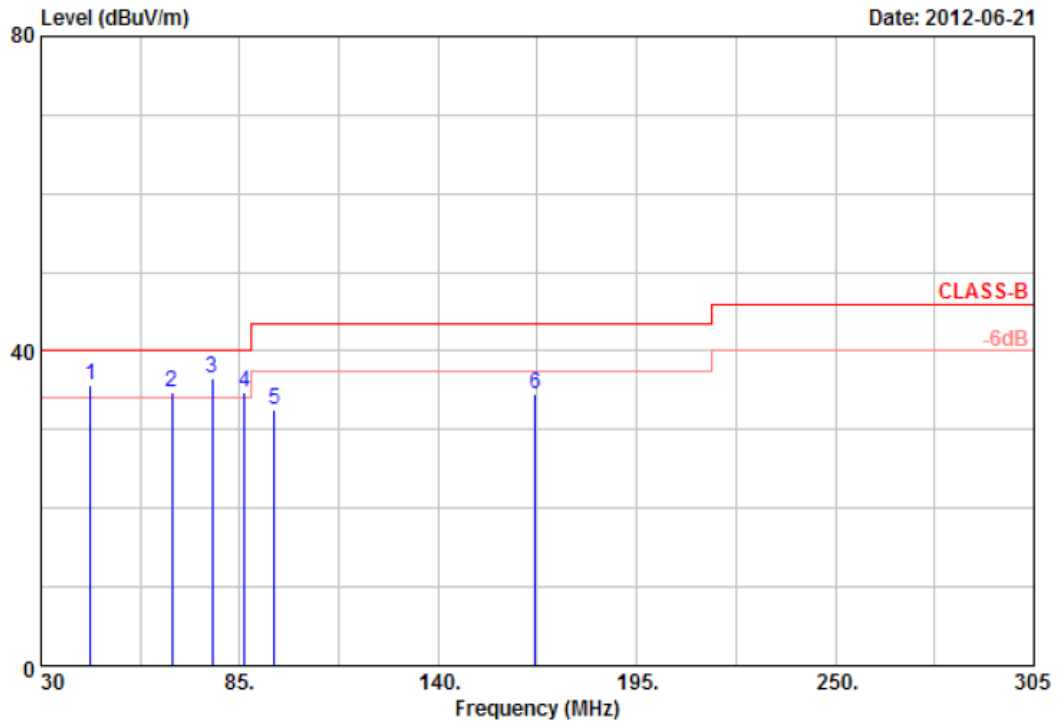




Power	: From System	Pol/Phase	: HORIZONTAL
Test Mode 6	: 802.11an HT40, CH151	Temperature	: 25 °C
Memo	:	Humidity	: 65 %



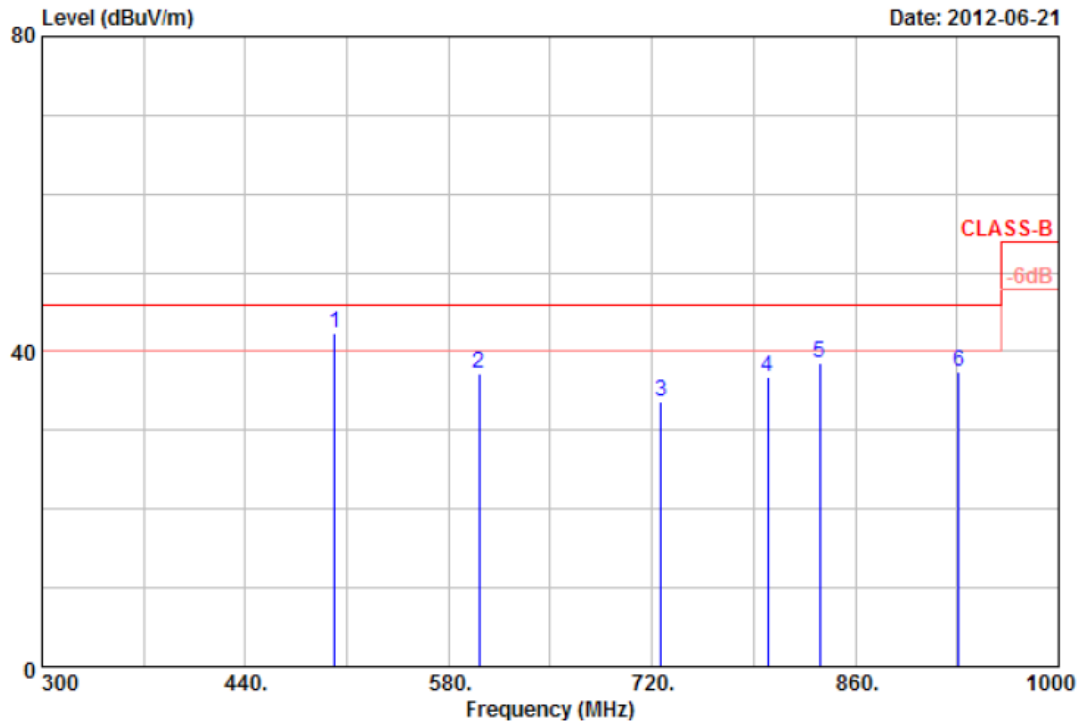
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	43.75	43.69	-8.03	35.66	40.00	-4.34	QP	100	0
2	66.30	54.62	-19.96	34.66	40.00	-5.34	QP	100	0
3	77.30	56.42	-19.83	36.59	40.00	-3.41	QP	100	0
4	86.38	53.11	-18.33	34.78	40.00	-5.22	QP	100	0
5	94.63	51.04	-18.54	32.50	43.50	-11.00	Peak	100	0
6	166.95	48.88	-14.28	34.60	43.50	-8.90	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. According to technical experiences, all spurious emission of 802.11a/an mode at Band1~4 channel are almost the same below 1GHz, so that the channel 36 or 38 (for HT40), channel 149 or 151 (for HT40) was chosen as representative in final test.
5. The data is worse case.



Power	: From System	Pol/Phase	: HORIZONTAL
Test Mode 6	: 802.11an HT40, CH151	Temperature	: 25 °C
Memo	:	Humidity	: 65 %



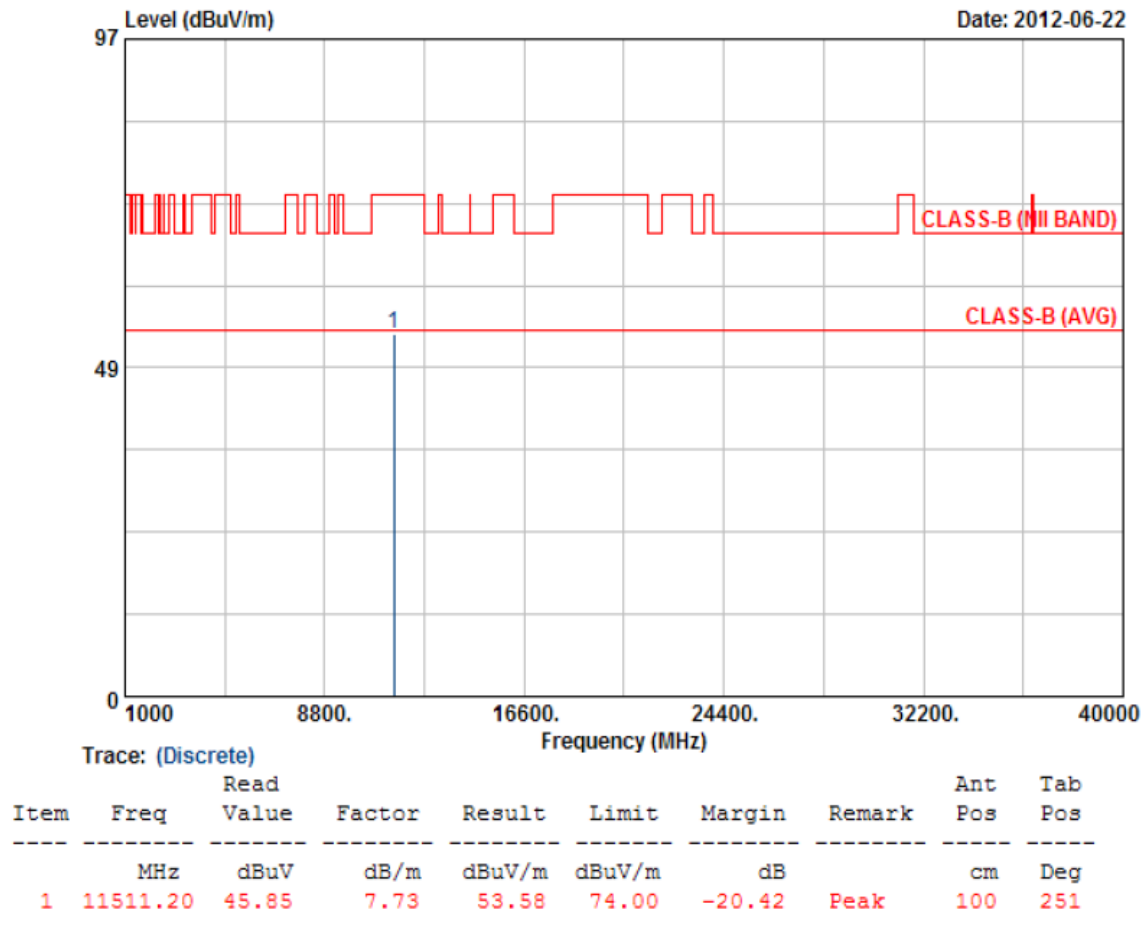
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	501.60	42.22	0.10	42.32	46.00	-3.68	QP	100	0
2	601.00	35.21	2.12	37.33	46.00	-8.67	Peak	100	0
3	726.30	30.05	3.68	33.73	46.00	-12.27	Peak	100	0
4	799.80	30.66	6.17	36.83	46.00	-9.17	Peak	100	0
5	835.50	29.56	8.89	38.45	46.00	-7.55	Peak	100	0
6	931.40	30.76	6.64	37.40	46.00	-8.60	Peak	100	0

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. According to technical experiences, all spurious emission of 802.11a/an mode at Band1~4 channel are almost the same below 1GHz, so that the channel 36 or 38 (for HT40), channel 149 or 151 (for HT40) was chosen as representative in final test.
5. The data is worse case.



Power	: From System	Pol/Phase	: VERTICAL
Test Mode 6	: 802.11an HT40, CH151	Temperature	: 22 °C
Memo	:	Humidity	: 65 %

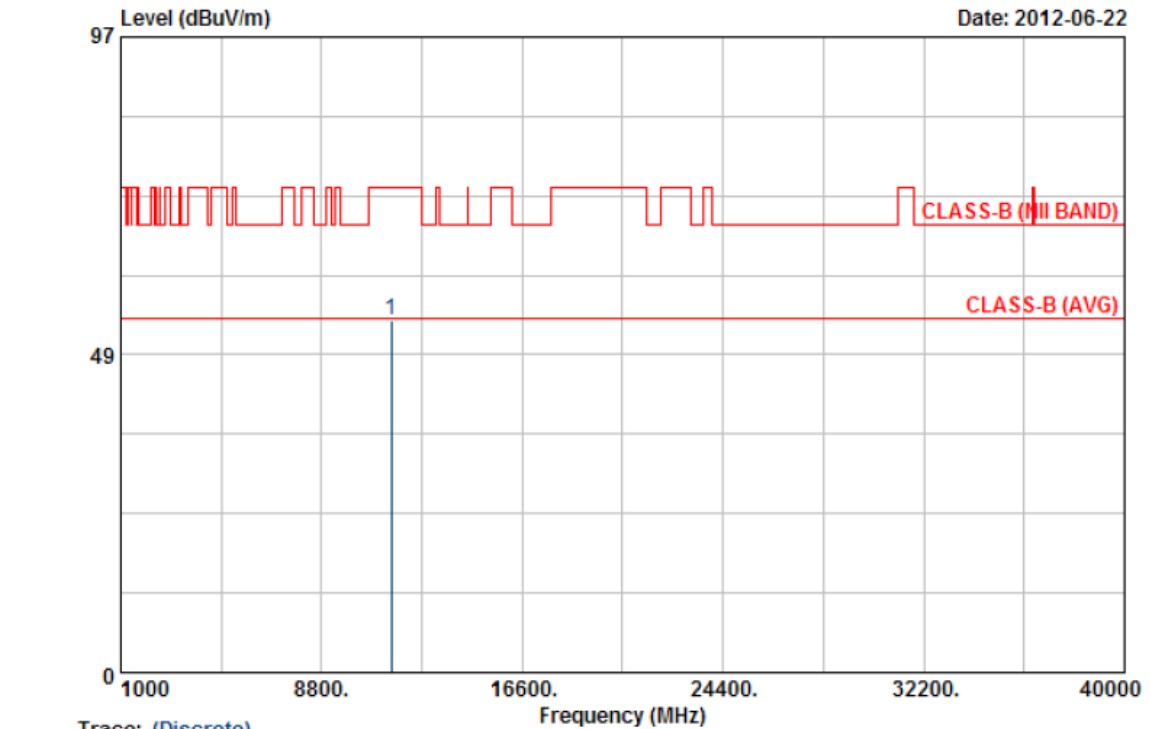


Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	:	From System	Pol/Phase	:	HORIZONTAL
Test Mode 6	:	802.11an HT40, CH151	Temperature	:	22 °C
Memo	:		Humidity	:	65 %



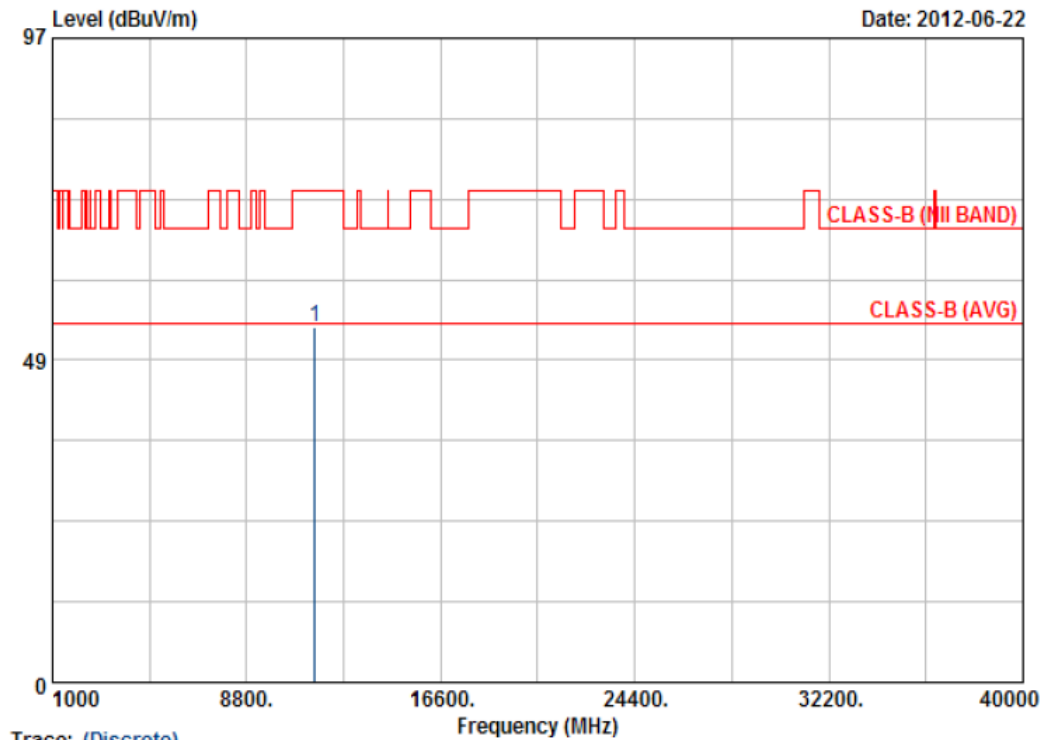
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	11510.50	43.75	9.92	53.67	74.00	-20.33	Peak	100	203

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	:	From System	Pol/Phase	:	VERTICAL
Test Mode 6	:	802.11an HT40, CH155	Temperature	:	22 °C
Memo	:		Humidity	:	65 %



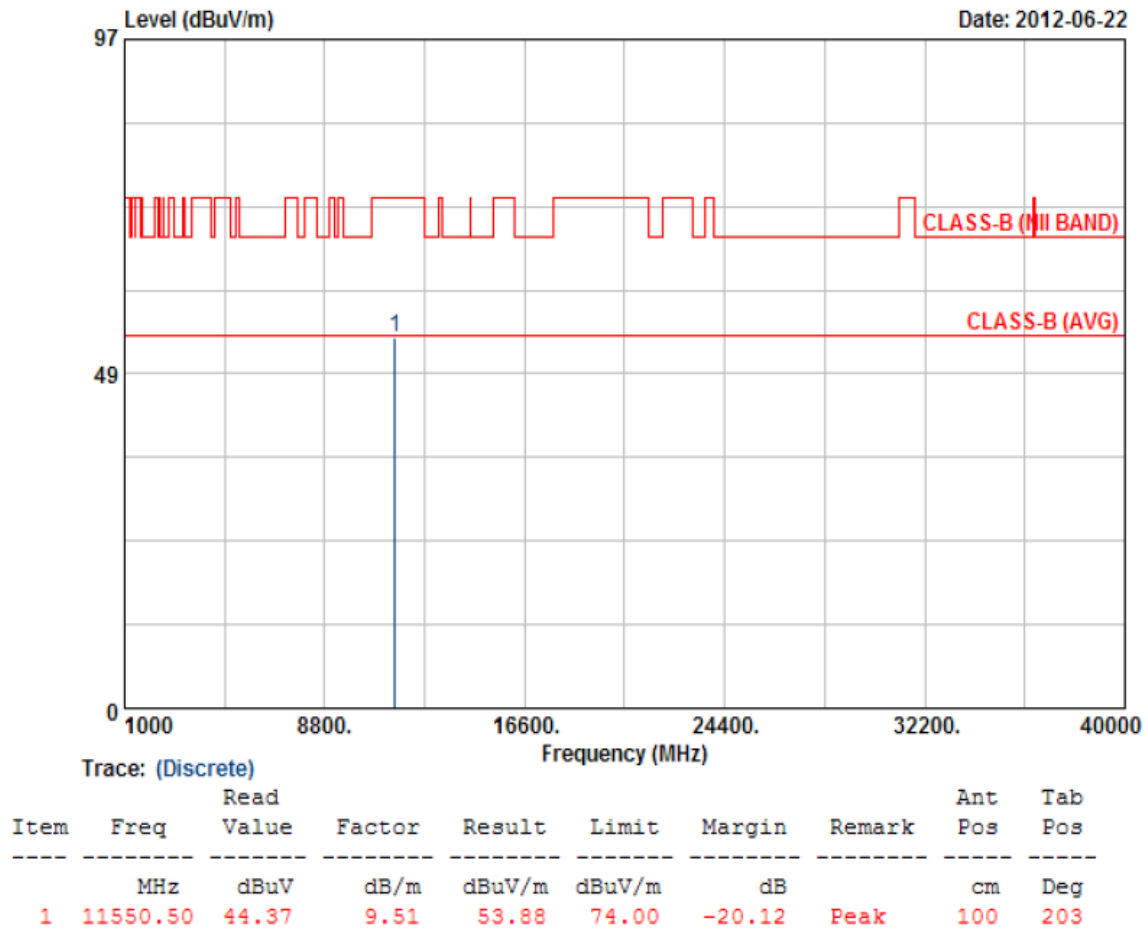
Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	11550.20	46.01	7.59	53.60	74.00	-20.40	Peak	100	251

Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: From System	Pol/Phase	: HORIZONTAL
Test Mode 6	: 802.11an HT40, CH155	Temperature	: 22 °C
Memo	:	Humidity	: 65 %

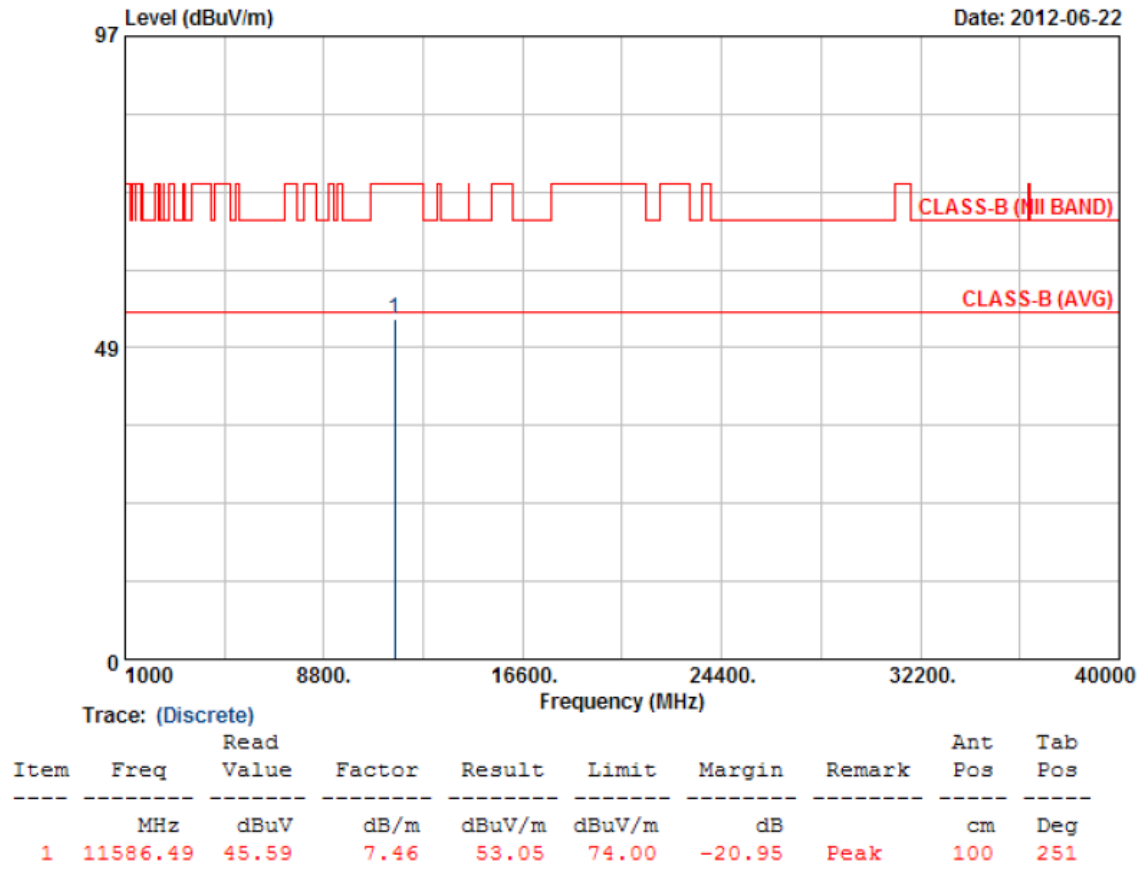


Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	: From System	Pol/Phase	: VERTICAL
Test Mode 6	: 802.11an HT40, CH159	Temperature	: 22 °C
Memo	:	Humidity	: 65 %

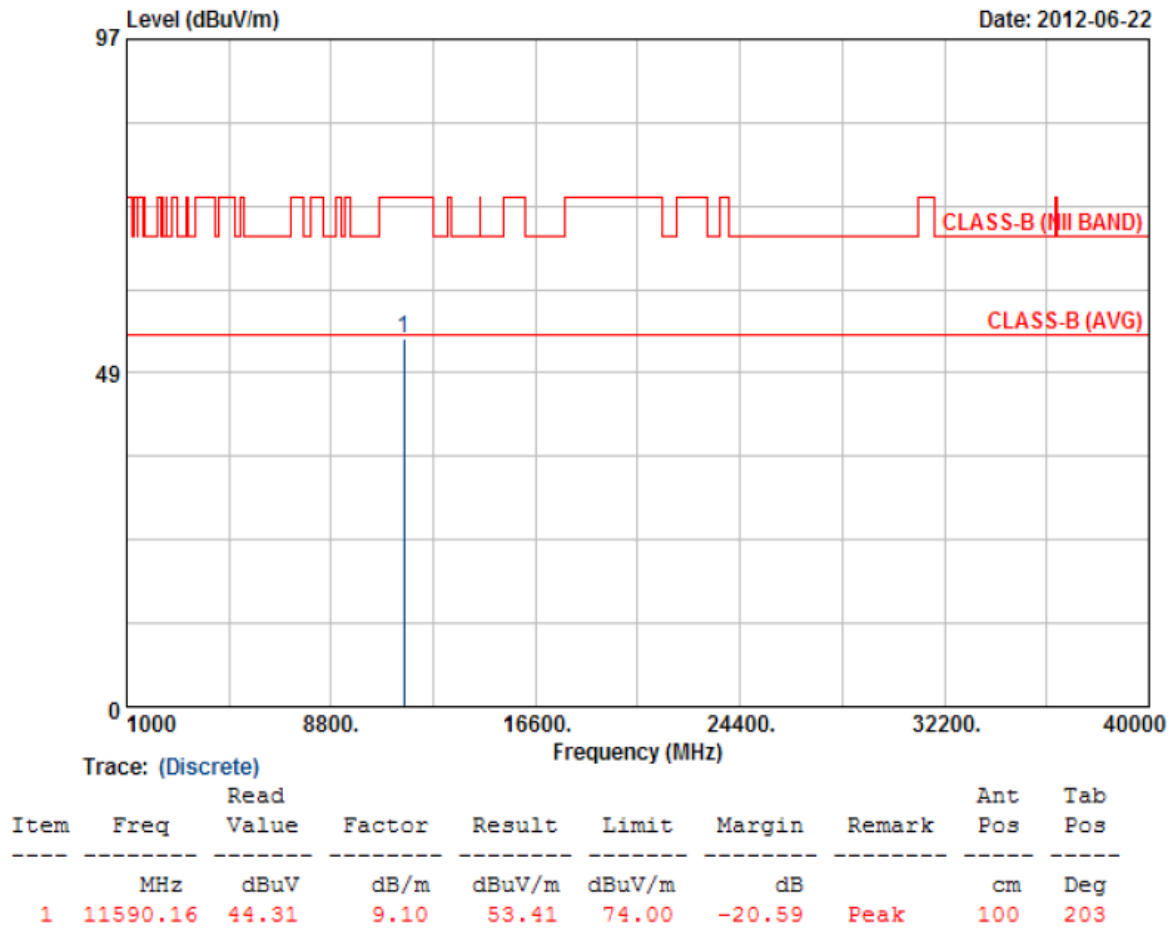


Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300KHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.



Power	:	From System	Pol/Phase	:	HORIZONTAL
Test Mode 6	:	802.11an HT40, CH159	Temperature	:	22 °C
Memo	:		Humidity	:	65 %



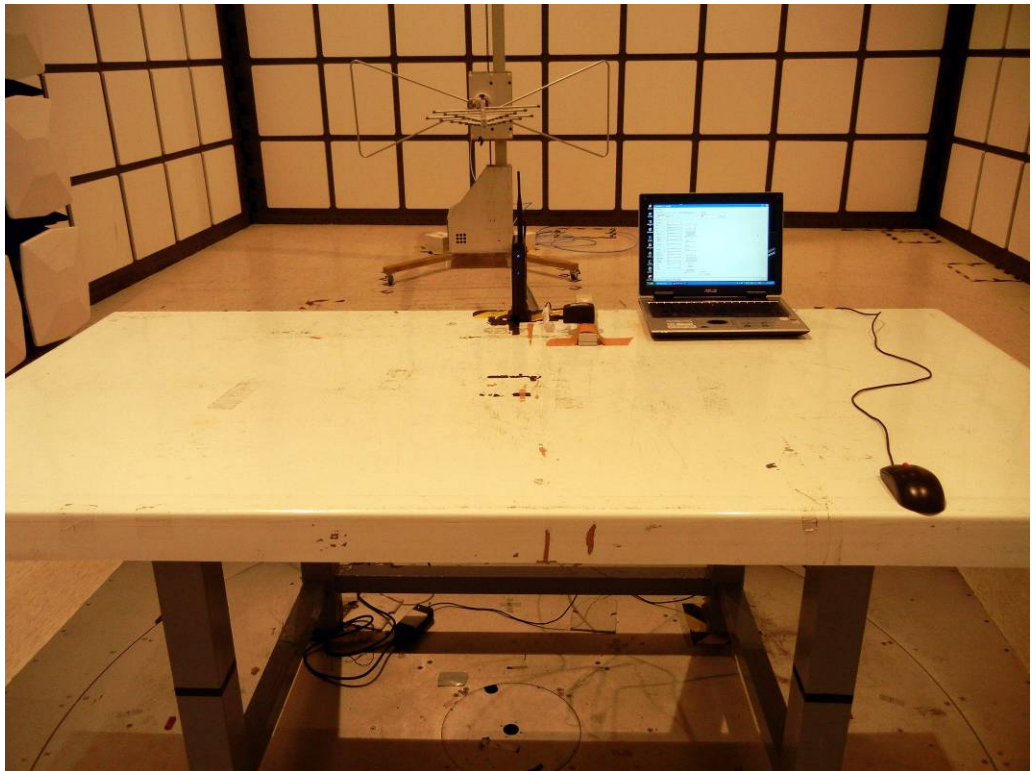
Notes:

1. Result = Read Value + Factor
2. Factor = Antenna Factor + Cable Loss - Amplifier
3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz (detector sample mode) for Average detection at frequency above 1GHz.
6. The other emissions is too low to be measured.
7. The data is worse case.

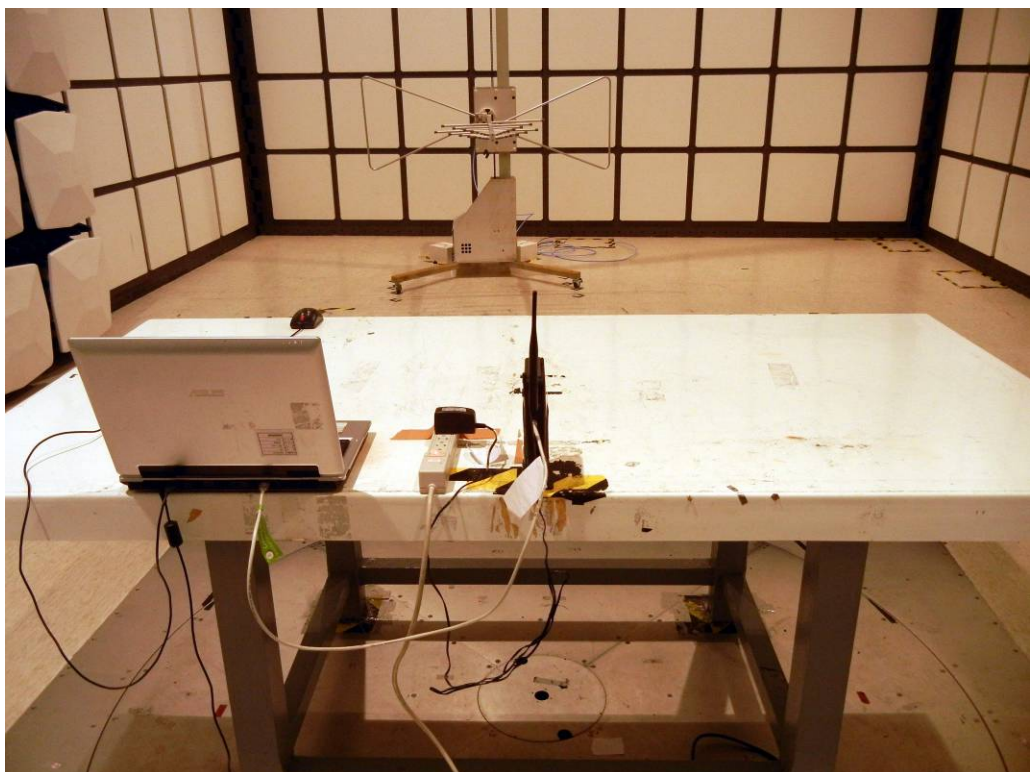


5.7 Test Photographs (30MHz~1000MHz)

Front View



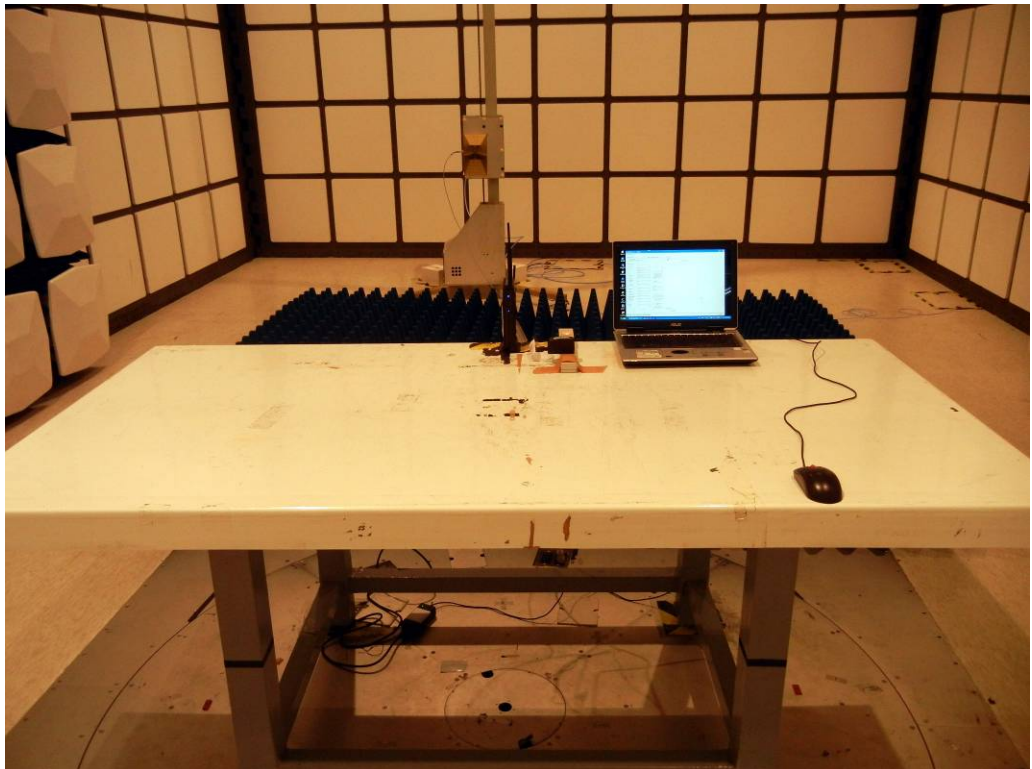
Rear View



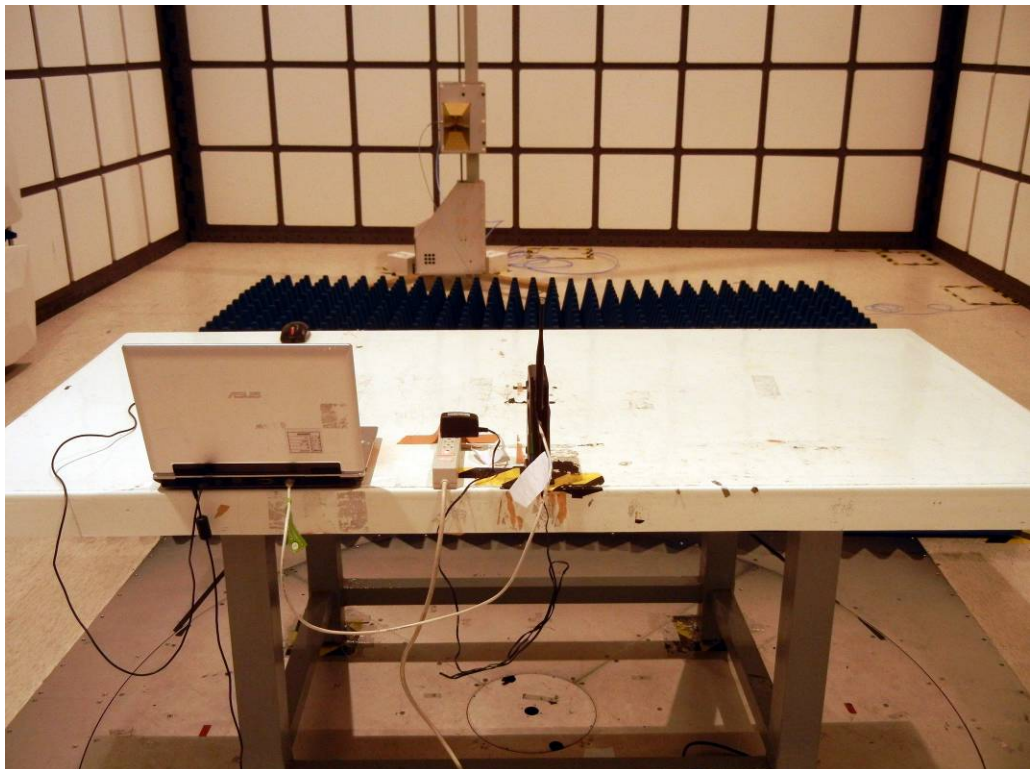


5.8 Test Photographs (1000MHz~40000MHz)

Front View



Rear View





6. 6dB Bandwidth Measurement Data

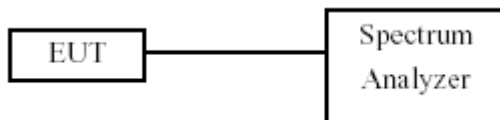
6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

6.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 1~5% of the emission bandwidth and $VBW \geq 3 \times RBW$.
- 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.

6.3 Test Setup Layout



6.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23



6.5 Test Result and Data

Test Date: Jun. 07, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	
			ANT R	ANT L
802.11b (11Mbps)	01	2412	10.2	10.8
	06	2437	11.0	10.8
	11	2462	9.8	10.9
802.11g (54Mbps)	01	2412	16.7	16.8
	06	2437	16.7	16.8
	11	2462	16.9	16.8
802.11n HT20 (130Mbps)	01	2412	17.9	17.8
	06	2437	18.0	18.0
	11	2462	18.0	17.9
802.11n HT40 (270Mbps)	03	2422	36.2	36.6
	06	2437	36.6	36.6
	09	2452	36.6	36.4

Test Date: Jun. 15, 2012

Temperature: 25°C

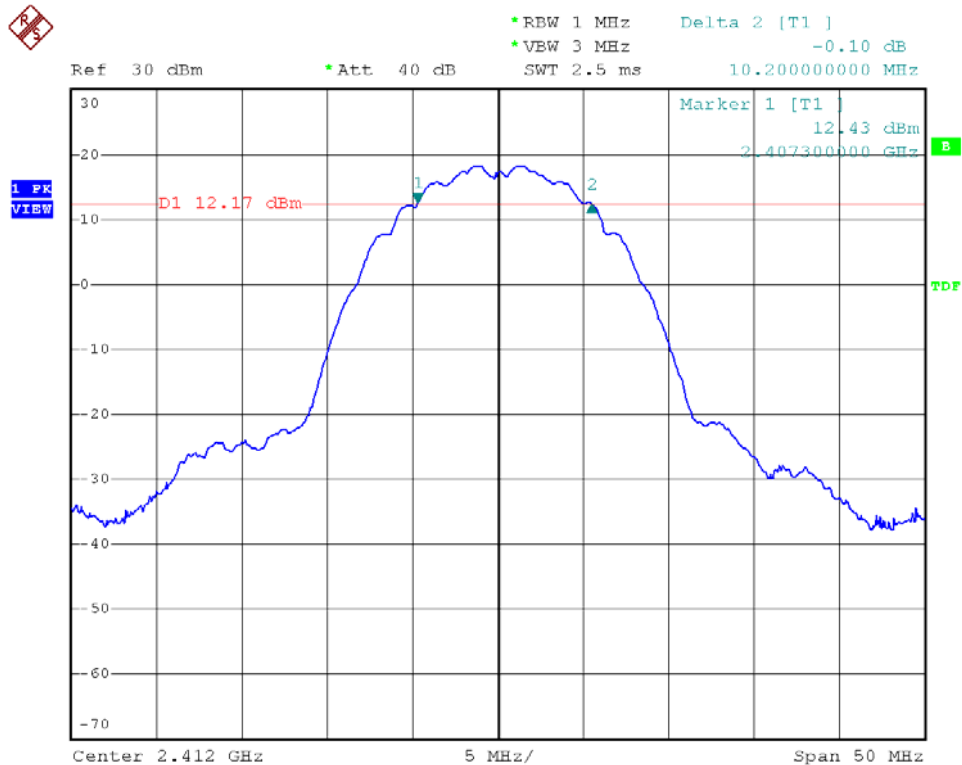
Atmospheric pressure: 1020 hPa

Humidity: 65%

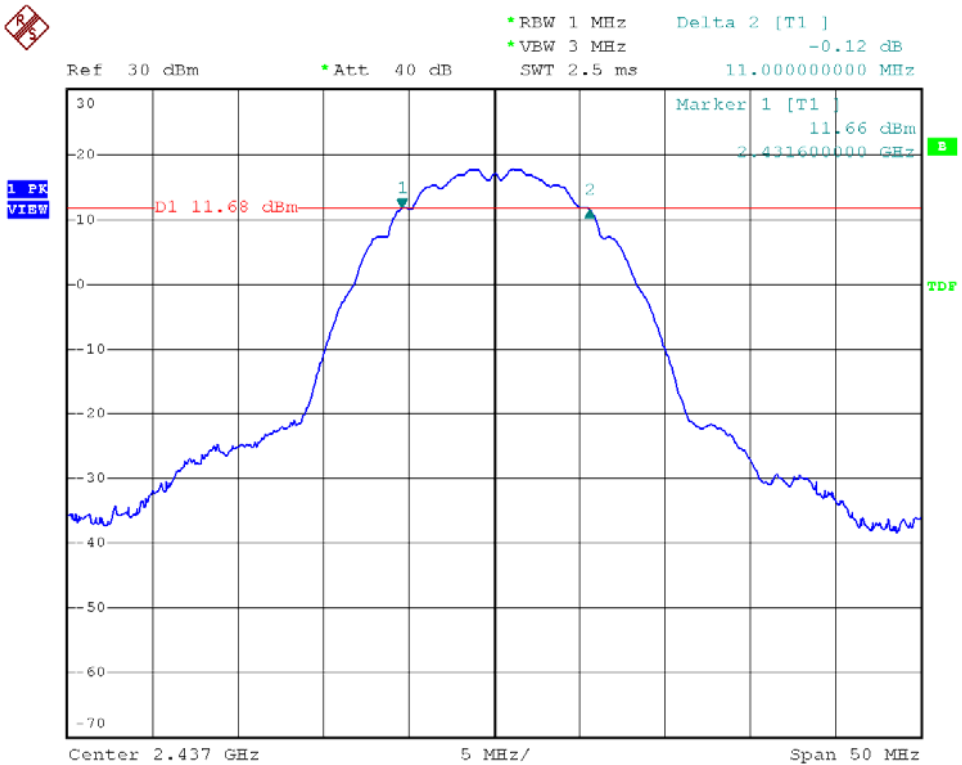
Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	
			ANT R	ANT L
802.11a (54Mbps)	149	5745	16.6	16.7
	157	5785	16.6	16.9
	165	5825	16.6	16.8
802.11an HT20 (130Mbps)	149	5745	17.8	18.0
	157	5785	17.7	17.8
	165	5825	17.8	17.8
802.11an HT40 (270Mbps)	151	5755	36.4	36.4
	155	5775	36.2	36.6
	159	5795	36.2	36.6



