

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		2412MHz (Ch1)	2437MHz (Ch6)	2462 MHz (Ch11)
802.11n (20MHz)	MCS0	20.27	/	/
	MCS1	20.23	/	/
	MCS2	20.05	/	/
	MCS3	20.56	/	/
	MCS4	20.72	/	/
	MCS5	20.87	21.54	21.25
	MCS6	20.85	/	/
	MCS7	20.82	/	/

The data rate MCS5 is selected as worse condition, and the following cases are performed with this condition.

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Mode	Data Rate (Index)	Test Result (dBm)		
		2422MHz (Ch3)	2437MHz (Ch6)	2452 MHz (Ch9)
802.11n (40MHz)	MCS0	21.17	/	/
	MCS1	20.99	/	/
	MCS2	21.02	/	/
	MCS3	21.45	/	/
	MCS4	21.40	/	/
	MCS5	21.95	21.85	21.97
	MCS6	21.71	/	/
	MCS7	21.87	/	/

The data rate MCS5 is selected as worse condition, and the following cases are performed with this condition.

The spot check result of average output power is 17.40dBm (802.11b 5.5Mbps ch6 prototype result:17.70dBm)

Conclusion: Pass

A.3. Peak Power Spectral Density

Method of Measurement: See ANSI C63.10-2013-clause 11.10.2

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to $RBW = 3 \text{ kHz}$.
- Set the VBW = 10 kHz .
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

Measurement Limit:

Standard	Limit
FCC CRF Part 15.247(e)	$< 8 \text{ dBm/3 kHz}$

Measurement Results:

802.11b/g mode

Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11b	1	Fig.A.3.1	-6.04	P
	6	Fig.A.3.2	-4.78	P
	11	Fig.A.3.3	-5.50	P
802.11g	1	Fig.A.3.4	-11.26	P
	6	Fig.A.3.5	-9.26	P
	11	Fig.A.3.6	-10.34	P

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Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11n (HT20)	1	Fig.A.3.7	-12.62	P
	6	Fig.A.3.8	-10.59	P
	11	Fig.A.3.9	-11.33	P

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Mode	Channel	Power Spectral Density (dBm/3 kHz)		Conclusion
802.11n (HT40)	3	Fig.A.3.10	-14.32	P
	6	Fig.A.3.11	-14.92	P
	9	Fig.A.3.12	-15.11	P

Conclusion: Pass

Test graphs as below:

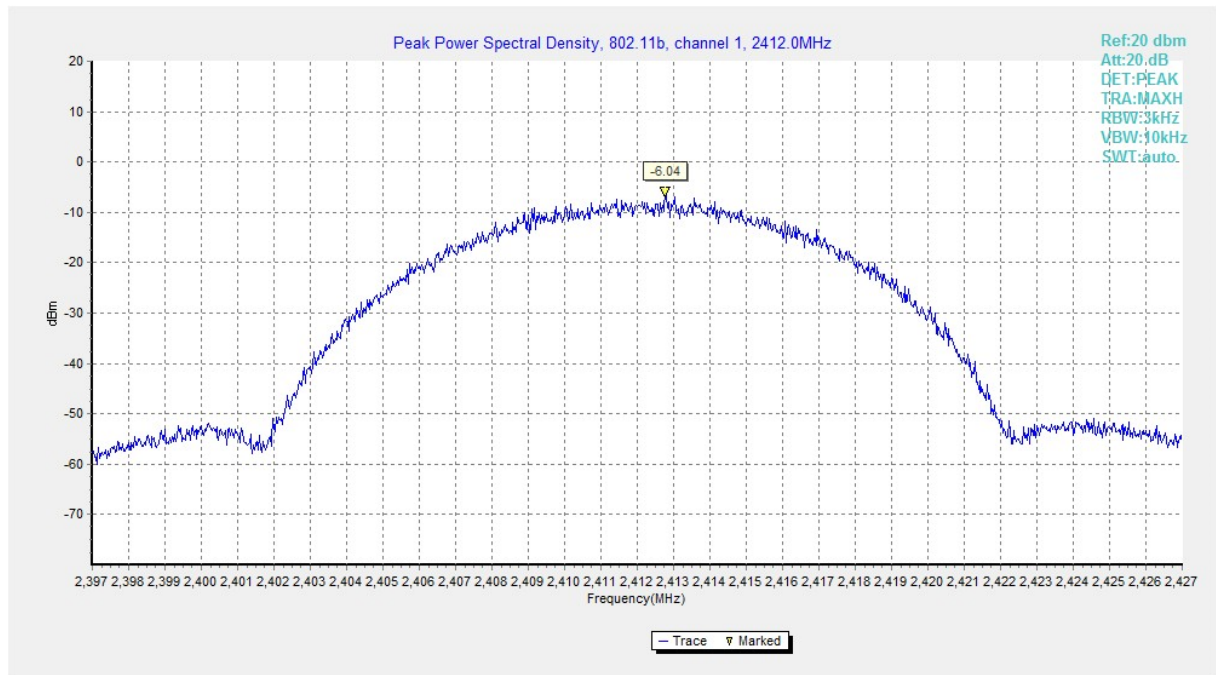


Fig.A.3.1 Power Spectral Density(802.11b,Ch1)

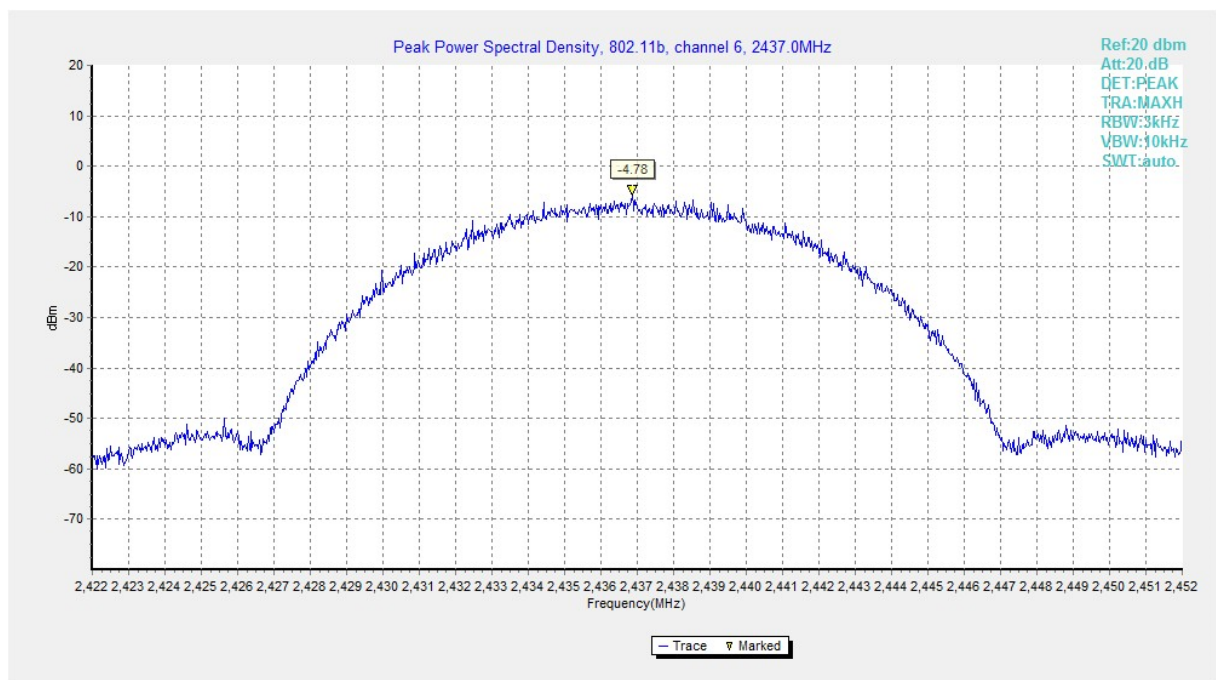


Fig.A.3.2 Power Spectral Density (802.11b, Ch 6)

