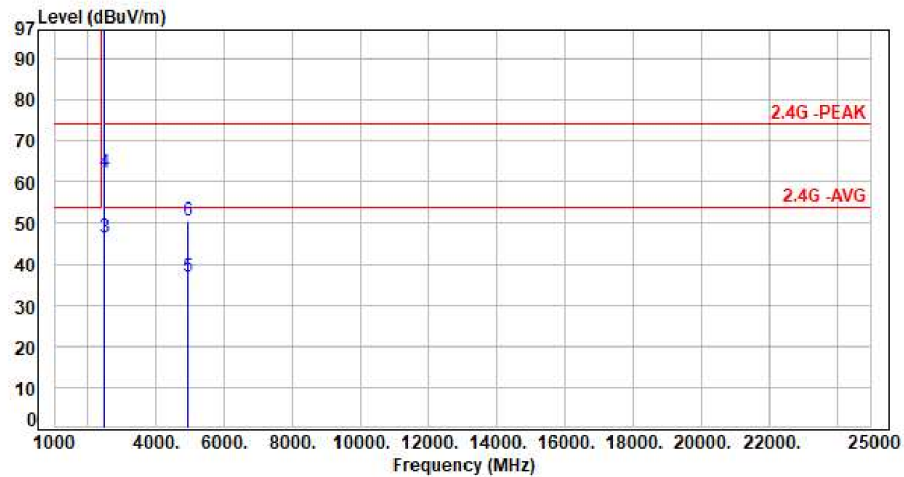




Test Mode : 2TX 11n20 CH11 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2462.00	-2.02	99.93	97.91	200.00	-102.09	Average	294	288	P
2	2462.00	-2.02	109.64	107.62	200.00	-92.38	Peak	294	288	P
3	2483.50	-1.98	48.47	46.49	54.00	-7.51	Average	294	288	P
4	2483.50	-1.98	64.29	62.31	74.00	-11.69	Peak	294	288	P
5	4924.00	6.48	30.26	36.74	54.00	-17.26	Average	100	223	P
6	4924.00	6.48	44.09	50.57	74.00	-23.43	Peak	100	223	P

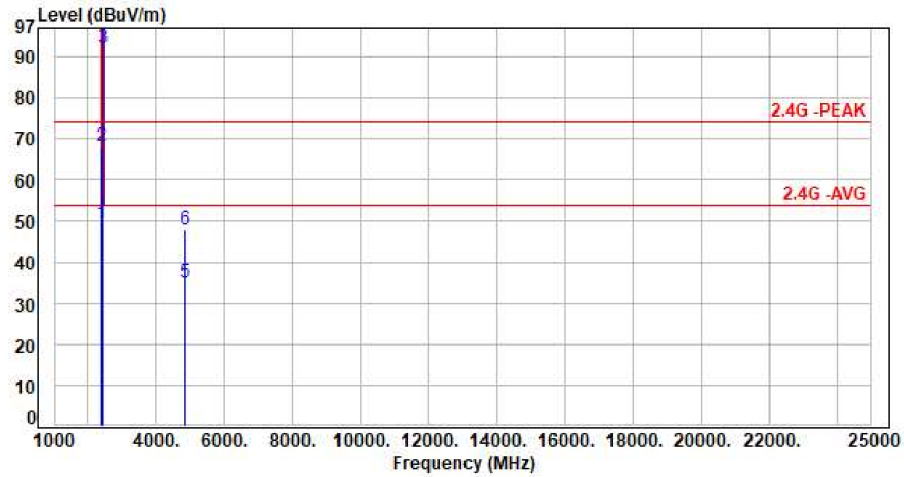
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Test Mode : 2TX 11n40 CH03 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	51.48	49.36	54.00	-4.64	Average	289	170	P
2	2390.00	-2.12	70.36	68.24	74.00	-5.76	Peak	289	170	P
3	2422.00	-2.08	94.32	92.24	200.00	-107.76	Average	289	170	P
4	2422.00	-2.08	106.60	104.52	200.00	-95.48	Peak	289	170	P
5	4844.00	6.23	28.69	34.92	54.00	-19.08	Average	100	121	P
6	4844.00	6.23	41.85	48.08	74.00	-25.92	Peak	100	121	P

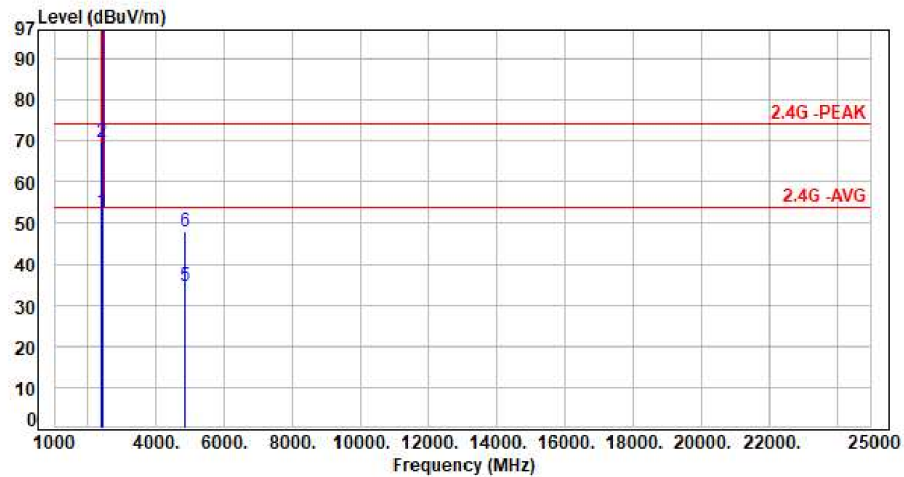
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Test Mode : 2TX 11n40 CH03 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	54.69	52.57	54.00	-1.43	Average	142	76	P
2	2390.00	-2.12	71.81	69.69	74.00	-4.31	Peak	142	76	P
3	2422.00	-2.08	98.95	96.87	200.00	-103.13	Average	142	76	P
4	2422.00	-2.08	108.40	106.32	200.00	-93.68	Peak	142	76	P
5	4844.00	6.23	28.57	34.80	54.00	-19.20	Average	100	132	P
6	4844.00	6.23	41.76	47.99	74.00	-26.01	Peak	100	132	P

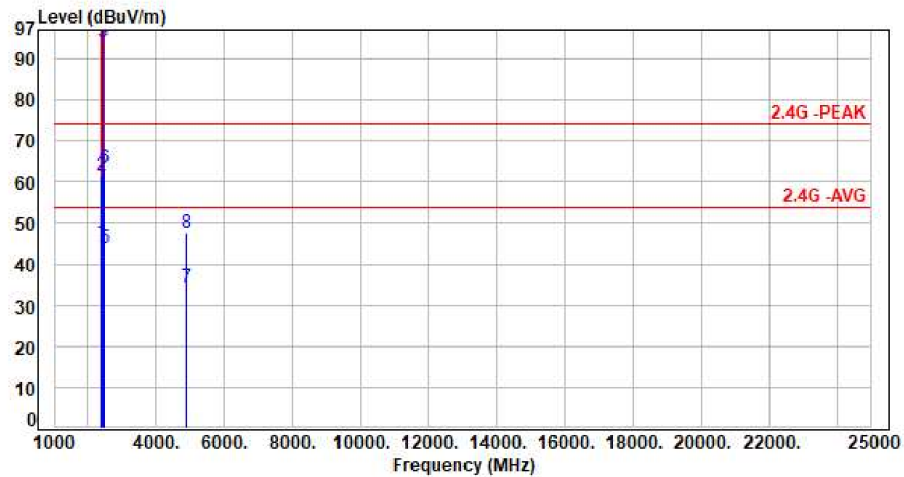
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Test Mode : 2TX 11n40 CH06 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	47.40	45.28	54.00	-8.72	Average	293	174	P
2	2390.00	-2.12	63.80	61.68	74.00	-12.32	Peak	293	174	P
3	2437.00	-2.07	96.07	94.00	200.00	-106.00	Average	293	174	P
4	2437.00	-2.07	105.22	103.15	200.00	-96.85	Peak	293	174	P
5	2483.50	-1.98	45.86	43.88	54.00	-10.12	Average	293	174	P
6	2483.50	-1.98	65.60	63.62	74.00	-10.38	Peak	293	174	P
7	4874.00	6.36	28.07	34.43	54.00	-19.57	Average	100	142	P
8	4874.00	6.36	41.31	47.67	74.00	-26.33	Peak	100	142	P

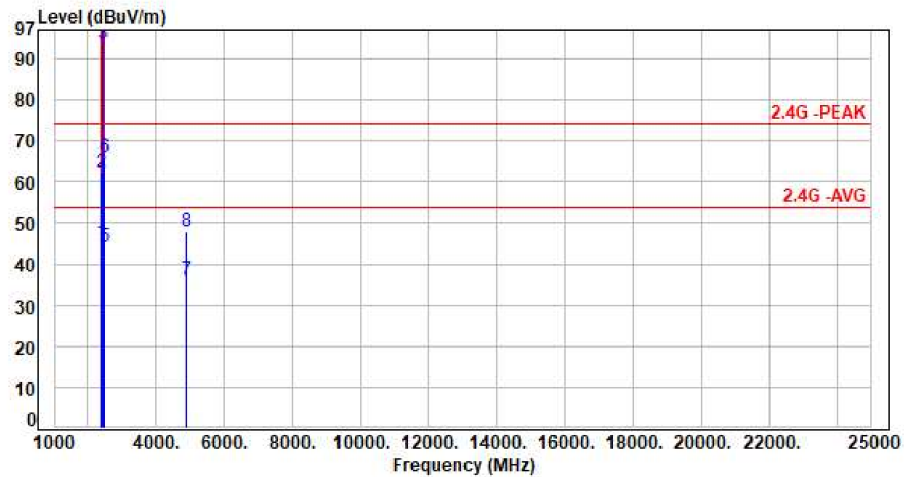
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Test Mode : 2TX 11n40 CH06 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2390.00	-2.12	47.37	45.25	54.00	-8.75	Average	333	294	P
2	2390.00	-2.12	64.34	62.22	74.00	-11.78	Peak	333	294	P
3	2437.00	-2.07	95.83	93.76	200.00	-106.24	Average	333	294	P
4	2437.00	-2.07	107.16	105.09	200.00	-94.91	Peak	333	294	P
5	2483.50	-1.98	46.27	44.29	54.00	-9.71	Average	333	294	P
6	2483.50	-1.98	67.93	65.95	74.00	-8.05	Peak	333	294	P
7	4874.00	6.36	29.74	36.10	54.00	-17.90	Average	100	121	P
8	4874.00	6.36	41.57	47.93	74.00	-26.07	Peak	100	121	P

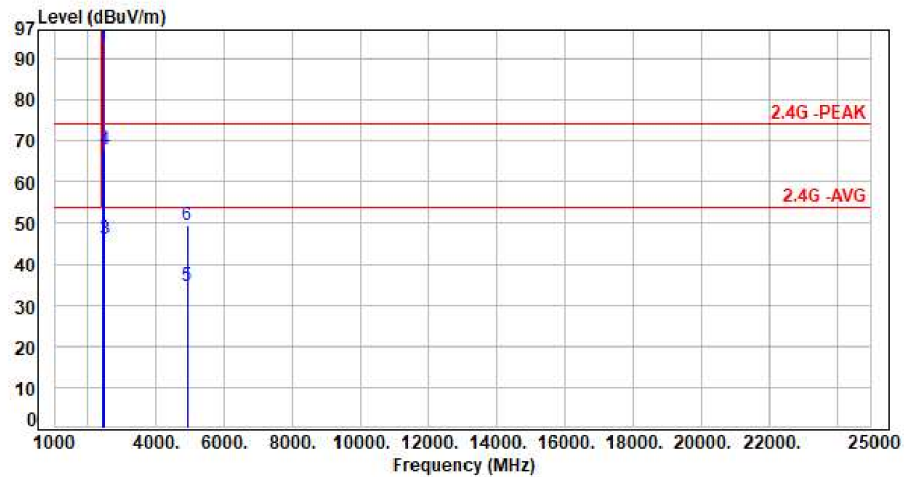
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Test Mode : 2TX 11n40 CH09 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2452.00	-2.05	95.44	93.39	200.00	-106.61	Average	269	171	P
2	2452.00	-2.05	105.36	103.31	200.00	-96.69	Peak	269	171	P
3	2483.50	-1.98	48.02	46.04	54.00	-7.96	Average	269	171	P
4	2483.50	-1.98	69.97	67.99	74.00	-6.01	Peak	269	171	P
5	4904.00	6.46	28.13	34.59	54.00	-19.41	Average	100	162	P
6	4904.00	6.46	42.83	49.29	74.00	-24.71	Peak	100	162	P

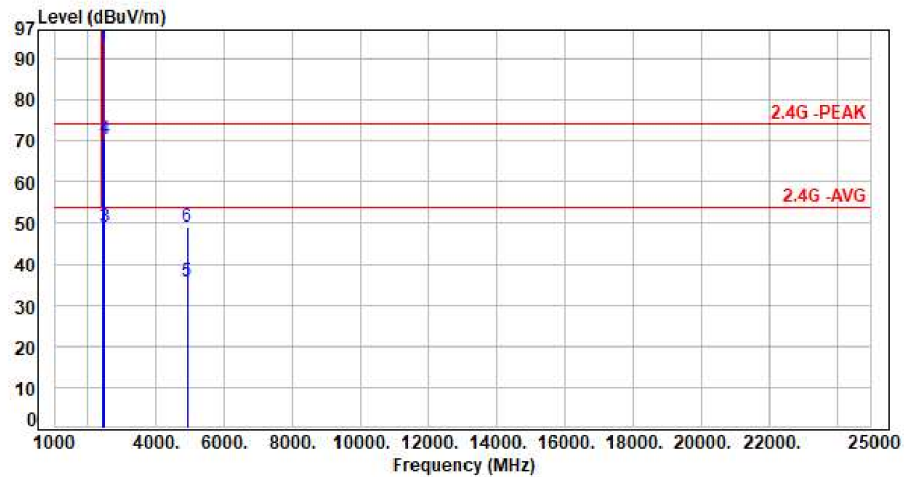
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Test Mode : 2TX 11n40 CH09 MCS0
Voltage : From Adapter(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	2452.00	-2.05	95.54	93.49	200.00	-106.51	Average	148	80	P
2	2452.00	-2.05	107.28	105.23	200.00	-94.77	Peak	148	80	P
3	2483.50	-1.98	51.14	49.16	54.00	-4.84	Average	148	80	P
4	2483.50	-1.98	72.35	70.37	74.00	-3.63	Peak	148	80	P
5	4904.00	6.46	29.29	35.75	54.00	-18.25	Average	100	125	P
6	4904.00	6.46	42.66	49.12	74.00	-24.88	Peak	100	125	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6.7 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



7. Test of Conducted Spurious Emission

7.1 Test Limit

According to the methods defined in ANSI C63.10-2013 Section 11.11.1

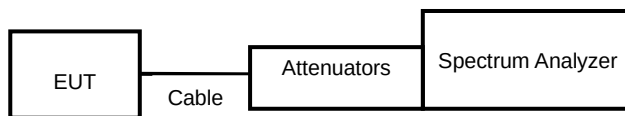
Below -30dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

7.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.11.2 & 11.11.3

- The transmitter output was connected to the spectrum analyzer via a low loss cable.
- Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- Peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 30dB relative to the maximum measured in-band peak PSD level.
- The band edges was measured and recorded.