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

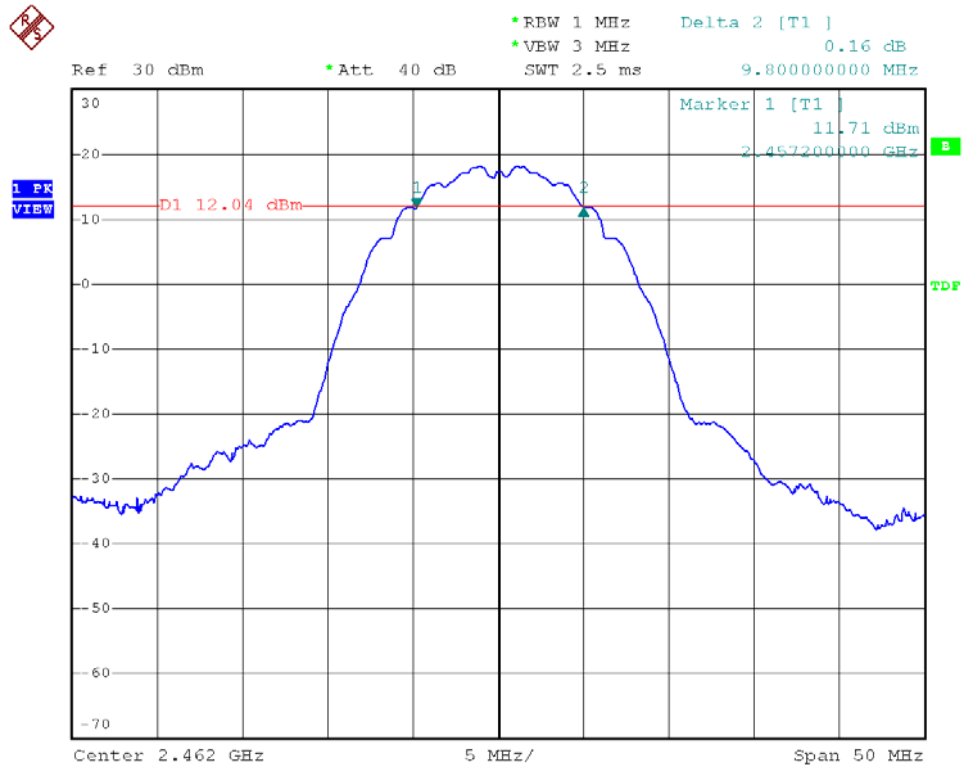


Modulation Standard: 802.11b (11Mbps), ANT R
Channel: 06

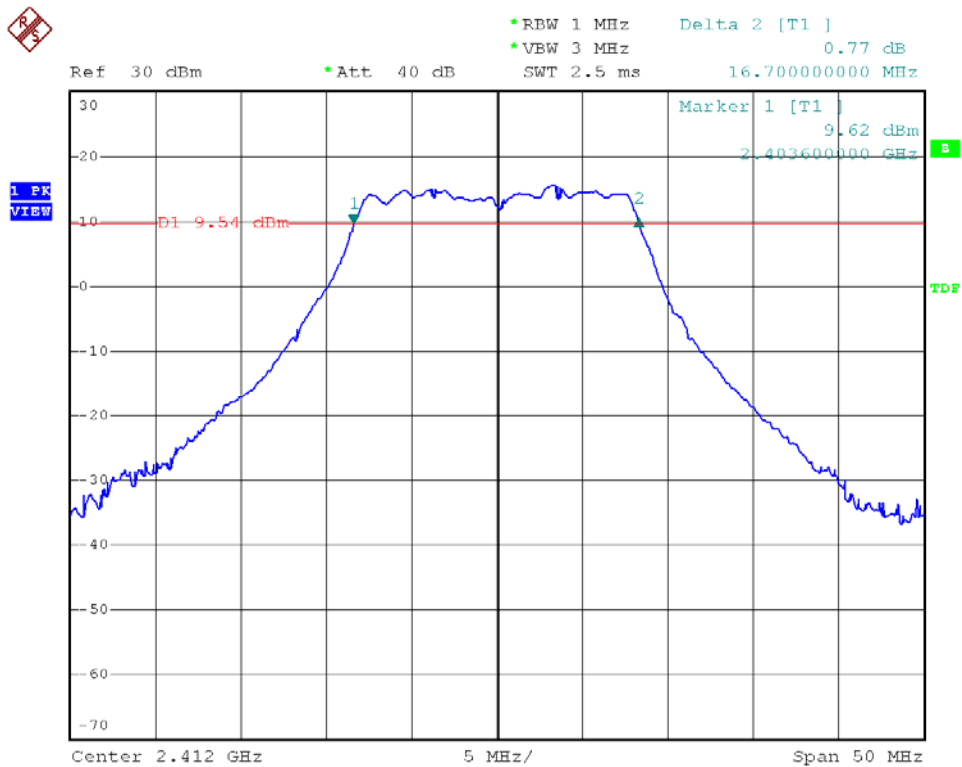




Modulation Standard: 802.11b (11Mbps), ANT R
Channel: 11

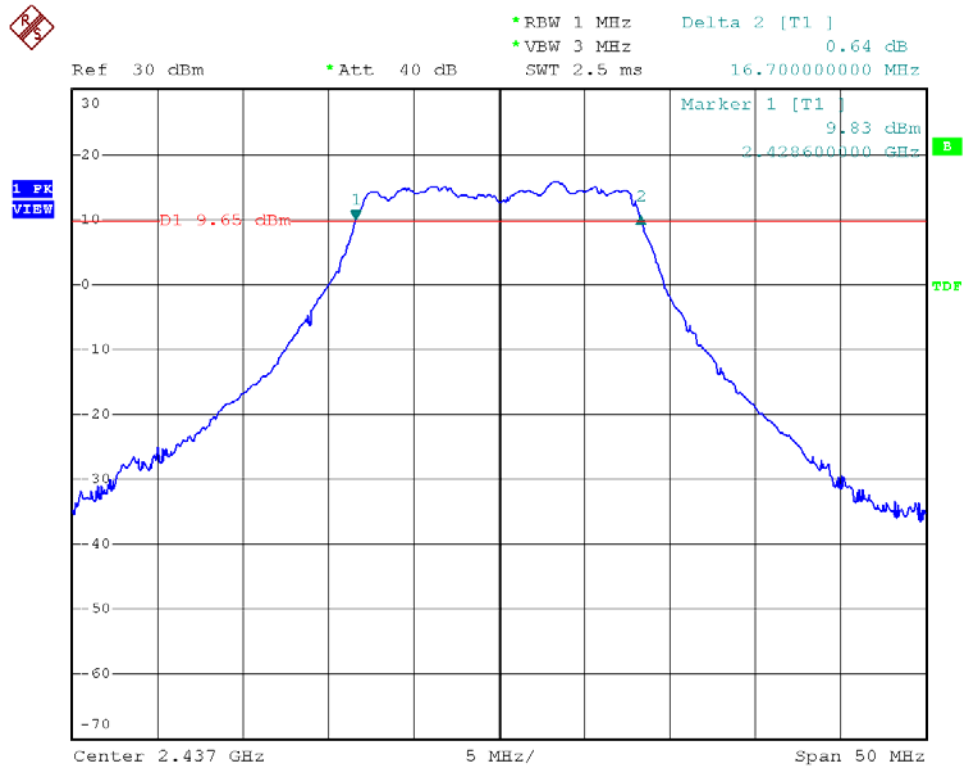


Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 01

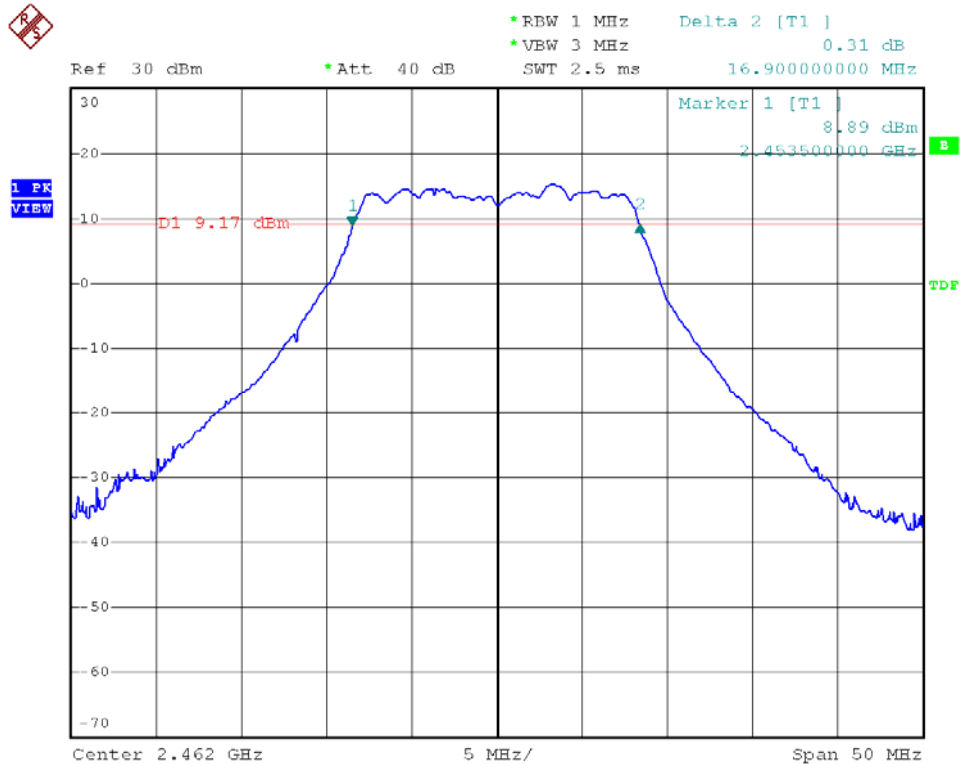




Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 06

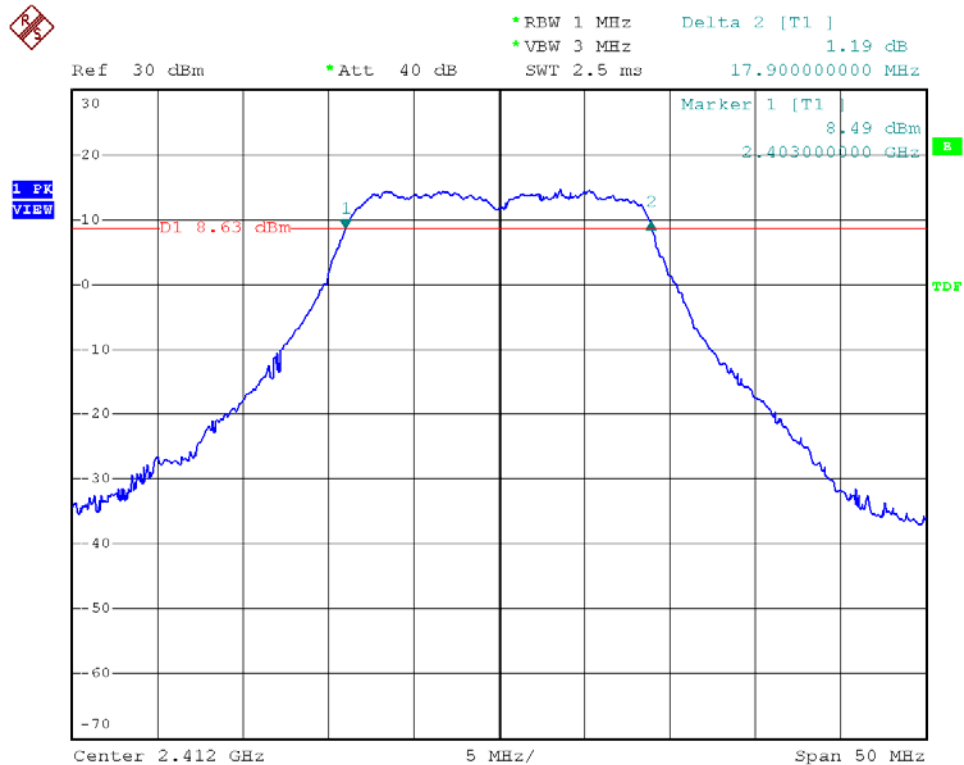


Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 11

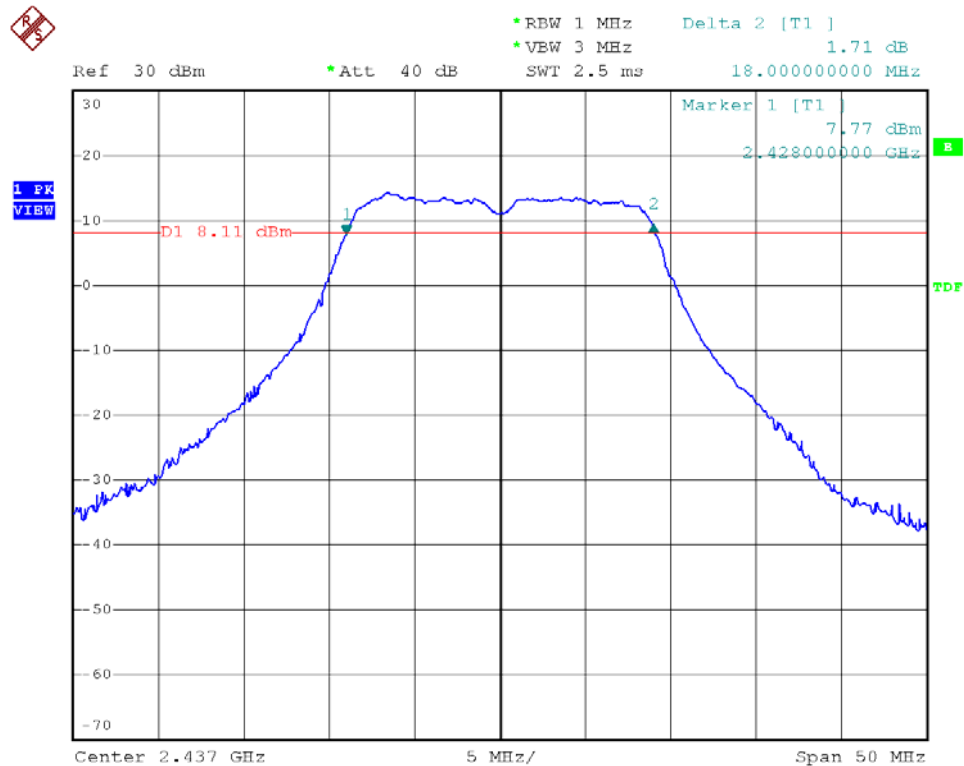




Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 01

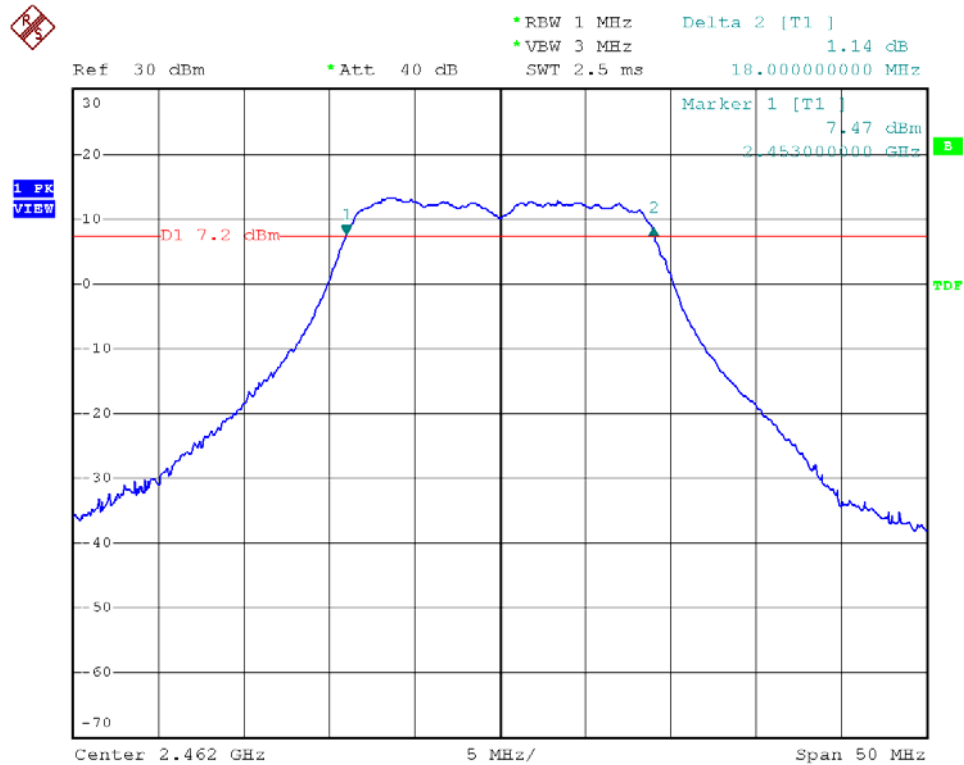


Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 06

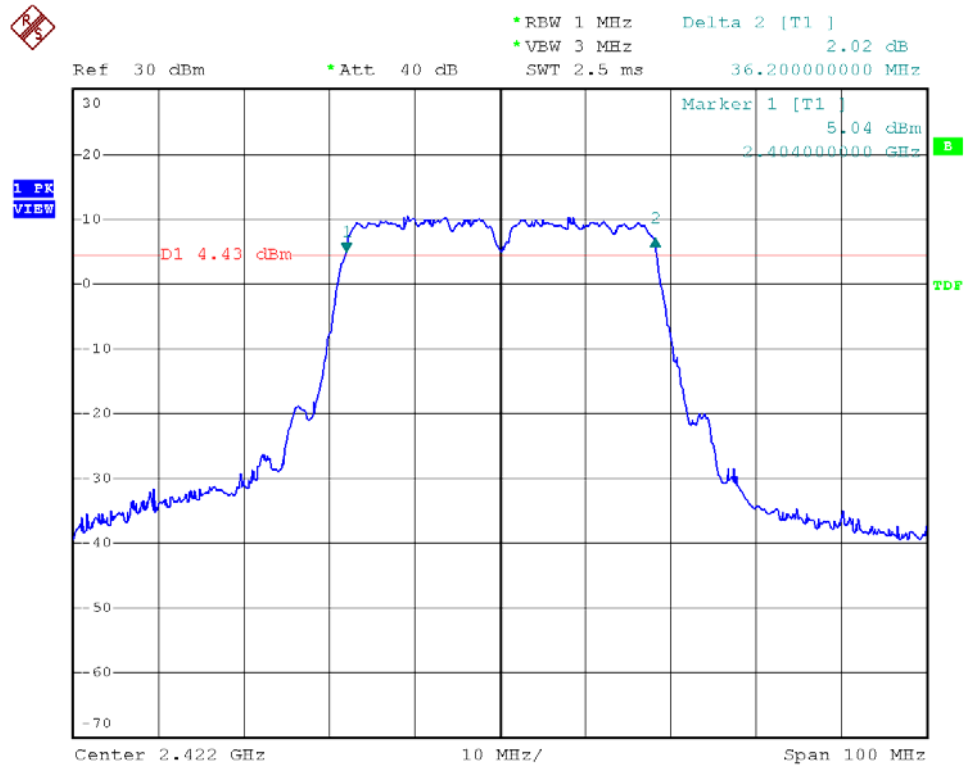




Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 11

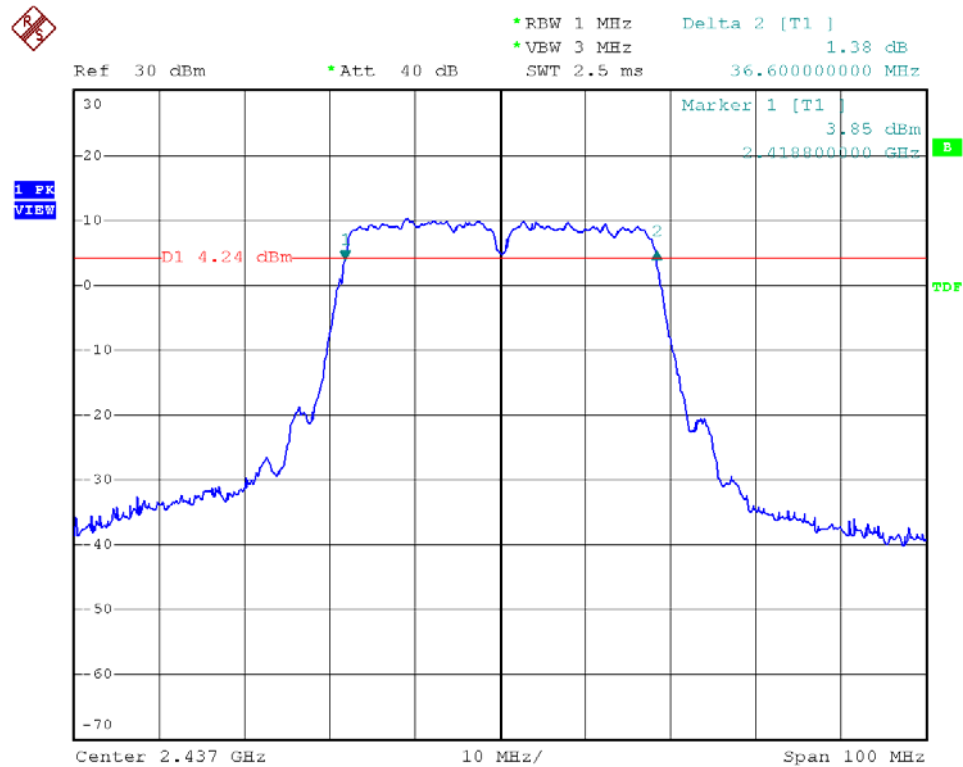


Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 03

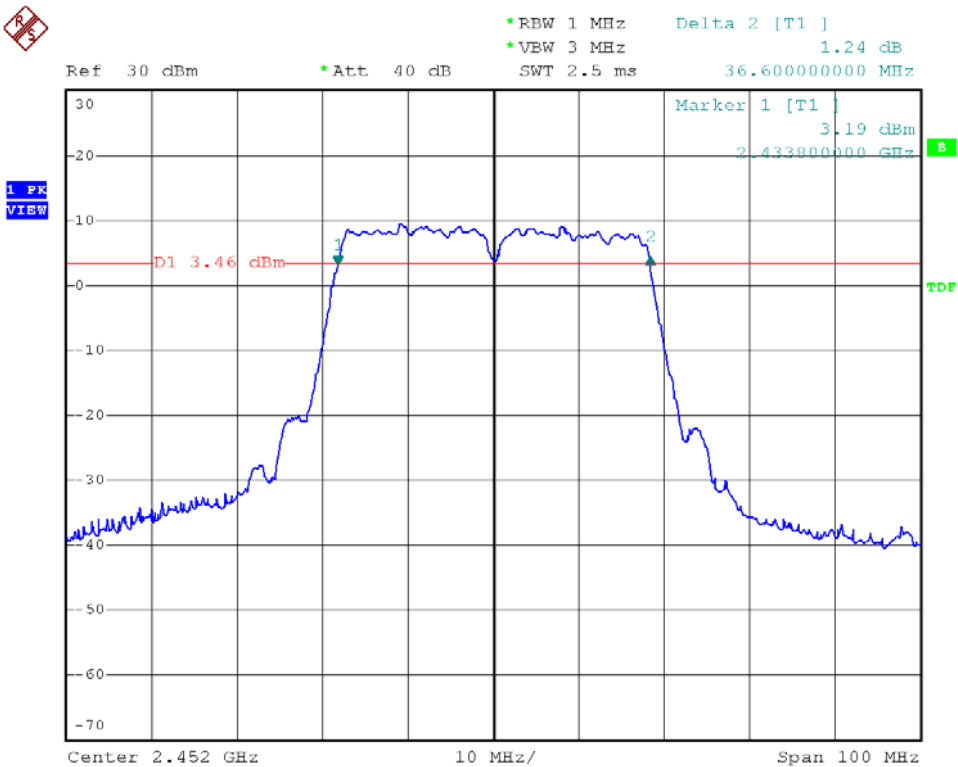




Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 06

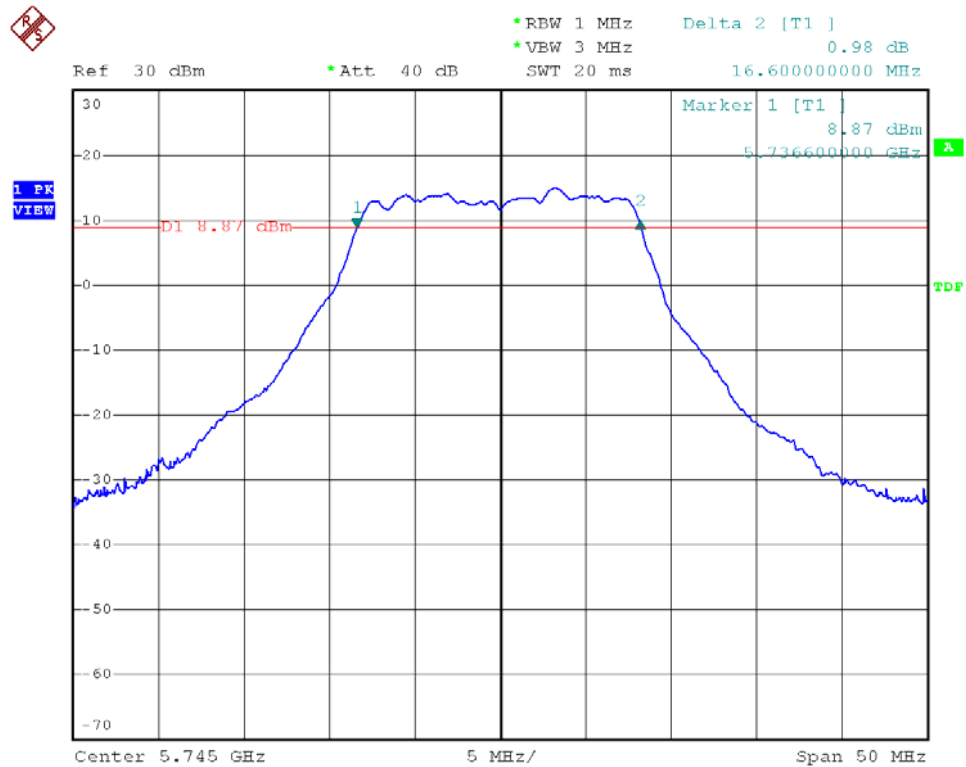


Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 09

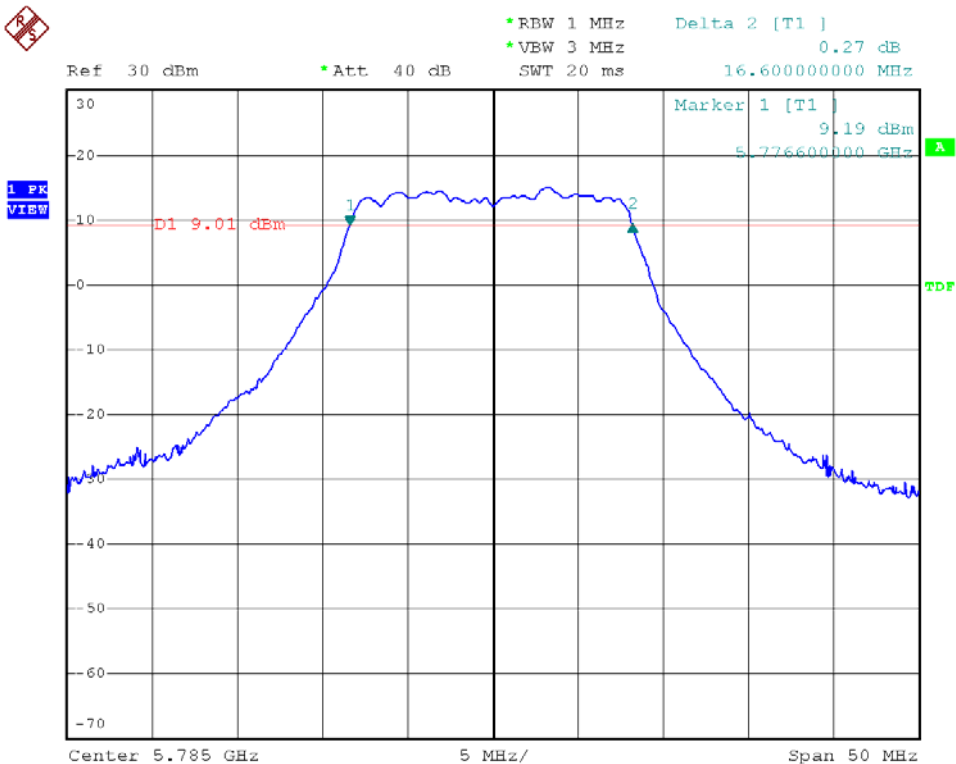




Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 149

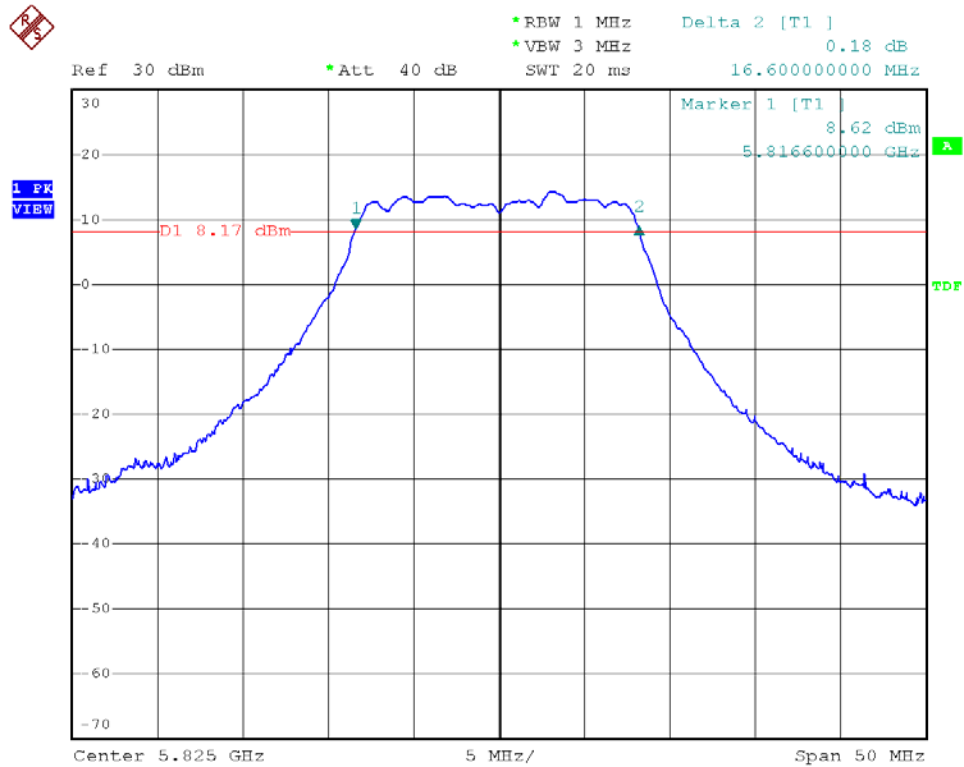


Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 157

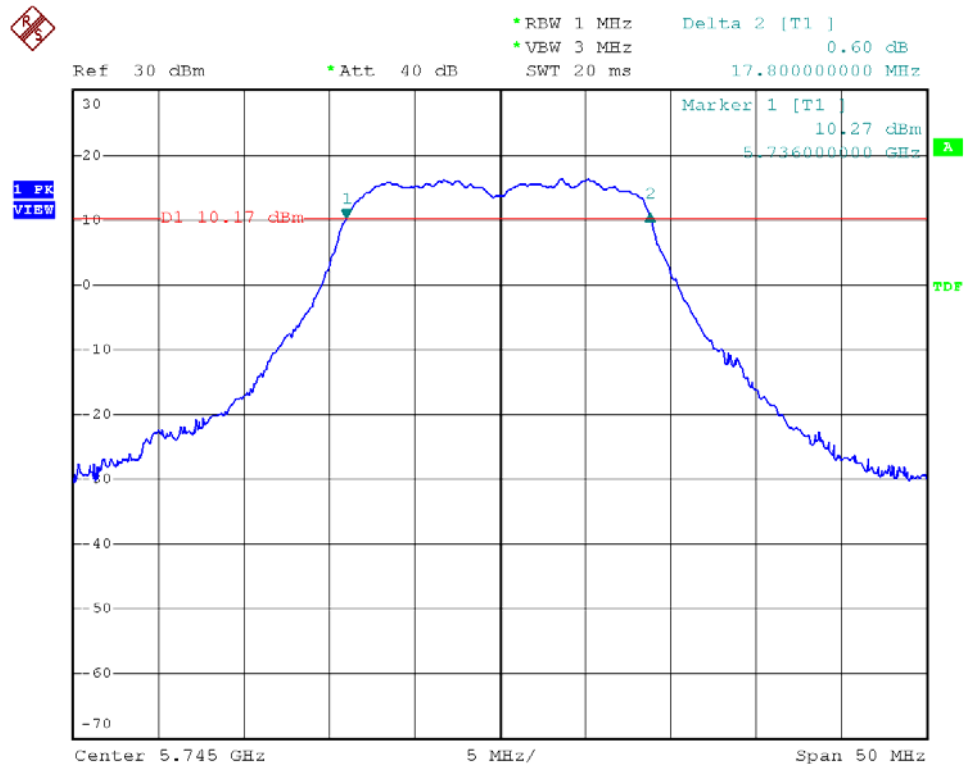




Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 165

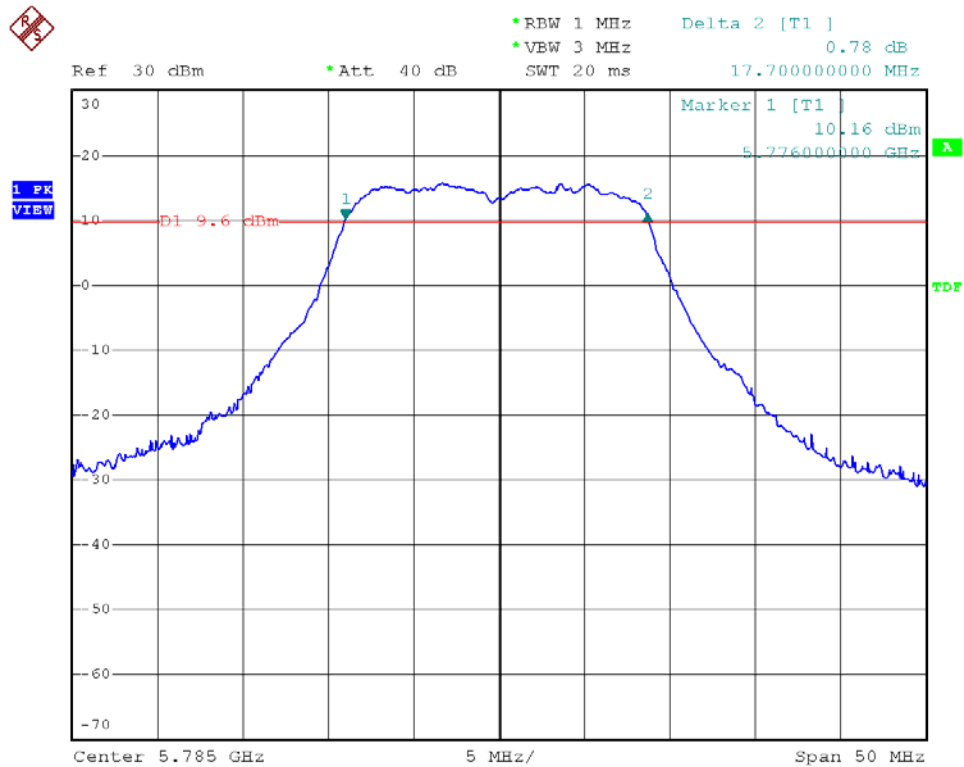


Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 149

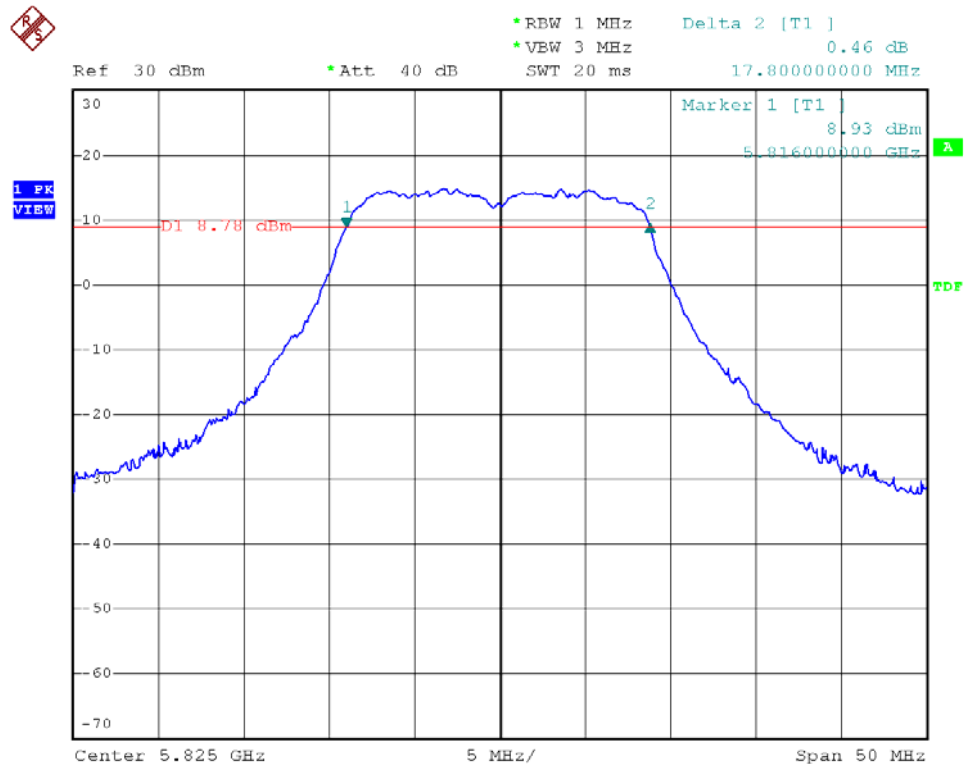




Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 157

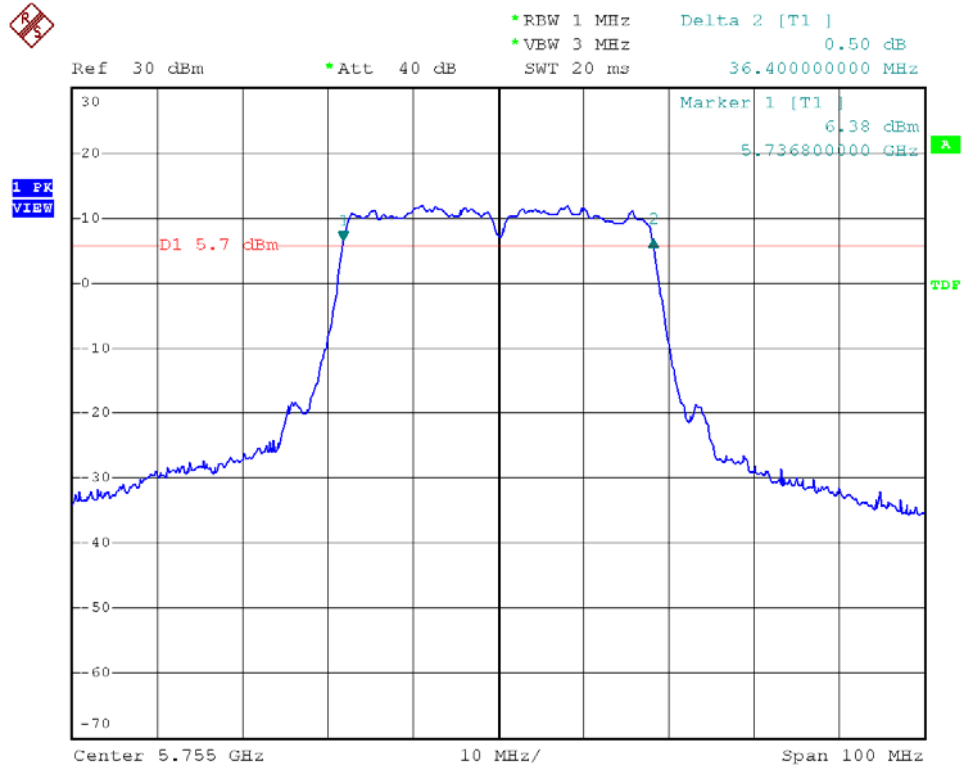


Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 165

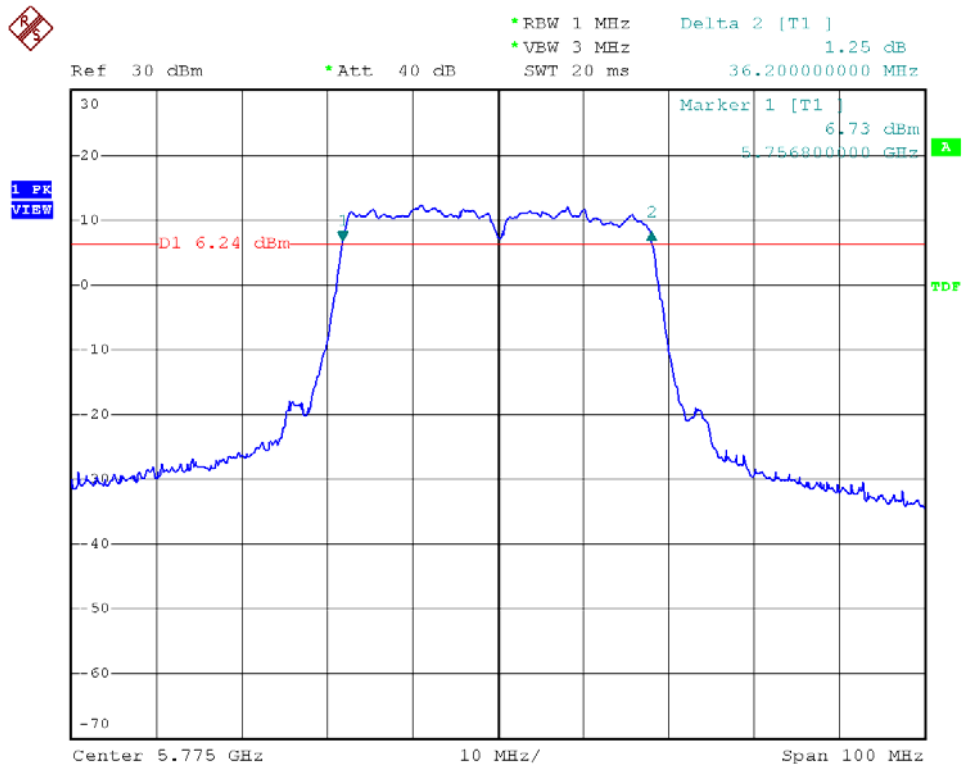




Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 151

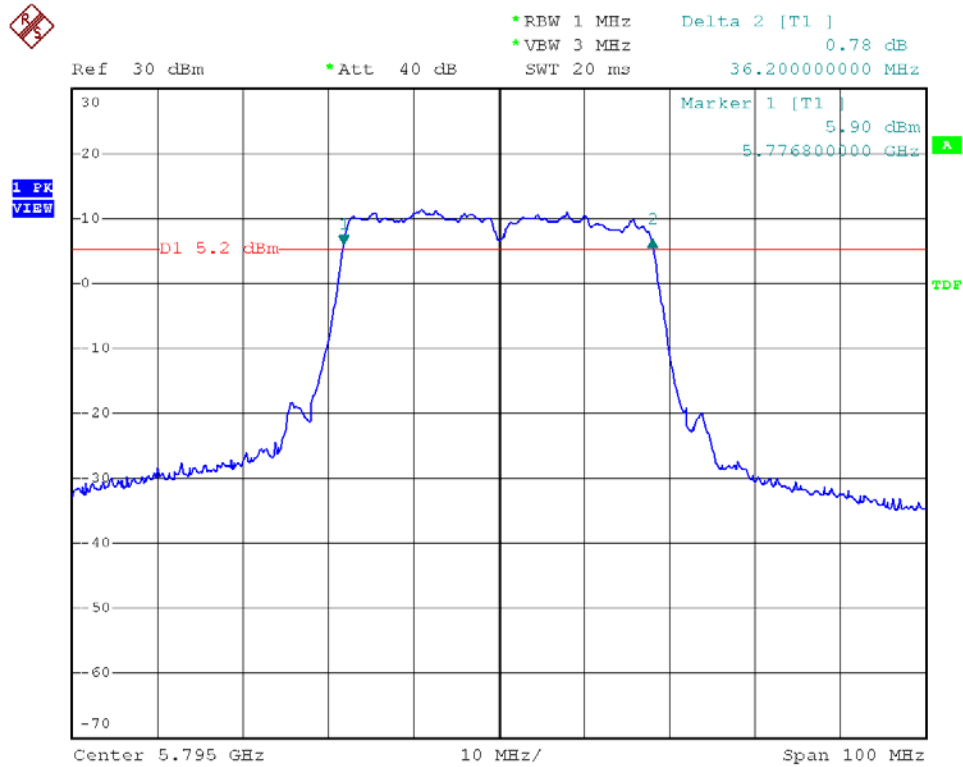


Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 155

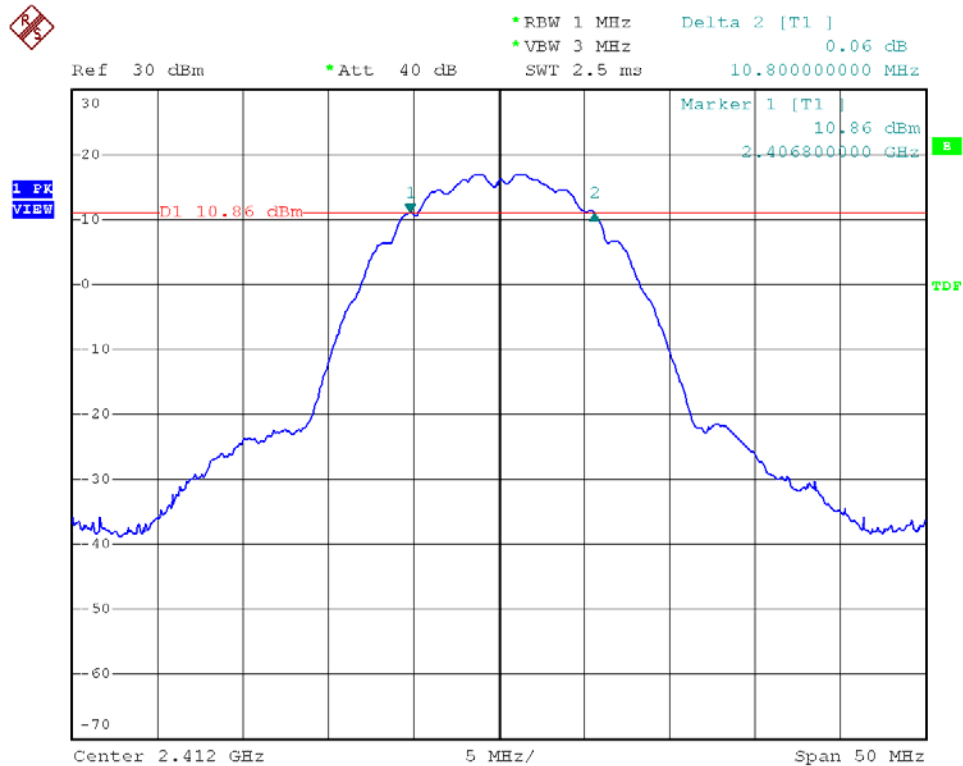




Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 159

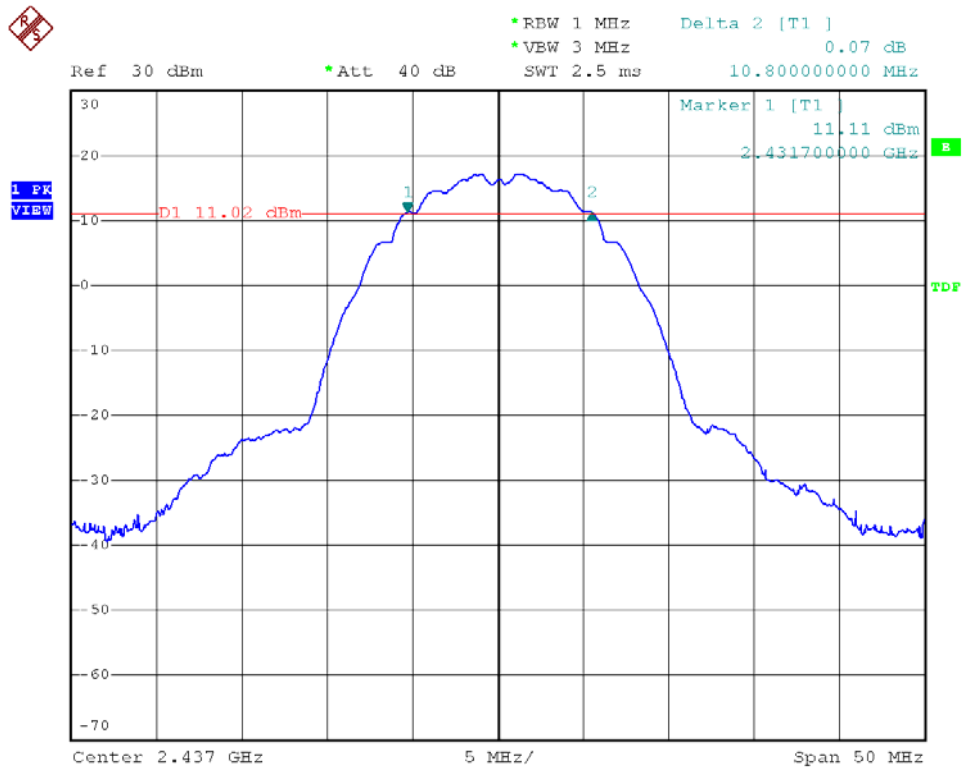


Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 01

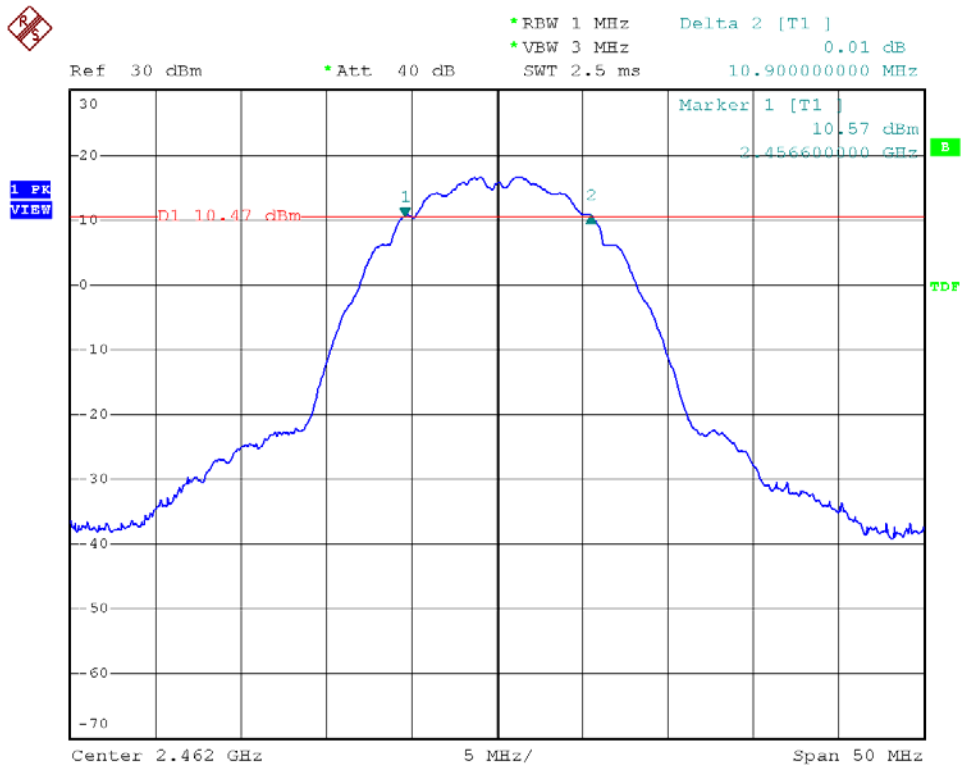




Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 06

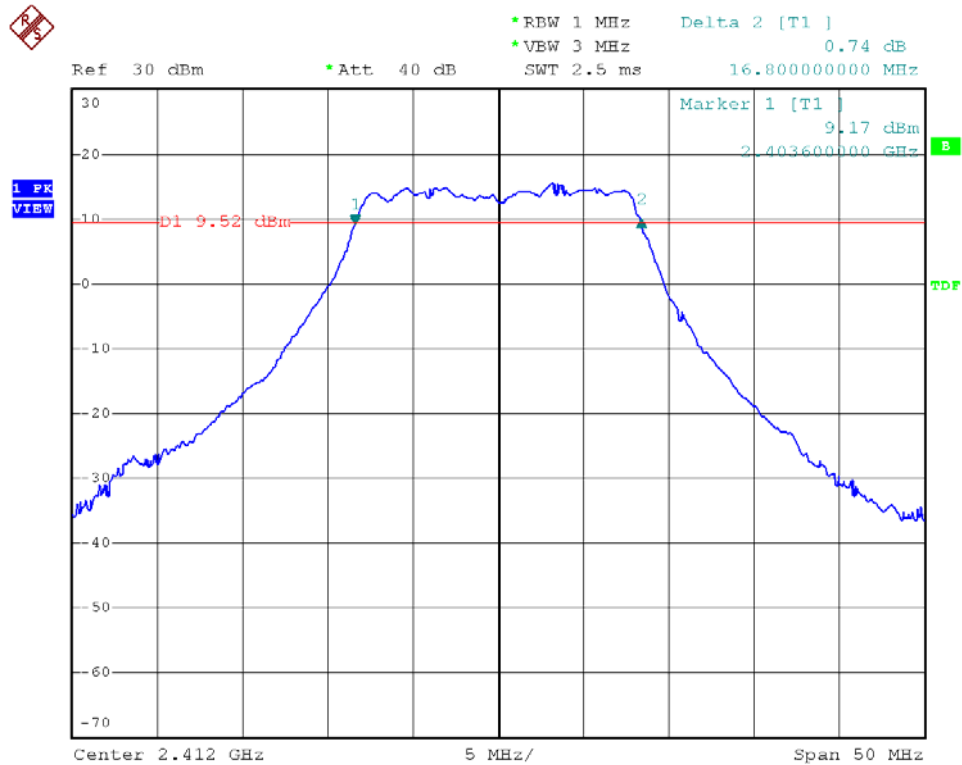


Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 11

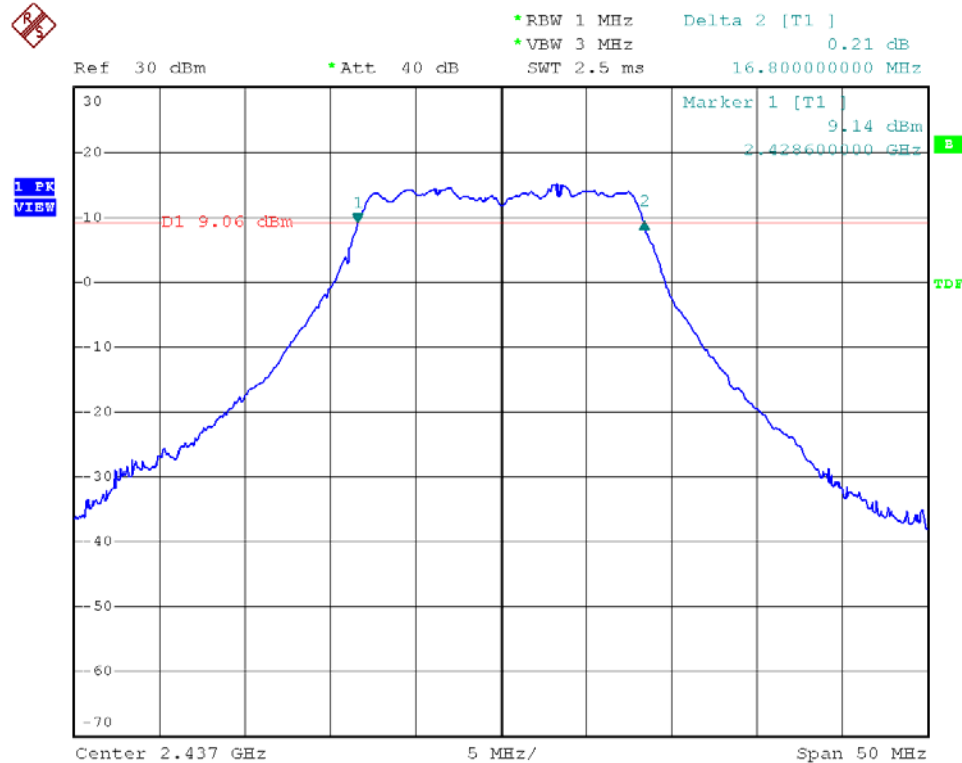




Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 01

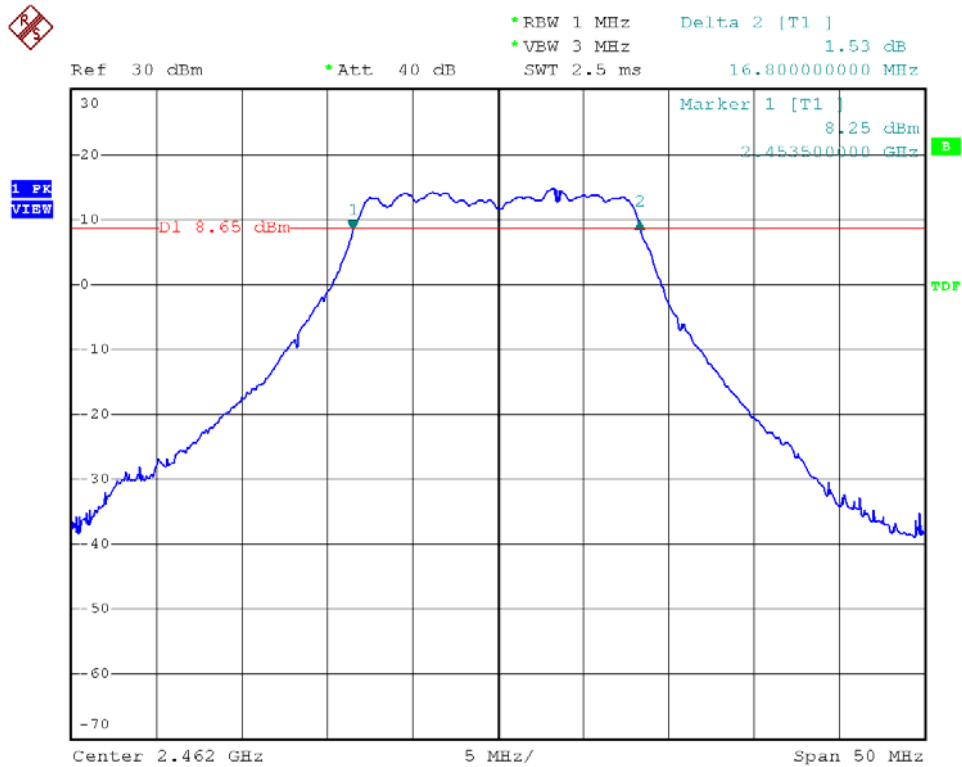


Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 06

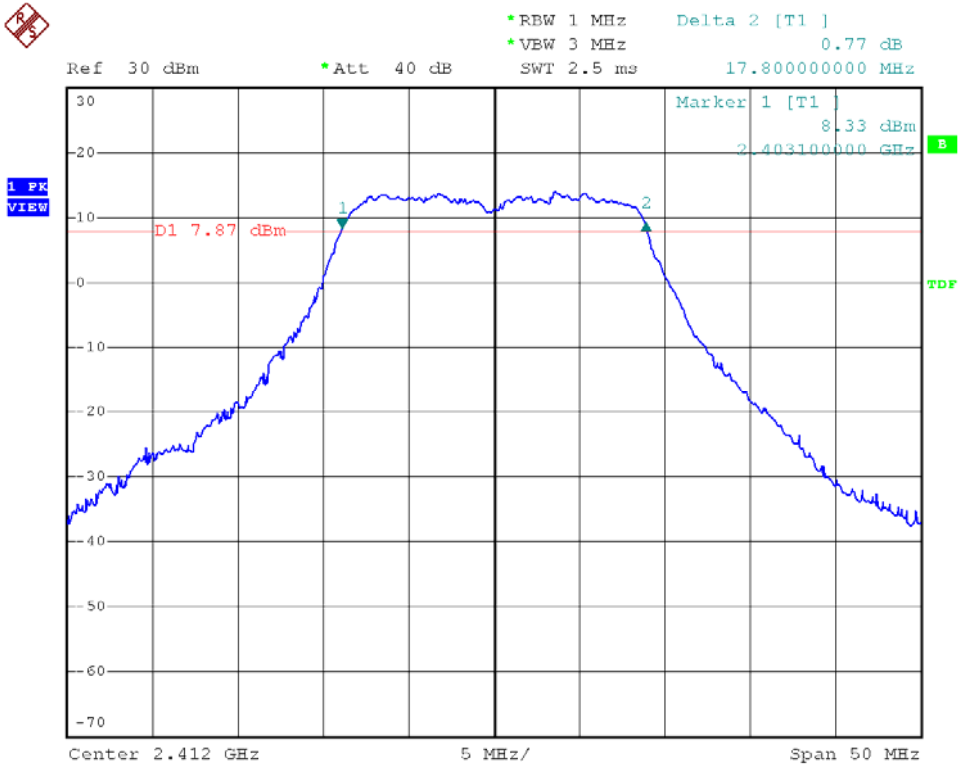




Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 11

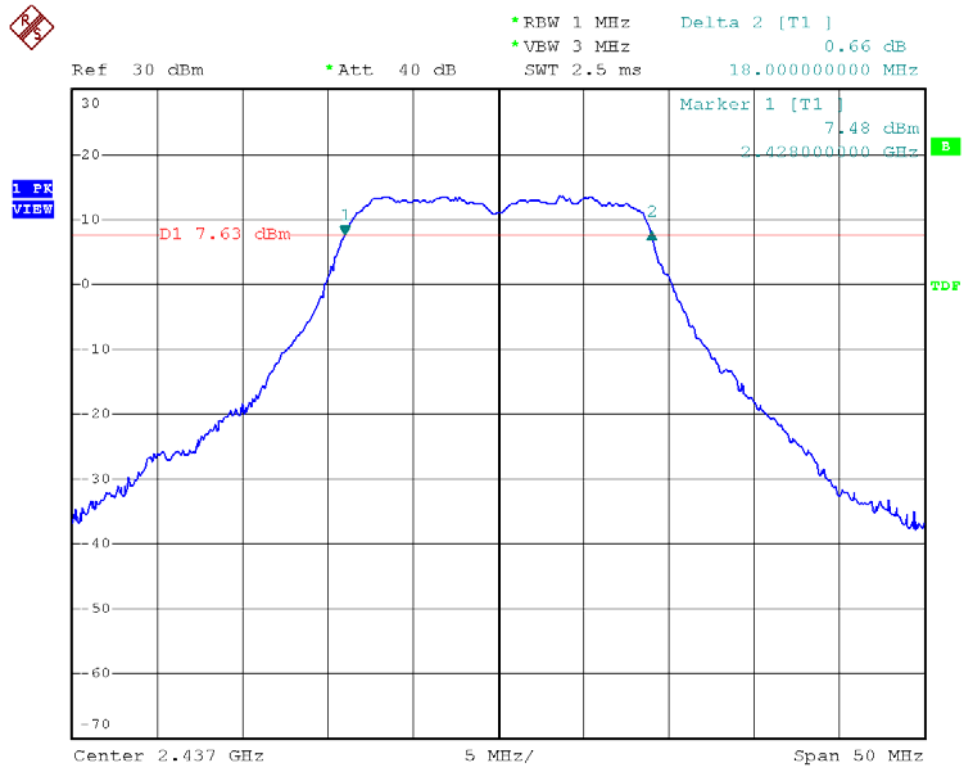


Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 01

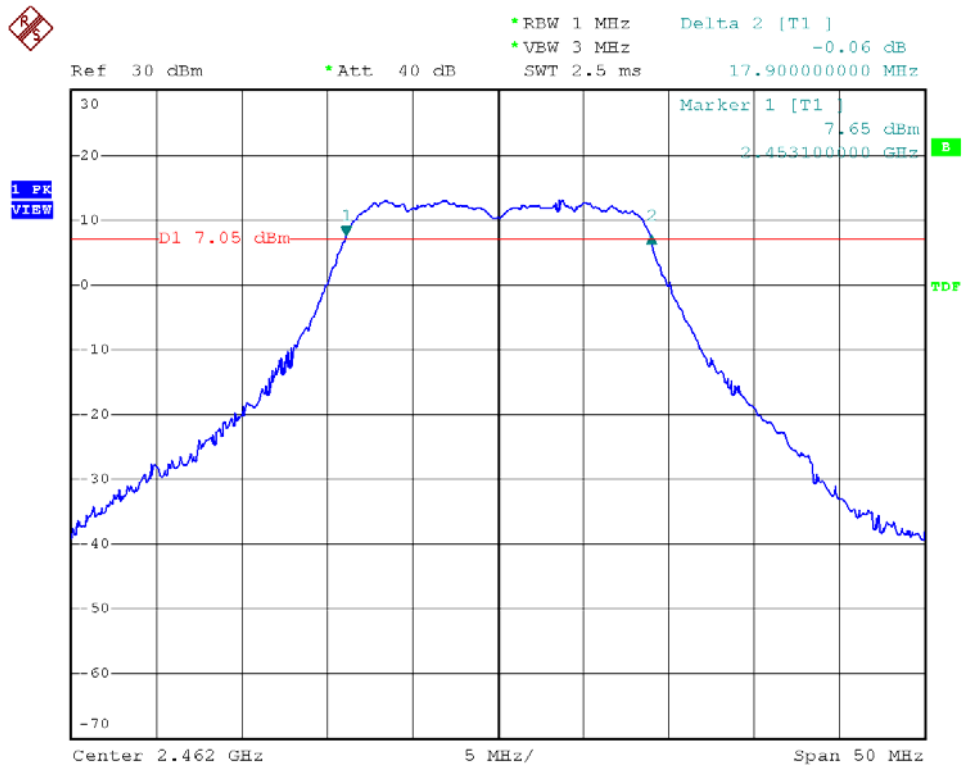




Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 06

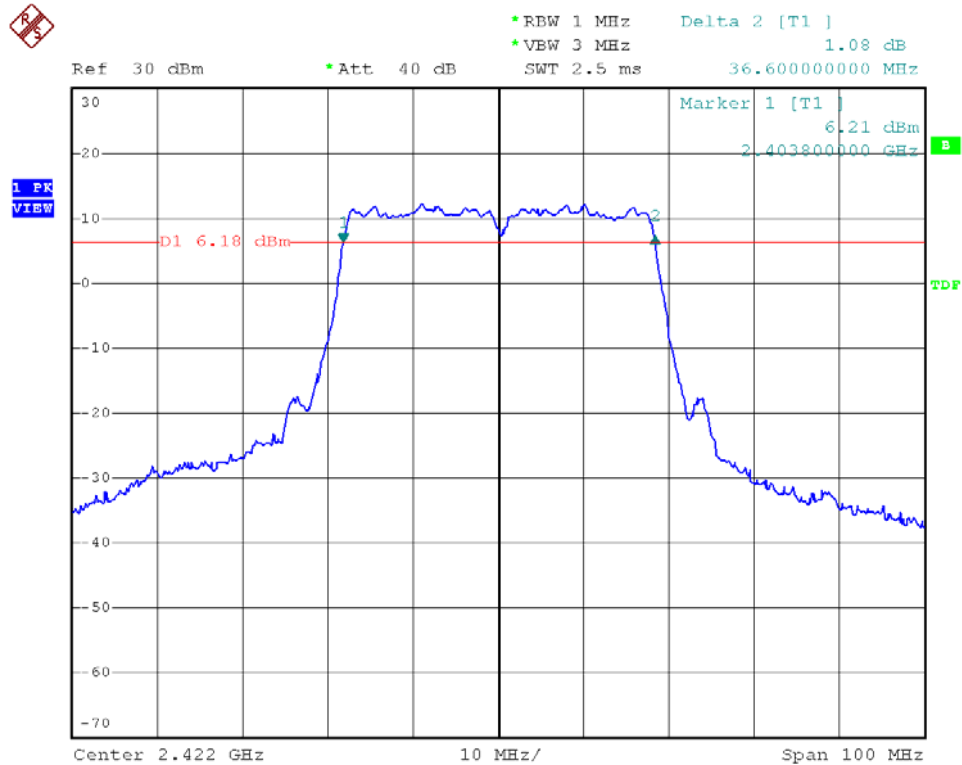


Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 11

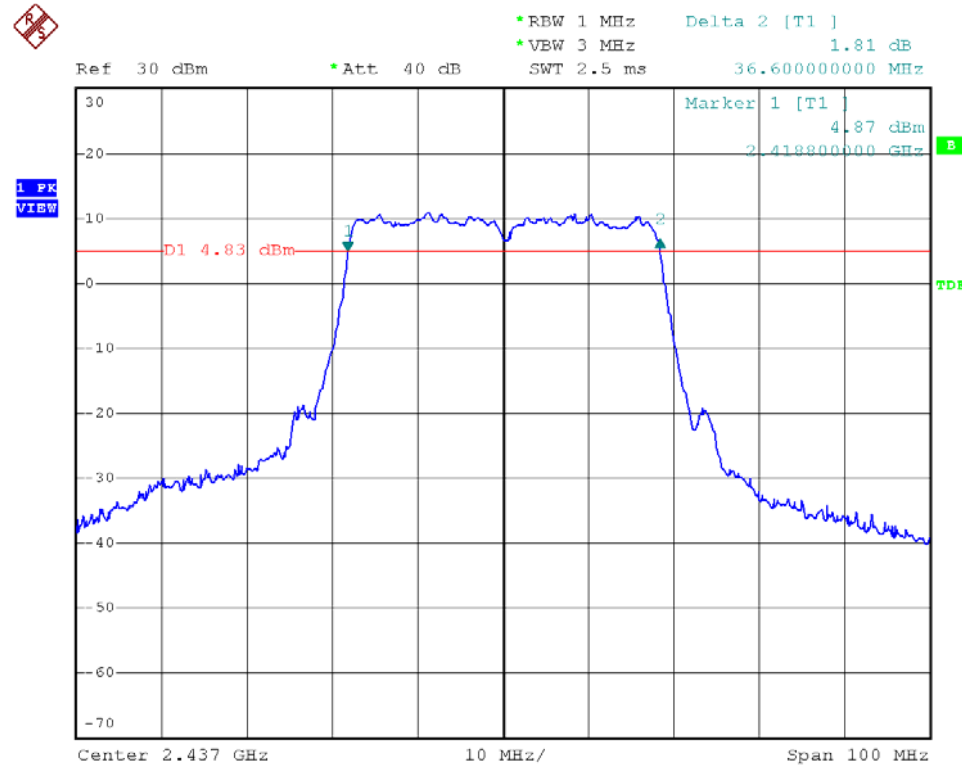




Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 03

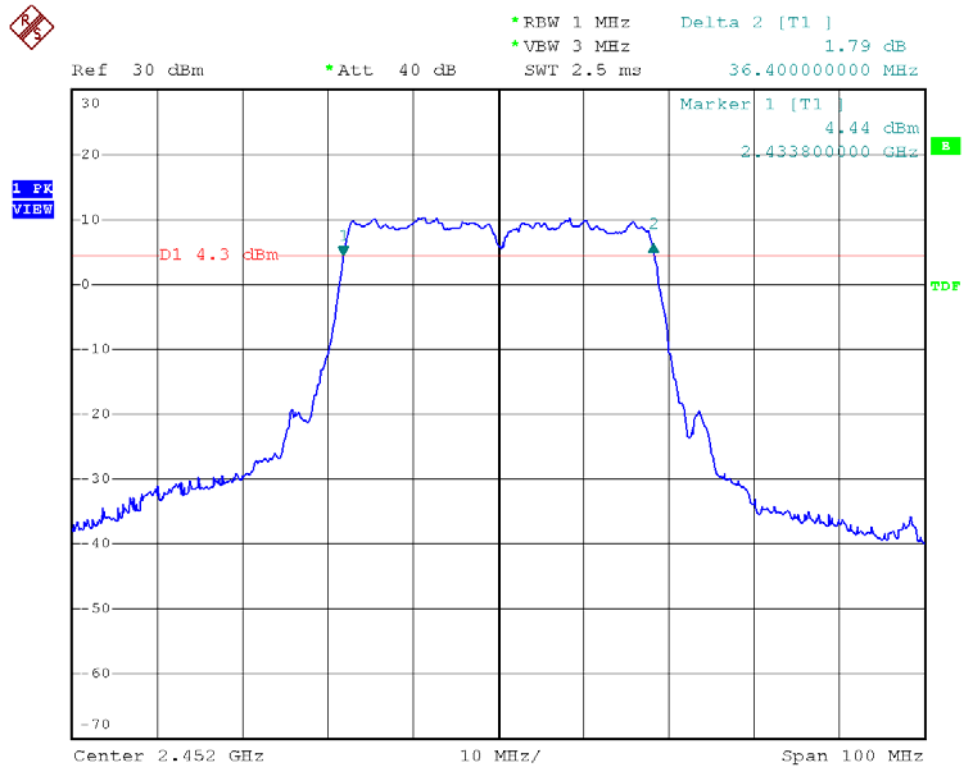


Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 06

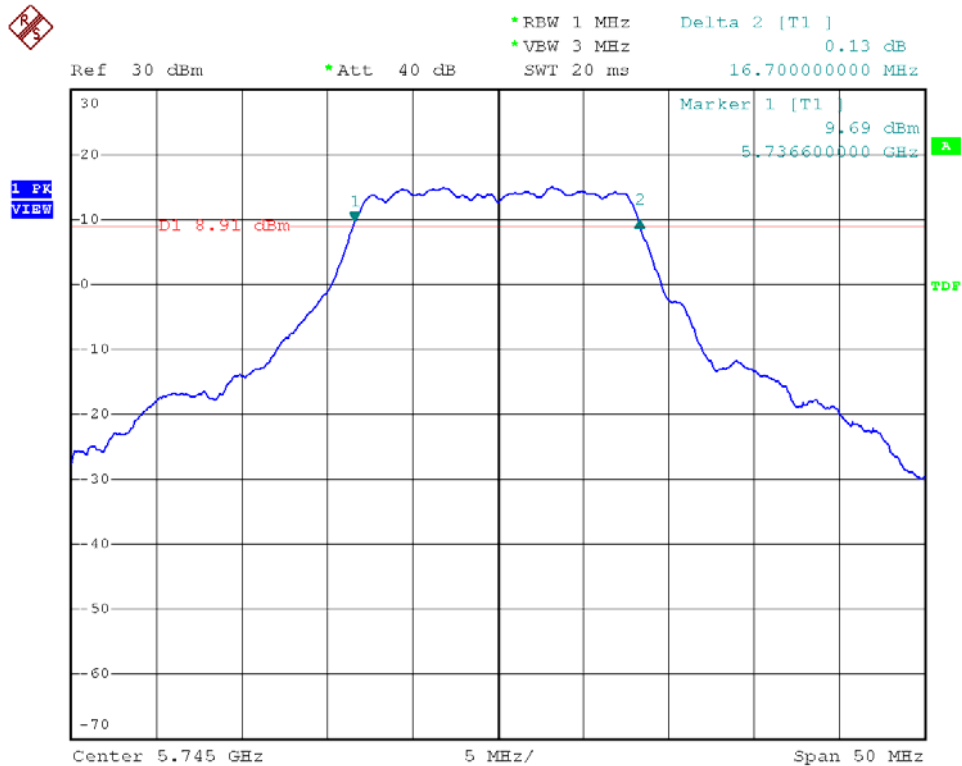




Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 09

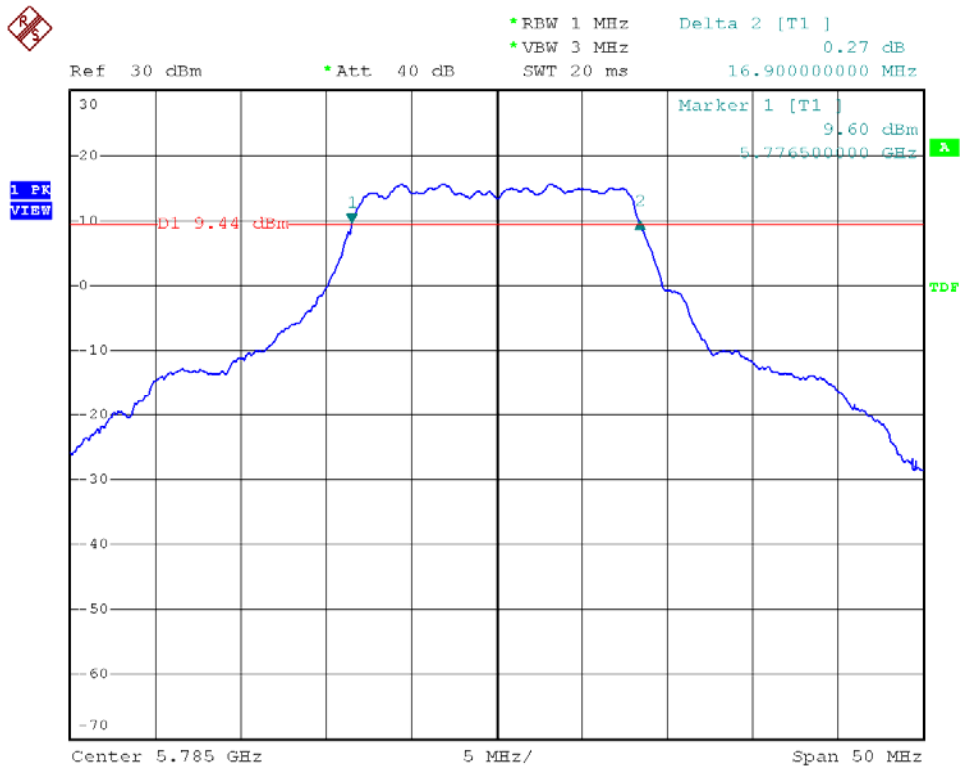


Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 149

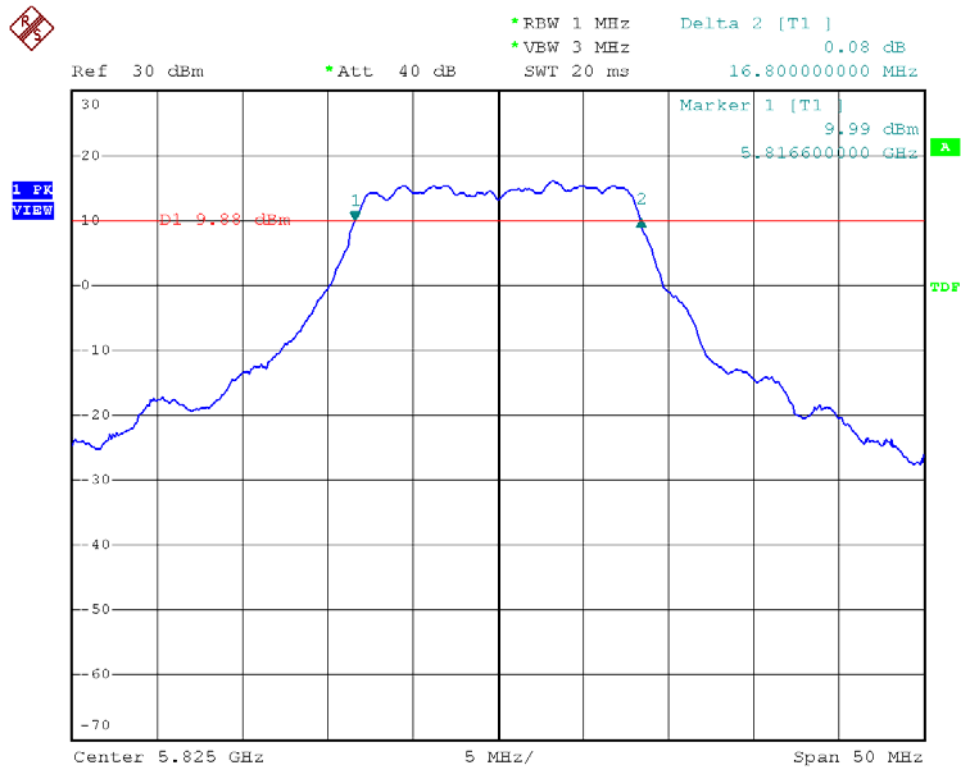




Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 157

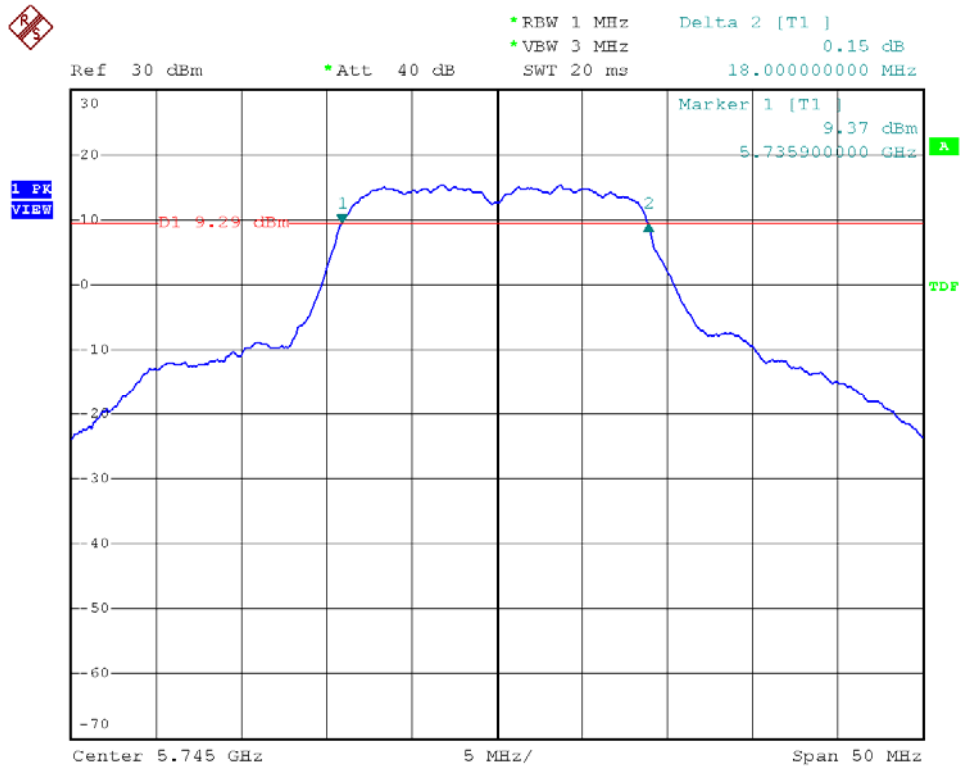


Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 165

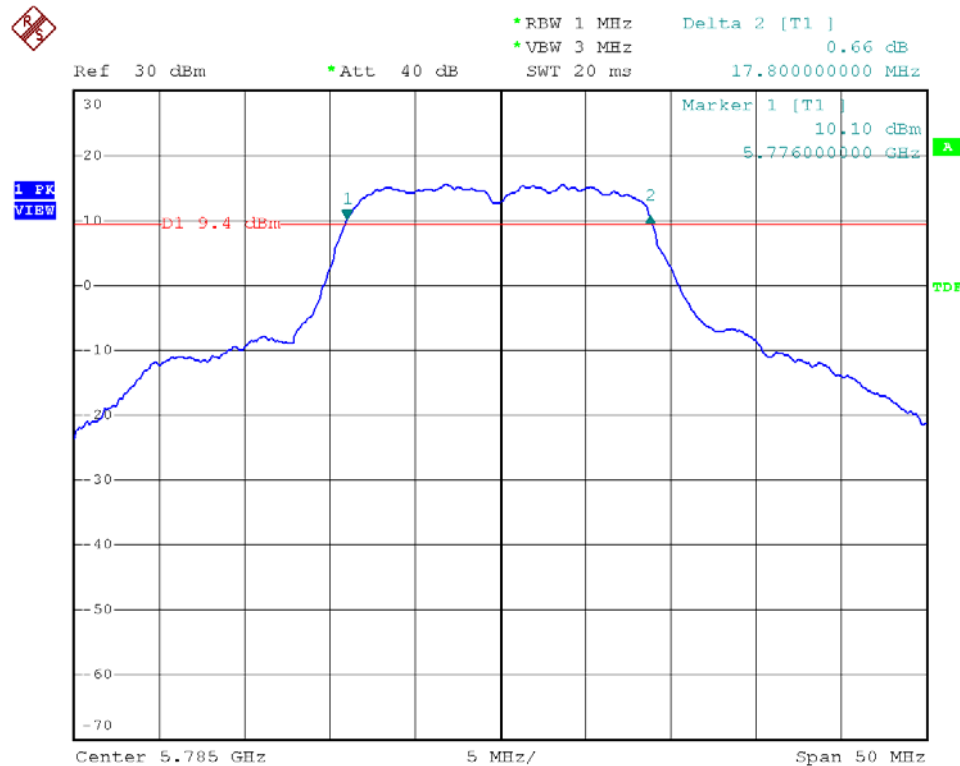




Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 149

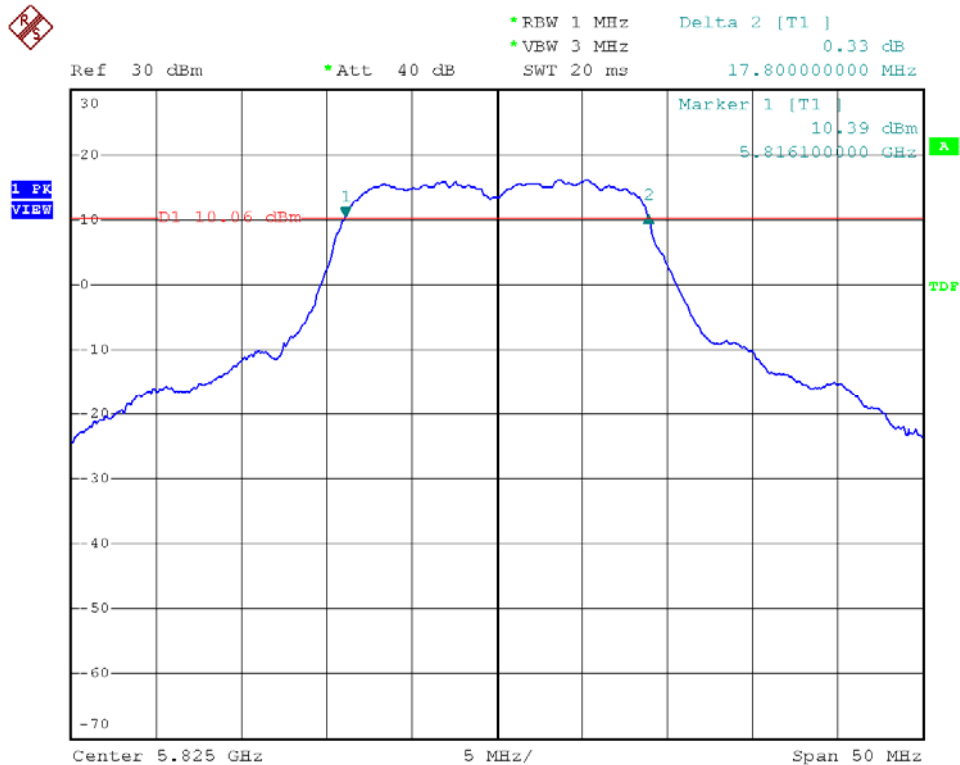


Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 157

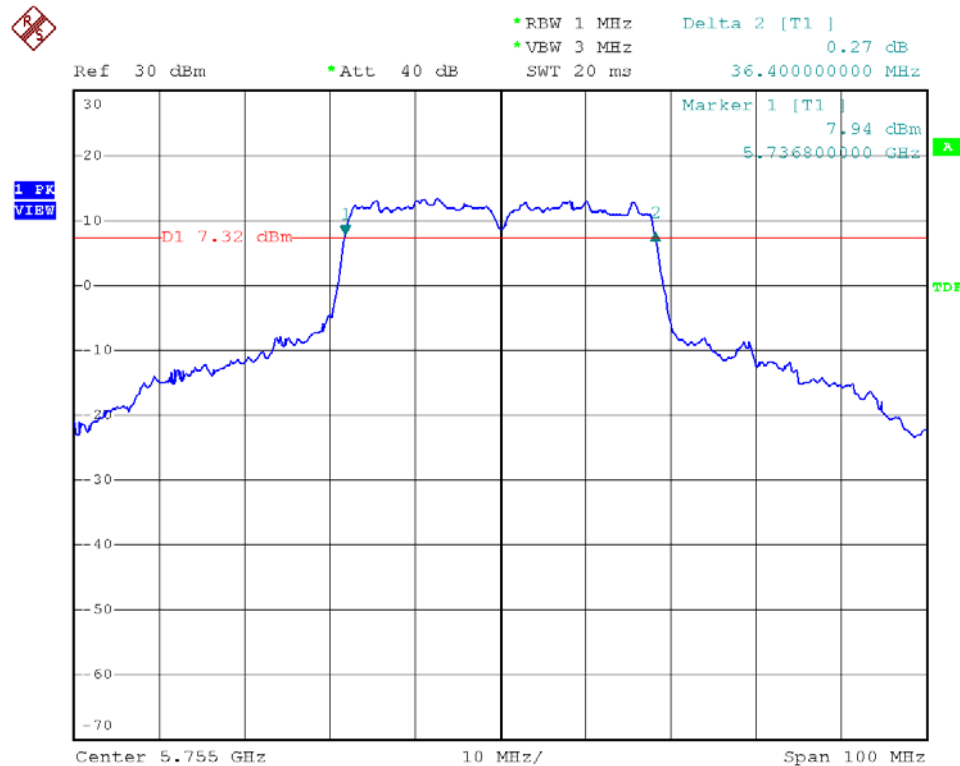




Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 165

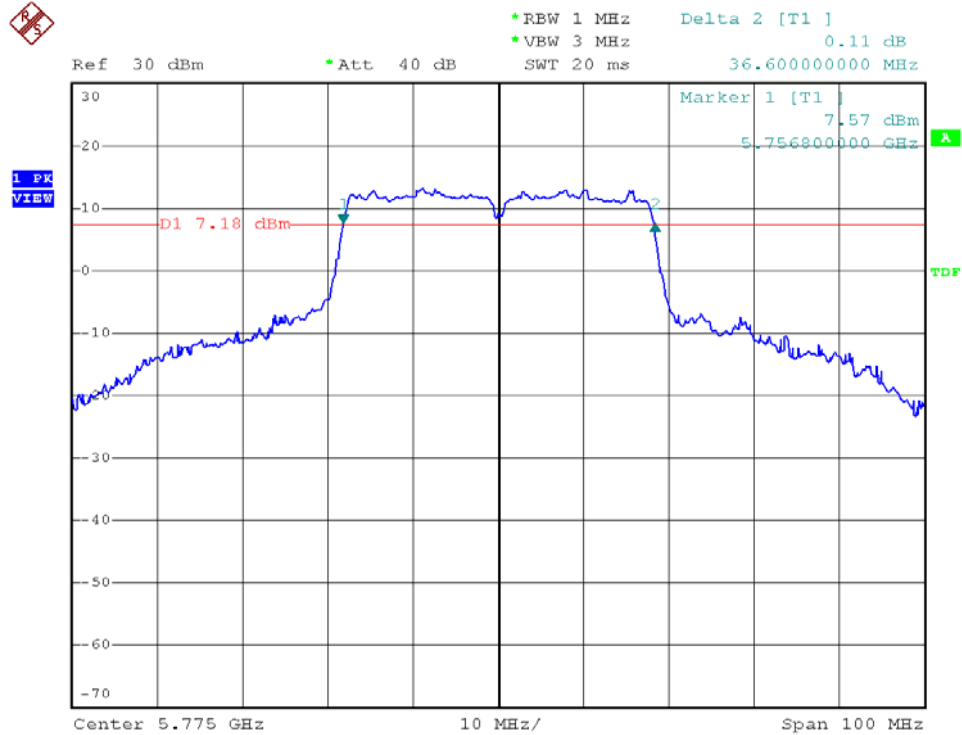


Modulation Standard: 802.11an HT40 (270Mbps), ANT L
Channel: 151

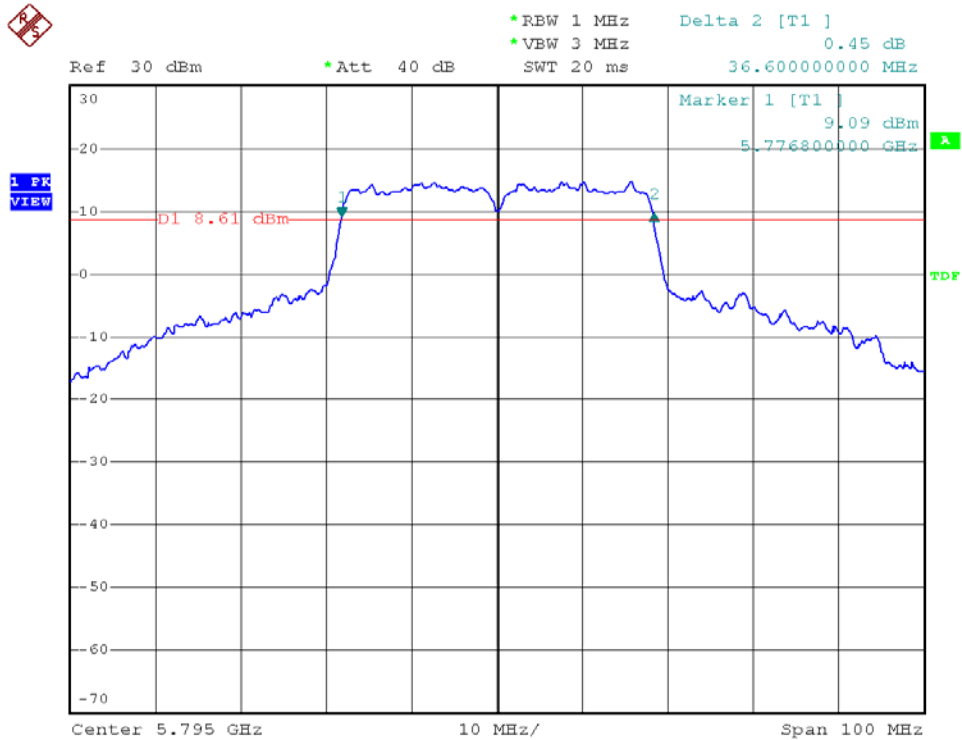




Modulation Standard: 802.11an HT40 (270Mbps), ANT L
Channel: 155



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





7. Maximum Peak and Average Output Power

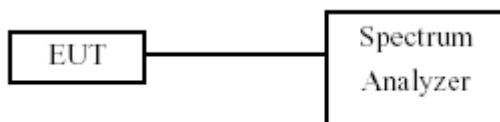
7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm (2.4GHz) and 28.99dBm (5GHz).