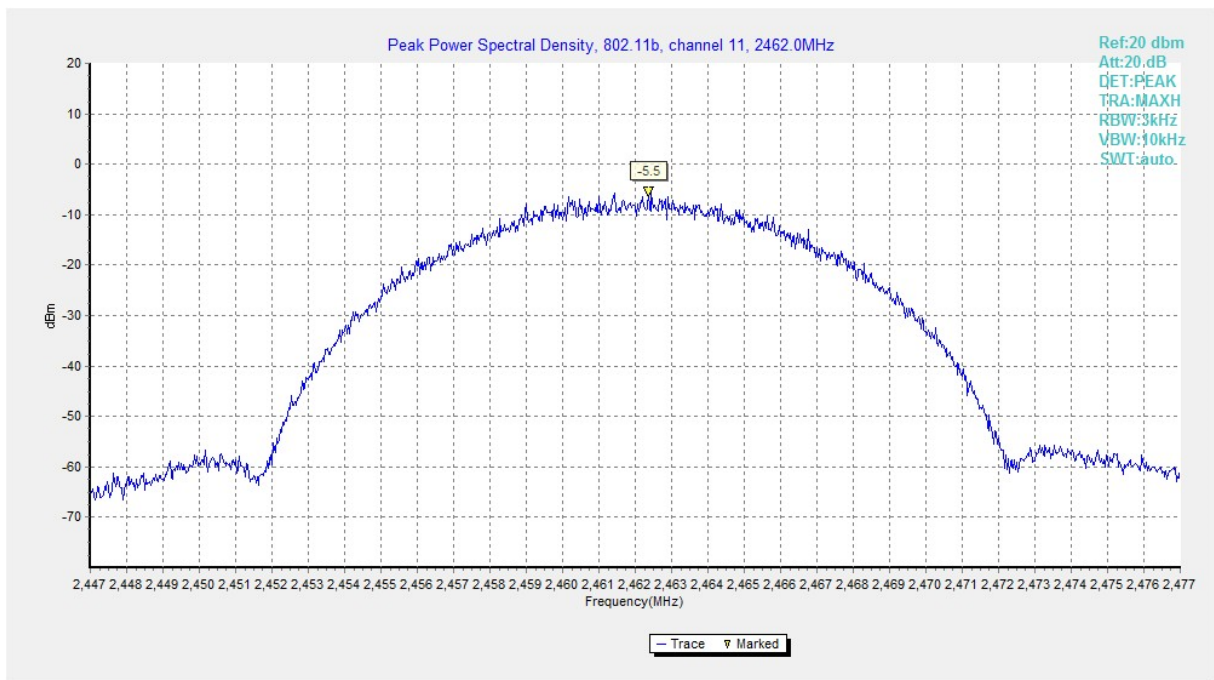


Fig.A.3.3 Power Spectral Density (802.11b, Ch 11)