7.3 Test Setup Layout



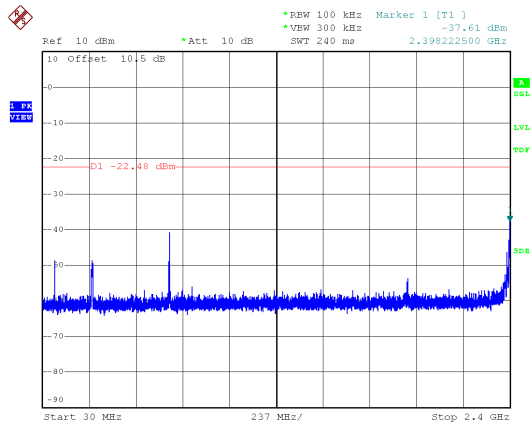
7.4 Test Result and Data

Note: Test plots refers to the following pages.

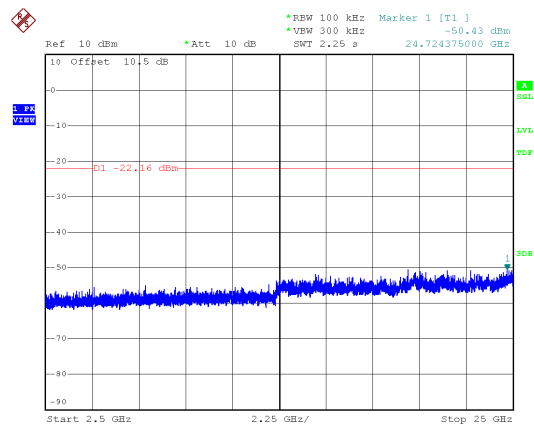
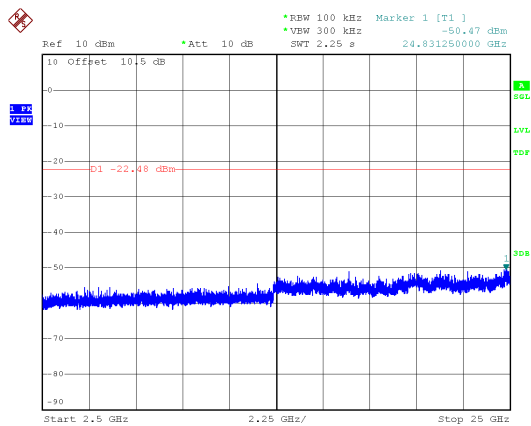
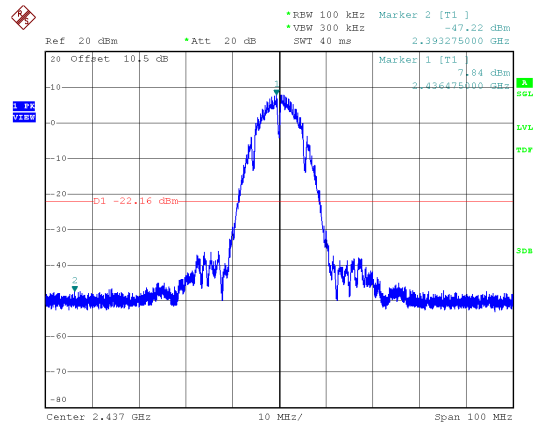
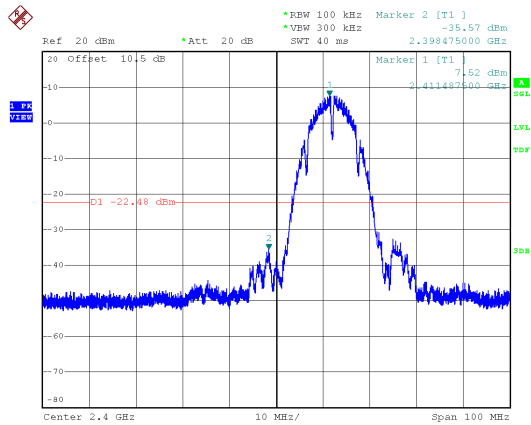
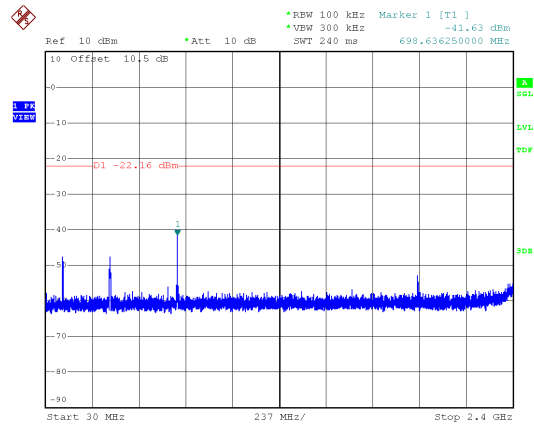


ANT A

Modulation Type: 802.11b, CH 01

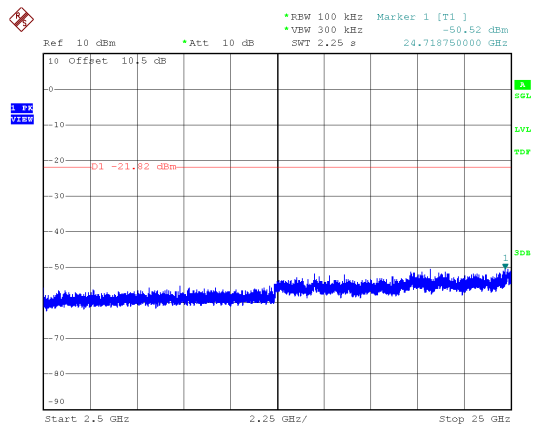
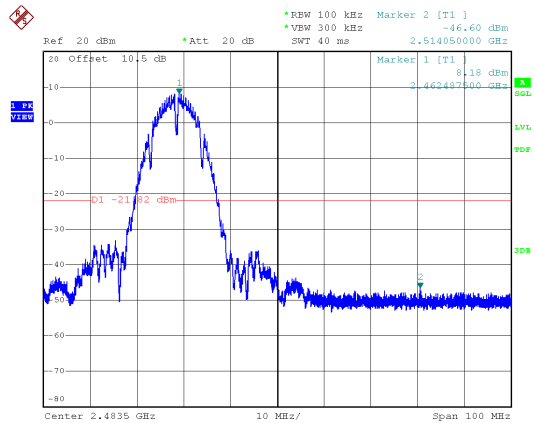
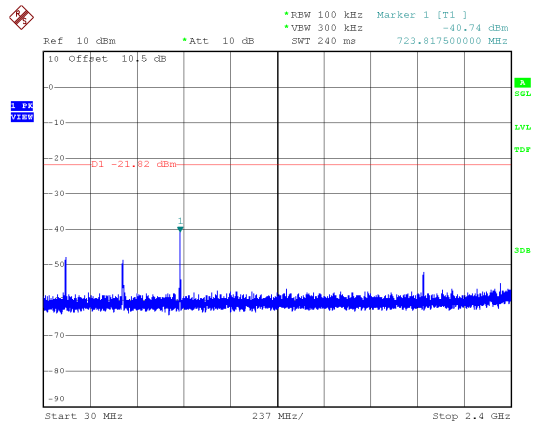


Modulation Type: 802.11b, CH 06



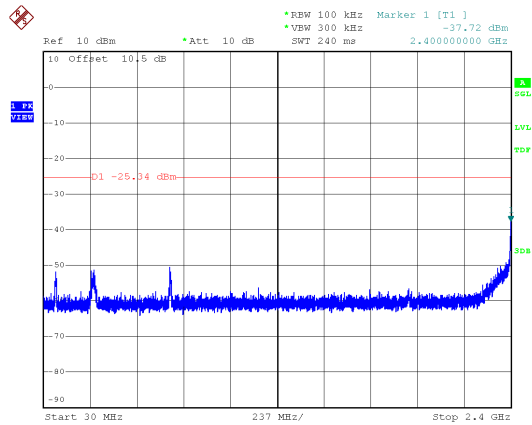


Modulation Type: 802.11b, CH 11

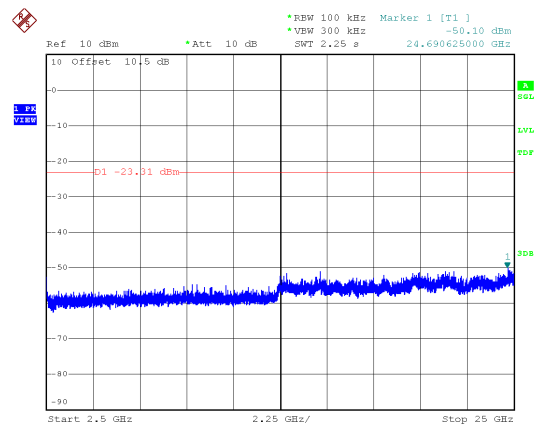
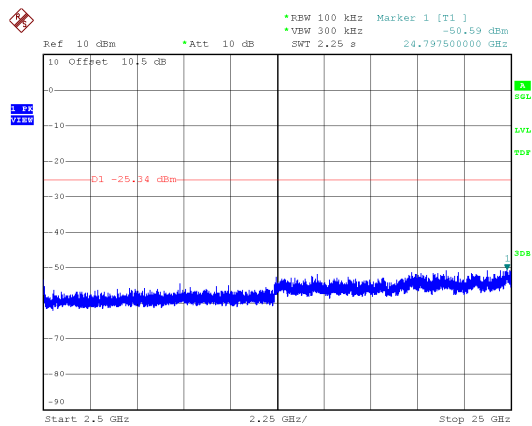
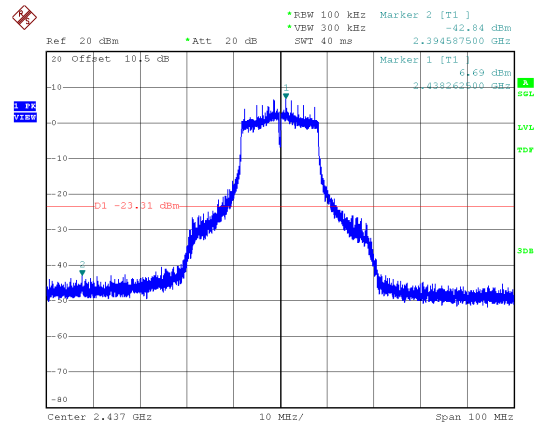
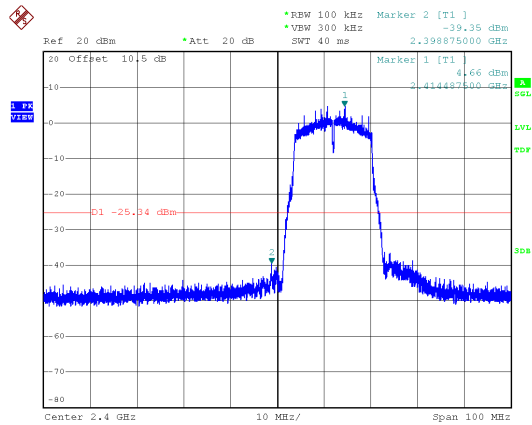
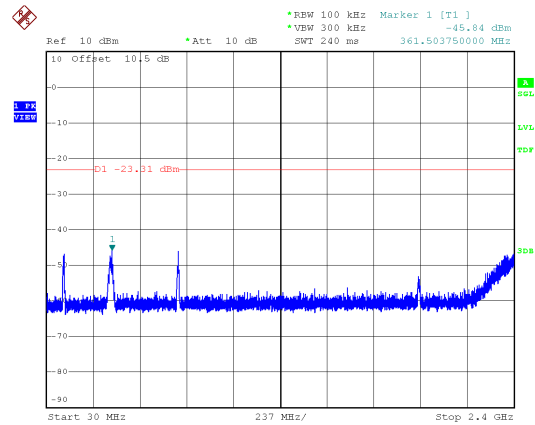




