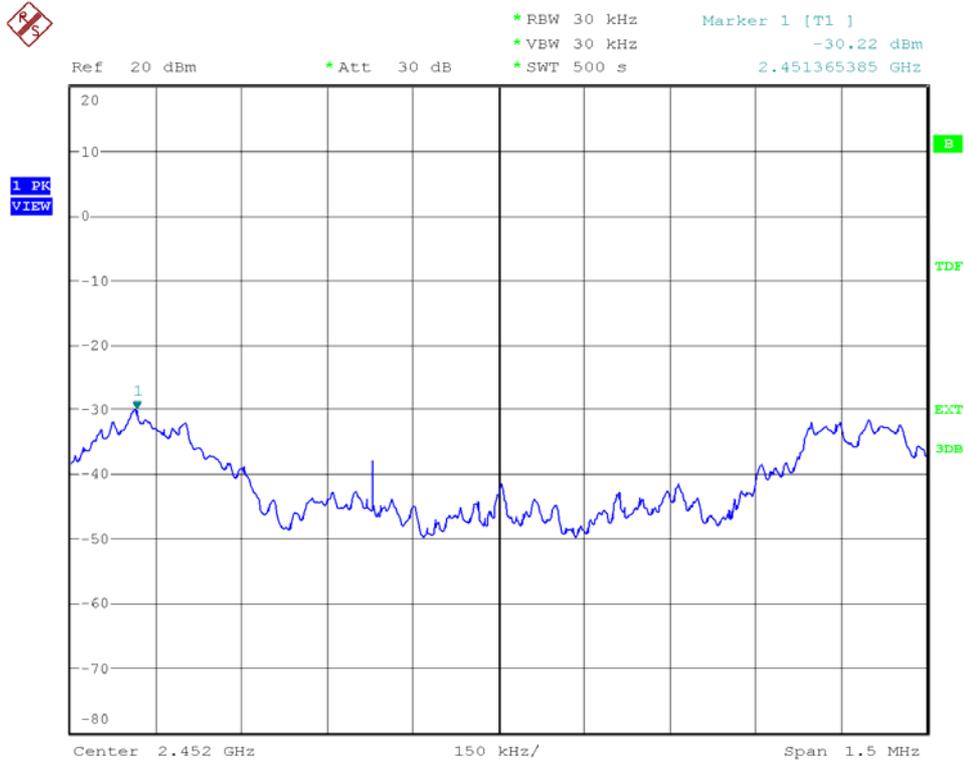


Modulation Standard: 802.11n HT40 (270Mbps), Ant R
Channel: 06

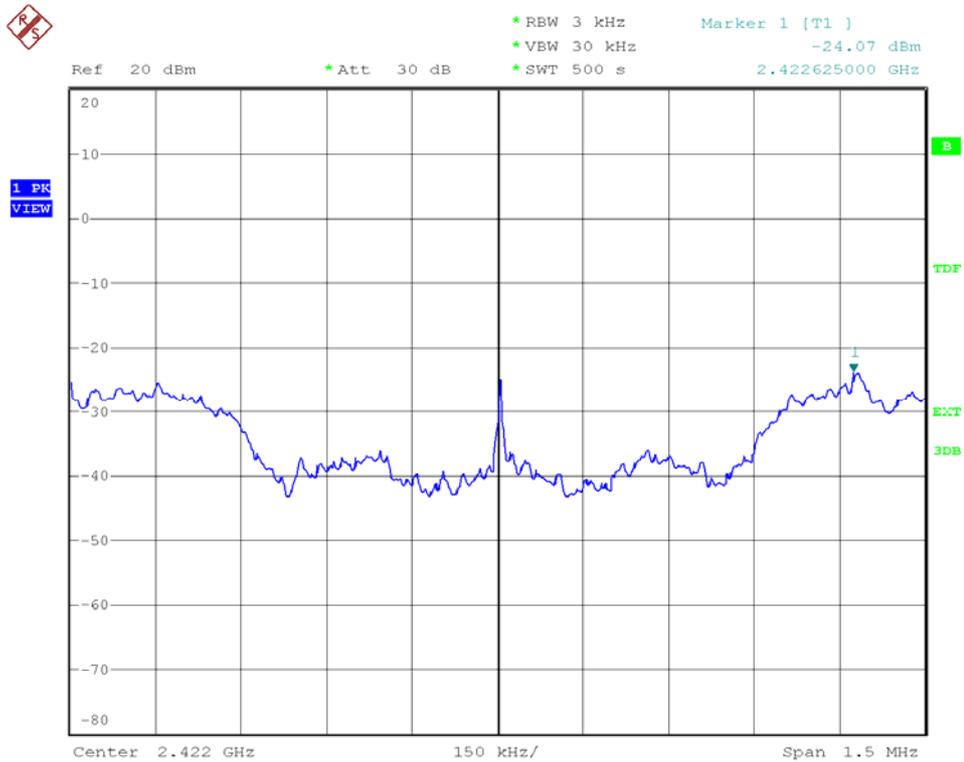




Modulation Standard: 802.11n HT40 (270Mbps), Ant R
Channel: 09

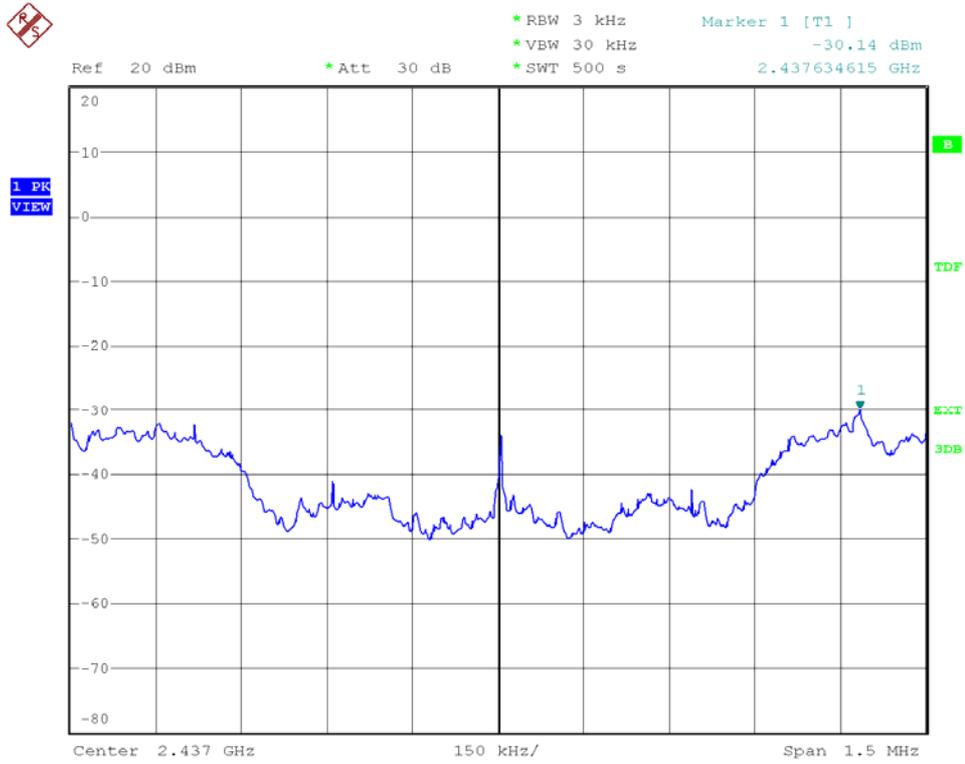


Modulation Standard: 802.11n HT40 (270Mbps), Ant L
Channel: 03

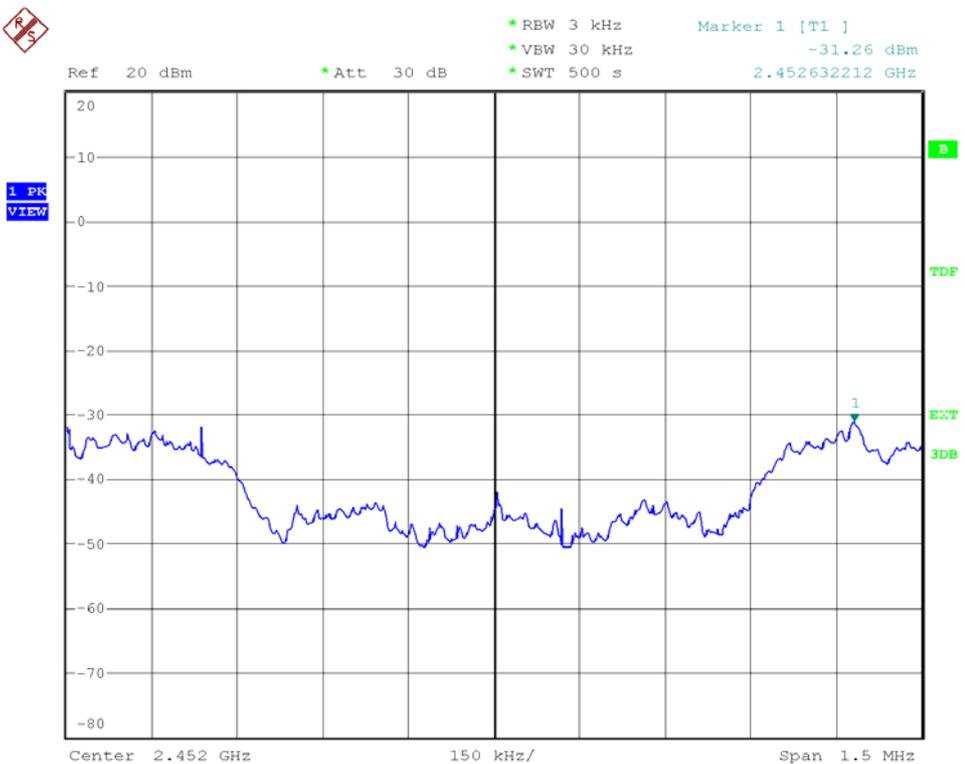




Modulation Standard: 802.11n HT40 (270Mbps), Ant L
Channel: 06

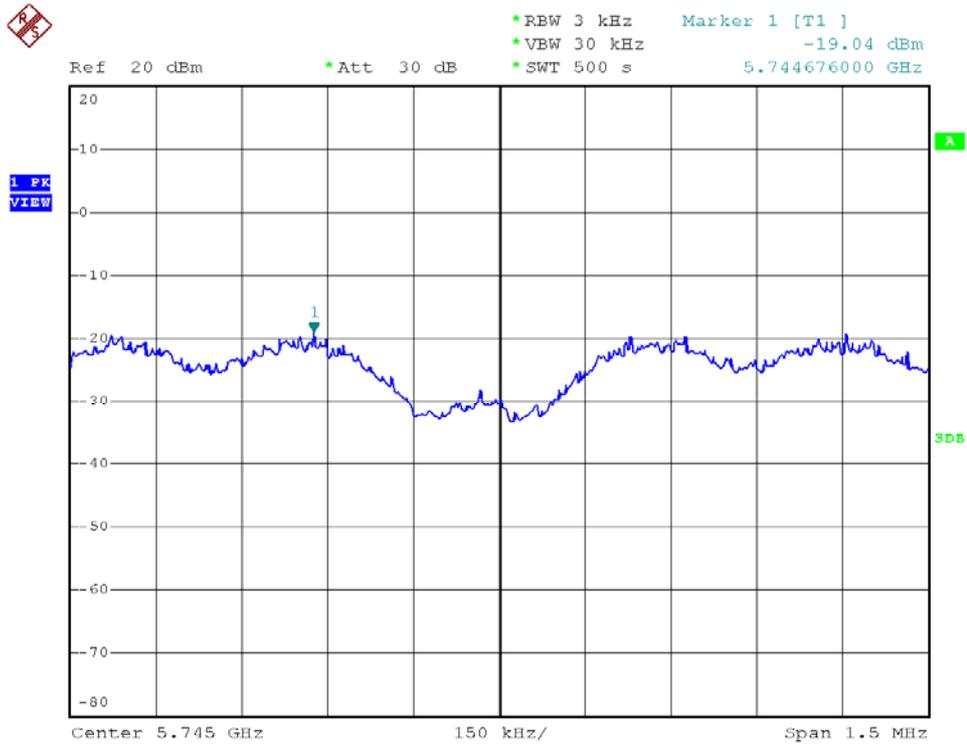


Modulation Standard: 802.11n HT40 (270Mbps), Ant L
Channel: 09

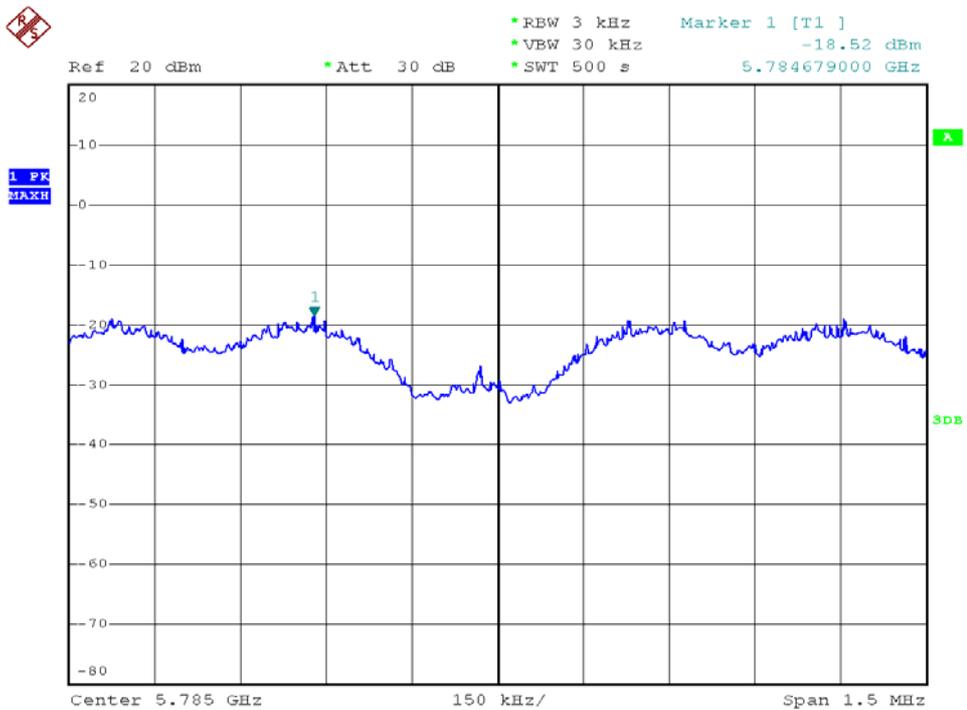




Modulation Standard: 802.11a (6Mbps), Ant R
Channel: 149

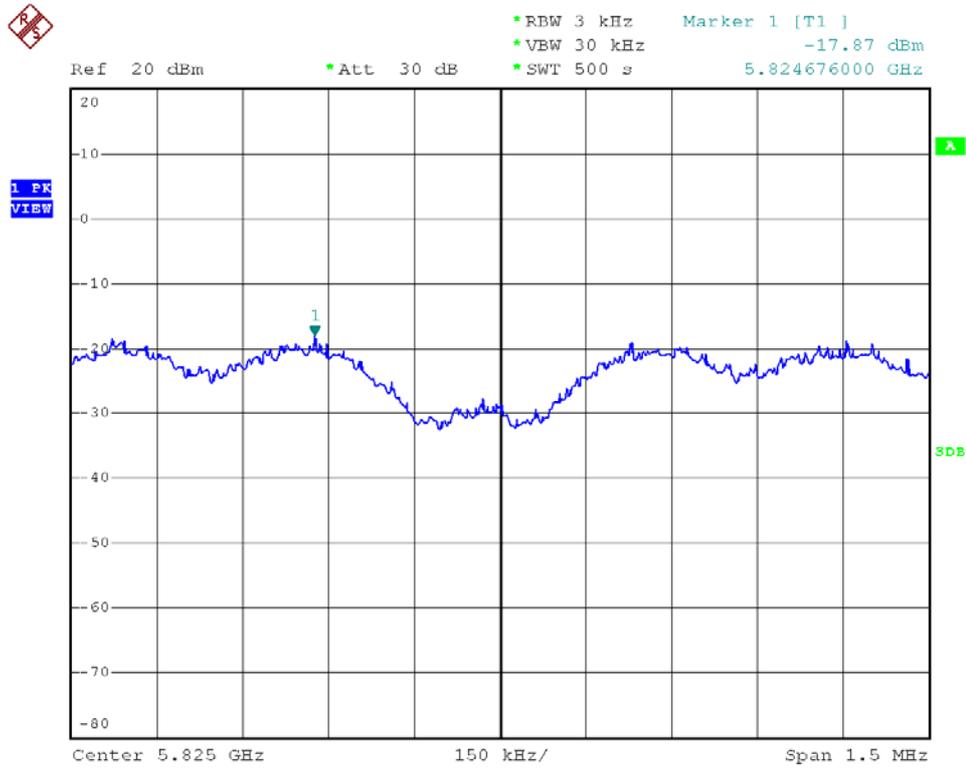


Modulation Standard: 802.11a (6Mbps), Ant R
Channel: 157

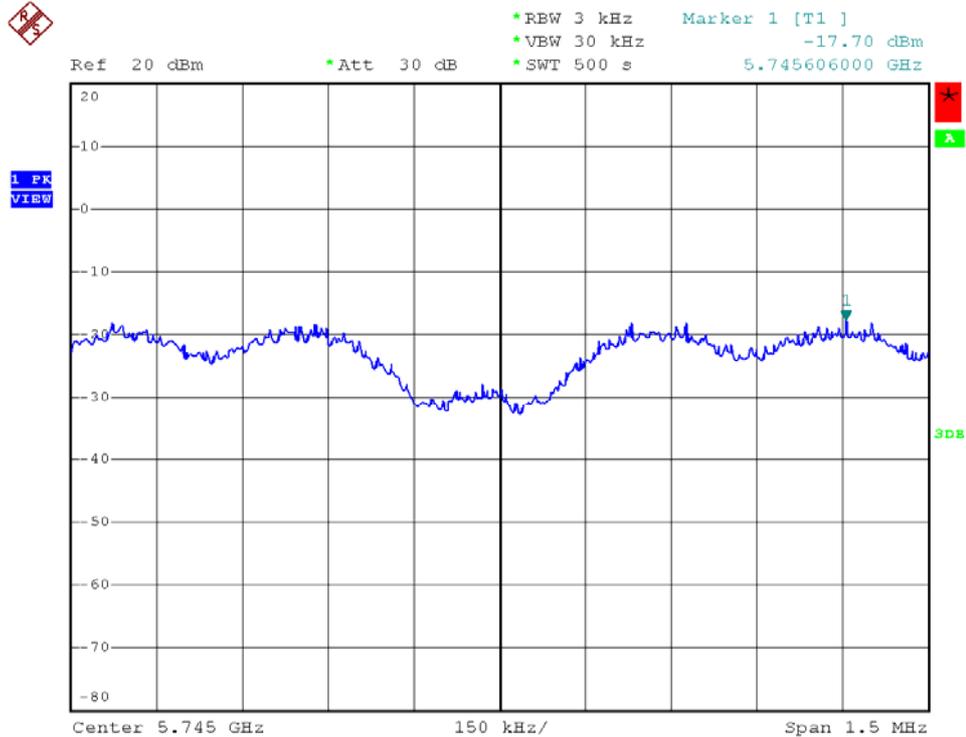




Modulation Standard: 802.11a (6Mbps), Ant R
Channel: 165

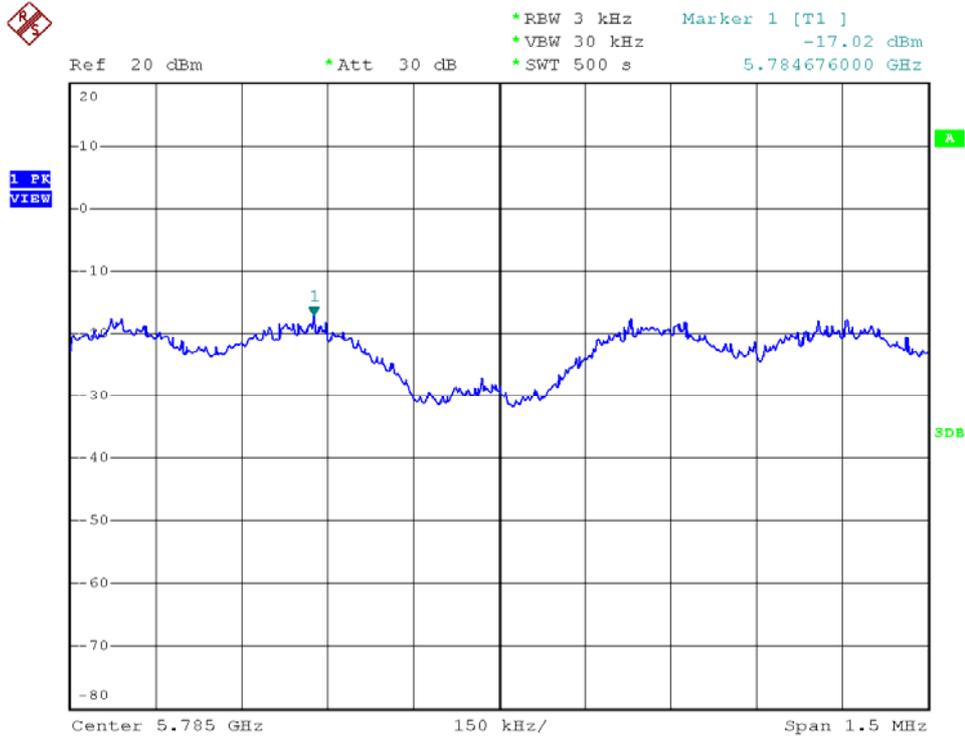


Modulation Standard: 802.11a (6Mbps), Ant L
Channel: 149

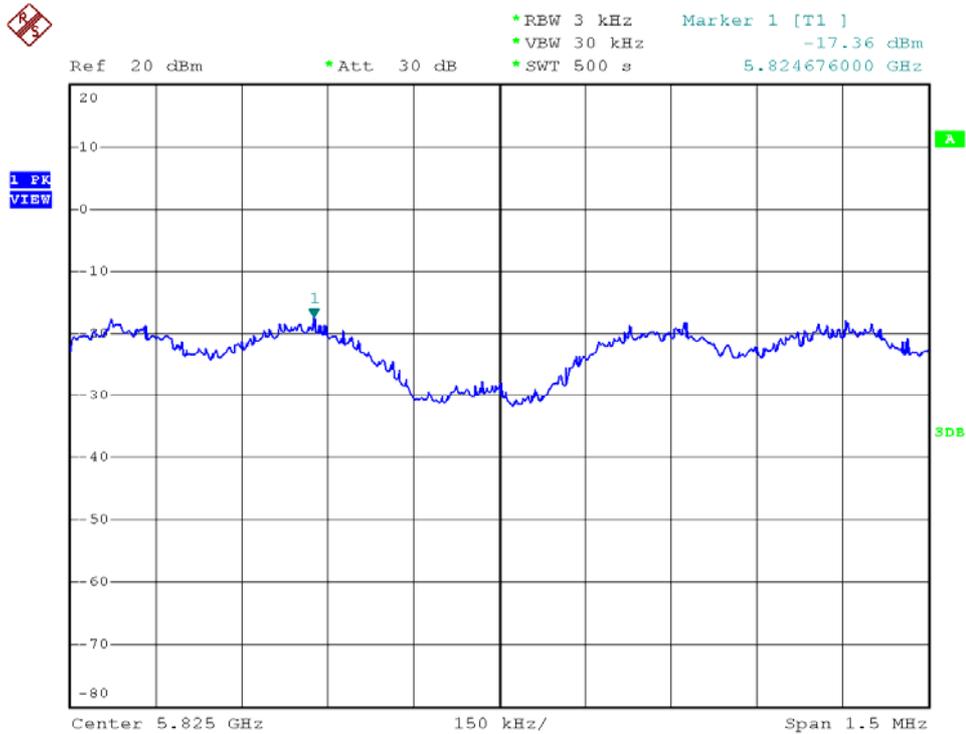




Modulation Standard: 802.11a (6Mbps), Ant L
Channel: 157

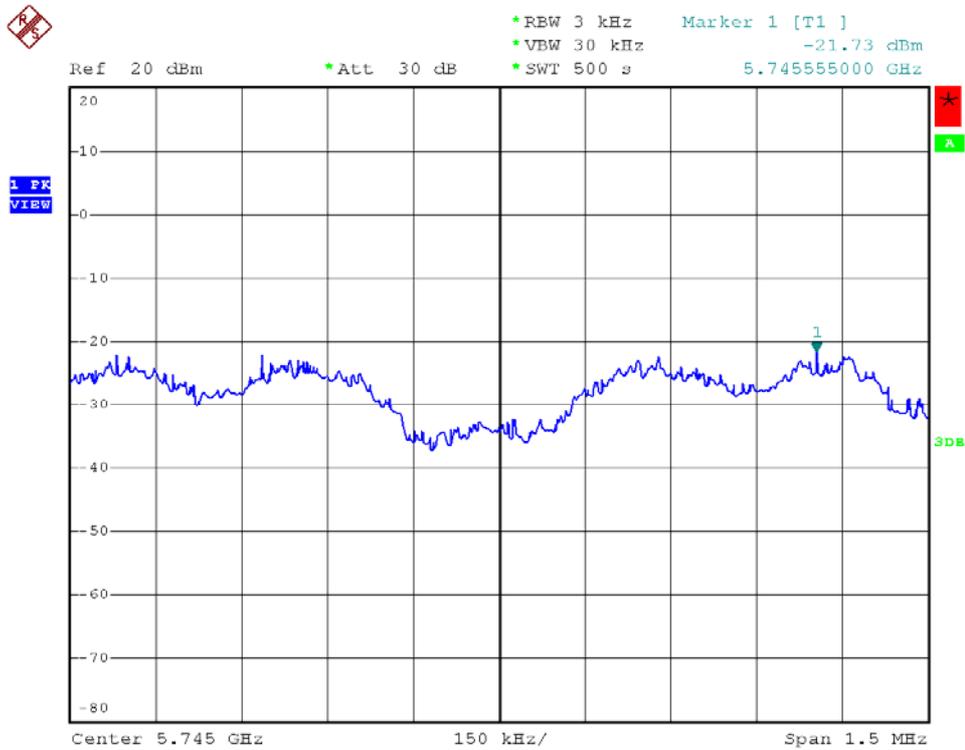


Modulation Standard: 802.11a (6Mbps), Ant L
Channel: 165

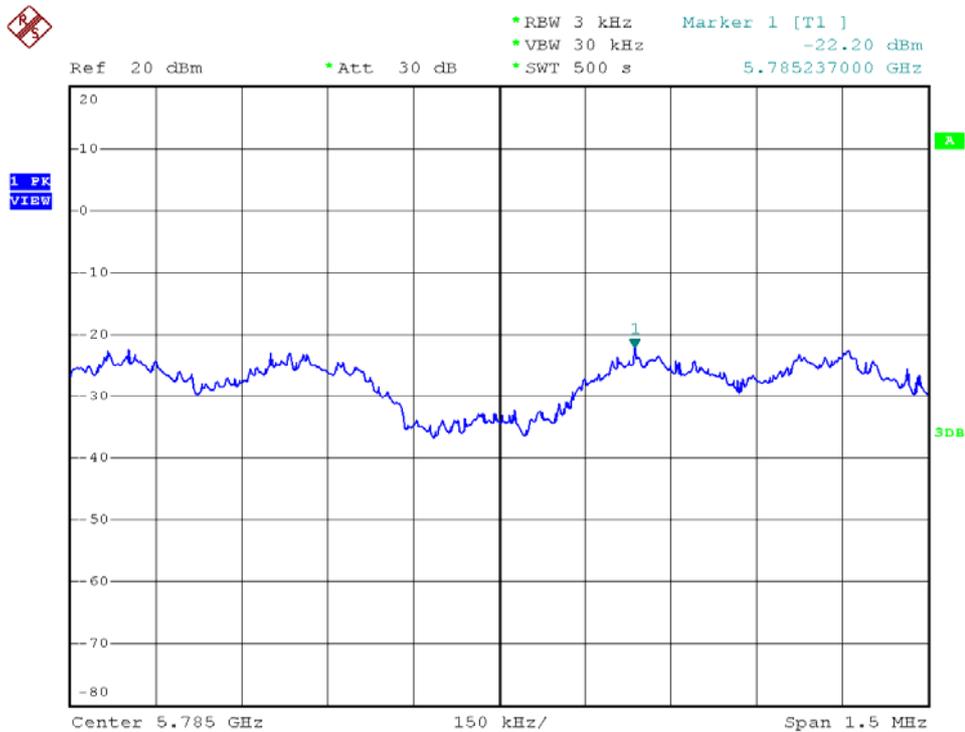




Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 149