7.2 Test Procedures

- The transmitter output was connected to the spectrum analyzer.
- Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.
- Set detector mode to peak (for peak output power) or set detector mode to RMS (for average output power).
- Use the spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges.
- The maximum peak and average output power was measured and recorded.

7.3 Test Setup Layout



7.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23



7.5 Test Result and Data

Test Date: Jun. 07, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)		Peak Power Output (mW)	
			ANT R	ANT L	ANT R	ANT L
802.11b (11Mbps)	01	2412	20.42	20.12	110.2	102.8
	06	2437	20.40	20.49	109.6	111.9
	11	2462	19.20	19.35	83.2	86.1
802.11g (54Mbps)	01	2412	21.53	21.70	142.2	147.9
	06	2437	21.85	21.75	153.1	149.6
	11	2462	21.55	21.53	82.2	142.2

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)			Peak Power Output (mW)
			ANT R	ANT L	R+L	R+L
802.11n HT20 (130Mbps)	01	2412	20.45	22.84	24.82	303.43
	06	2437	21.72	21.82	24.78	300.65
	11	2462	21.69	21.53	24.62	289.80
802.11n HT40 (270Mbps)	03	2422	18.15	20.42	22.44	175.47
	06	2437	21.54	21.71	24.64	290.81
	09	2452	21.76	21.86	24.82	303.43

Test Date: Jun. 15, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)		Peak Power Output (mW)	
			ANT R	ANT L	ANT R	ANT L
802.11a (54Mbps)	149	5745	23.43	23.58	220.3	228.0
	157	5785	23.87	23.89	243.8	244.9
	165	5825	23.32	23.74	214.8	236.6

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)			Peak Power Output (mW)
			ANT R	ANT L	R+L	R+L
802.11an HT20 (130Mbps)	149	5745	23.53	23.61	26.58	455.04
	157	5785	23.70	23.82	26.77	475.41
	165	5825	23.25	23.78	26.53	450.13
802.11an HT40 (270Mbps)	151	5755	23.29	23.36	26.34	430.07
	155	5775	23.65	23.71	26.69	466.70
	159	5795	23.32	23.50	26.42	438.66



Test Date: Jun. 07, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Average Power Output (dBm)		Average Power Output (mW)	
			ANT R	ANT L	ANT R	ANT L
802.11b (11Mbps)	01	2412	16.22	16.23	41.9	42.0
	06	2437	16.55	15.83	45.2	38.3
	11	2462	15.43	15.27	34.9	33.7
802.11g (54Mbps)	01	2412	15.38	13.80	34.5	24.0
	06	2437	15.80	14.13	38.0	25.9
	11	2462	15.77	14.08	37.8	25.6

Modulation Standard	Channel	Frequency (MHz)	Average Power Output (dBm)			Average Power Output (mW)
			ANT R	ANT L	R+L	R+L
802.11n HT20 (130Mbps)	01	2412	13.19	16.21	17.97	62.63
	06	2437	15.46	15.50	18.49	70.64
	11	2462	15.62	16.07	18.86	76.93
802.11n HT40 (270Mbps)	03	2422	11.55	12.07	14.83	30.40
	06	2437	14.88	15.12	18.01	63.27
	09	2452	15.38	15.71	18.56	71.75

Test Date: Jun. 15, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

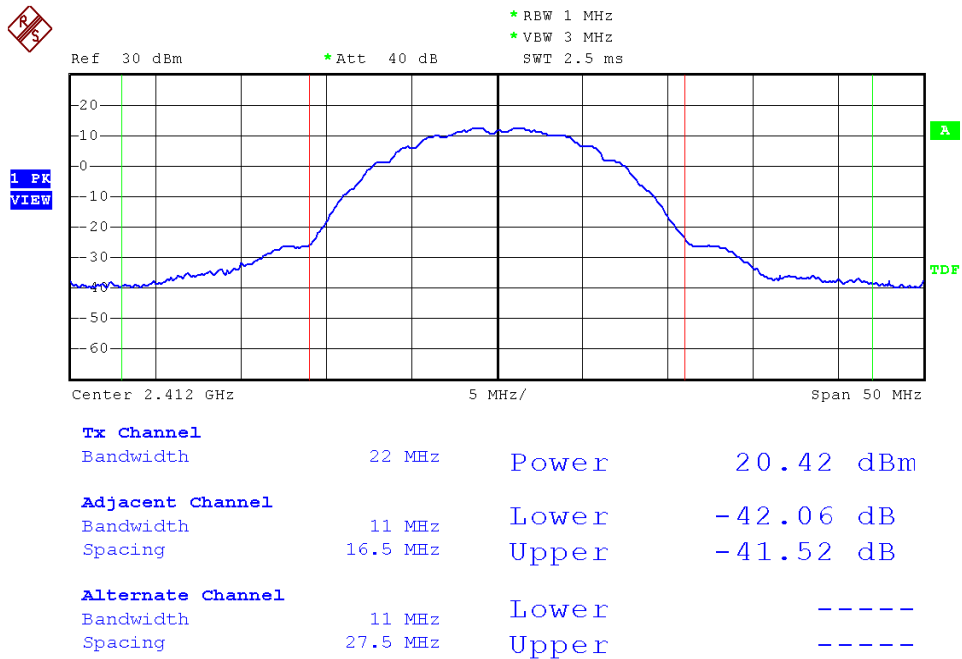
Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm)		Peak Power Output (mW)	
			ANT R	ANT L	ANT R	ANT L
802.11a (54Mbps)	149	5745	16.39	14.60	43.6	28.8
	157	5785	17.91	15.35	61.8	34.3
	165	5825	16.95	14.96	49.5	31.3

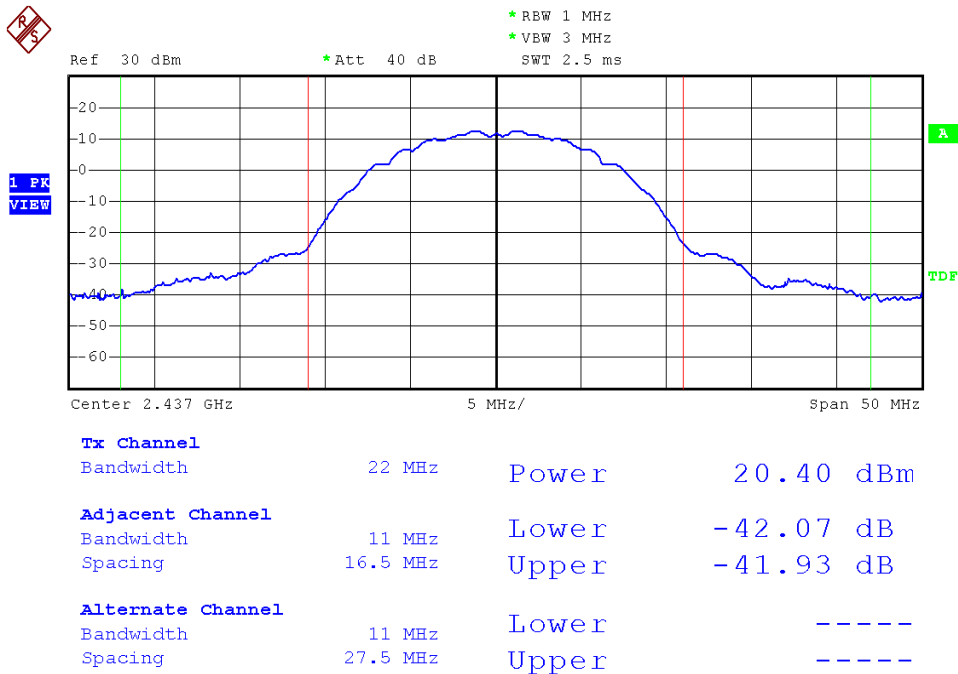
Modulation Standard	Channel	Frequency (MHz)	Average Power Output (dBm)			Average Power Output (mW)
			ANT R	ANT L	R+L	R+L
802.11an HT20 (130Mbps)	149	5745	16.94	15.26	19.19	83.00
	157	5785	17.27	15.82	19.62	91.53
	165	5825	16.64	15.70	19.21	83.29
802.11an HT40 (270Mbps)	151	5755	17.06	15.41	19.32	85.57
	155	5775	18.00	15.52	19.94	98.74
	159	5795	17.40	15.74	19.66	92.45



Modulation Standard: 802.11b (11Mbps), ANT R, Peak Power Output
Channel: 01

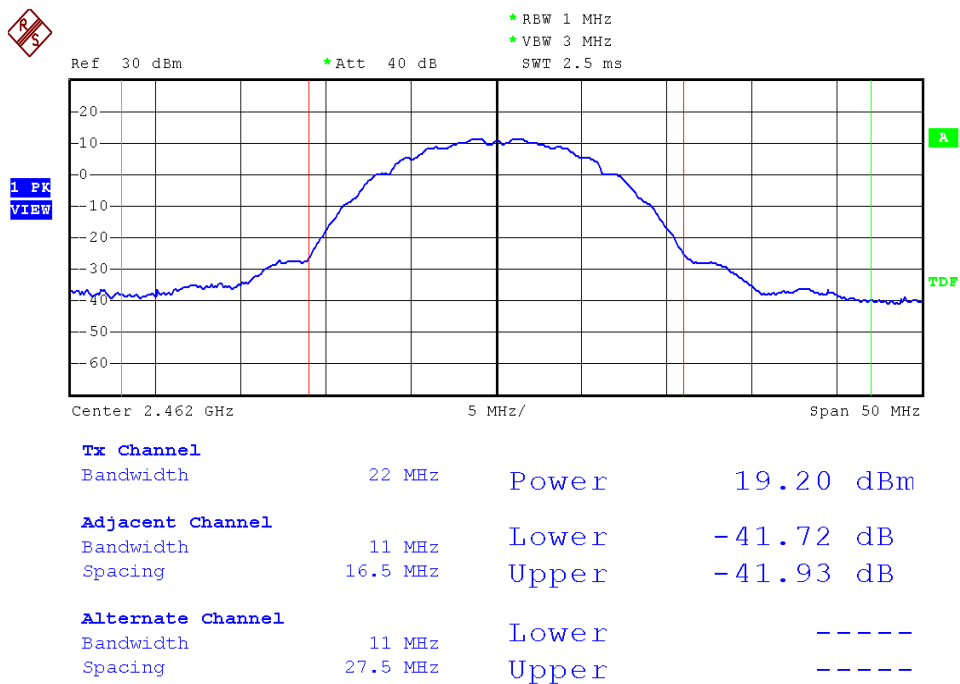


Modulation Standard: 802.11b (11Mbps), ANT R, Peak Power Output
Channel: 06

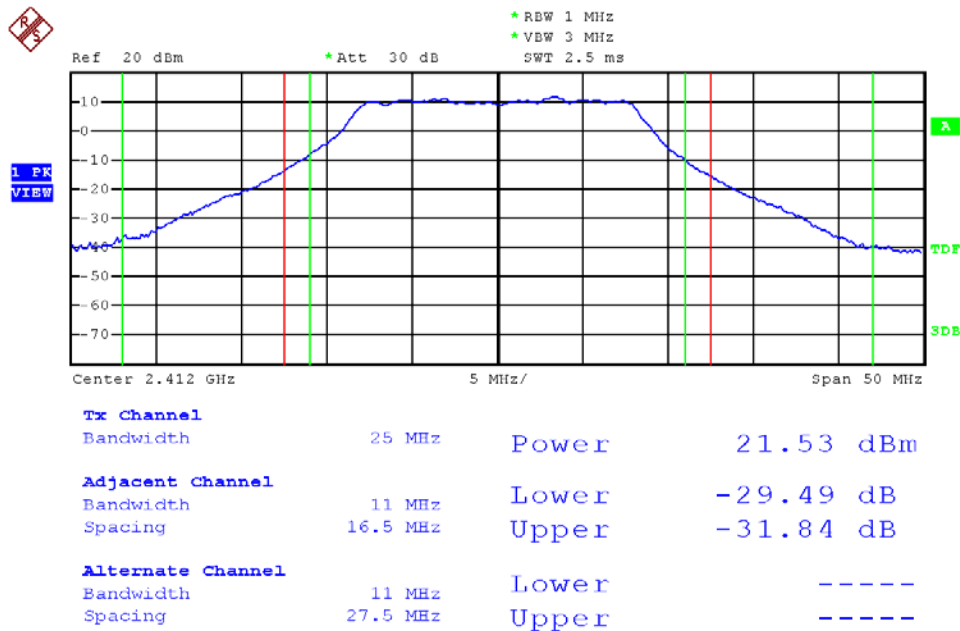




Modulation Standard: 802.11b (11Mbps), ANT R, Peak Power Output
Channel: 11

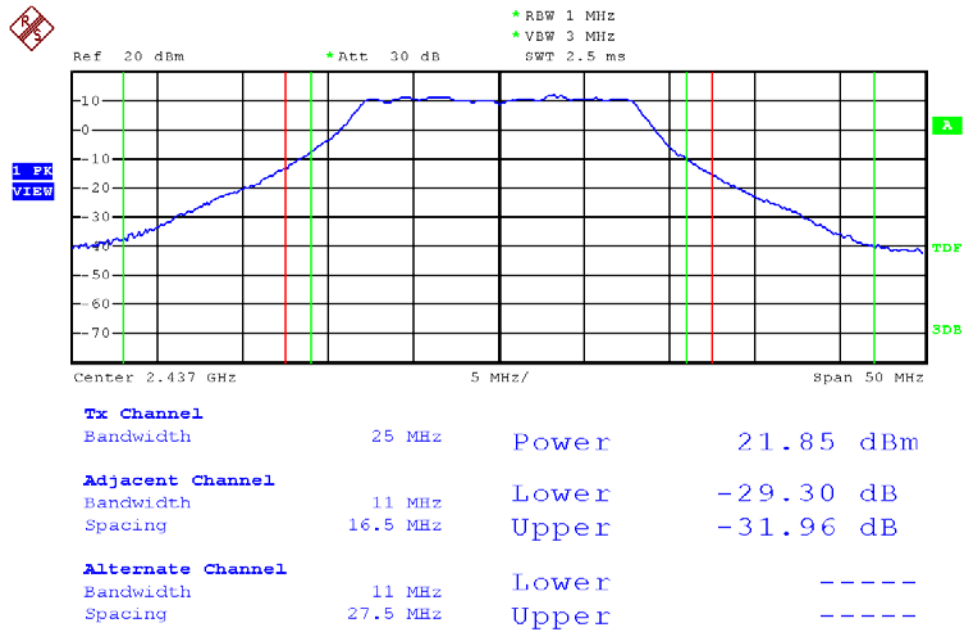


Modulation Standard: 802.11g (54Mbps), ANT R, Peak Power Output
Channel: 01

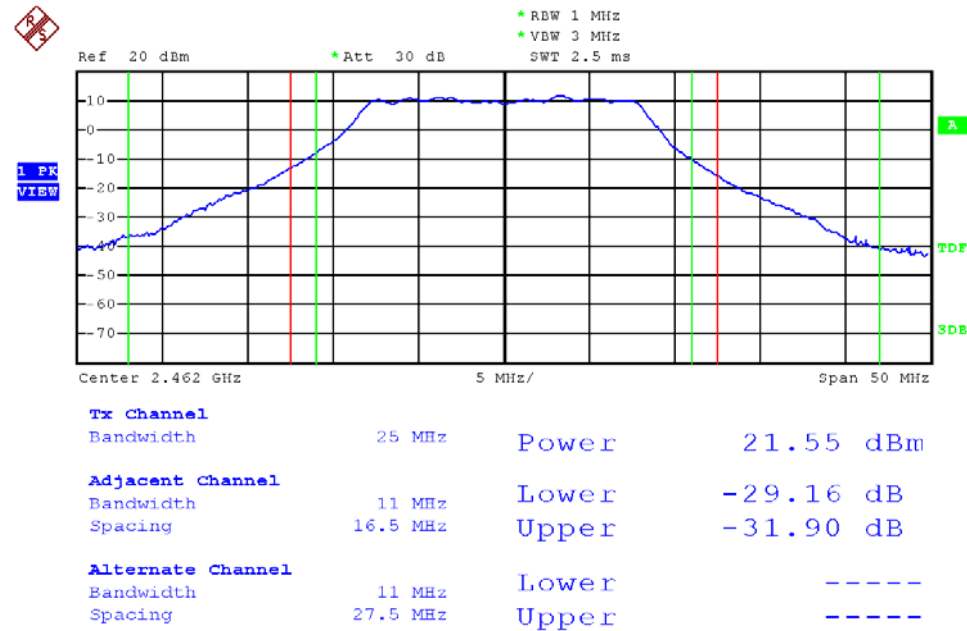




Modulation Standard: 802.11g (54Mbps), ANT R, Peak Power Output
Channel: 06

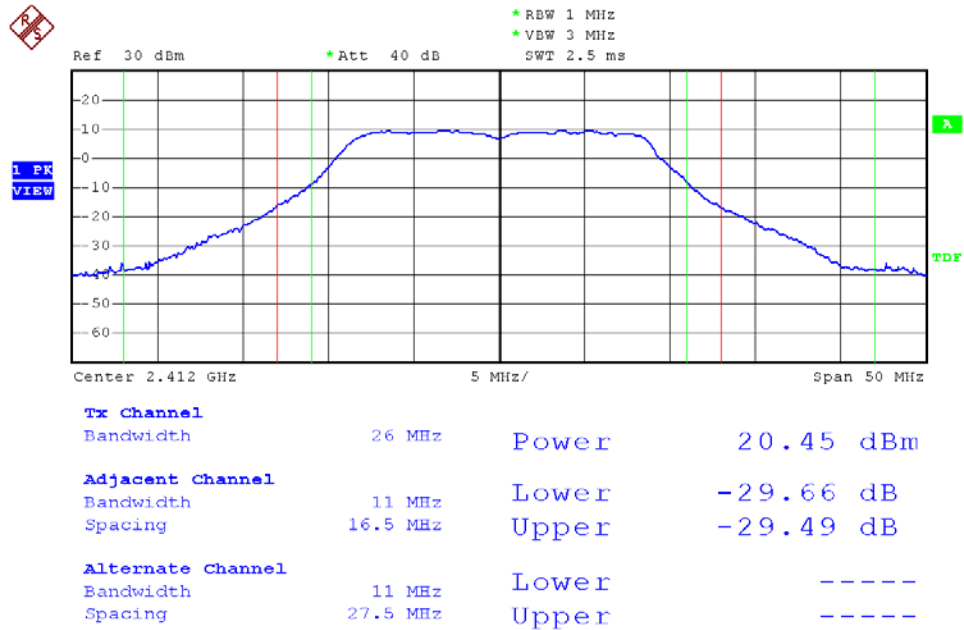


Modulation Standard: 802.11g (54Mbps), ANT R, Peak Power Output
Channel: 11

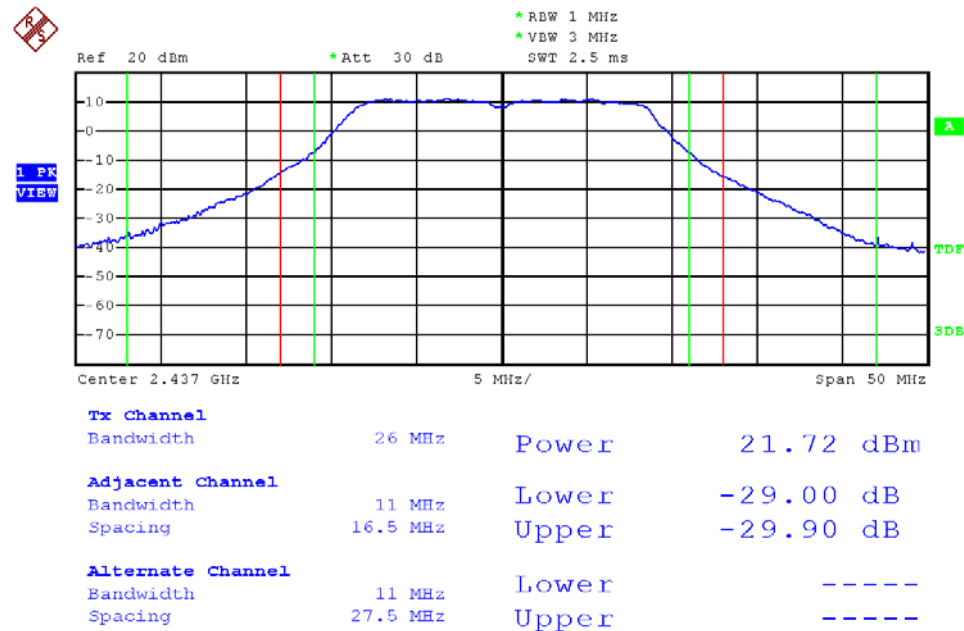




Modulation Standard: 802.11n HT20 (130Mbps), ANT R, Peak Power Output
Channel: 01

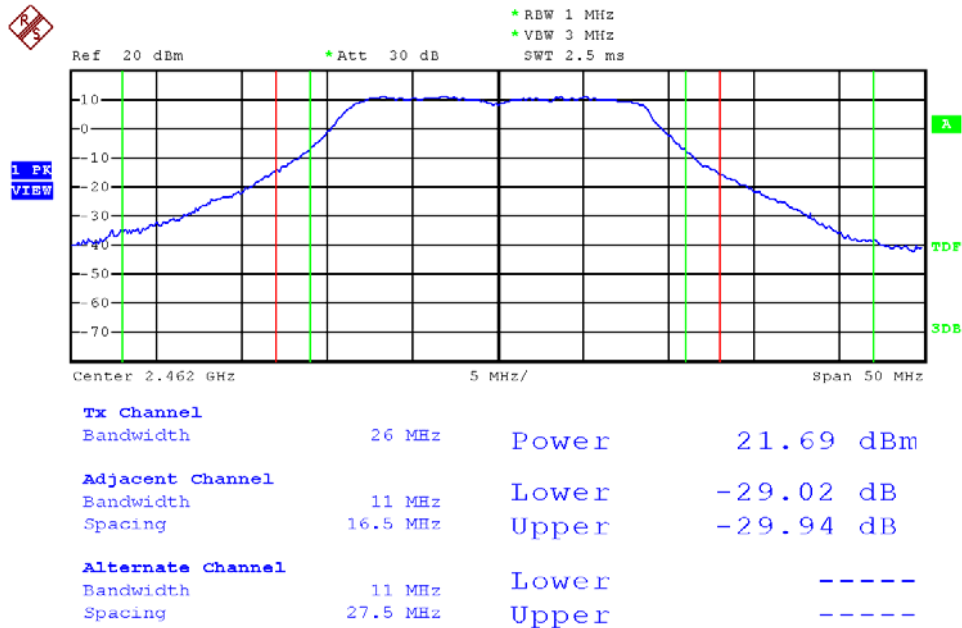


Modulation Standard: 802.11n HT20 (130Mbps), ANT R, Peak Power Output
Channel: 06

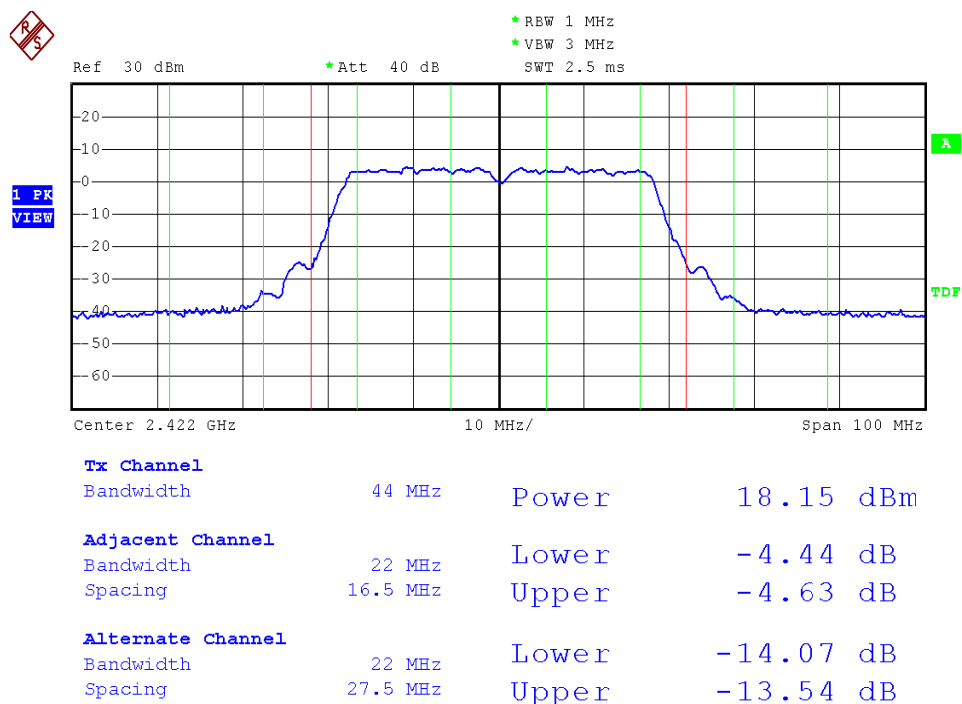




Modulation Standard: 802.11n HT20 (130Mbps), ANT R, Peak Power Output
Channel: 11

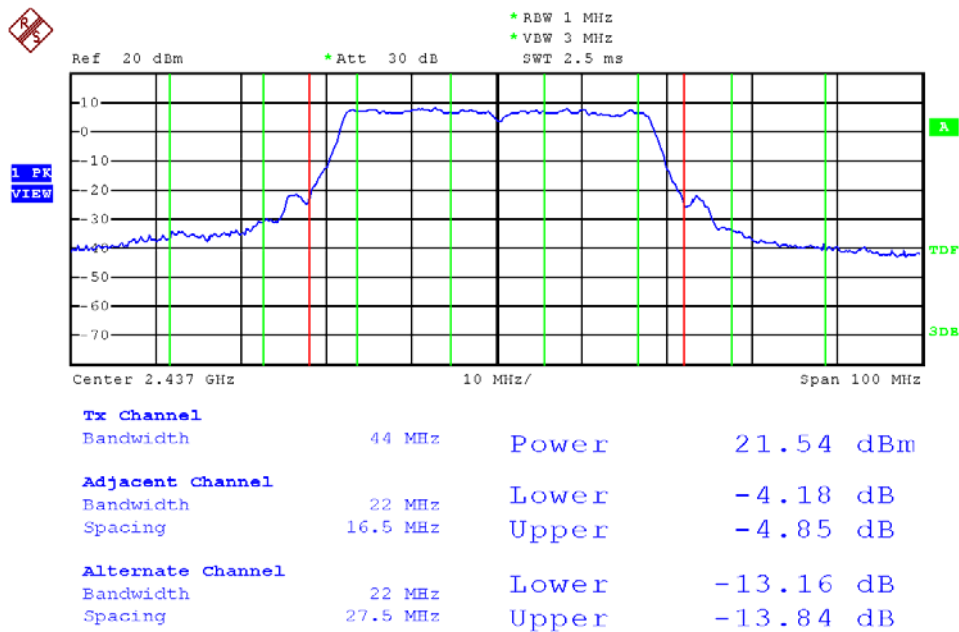


Modulation Standard: 802.11n HT40 (270Mbps), ANT R, Peak Power Output
Channel: 03

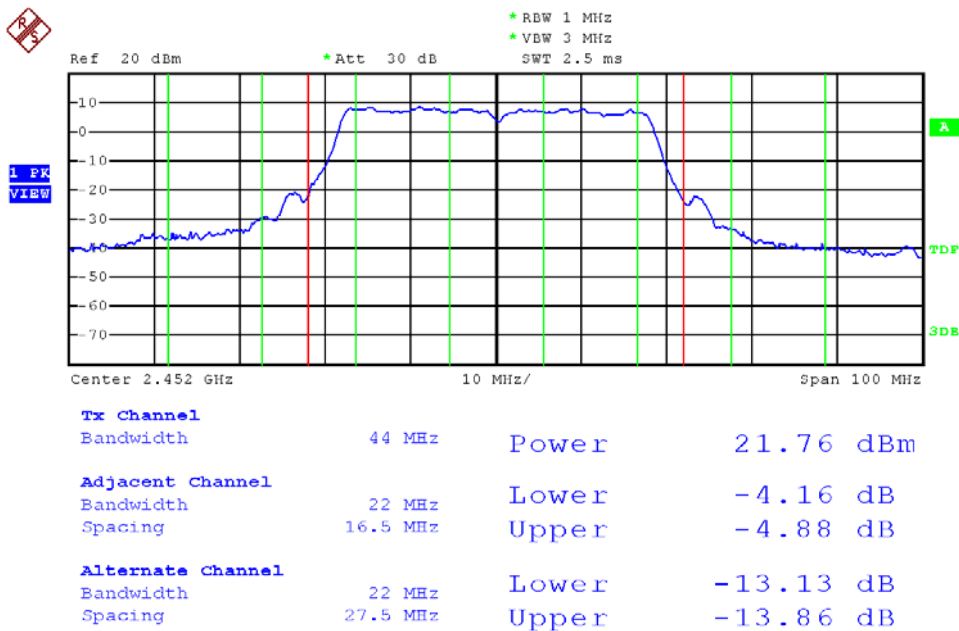




Modulation Standard: 802.11n HT40 (270Mbps), ANT R, Peak Power Output
Channel: 06

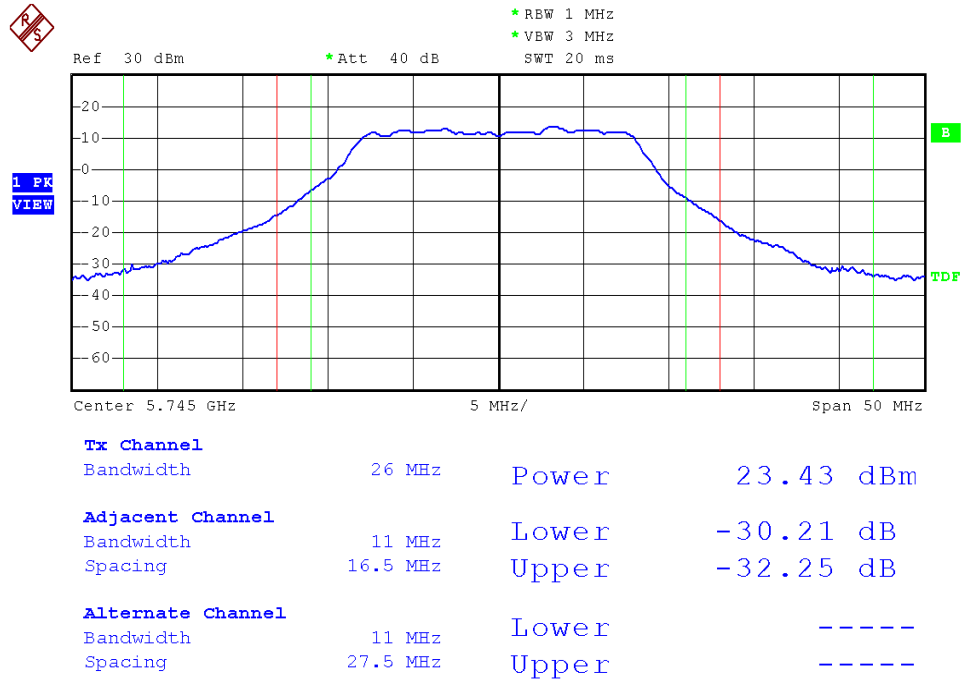


Modulation Standard: 802.11n HT40 (270Mbps), ANT R, Peak Power Output
Channel: 09

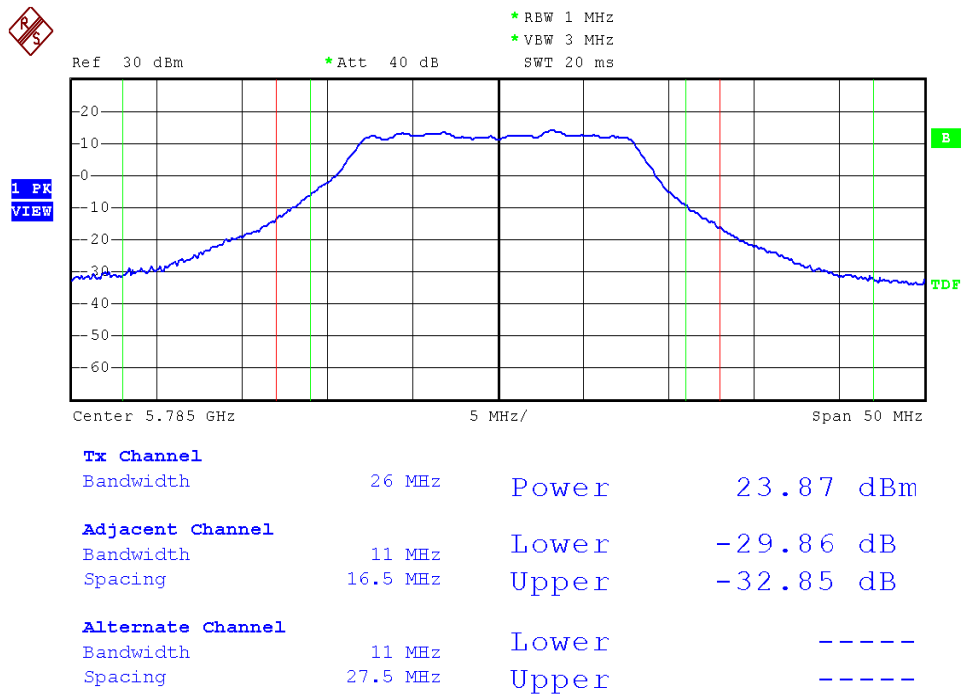




Modulation Standard: 802.11a (54Mbps), ANT R, Peak Power Output
Channel: 149

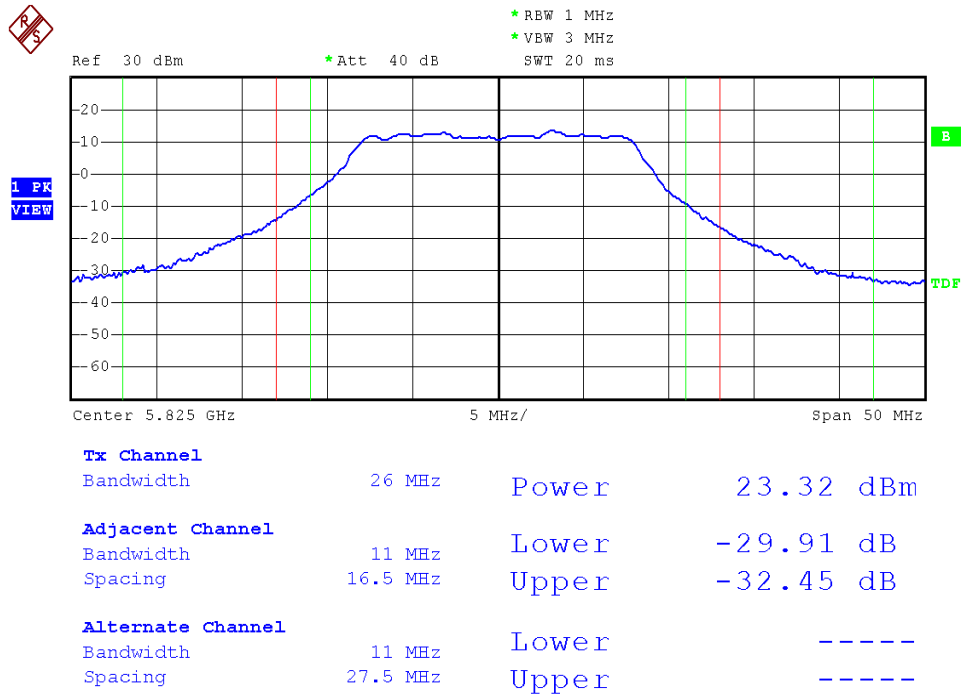


Modulation Standard: 802.11a (54Mbps), ANT R, Peak Power Output
Channel: 157

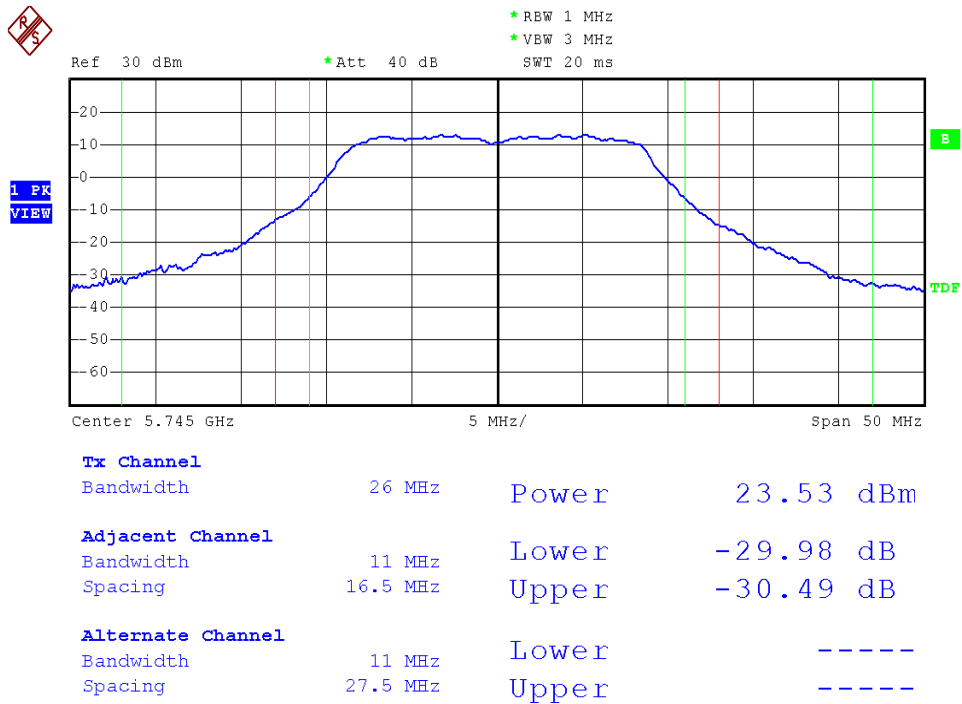




Modulation Standard: 802.11a (54Mbps), ANT R, Peak Power Output
Channel: 165

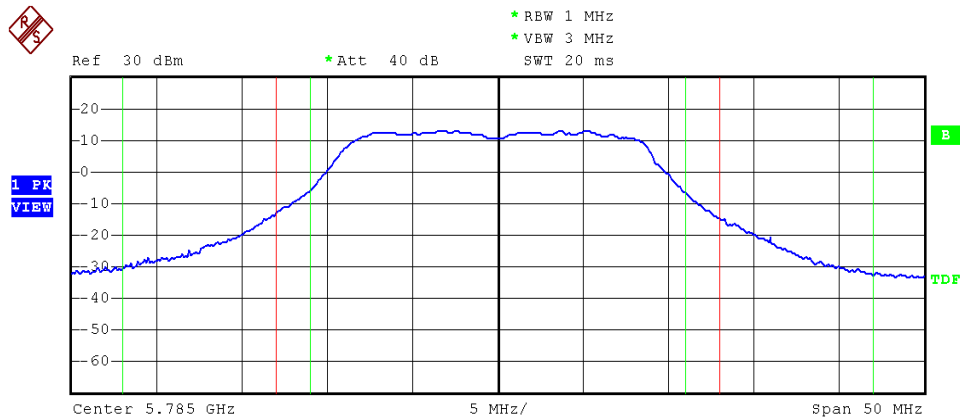


Modulation Standard: 802.11an HT20 (130Mbps), ANT R, Peak Power Output
Channel: 149



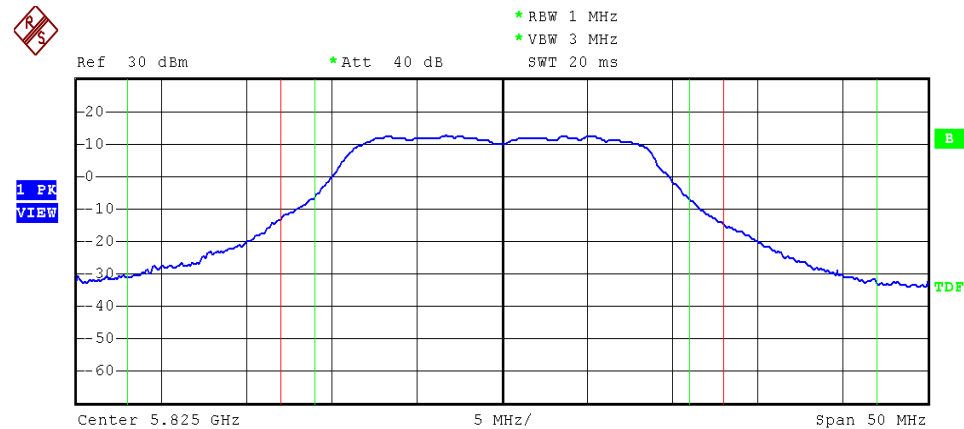


Modulation Standard: 802.11an HT20 (130Mbps), ANT R, Peak Power Output
Channel: 157



Tx Channel			
Bandwidth	26 MHz	Power	23.70 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-29.49 dB
Spacing	16.5 MHz	Upper	-30.77 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----

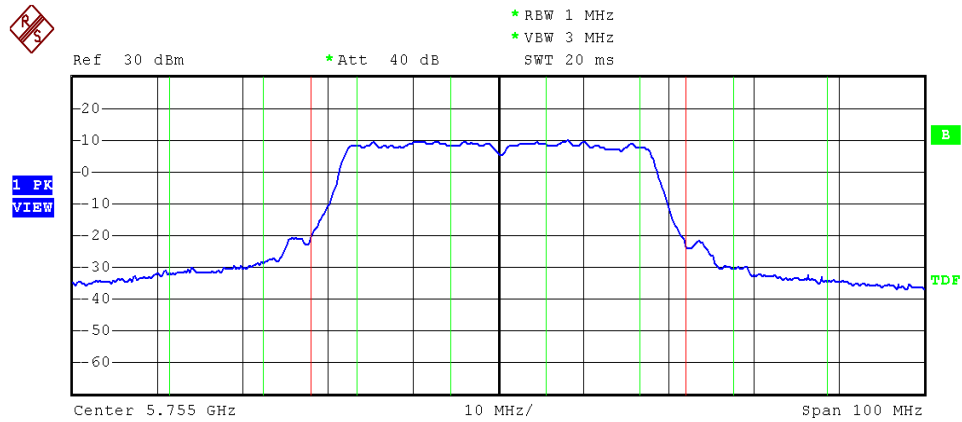
Modulation Standard: 802.11an HT20 (130Mbps), ANT R, Peak Power Output
Channel: 165



Tx Channel			
Bandwidth	26 MHz	Power	23.25 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-29.33 dB
Spacing	16.5 MHz	Upper	-30.53 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----

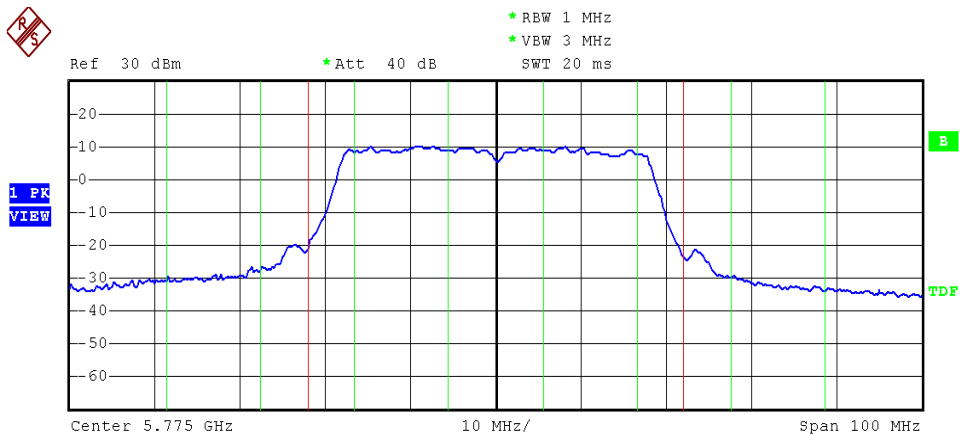


Modulation Standard: 802.11an HT40 (270Mbps), ANT R, Peak Power Output
Channel: 151



Tx Channel			
Bandwidth	44 MHz	Power	23.29 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.42 dB
Spacing	16.5 MHz	Upper	-4.82 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.88 dB
Spacing	27.5 MHz	Upper	-14.31 dB

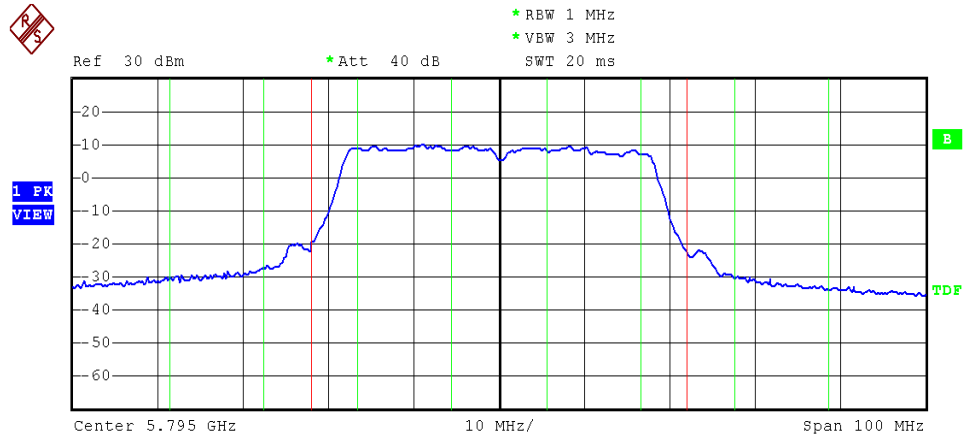
Modulation Standard: 802.11an HT40 (270Mbps), ANT R, Peak Power Output
Channel: 155



Tx Channel			
Bandwidth	44 MHz	Power	23.65 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.26 dB
Spacing	16.5 MHz	Upper	-4.95 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.56 dB
Spacing	27.5 MHz	Upper	-14.50 dB

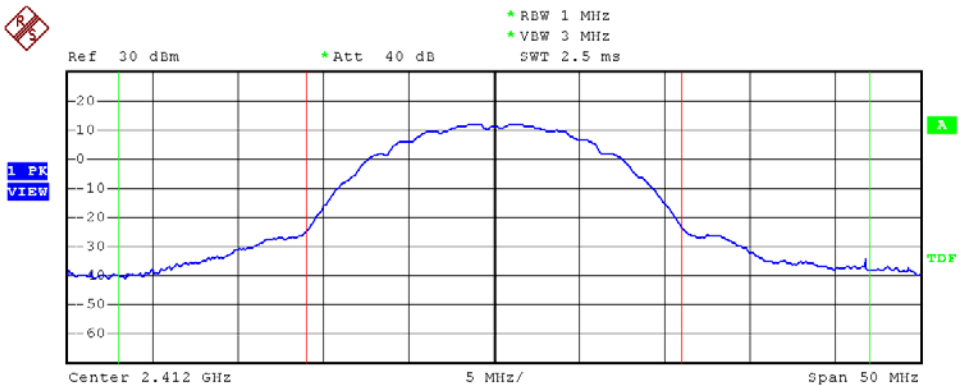


Modulation Standard: 802.11an HT40 (270Mbps), ANT R, Peak Power Output
Channel: 159



Tx Channel			
Bandwidth	44 MHz	Power	23.32 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.16 dB
Spacing	16.5 MHz	Upper	-5.05 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.40 dB
Spacing	27.5 MHz	Upper	-14.57 dB

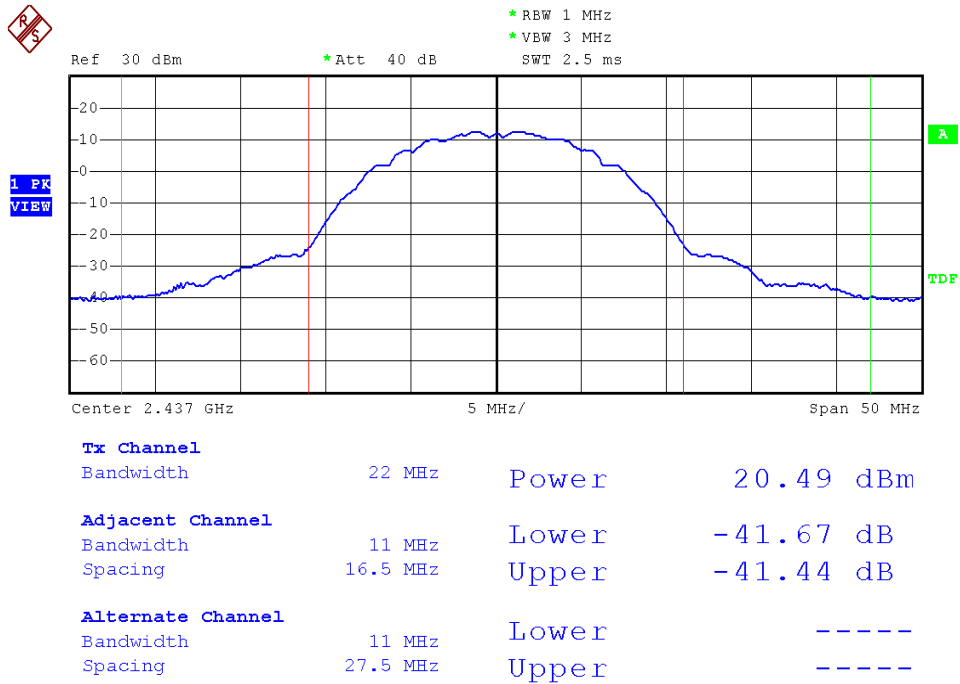
Modulation Standard: 802.11b (11Mbps), ANT L, Peak Power Output
Channel: 01



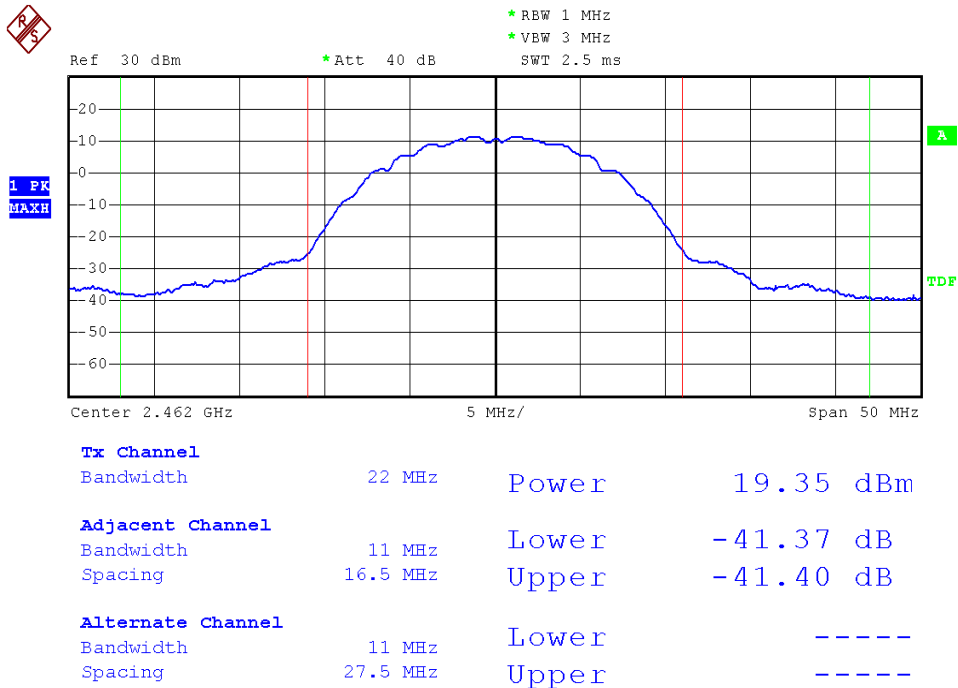
Tx Channel			
Bandwidth	22 MHz	Power	20.12 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-41.54 dB
Spacing	16.5 MHz	Upper	-40.87 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----



Modulation Standard: 802.11b (11Mbps), ANT L, Peak Power Output
Channel: 06

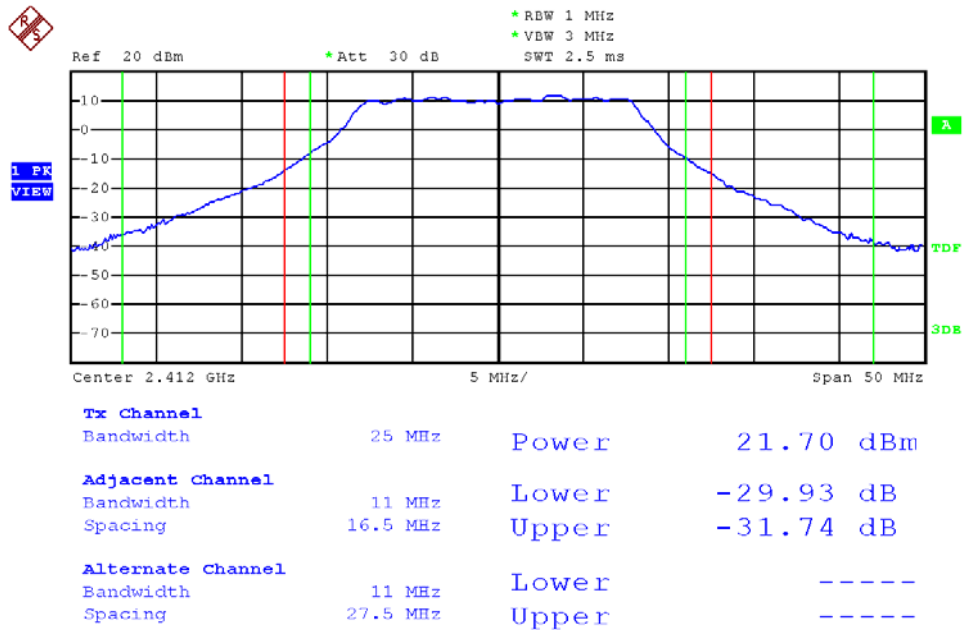


Modulation Standard: 802.11b (11Mbps), ANT L, Peak Power Output
Channel: 11

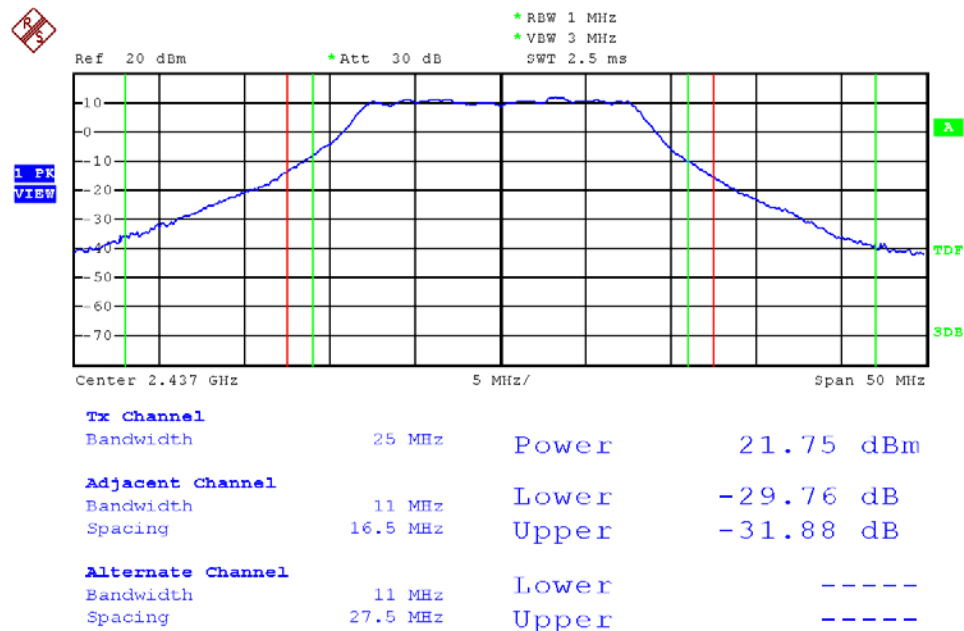




Modulation Standard: 802.11g (54Mbps), ANT L, Peak Power Output
Channel: 01

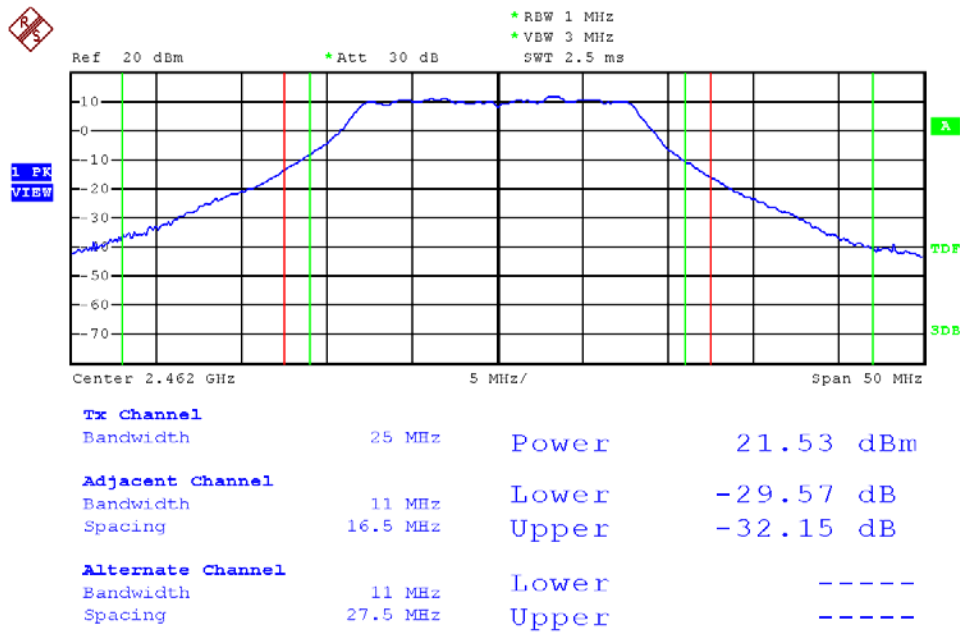


Modulation Standard: 802.11g (54Mbps), ANT L, Peak Power Output
Channel: 06

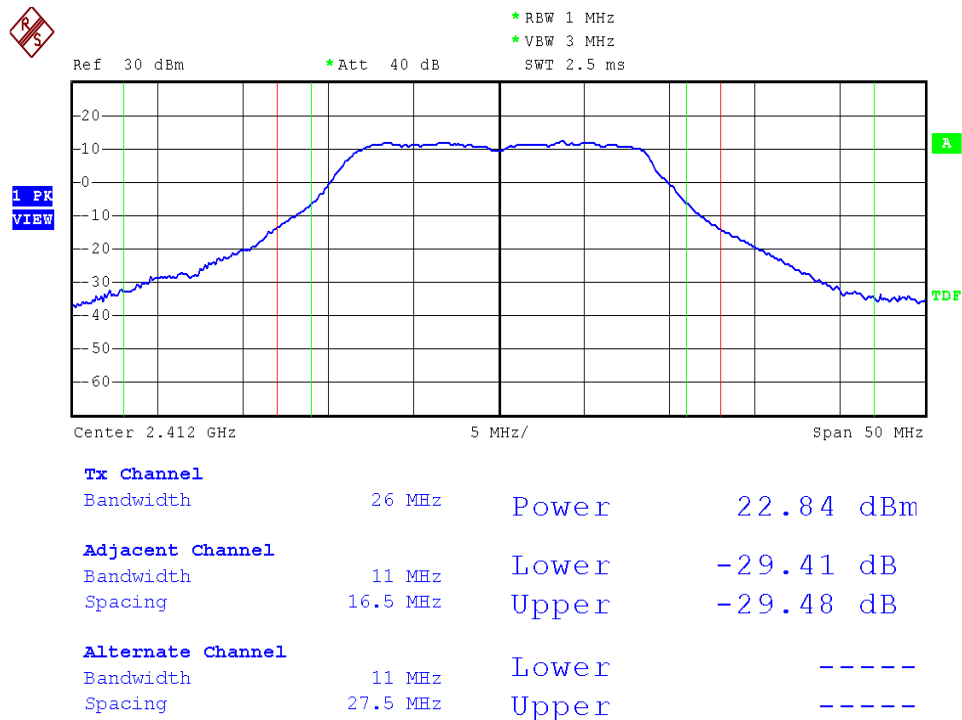




Modulation Standard: 802.11g (54Mbps), ANT L, Peak Power Output
Channel: 11

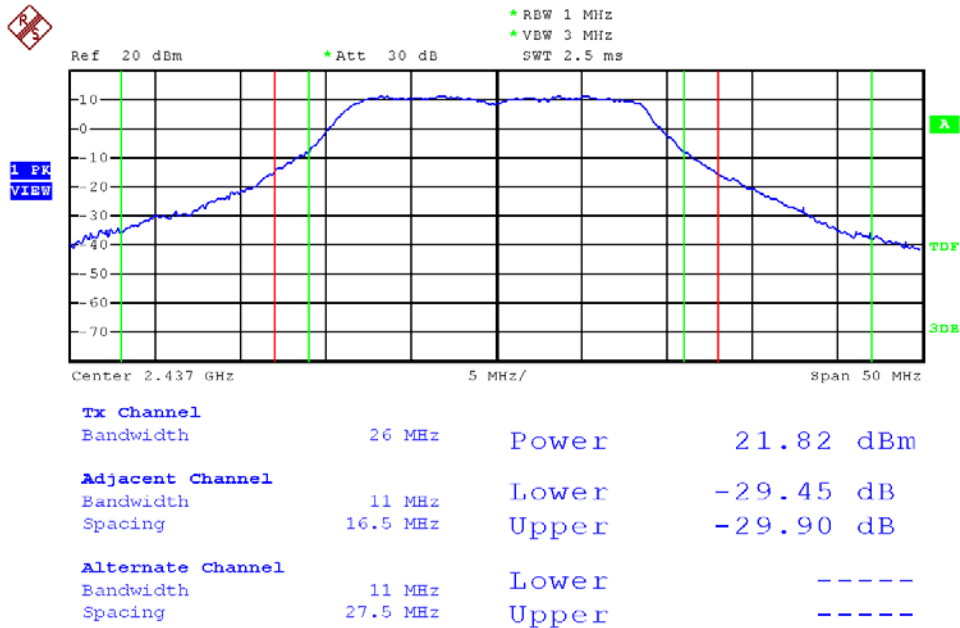


Modulation Standard: 802.11n HT20 (130Mbps), ANT L, Peak Power Output
Channel: 01

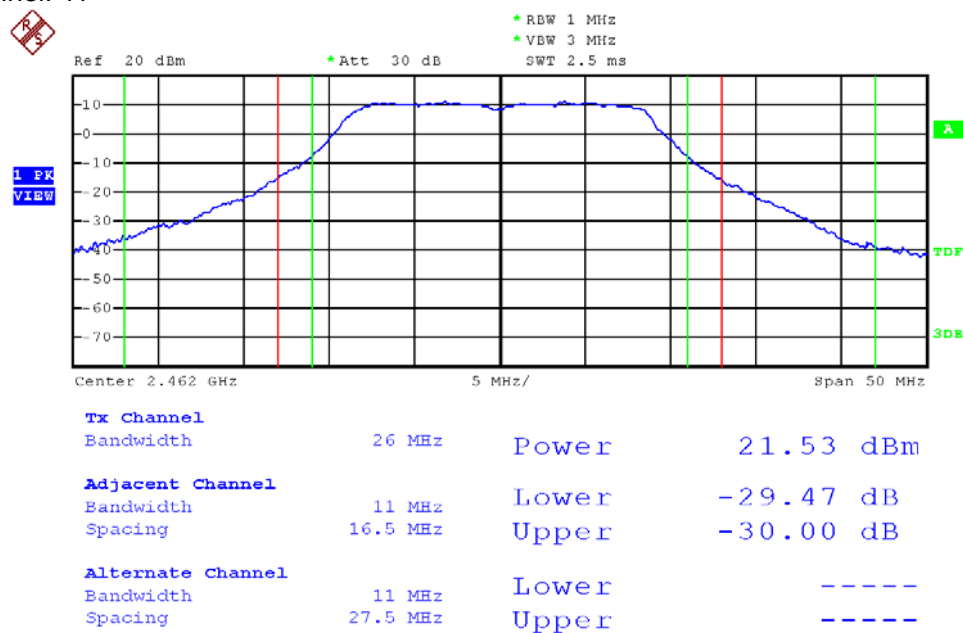




Modulation Standard: 802.11n HT20 (130Mbps), ANT L, Peak Power Output
Channel: 06