Modulation Type: 802.11g, CH 01

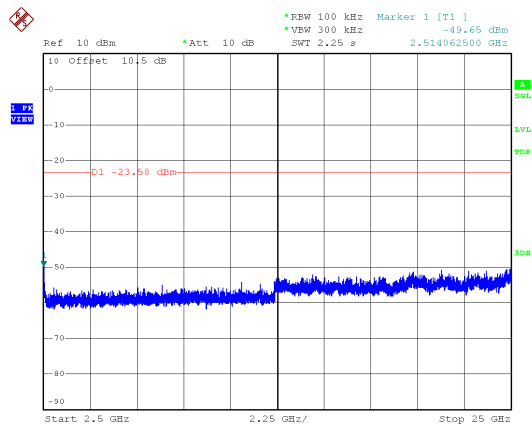
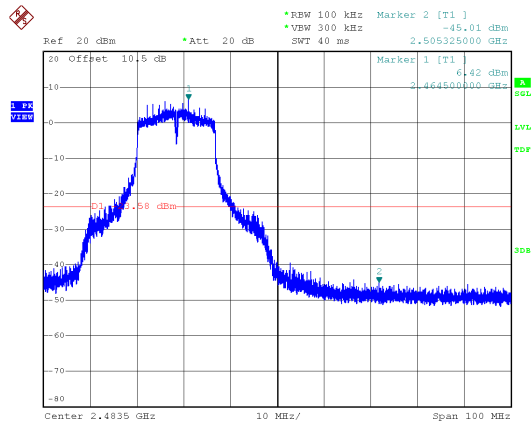
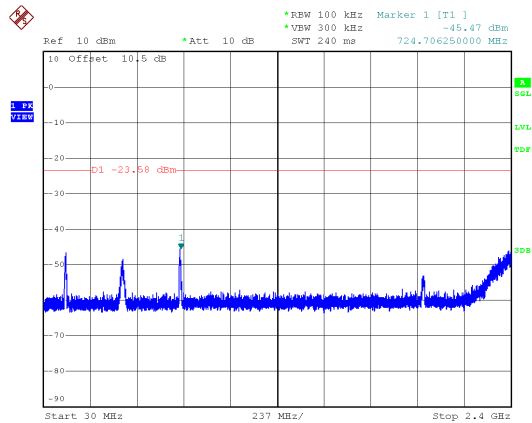


Modulation Type: 802.11g, CH 06



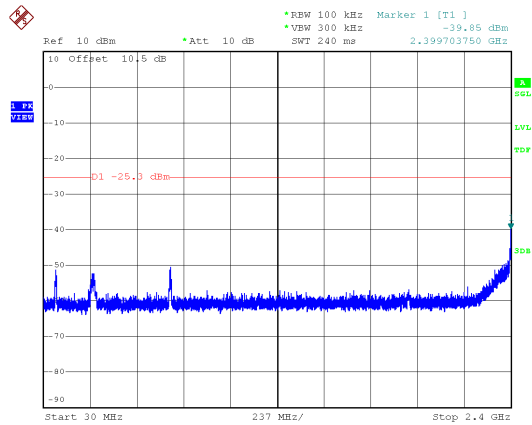


Modulation Type: 802.11g, CH 11

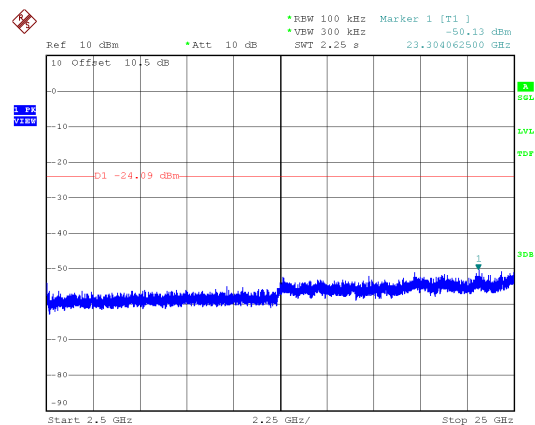
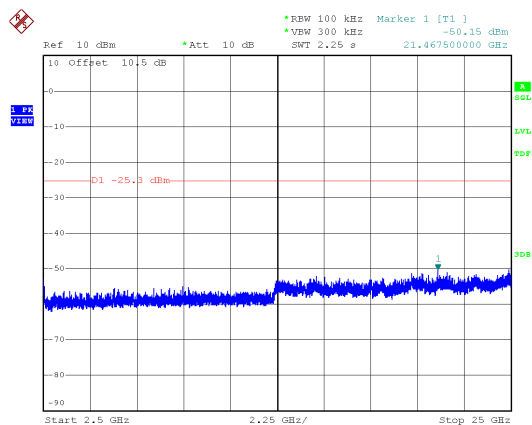
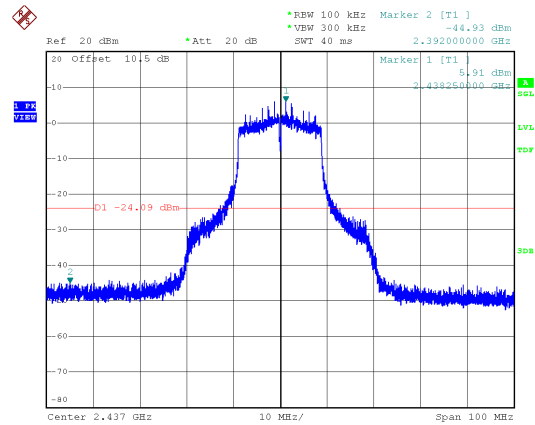
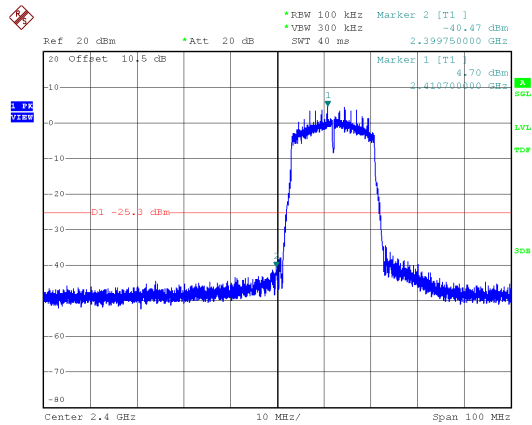
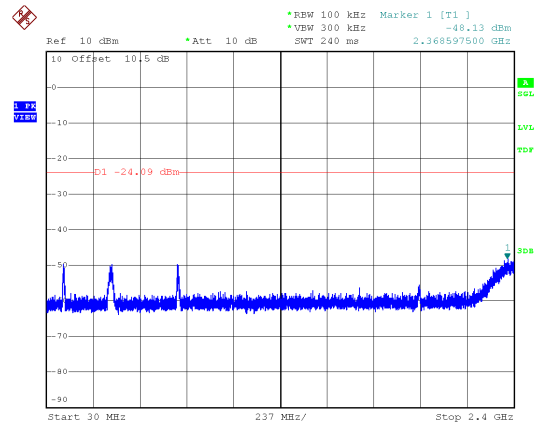




Modulation Type: 802.11n HT20, CH01

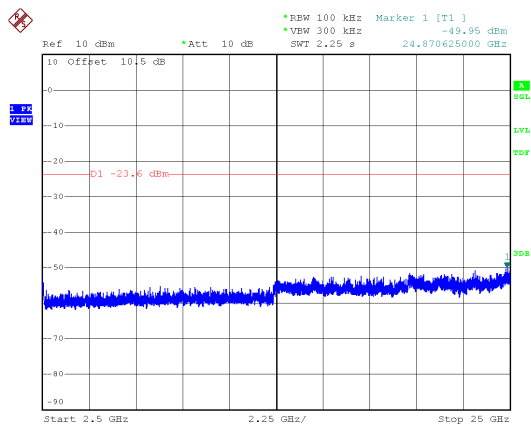
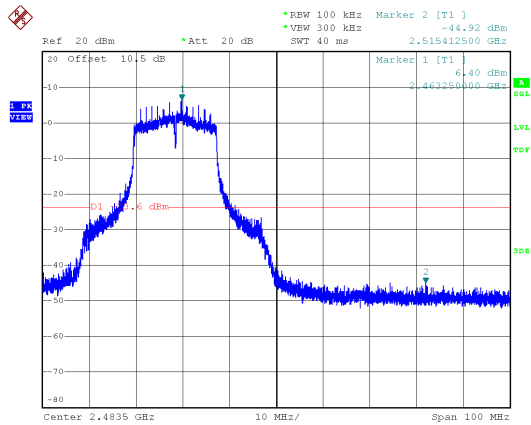
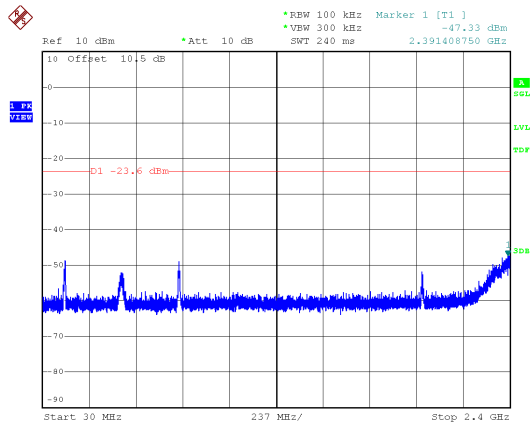


Modulation Type: 802.11n HT20, CH06



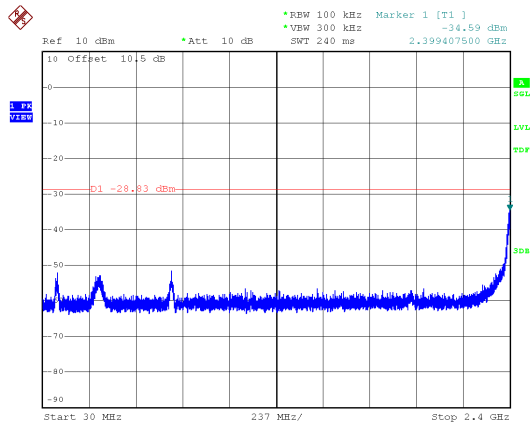


Modulation Type: 802.11n HT20, CH11

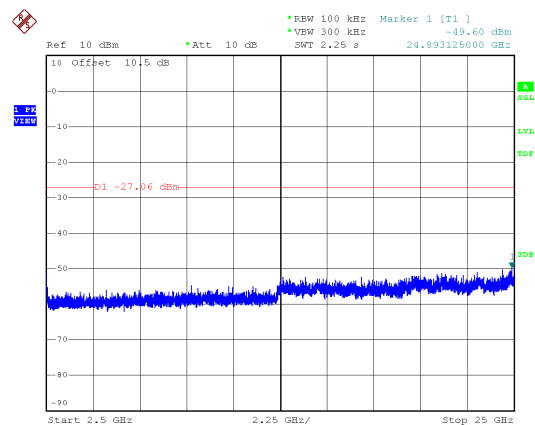
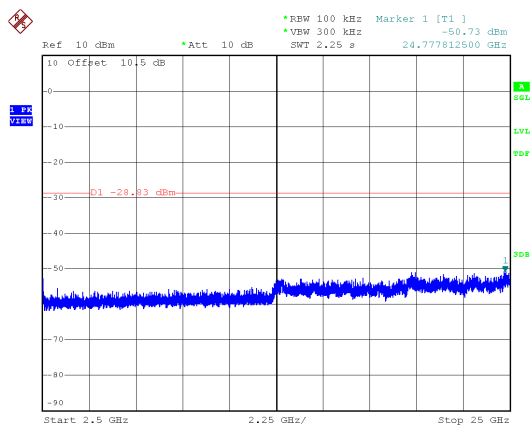
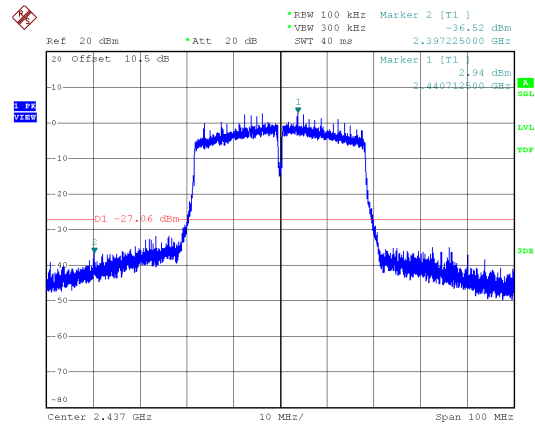
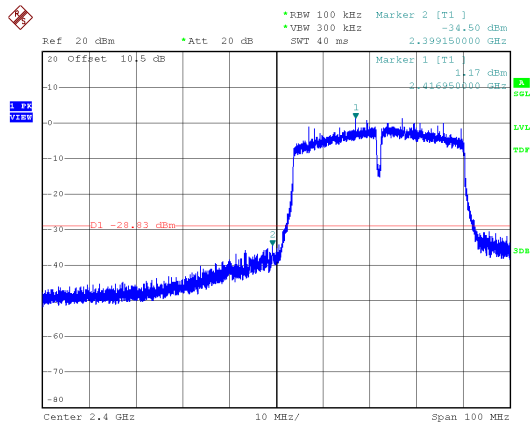
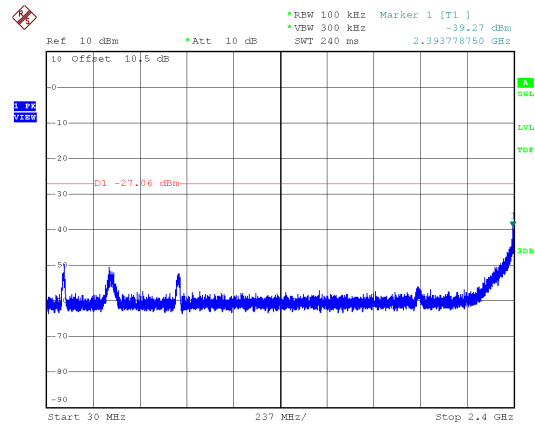




Modulation Type: 802.11n HT40, CH03

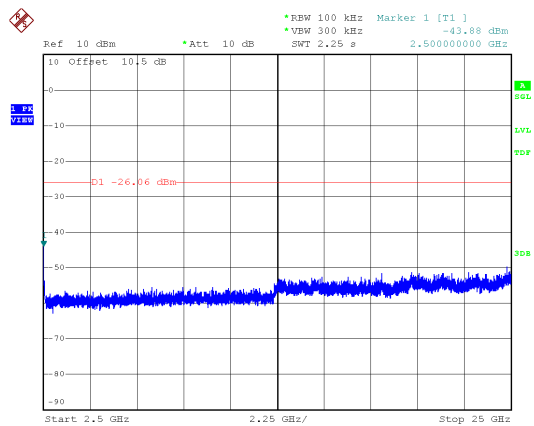
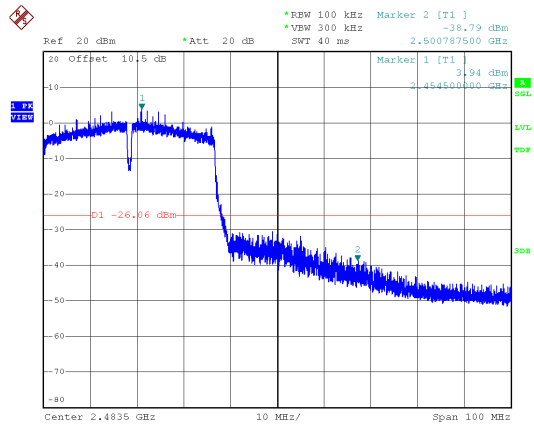
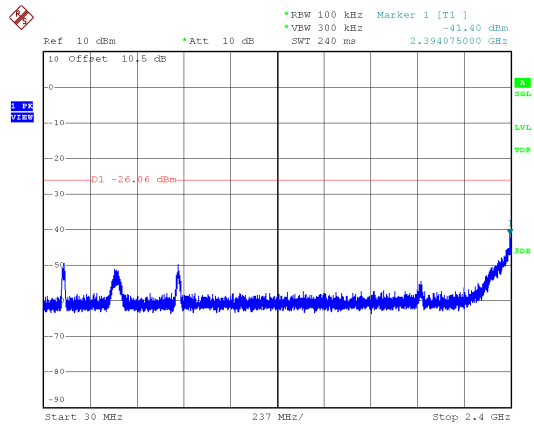