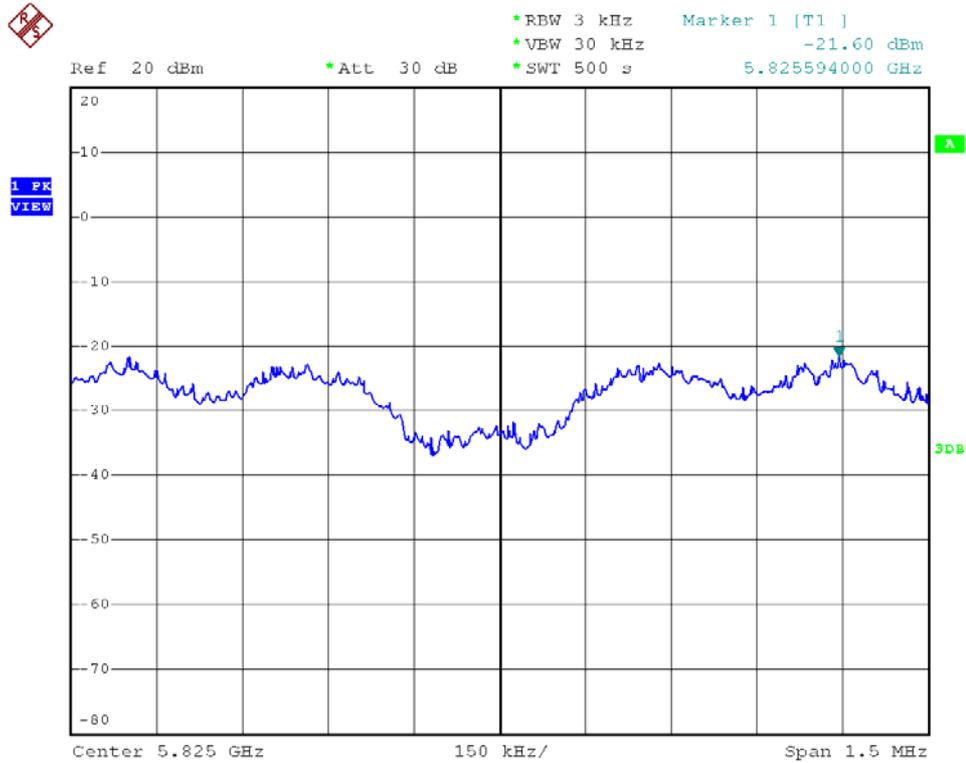


Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 157

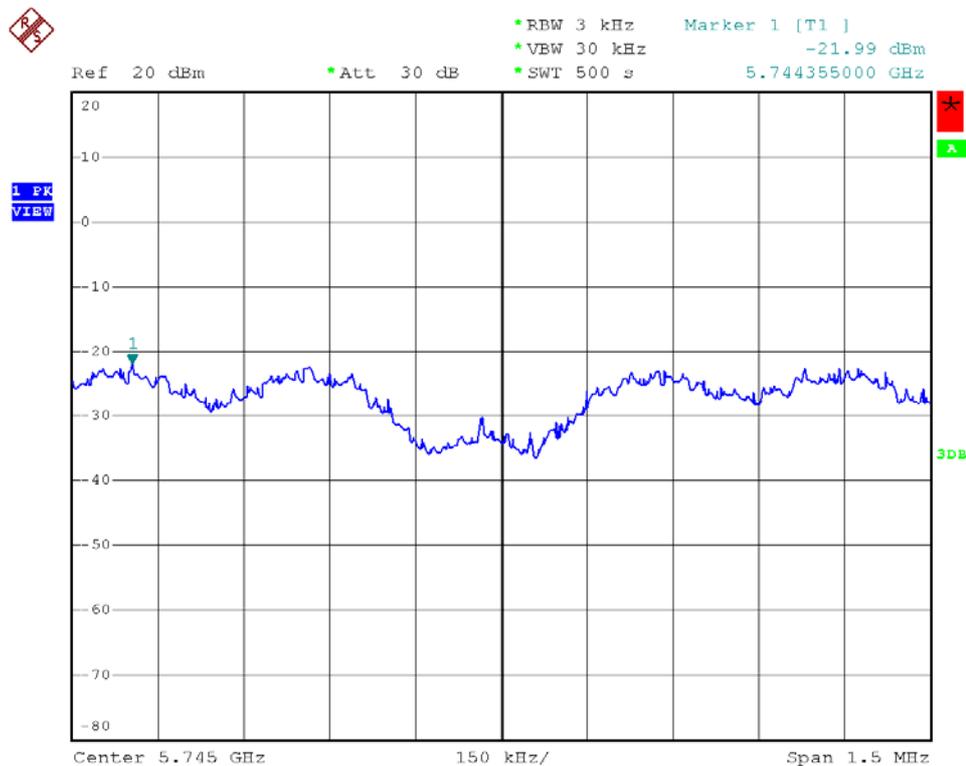




Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 165

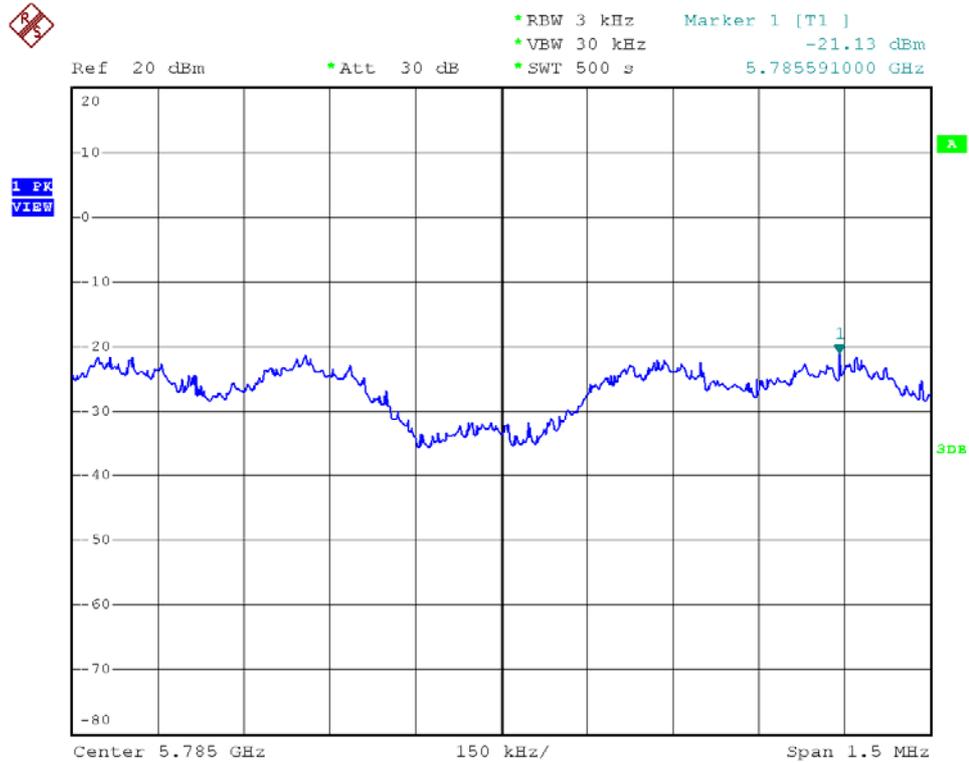


Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 149

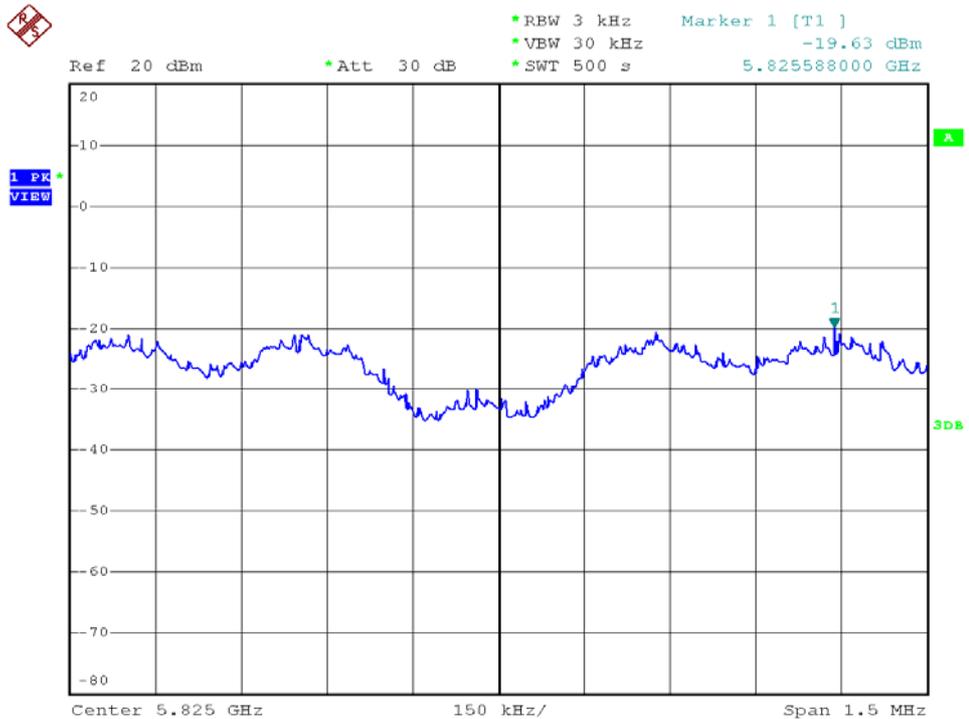




Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 157

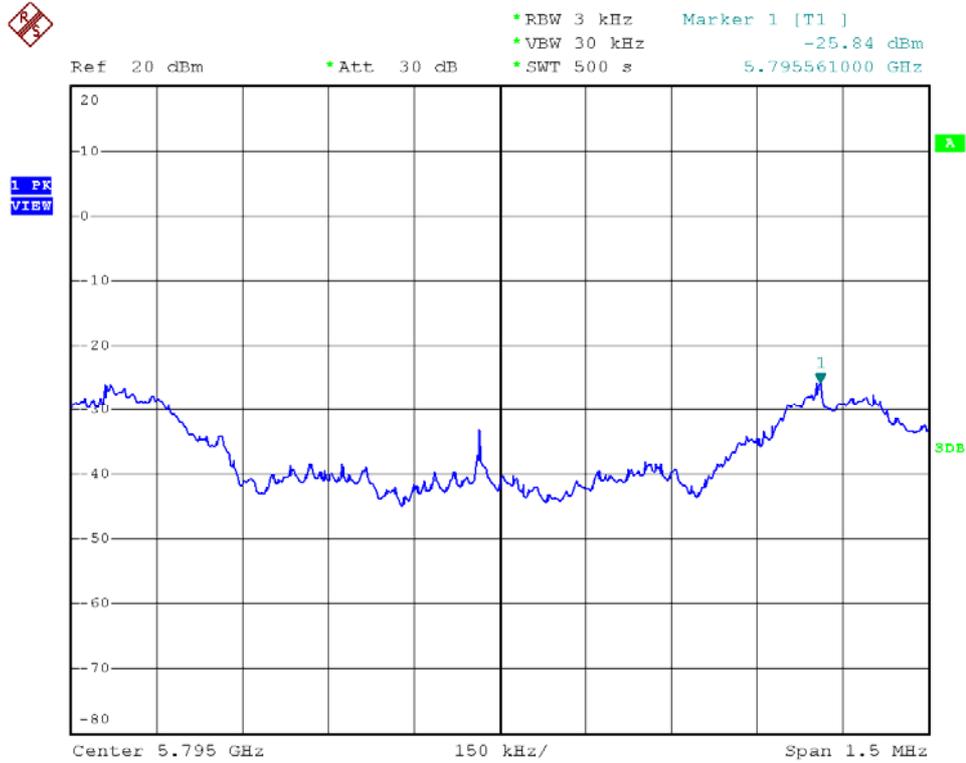


Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 165

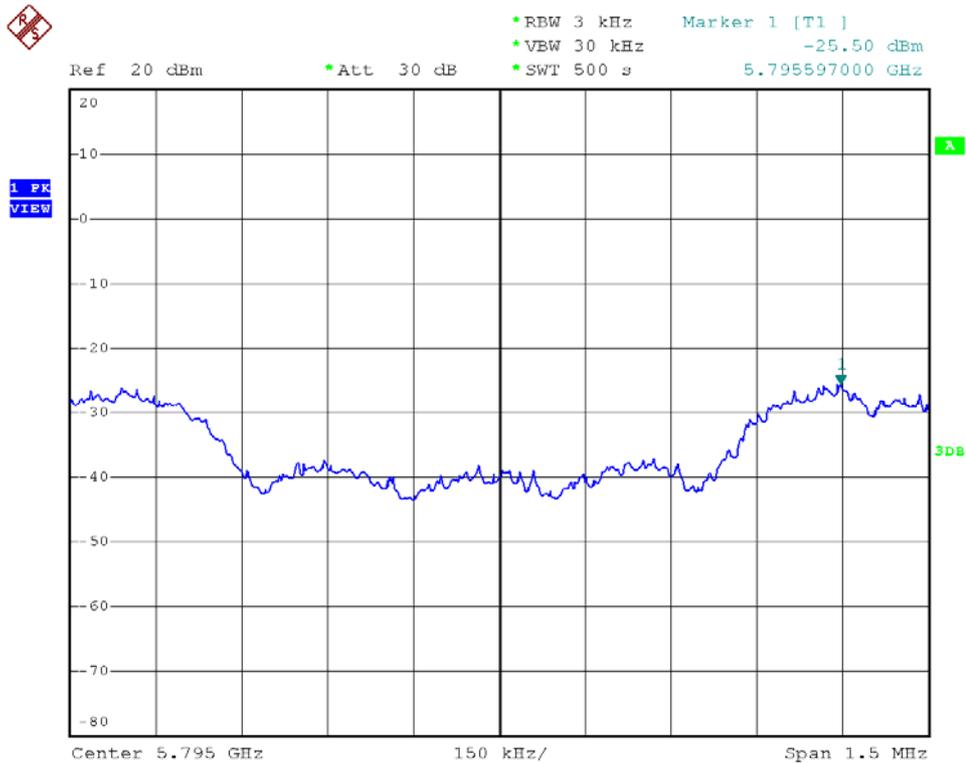




Modulation Standard: 802.11an HT40 (270Mbps), Ant R
Channel: 159



Modulation Standard: 802.11an HT40 (270Mbps), Ant L
Channel: 159





9. Band Edges Measurement

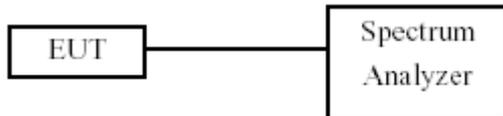
9.1 Test Limit

Below -20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

9.2 Test Procedure

- a. The transmitter output was connected to the spectrum analyzer via a low lose cable.
- b. Set both RBW and VBW of spectrum analyzer to 100 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- c. The band edges was measured and recorded.

9.3 Test Setup Layout



9.4 Measurement Equipment

Instrument/Ancillary	Model No.	Manufacturer	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	FSP40	R&S	10047	2009/02/21	2010/02/20