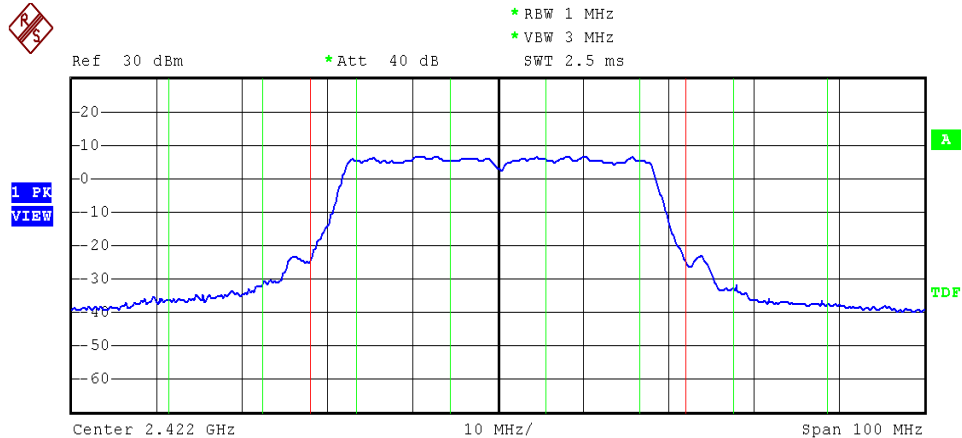


Modulation Standard: 802.11n HT20 (130Mbps), ANT L, Peak Power Output
Channel: 11



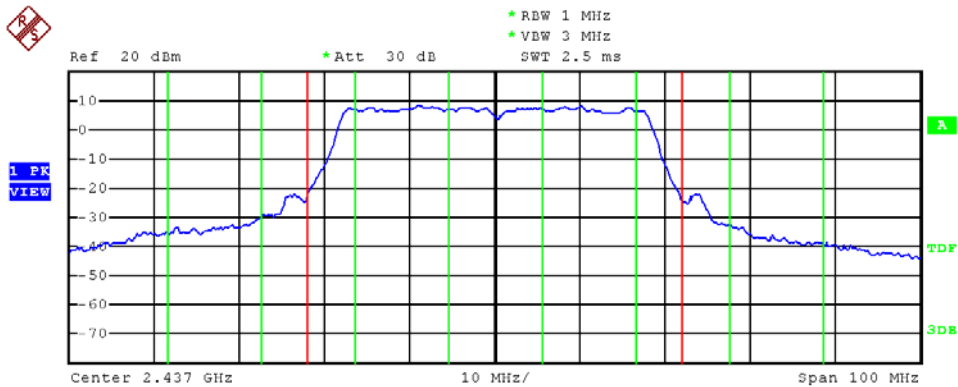


Modulation Standard: 802.11n HT40 (270Mbps), ANT L, Peak Power Output
Channel: 03



Tx Channel			
Bandwidth	44 MHz	Power	20.42 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.56 dB
Spacing	16.5 MHz	Upper	-4.58 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.92 dB
Spacing	27.5 MHz	Upper	-13.34 dB

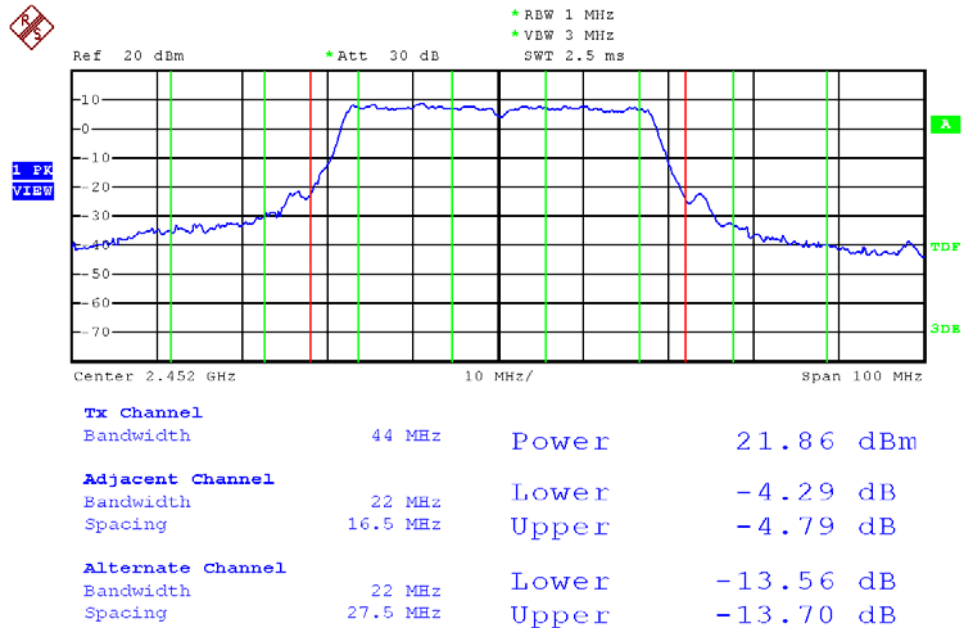
Modulation Standard: 802.11n HT40 (270Mbps), ANT L, Peak Power Output
Channel: 06



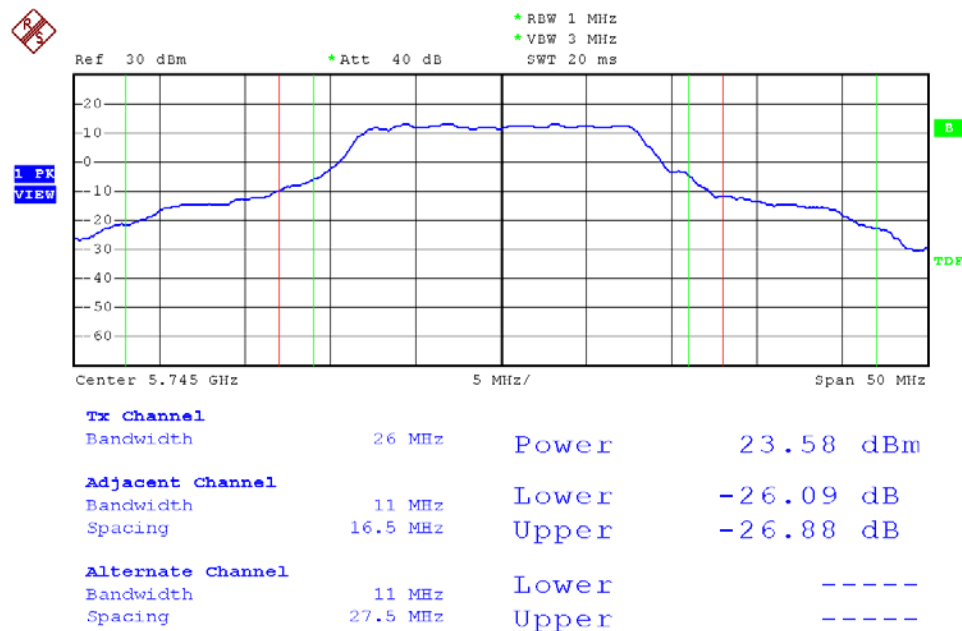
Tx Channel			
Bandwidth	44 MHz	Power	21.71 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.40 dB
Spacing	16.5 MHz	Upper	-4.73 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.58 dB
Spacing	27.5 MHz	Upper	-13.76 dB



Modulation Standard: 802.11n HT40 (270Mbps), ANT L, Peak Power Output
Channel: 09

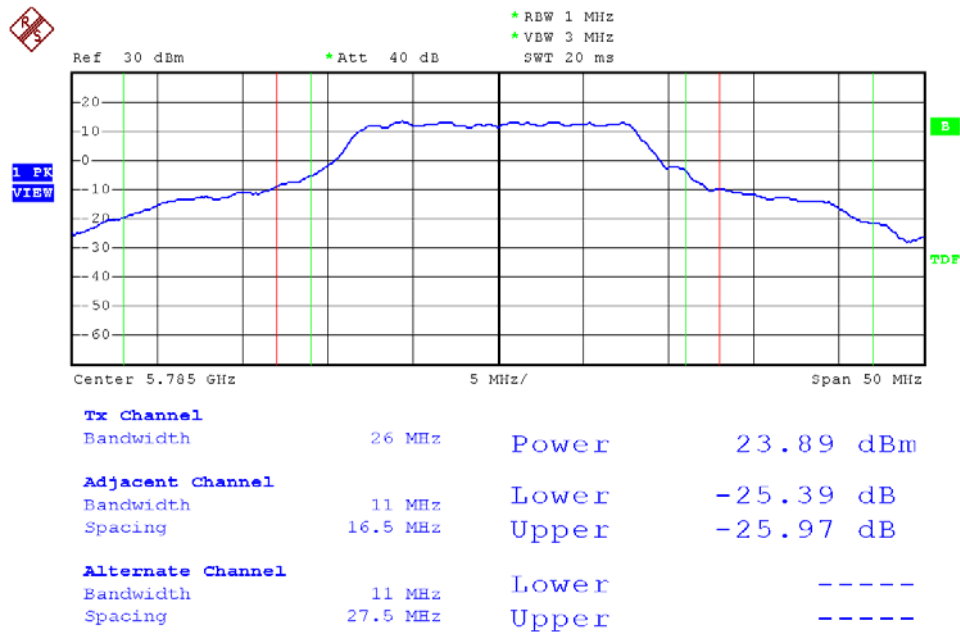


Modulation Standard: 802.11a (54Mbps), ANT L, Peak Power Output
Channel: 149

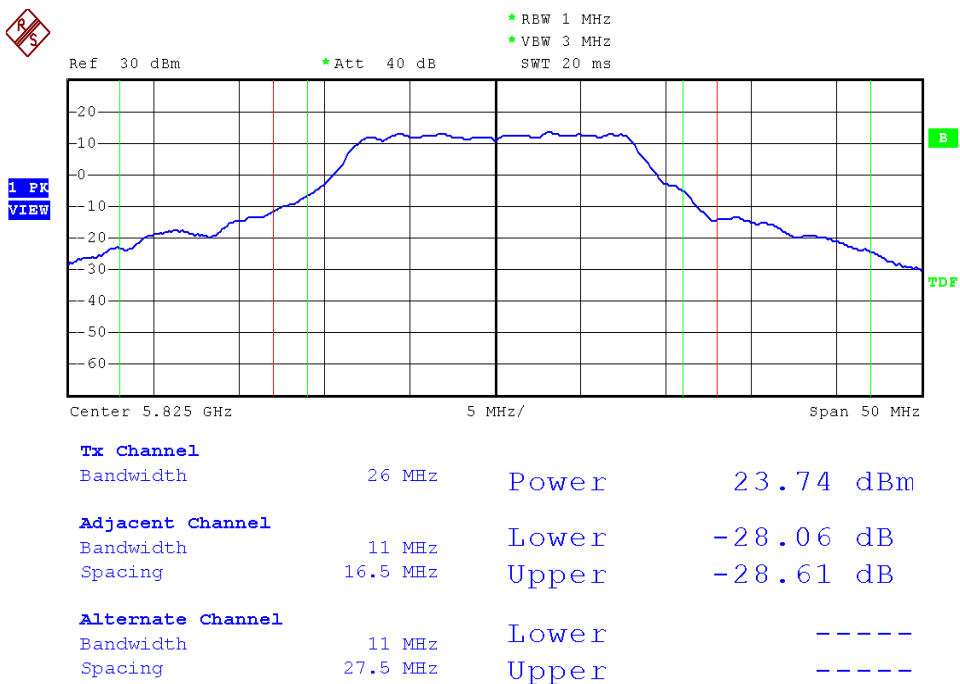




Modulation Standard: 802.11a (54Mbps), ANT L, Peak Power Output
Channel: 157

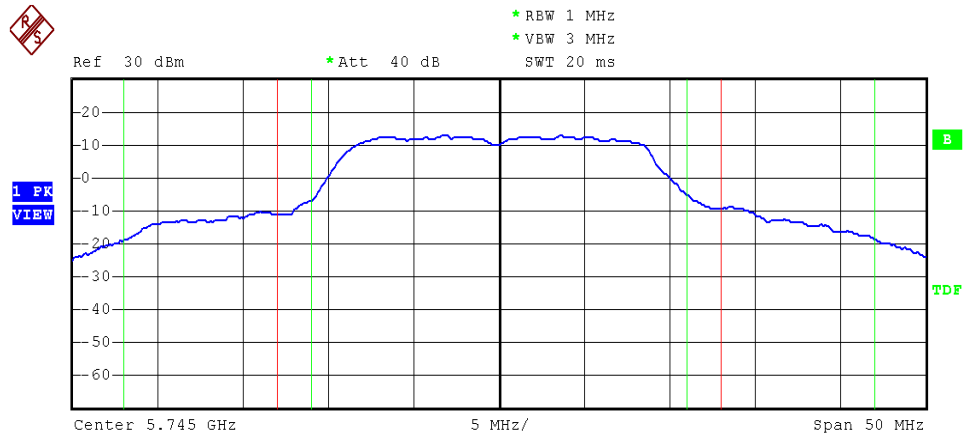


Modulation Standard: 802.11a (54Mbps), ANT L, Peak Power Output
Channel: 165



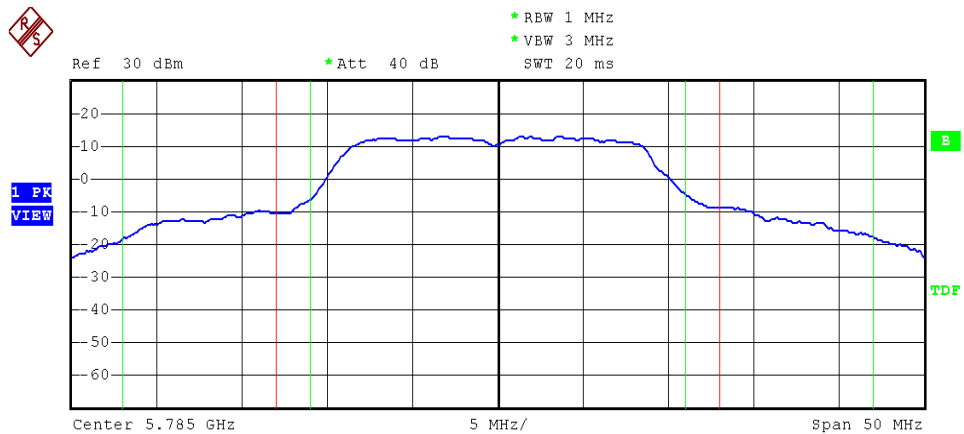


Modulation Standard: 802.11an HT20 (130Mbps), ANT L, Peak Power Output
Channel: 149



Tx Channel			
Bandwidth	26 MHz	Power	23.61 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-25.78 dB
Spacing	16.5 MHz	Upper	-25.22 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----

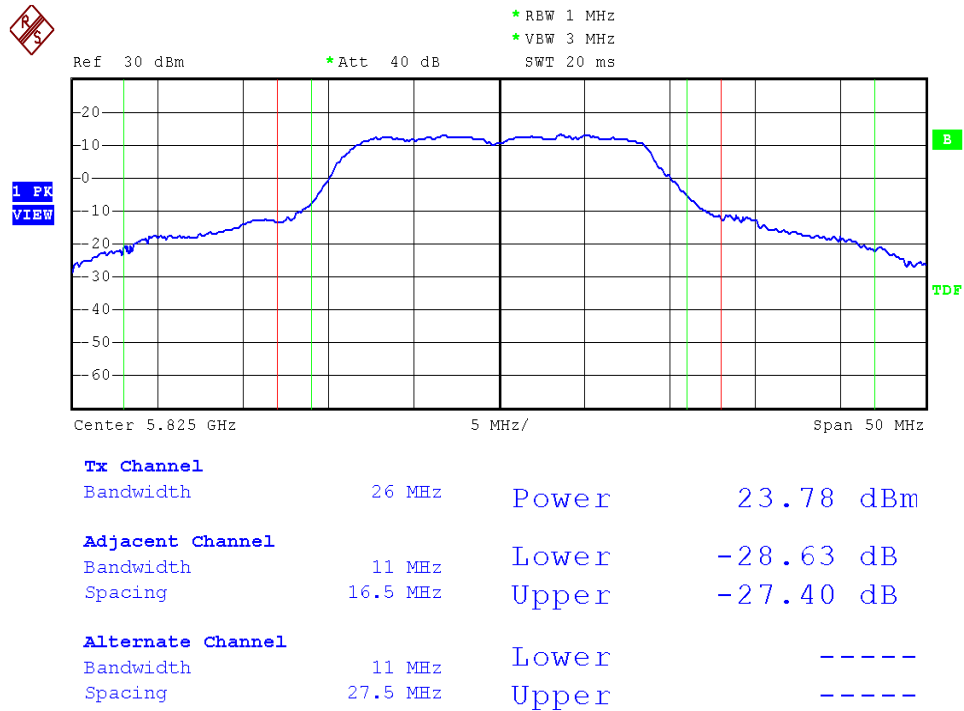
Modulation Standard: 802.11an HT20 (130Mbps), ANT L, Peak Power Output
Channel: 157



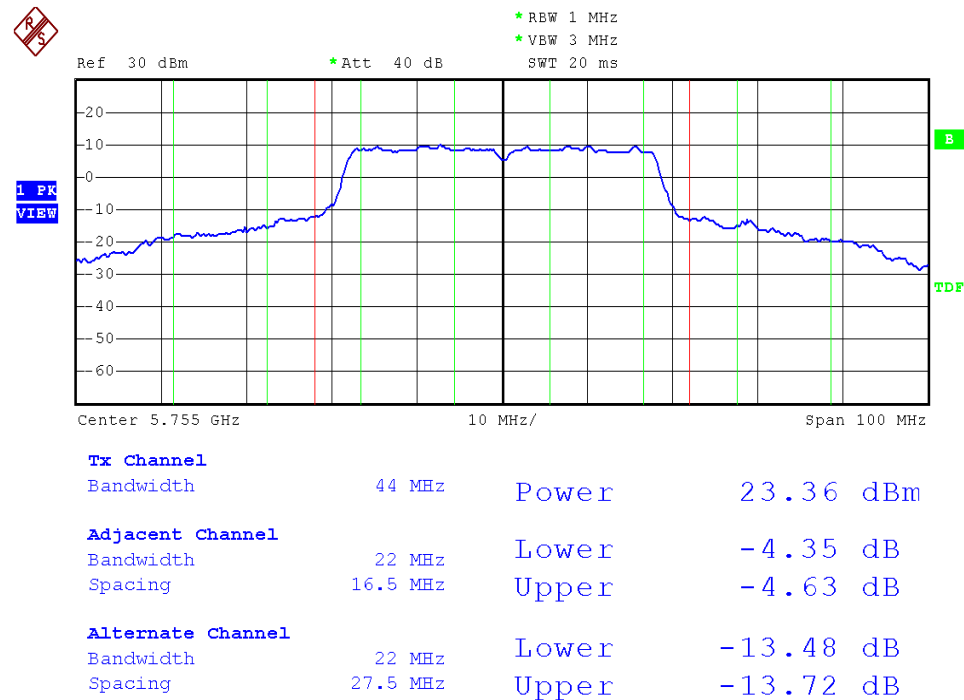
Tx Channel			
Bandwidth	26 MHz	Power	23.82 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-25.52 dB
Spacing	16.5 MHz	Upper	-25.01 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----



Modulation Standard: 802.11an HT20 (130Mbps), ANT L, Peak Power Output
Channel: 165

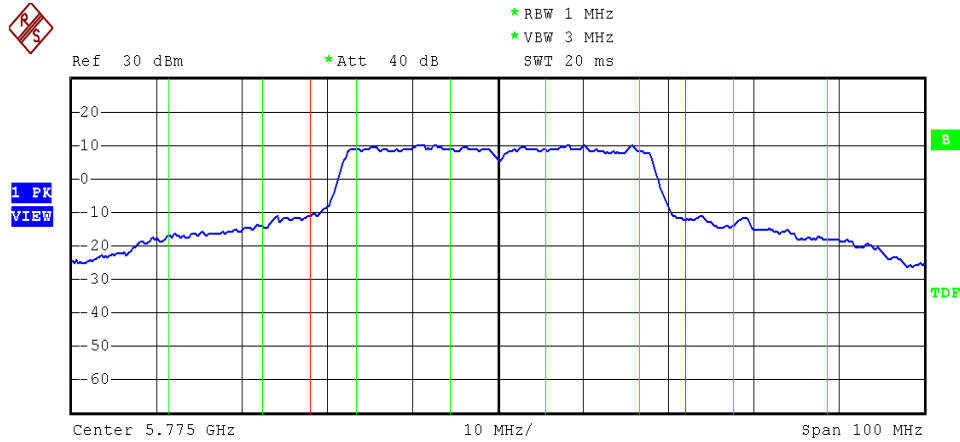


Modulation Standard: 802.11an HT40 (270Mbps), ANT L, Peak Power Output
Channel: 151





Modulation Standard: 802.11an HT40 (270Mbps), ANT L, Peak Power Output
Channel: 155

**Tx Channel**

Bandwidth 44 MHz Power 23.71 dBm

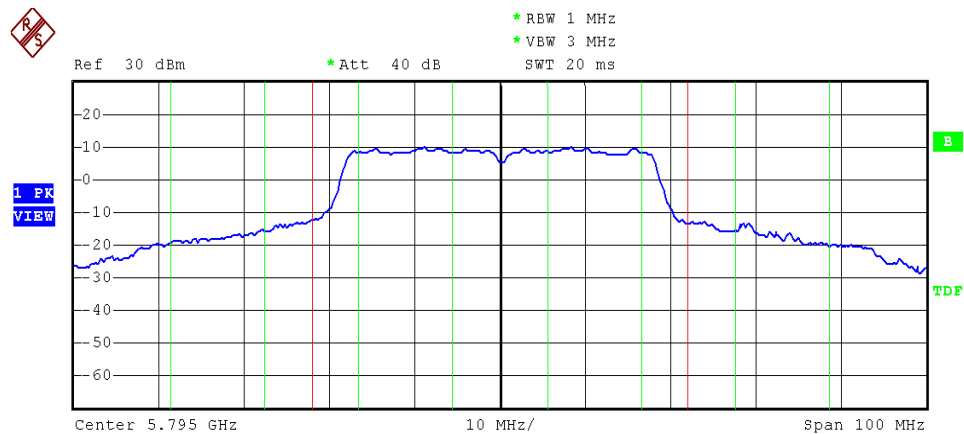
Adjacent Channel

Bandwidth 22 MHz Lower -4.39 dB
Spacing 16.5 MHz Upper -4.58 dB

Alternate Channel

Bandwidth 22 MHz Lower -13.51 dB
Spacing 27.5 MHz Upper -13.55 dB

Modulation Standard: 802.11an HT40 (270Mbps), ANT L, Peak Power Output
Channel: 159

**Tx Channel**

Bandwidth 44 MHz Power 23.50 dBm

Adjacent Channel

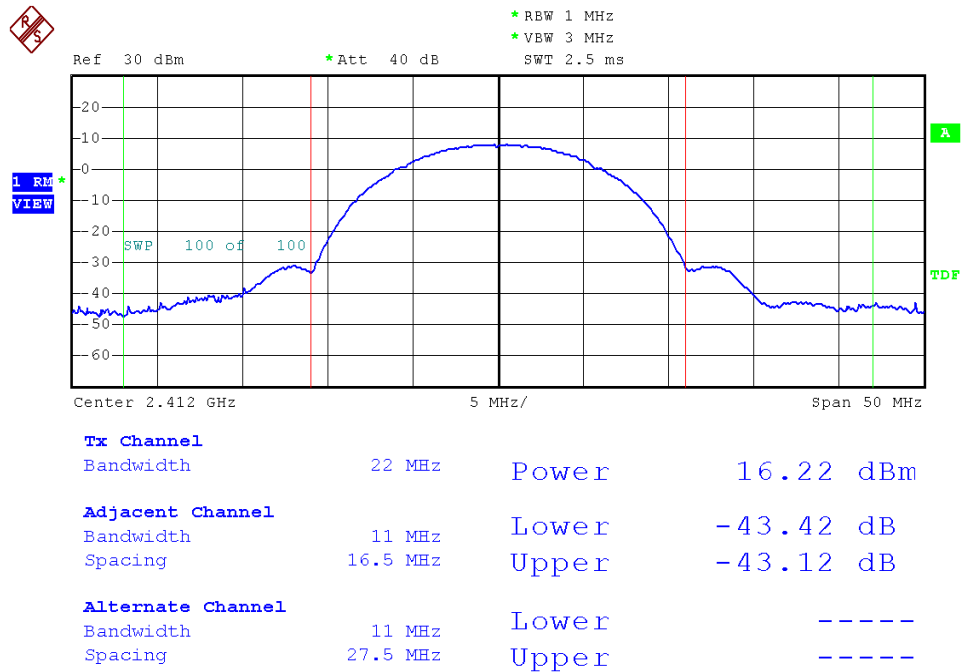
Bandwidth 22 MHz Lower -4.47 dB
Spacing 16.5 MHz Upper -4.50 dB

Alternate Channel

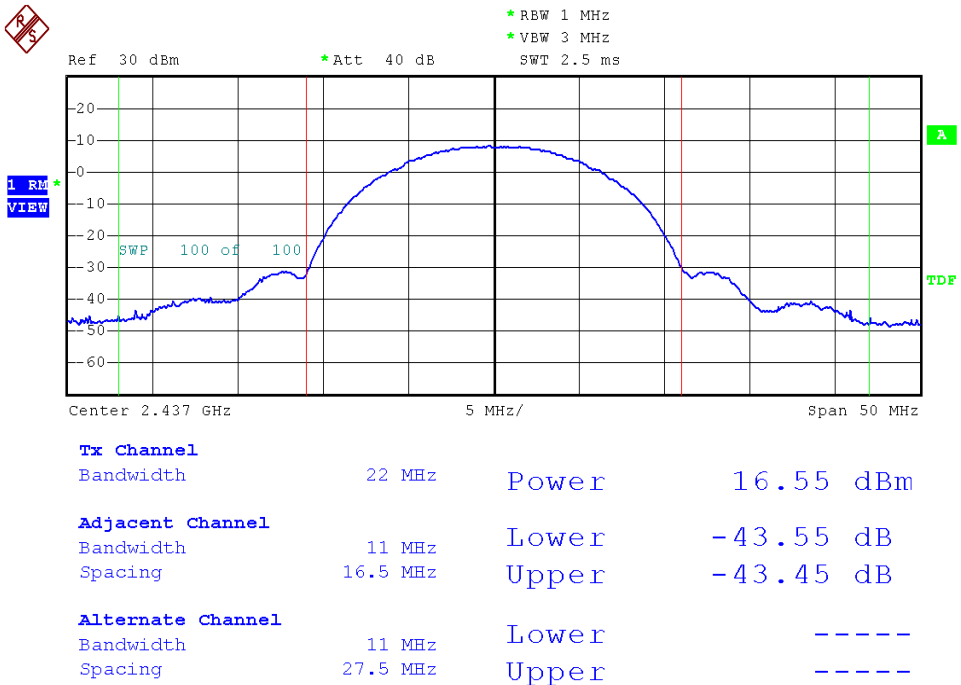
Bandwidth 22 MHz Lower -13.64 dB
Spacing 27.5 MHz Upper -13.47 dB



Modulation Standard: 802.11b (11Mbps), ANT R, Average Power Output
Channel: 01

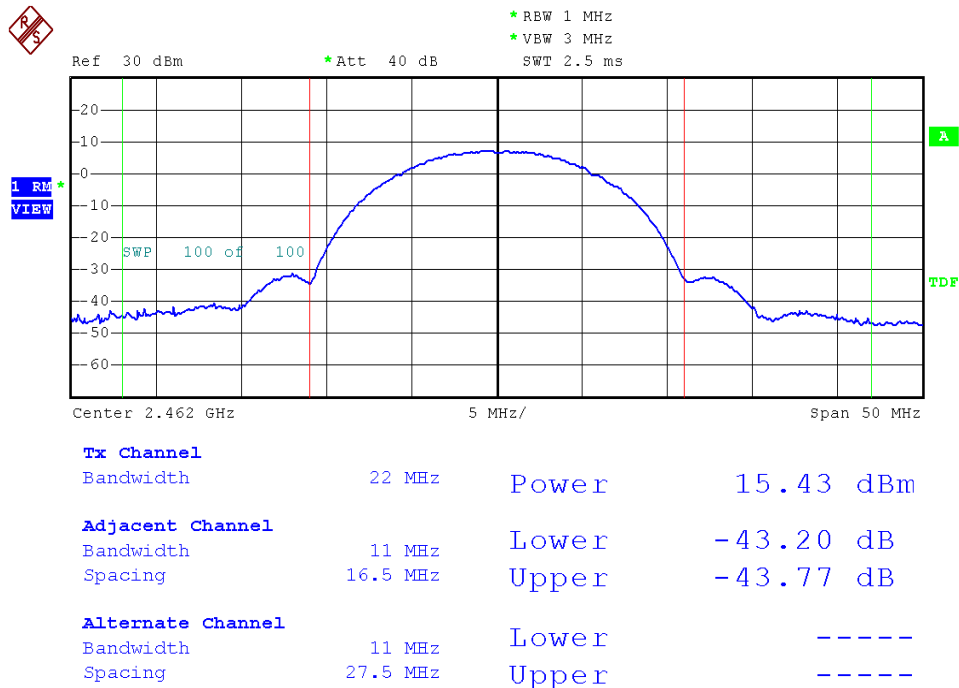


Modulation Standard: 802.11b (11Mbps), ANT R, Average Power Output
Channel: 06

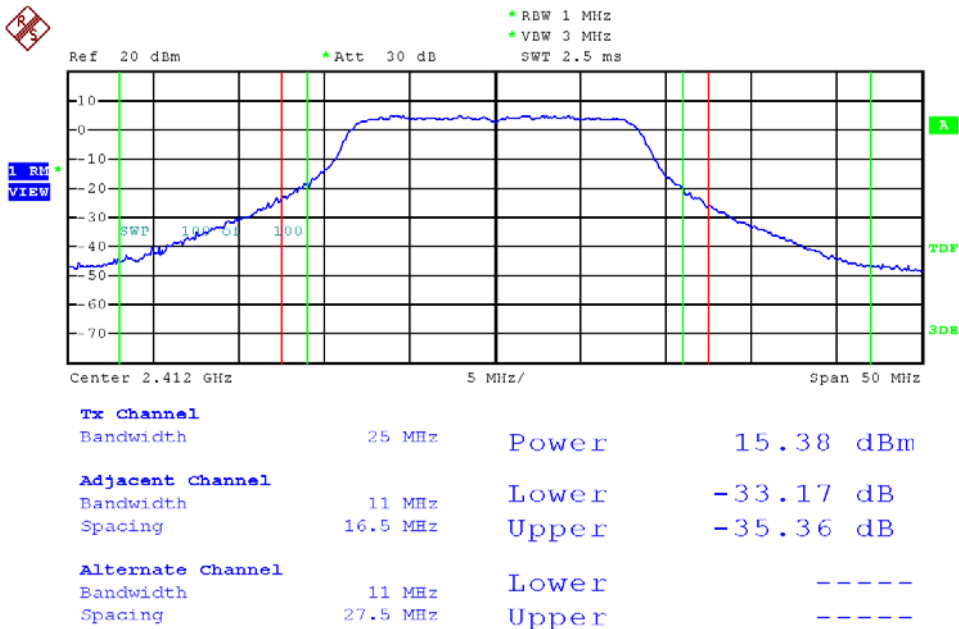




Modulation Standard: 802.11b (11Mbps), ANT R, Average Power Output
Channel: 11

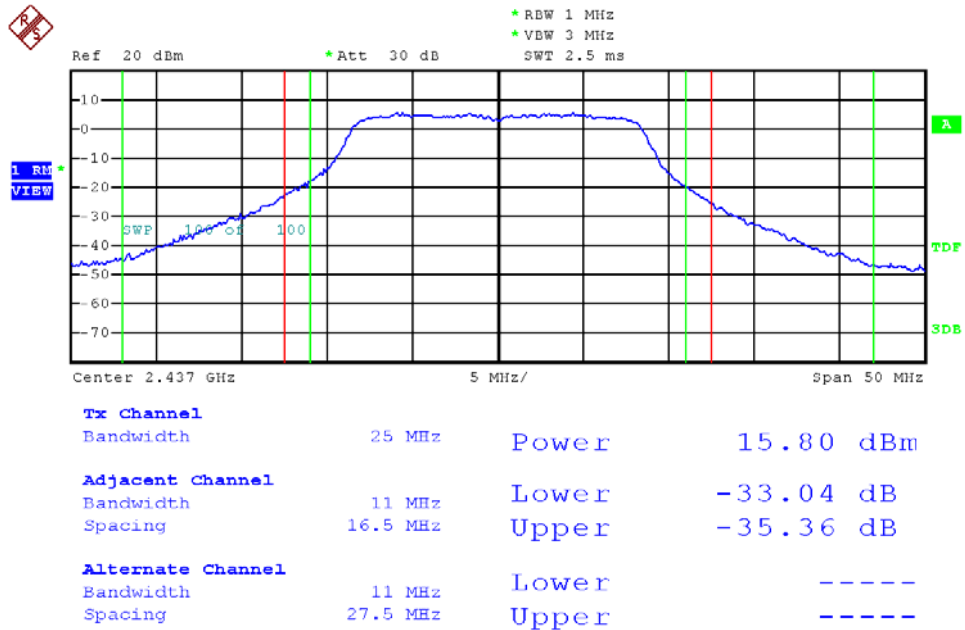


Modulation Standard: 802.11g (54Mbps), ANT R, Average Power Output
Channel: 01

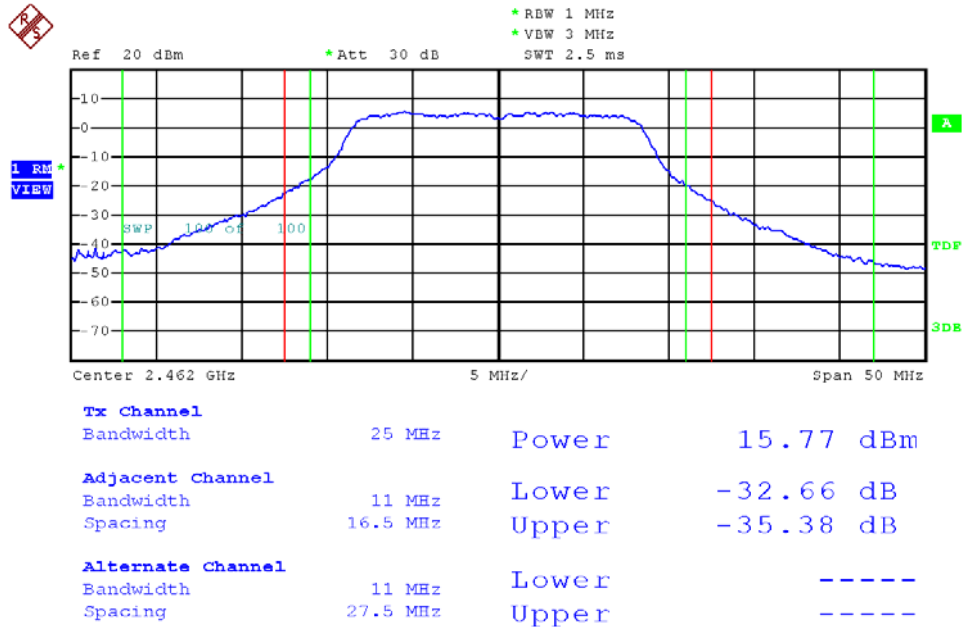




Modulation Standard: 802.11g (54Mbps), ANT R, Average Power Output
Channel: 06

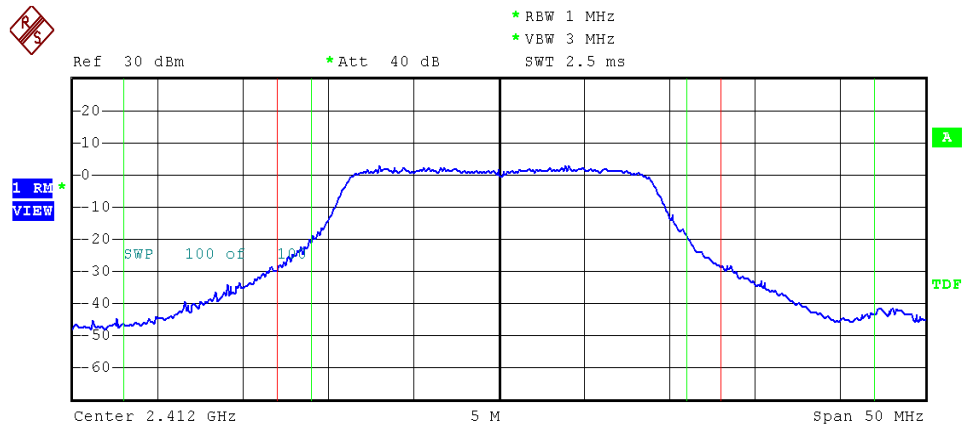


Modulation Standard: 802.11g (6Mbps), ANT R, Average Power Output
Channel: 11



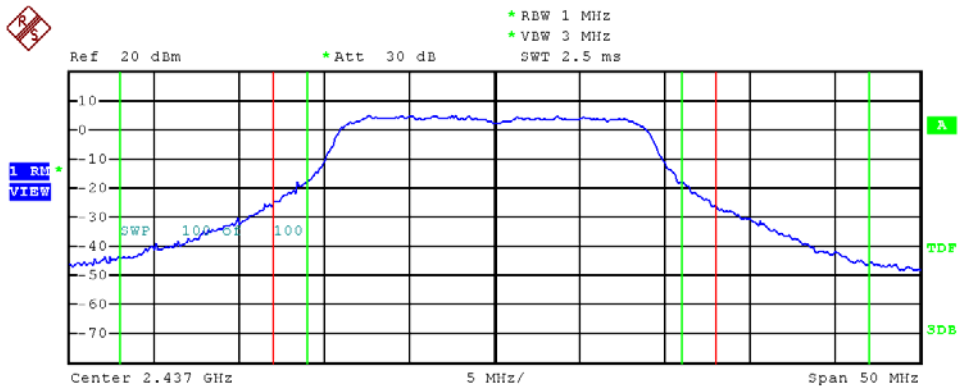


Modulation Standard: 802.11n HT20 (130Mbps), ANT R, Average Power Output
Channel: 01



Tx Channel			
Bandwidth	26 MHz	Power	13.19 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-34.11 dB
Spacing	16.5 MHz	Upper	-33.07 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

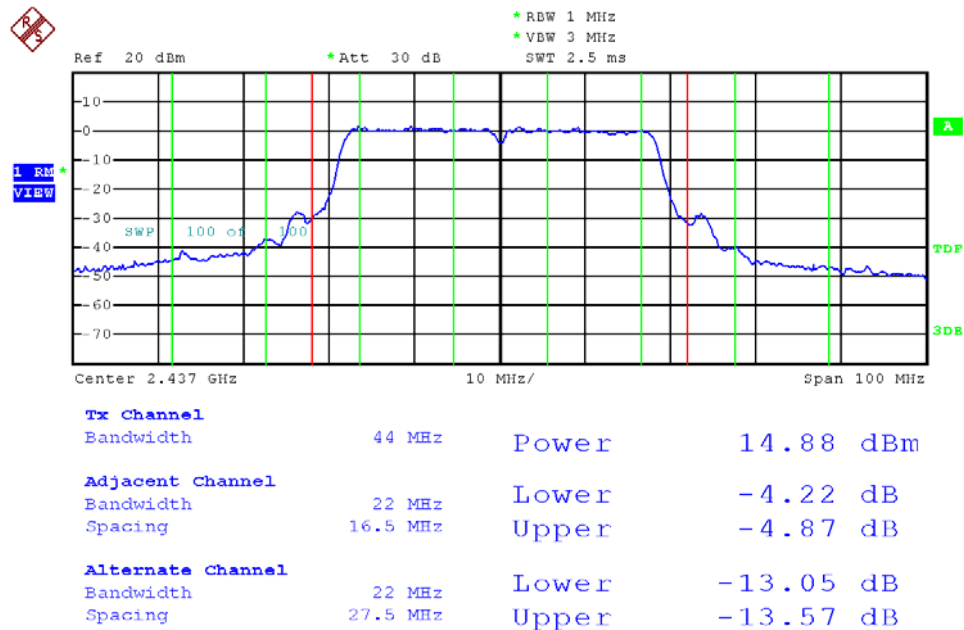
Modulation Standard: 802.11n HT20 (130Mbps), ANT R, Average Power Output
Channel: 06



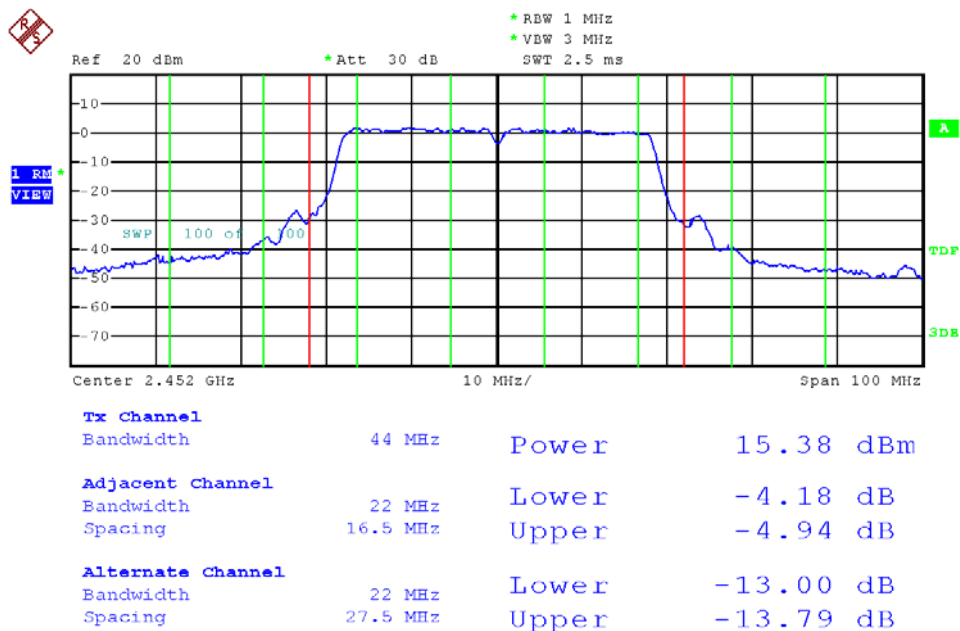
Tx Channel			
Bandwidth	26 MHz	Power	15.46 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-32.97 dB
Spacing	16.5 MHz	Upper	-33.75 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----



Modulation Standard: 802.11n HT40 (270Mbps), ANT R, Average Power Output
Channel: 06

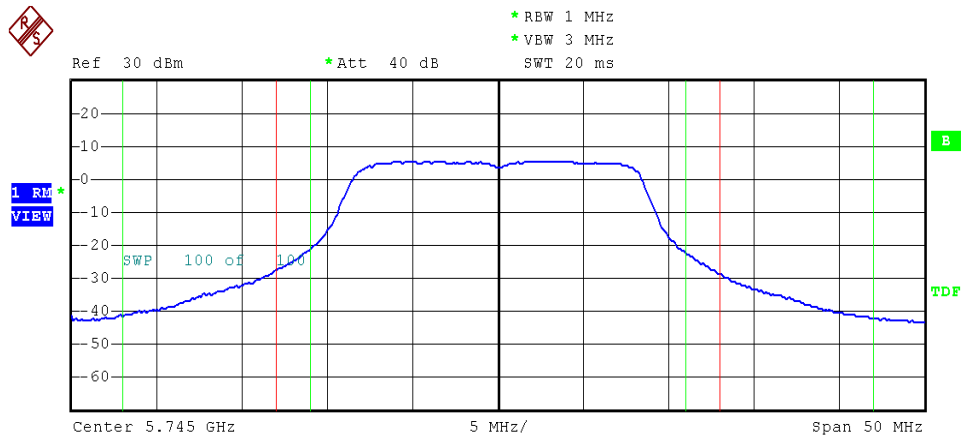


Modulation Standard: 802.11n HT40 (270Mbps), ANT R, Average Power Output
Channel: 09



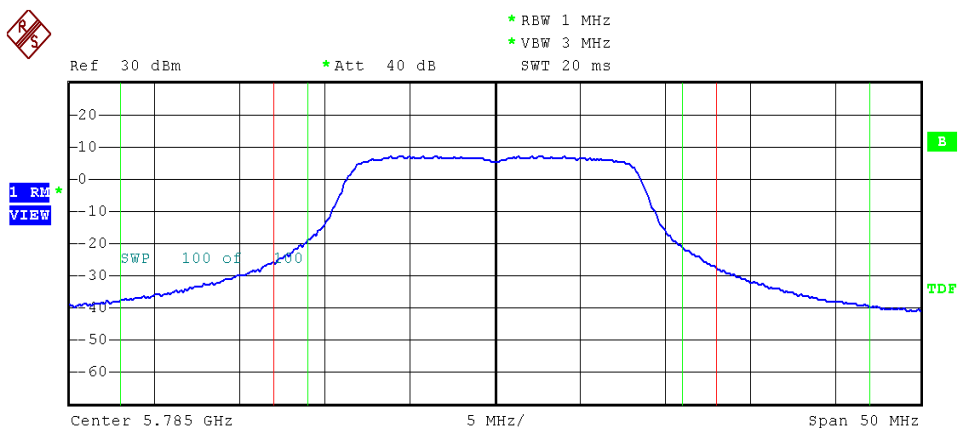


Modulation Standard: 802.11a (54Mbps), ANT R, Average Power Output
Channel: 149



Tx Channel			
Bandwidth	26 MHz	Power	16.39 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-36.52 dB
Spacing	16.5 MHz	Upper	-37.56 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

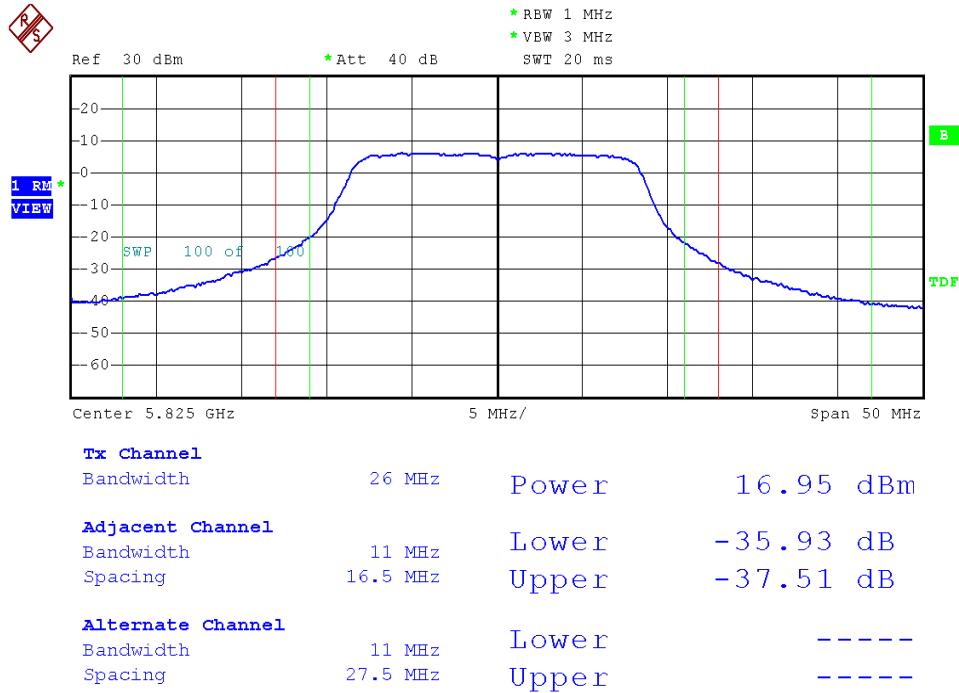
Modulation Standard: 802.11a (54Mbps), ANT R, Average Power Output
Channel: 157



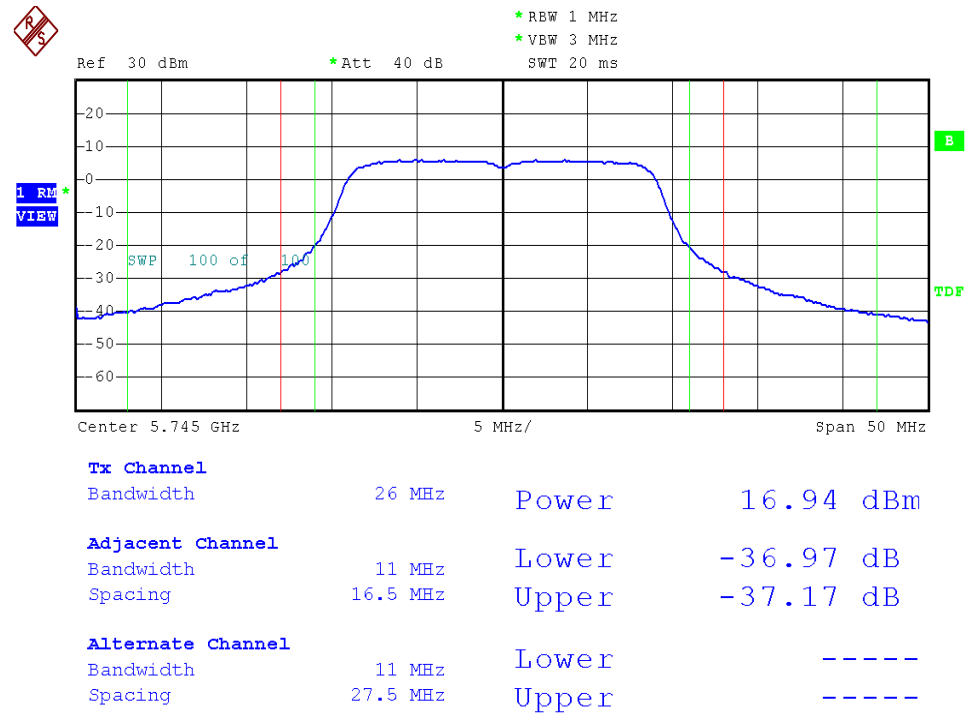
Tx Channel			
Bandwidth	26 MHz	Power	17.91 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-36.02 dB
Spacing	16.5 MHz	Upper	-37.84 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----



Modulation Standard: 802.11a (54Mbps), ANT R, Average Power Output
Channel: 165

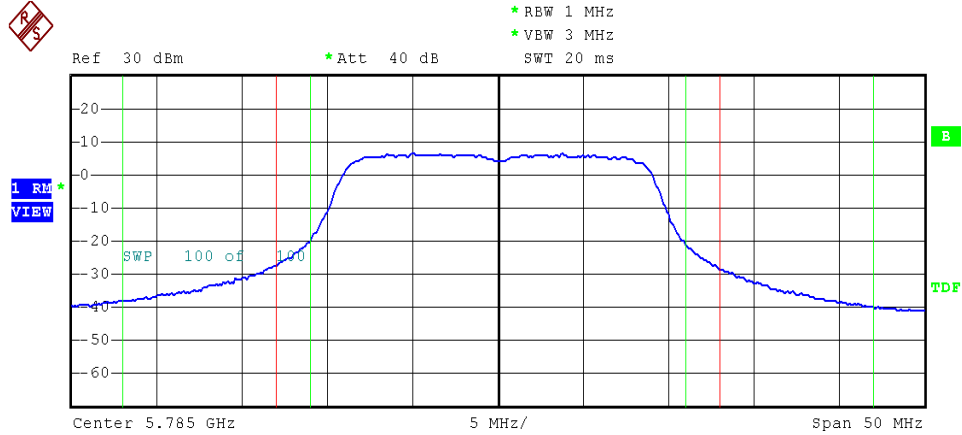


Modulation Standard: 802.11an HT20 (130Mbps), ANT R, Average Power Output
Channel: 149



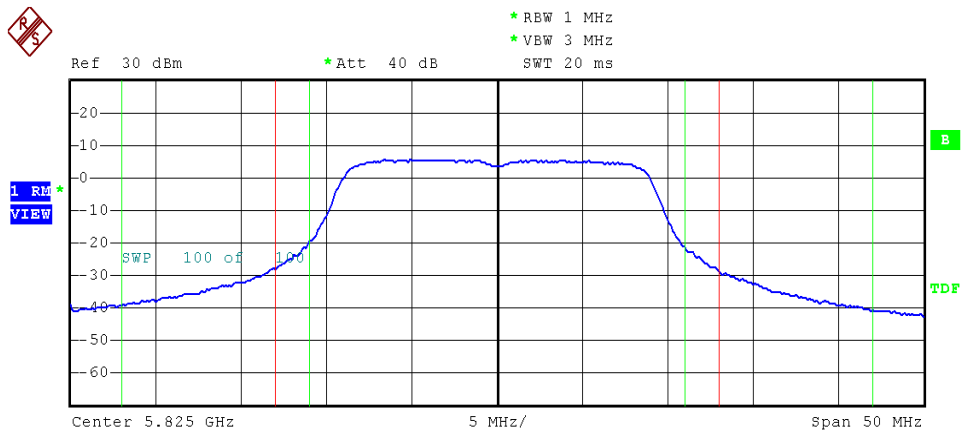


Modulation Standard: 802.11an HT20 (130Mbps), ANT R, Average Power Output
Channel: 157



Tx Channel			
Bandwidth	26 MHz	Power	17.27 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-36.56 dB
Spacing	16.5 MHz	Upper	-37.65 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

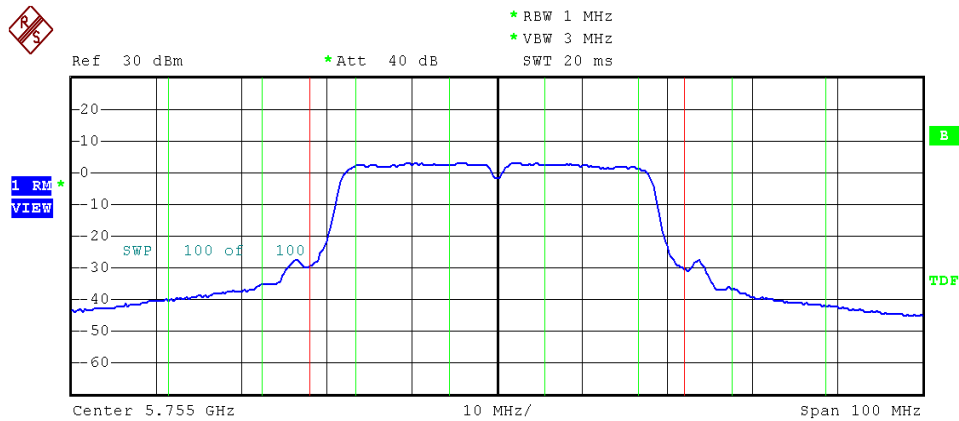
Modulation Standard: 802.11an HT20 (130Mbps), ANT R, Average Power Output
Channel: 165



Tx Channel			
Bandwidth	26 MHz	Power	16.64 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-36.39 dB
Spacing	16.5 MHz	Upper	-37.19 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

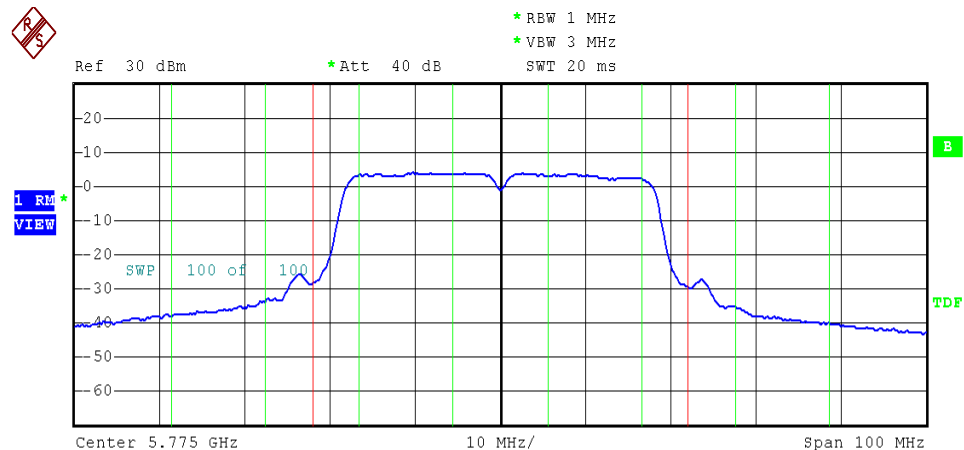


Modulation Standard: 802.11an HT40 (270Mbps), ANT R, Average Power Output
Channel: 151



Tx Channel			
Bandwidth	44 MHz	Power	17.06 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.44 dB
Spacing	16.5 MHz	Upper	-4.81 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.93 dB
Spacing	27.5 MHz	Upper	-14.61 dB

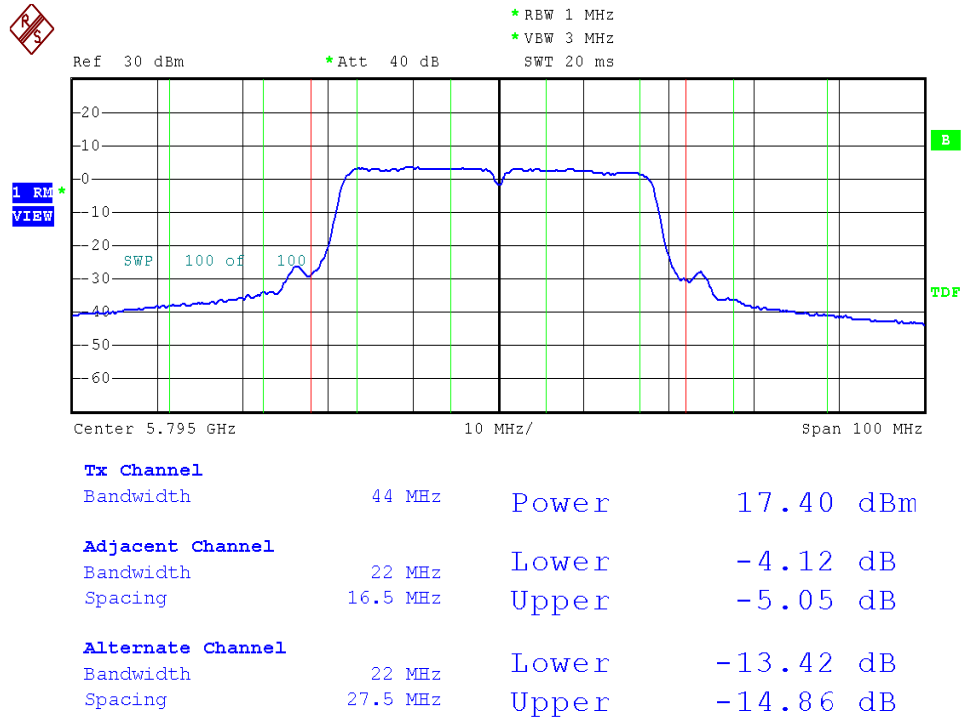
Modulation Standard: 802.11an HT40 (270Mbps), ANT R, Average Power Output
Channel: 155



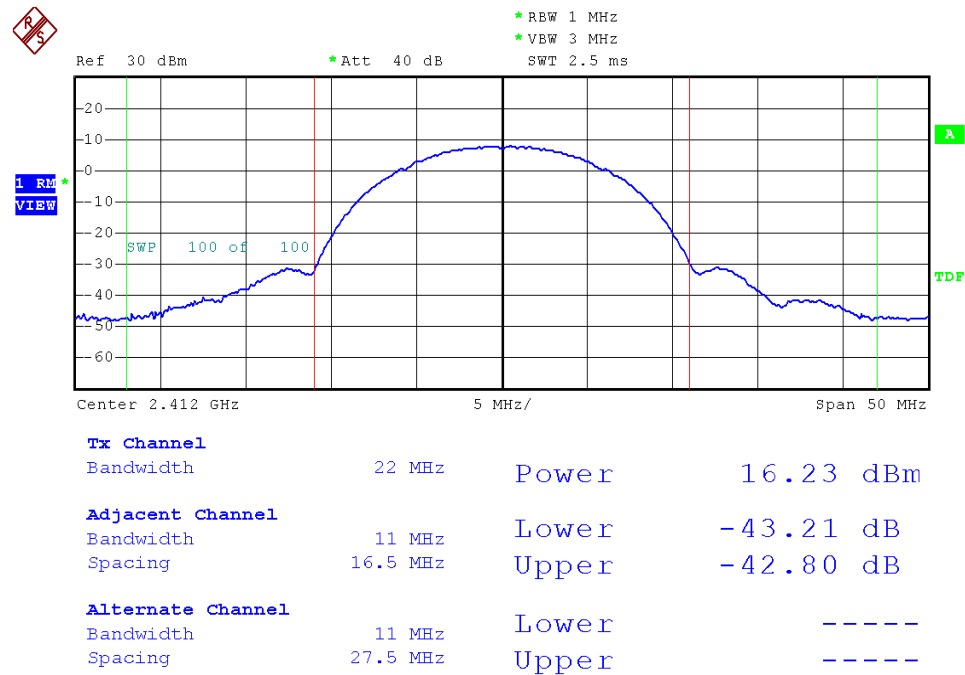
Tx Channel			
Bandwidth	44 MHz	Power	18.00 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.27 dB
Spacing	16.5 MHz	Upper	-4.94 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.59 dB
Spacing	27.5 MHz	Upper	-14.71 dB



Modulation Standard: 802.11an HT40 (270Mbps), ANT R, Average Power Output
Channel: 159