Modulation Type: 802.11n HT40, CH06





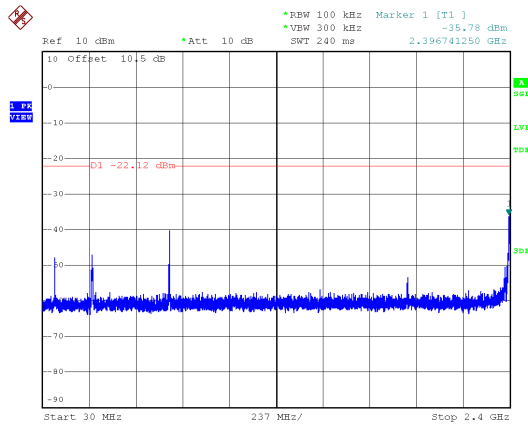
Modulation Type: 802.11n HT40, CH09



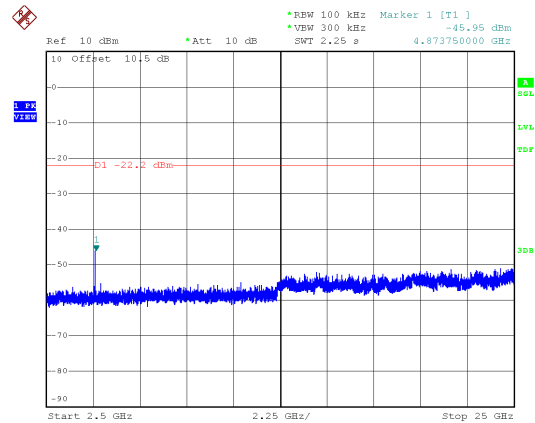
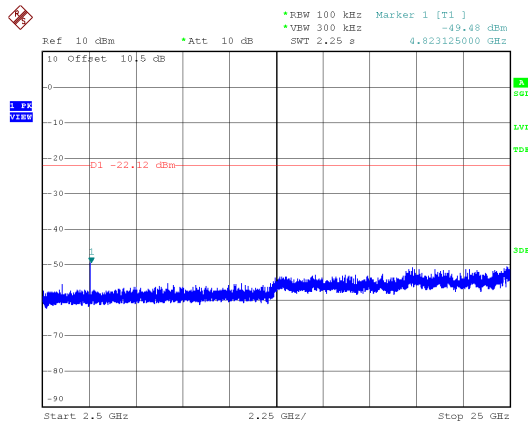
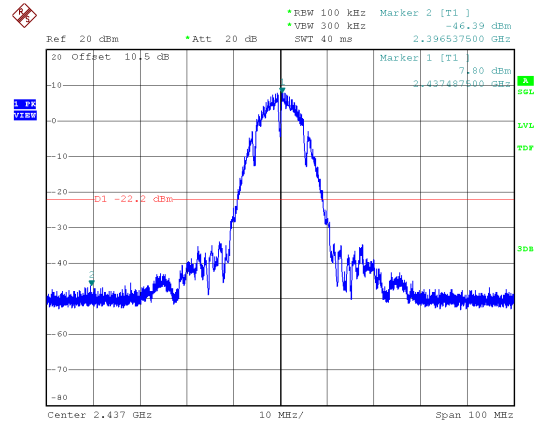
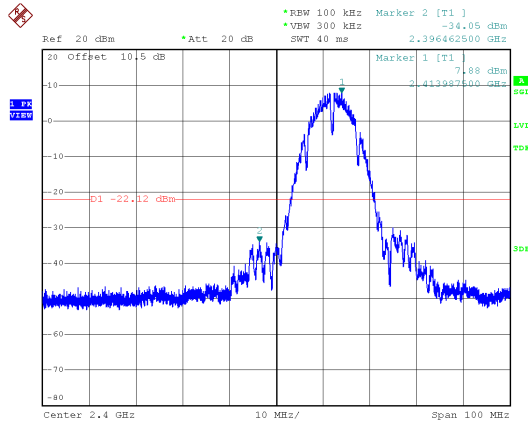
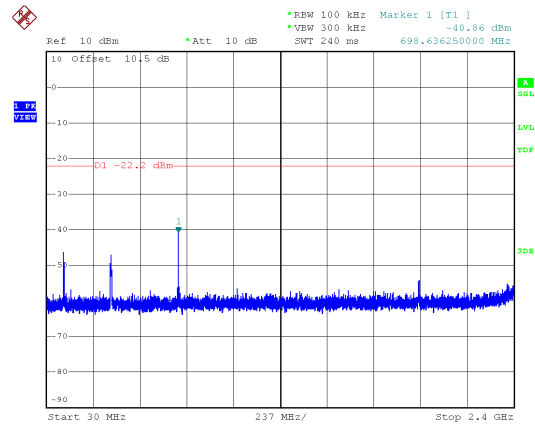


ANT B

Modulation Type: 802.11b, CH 01

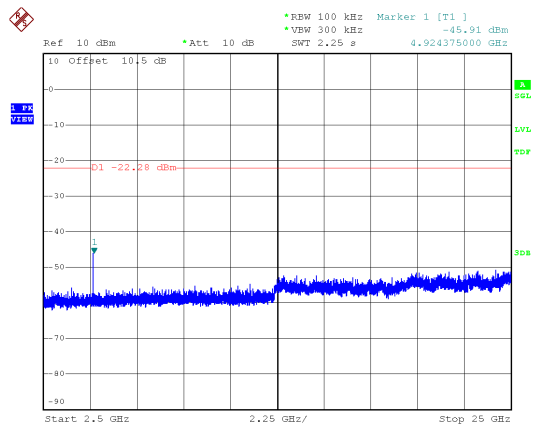
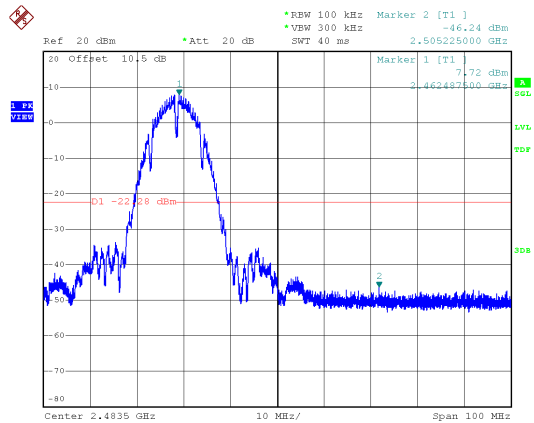
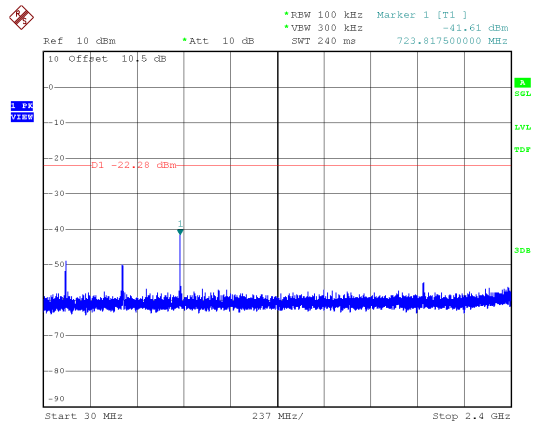


Modulation Type: 802.11b, CH 06



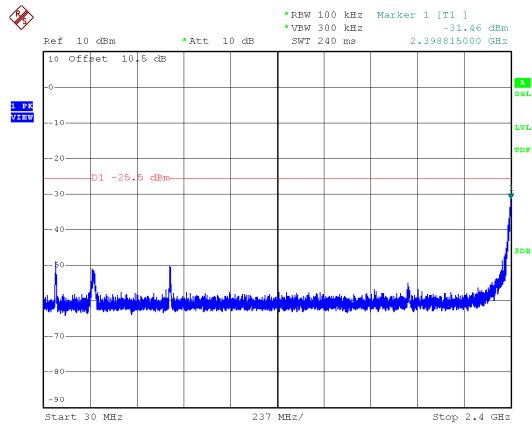


Modulation Type: 802.11b, CH 11

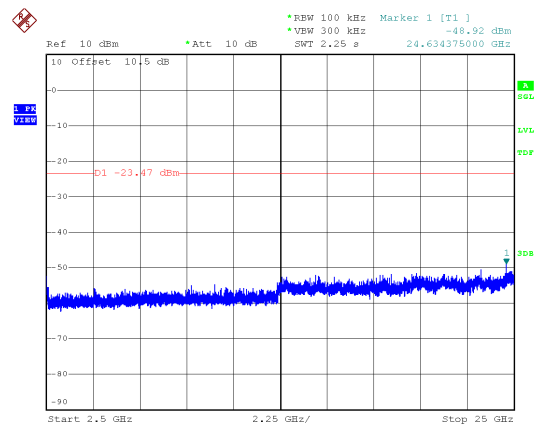
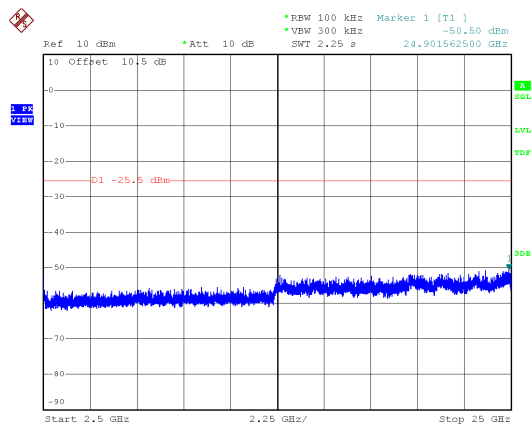
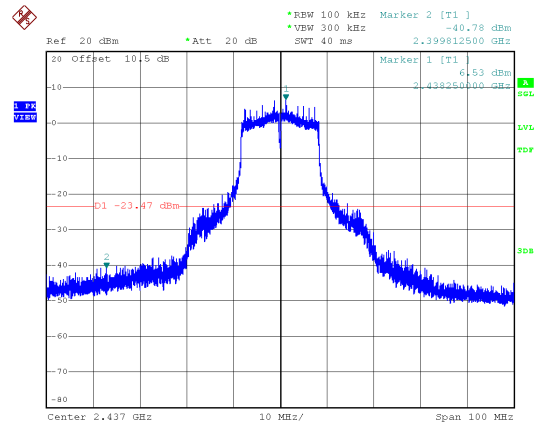
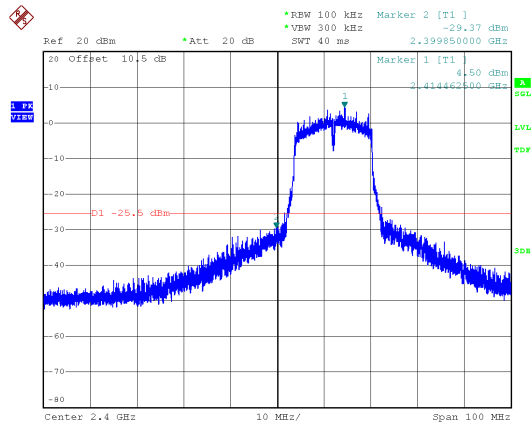
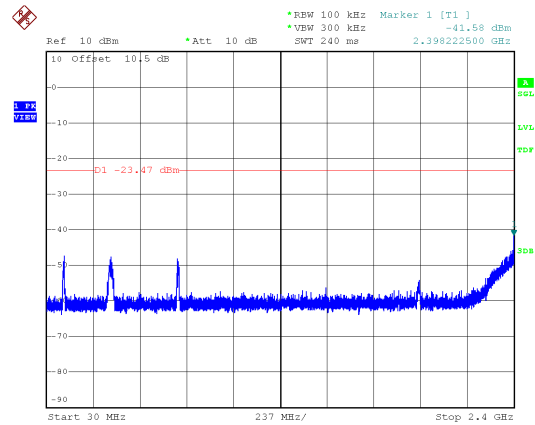




Modulation Type: 802.11g, CH 01

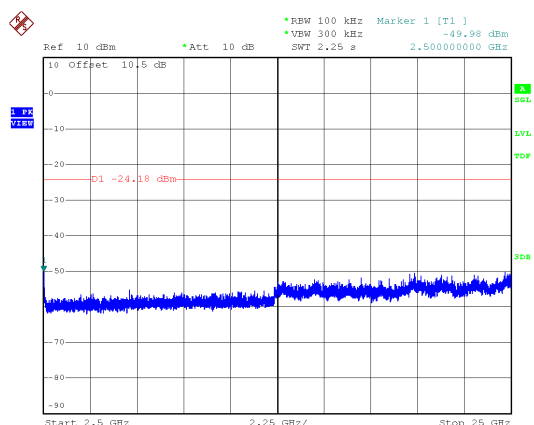
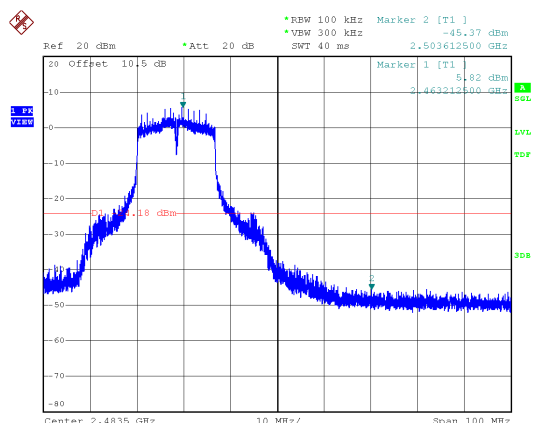
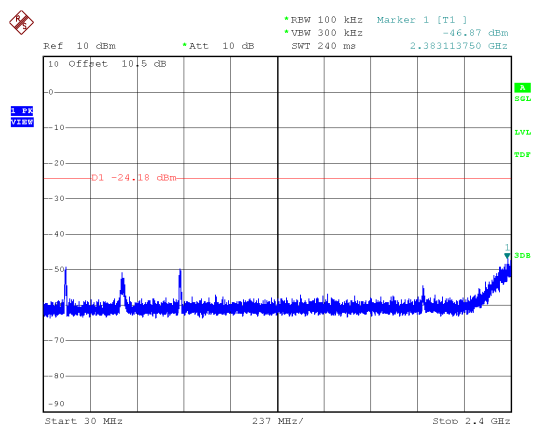