9.5 Test Result and Data

Test Date: Mar. 06, 2009

Temperature: 25°C

Atmospheric pressure: 1025 hPa

Humidity: 49%

Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)		maximum value (dBm)	
			Ant R	Ant L	Ant R	Ant L
802.11b (11Mbps)	01	2412	2396.9	2396.9	-26.70	-28.70
	11	2462	2484.6	2484.7	-48.56	-48.98
802.11g (54Mbps)	01	2412	2399.5	2399.5	-28.33	-29.46
	11	2462	2483.8	2536.0	-51.49	-64.37
802.11n HT20 (130Mbps)	01	2412	2399.5	2399.5	-30.97	-23.81
	11	2462	2484.3	2536.0	-54.32	-66.38
802.11n HT40 (270Mbps)	03	2422	2399.5	2399.5	-36.56	-35.57
	09	2452	2484.4	2500.0	-50.81	-65.79

Test Date: Mar. 13, 2009

Temperature: 25°C

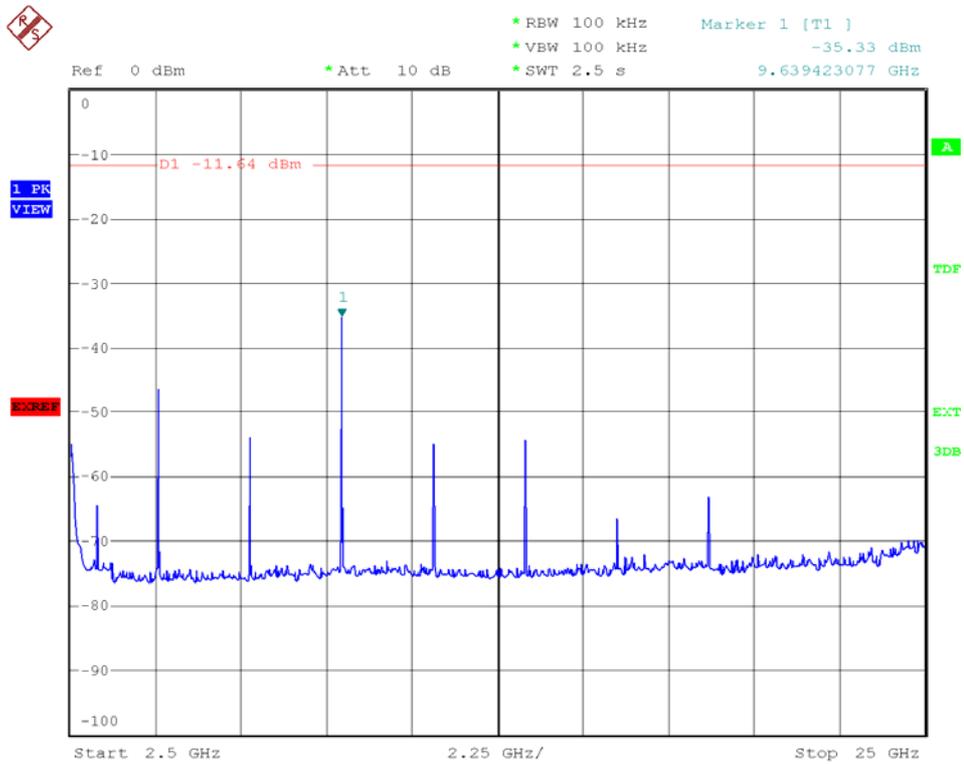
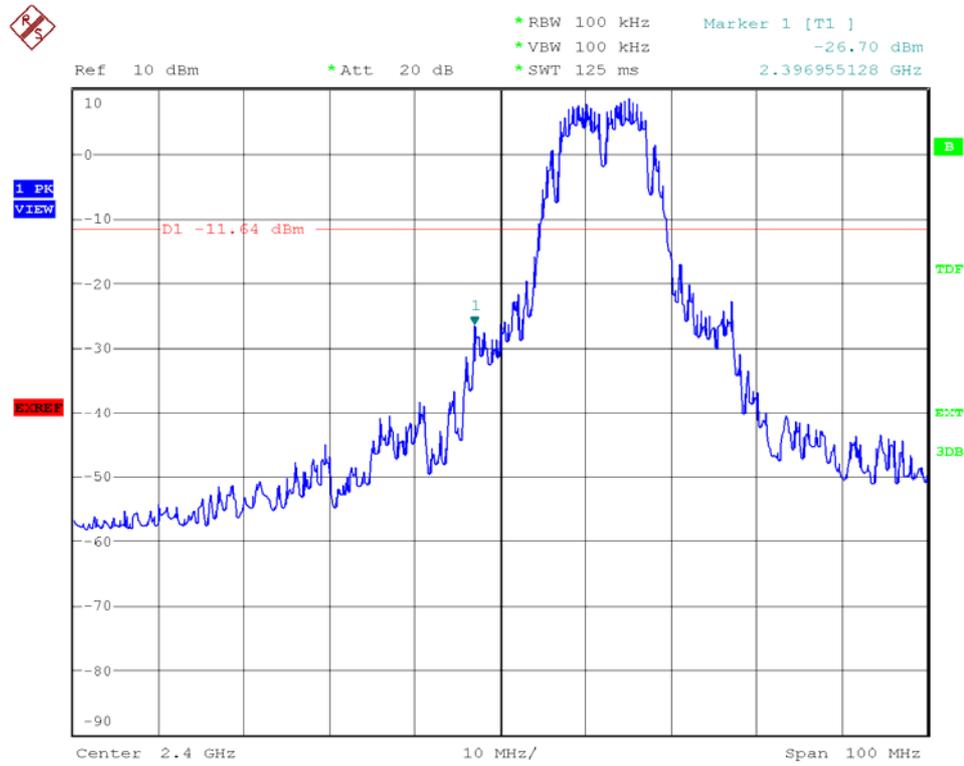
Atmospheric pressure: 1025 hPa

Humidity: 49%

Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)		maximum value (dBm)	
			Ant R	Ant L	Ant R	Ant L
802.11a (6Mbps)	149	5745	5724.8	5721.6	-46.86	-44.78
	165	5825	39592.0	39524.0	-47.54	-47.80
802.11an HT20 (130Mbps)	149	5745	5724.4	5724.6	-47.41	-47.10
	165	5825	39660.0	39524.0	-48.04	-47.60
802.11an HT40 (270Mbps)	159	5795	5827.4	5832.6	-43.09	-42.44

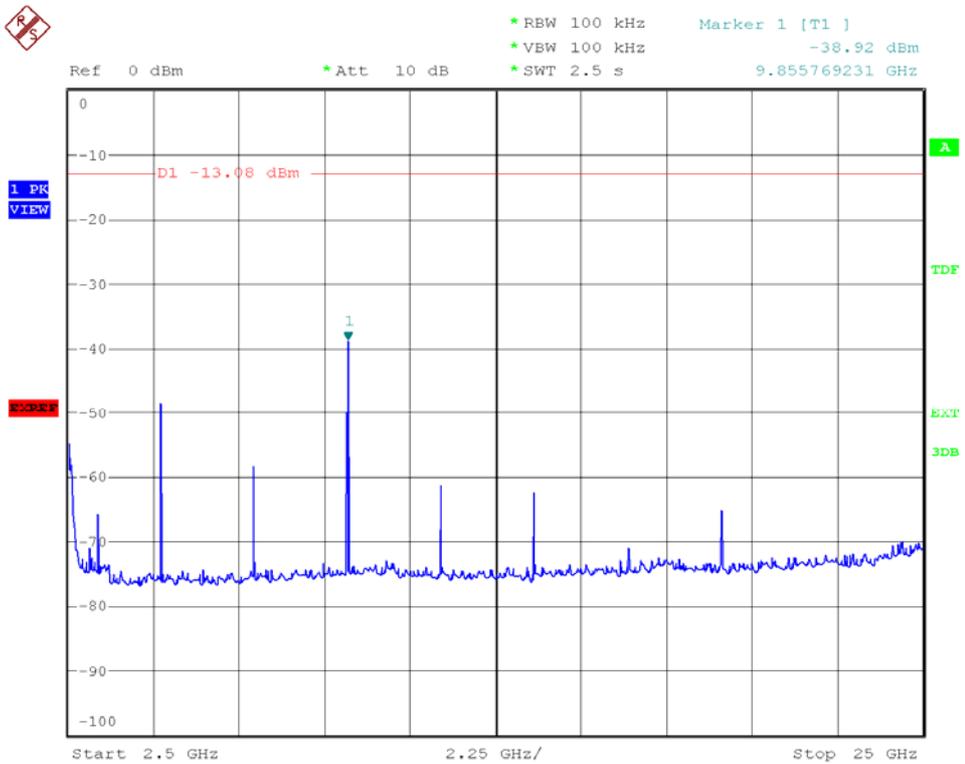
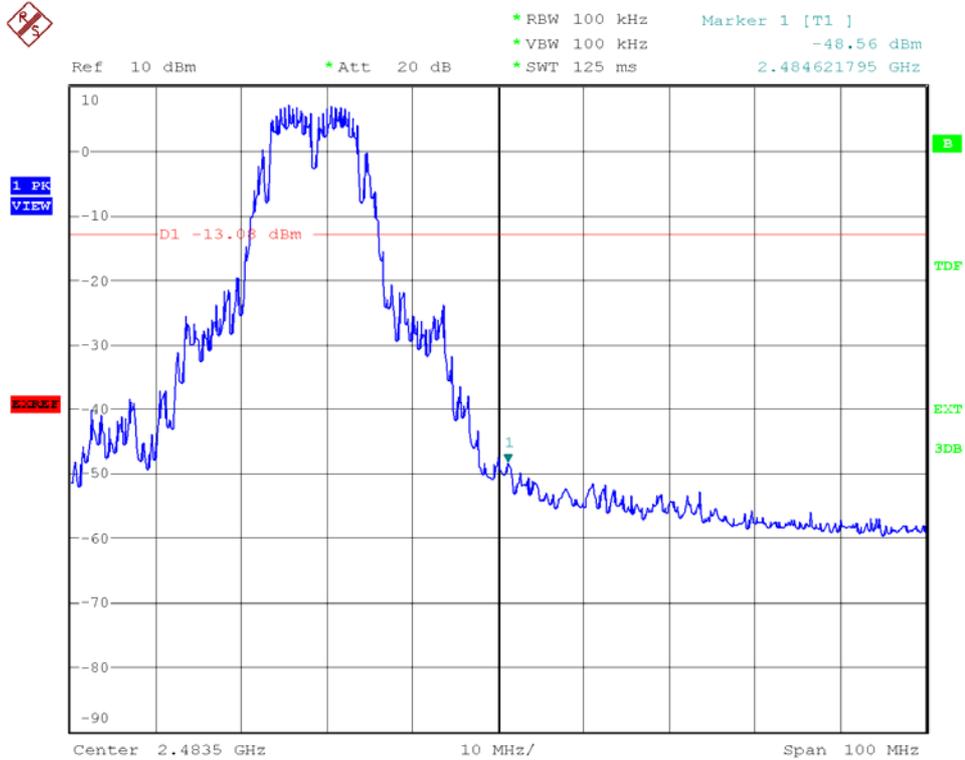