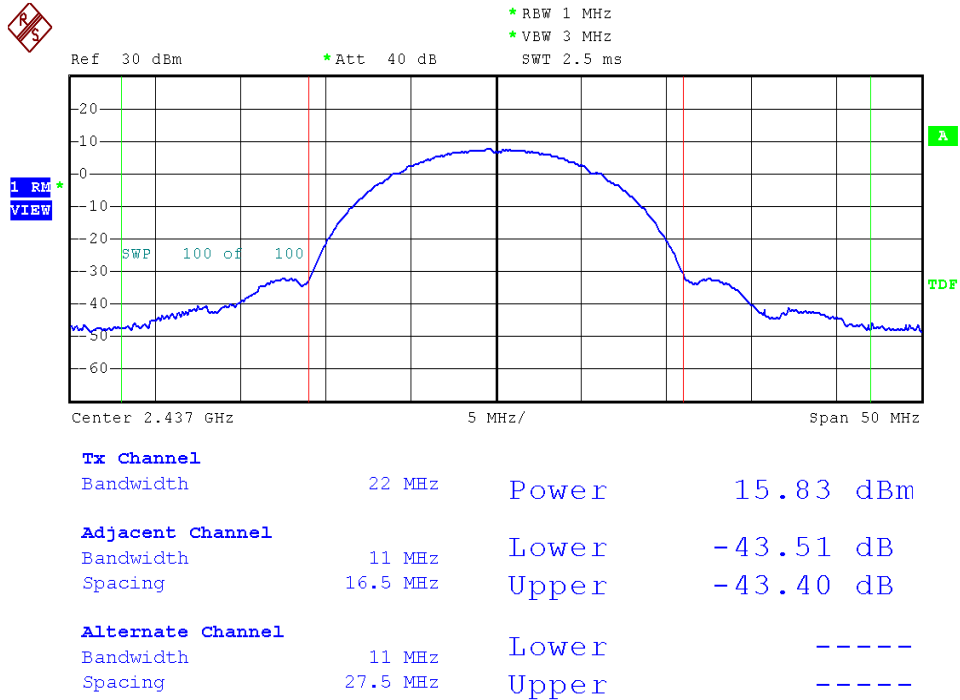


Modulation Standard: 802.11b (11Mbps), ANT L, Average Power Output
Channel: 01

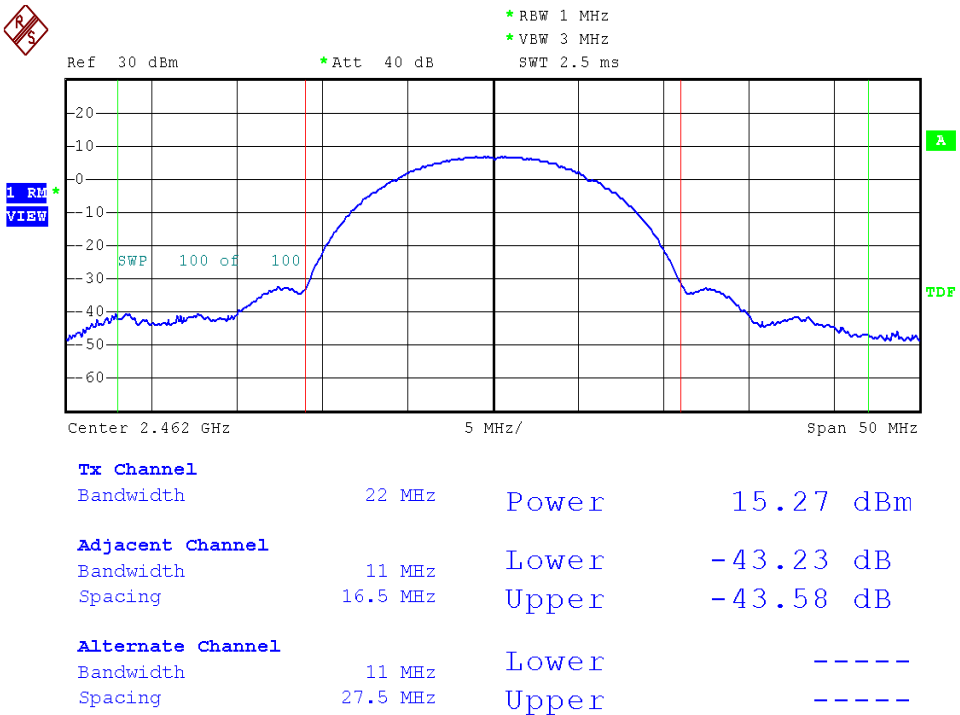




Modulation Standard: 802.11b (11Mbps), ANT L, Average Power Output
Channel: 06

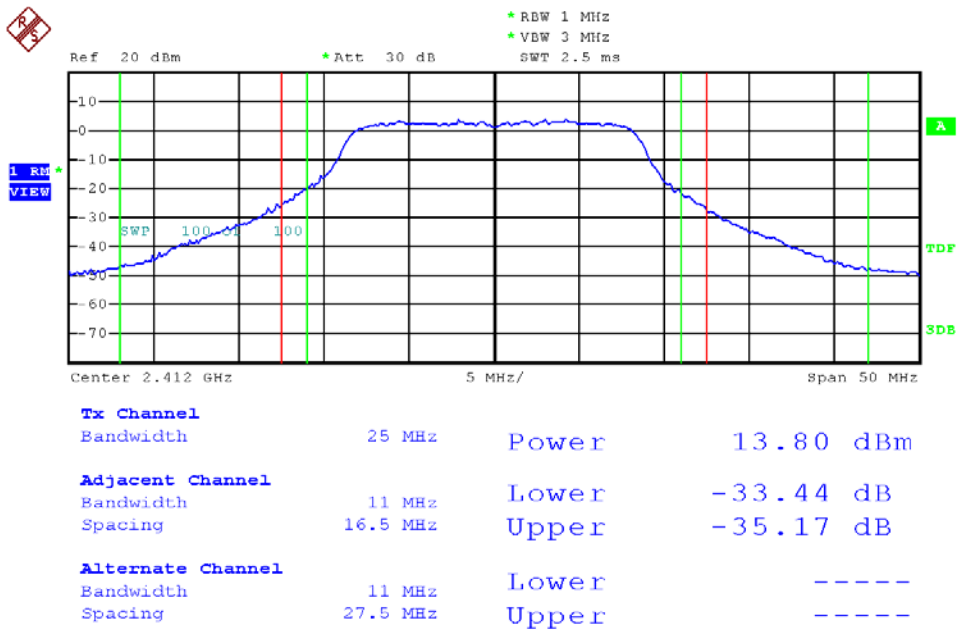


Modulation Standard: 802.11b (11Mbps), ANT L, Average Power Output
Channel: 11

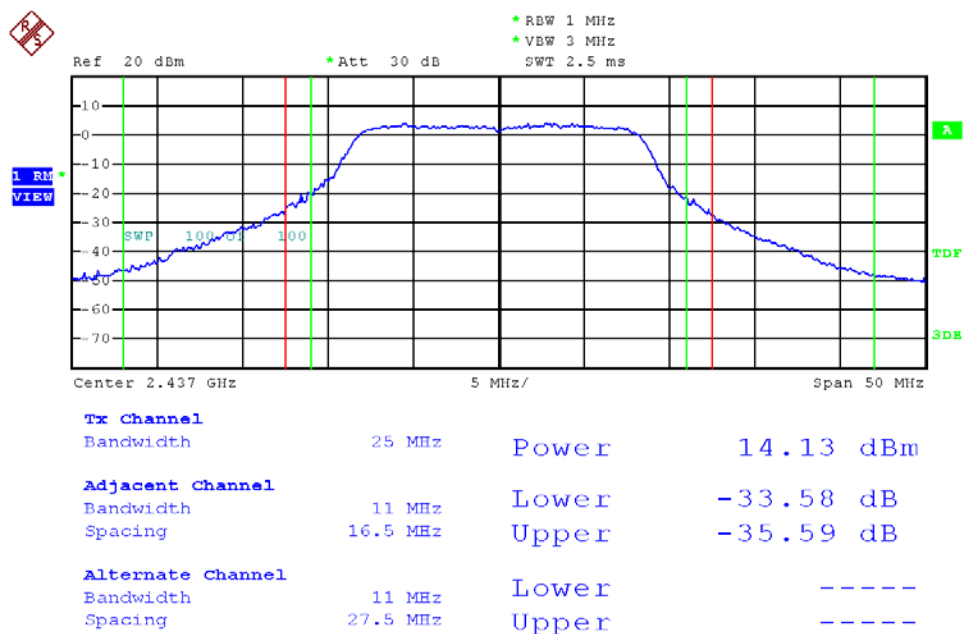




Modulation Standard: 802.11g (54Mbps), ANT L, Average Power Output
Channel: 01

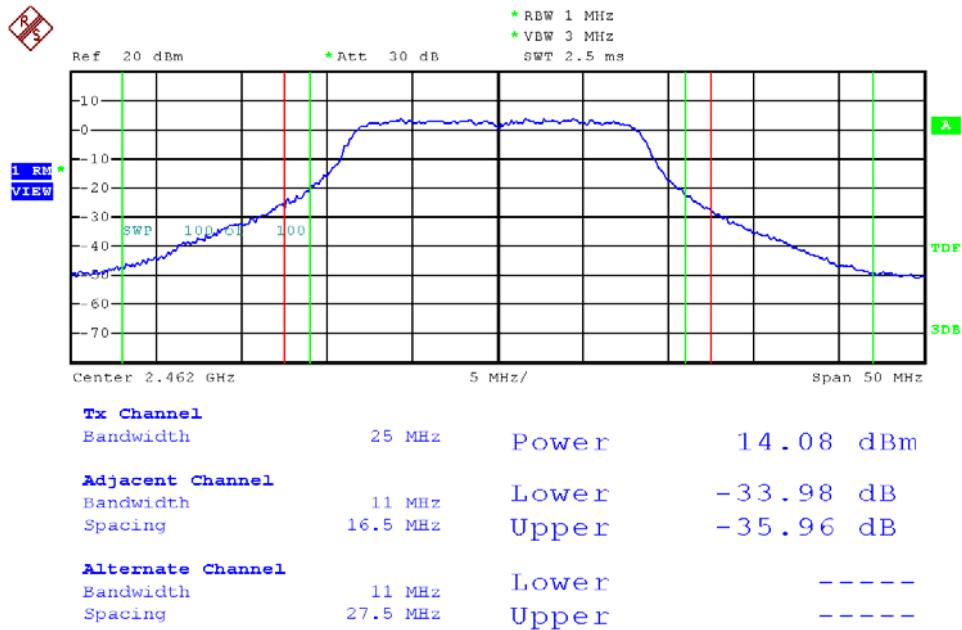


Modulation Standard: 802.11g (54Mbps), ANT L, Average Power Output
Channel: 06

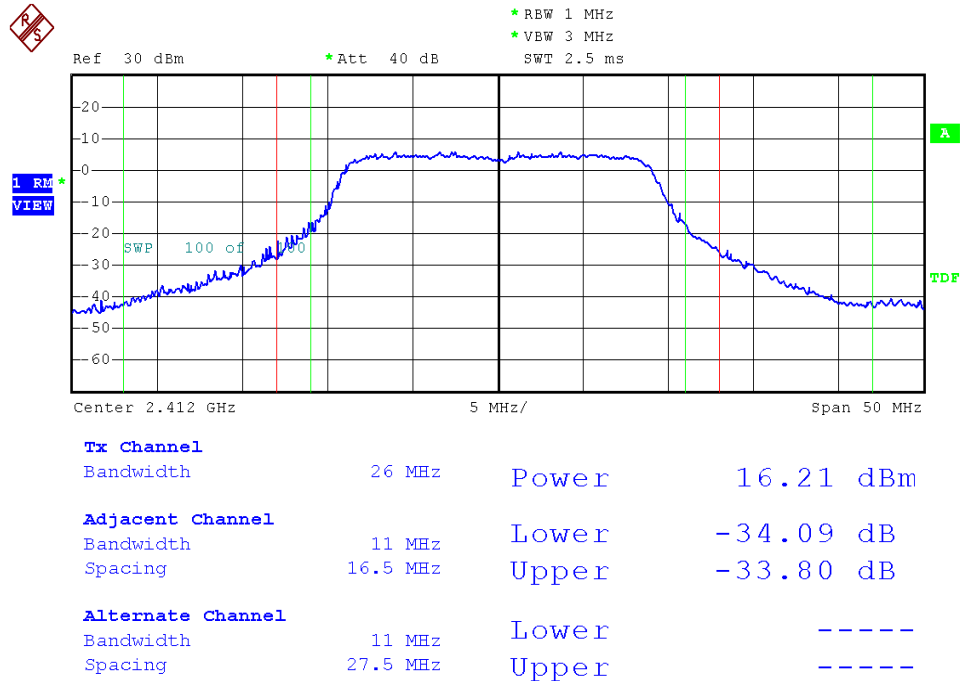




Modulation Standard: 802.11g (54Mbps), ANT L, Average Power Output
Channel: 11

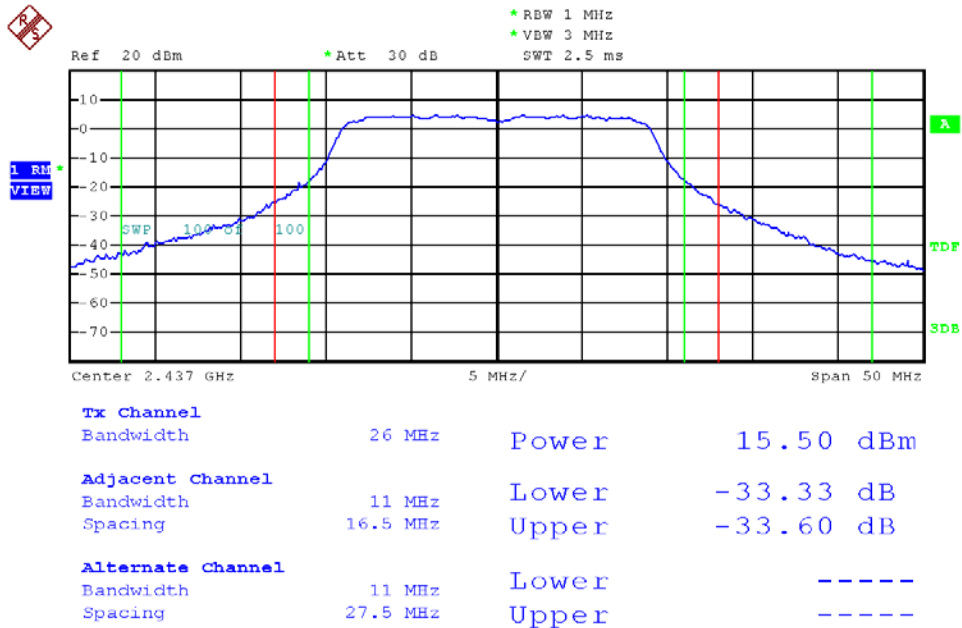


Modulation Standard: 802.11n HT20 (130Mbps), ANT L, Average Power Output
Channel: 01

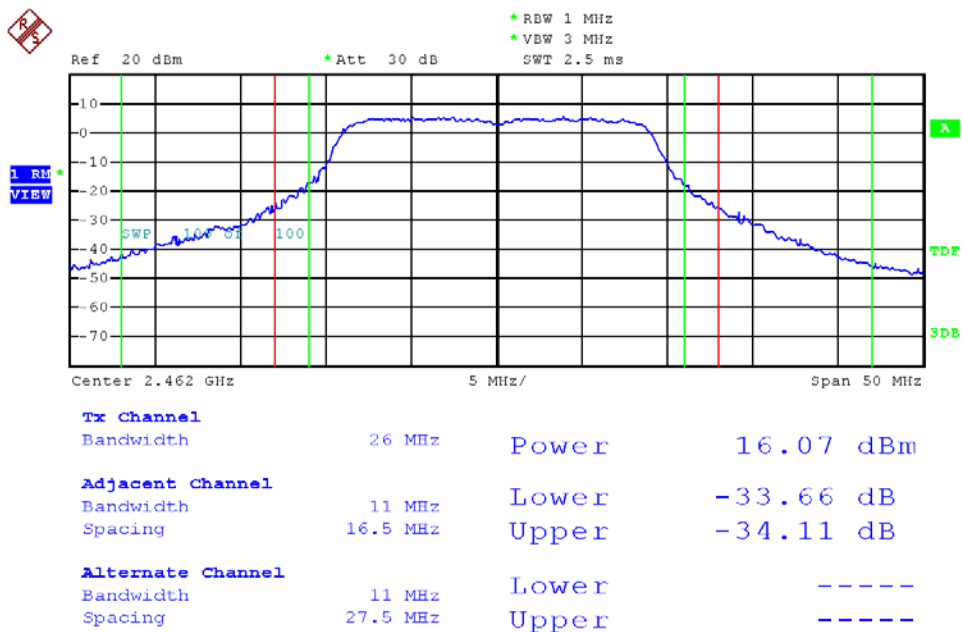




Modulation Standard: 802.11n HT20 (130Mbps), ANT L, Average Power Output
Channel: 06

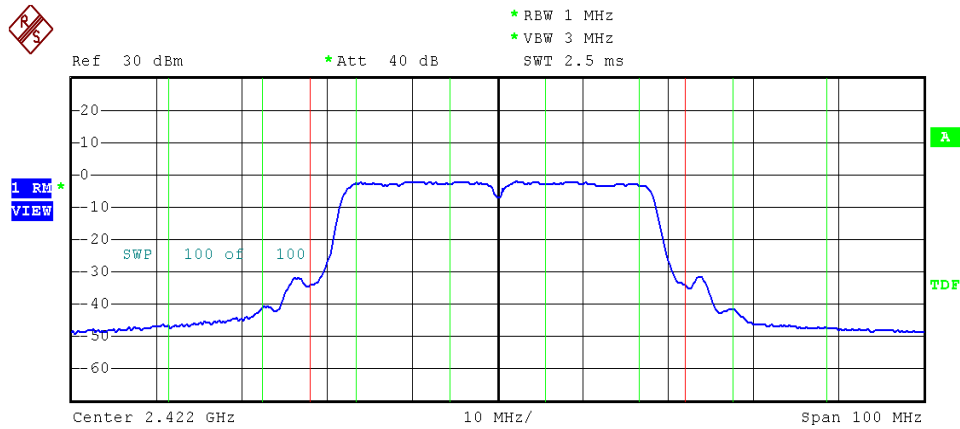


Modulation Standard: 802.11n HT20 (130Mbps), ANT L, Average Power Output
Channel: 11



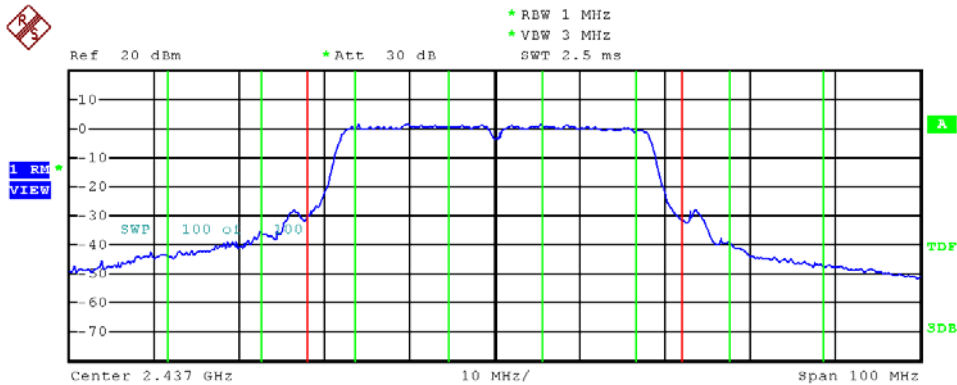


Modulation Standard: 802.11n HT40 (270Mbps), ANT L, Average Power Output
Channel: 03



Tx Channel			
Bandwidth	44 MHz	Power	12.07 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.53 dB
Spacing	16.5 MHz	Upper	-4.57 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.92 dB
Spacing	27.5 MHz	Upper	-13.75 dB

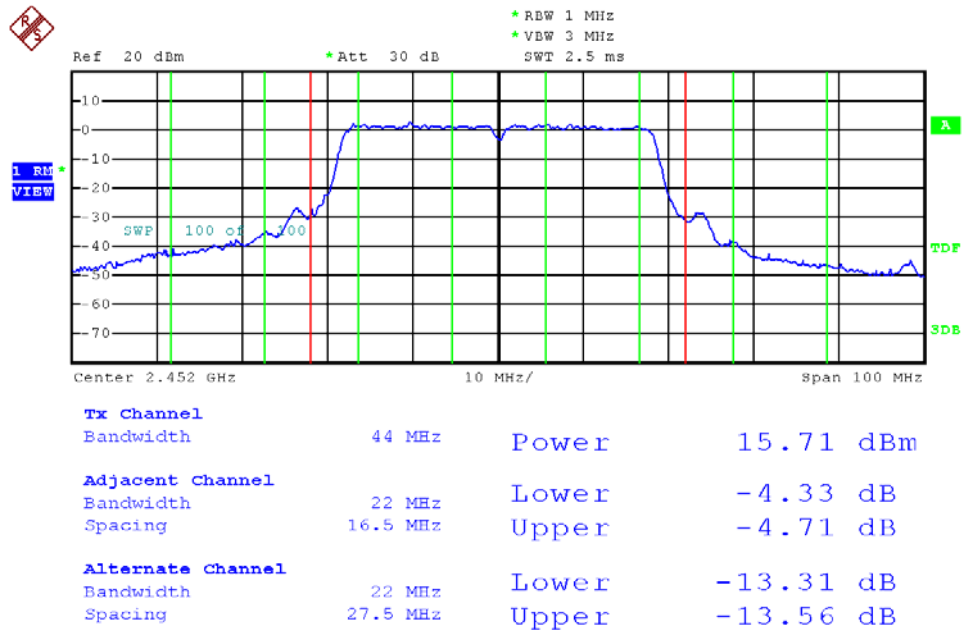
Modulation Standard: 802.11n HT40 (270Mbps), ANT L, Average Power Output
Channel: 06



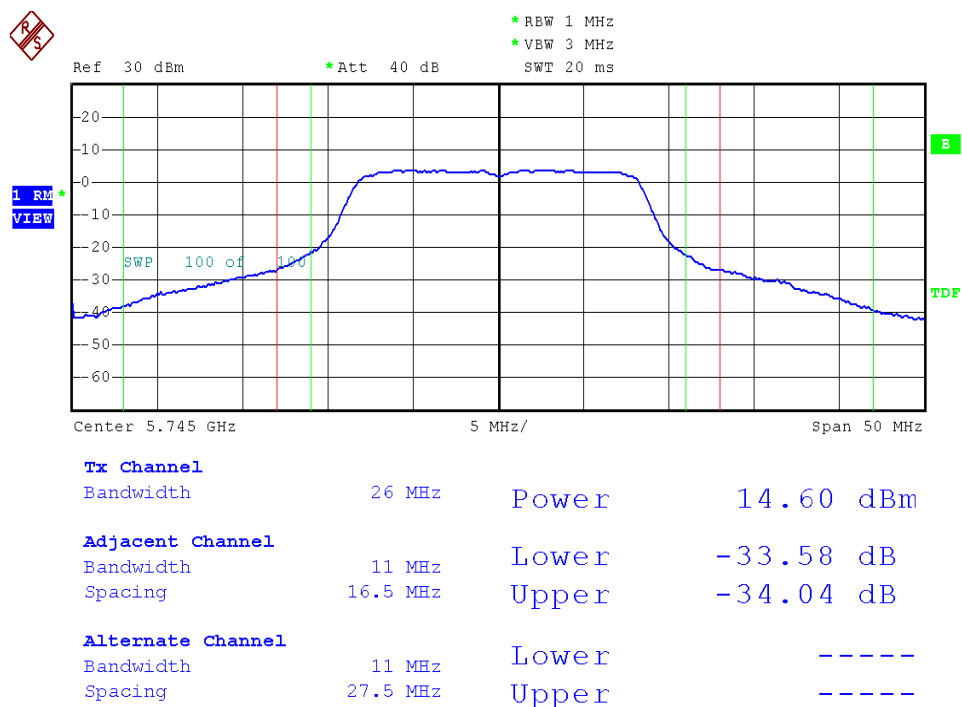
Tx Channel			
Bandwidth	44 MHz	Power	15.12 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.43 dB
Spacing	16.5 MHz	Upper	-4.76 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.73 dB
Spacing	27.5 MHz	Upper	-13.81 dB



Modulation Standard: 802.11n HT40 (270Mbps), ANT L, Average Power Output
Channel: 09

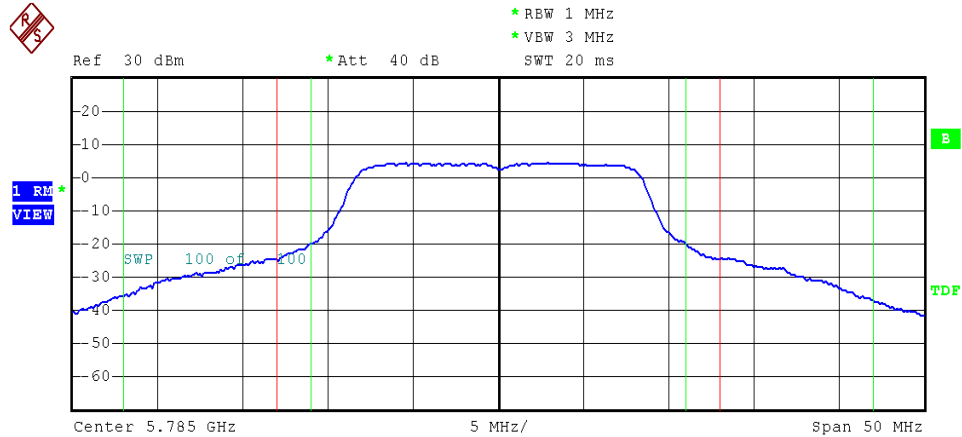


Modulation Standard: 802.11a (54Mbps), ANT L, Average Power Output
Channel: 149



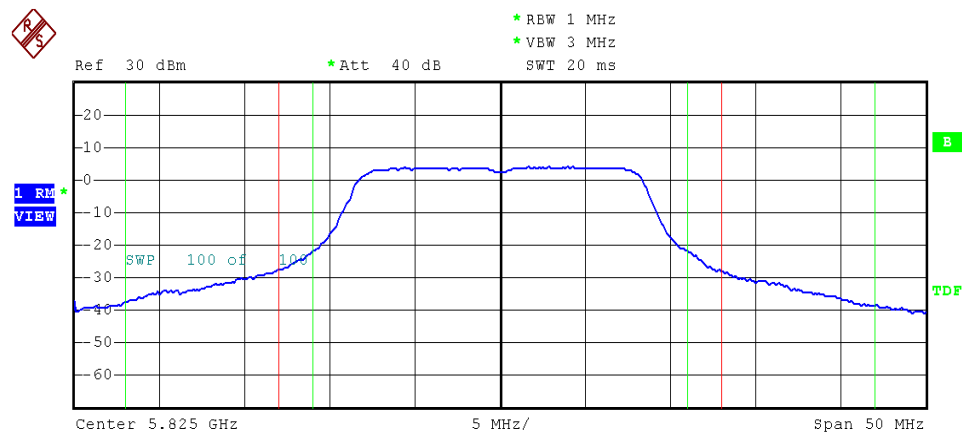


Modulation Standard: 802.11a (54Mbps), ANT L, Average Power Output
Channel: 157



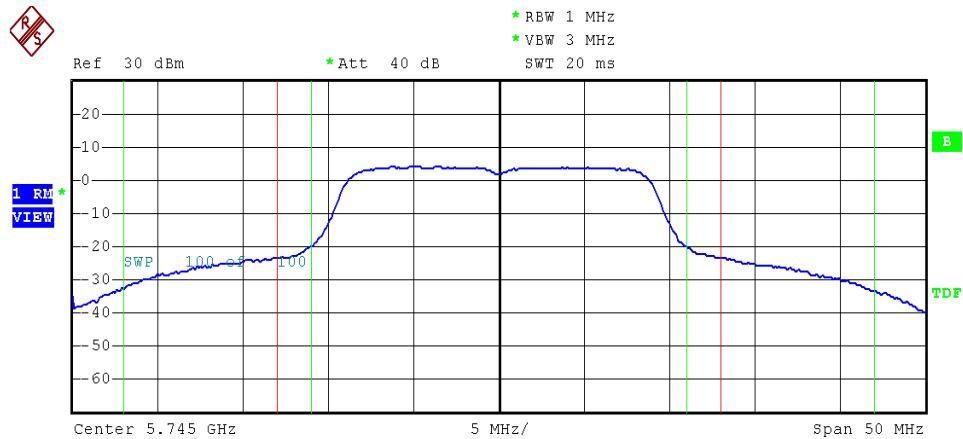
Tx Channel			
Bandwidth	26 MHz	Power	15.35 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-31.89 dB
Spacing	16.5 MHz	Upper	-32.22 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----

Modulation Standard: 802.11a (54Mbps), ANT L, Average Power Output
Channel: 165



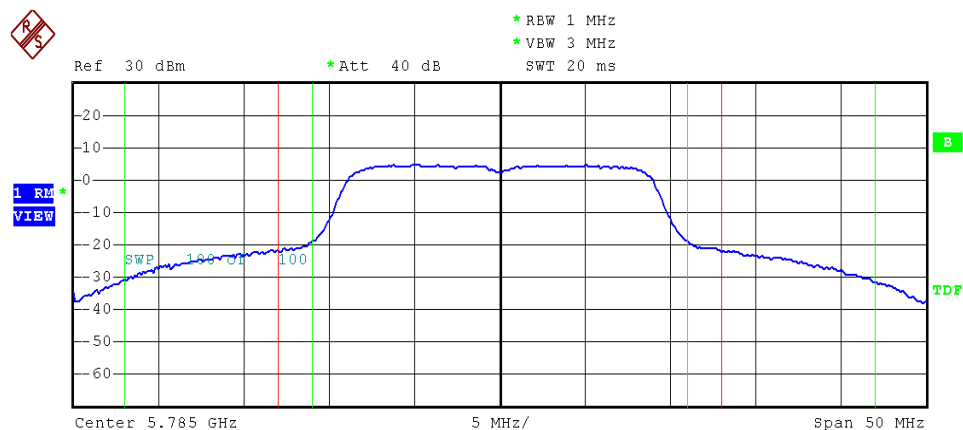
Tx Channel			
Bandwidth	26 MHz	Power	14.96 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-34.70 dB
Spacing	16.5 MHz	Upper	-34.95 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	----
Spacing	27.5 MHz	Upper	----

Modulation Standard: 802.11an HT20 (130Mbps), ANT L, Average Power Output
Channel: 149



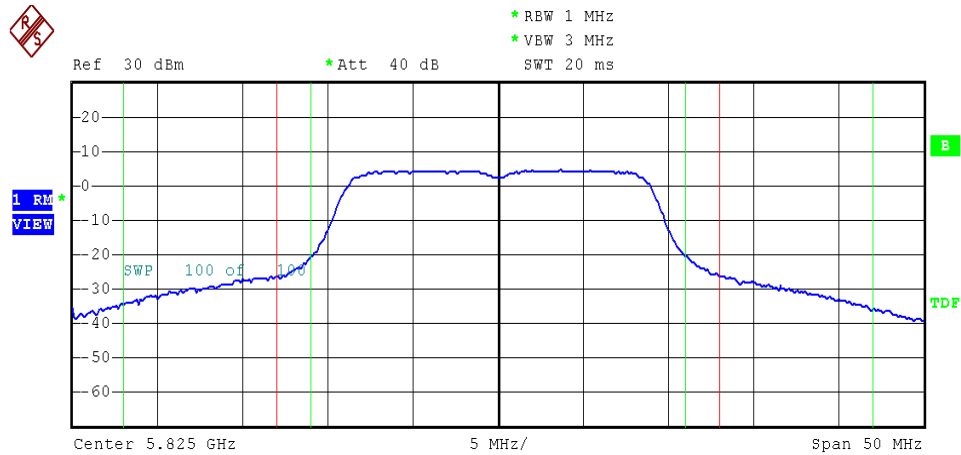
Tx Channel			
Bandwidth	26 MHz	Power	15.26 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-30.63 dB
Spacing	16.5 MHz	Upper	-31.06 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

Modulation Standard: 802.11an HT20 (130Mbps), ANT L, Average Power Output
Channel: 157



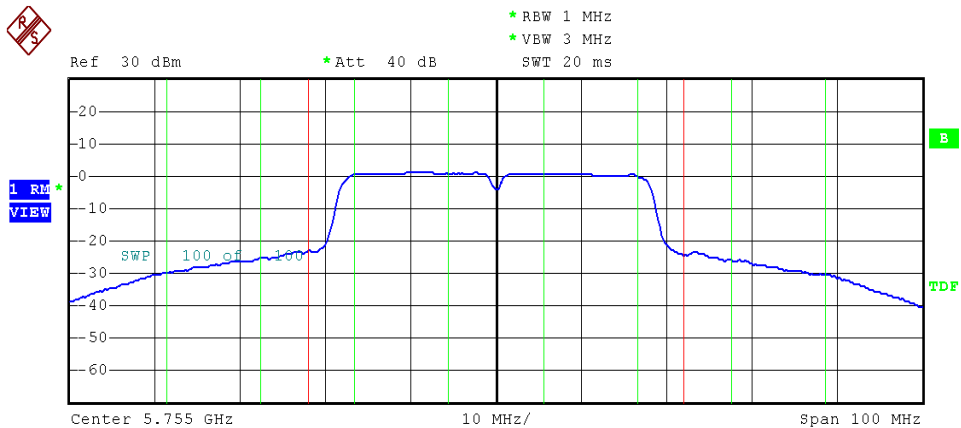
Tx Channel			
Bandwidth	26 MHz	Power	15.82 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-29.68 dB
Spacing	16.5 MHz	Upper	-29.94 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

Modulation Standard: 802.11an HT20 (130Mbps), ANT L, Average Power Output
Channel: 165



Tx Channel			
Bandwidth	26 MHz	Power	15.70 dBm
Adjacent Channel			
Bandwidth	11 MHz	Lower	-33.71 dB
Spacing	16.5 MHz	Upper	-33.72 dB
Alternate Channel			
Bandwidth	11 MHz	Lower	-----
Spacing	27.5 MHz	Upper	-----

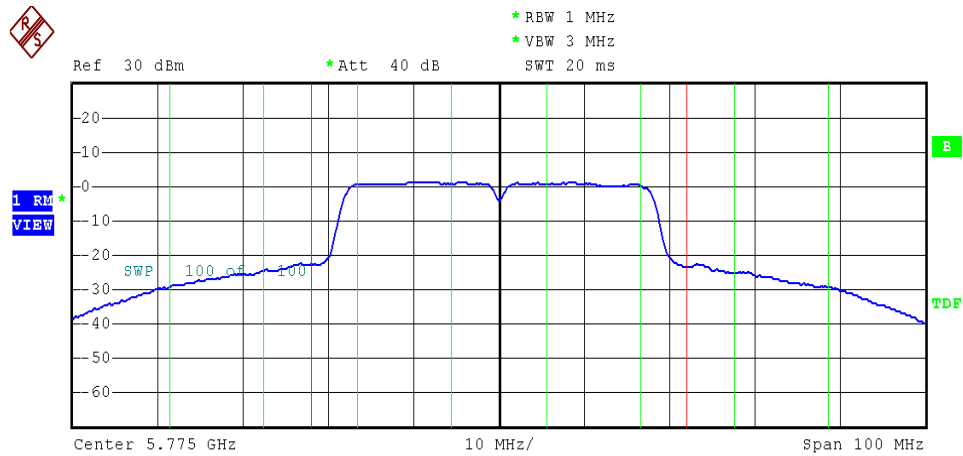
Modulation Standard: 802.11an HT40 (270Mbps), ANT L, Average Power Output
Channel: 151



Tx Channel			
Bandwidth	44 MHz	Power	15.41 dBm
Adjacent Channel			
Bandwidth	22 MHz	Lower	-4.33 dB
Spacing	16.5 MHz	Upper	-4.71 dB
Alternate Channel			
Bandwidth	22 MHz	Lower	-13.70 dB
Spacing	27.5 MHz	Upper	-14.15 dB



Modulation Standard: 802.11an HT40 (270Mbps), ANT L, Average Power Output
Channel: 155

**Tx Channel**

Bandwidth 44 MHz Power 15.52 dBm

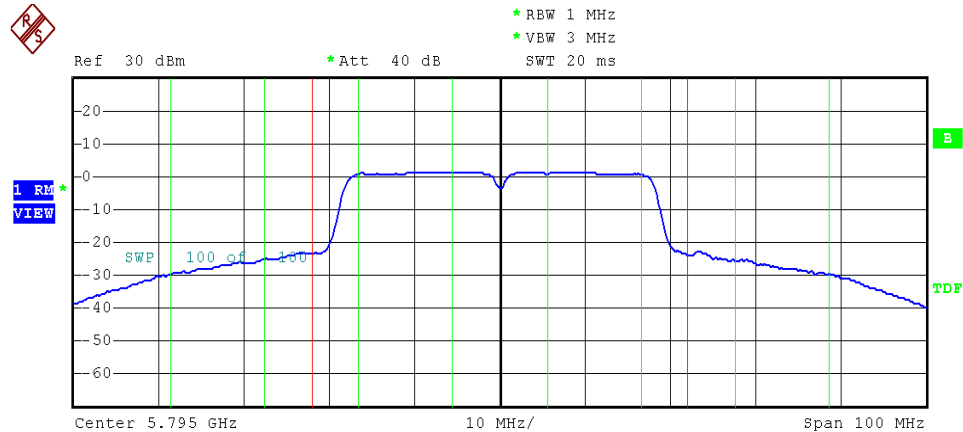
Adjacent Channel

Bandwidth 22 MHz Lower -4.39 dB
Spacing 16.5 MHz Upper -4.64 dB

Alternate Channel

Bandwidth 22 MHz Lower -13.71 dB
Spacing 27.5 MHz Upper -14.03 dB

Modulation Standard: 802.11an HT40 (270Mbps), ANT L, Average Power Output
Channel: 159

**Tx Channel**

Bandwidth 44 MHz Power 15.74 dBm

Adjacent Channel

Bandwidth 22 MHz Lower -4.46 dB
Spacing 16.5 MHz Upper -4.56 dB

Alternate Channel

Bandwidth 22 MHz Lower -13.81 dB
Spacing 27.5 MHz Upper -13.88 dB



8. Power Spectral Density

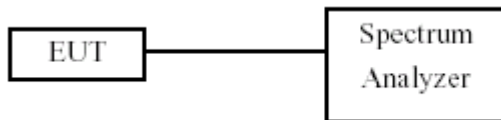
8.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm (2.4GHz), 6.99dBm (5GHz).

8.2 Test Procedures

- The transmitter output was connected to spectrum analyzer.
- The spectrum analyzer's resolution bandwidth were set at 100KHz RBW and 300KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.
- Scale the observed power level to an equivalent value in 3 kHz by adjusting the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3\text{ kHz}/100) = -15.2\text{ dB}$.
- The power spectral density was measured and recorded.

8.3 Test Setup Layout



8.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23



8.5 Test Result and Data

Test Date: Jun. 07, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)	
			ANT R	ANT L
802.11b (11Mbps)	01	2412	-3.38	-2.74
	06	2437	-3.14	-2.14
	11	2462	-3.61	-2.89
802.11g (54Mbps)	01	2412	-11.59	-10.11
	06	2437	-11.26	-10.36
	11	2462	-11.59	-10.81

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)		
			ANT R	ANT L	R+L
802.11n HT20 (130Mbps)	01	2412	-12.73	-10.02	-8.16
	06	2437	-13.31	-10.18	-8.46
	11	2462	-14.02	-10.21	-8.70
802.11n HT40 (270Mbps)	03	2422	-15.9	-12.68	-10.99
	06	2437	-16.58	-14.74	-12.55
	09	2452	-17.2	-15.23	-13.09

Test Date: Jun. 15, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

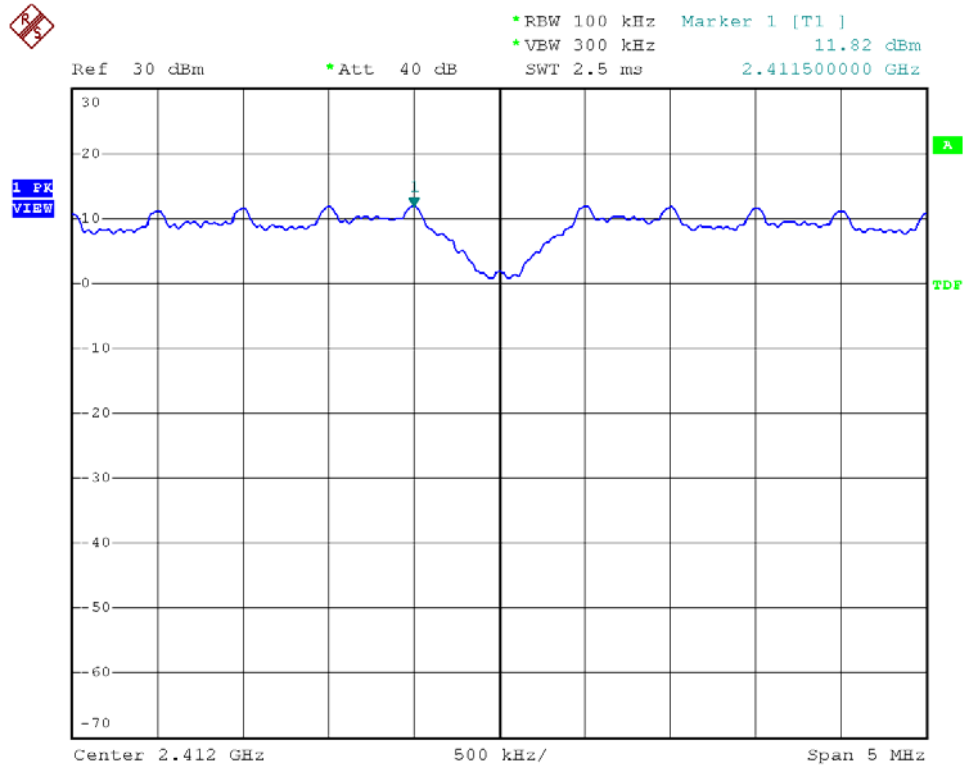
Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)	
			ANT R	ANT L
802.11a (54Mbps)	149	5745	-10.56	-8.31
	157	5785	-12.27	-9.43
	165	5825	-13.33	-10.33

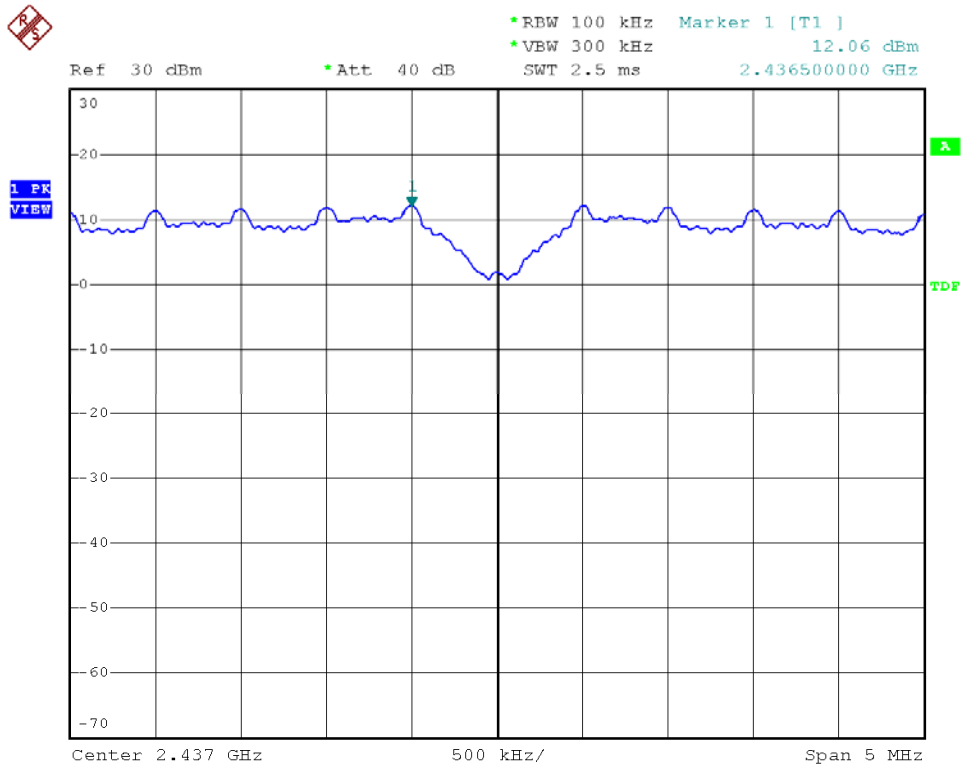
Modulation Standard	Channel	Frequency (MHz)	Maximum Power Density of 3 kHz Bandwidth (dBm)		
			ANT R	ANT L	R+L
802.11an HT20 (130Mbps)	149	5745	-10.93	-9.72	-7.27
	157	5785	-12.22	-9.52	-7.65
	165	5825	-13.89	-9.59	-8.22
802.11an HT40 (270Mbps)	151	5755	-14.15	-12.26	-10.09
	155	5775	-14.63	-12.10	-10.17
	159	5795	-14.35	-12.55	-10.35