Modulation Type: 802.11g, CH 06



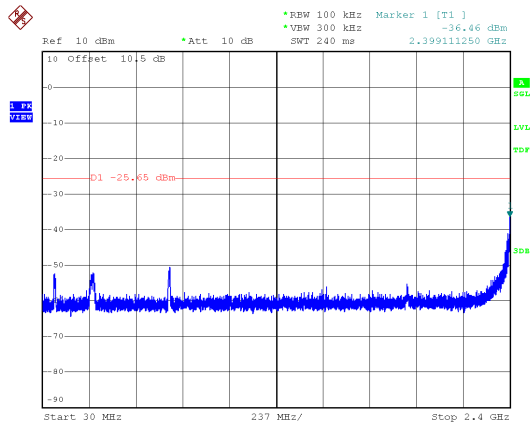


Modulation Type: 802.11g, CH 11

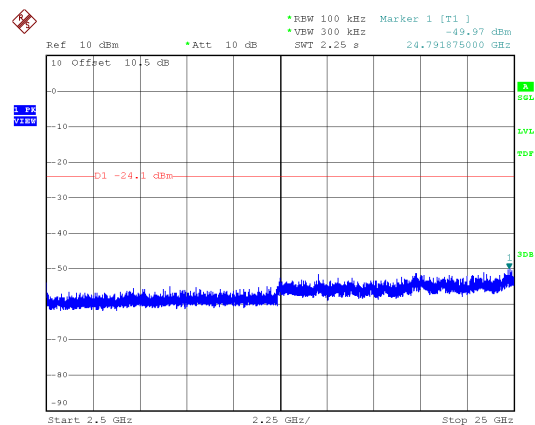
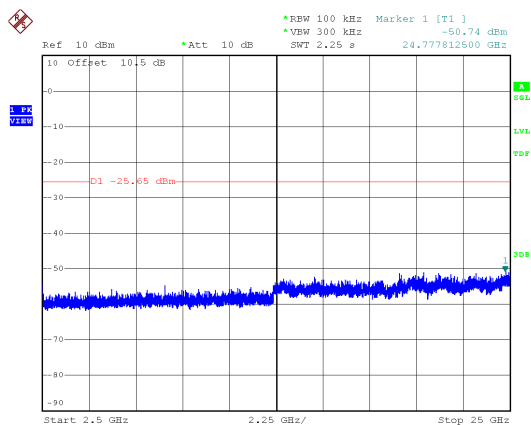
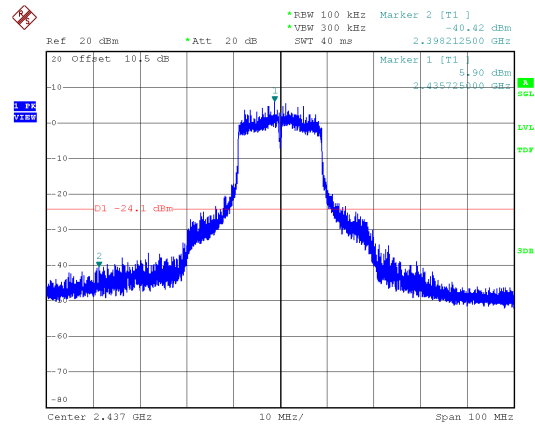
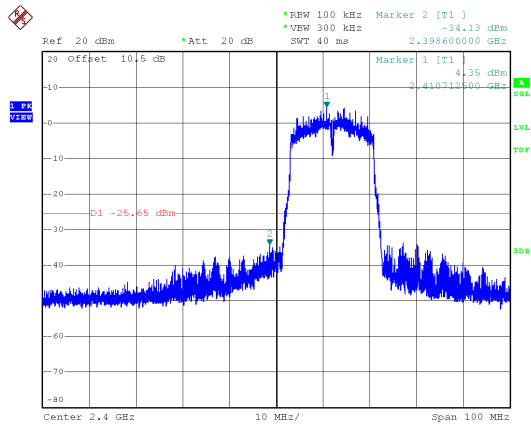
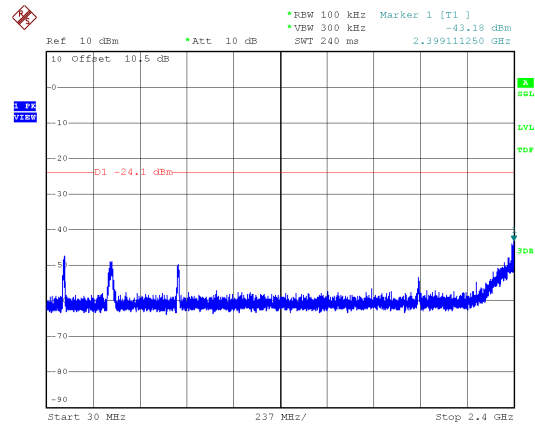




Modulation Type: 802.11n HT20, CH01

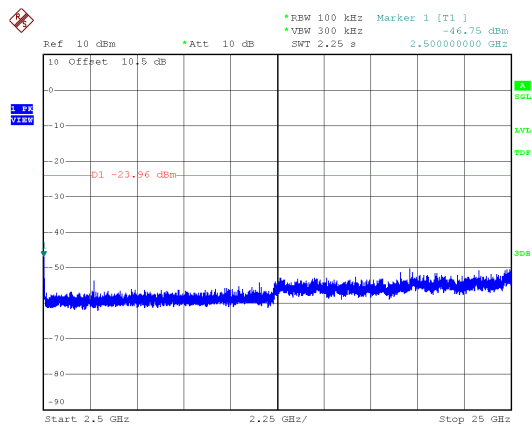
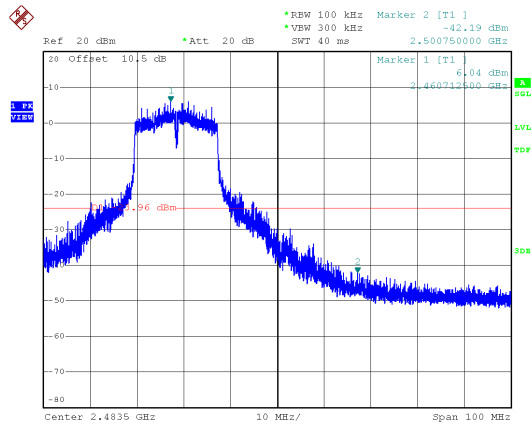
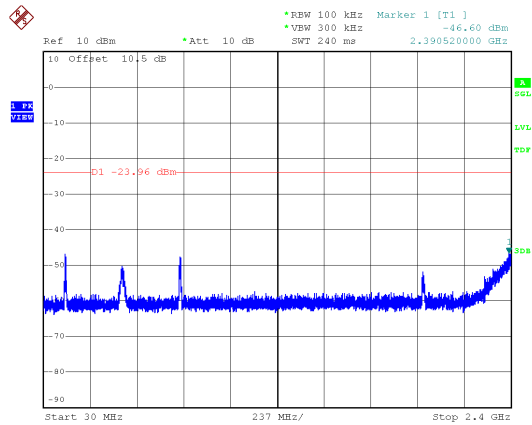


Modulation Type: 802.11n HT20, CH06



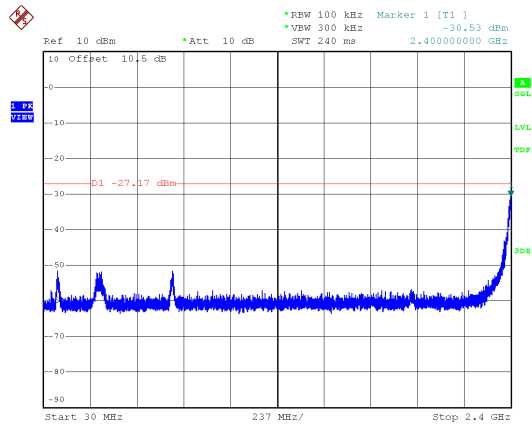


Modulation Type: 802.11n HT20, CH11

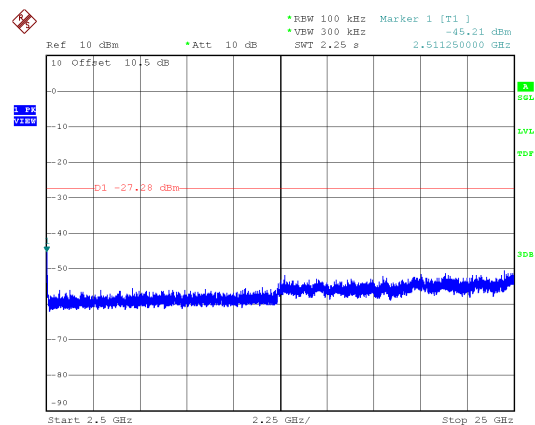
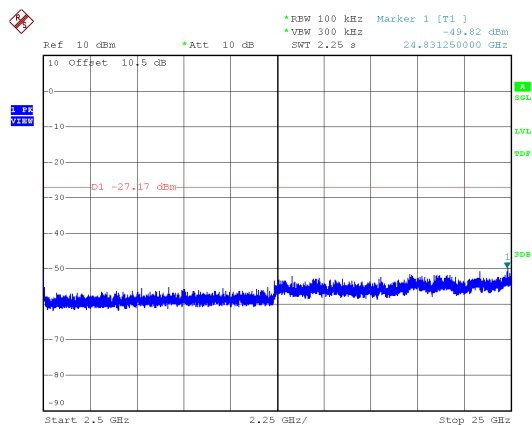
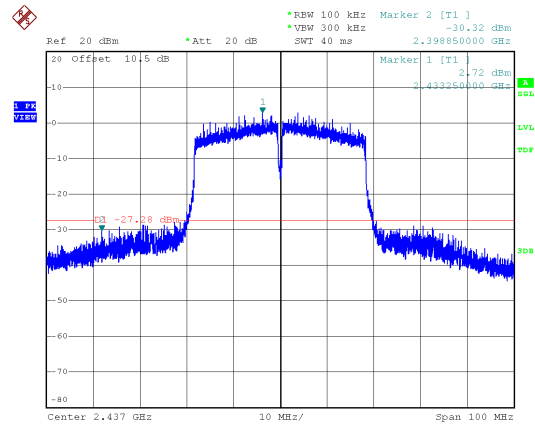
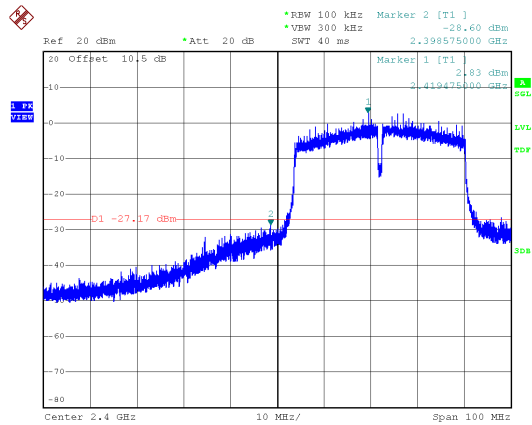
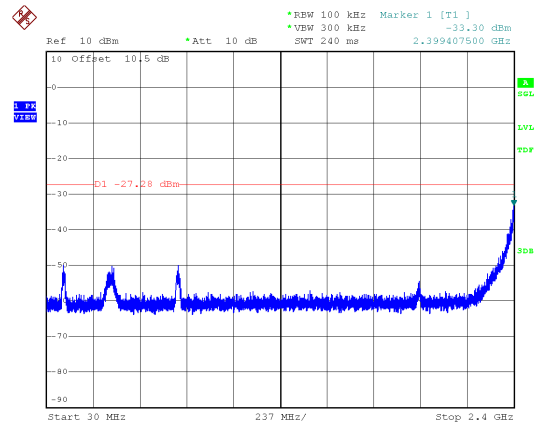




Modulation Type: 802.11n HT40, CH03

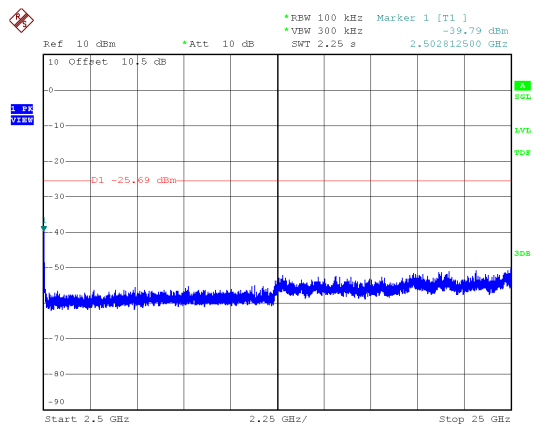
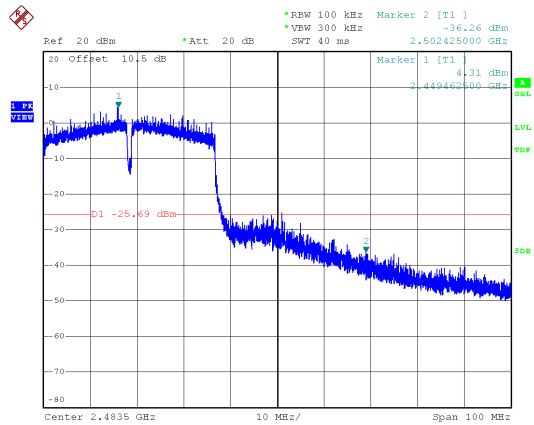
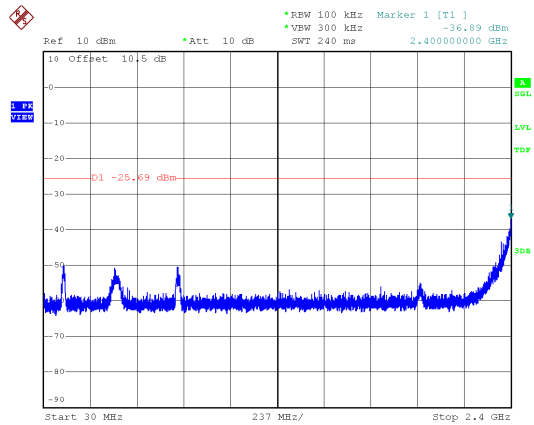


Modulation Type: 802.11n HT40, CH06





Modulation Type: 802.11n HT40, CH09





8. On Time, Duty Cycle and Measurement methods

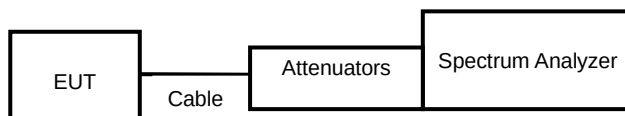
8.1 Test Limit

None; for reporting purposes only.