Modulation Standard: 802.11b (11Mbps), Ant R
Channel: 01



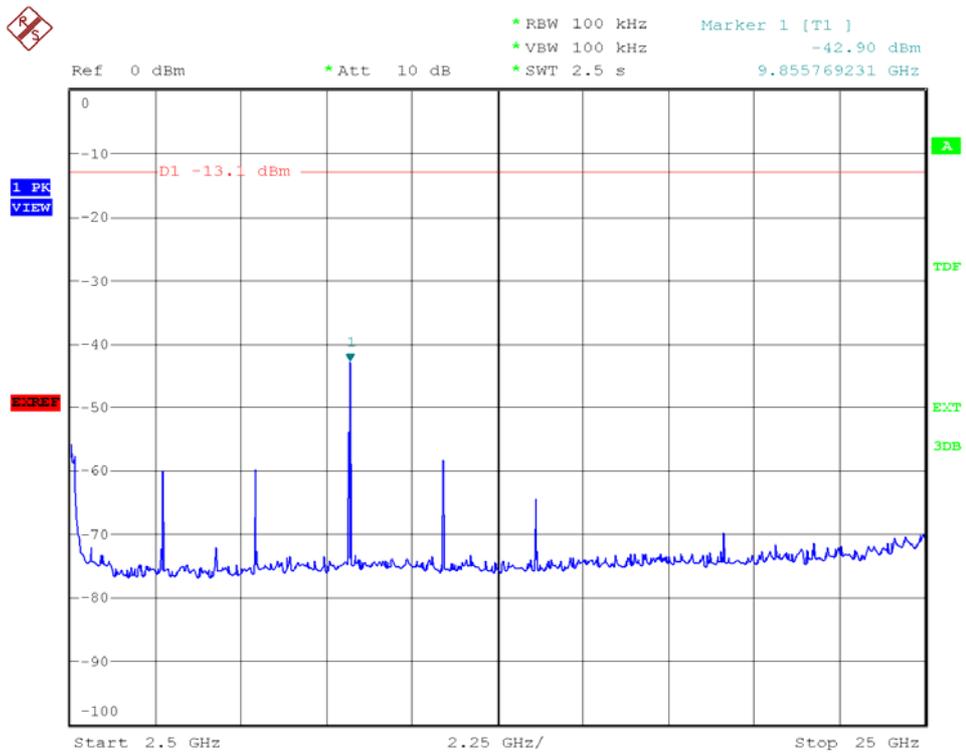
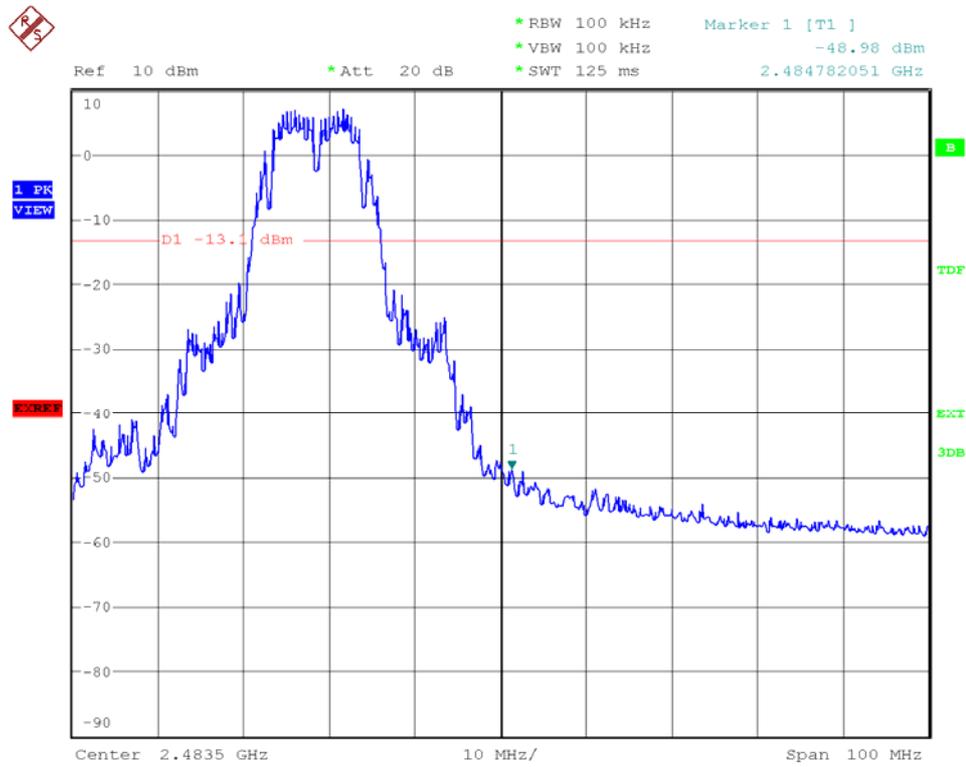


Modulation Standard: 802.11b (11Mbps), Ant R
Channel: 11



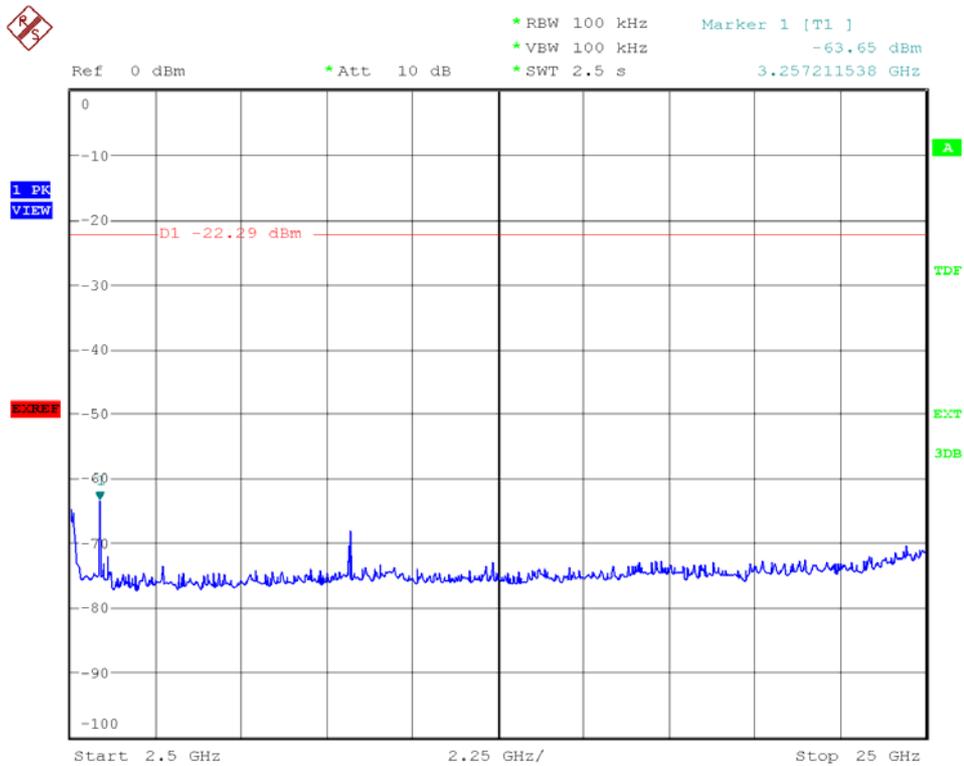
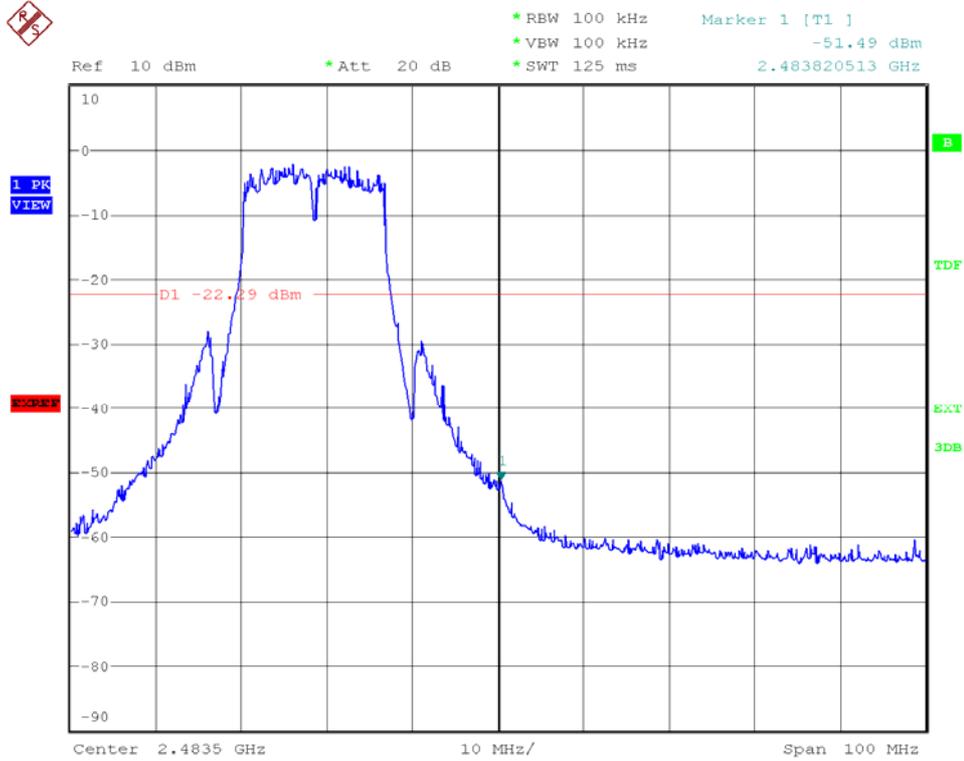


Modulation Standard: 802.11b (11Mbps), Ant L
Channel: 11



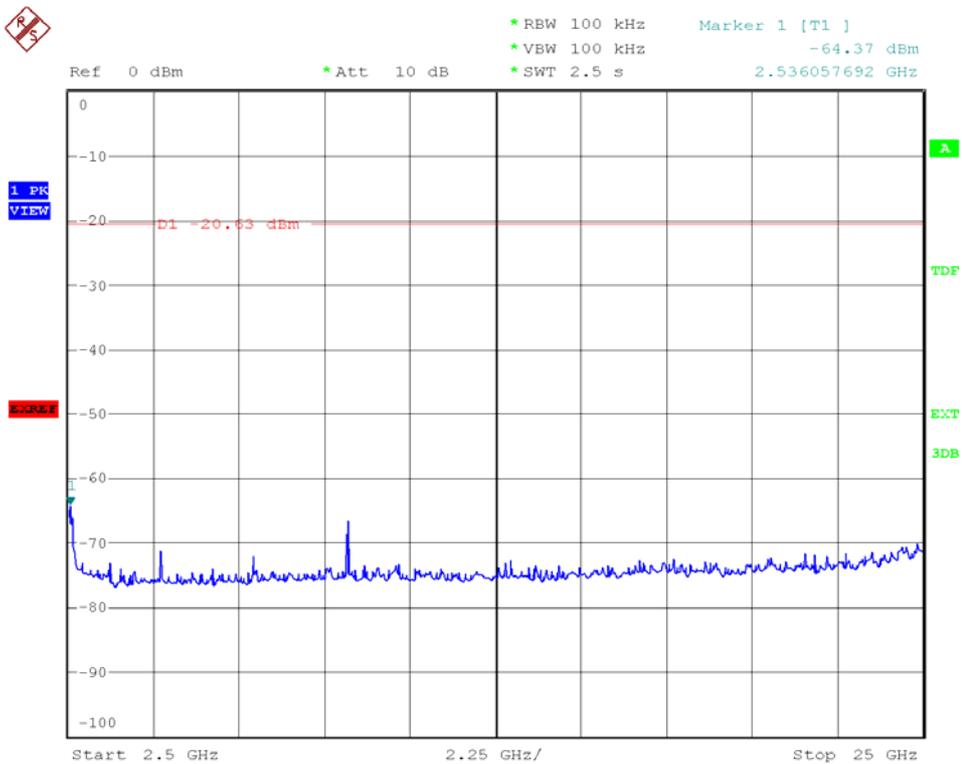
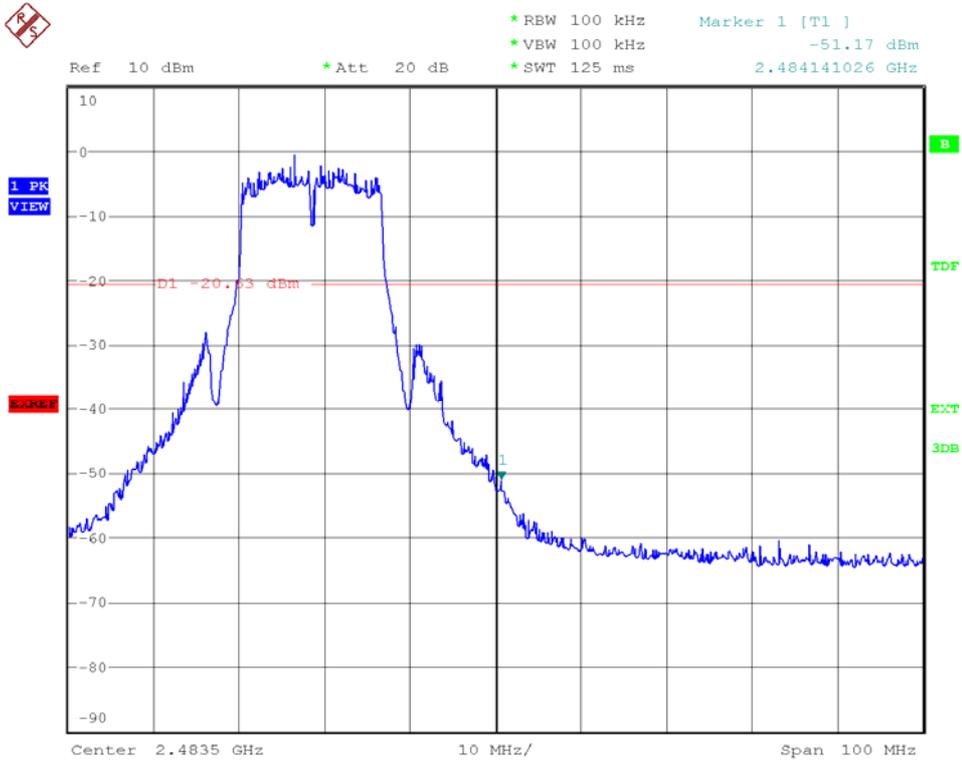


Modulation Standard: 802.11g (54Mbps), Ant R
Channel: 11



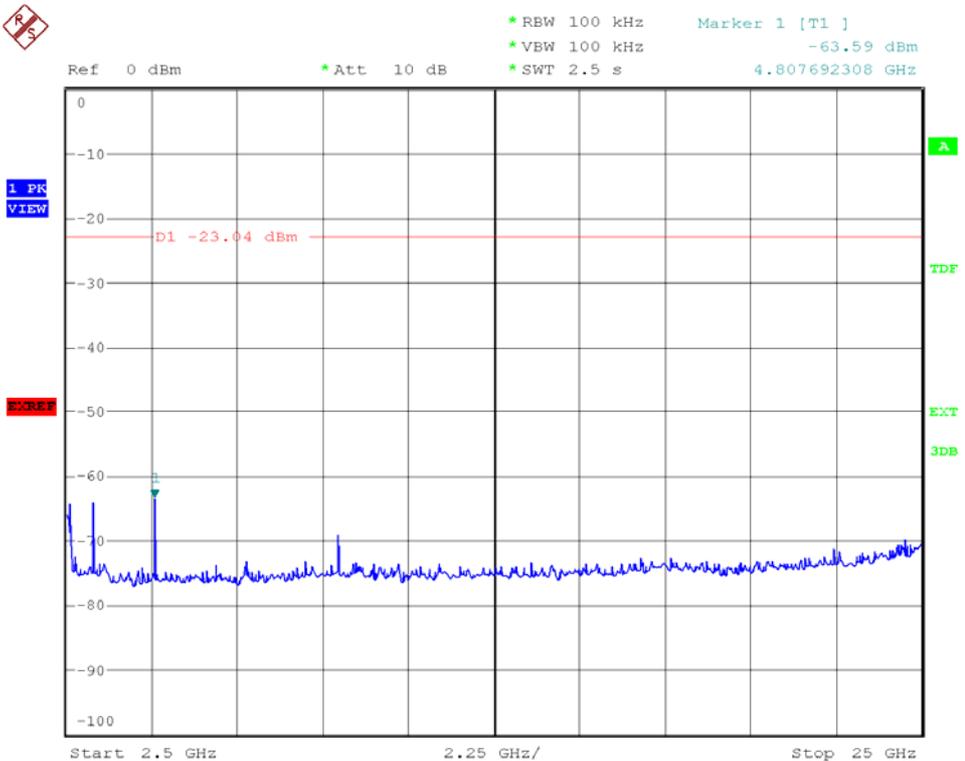
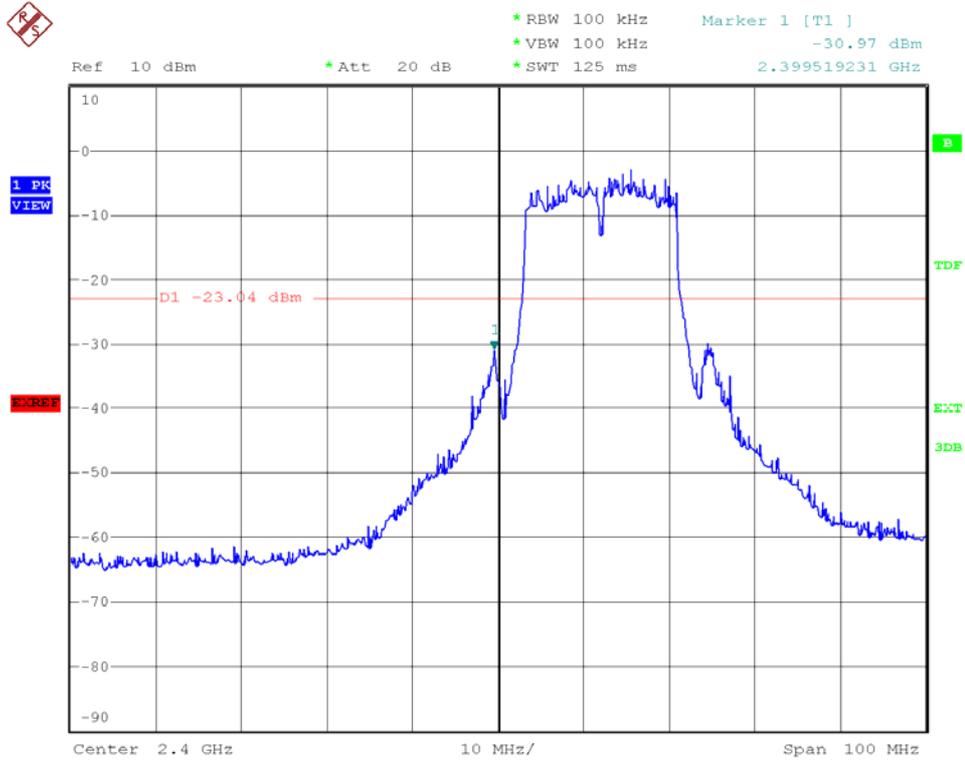