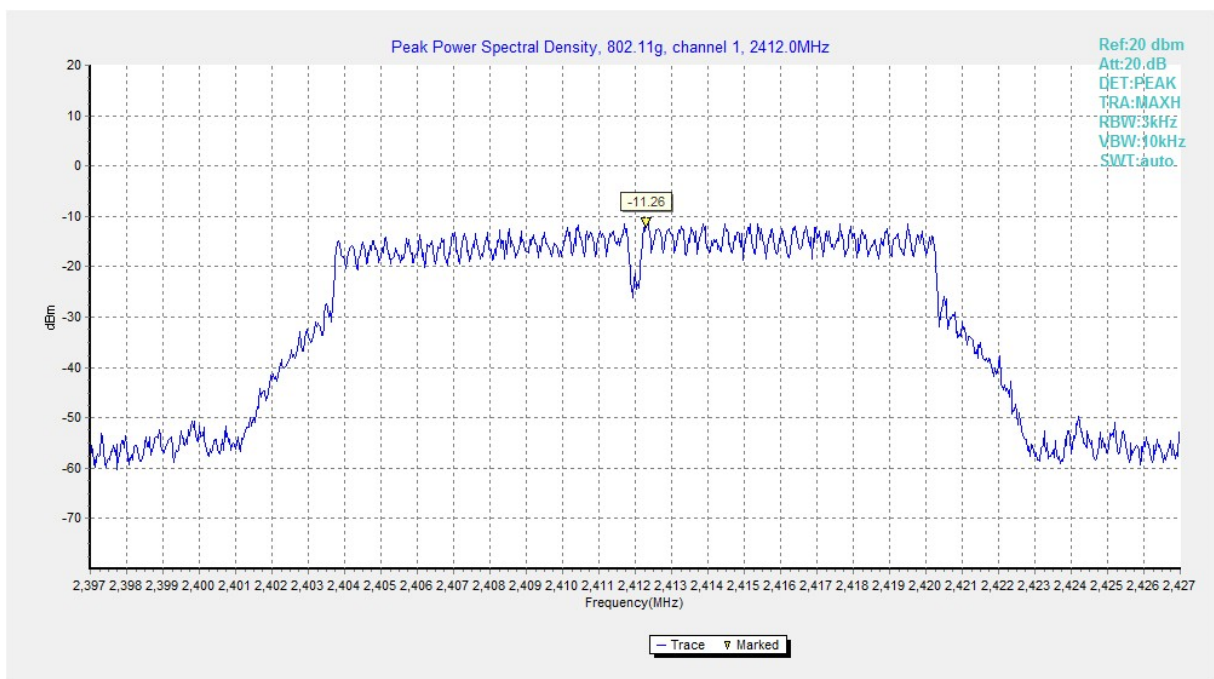


Fig.A.3.4 Power Spectral Density (802.11g, Ch 1)