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

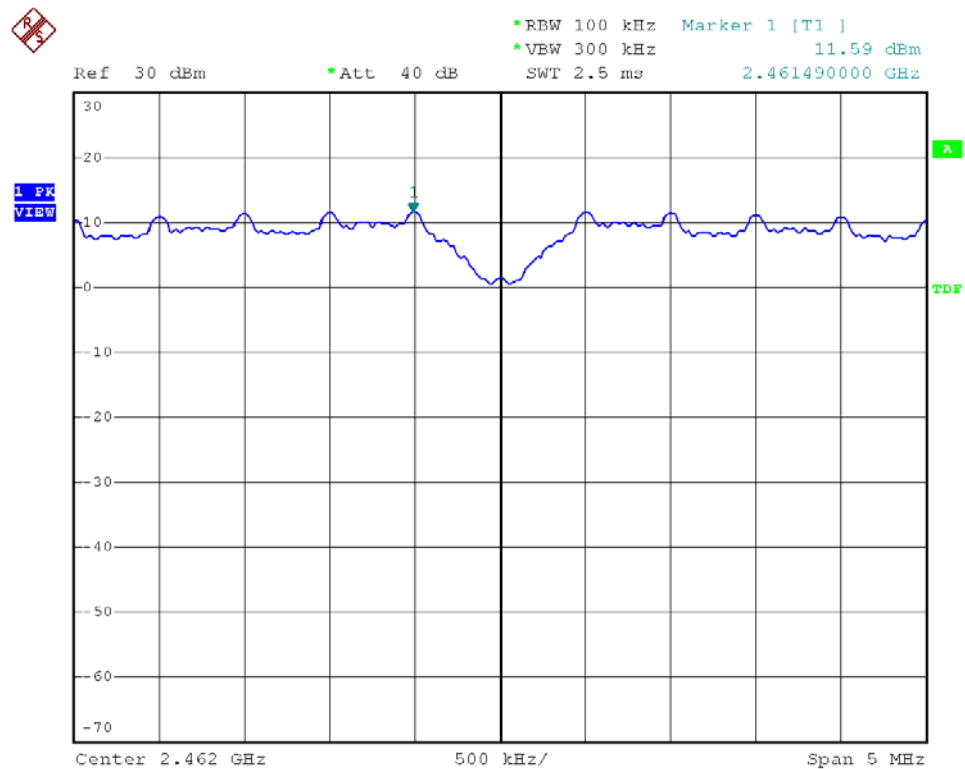


Modulation Standard: 802.11b (11Mbps), ANT R
Channel: 06

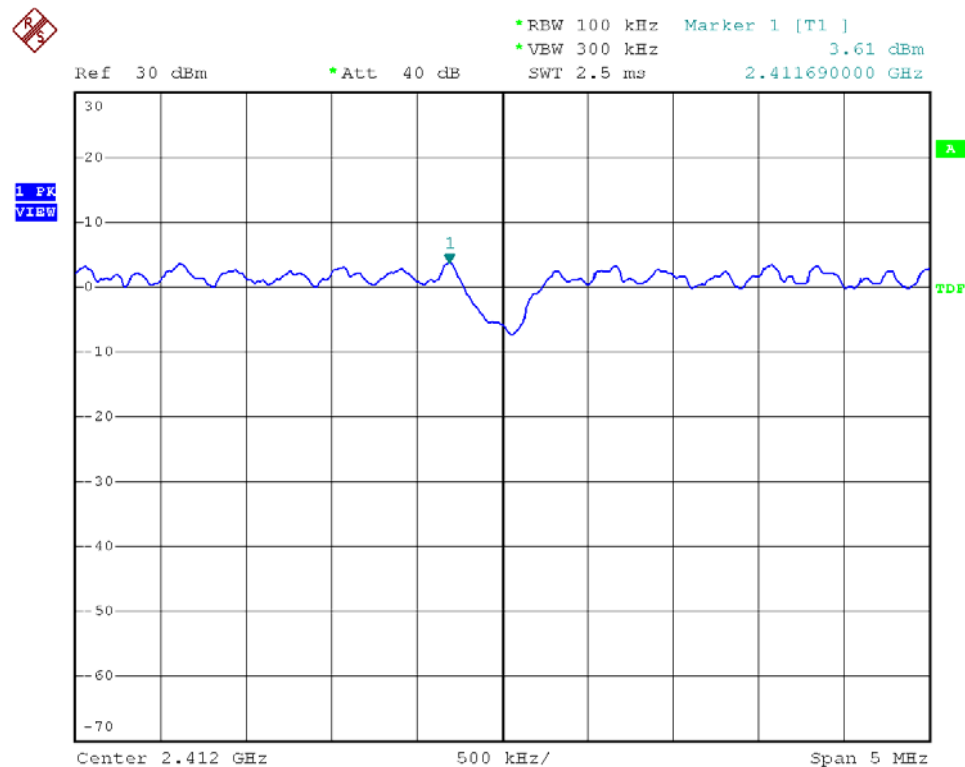




Modulation Standard: 802.11b (11Mbps), ANT R
Channel: 11

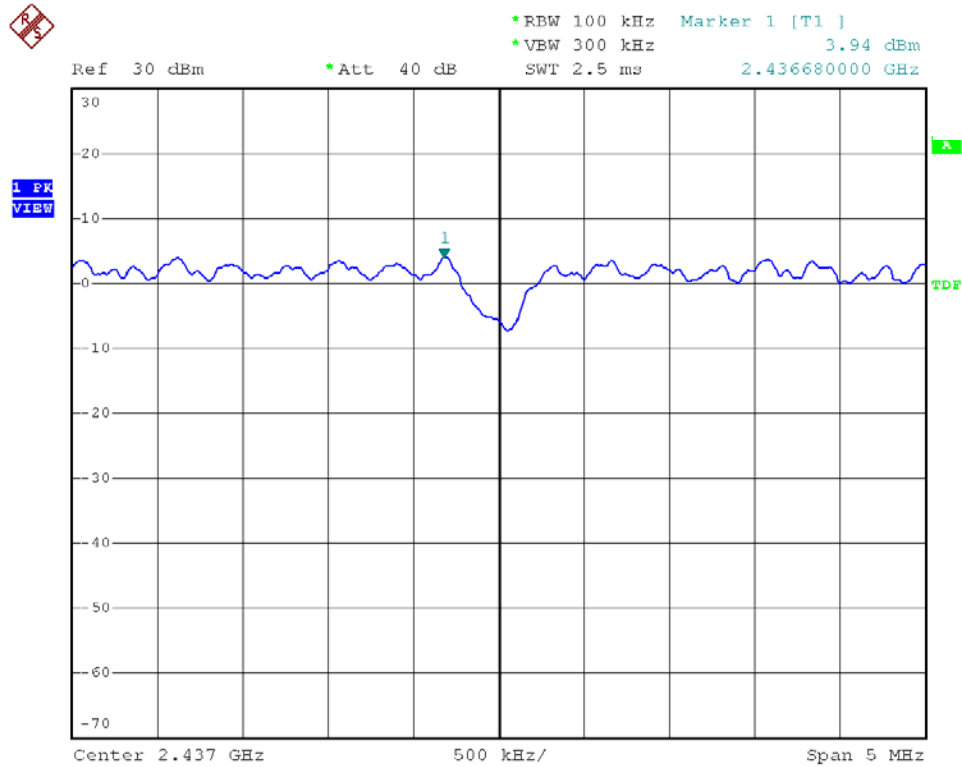


Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 01

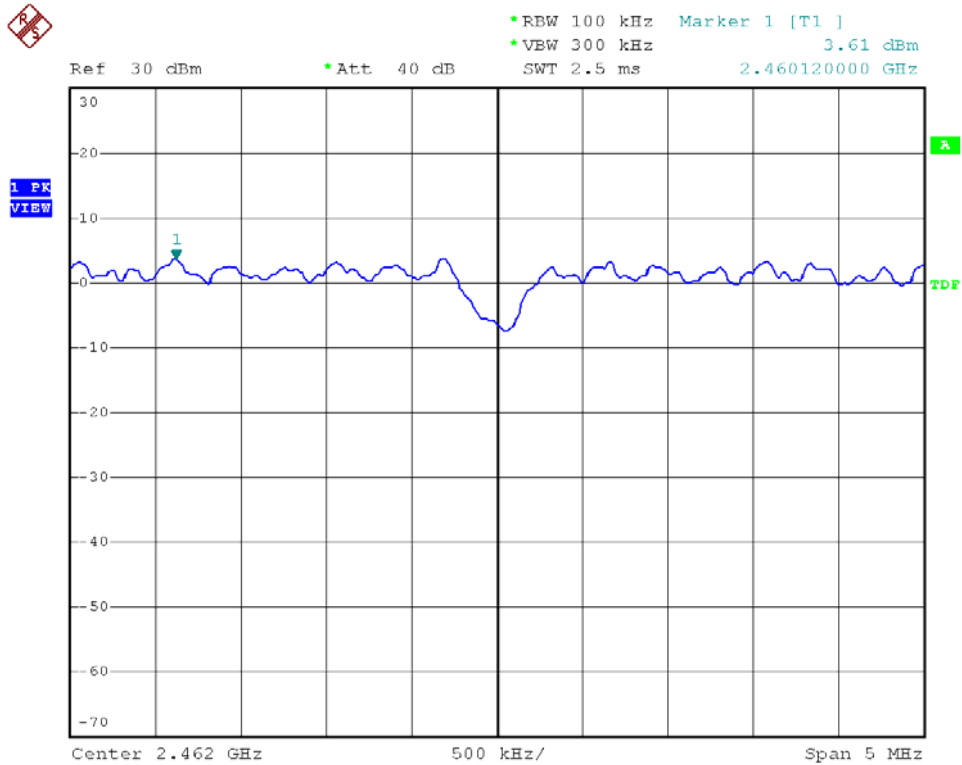




Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 06

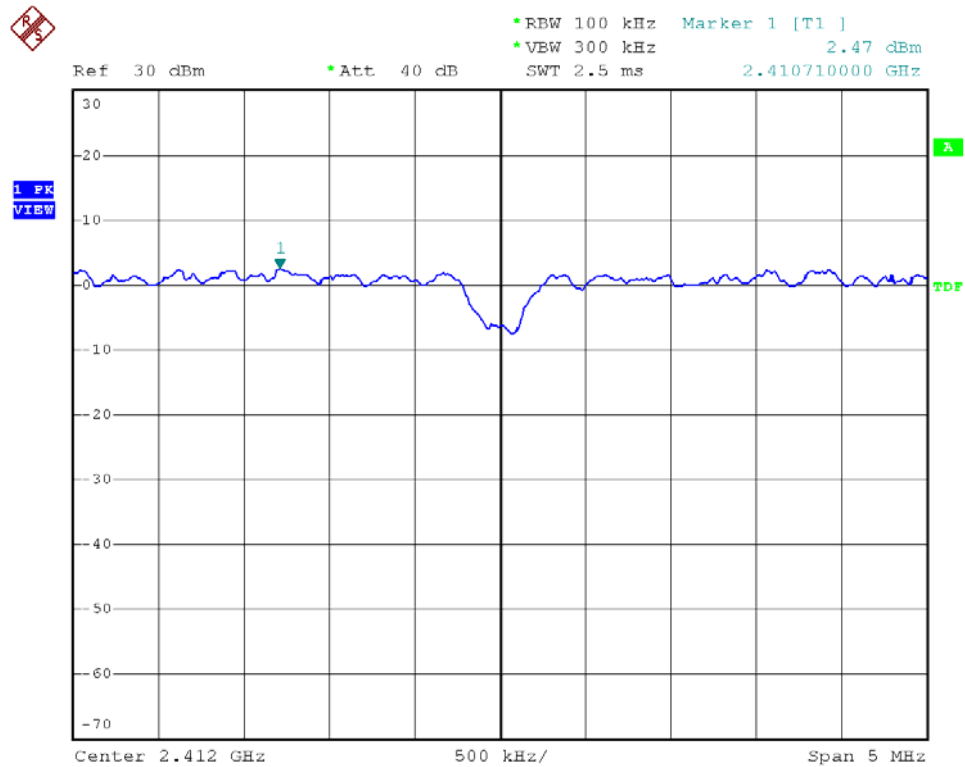


Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 11

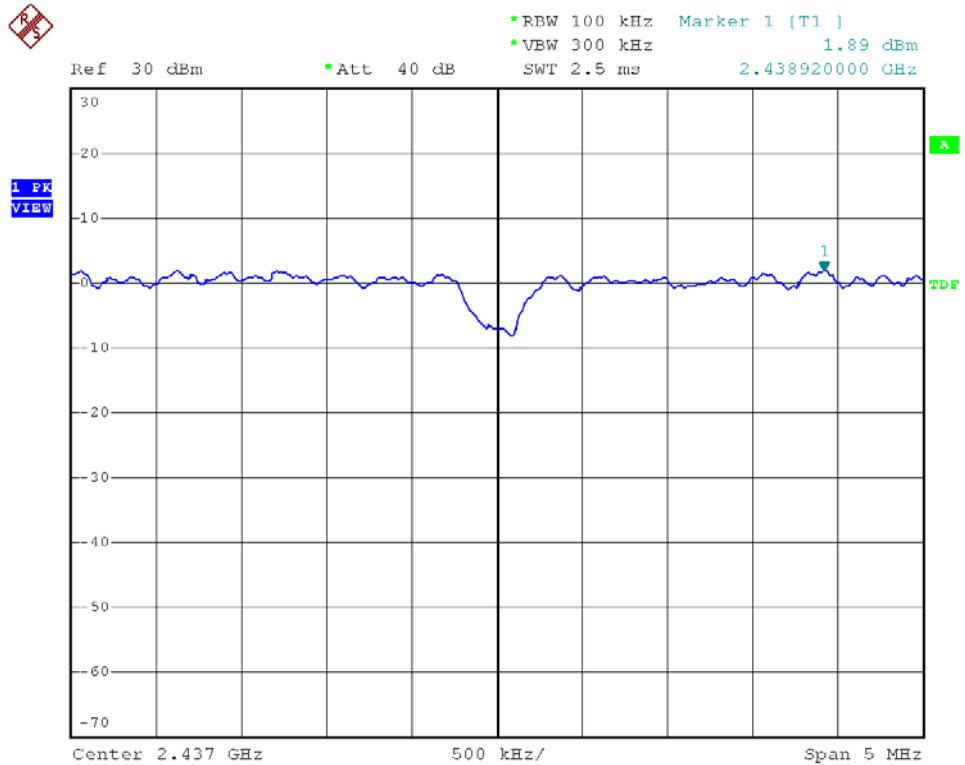




Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 01

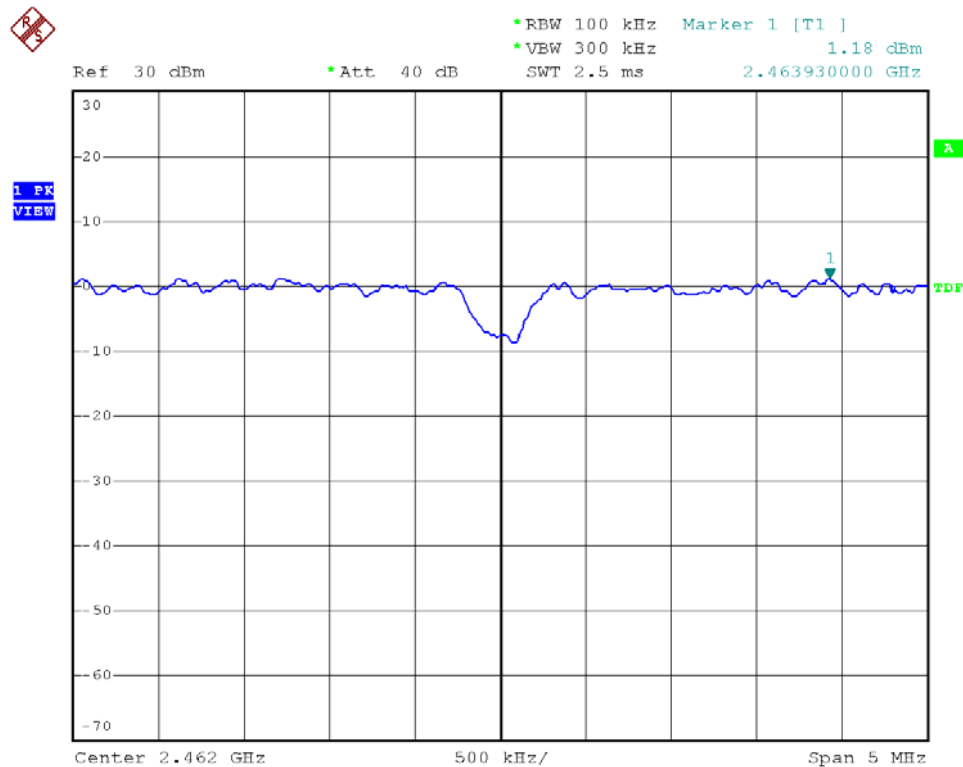


Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 06

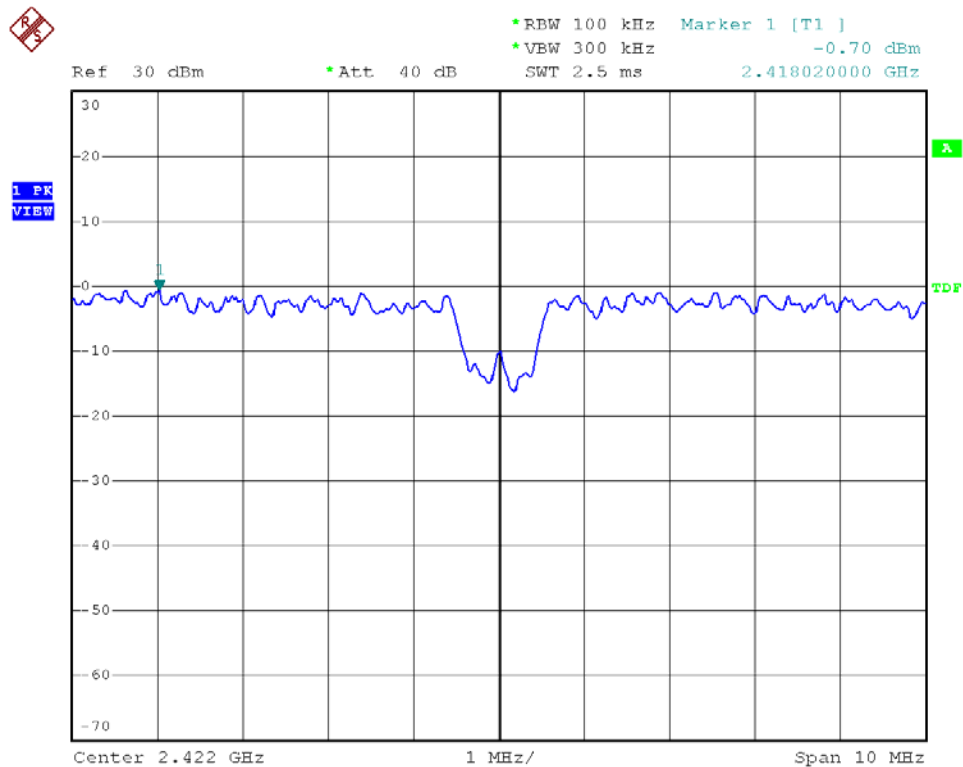




Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 11

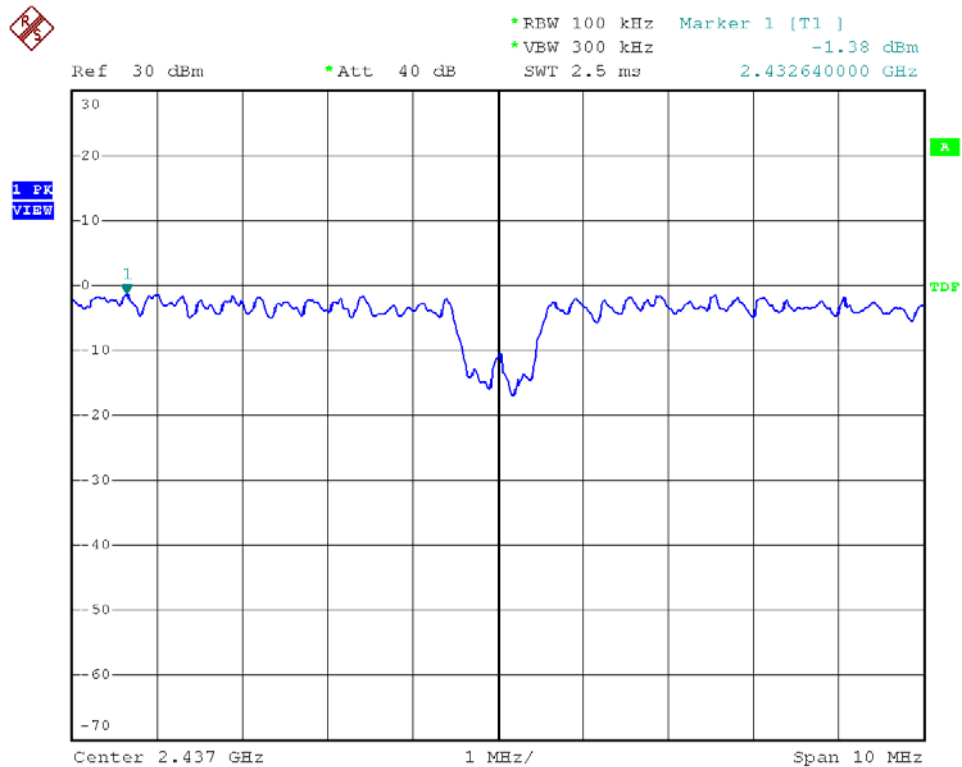


Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 03

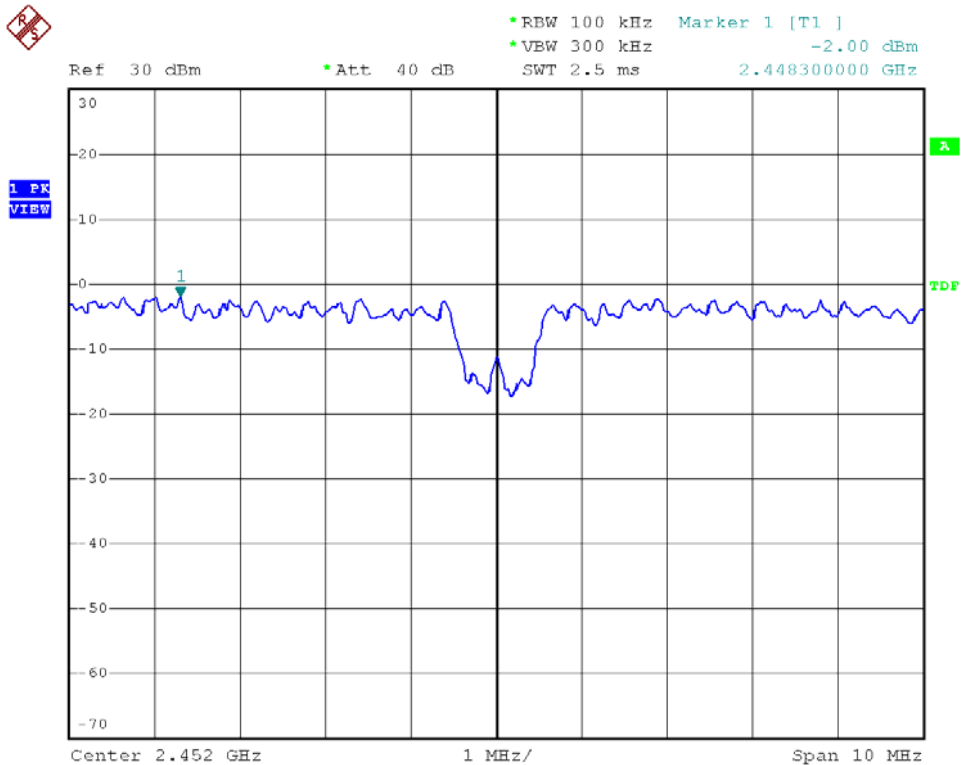




Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 06

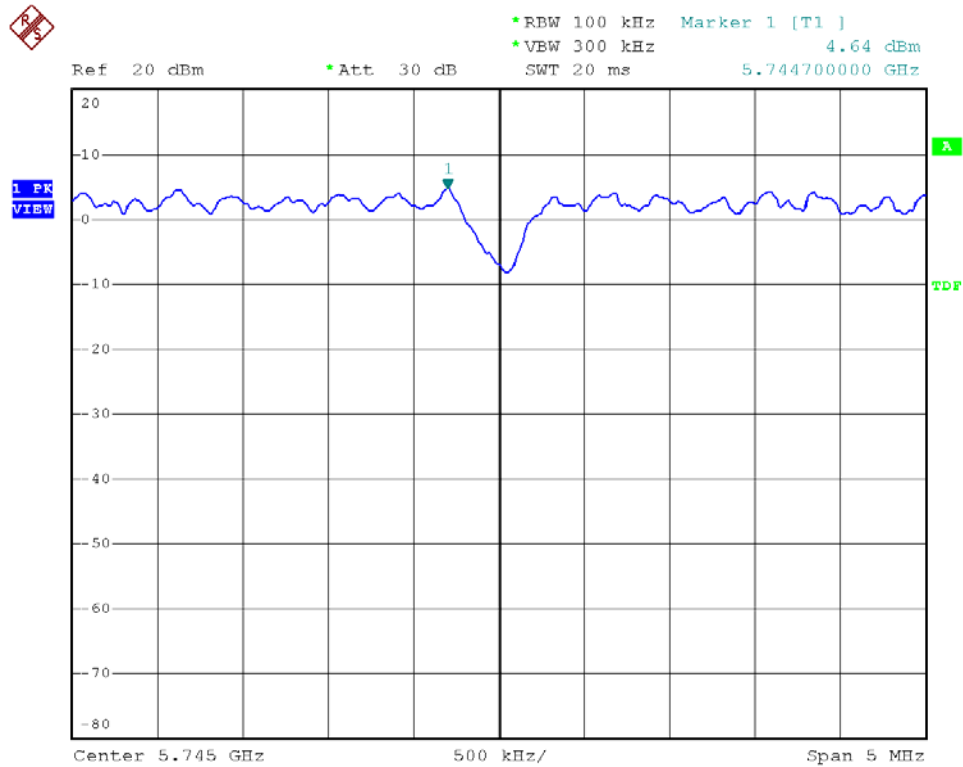


Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 09

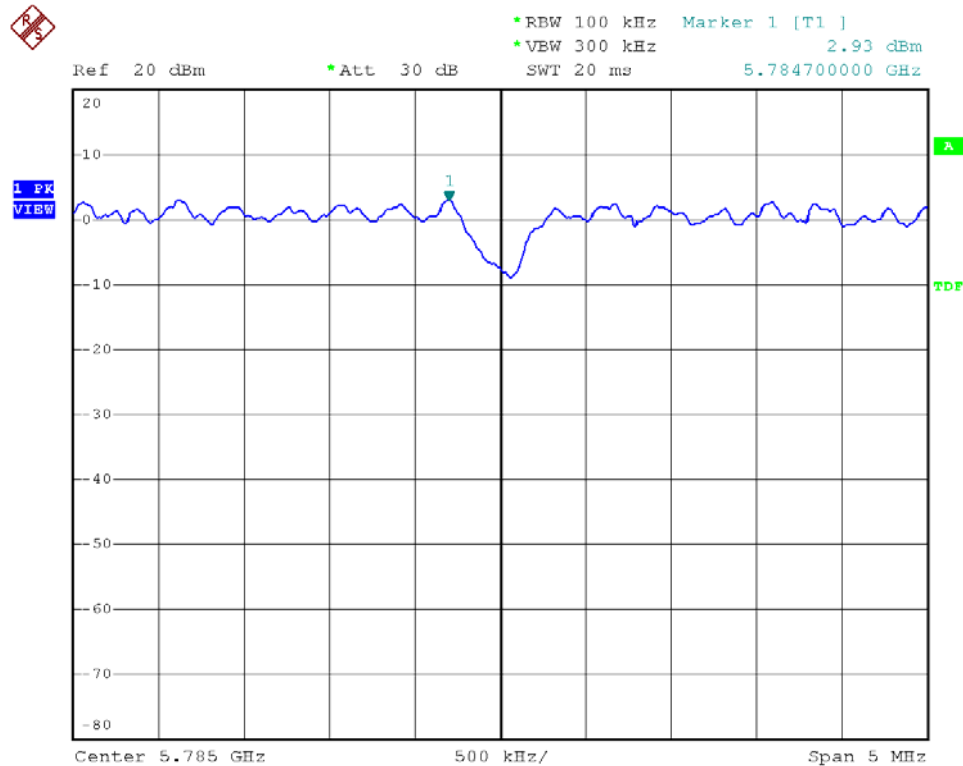




Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 149

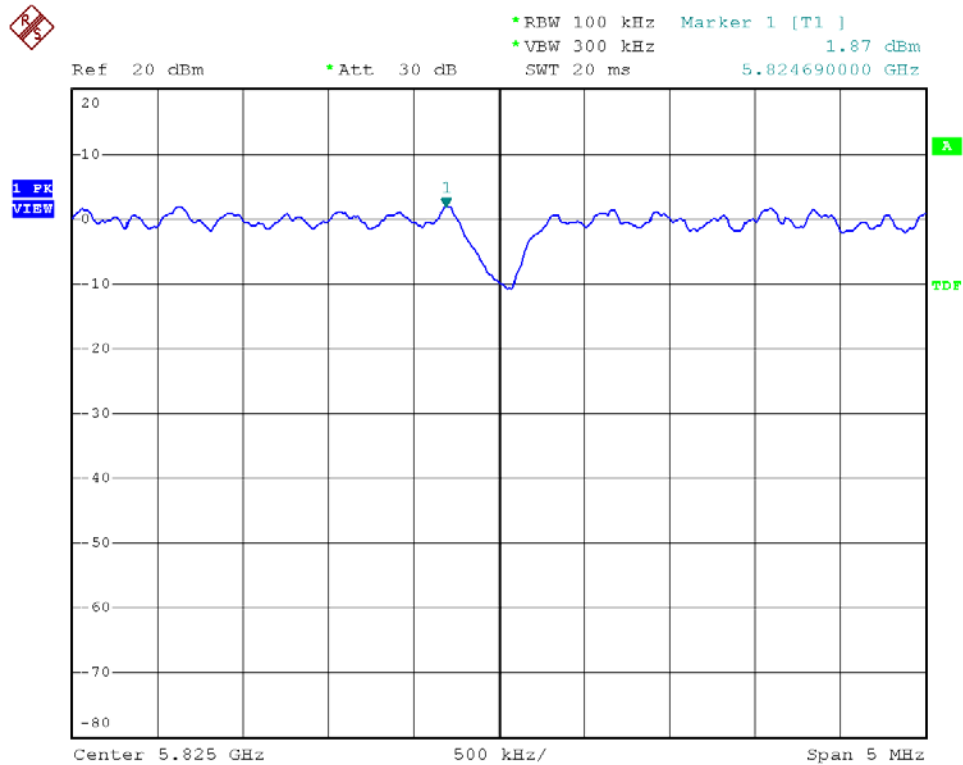


Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 157

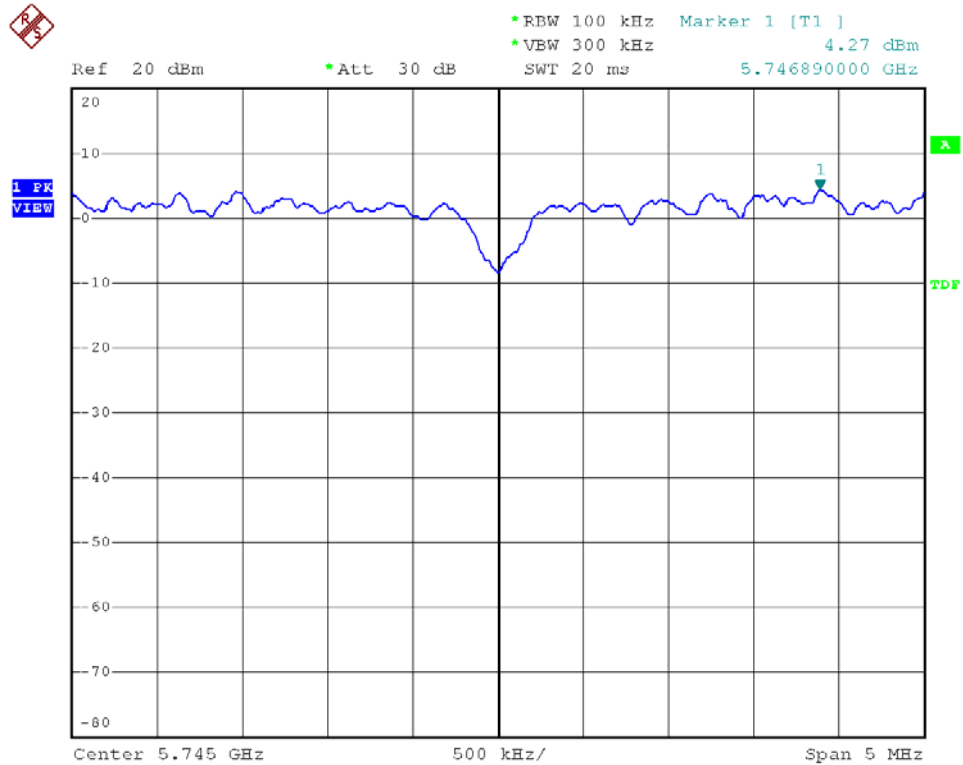




Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 165

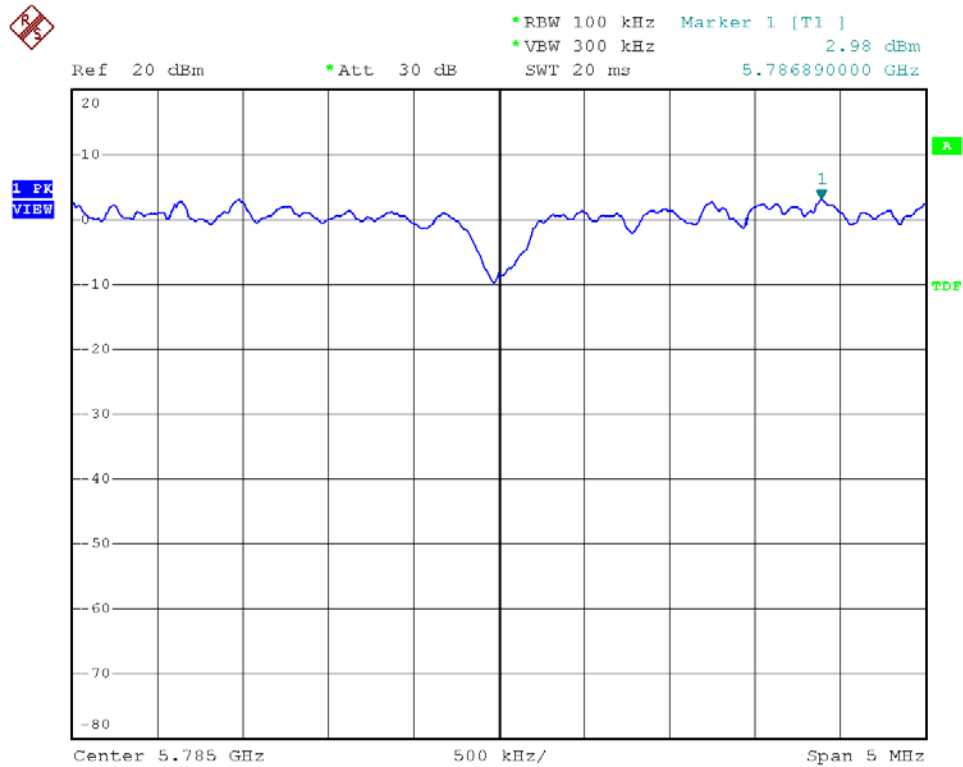


Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 149

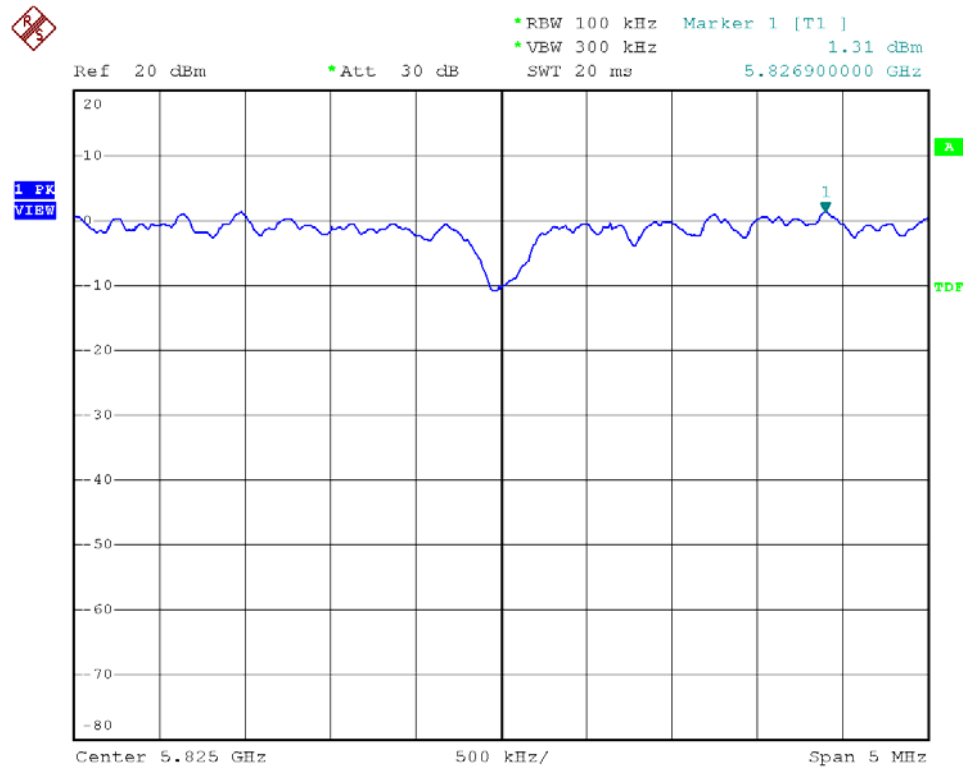




Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 157

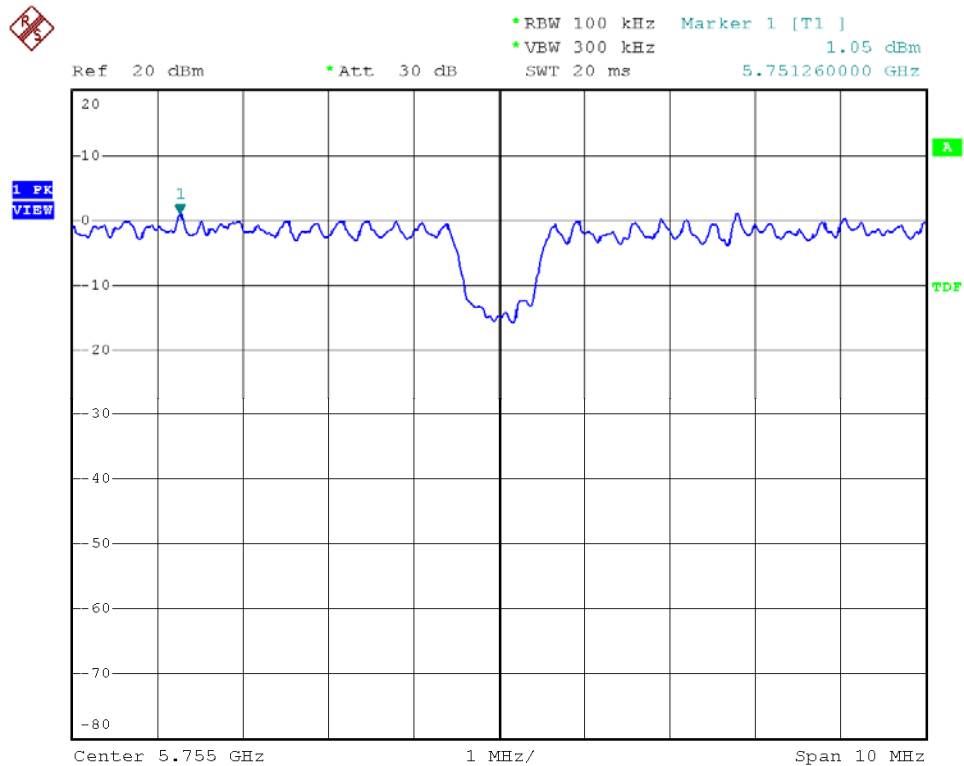


Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 165

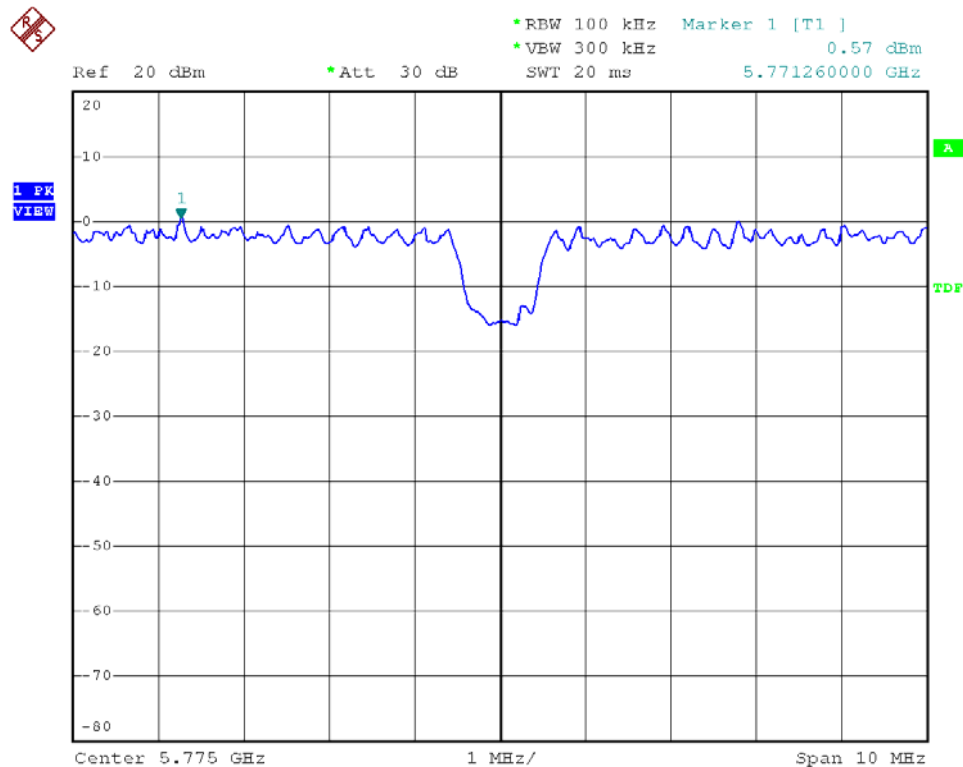




Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 151

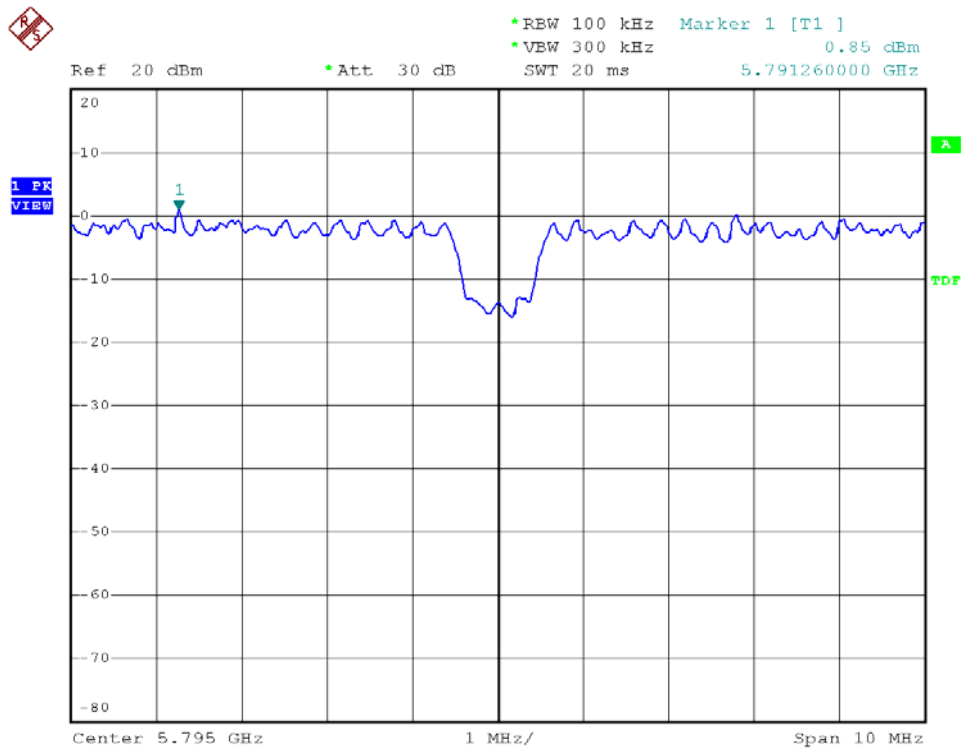


Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 155

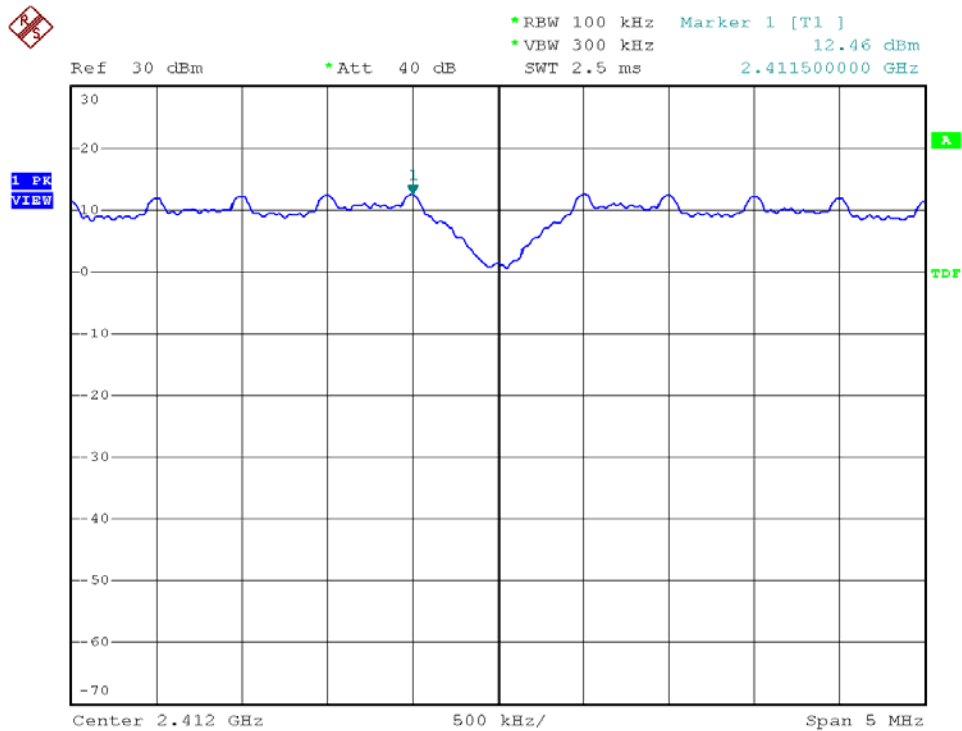




Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 159

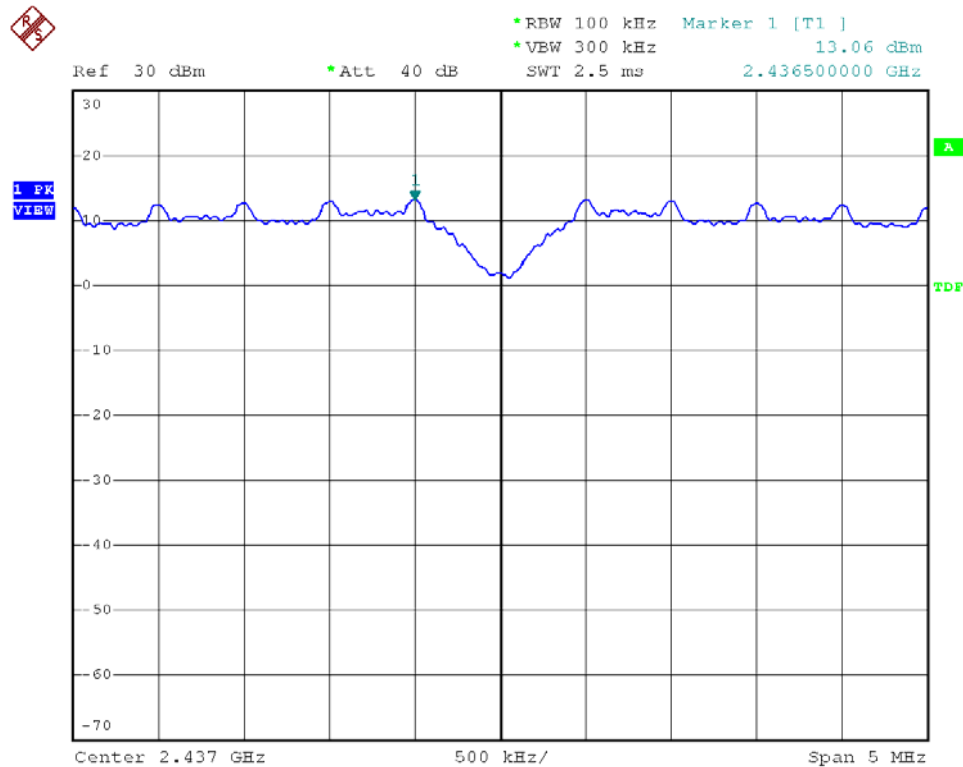


Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 01

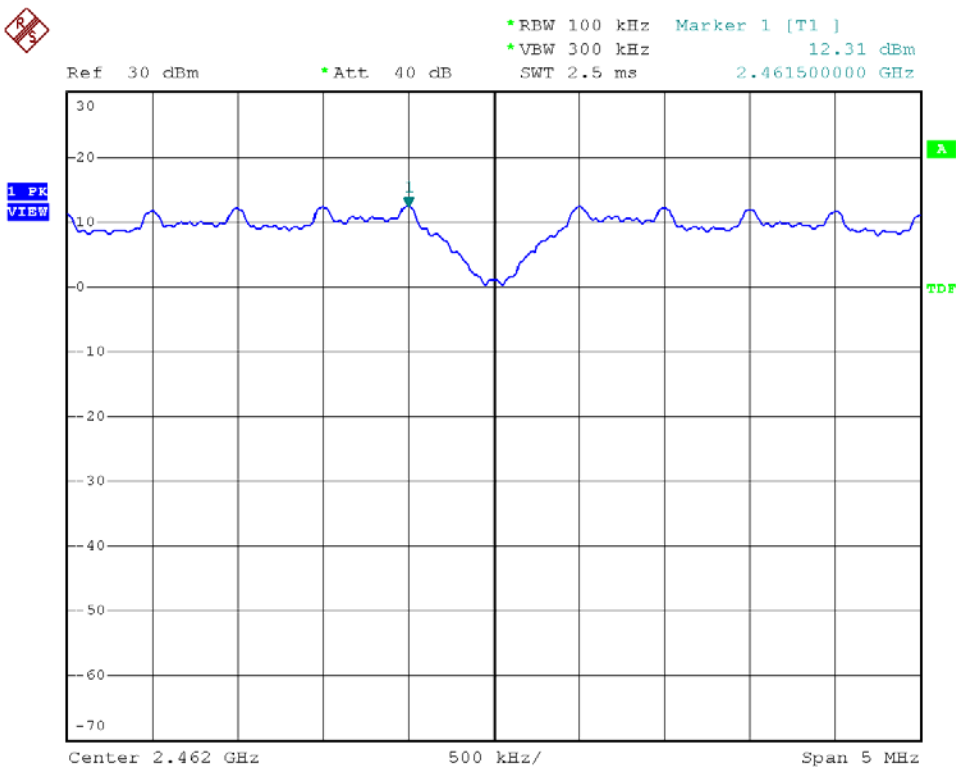




Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 06

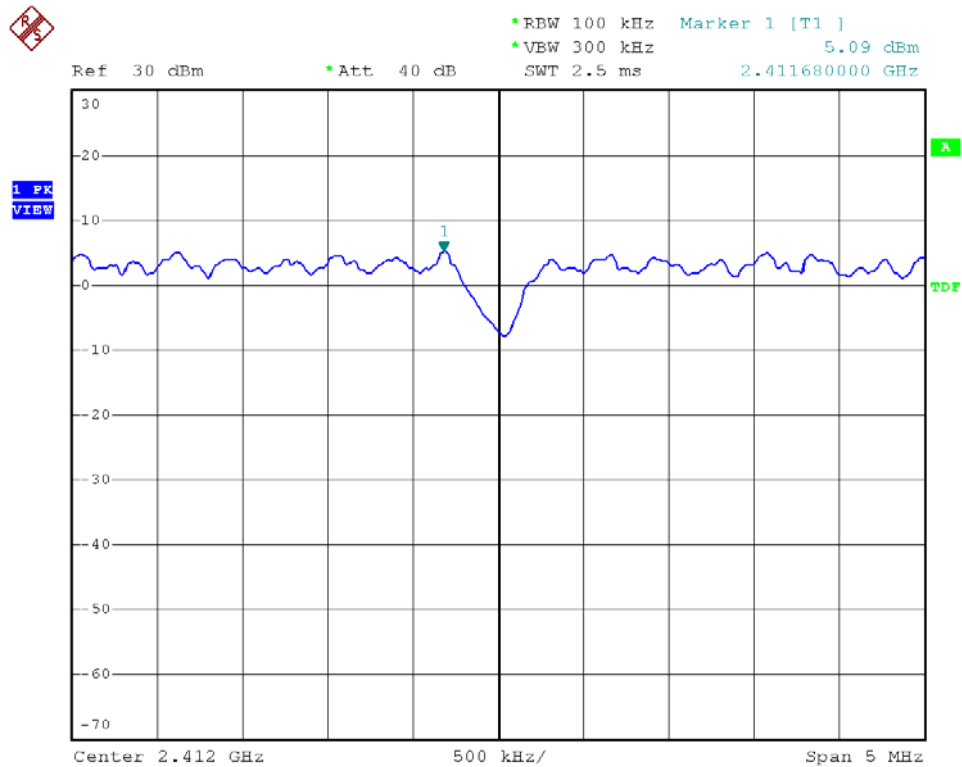


Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 11

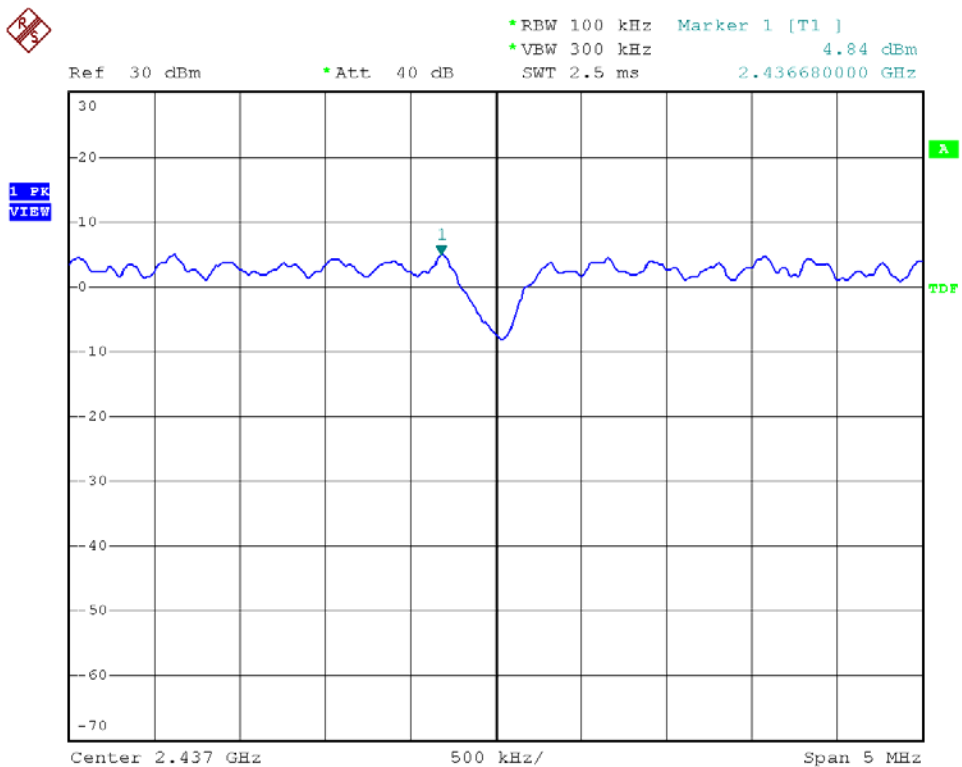




Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 01

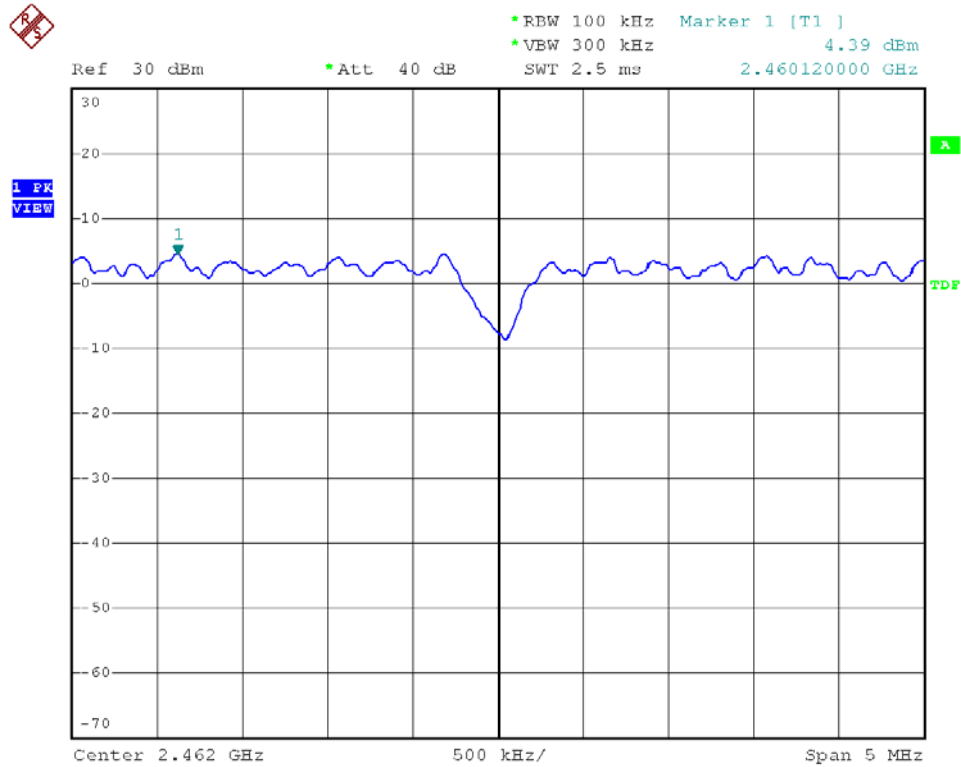


Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 06

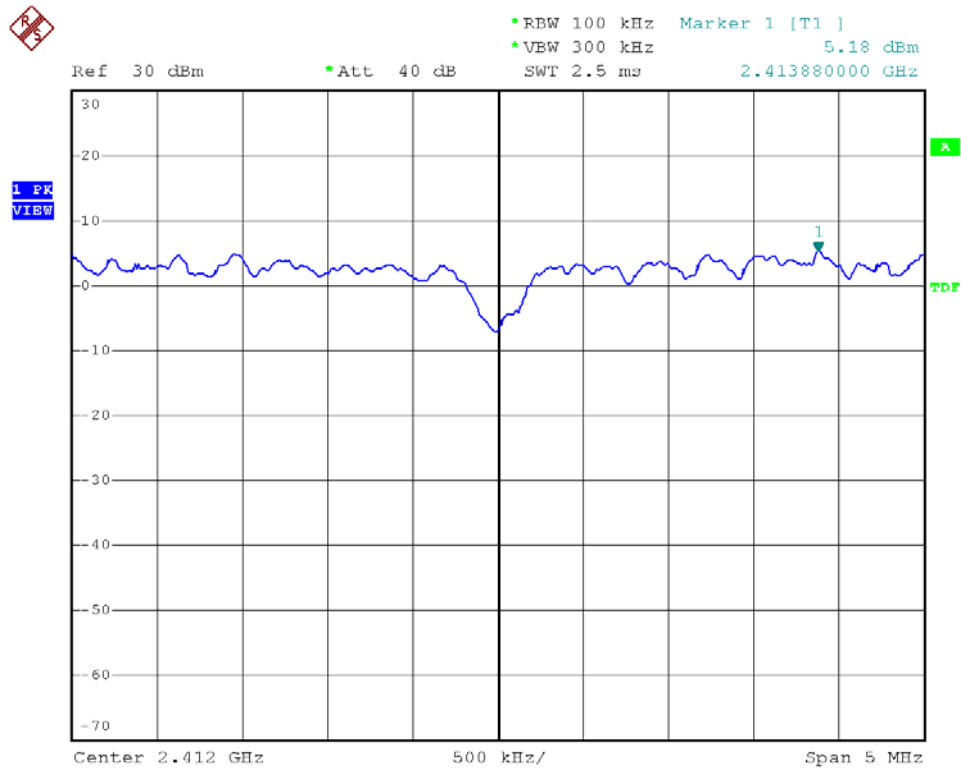




Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 11

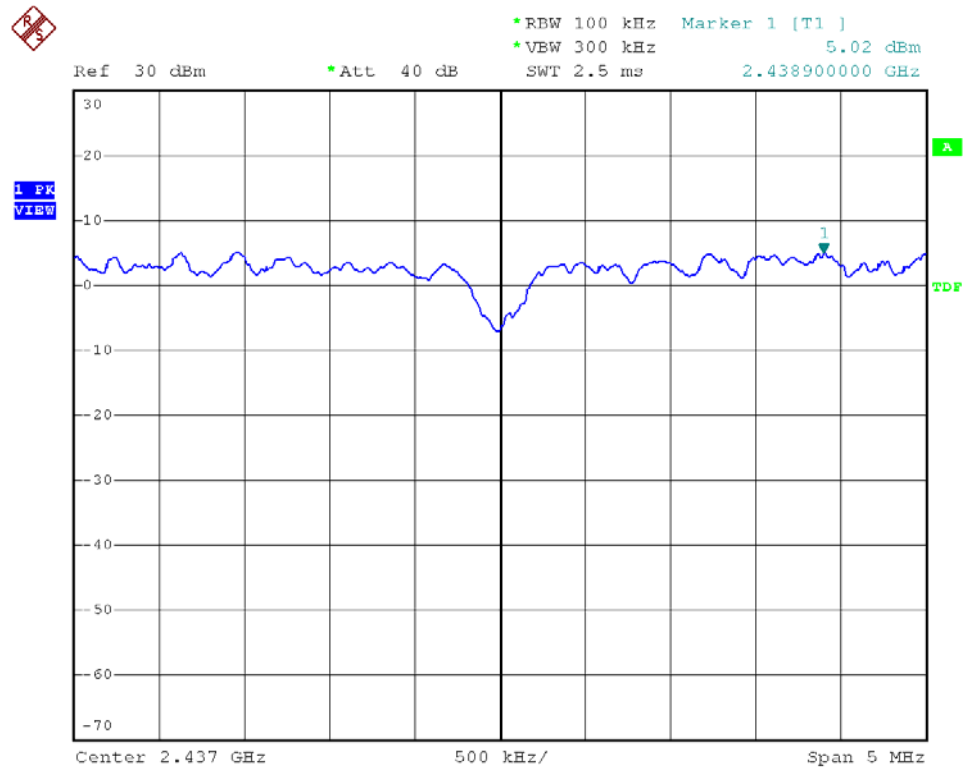


Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 01

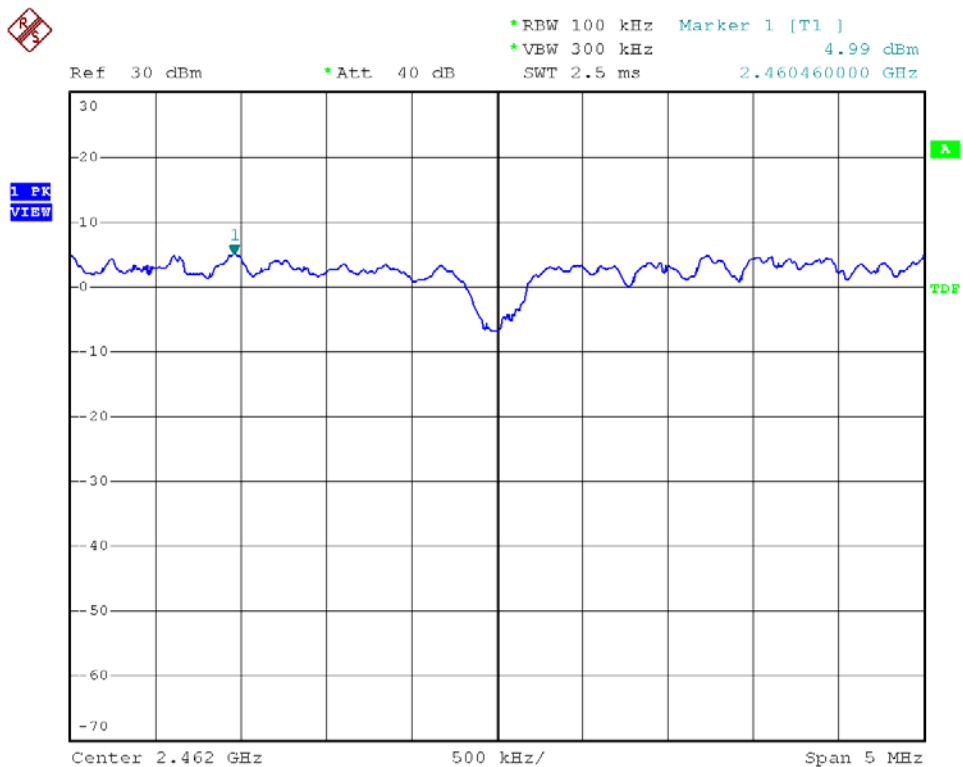




Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 06

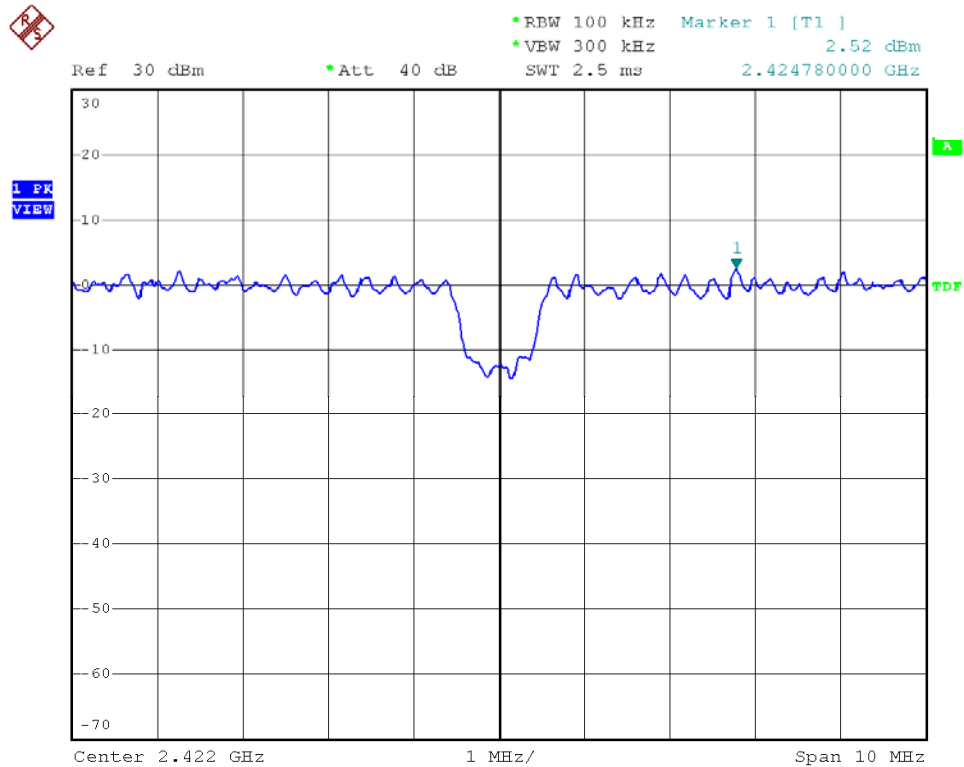


Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 11

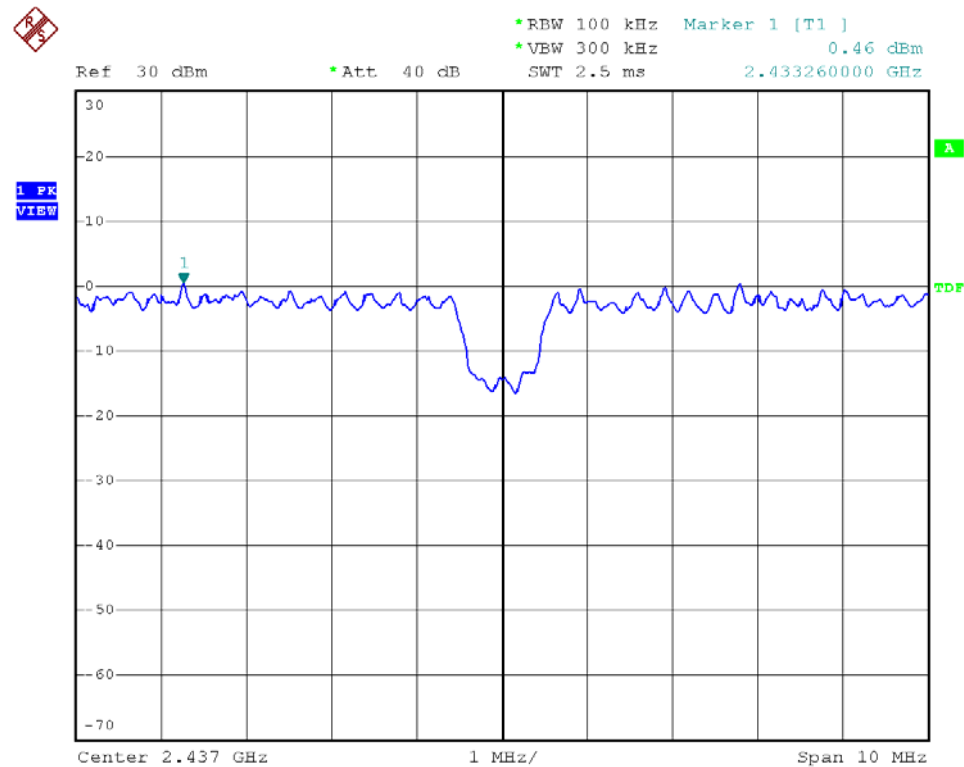




Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 03

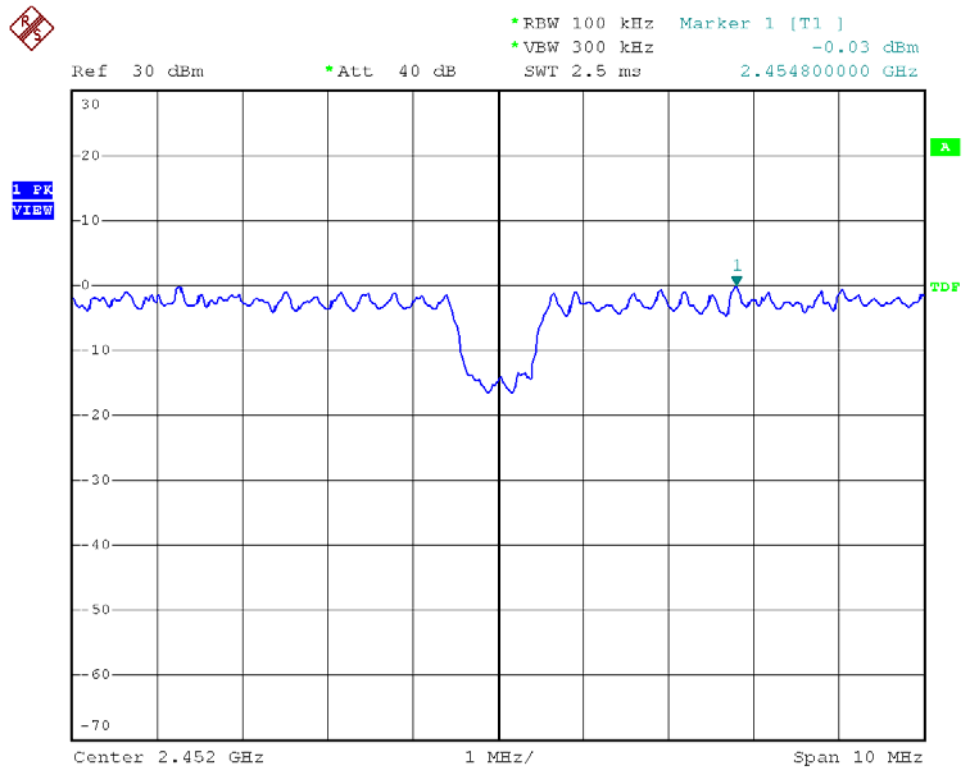


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Channel: 06

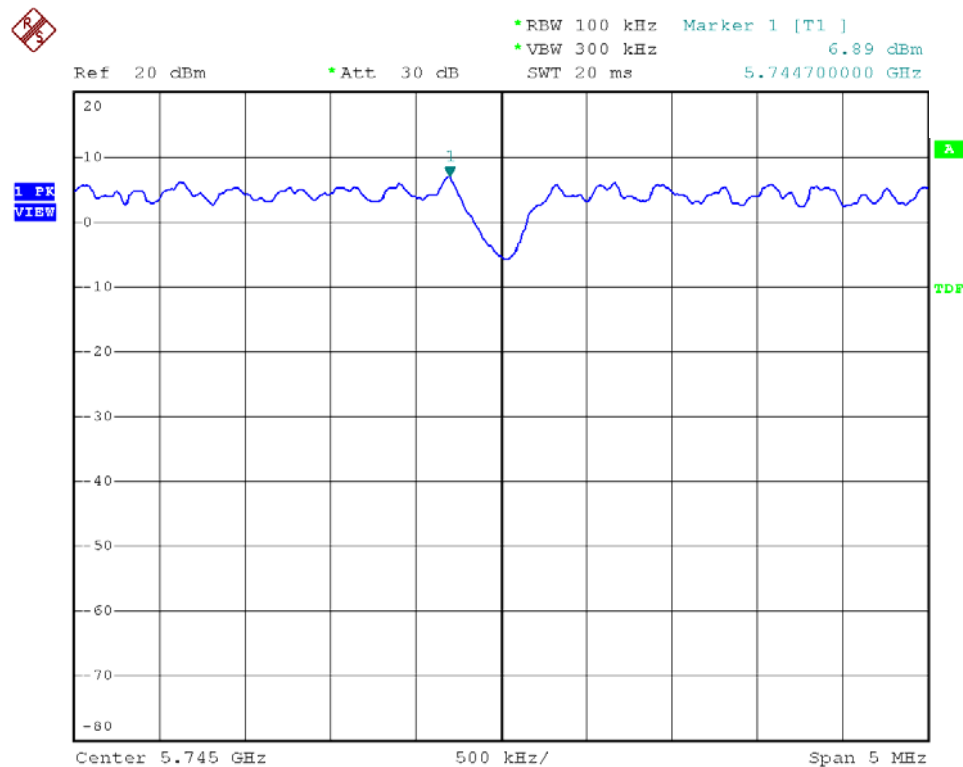




Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 09

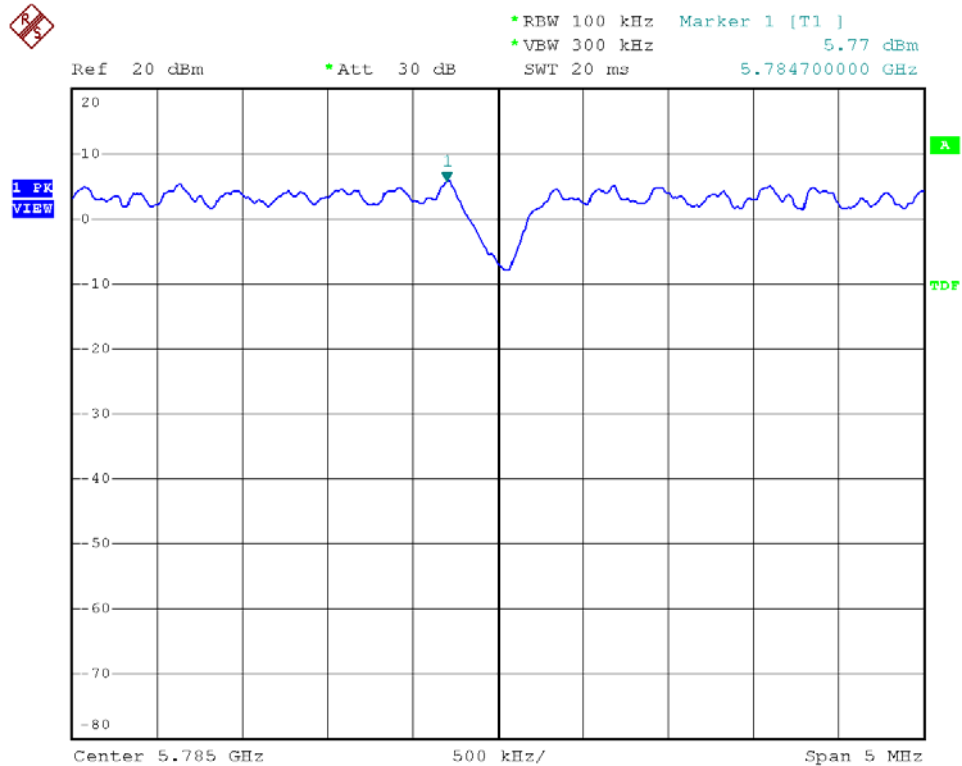


Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 149

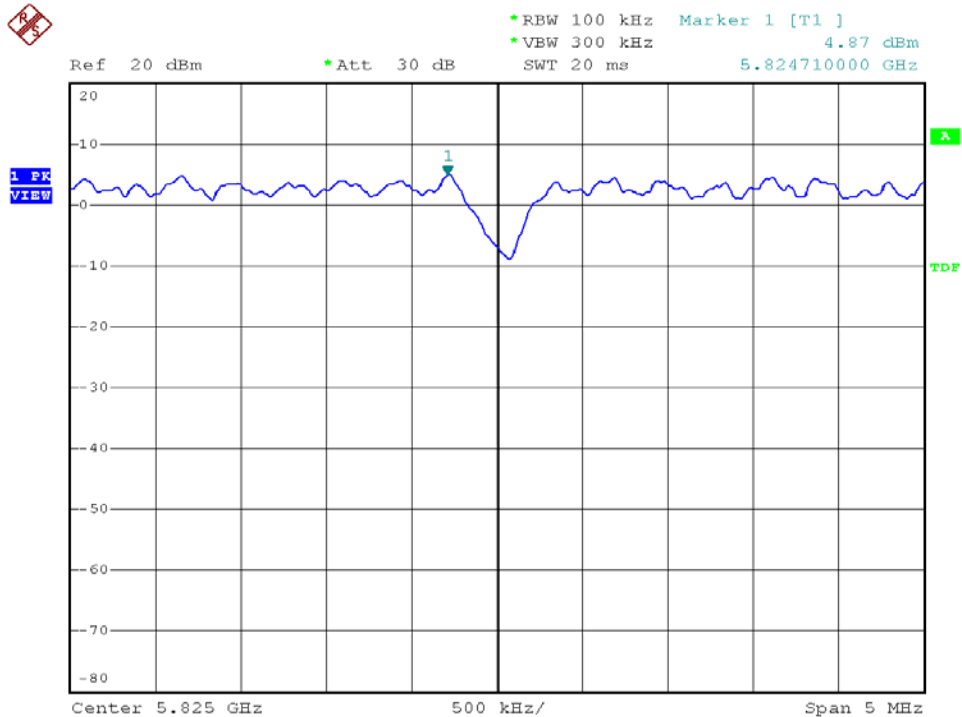




Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 157

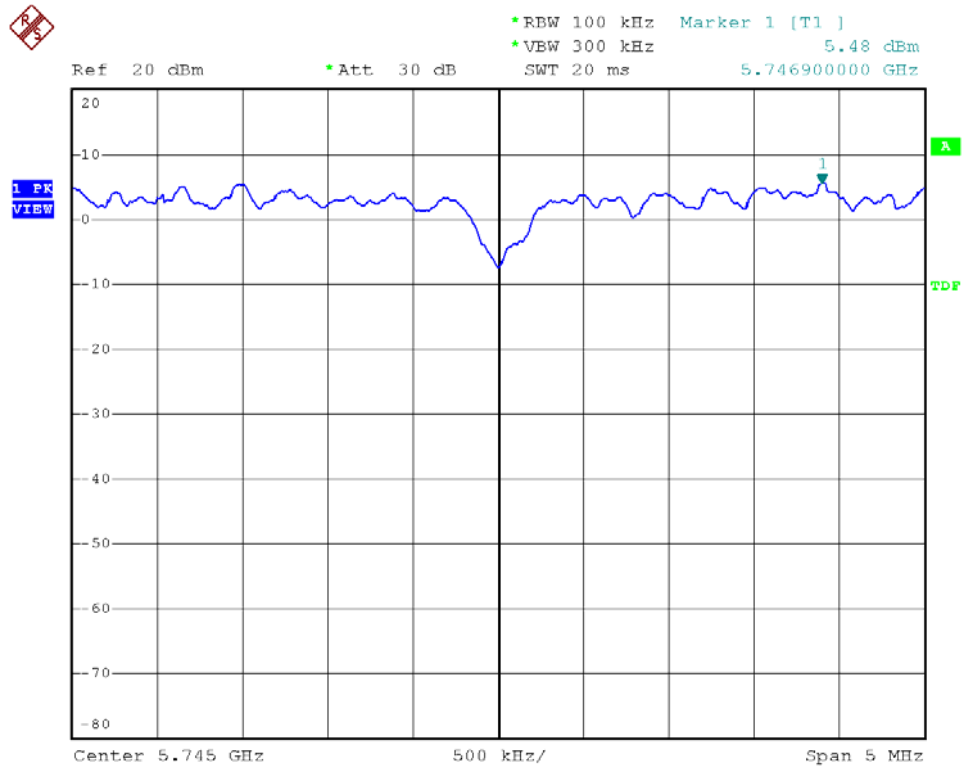


Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 165

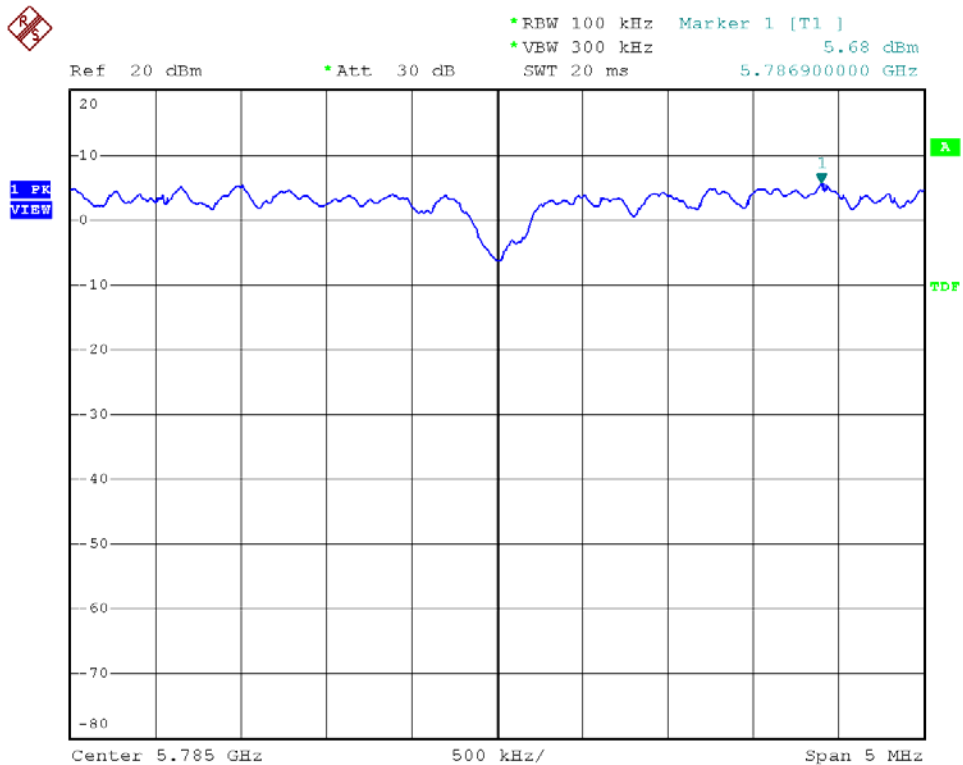




Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 149

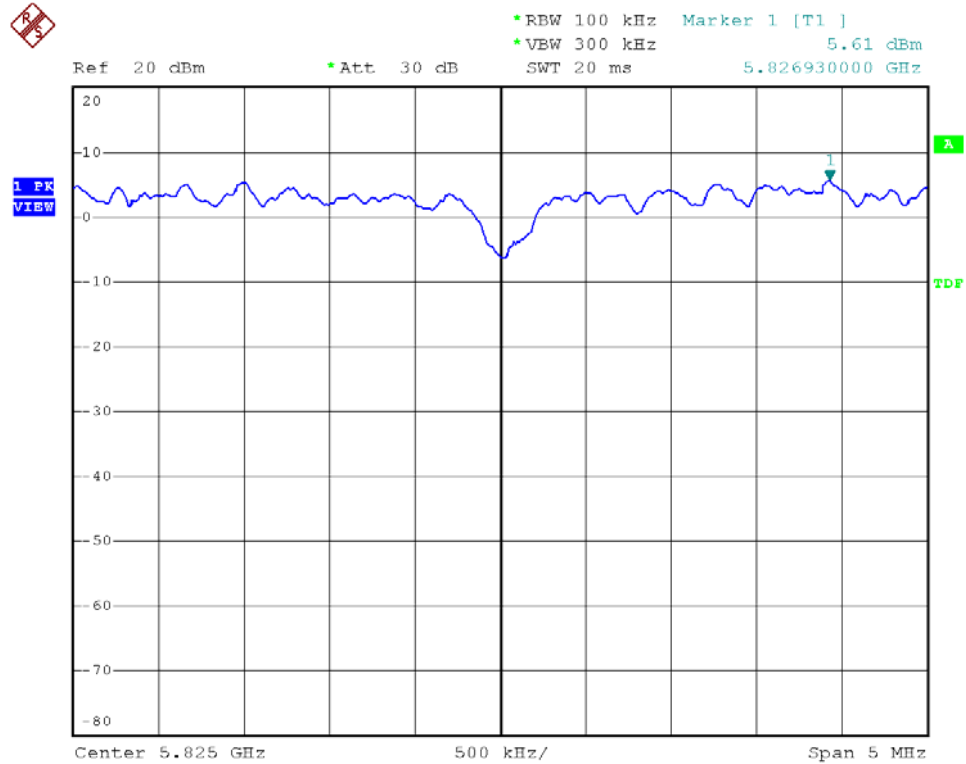


Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 157

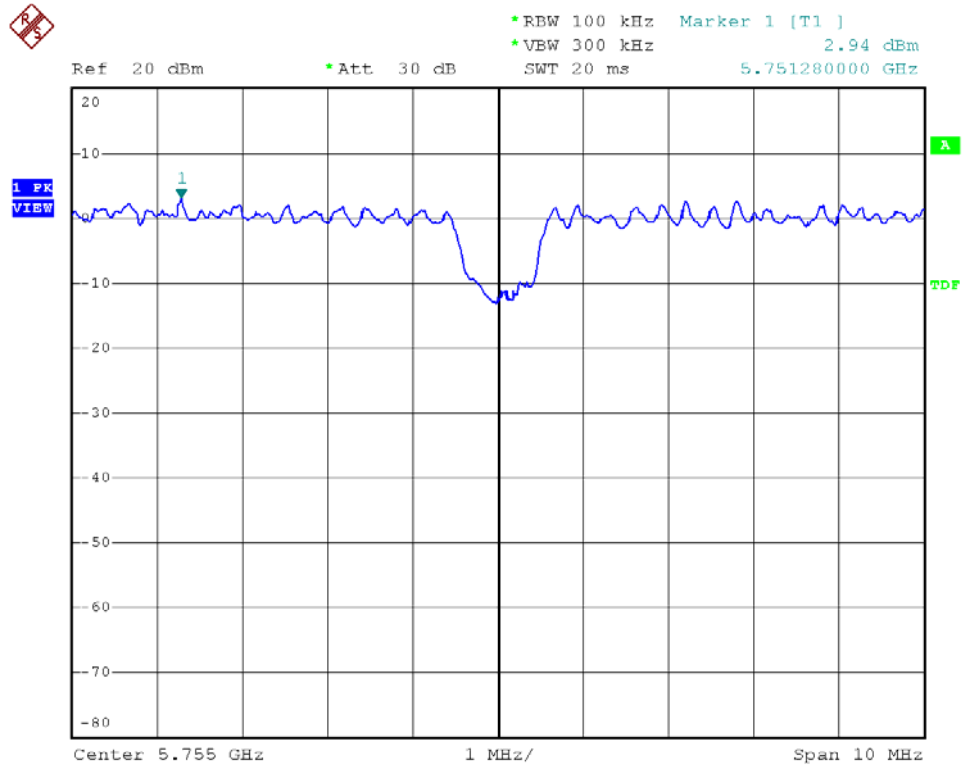




Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 165

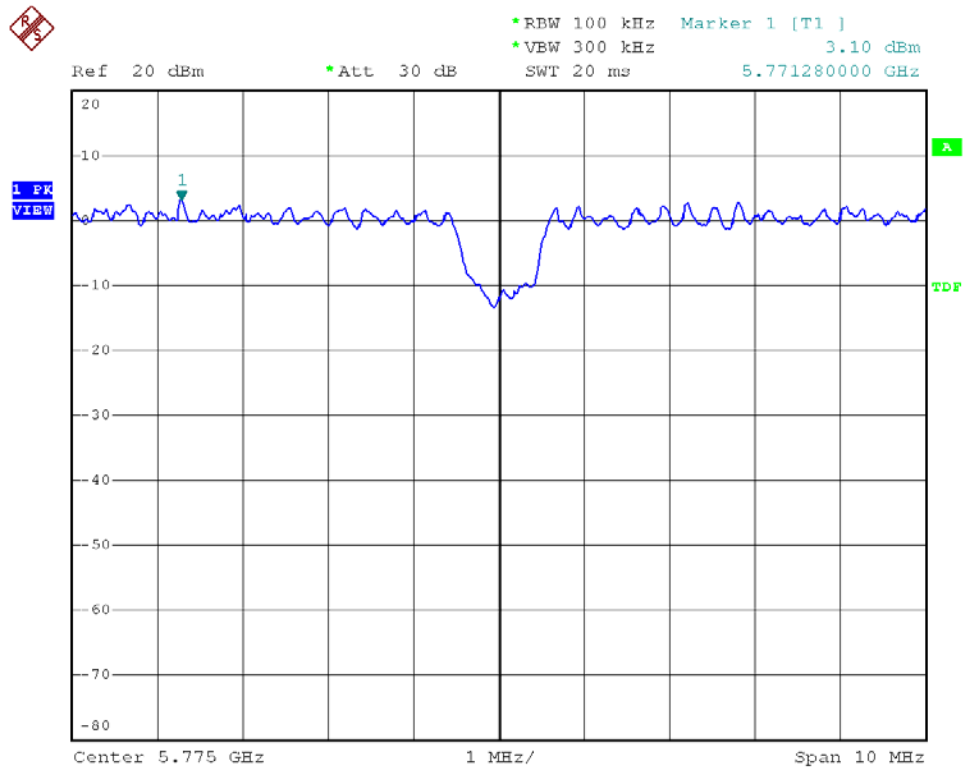


Modulation Standard: 802.11an HT40 (270Mbps), ANT L
Channel: 151

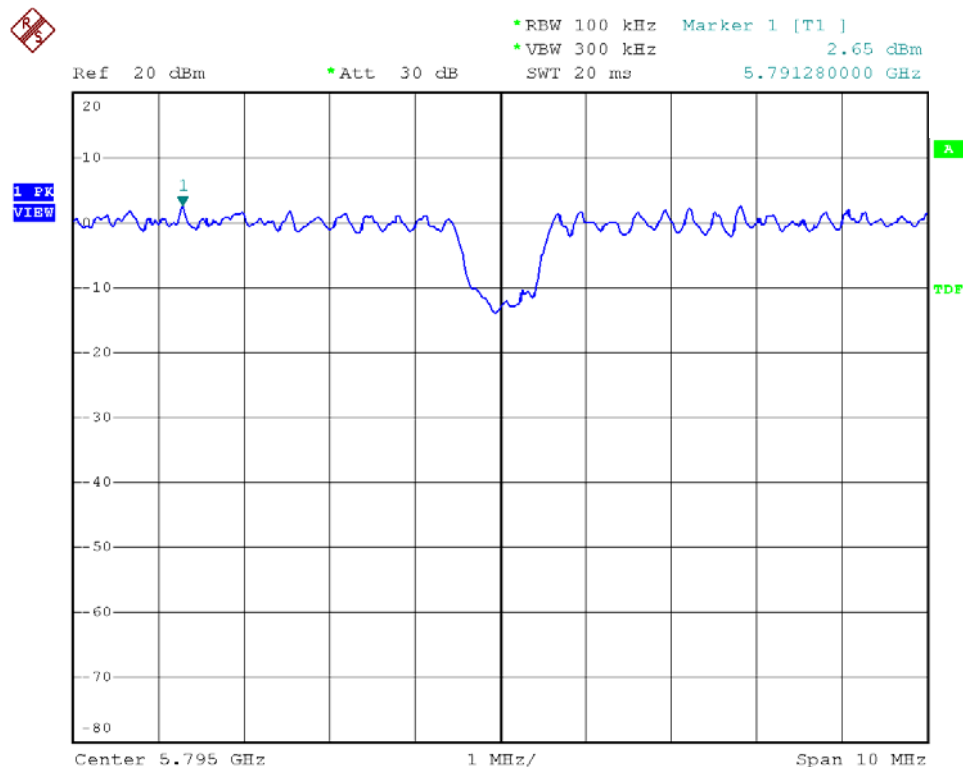




Modulation Standard: 802.11an HT40 (270Mbps), ANT L
Channel: 155



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





9. Band Edges Measurement

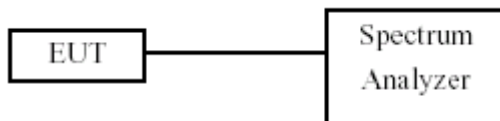
9.1 Test Limit

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

9.2 Test Procedure

- The transmitter output was connected to the spectrum analyzer via a low lose 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.
- The band edges was measured and recorded.