Modulation Standard: 802.11g (54Mbps), Ant L
Channel: 11



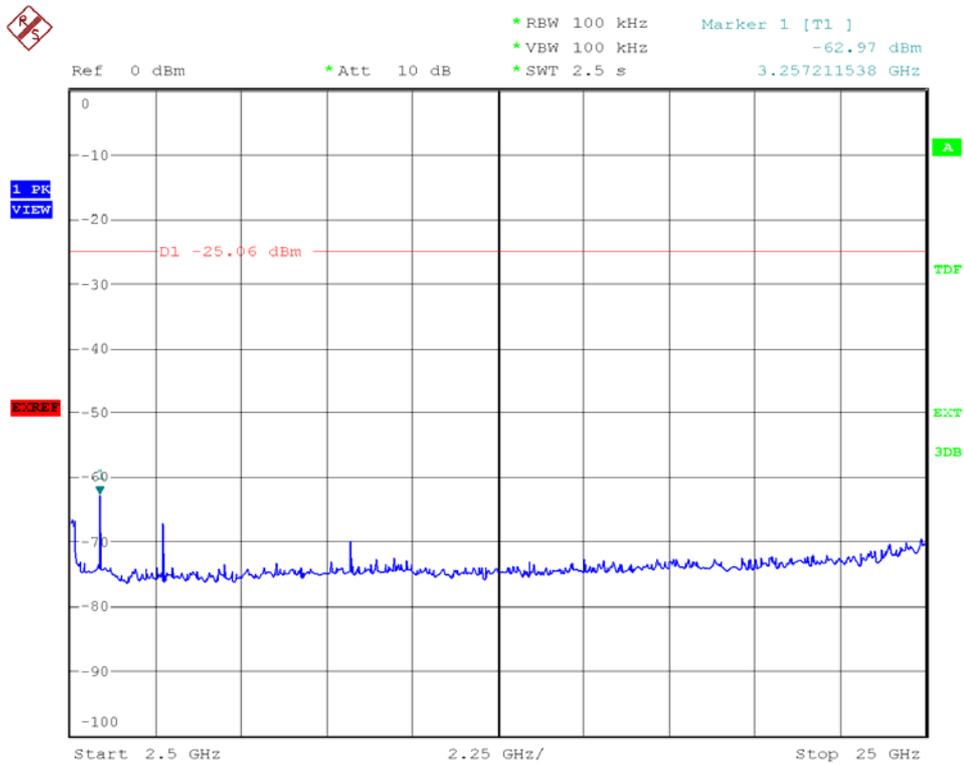
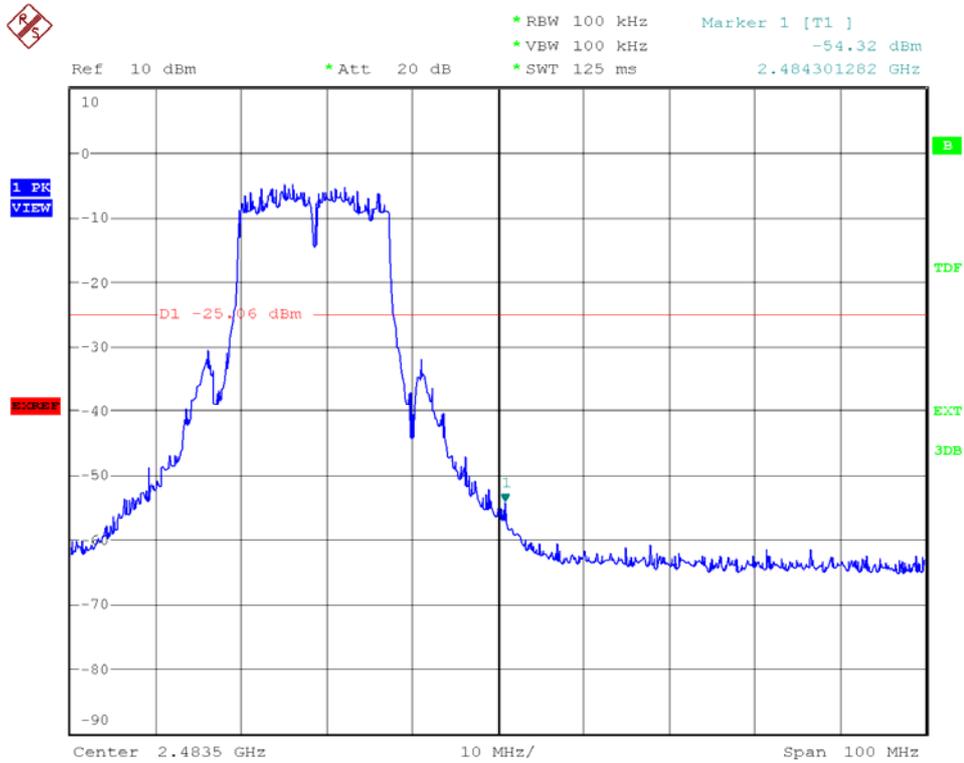


Modulation Standard: 802.11n HT20 (130Mbps), Ant R
Channel: 01



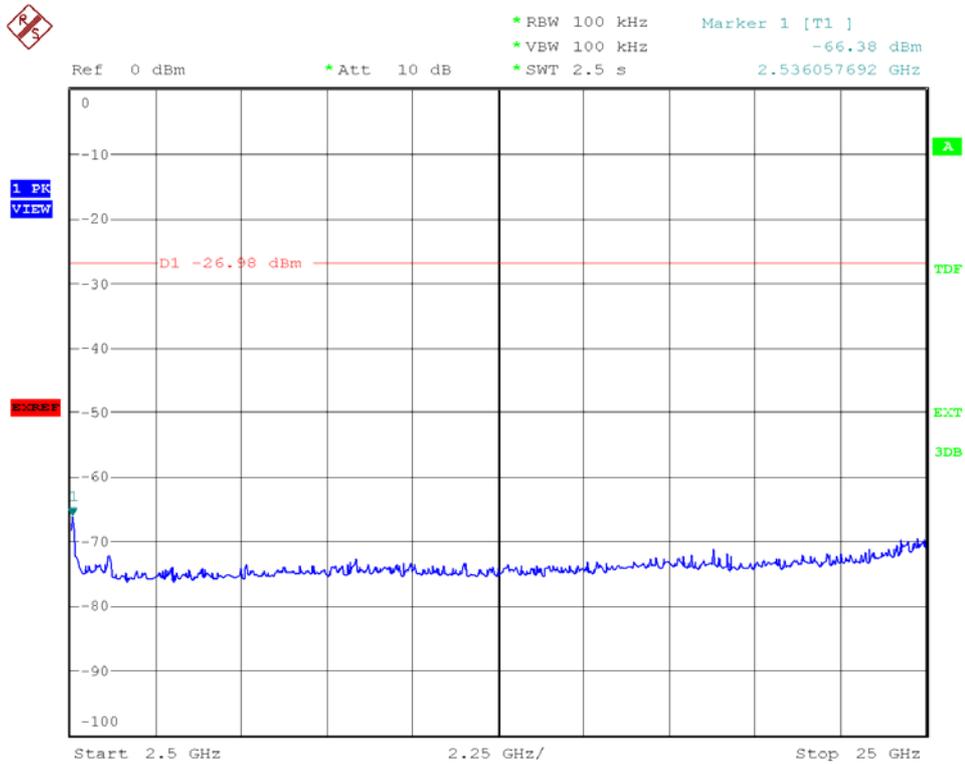
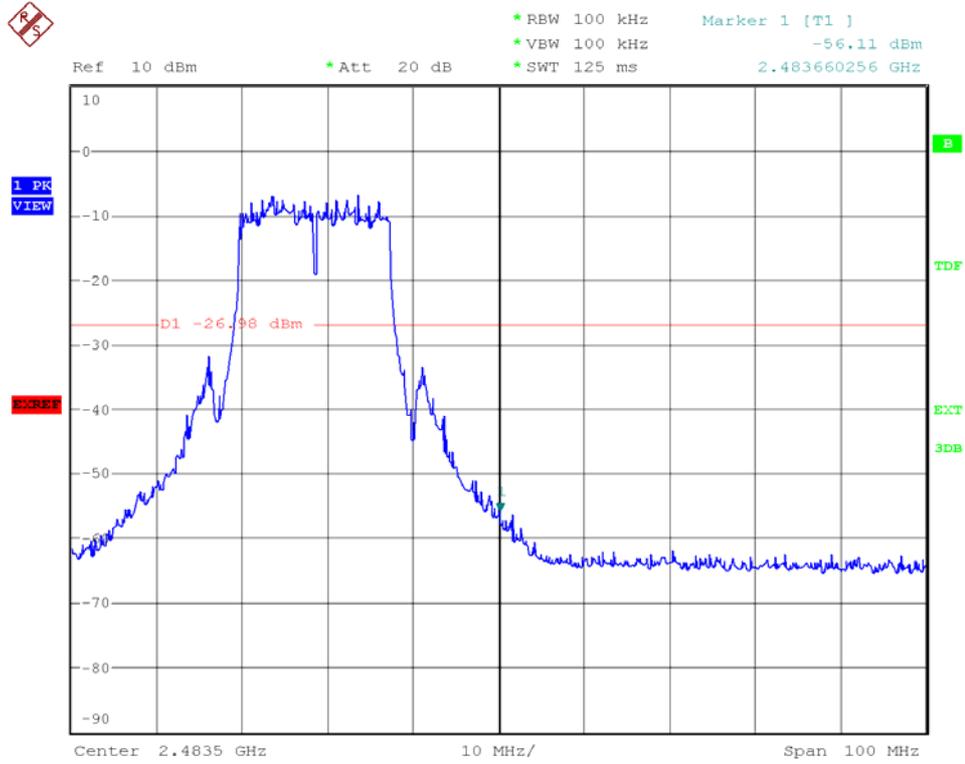


Modulation Standard: 802.11n HT20 (130Mbps), Ant R
Channel: 11



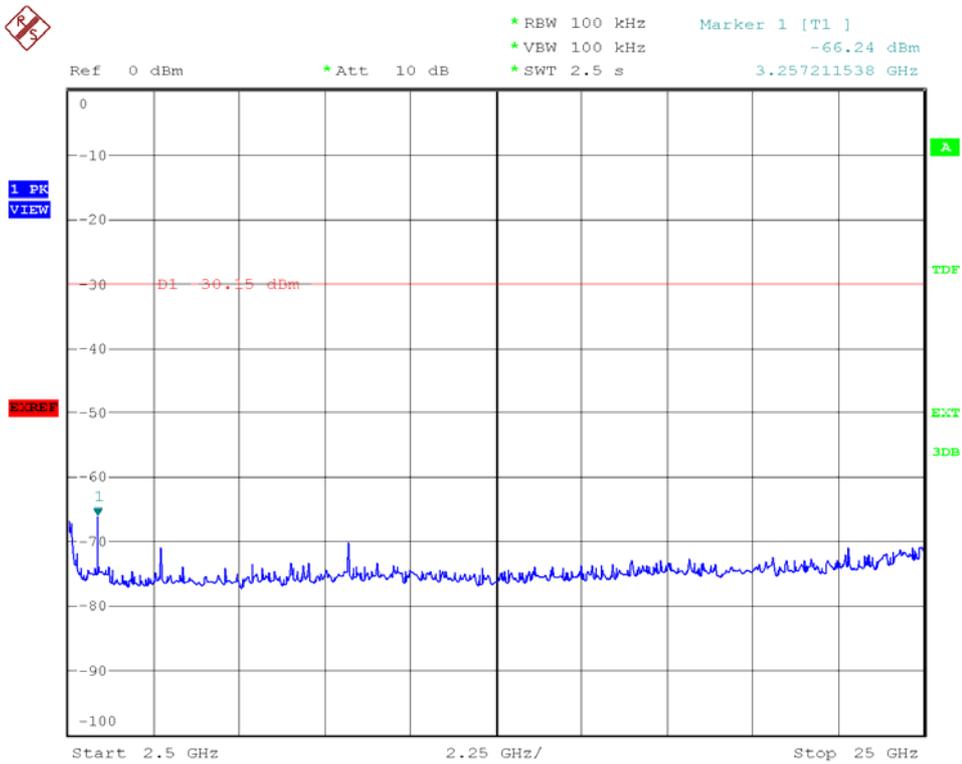
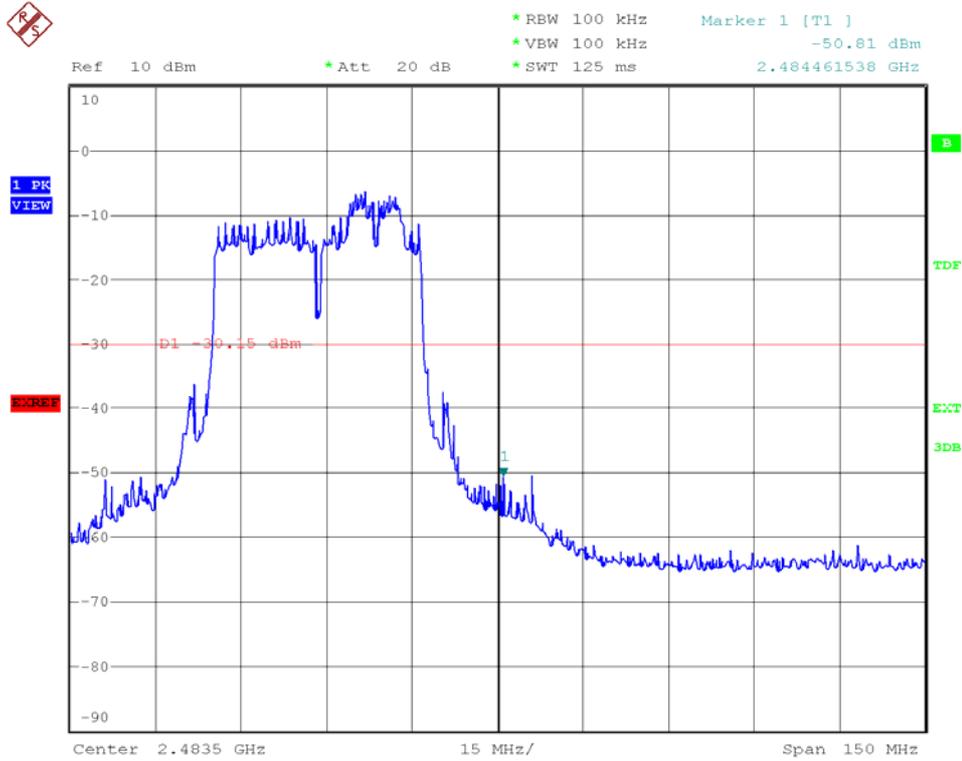


Modulation Standard: 802.11n HT20 (130Mbps), Ant L
Channel: 11



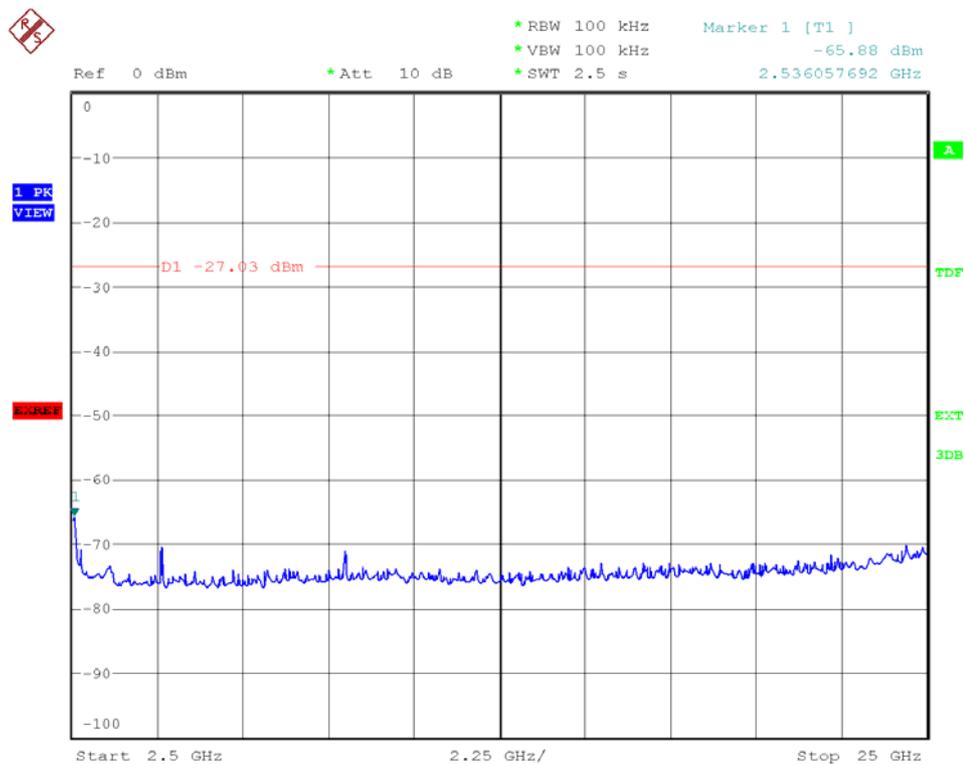
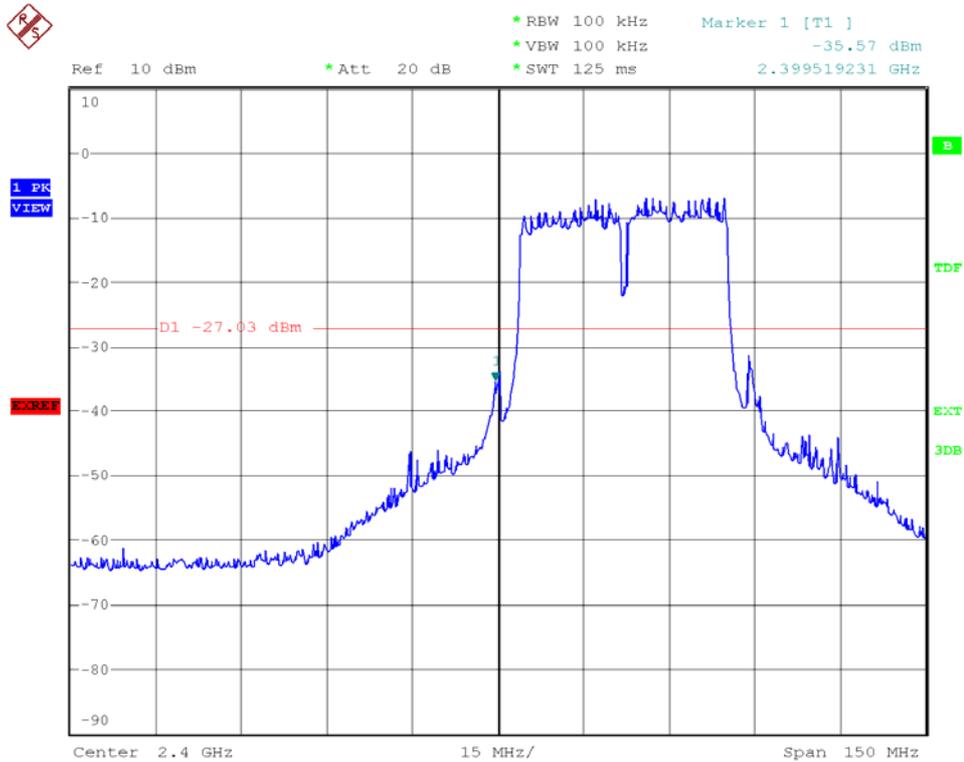