8.2 Test Procedure

According to the methods defined in ANSI C63.10-2013 Section 11.6
Zero-Span Spectrum Analyzer Method.

8.3 Test Setup Layout

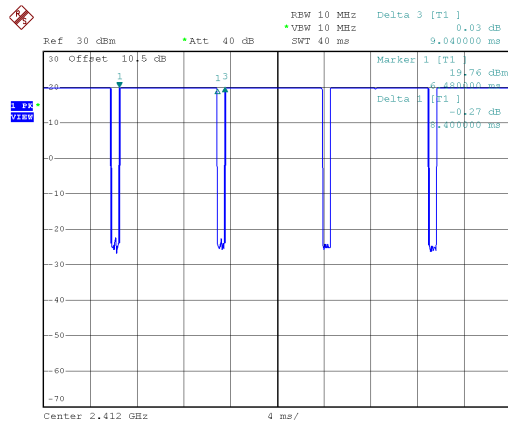


8.4 Test Result and Data

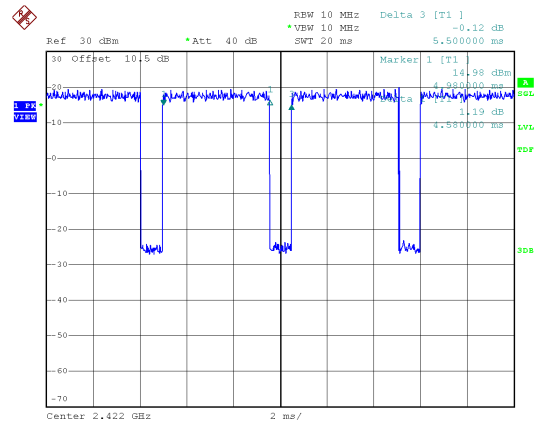
Modulation Type	On Time (msec)	Period Time (msec)	Duty Cycle (%)
11b,1M	8.40	9.04	92.92%
11g,6M	1.40	2.05	68.40%
11n HT20	1.30	1.97	66.33%
11n HT40	4.58	5.50	83.27%



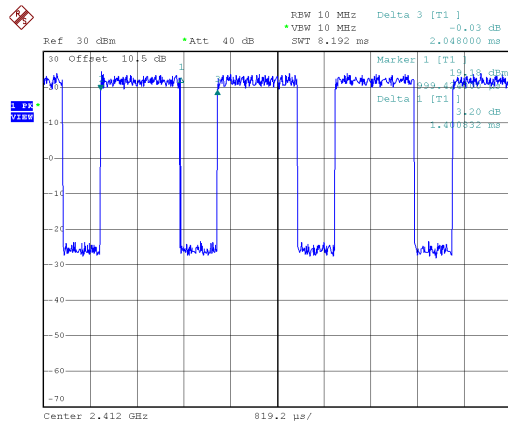
Modulation Type: 802.11b(1Mbps)



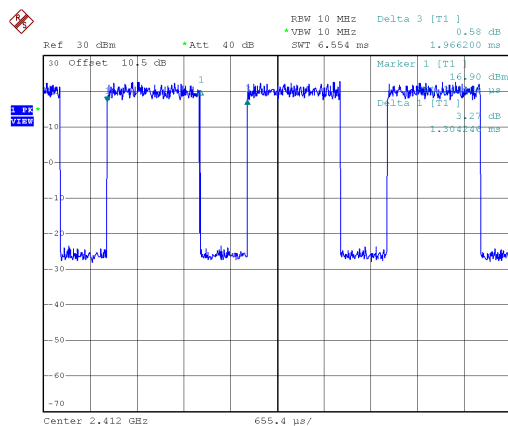
Modulation Type: 802.11n HT40(13.5Mbps)



Modulation Type: 802.11g(6Mbps)



Modulation Type: 802.11n HT20(6.5Mbps)





9. 6dB Bandwidth Measurement Data

9.1 Test Limit

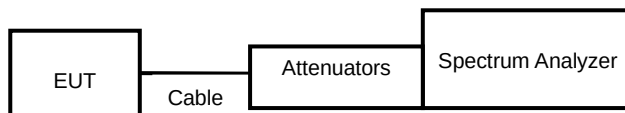
The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

9.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.8

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 100 KHz and VBW to 300 KHz.
- The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- The 6dB Bandwidth was measured and recorded.

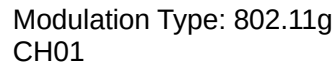
9.3 Test Setup Layout

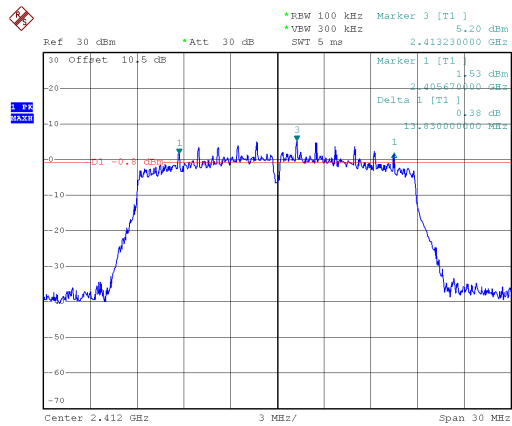
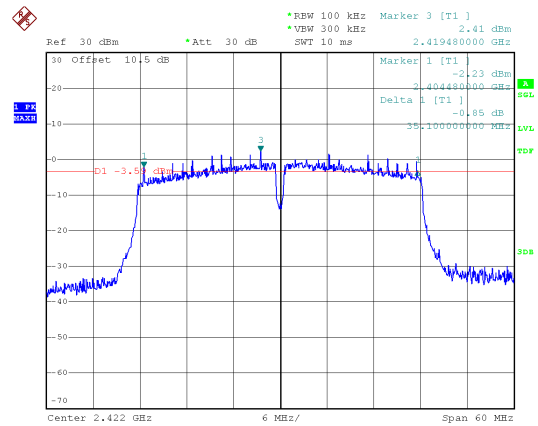




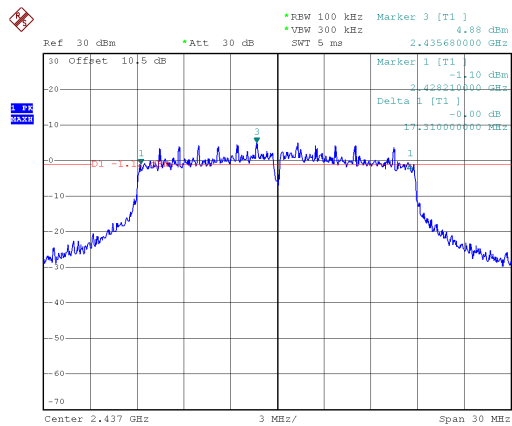
9.4 Test Result and Data

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Limit (MHz)
			ANT A	ANT B	
11b	1	2412	8.07	8.07	0.5
	6	2437	8.07	9.03	0.5
	11	2462	8.07	8.07	0.5
11g	1	2412	15.12	15.12	0.5
	6	2437	15.45	16.29	0.5
	11	2462	15.45	15.66	0.5
11n HT20	1	2412	13.83	15.66	0.5
	6	2437	17.31	16.56	0.5
	11	2462	15.78	16.56	0.5
11n HT40	3	2422	35.10	35.16	0.5
	6	2437	33.72	34.44	0.5
	9	2452	35.10	35.10	0.5

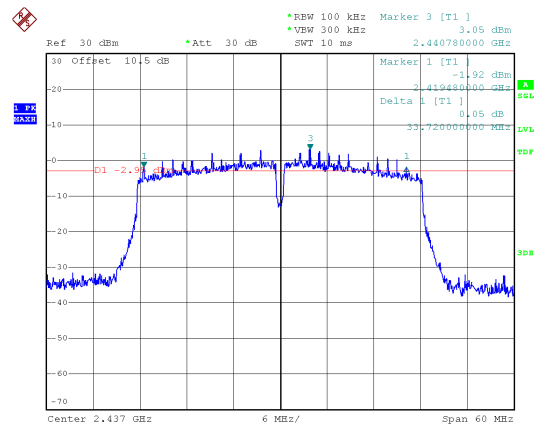


Modulation Type: 802.11n HT20
CH01Modulation Type: 802.11n HT40
CH03

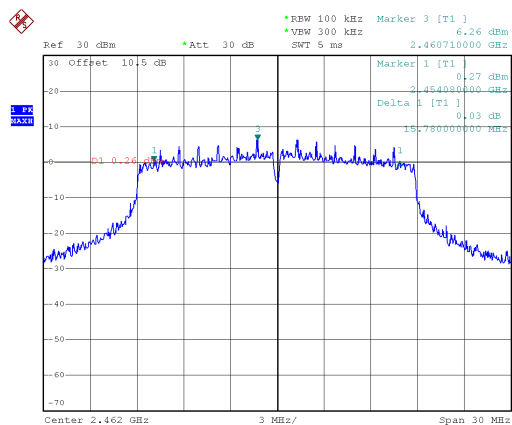
CH06



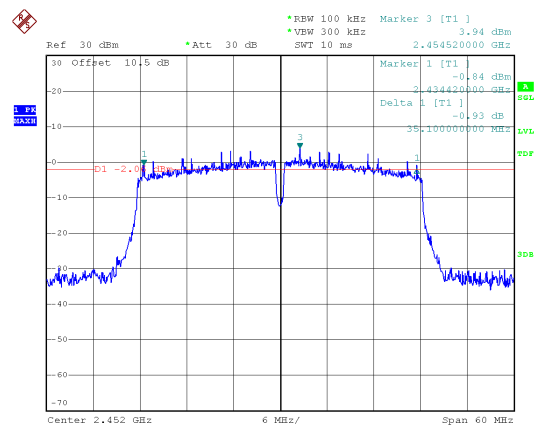
CH06



CH11

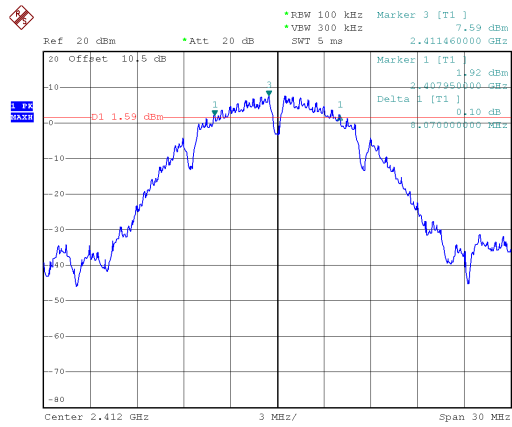


CH09

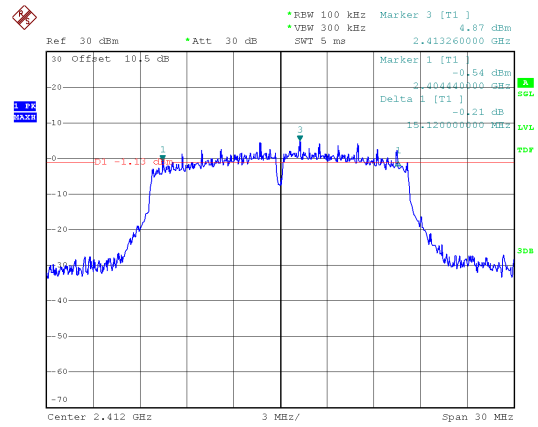




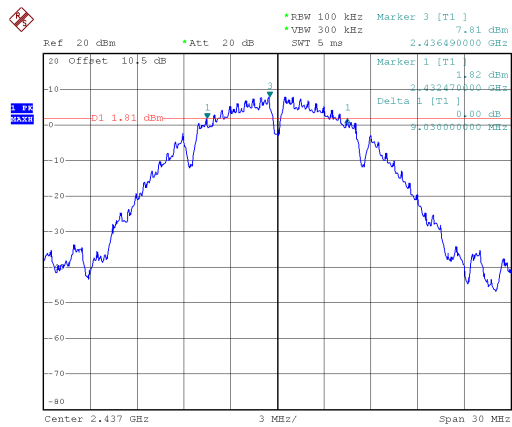
ANT B
6dB Bandwidth
Modulation Type: 802.11b
CH01