9.3 Test Setup Layout



9.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23



9.5 Test Result and Data

Test Date: Jun. 07, 2012

Temperature: 25°C

Atmospheric pressure: 1020 hPa

Humidity: 65%

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	2680.00	2680.00	-25.85	-22.55
	11	2462	2860.00	2860.00	-21.36	-24.30
802.11g (54Mbps)	01	2412	2400.00	2399.80	-25.90	-25.08
	11	2462	2500.10	2500.10	-40.55	-39.41
802.11n HT20 (130Mbps)	01	2412	2400.00	2399.60	-27.31	-27.33
	11	2462	2500.10	2500.10	-40.69	-39.19
802.11n HT40 (270Mbps)	03	2422	2398.40	2398.00	-26.08	-25.69
	09	2452	2500.00	2500.00	-35.44	-35.40

Test Date: Jun. 15, 2012

Temperature: 25°C

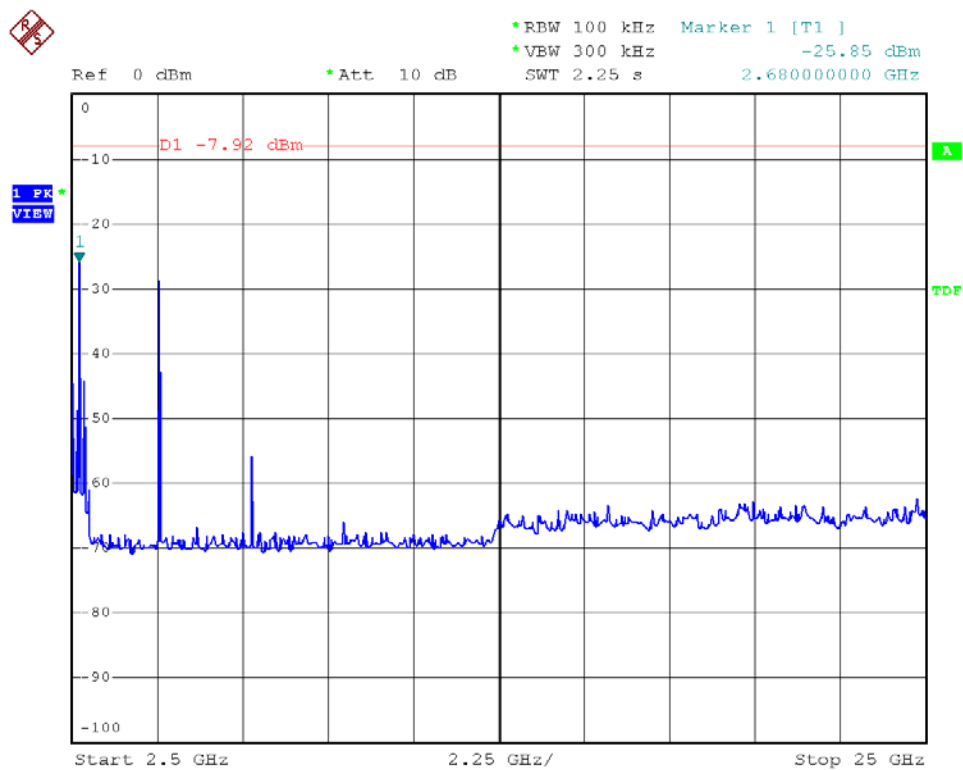
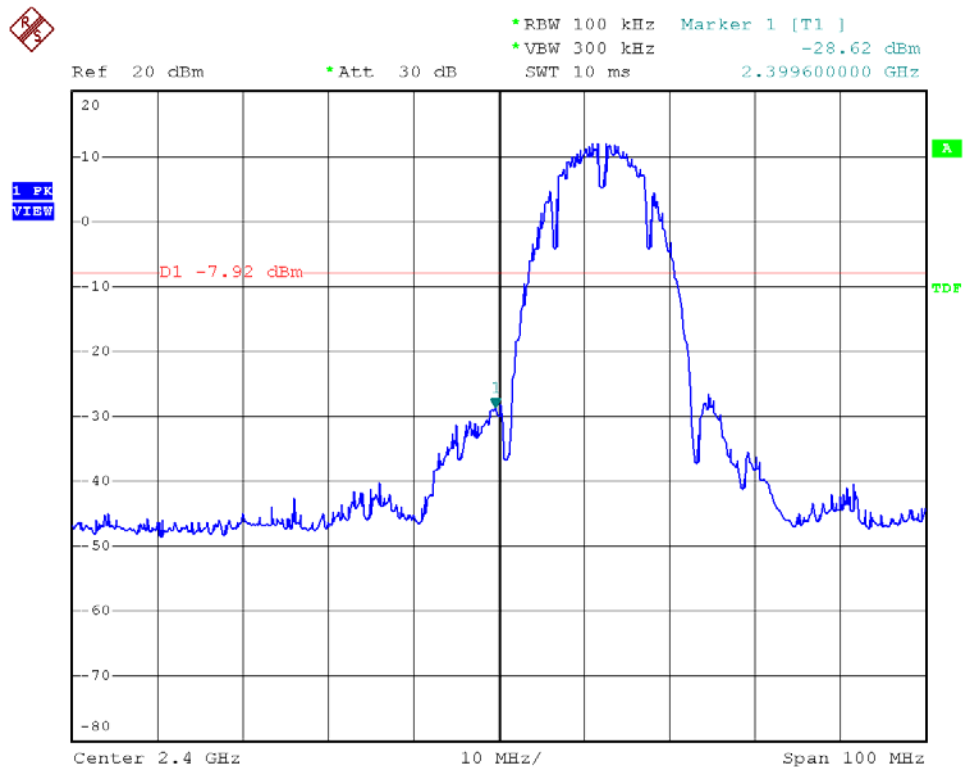
Atmospheric pressure: 1020 hPa

Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)		maximum value (dBm)	
			ANT R	ANT L	ANT R	ANT L
802.11a (54Mbps)	149	5745	5724.20	5725.00	-41.19	-32.22
	165	5825	5850.00	5850.00	-43.10	-41.10
802.11an HT20 (130Mbps)	149	5745	5725.00	5724.80	-40.72	-27.45
	165	5825	5850.00	5850.00	-43.53	-36.44
802.11an HT40 (270Mbps)	151	5755	5723.80	5723.00	-40.98	-22.50
	159	5795	5864.40	5850.40	-45.05	-40.95

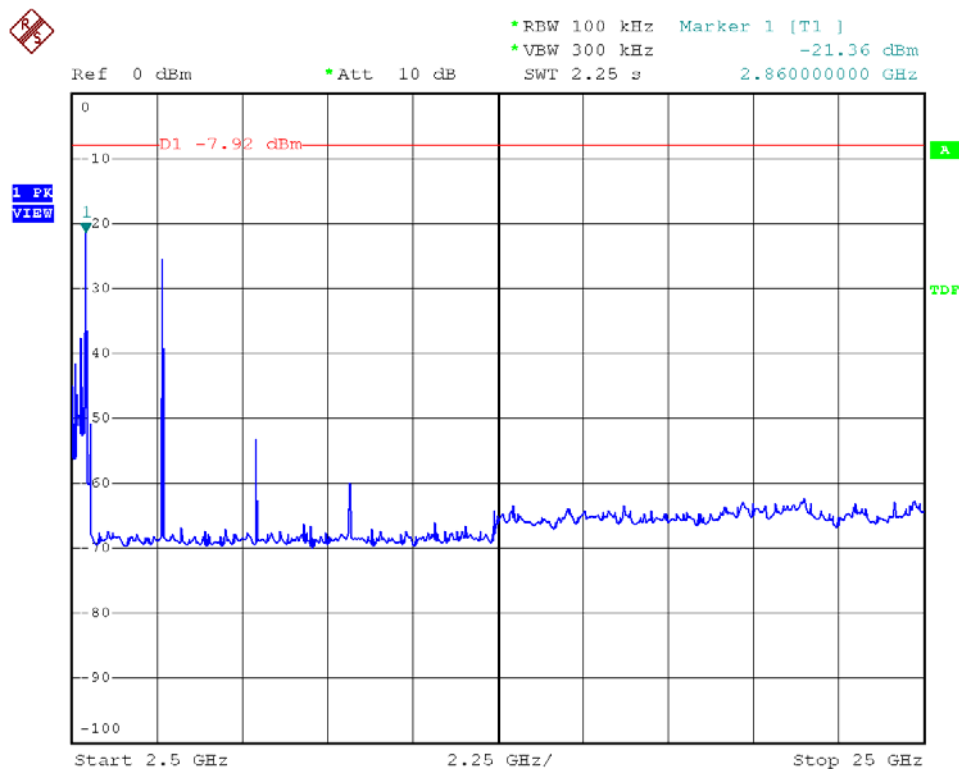


Modulation Standard: 802.11b (11Mbps), ANT R
Channel: 01



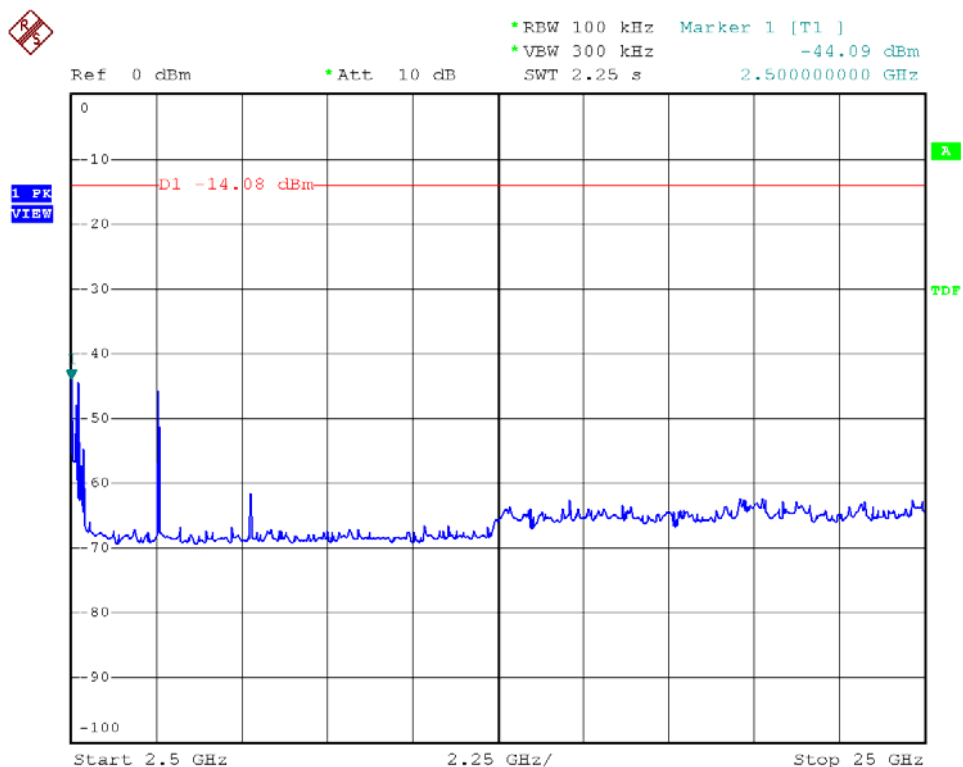
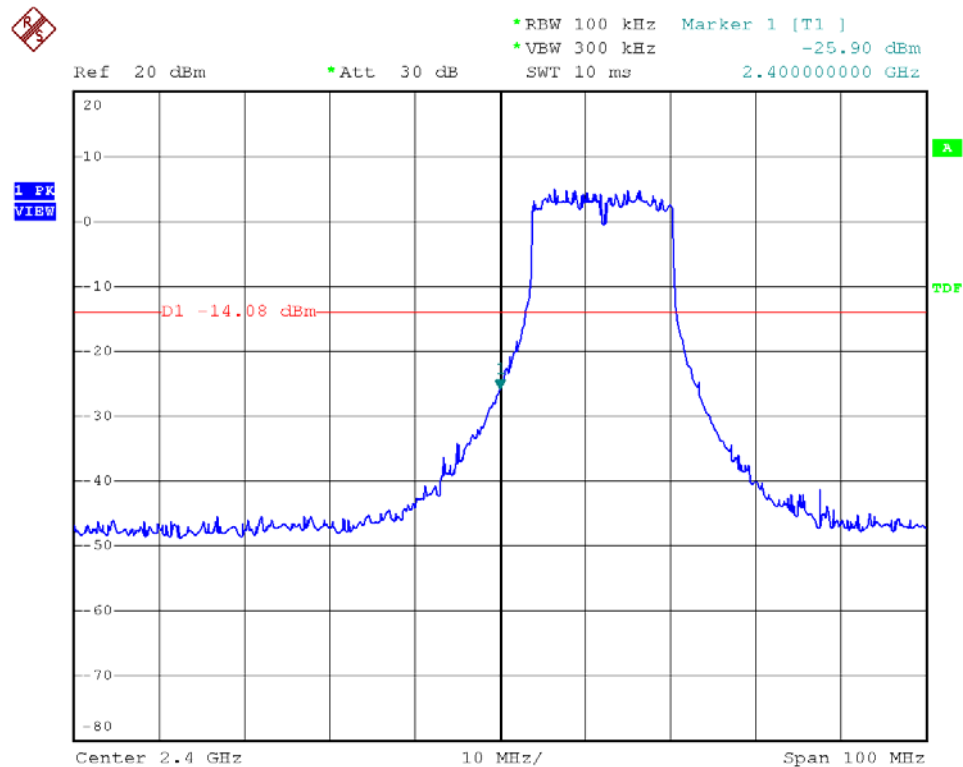


Modulation Standard: 802.11b (11Mbps), ANT R
Channel: 11



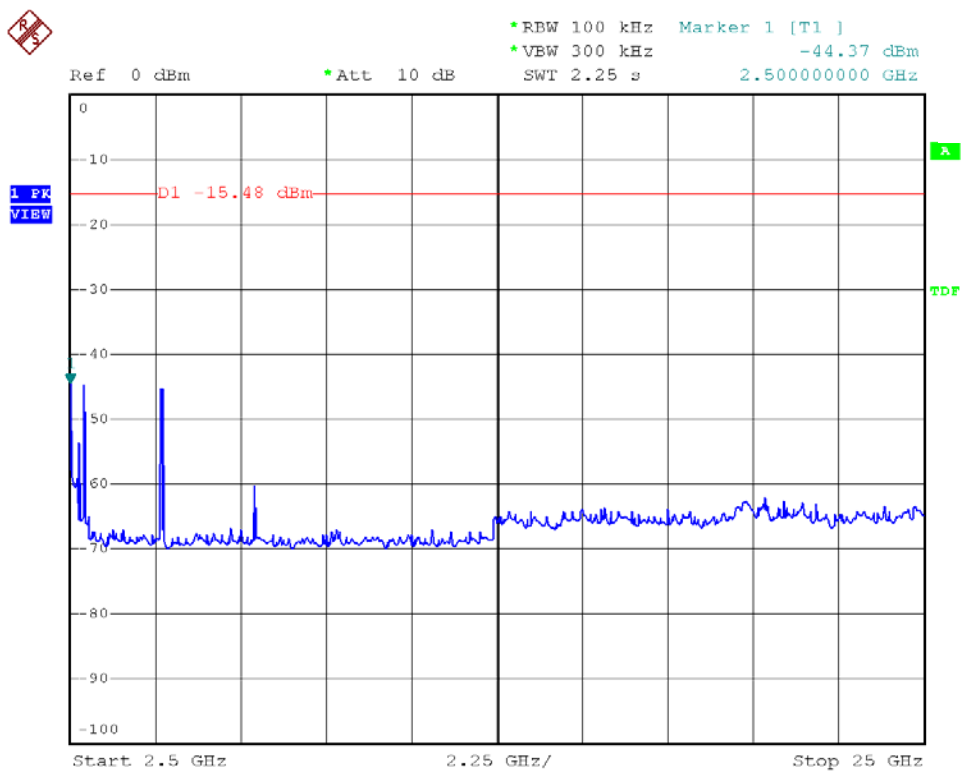
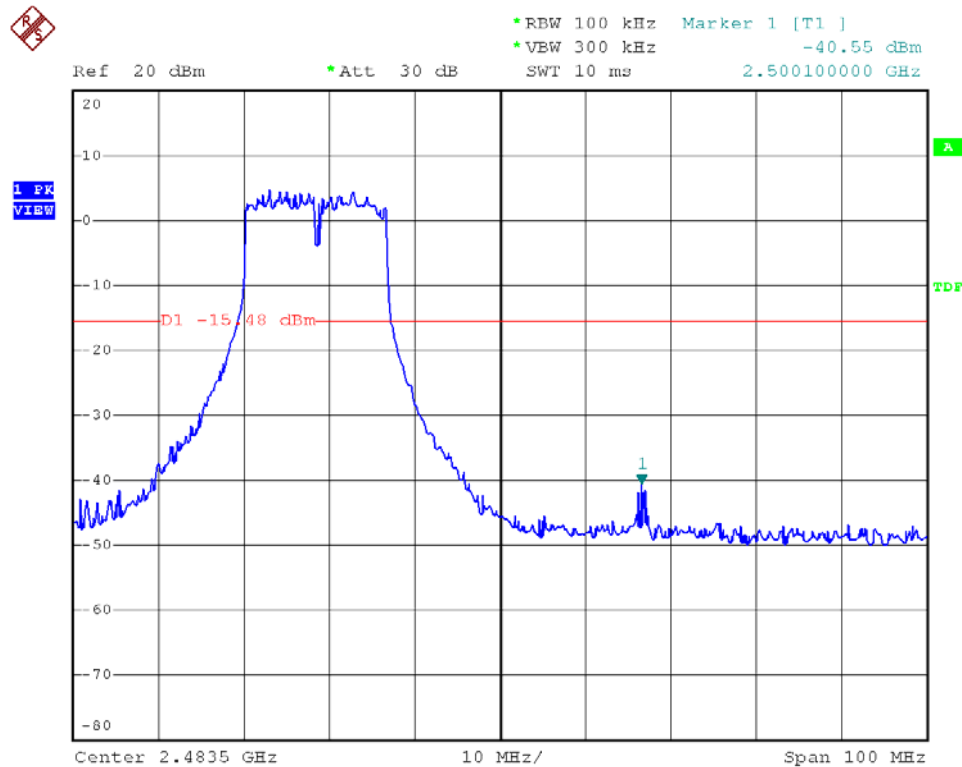


Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 01



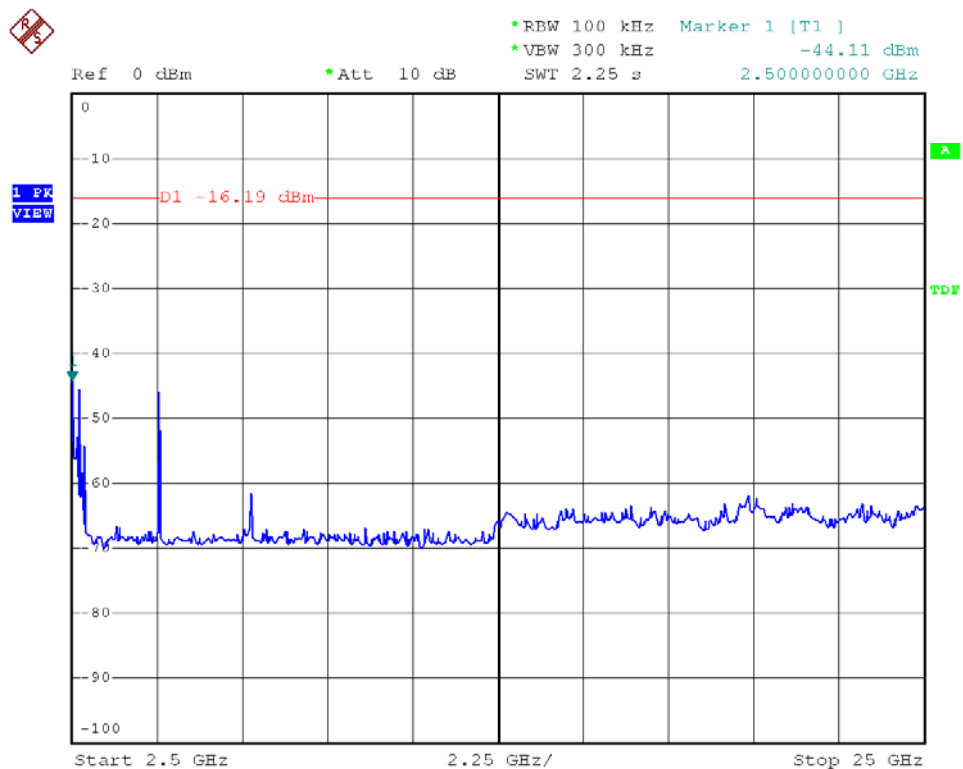
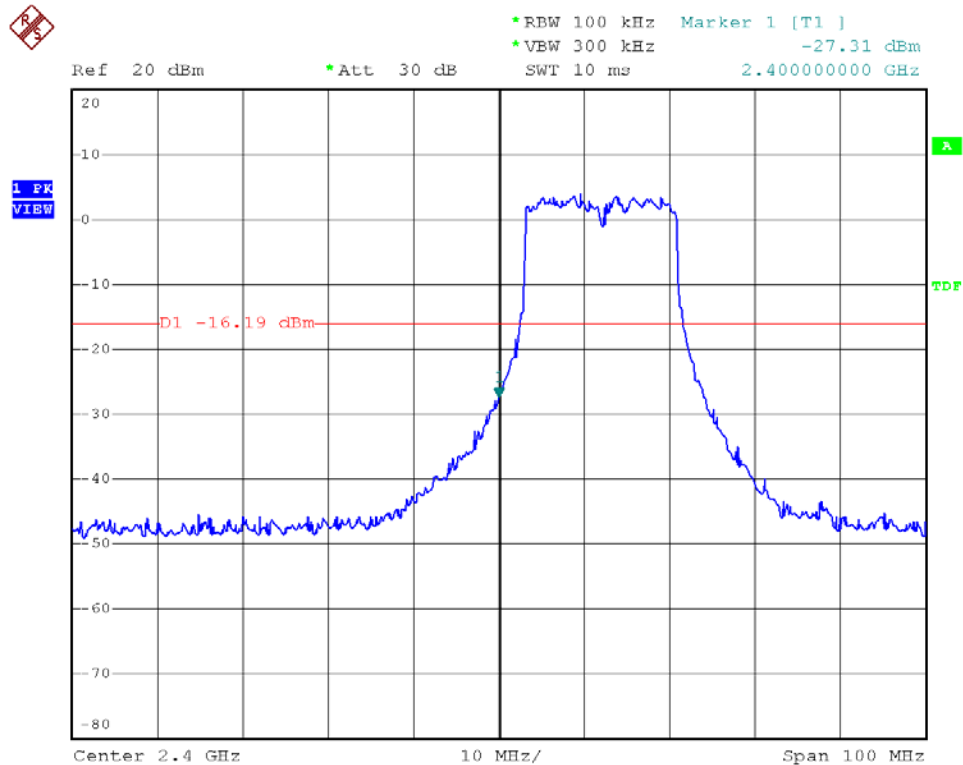


Modulation Standard: 802.11g (54Mbps), ANT R
Channel: 11



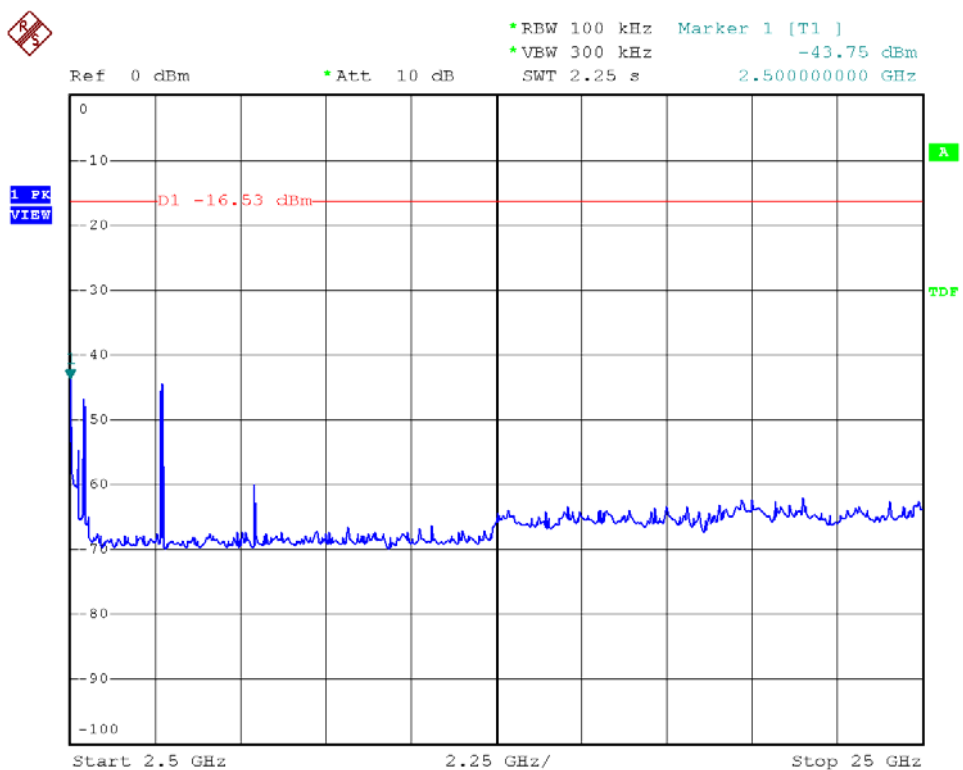
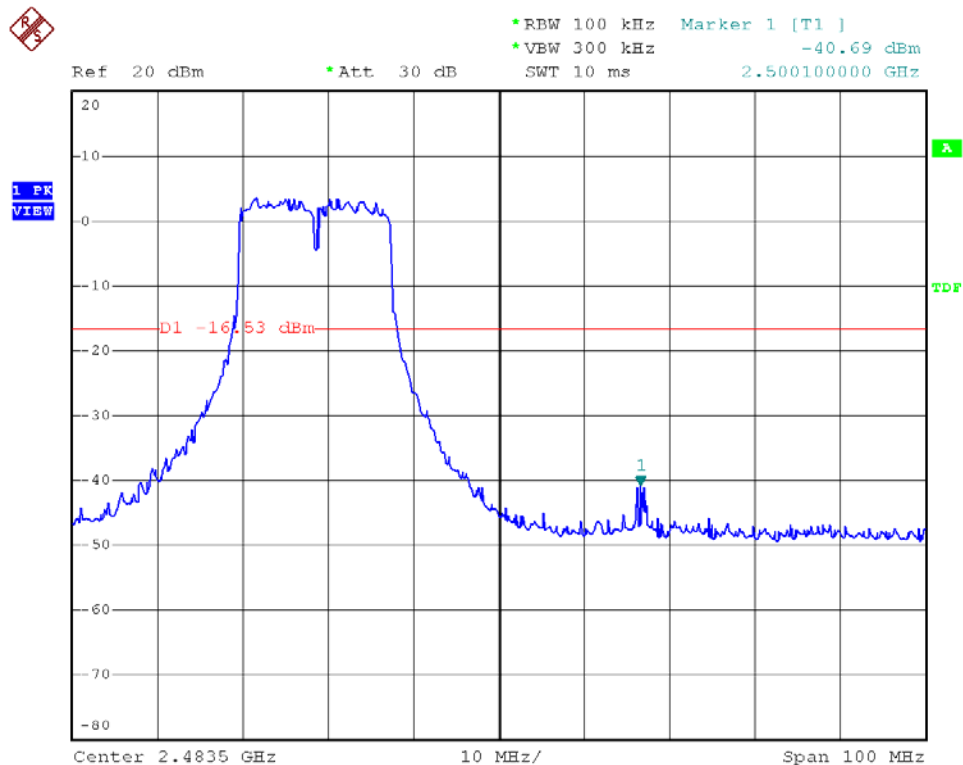


Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 01



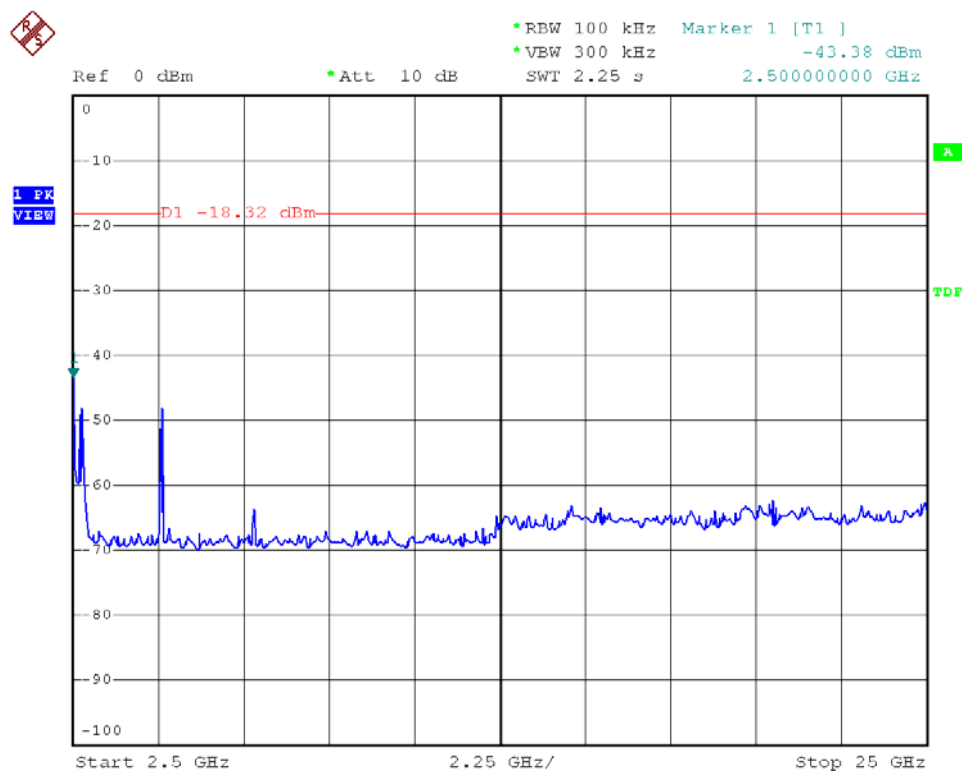
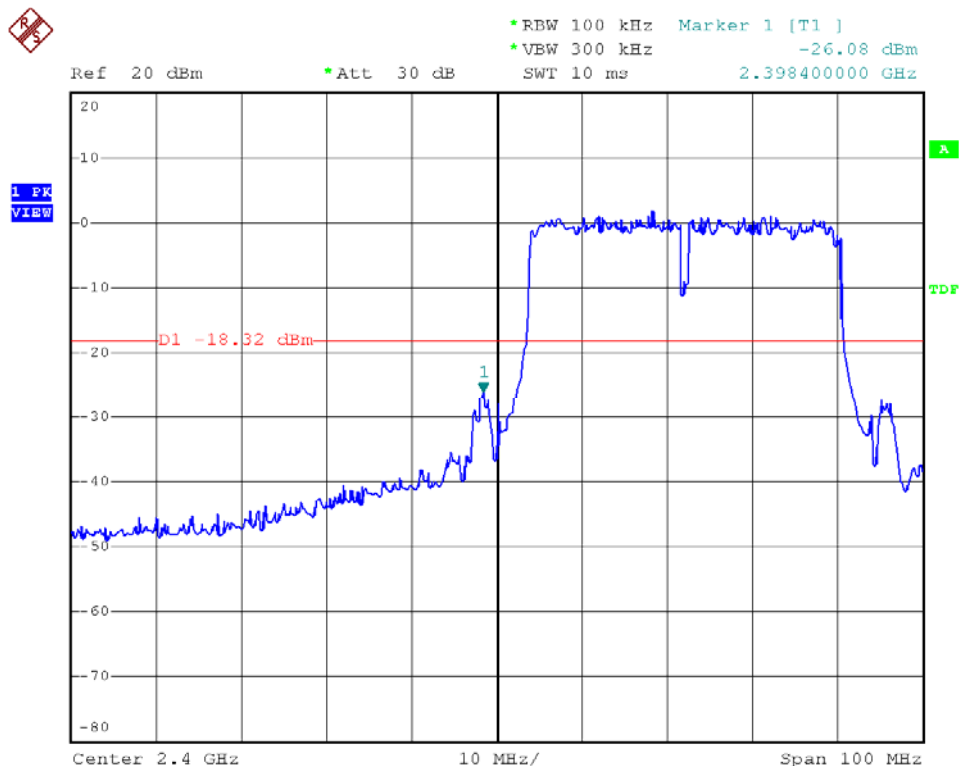


Modulation Standard: 802.11n HT20 (130Mbps), ANT R
Channel: 11



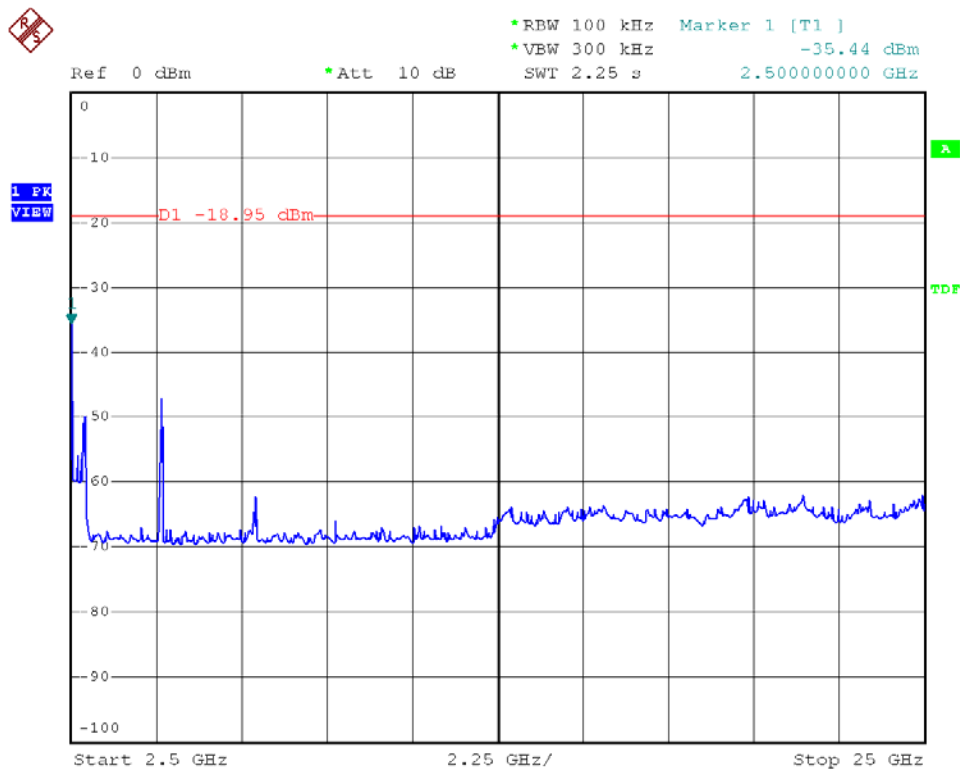
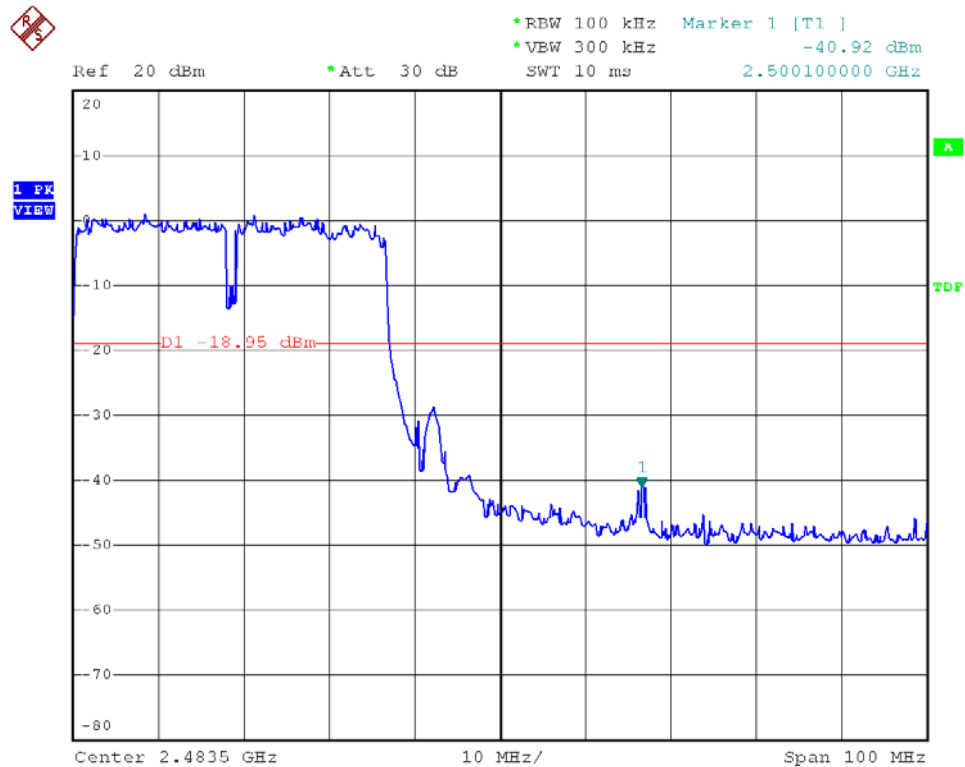


Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 03



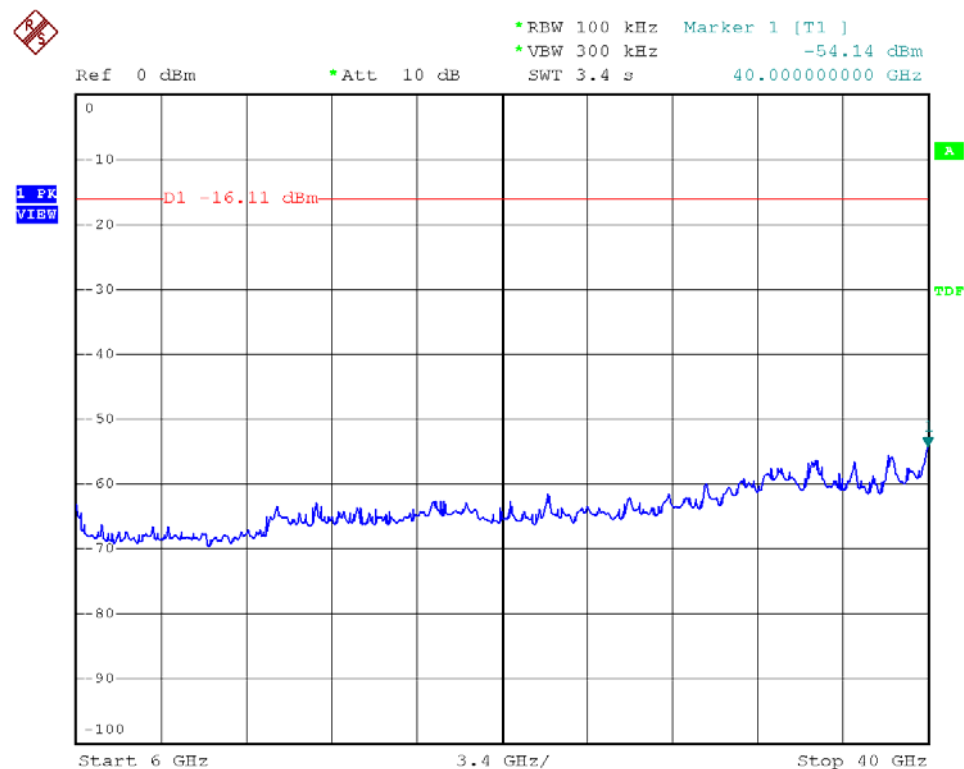
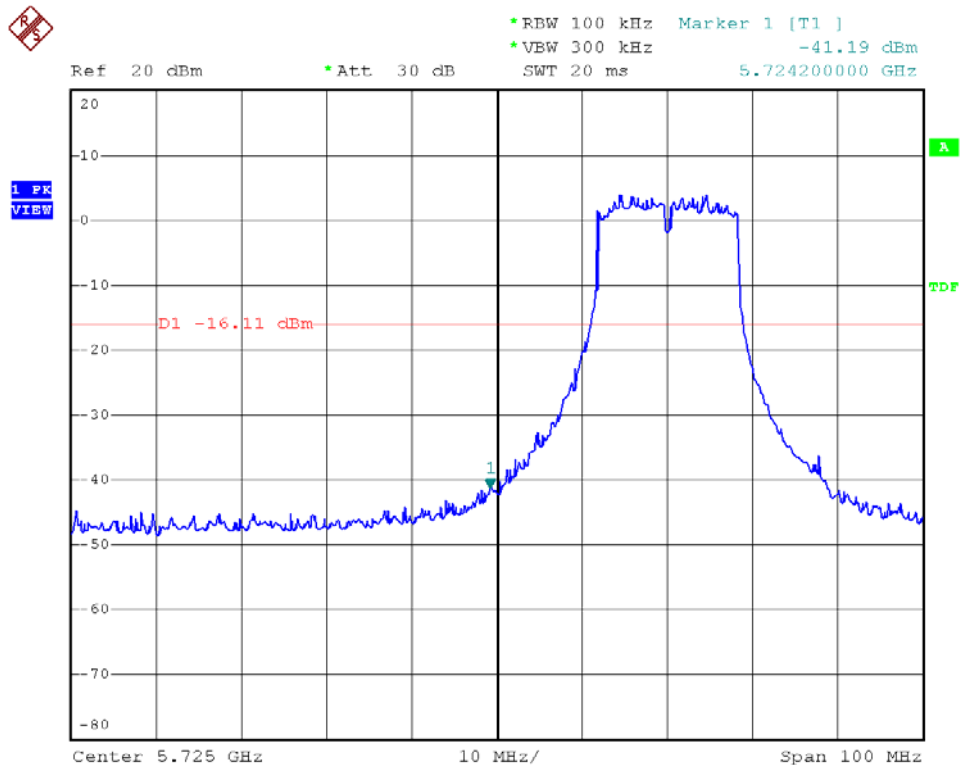


Modulation Standard: 802.11n HT40 (270Mbps), ANT R
Channel: 09



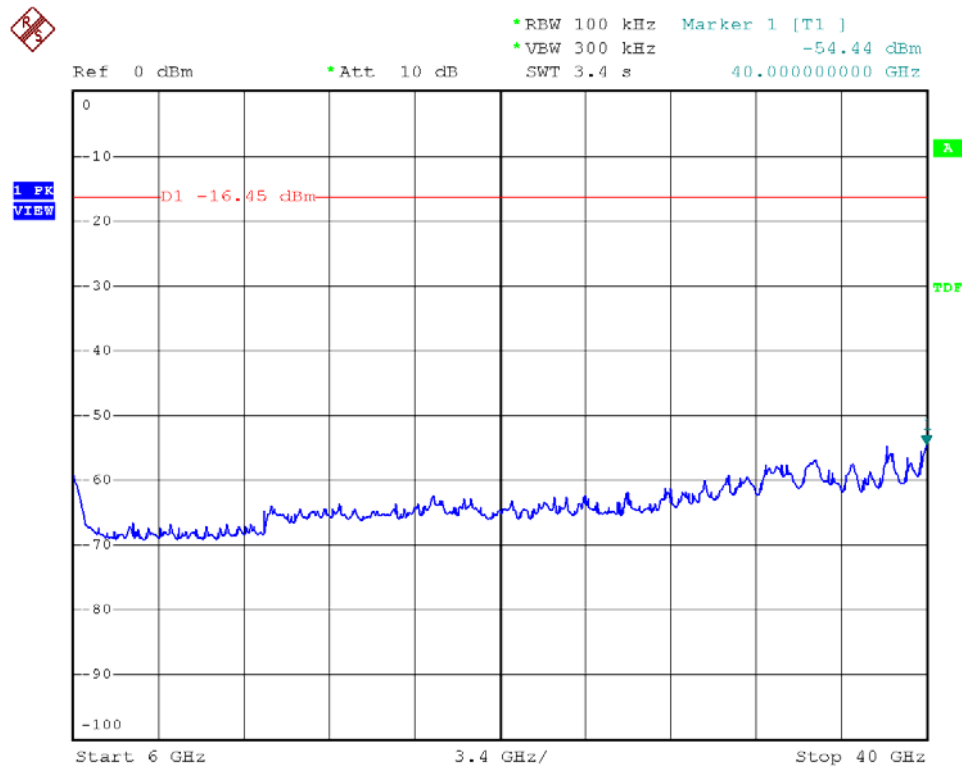
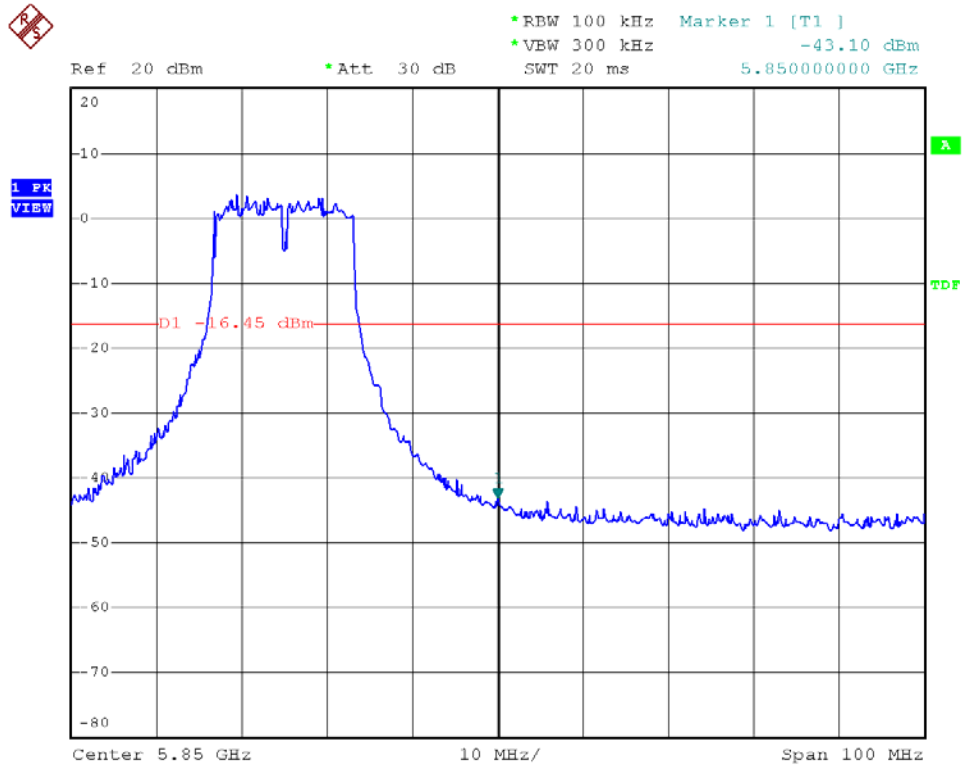


Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 149



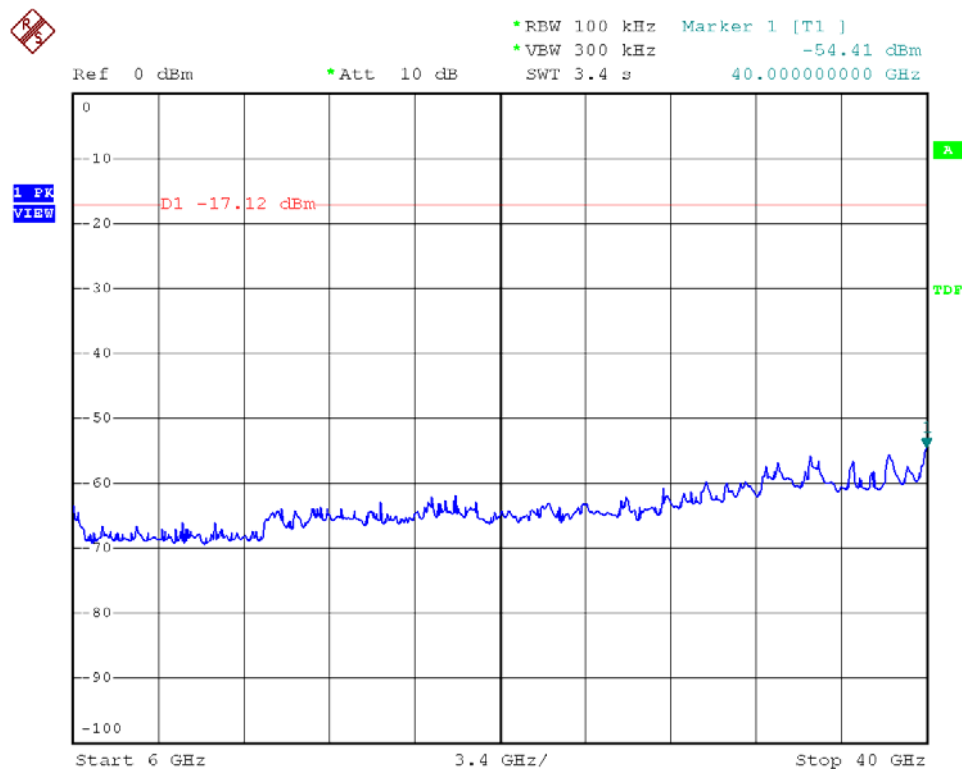
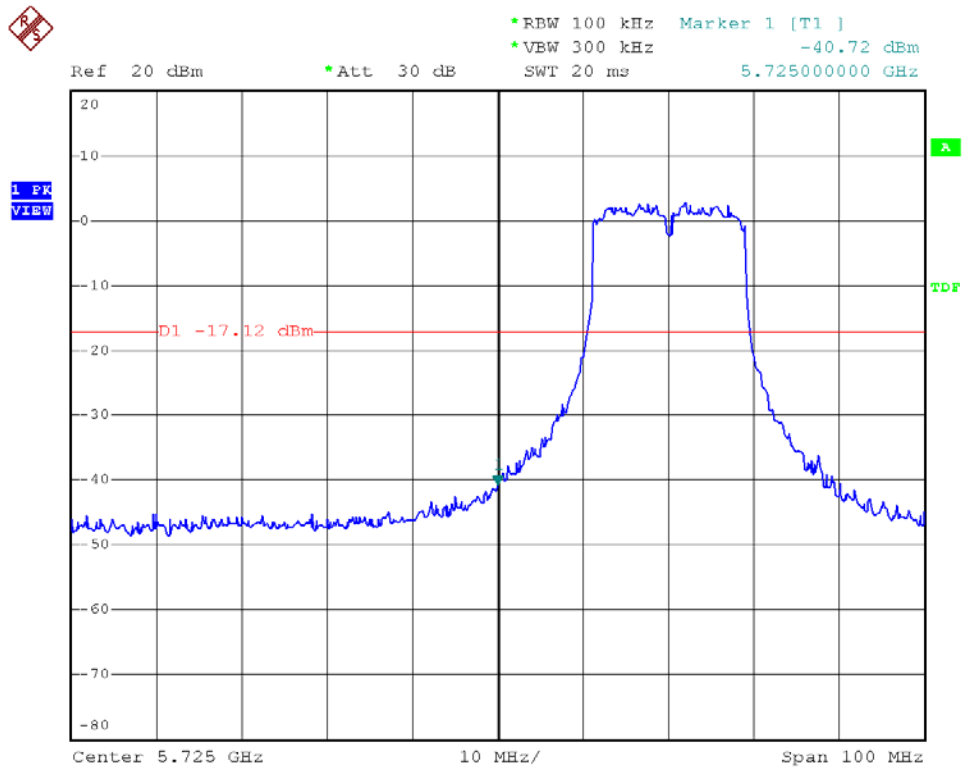


Modulation Standard: 802.11a (54Mbps), ANT R
Channel: 165



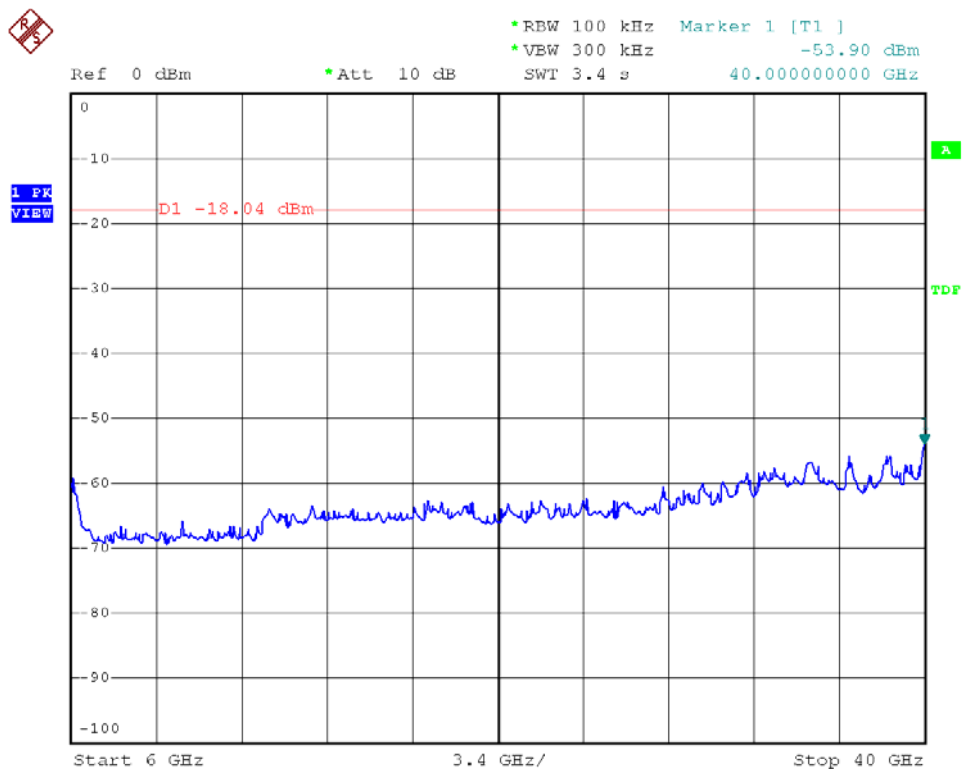
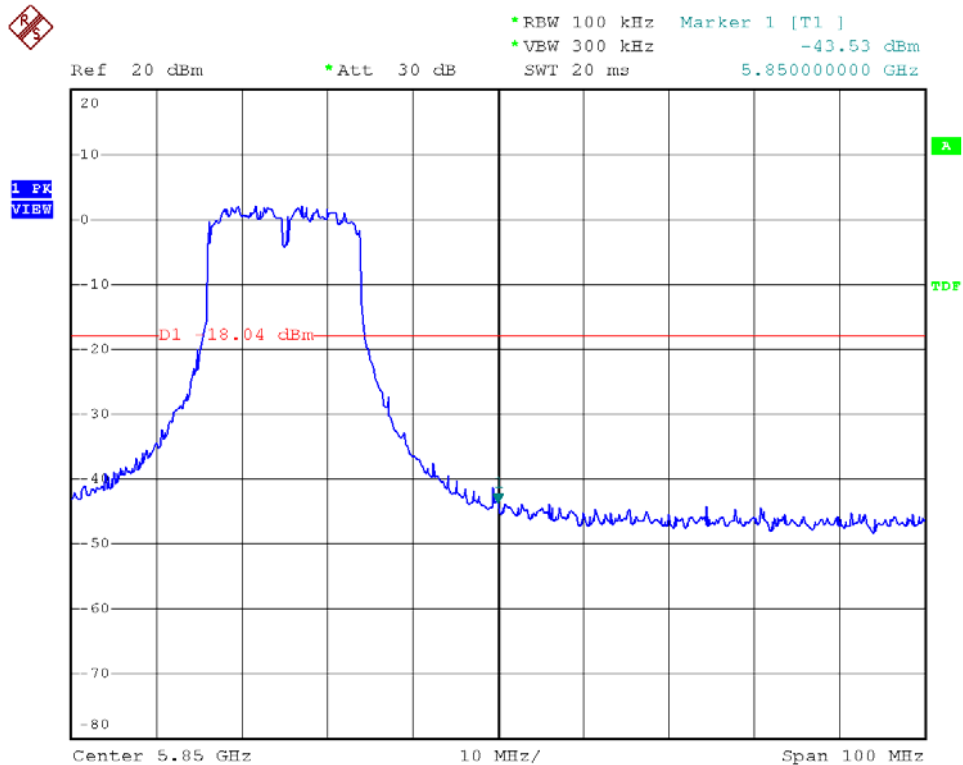


Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 149



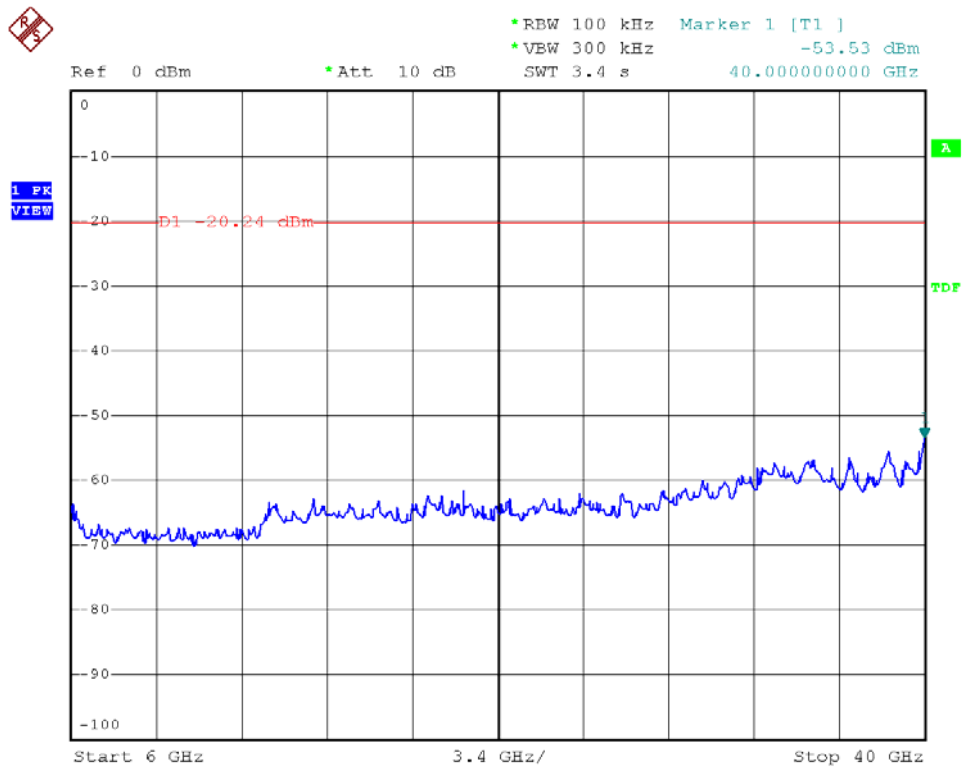
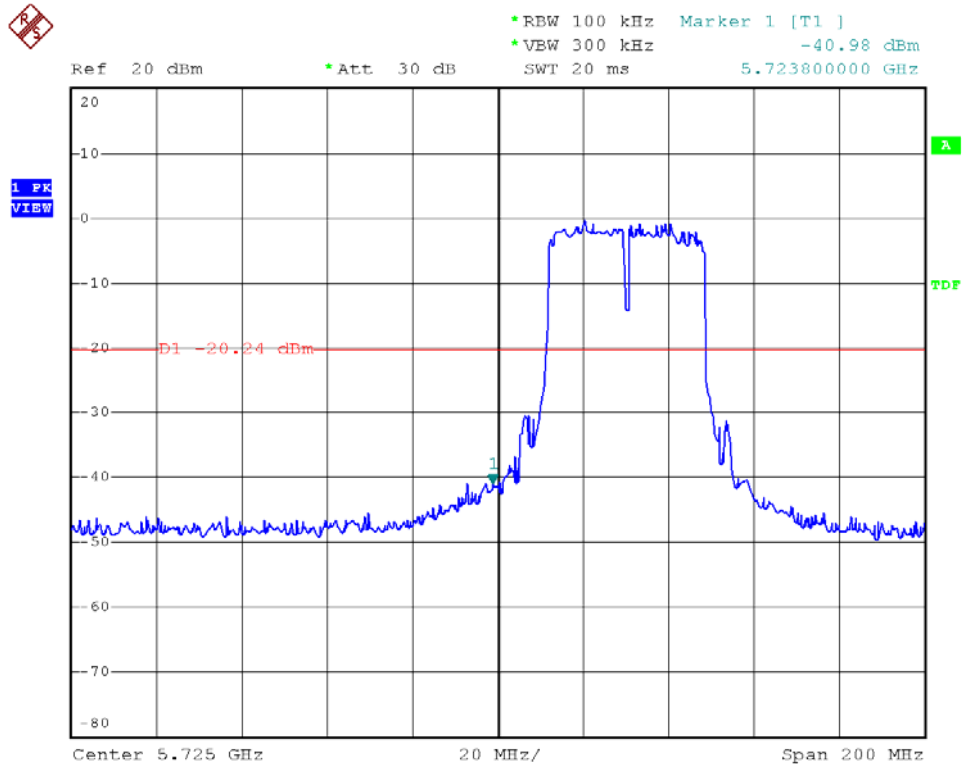


Modulation Standard: 802.11an HT20 (130Mbps), ANT R
Channel: 165



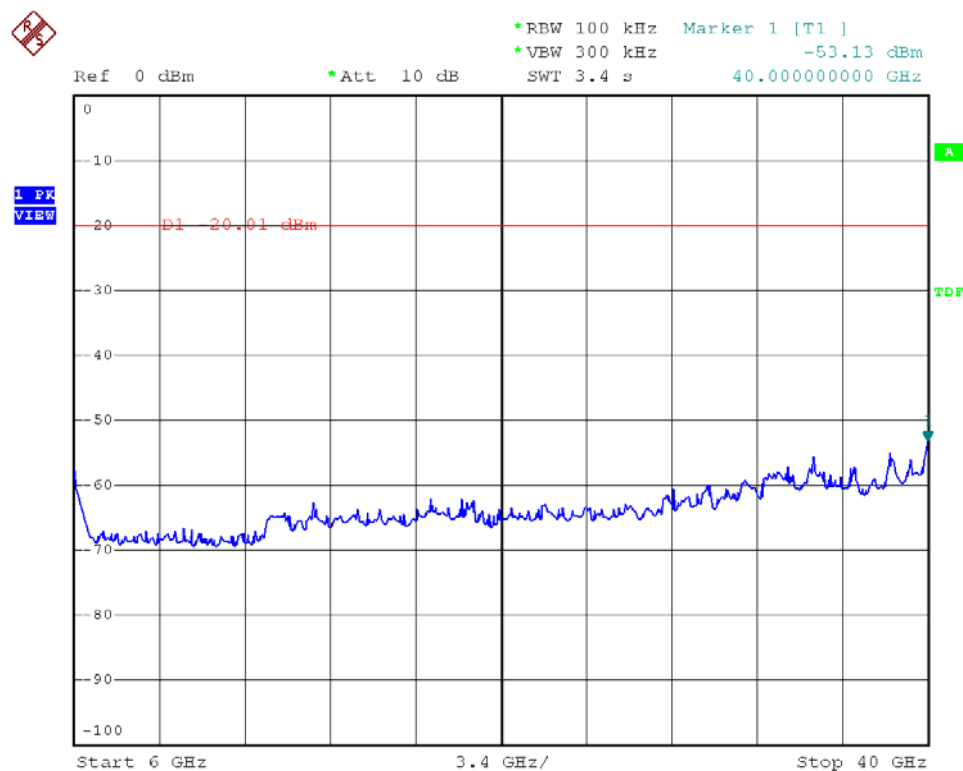
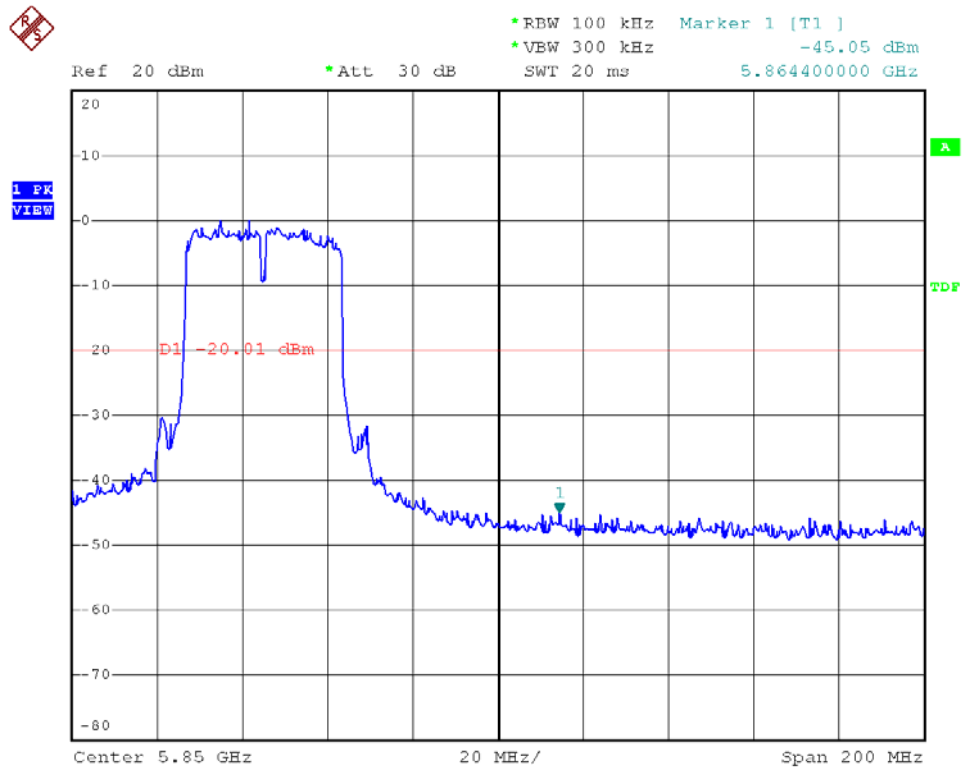


Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 151



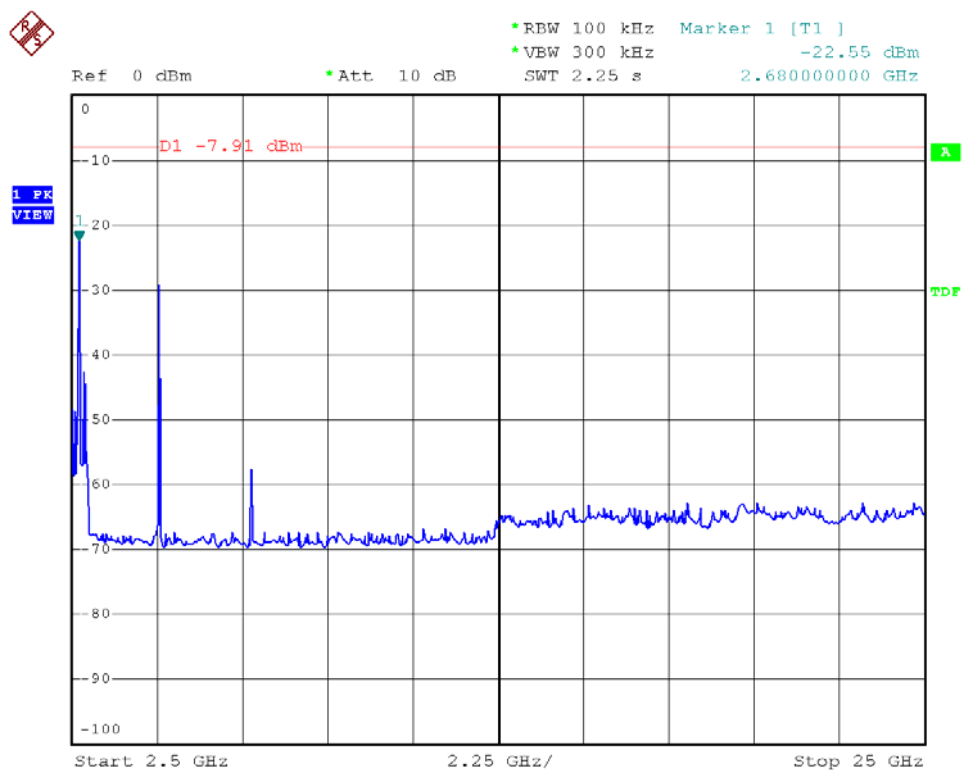
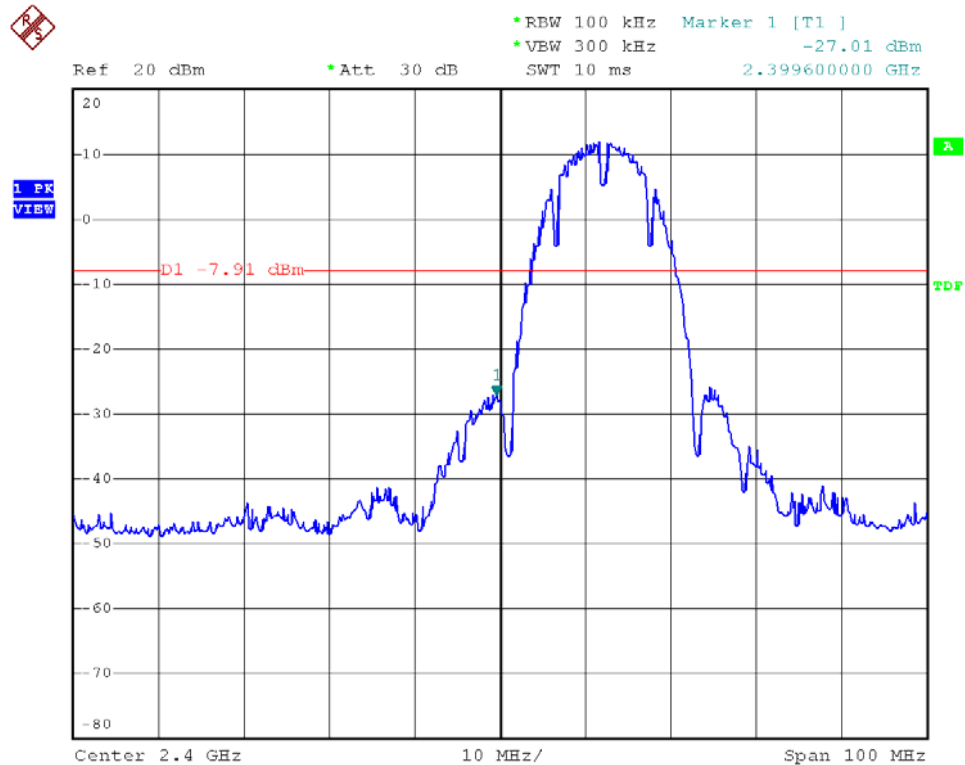


Modulation Standard: 802.11an HT40 (270Mbps), ANT R
Channel: 159



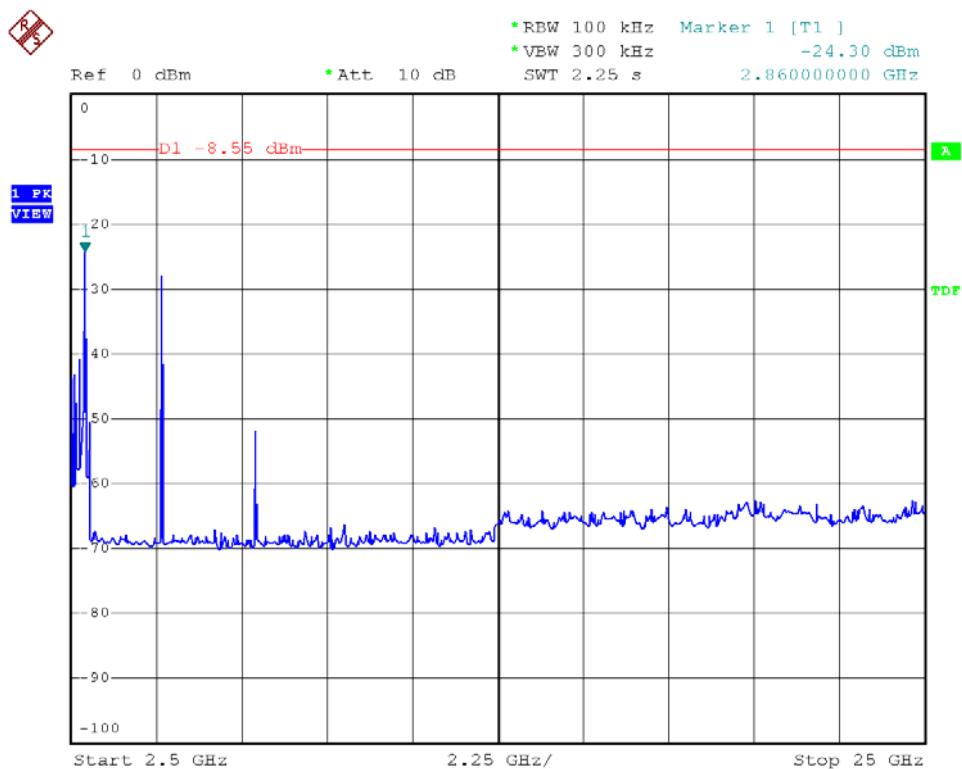
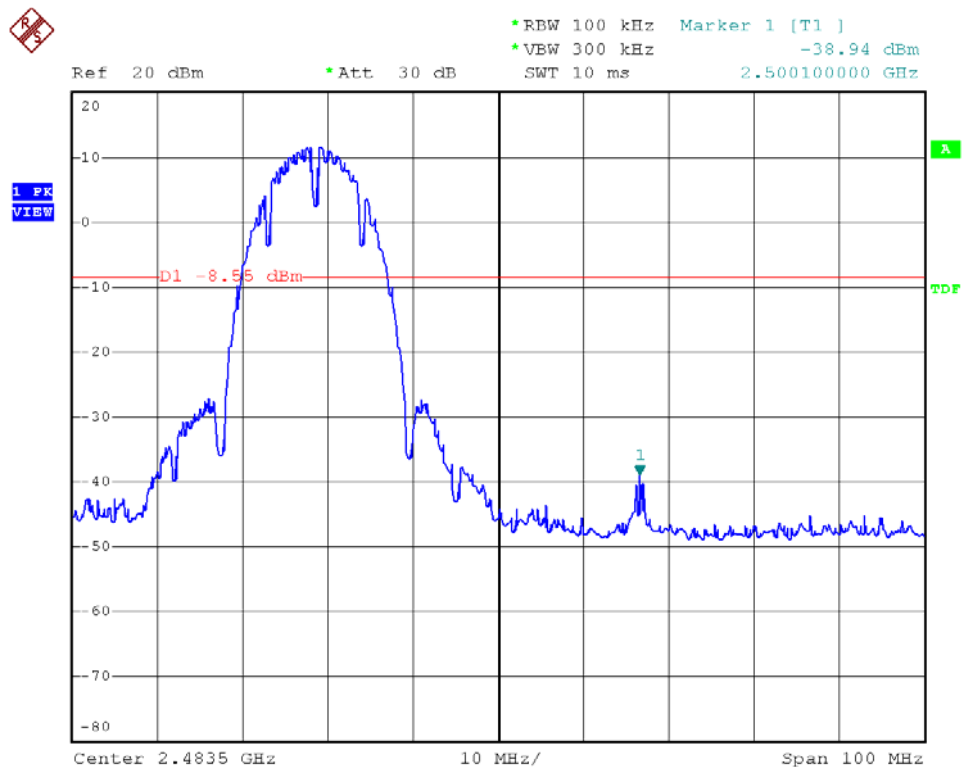


Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 01



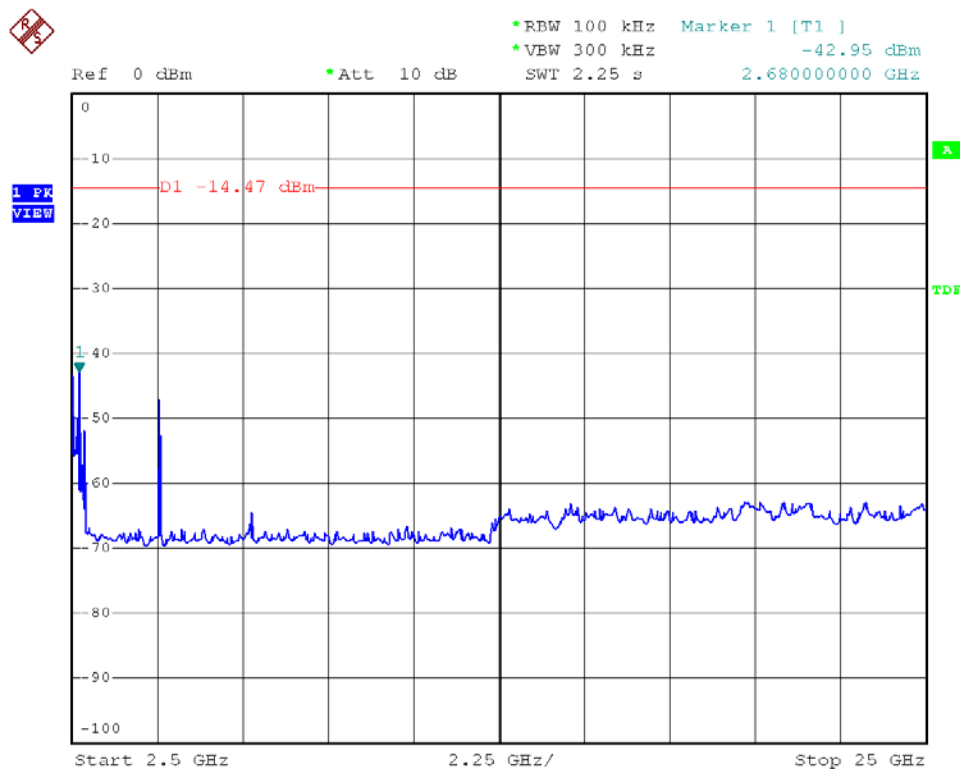
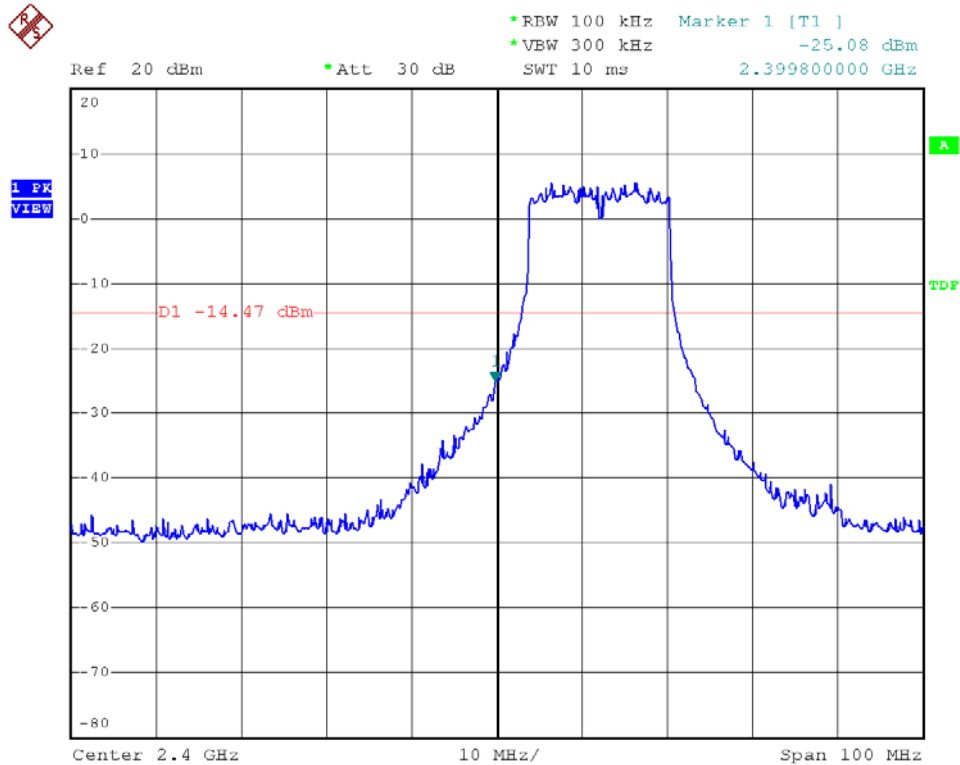


Modulation Standard: 802.11b (11Mbps), ANT L
Channel: 11



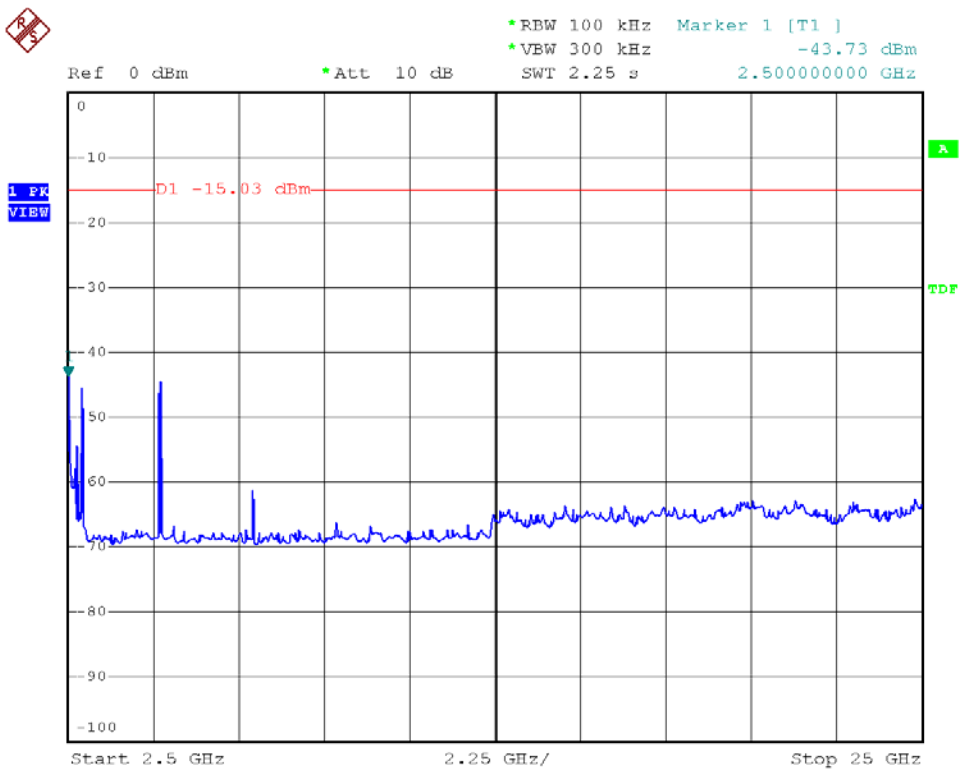
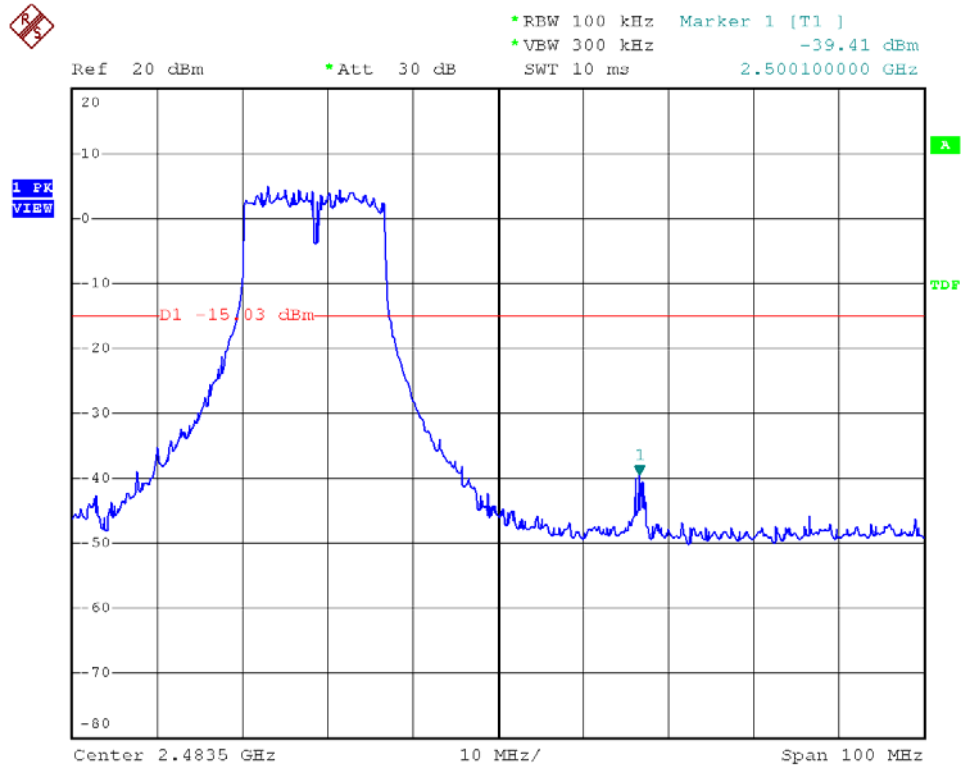


Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 01



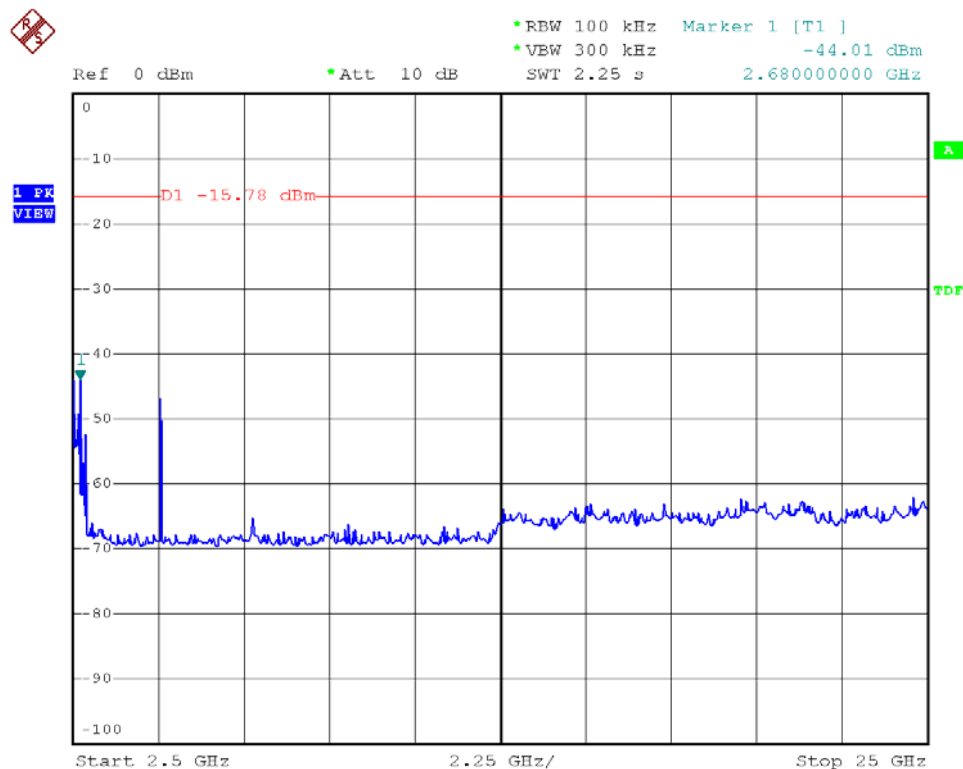
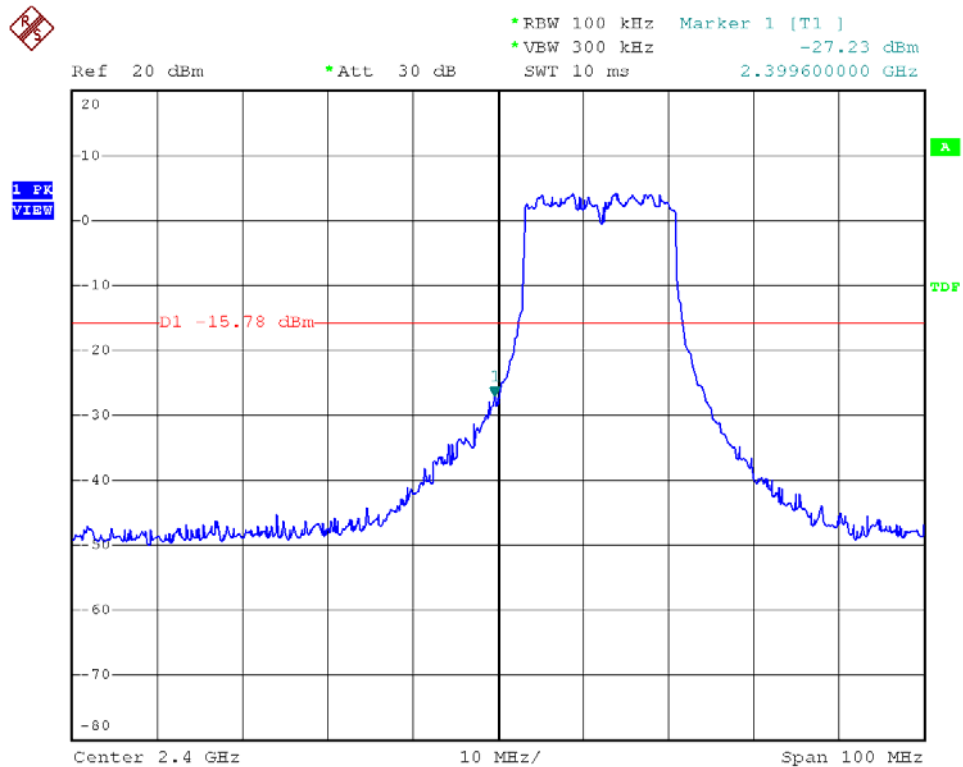


Modulation Standard: 802.11g (54Mbps), ANT L
Channel: 11



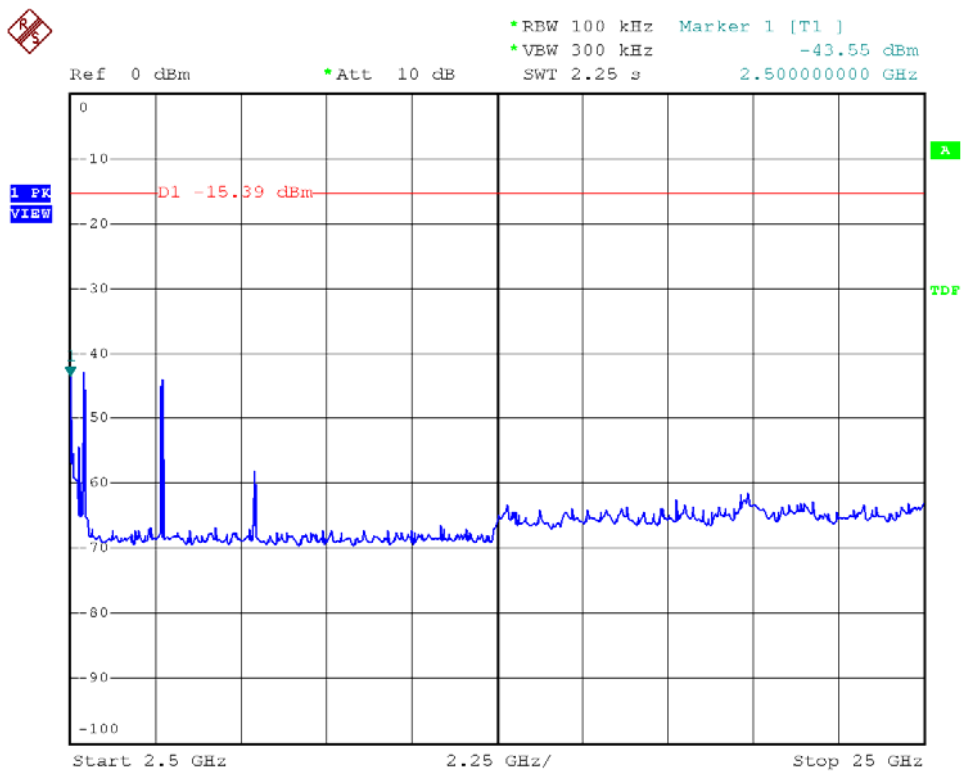
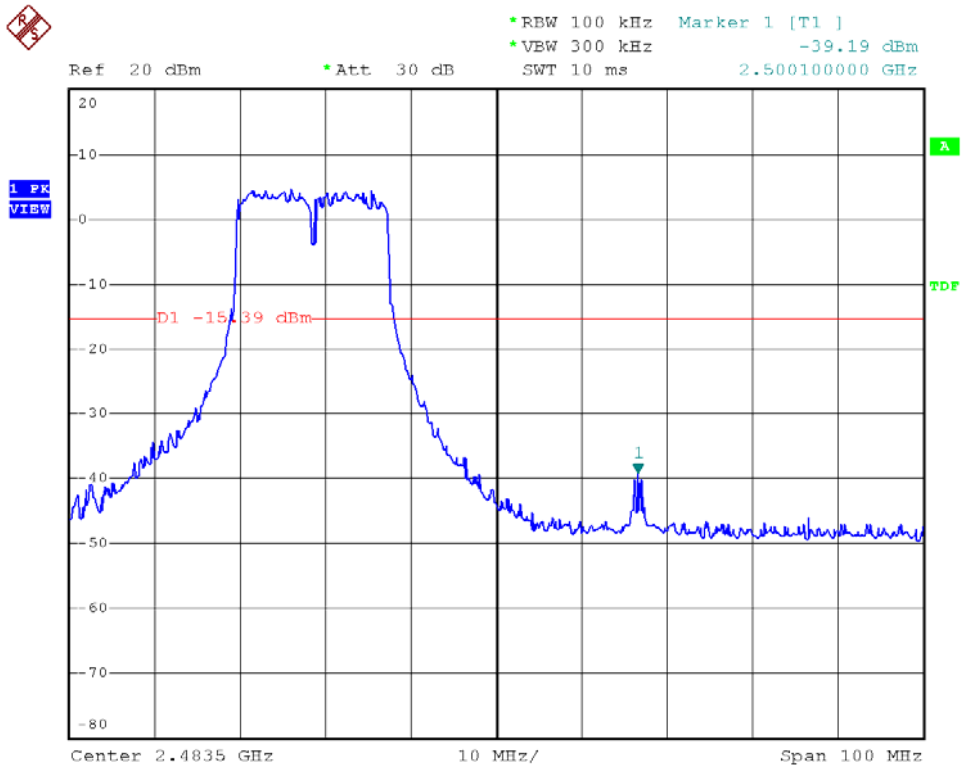


Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 01



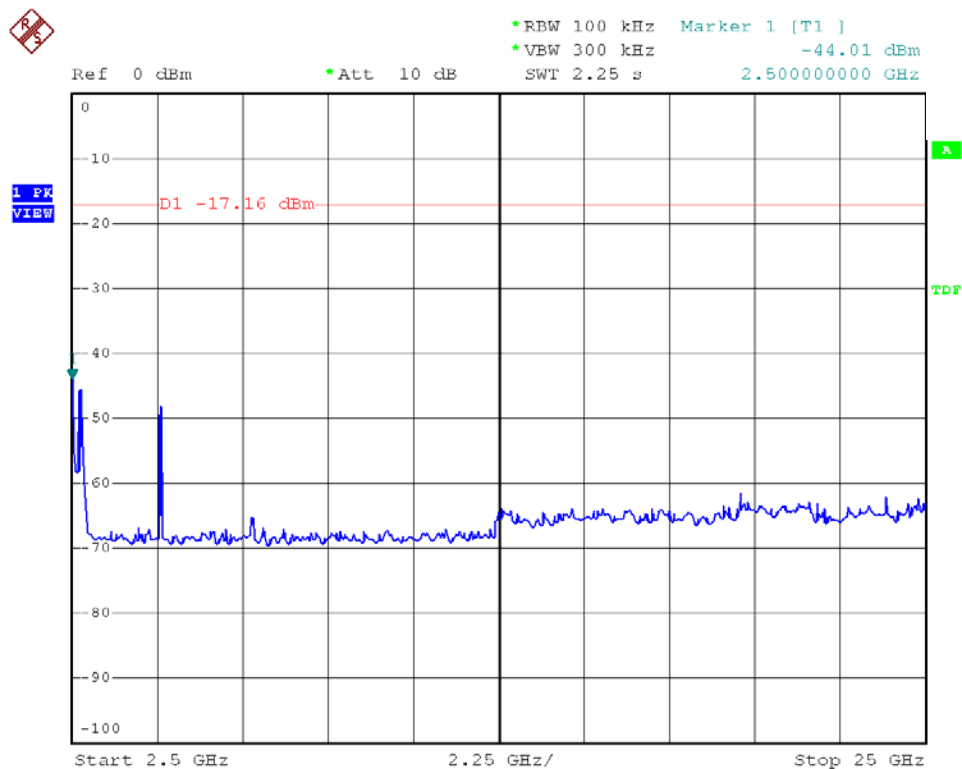
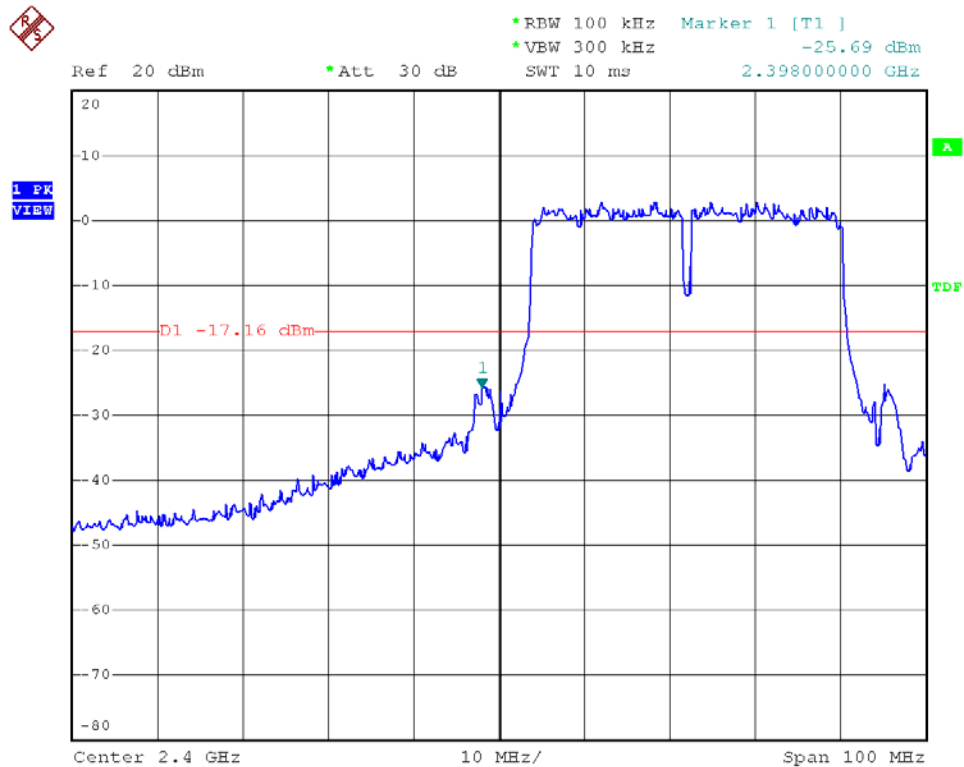


Modulation Standard: 802.11n HT20 (130Mbps), ANT L
Channel: 11



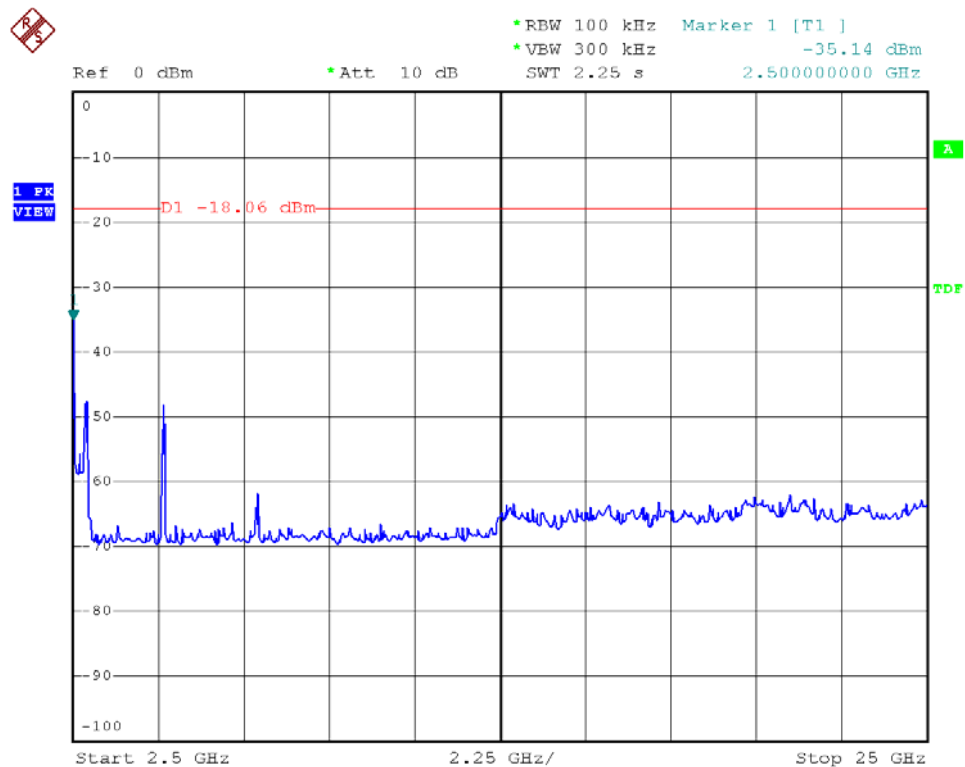
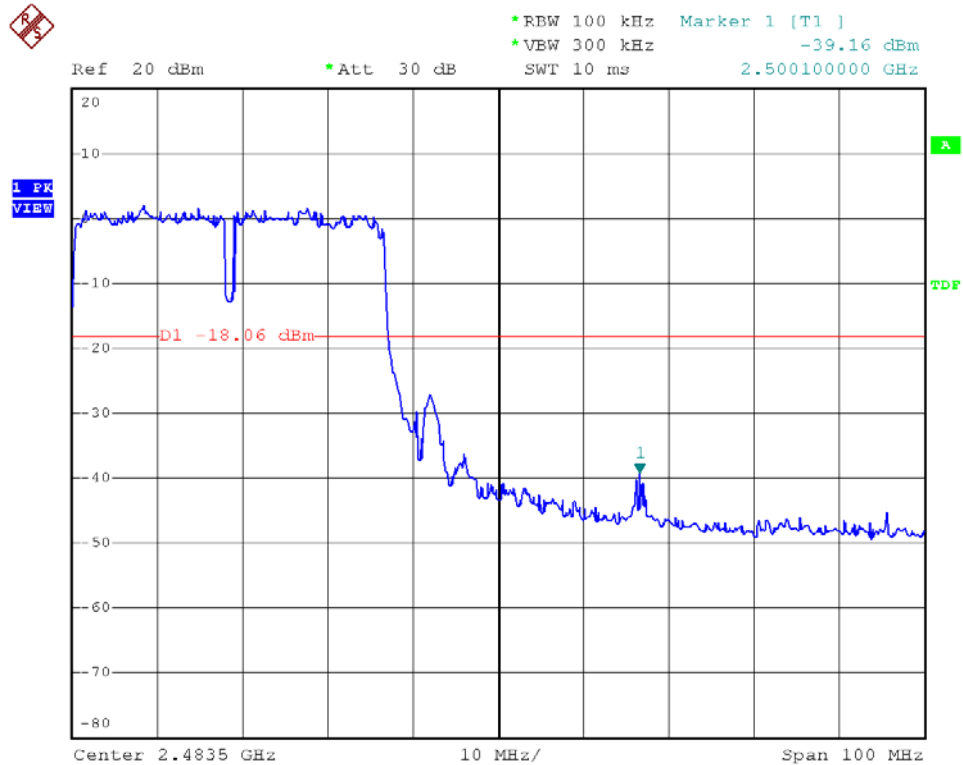


Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 03



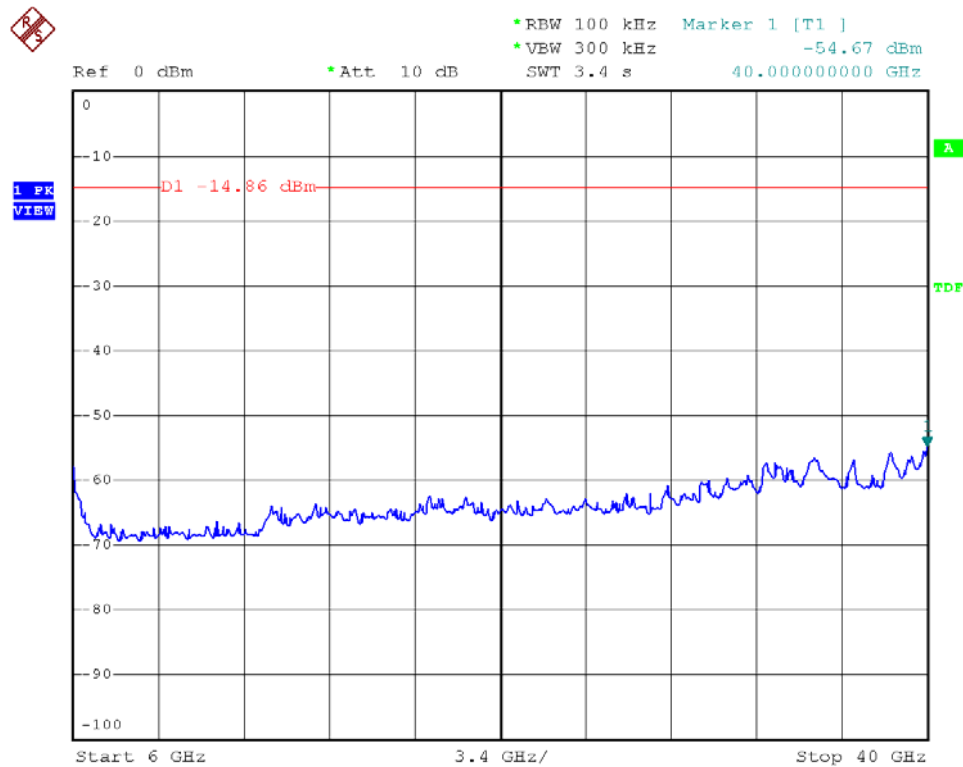
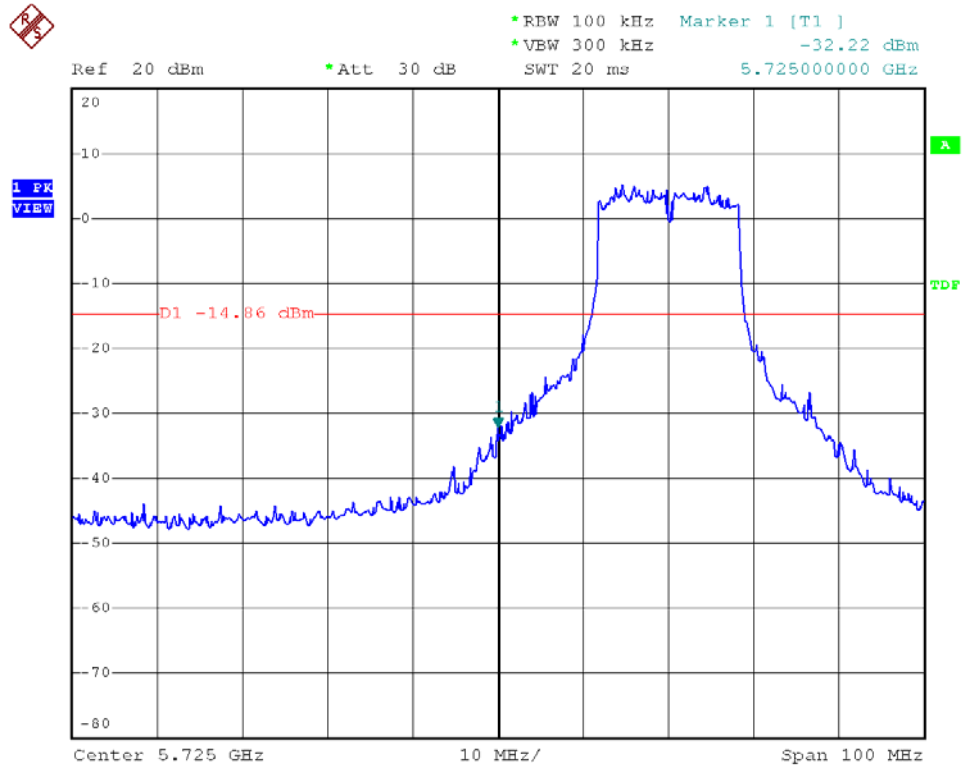


Modulation Standard: 802.11n HT40 (270Mbps), ANT L
Channel: 09



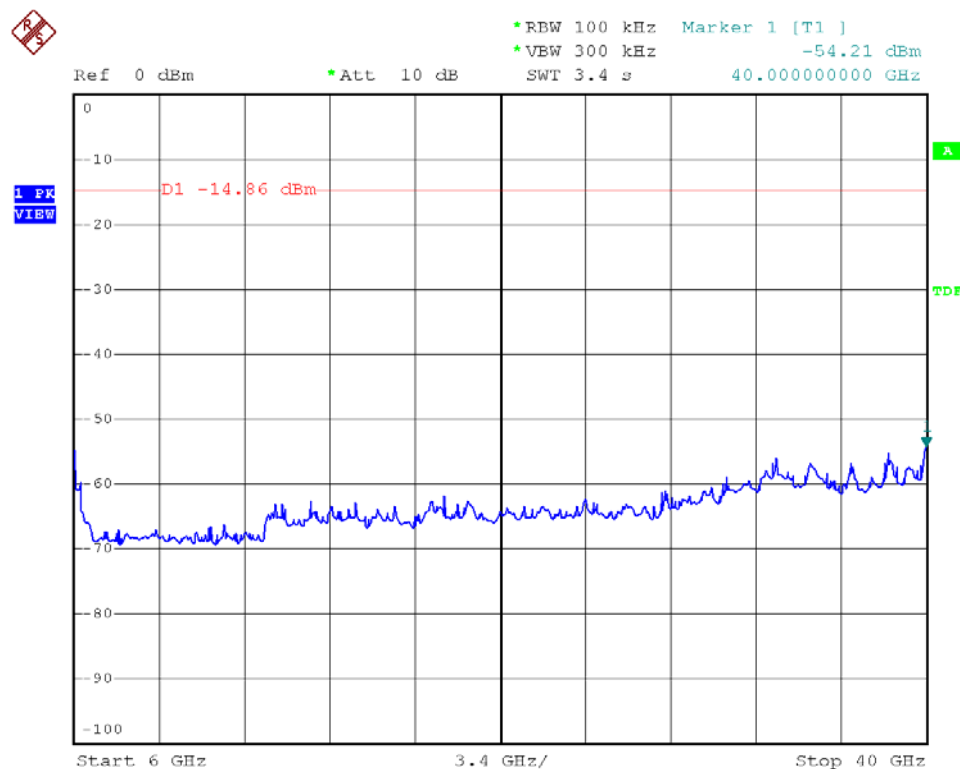
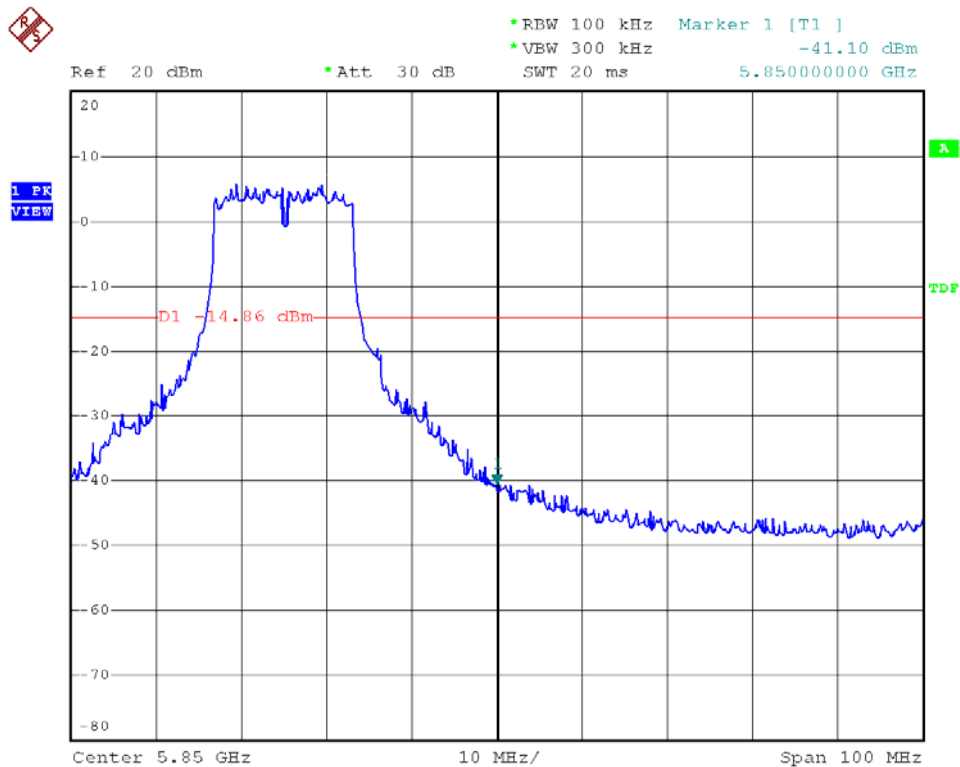


Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 149



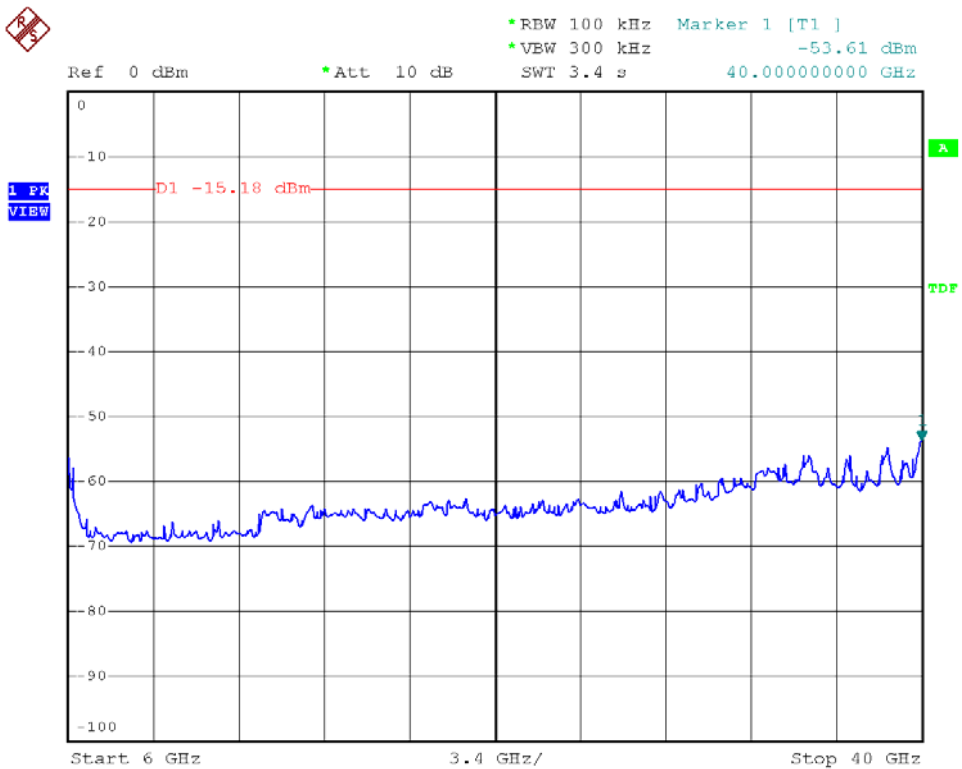
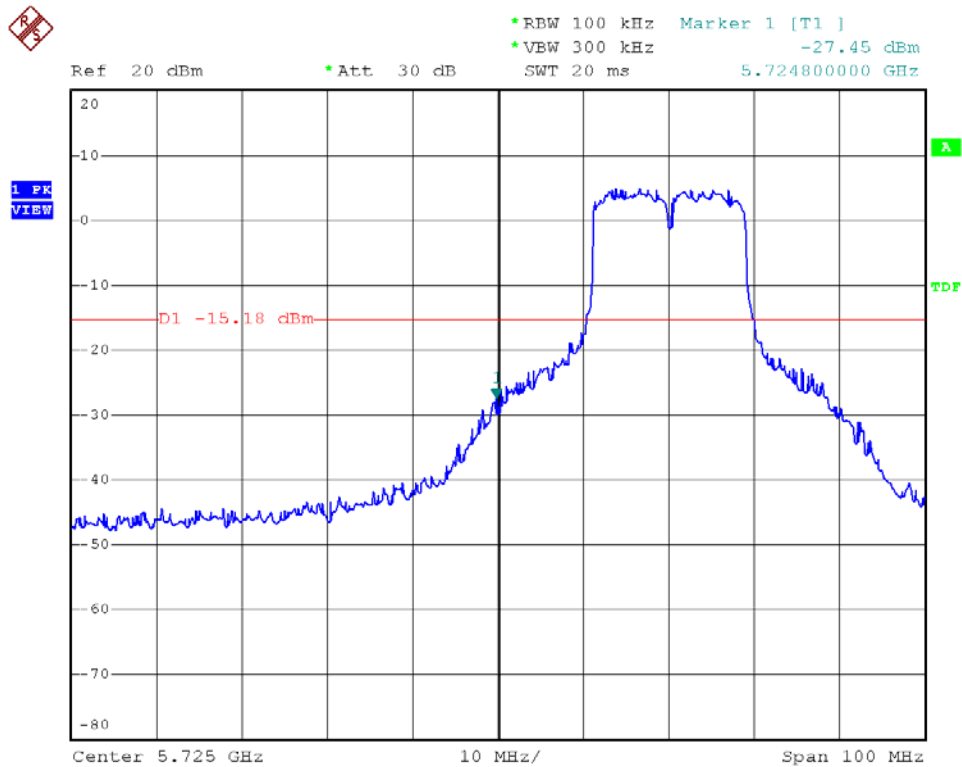


Modulation Standard: 802.11a (54Mbps), ANT L
Channel: 165



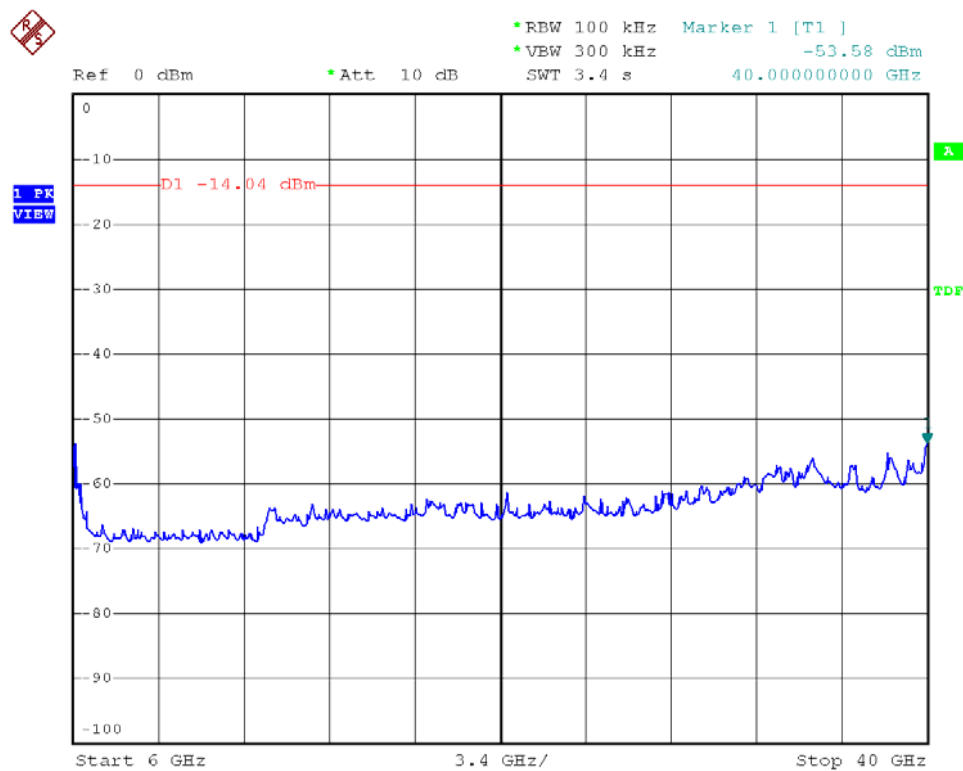
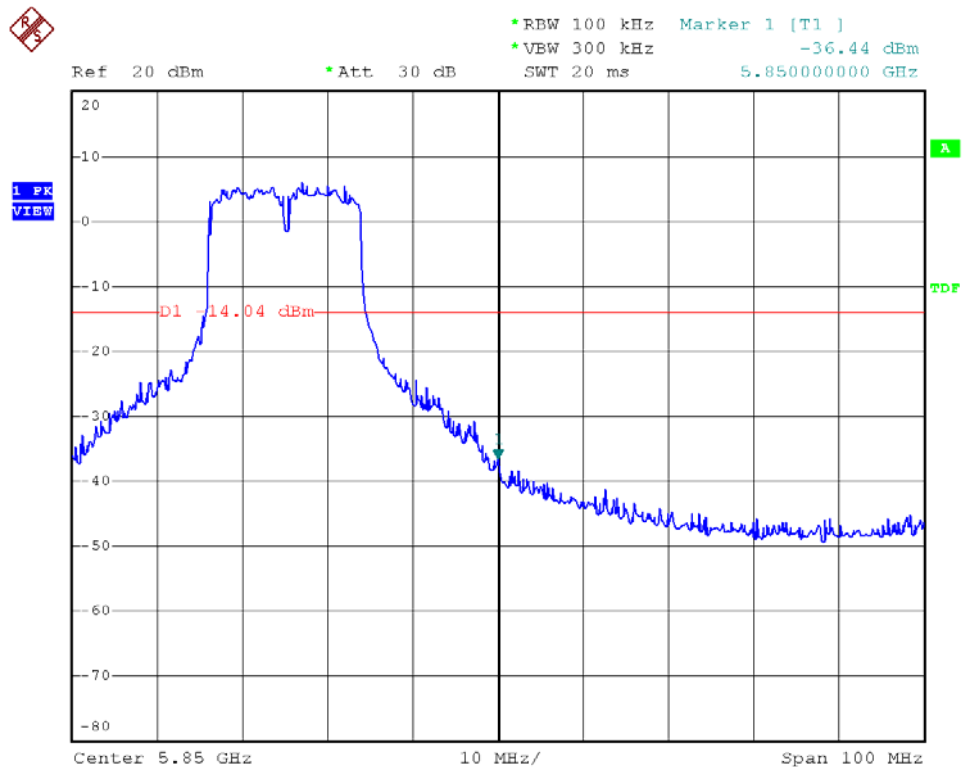


Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 149



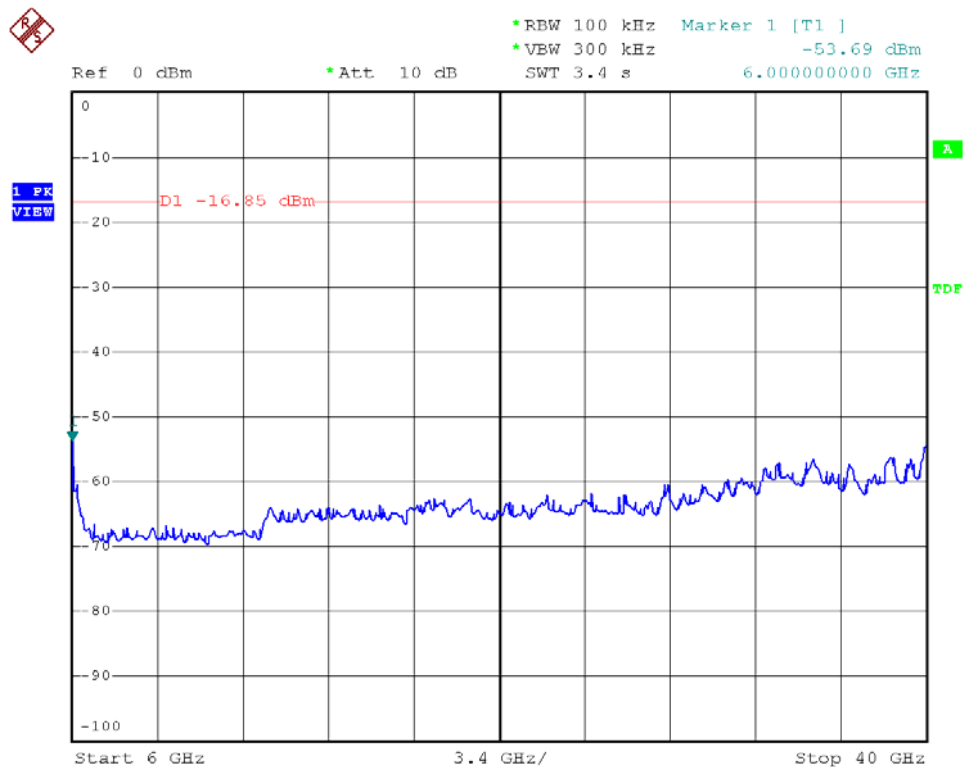
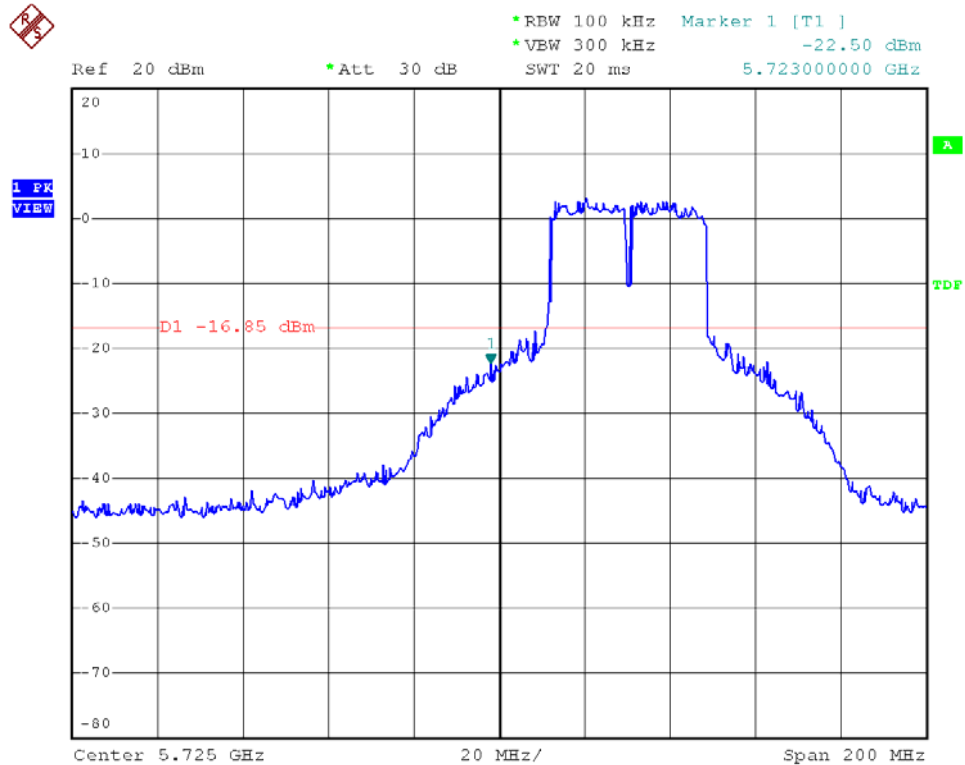


Modulation Standard: 802.11an HT20 (130Mbps), ANT L
Channel: 165



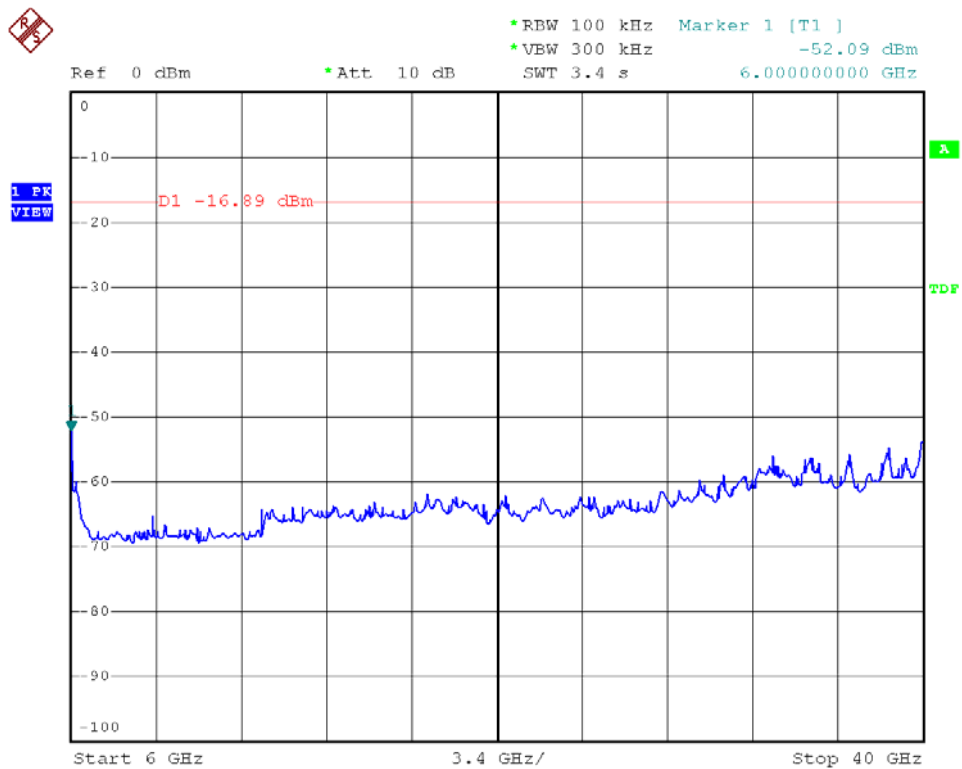
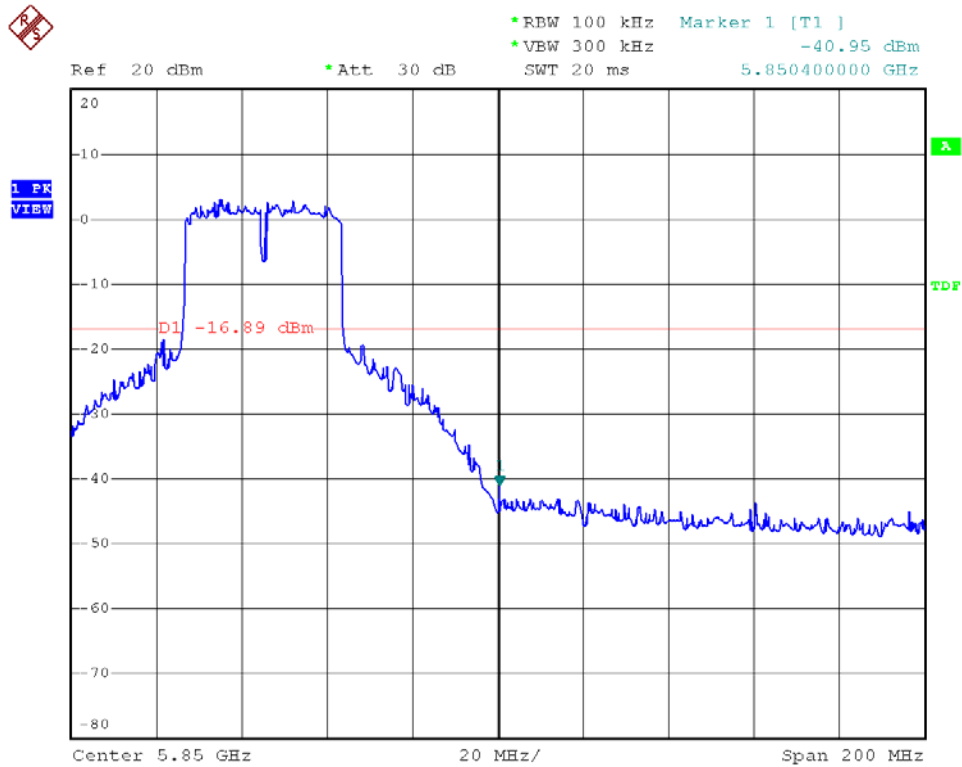


Modulation Standard: 802.11an HT40 (270Mbps), ANT L
Channel: 151





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





9.6 Restrict Band Emission Measurement Data

Test Date: Jun. 21, 2012

Temperature: 25 °C

Atmospheric pressure: 1020 hPa

Humidity: 65 %

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			
2369.16	H	49.68	1.69	51.37	Peak	74	54	-22.63	106	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2386.29	V	60.83	2.30	63.13	Peak	74	54	-10.87	225	1.00
2376.04	V	47.83	2.48	50.31	Ave	74	54	-3.69	225	1.00
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			
2499.81	H	52.68	0.05	52.73	Peak	74	54	-21.27	101	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2500.00	V	63.20	-3.22	59.98	Peak	74	54	-14.02	229	1.00
2500.00	V	50.65	-3.22	47.43	Ave	74	54	-6.57	229	1.00

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			
2389.35	H	52.77	1.62	54.39	Peak	74	54	-19.61	98	1.00
2389.81	H	39.85	1.62	41.47	Ave	74	54	-12.53	98	1.00
2389.76	V	65.19	2.25	67.44	Peak	74	54	-6.56	225	1.00
2389.81	V	48.50	2.25	50.75	Ave	74	54	-3.25	225	1.00
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			
2484.23	H	53.24	0.29	53.53	Peak	74	54	-20.47	108	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2484.11	V	66.37	-2.37	64.00	Peak	74	54	-10.00	226	1.00
2483.56	V	51.33	-2.35	48.98	Ave	74	54	-5.02	226	1.00



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			
2389.56	H	51.22	1.62	52.84	Peak	74	54	-21.16	99	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2389.96	V	62.50	2.25	64.75	Peak	74	54	-9.25	222	1.00
2389.56	V	48.46	2.26	50.72	Ave	74	54	-3.28	222	1.00
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			
2483.73	H	52.57	0.29	52.86	Peak	74	54	-21.14	94	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2483.66	V	67.07	-2.36	64.71	Peak	74	54	-9.29	228	1.00
2483.56	V	52.80	-2.35	50.45	Ave	74	54	-3.55	228	1.00

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			
2386.70	H	50.86	1.62	52.48	Peak	74	54	-21.52	106	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2387.52	V	61.48	2.29	63.77	Peak	74	54	-10.23	224	1.00
2389.81	V	48.25	2.25	50.50	Ave	74	54	-3.50	224	1.00
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			
2499.92	H	53.68	0.05	53.73	Peak	74	54	-20.27	76	1.00
---	H	---	---	---	Ave	74	54	---	---	---
2483.56	V	66.10	-2.36	63.74	Peak	74	54	-10.26	228	1.00
2483.73	V	53.01	-2.35	50.66	Ave	74	54	-3.34	228	1.00

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 (detector peak mode) for Peak detection at frequency above 1GHz.
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector sample mode) 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.