Modulation Standard: 802.11n HT40 (270Mbps), Ant R
Channel: 09



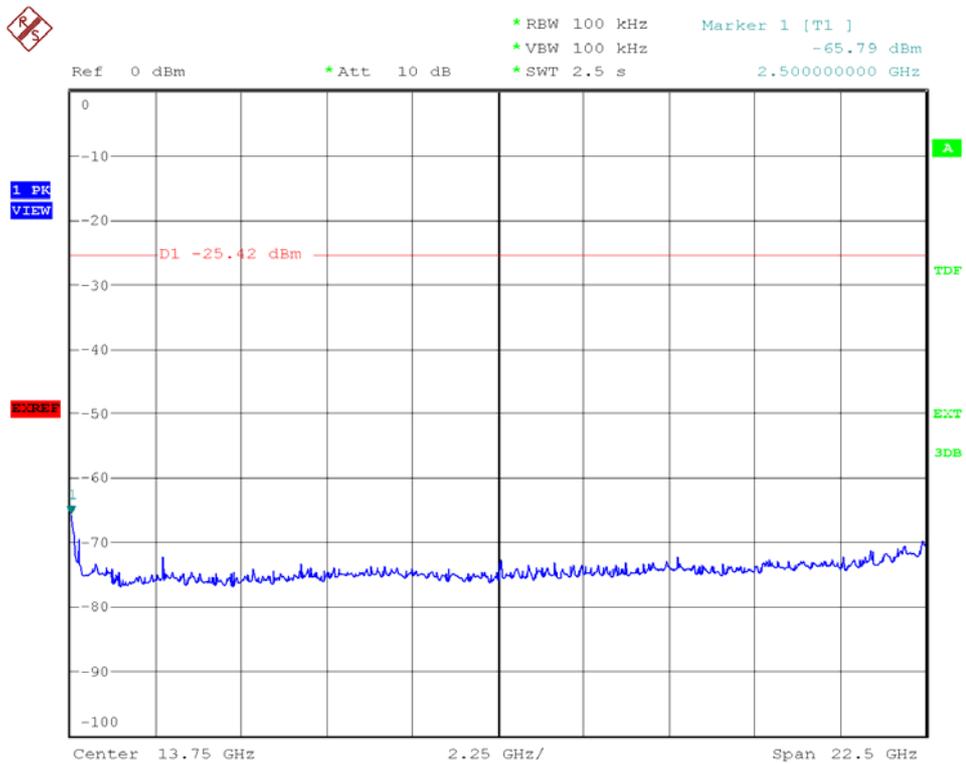
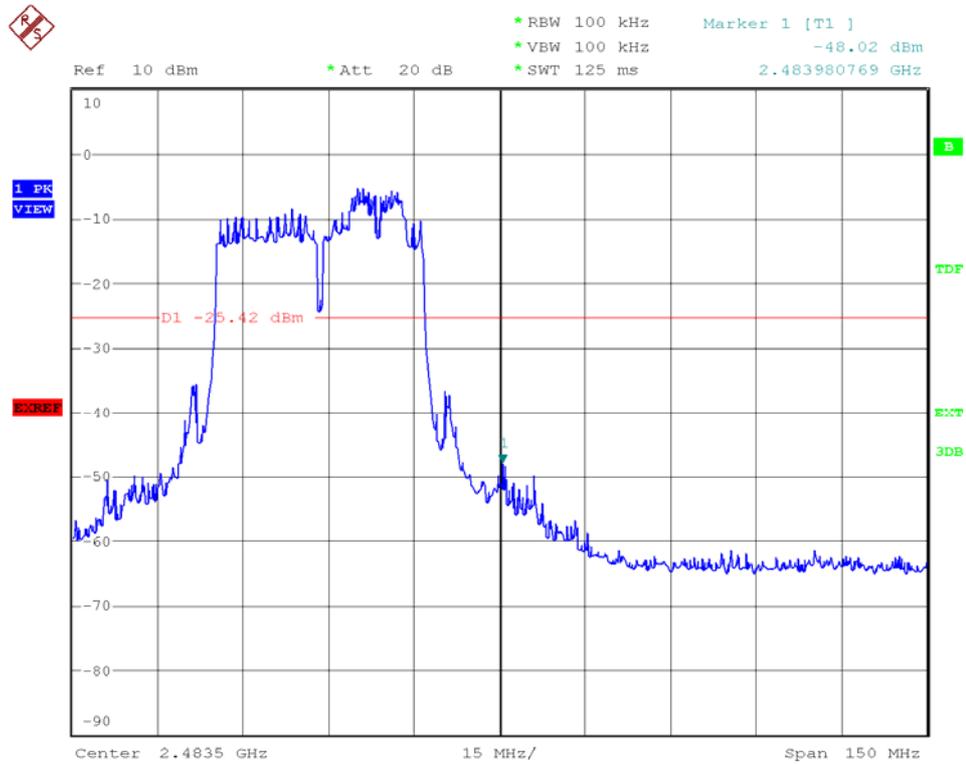


Modulation Standard: 802.11n HT40 (270Mbps), Ant L
Channel: 03



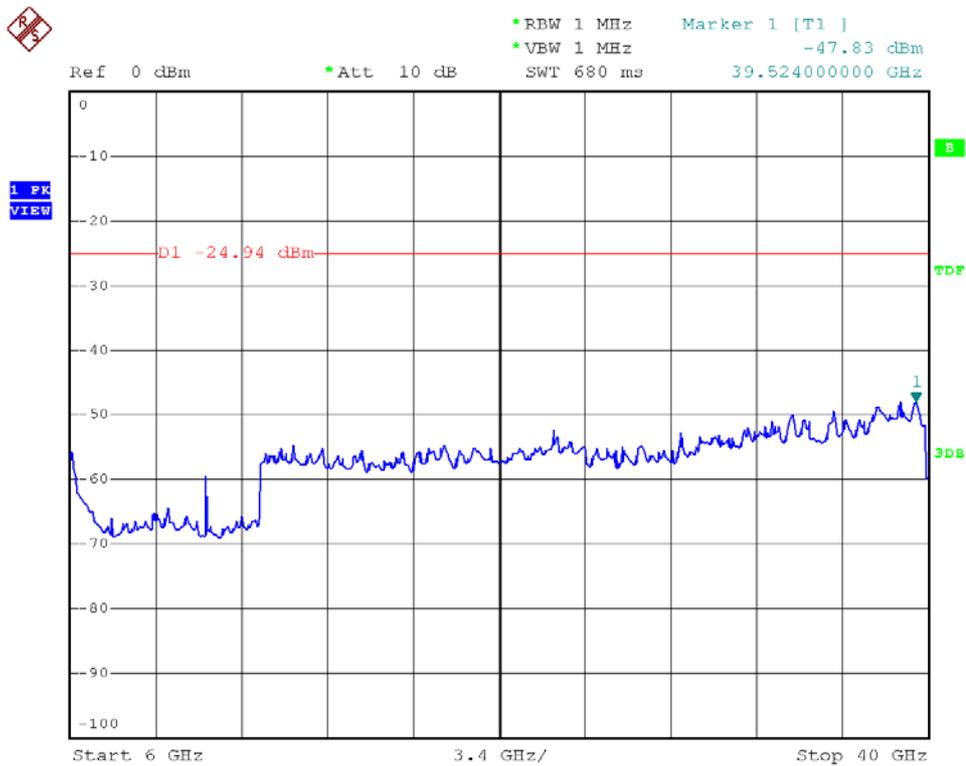
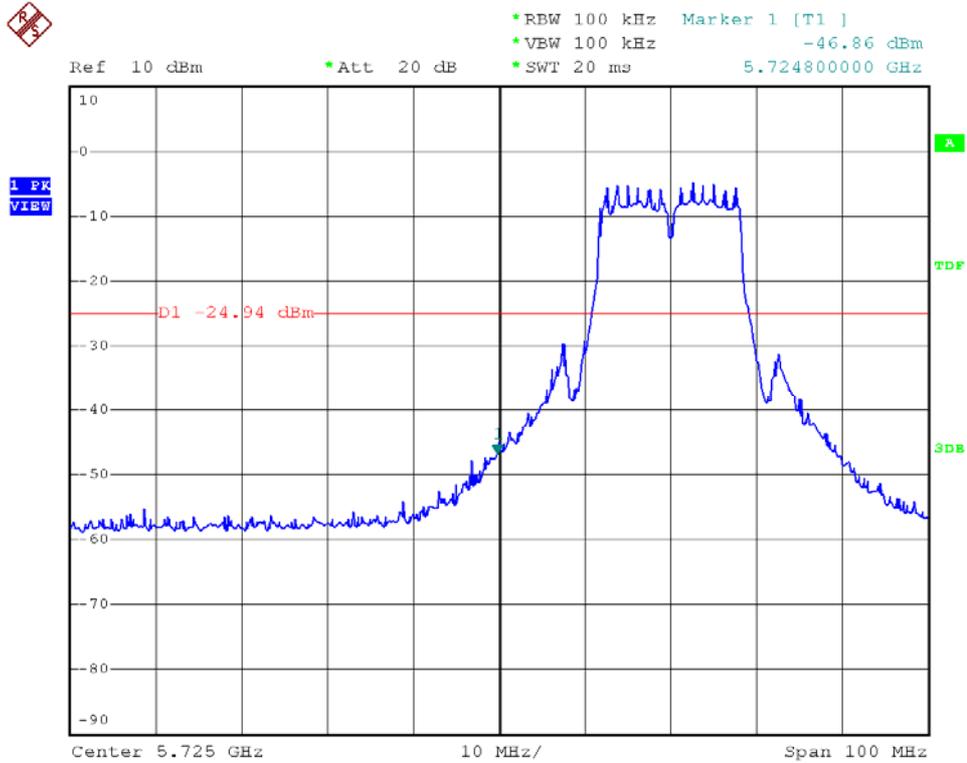


Modulation Standard: 802.11n HT40 (270Mbps), Ant L
Channel: 09



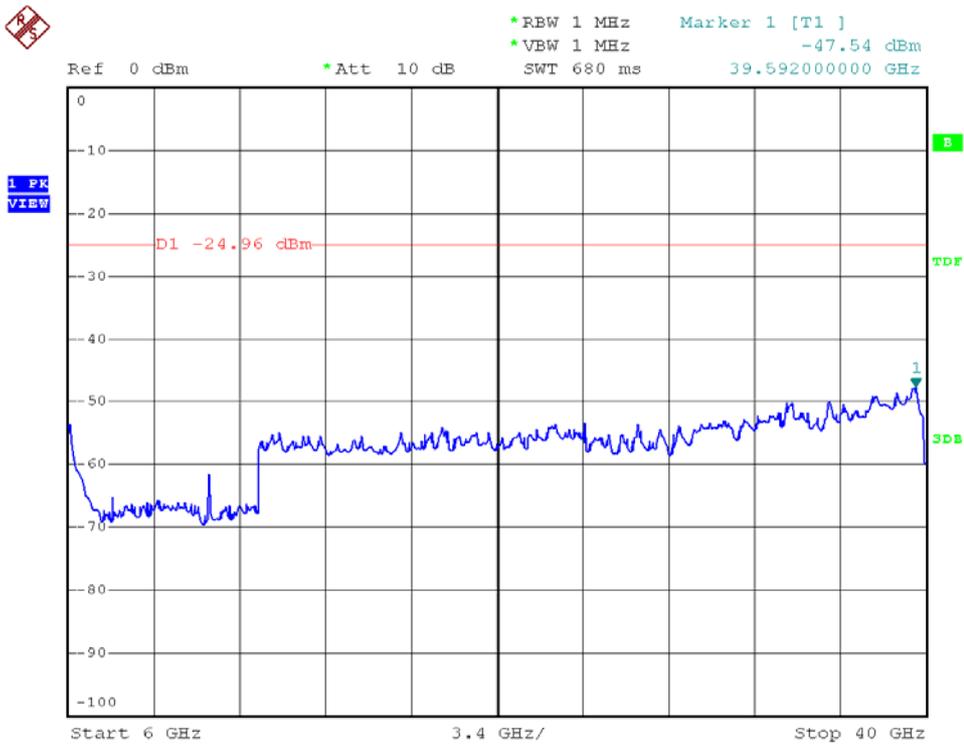
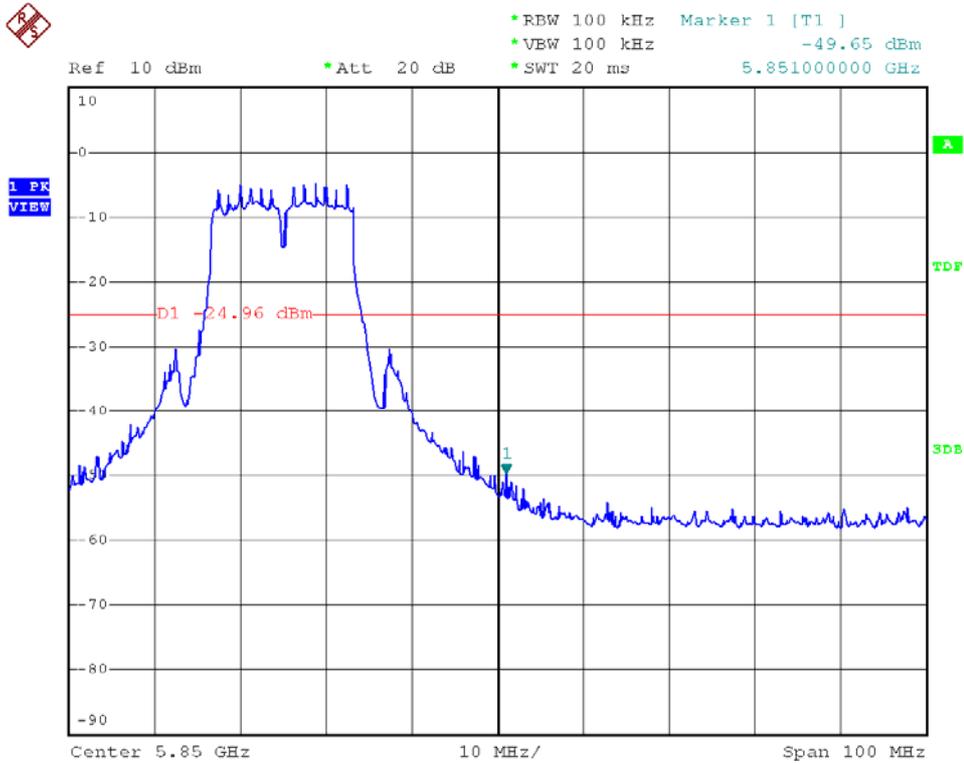


Modulation Standard: 802.11a (6Mbps), Ant R
Channel: 149



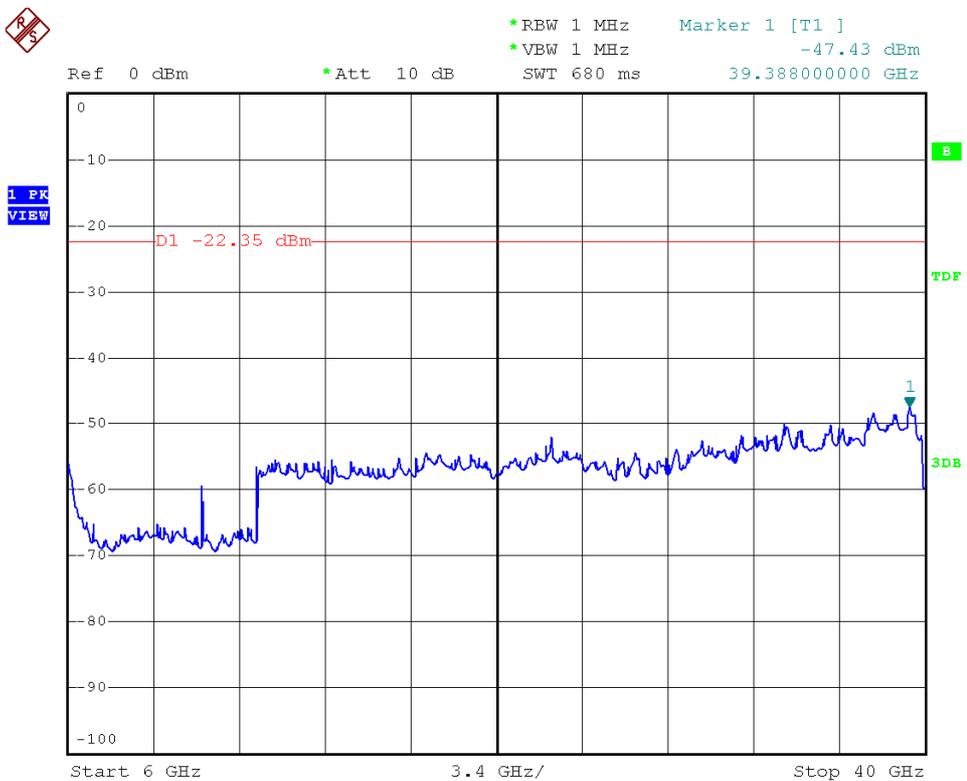
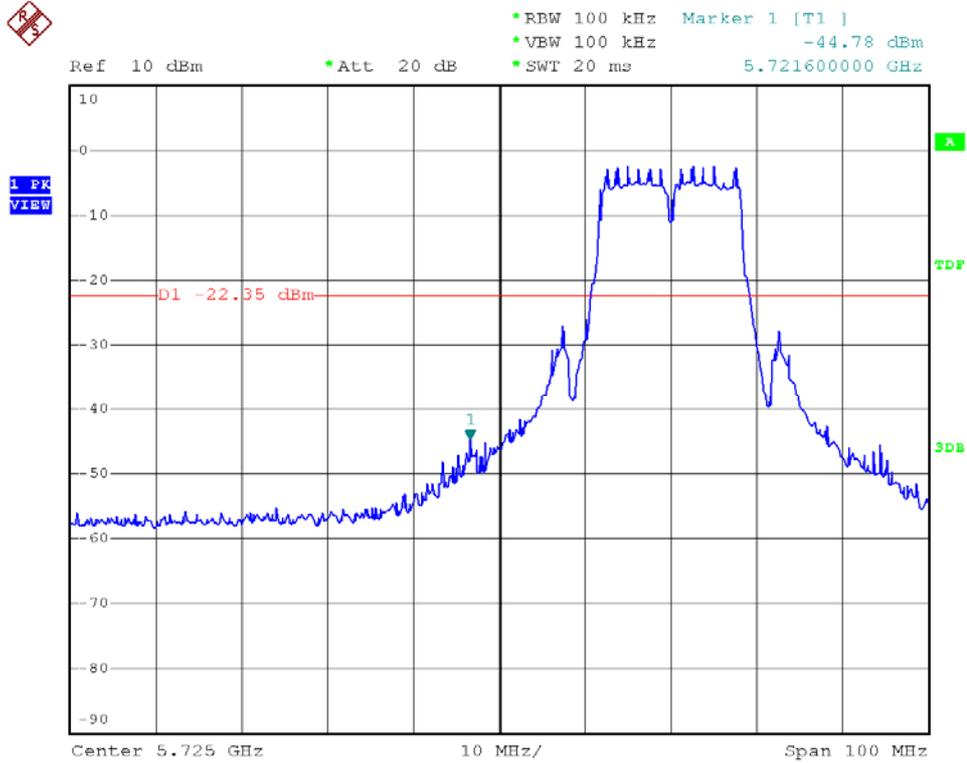