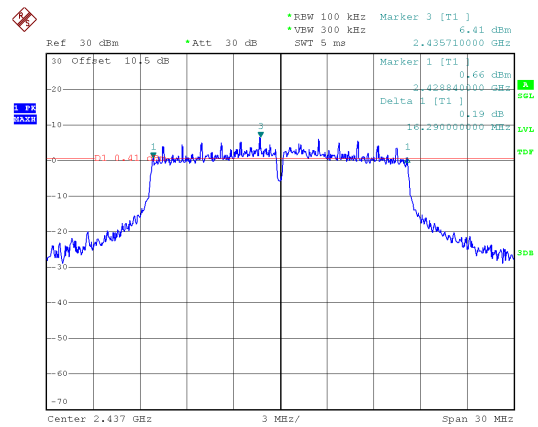
Modulation Type: 802.11g
CH01



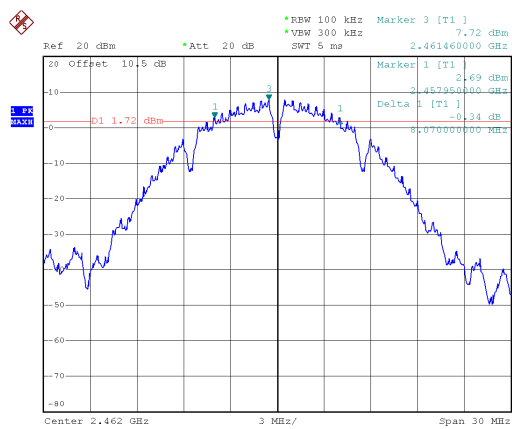
CH06



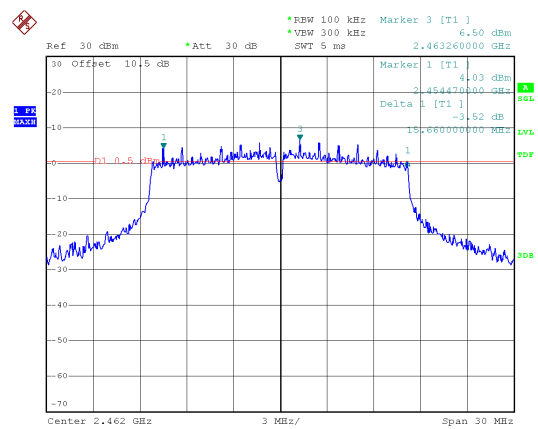
CH06

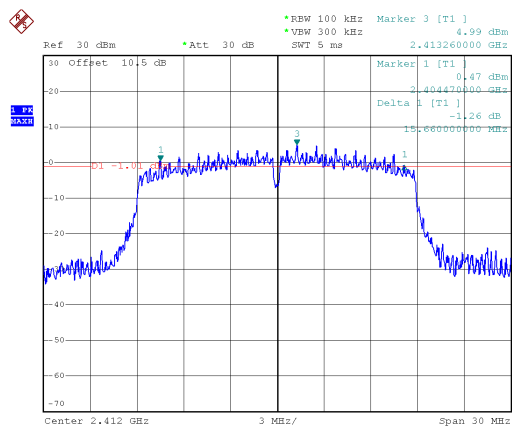
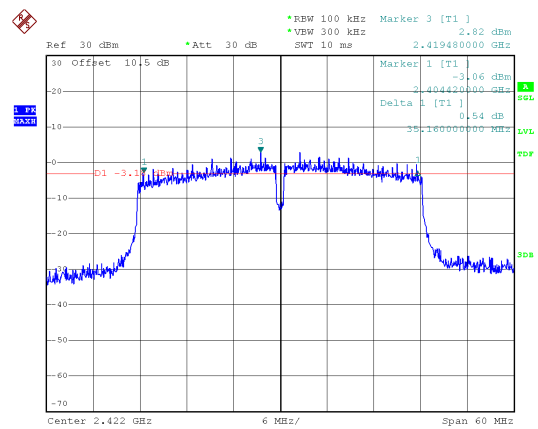


CH11

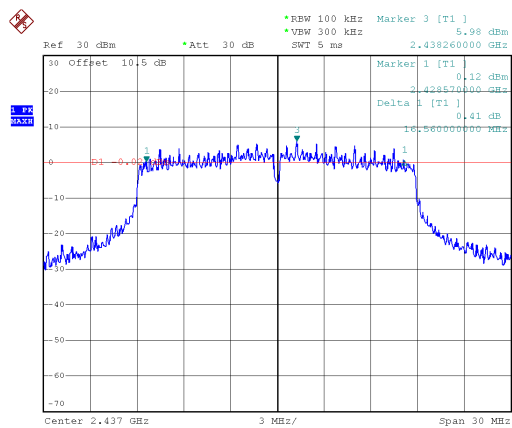


CH11

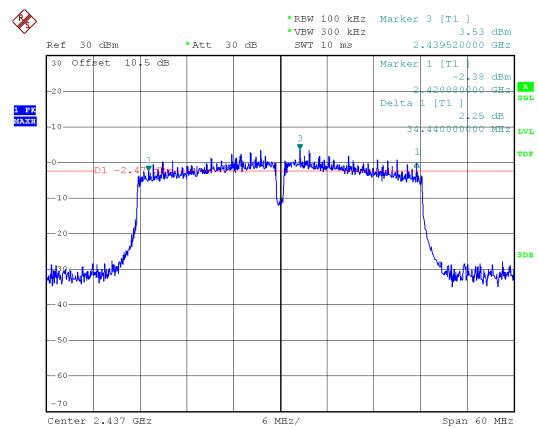


Modulation Type: 802.11n HT20
CH01Modulation Type: 802.11n HT40
CH03

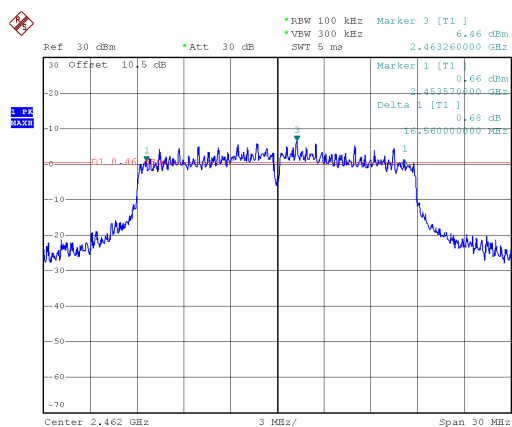
CH06



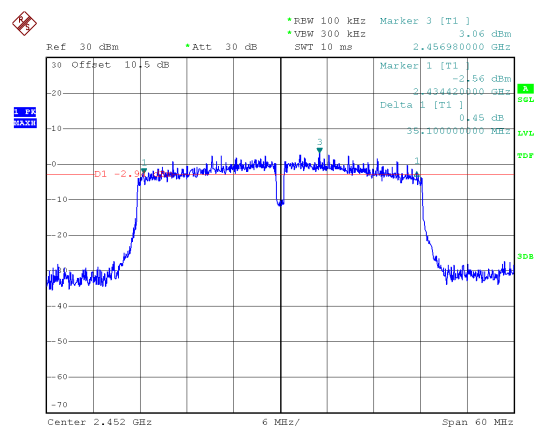
CH06



CH11



CH09





10. Maximum Average Output Power

10.1 Test Limit

The Maximum Average Output Power Measurement is 30dBm.

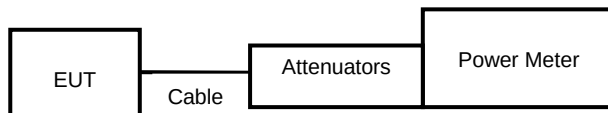
If transmitting antennas of directional gain greater than 6 dBi are used, the average output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

10.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.9.2.3.2

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter. Power was read directly from the meter and cable loss connection was added to the reading to obtain power at the EUT antenna terminal. The EUT Output Power was set to maximum to produce the worse case test result.

10.3 Test Setup Layout



**10.4 Test Result and Data**

Setting	Modulation Mode	Channel	Frequency (MHz)	Conducted(average) output power (dBm)		Total AV power (dBm)	Total AV power (mW)	Power Limit (dBm)
				ANT A	ANT B			
17	11b	1	2412	16.96	17.25	20.12	102.748	30.00
17		6	2437	16.92	17.28	20.11	102.660	30.00
17		11	2462	17.46	17.19	20.34	108.079	30.00
15.5	11g	1	2412	15.36	15.39	18.39	68.950	30.00
17		6	2437	17.12	16.91	20.03	100.614	30.00
17		11	2462	17.42	17.02	20.23	105.558	30.00
15.5	11n HT20	1	2412	15.22	15.46	18.35	68.422	30.00
17		6	2437	17.03	17.04	20.05	101.049	30.00
17		11	2462	17.29	17.08	20.20	104.630	30.00
16	11n HT40	3	2422	15.77	16.15	18.97	78.967	30.00
17		6	2437	17.27	16.87	20.08	101.974	30.00
17		9	2452	17.30	17.47	20.40	109.550	30.00



11. Power Spectral Density

11.1 Test Limit

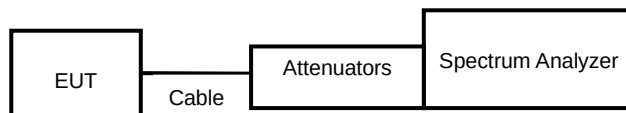
The Maximum of Power Spectral Density Measurement is 8dBm.

If transmitting antennas of directional gain greater than 6 dBi are used, the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi

11.2 Test Procedures

According to the methods defined in ANSI C63.10-2013 Section 11.10

11.3 Test Setup Layout

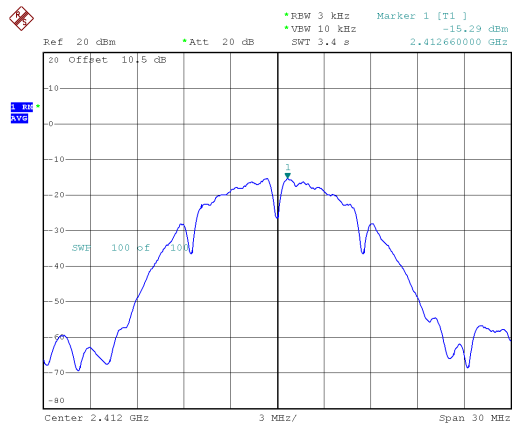


**11.4 Test Result and Data**

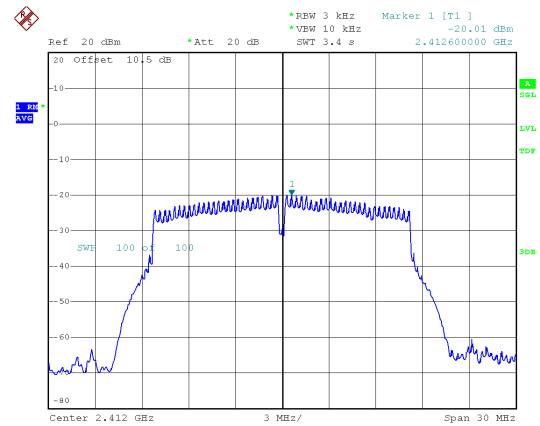
Modulation Type	Channel	Frequency (MHz)	Maximum Power Density of 3KHz Bandwidth(dBm)		Sum chain (dBm)	Duty Cycle CF(dB)	Total PSD (dBm)	Limit (dBm)
			ANT A	ANT B				
11b	1	2412	-15.29	-14.96	-12.11	0.32	-11.79	7.99
	6	2437	-14.76	-14.77	-11.75	0.32	-11.43	7.99
	11	2462	-14.69	-15.11	-11.88	0.32	-11.56	7.99
11g	1	2412	-20.01	-20.09	-17.04	1.65	-15.39	7.99
	6	2437	-18.22	-18.47	-15.33	1.65	-13.68	7.99
	11	2462	-17.71	-18.76	-15.19	1.65	-13.54	7.99
11n HT20	1	2412	-20.41	-19.74	-17.05	1.78	-15.27	7.99
	6	2437	-19.44	-18.44	-15.90	1.78	-14.12	7.99
	11	2462	-18.83	-18.06	-15.42	1.78	-13.64	7.99
11n HT40	3	2422	-22.08	-22.07	-19.06	0.79	-18.27	7.99
	6	2437	-21.36	-21.16	-18.25	0.79	-17.46	7.99
	9	2452	-20.59	-20.71	-17.64	0.79	-16.85	7.99