Modulation Standard: 802.11a (6Mbps), Ant R
Channel: 165



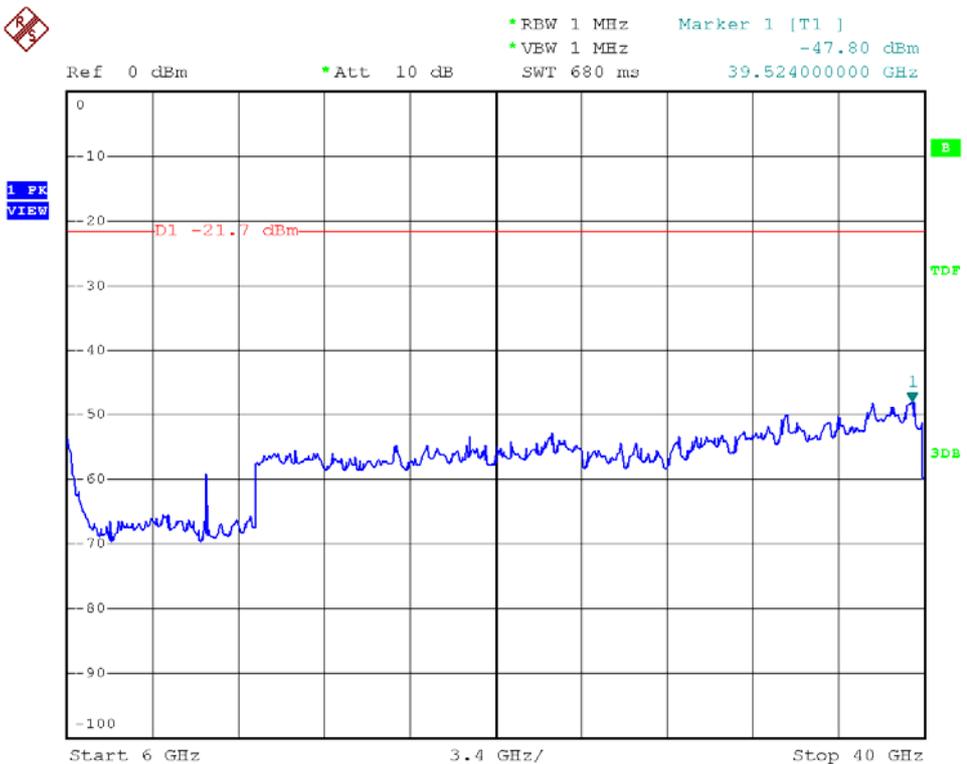
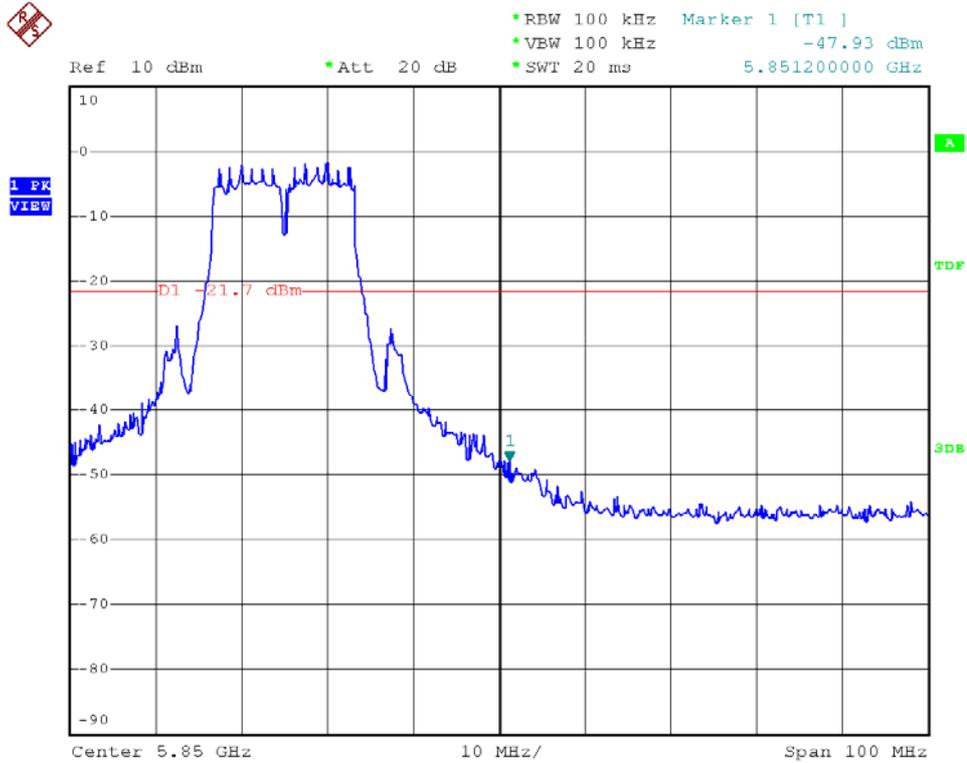


Modulation Standard: 802.11a (6Mbps), Ant L
Channel: 149



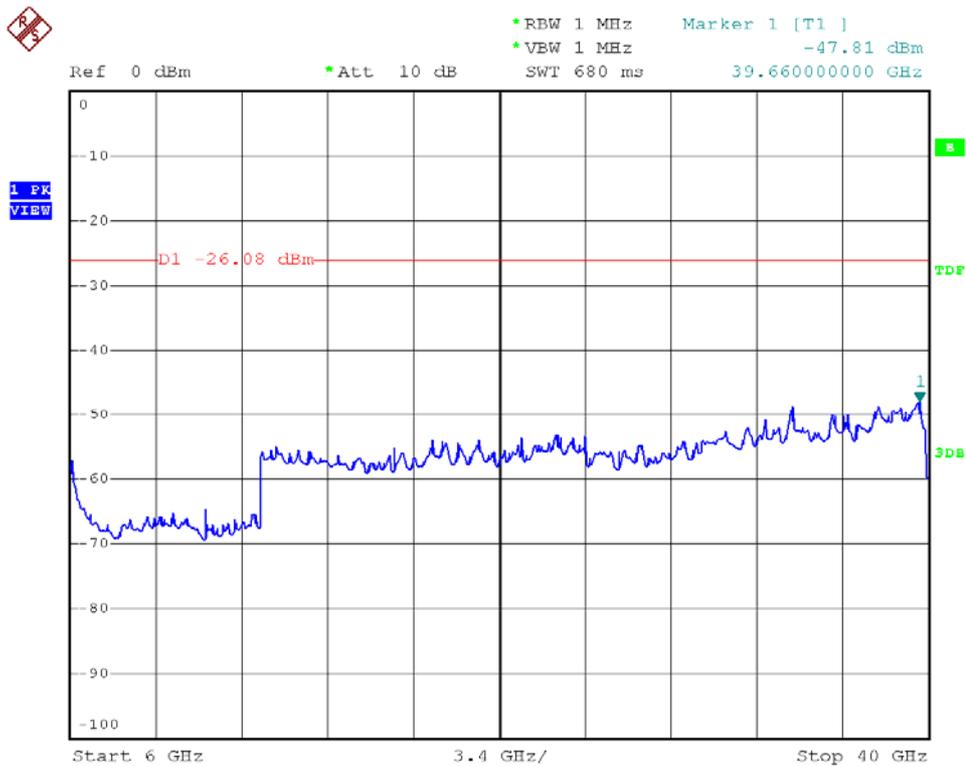
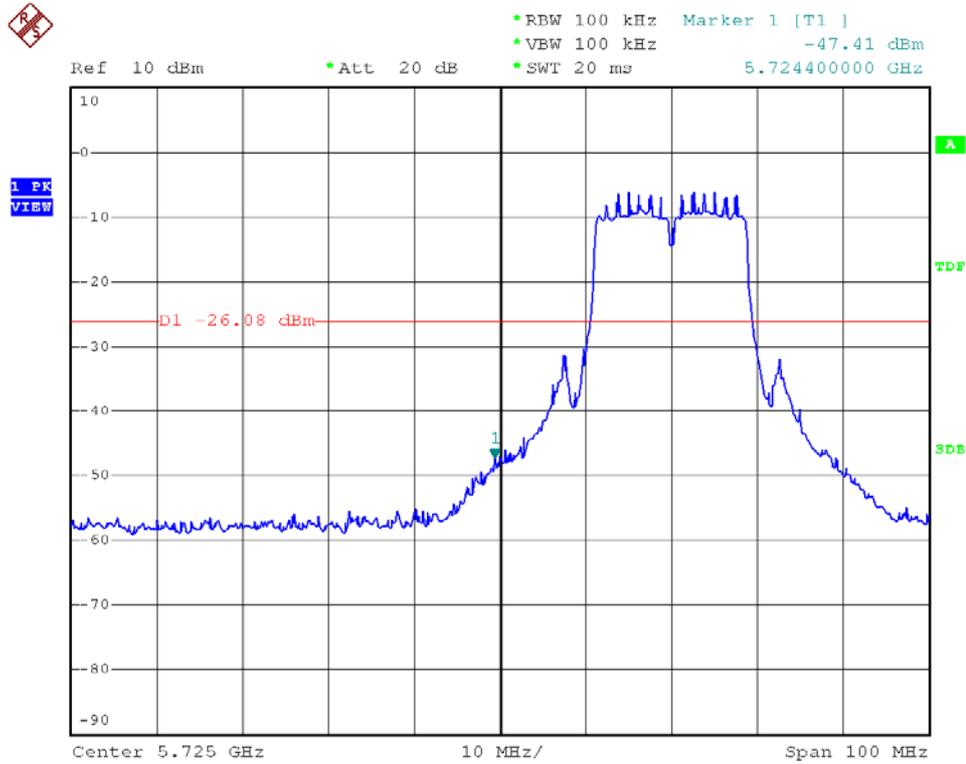


Modulation Standard: 802.11a (6Mbps), Ant L
Channel: 165



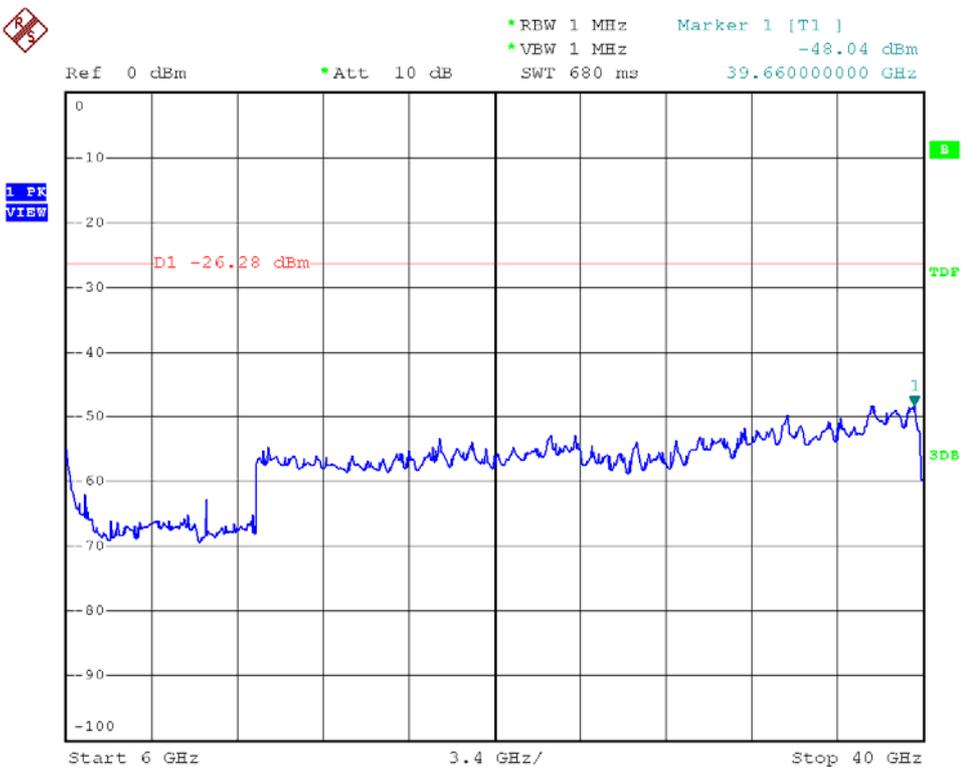
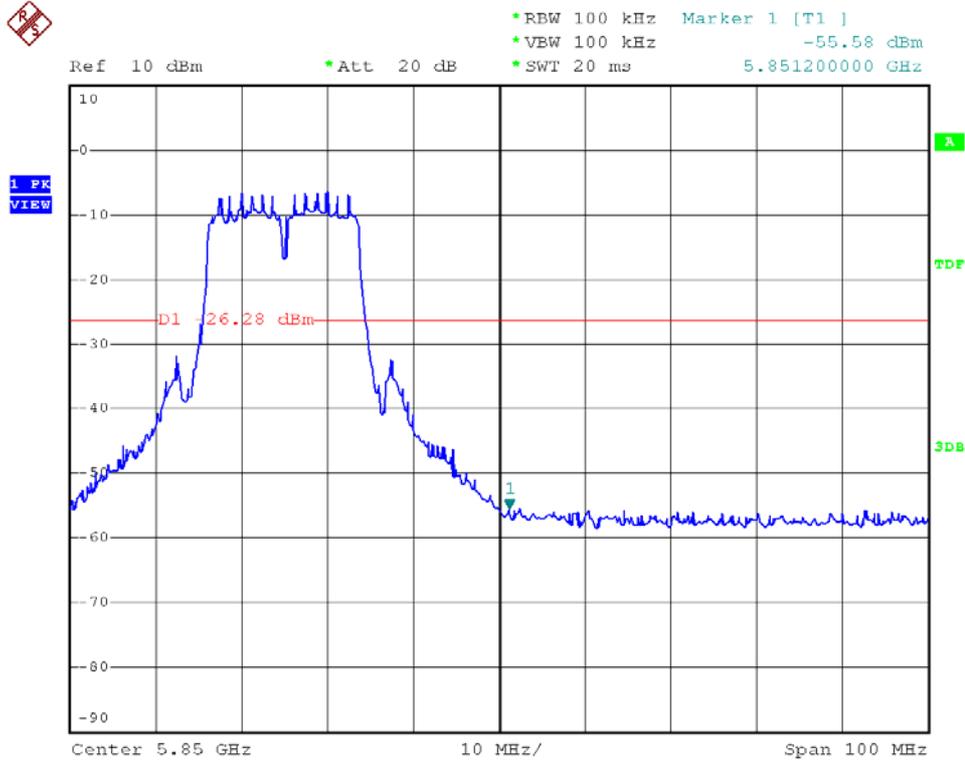


Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 149



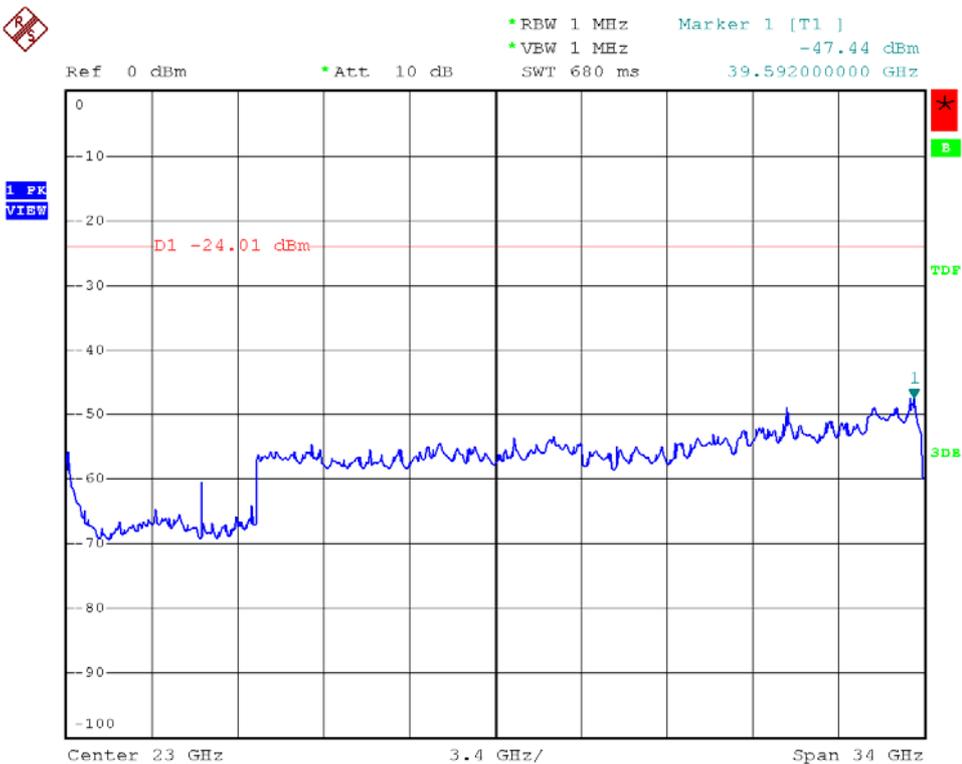
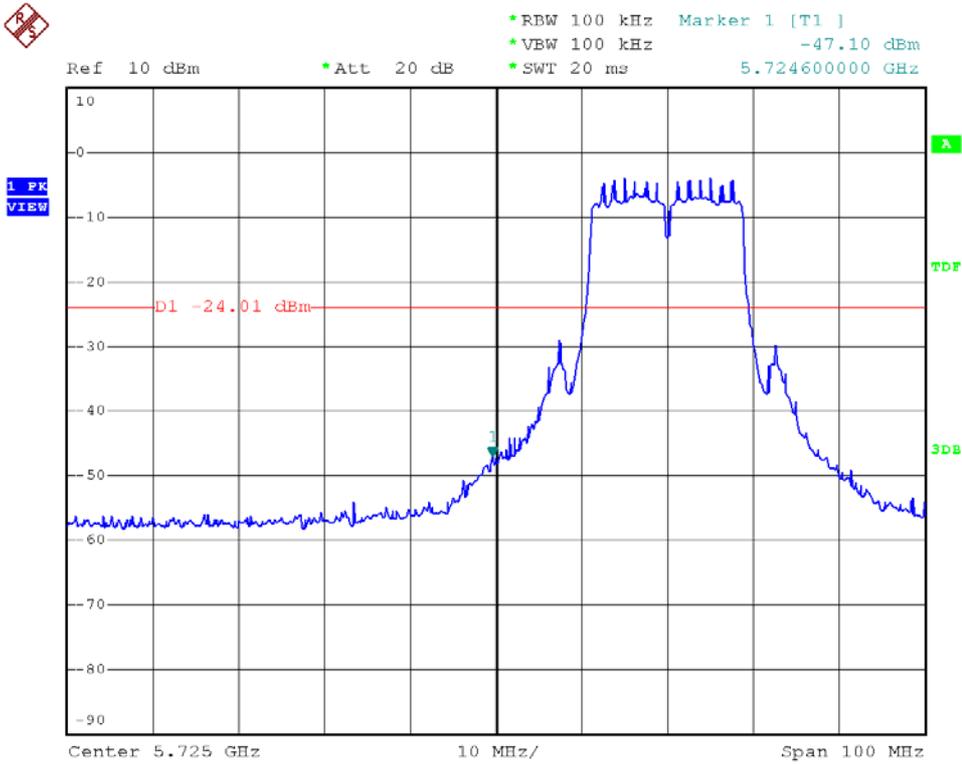


Modulation Standard: 802.11an HT20 (130Mbps), Ant R
Channel: 165



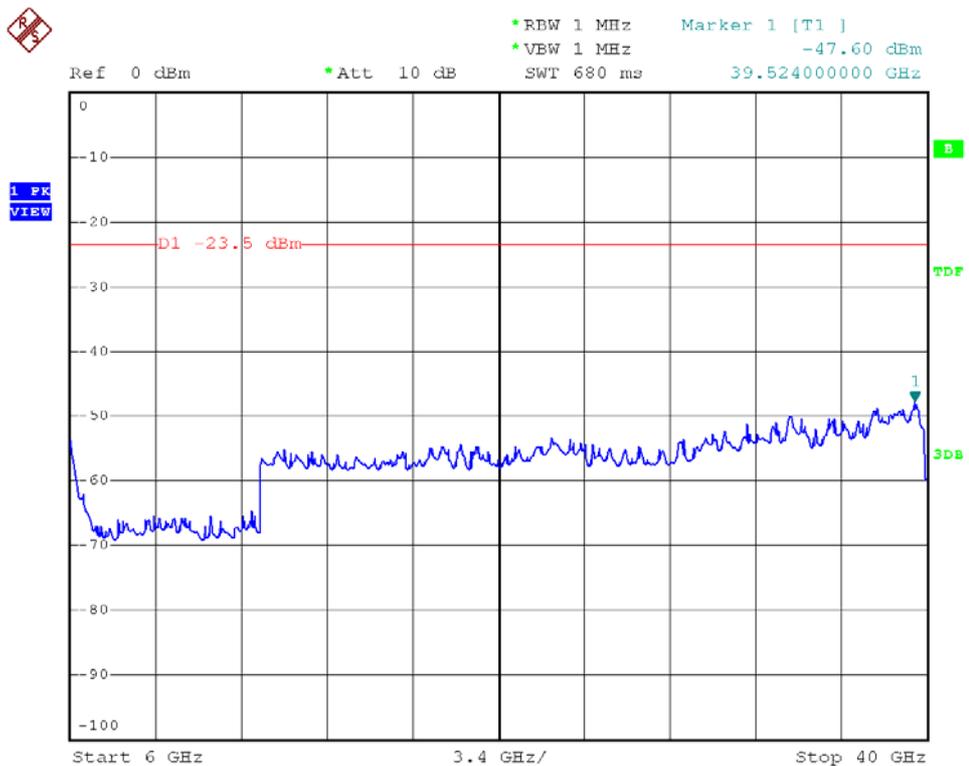
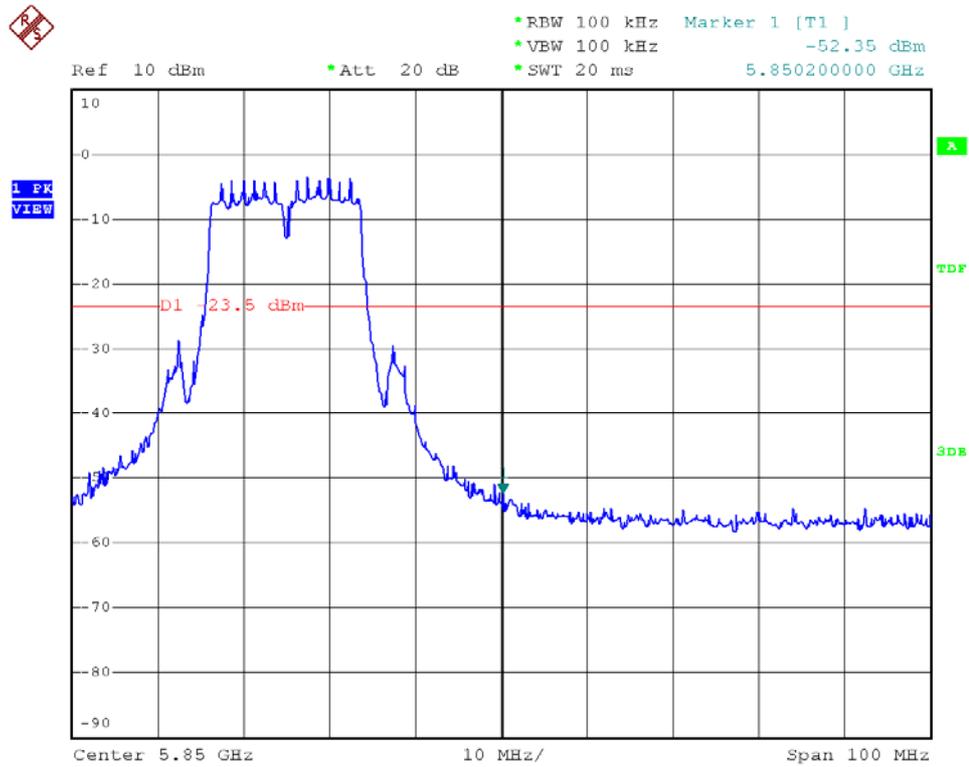


Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 149



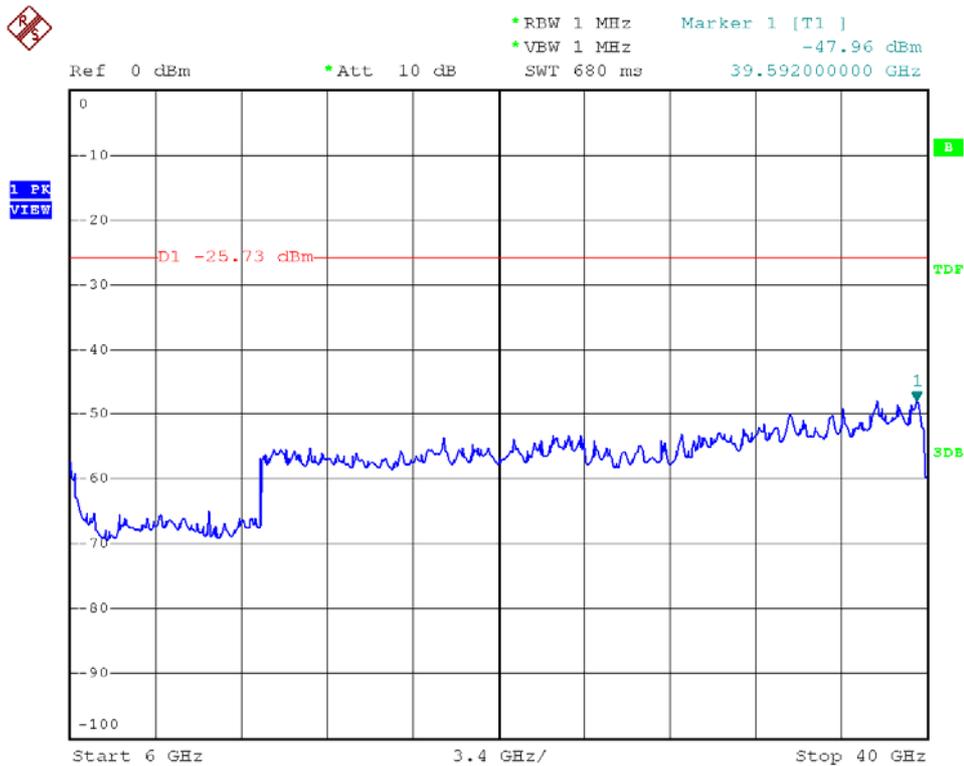
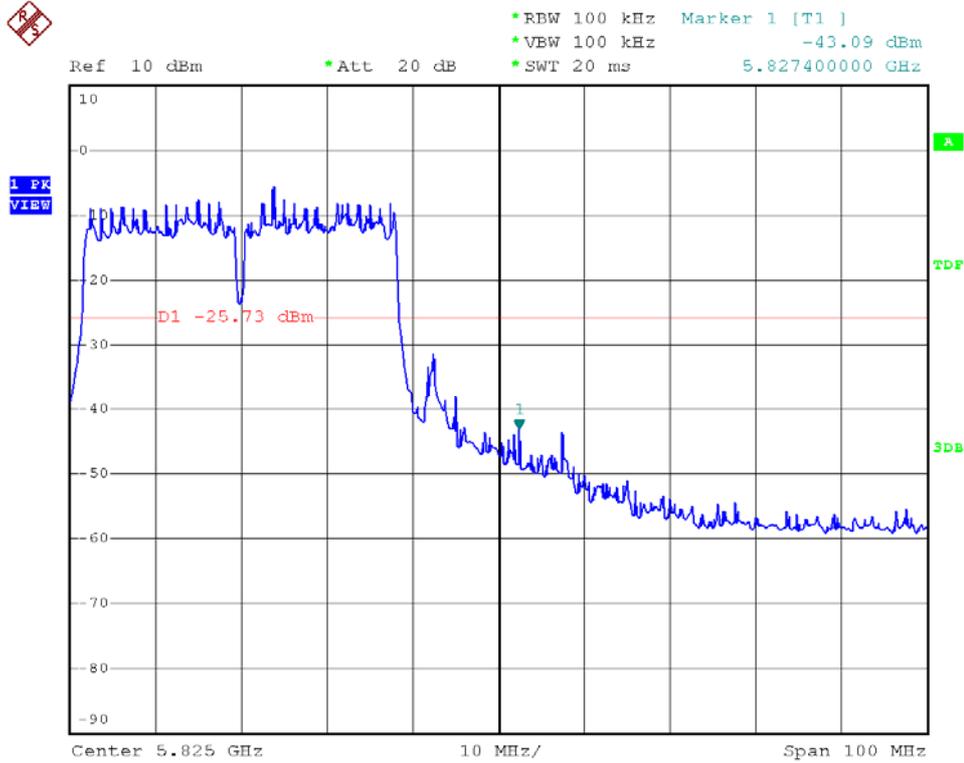


Modulation Standard: 802.11an HT20 (130Mbps), Ant L
Channel: 165



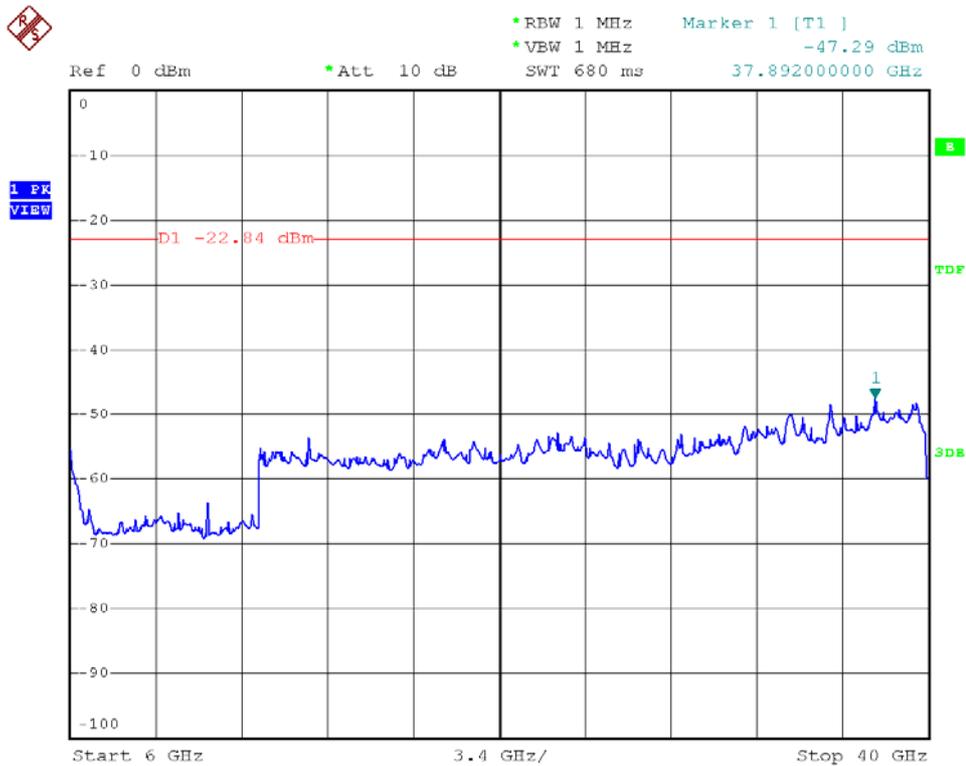
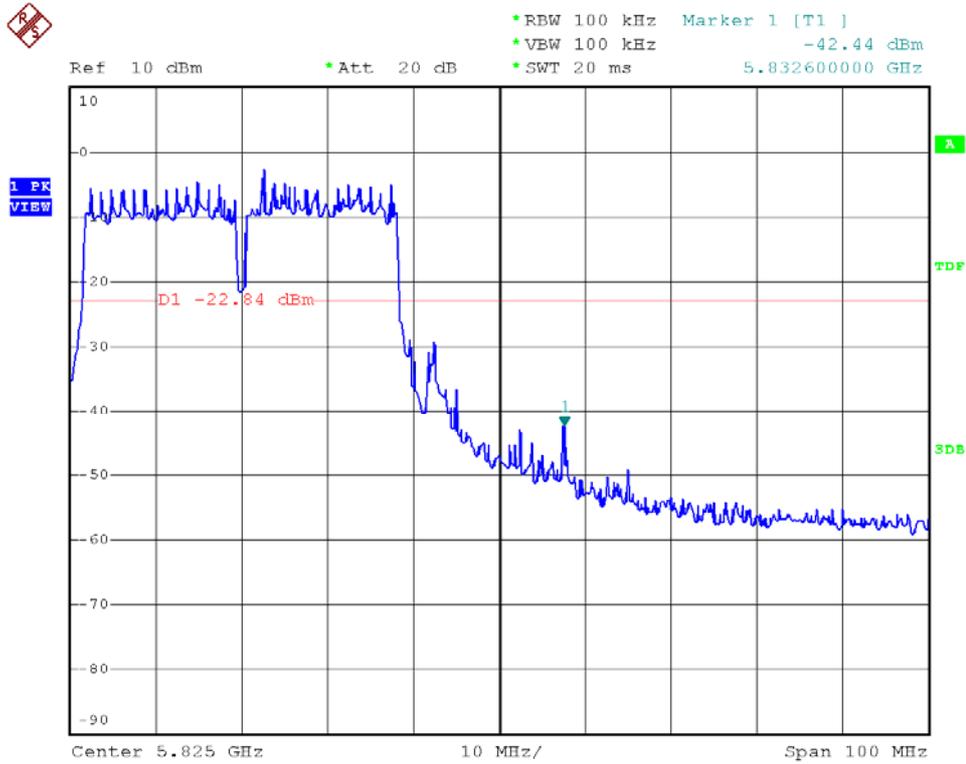


Modulation Standard: 802.11an HT40 (270Mbps), Ant R
Channel: 159





Modulation Standard: 802.11an HT40 (270Mbps), Ant L
Channel: 159





9.6 Restrict Band Emission Measurement Data

Test Mode: EUT with USB cable

Test Date: Mar. 20, 2009

Temperature: 23°C

Atmospheric pressure: 1024 hPa

Humidity: 48%

Modulation Standard: IEEE 802.11b (11Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2389.968	H	63.26	-0.85	62.41	Peak	74	54	-11.59	202	150
2386.806	H	51.87	-4.10	47.77	Ave	74	54	-6.23	205	150
2387.622	V	62.09	-1.30	60.79	Peak	74	54	-13.21	62	150
2386.806	V	51.57	-3.63	47.94	Ave	74	54	-6.06	65	150
Channel 11						Fundamental Frequency: 2462 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2483.66	H	60.10	-0.67	59.43	Peak	74	54	-14.57	202	150
2483.508	H	53.18	-5.21	47.96	Ave	74	54	-6.04	205	150
2483.774	V	65.05	-1.14	63.91	Peak	74	54	-10.09	62	150
2483.508	V	51.68	-3.93	47.75	Ave	74	54	-6.25	65	150

Modulation Standard: IEEE 802.11g (54Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2389.866	H	63.06	-1.80	61.26	Peak	74	54	-12.74	202	150
2389.968	H	37.51	-0.84	36.67	Ave	74	54	-17.33	205	150
2389.764	V	67.41	-1.55	65.85	Peak	74	54	-8.15	62	150
2389.968	V	41.18	-0.93	40.25	Ave	74	54	-13.75	65	150
Channel 11						Fundamental Frequency: 2462 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2483.584	H	56.62	-1.04	55.58	Peak	74	54	-18.42	202	150
2483.888	H	37.73	-0.35	37.39	Ave	74	54	-16.61	205	150
2483.85	V	62.07	-0.70	61.36	Peak	74	54	-12.64	62	150
2483.584	V	39.14	-1.88	37.26	Ave	74	54	-16.74	65	150



Modulation Standard: IEEE 802.11n HT20 (130Mbps)

Channel 1						Fundamental Frequency: 2412 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2388.846	H	58.91	-1.38	57.52	Peak	74	54	-16.48	202	150
2389.968	H	38.15	-0.77	37.38	Ave	74	54	-16.62	205	150
2389.866	V	61.25	-1.19	60.06	Peak	74	54	-13.94	62	150
2389.968	V	37.96	-1.00	36.96	Ave	74	54	-17.04	65	150
Channel 11						Fundamental Frequency: 2462 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2483.66	H	56.11	-0.61	55.50	Peak	74	54	-18.50	202	150
2483.508	H	37.44	-1.05	36.38	Ave	74	54	-17.62	205	150
2483.774	V	59.35	-1.52	57.83	Peak	74	54	-16.17	62	150
2483.508	V	37.23	-0.75	36.48	Ave	74	54	-17.52	65	150

Modulation Standard: IEEE 802.11n HT40 (270Mbps)

Channel 3						Fundamental Frequency: 2422 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2388.030	H	62.22	-1.07	61.15	Peak	74	54	-12.85	202	150
2386.908	H	38.88	-1.08	37.80	Ave	74	54	-16.20	205	150
2389.866	V	69.82	-1.08	68.74	Peak	74	54	-5.26	62	150
2388.540	V	40.47	-1.07	39.40	Ave	74	54	-14.60	65	150
Channel 9						Fundamental Frequency: 2452 MHz				
Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result (dBuV/m)	Remark	Limit (dBuV/m)		Margin (dB)	Table Deg.	Ant High (m)
						Peak	Ave			
2483.85	H	59.10	-0.96	58.14	Peak	74	54	-15.86	202	150
2483.774	H	38.34	-0.57	37.77	Ave	74	54	-16.23	205	150
2487.46	V	63.58	-0.88	62.71	Peak	74	54	-11.29	62	150
2483.508	V	38.76	-1.44	37.32	Ave	74	54	-16.68	65	150

Notes:

1. Result = Meter Reading + Factor
2. Factor = Antenna Factor + Cable Loss – Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10 MHz for Average detection at frequency above 1GHz.



10. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.250
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

10.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device:
 This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



Appendix A. Photographs of EUT