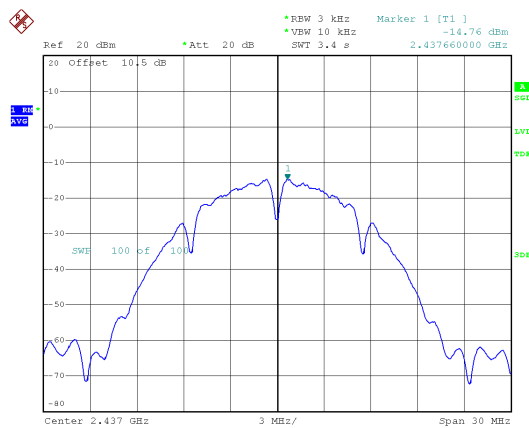
ANT A

Modulation Type: 802.11b
CH01

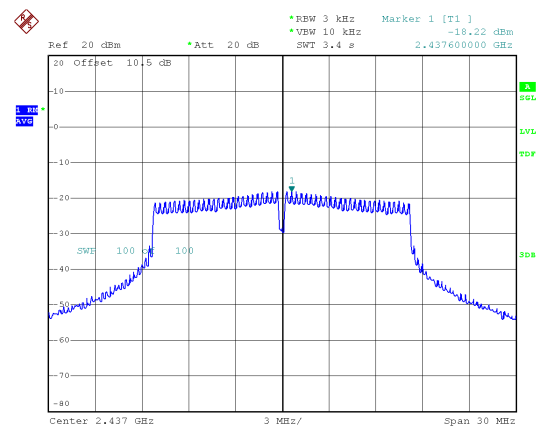
Modulation Type: 802.11g
CH01



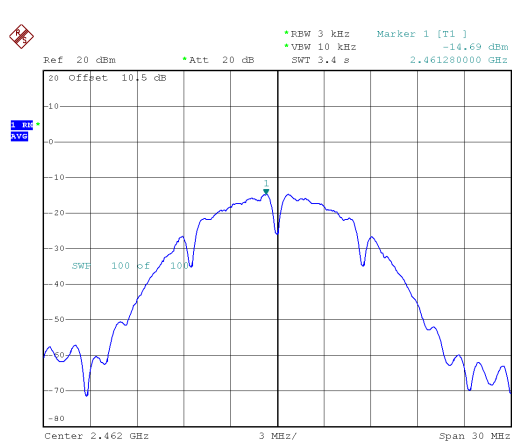
CH06



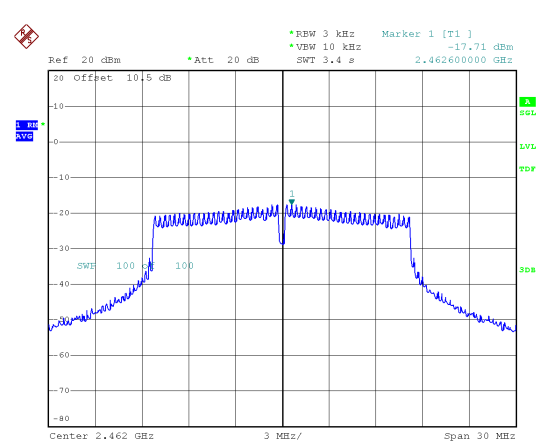
CH06



CH11

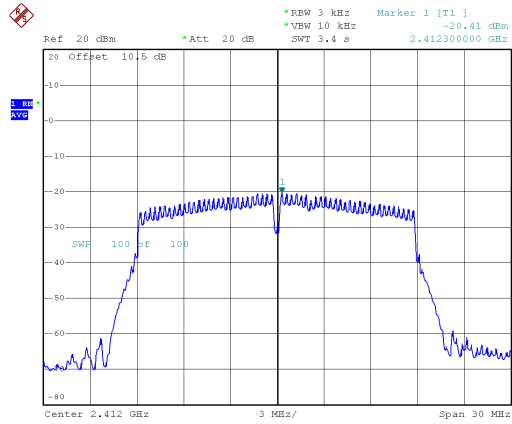


CH11

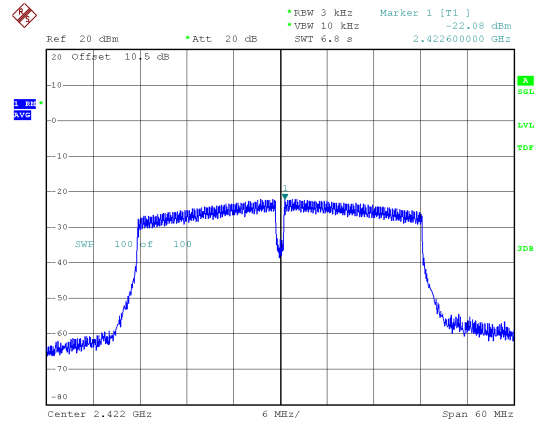




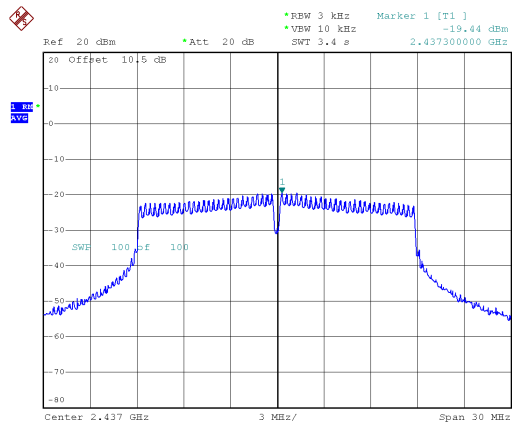
Modulation Type: 802.11n HT20
CH01



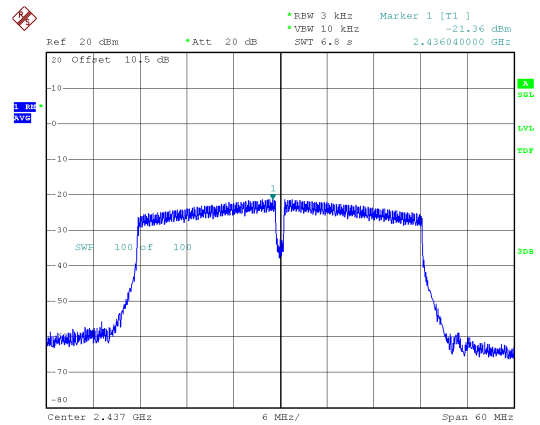
Modulation Type: 802.11n HT40
CH03



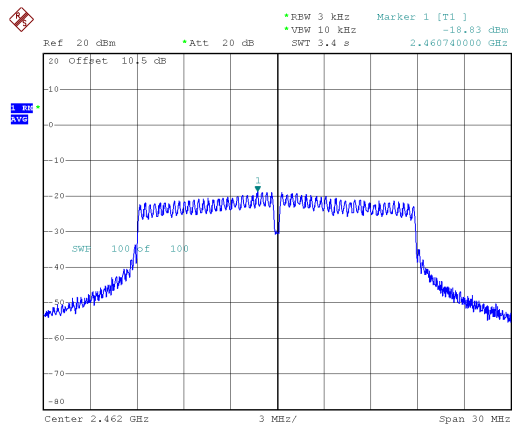
CH06



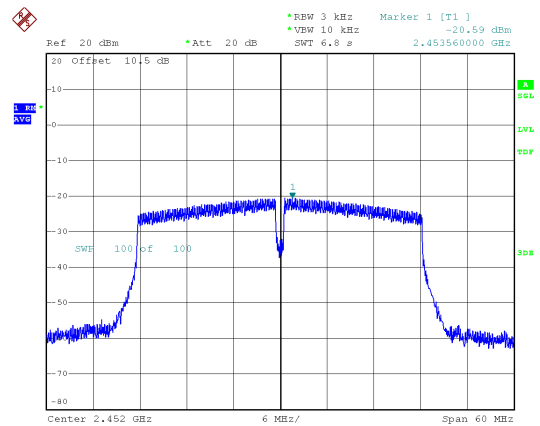
CH06



CH11

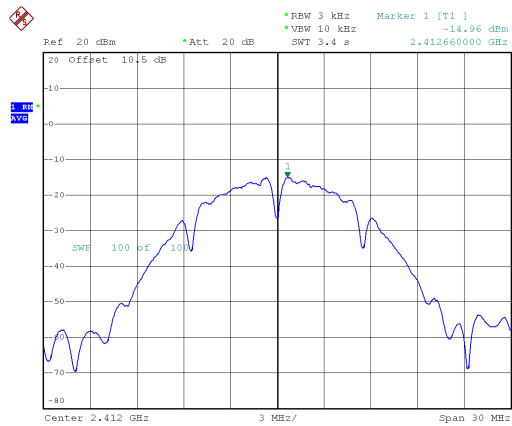
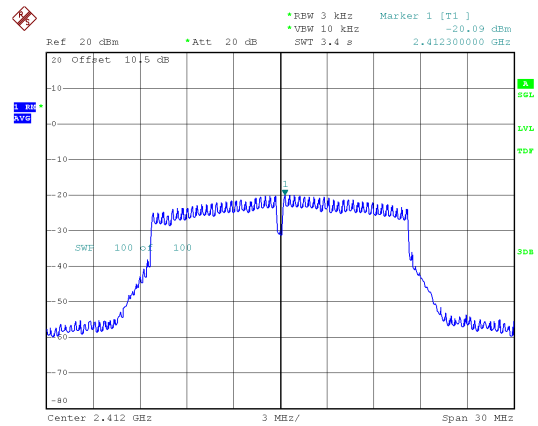


CH09

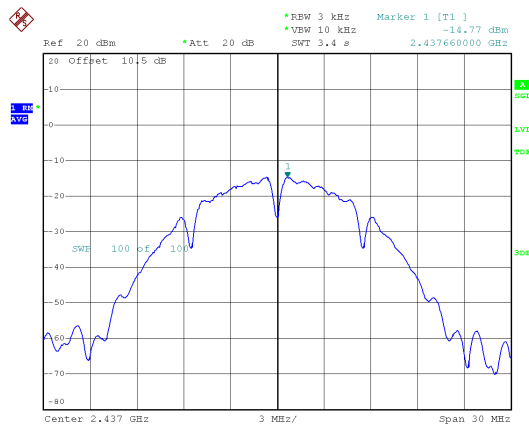




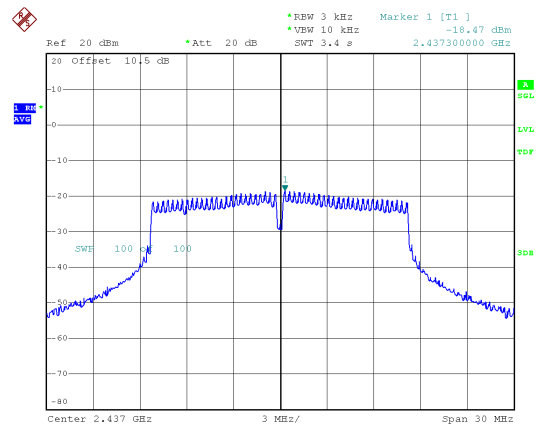
ANT B

Modulation Type: 802.11b
CH01Modulation Type: 802.11g
CH01

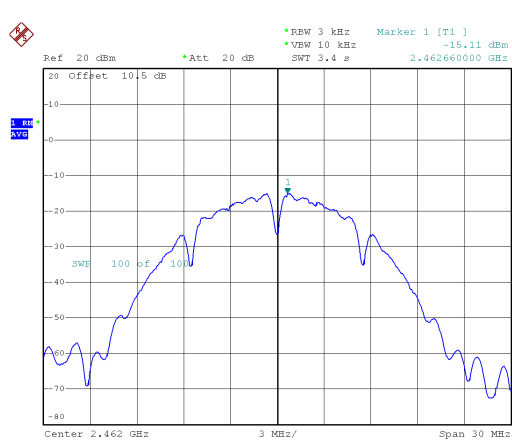
CH06



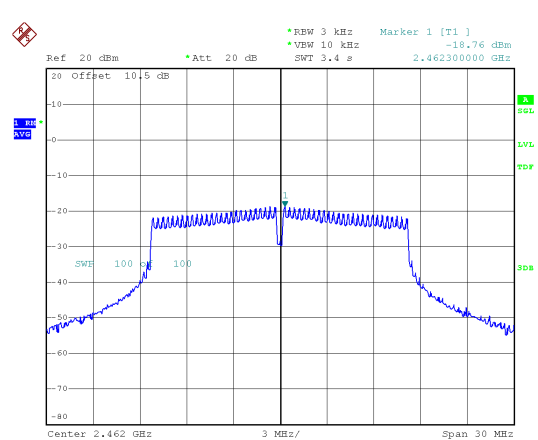
CH06



CH11

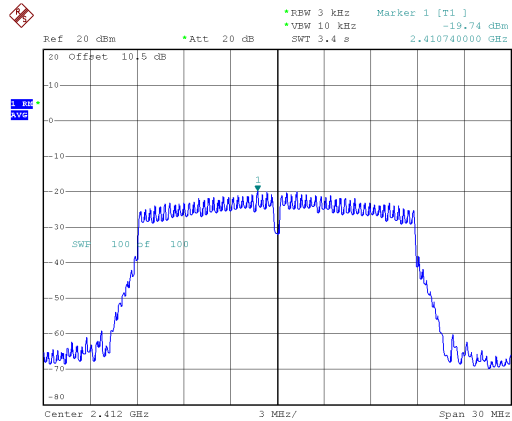


CH11

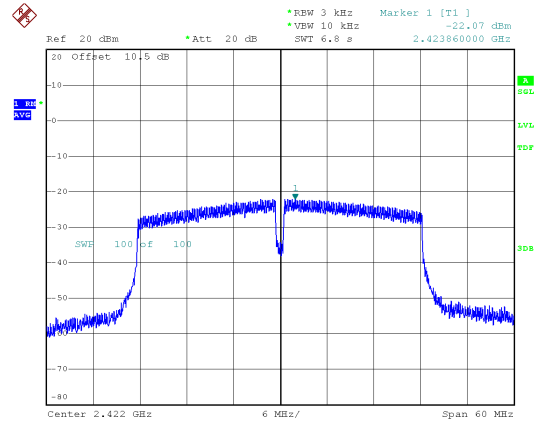




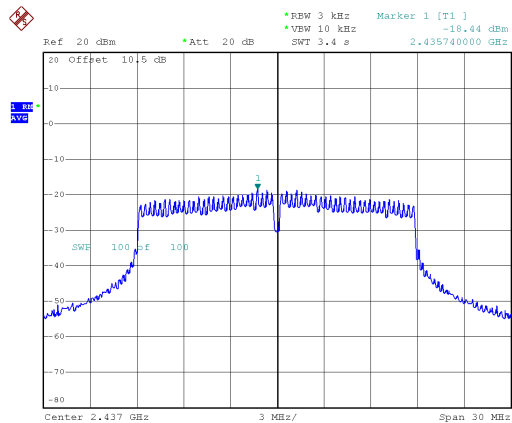
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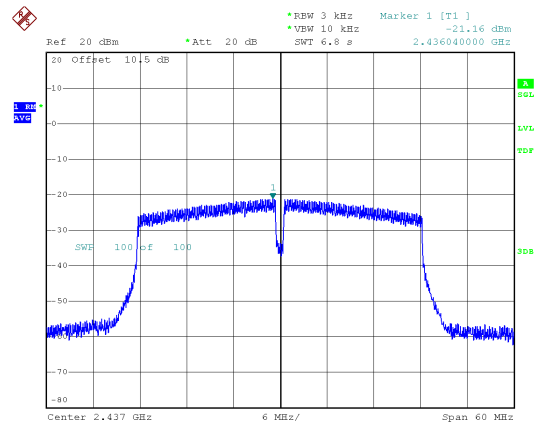
Modulation Type: 802.11n HT40
CH03



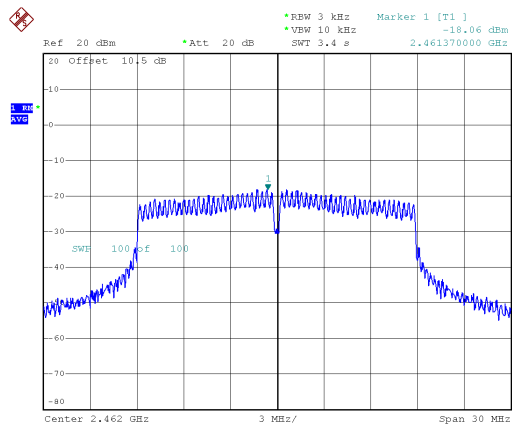
CH06



CH06



CH11



CH09