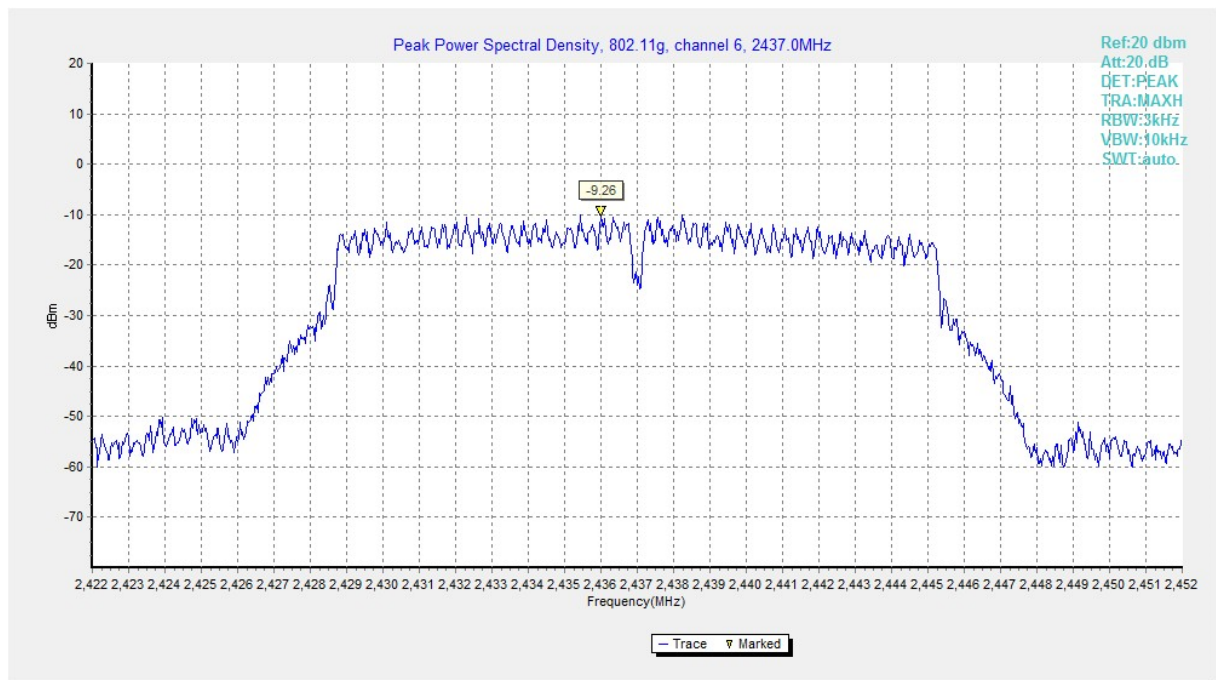


Fig.A.3.5 Power Spectral Density (802.11g, Ch 6)

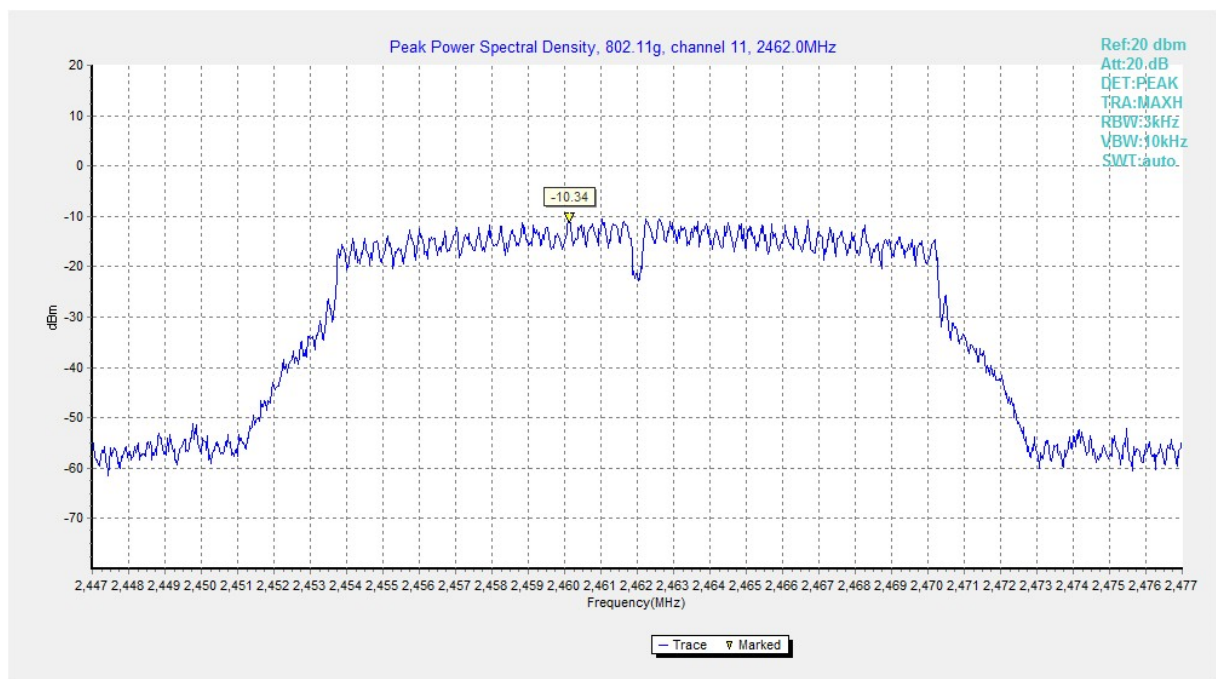


Fig.A.3.6 Power Spectral Density (802.11g, Ch 11)

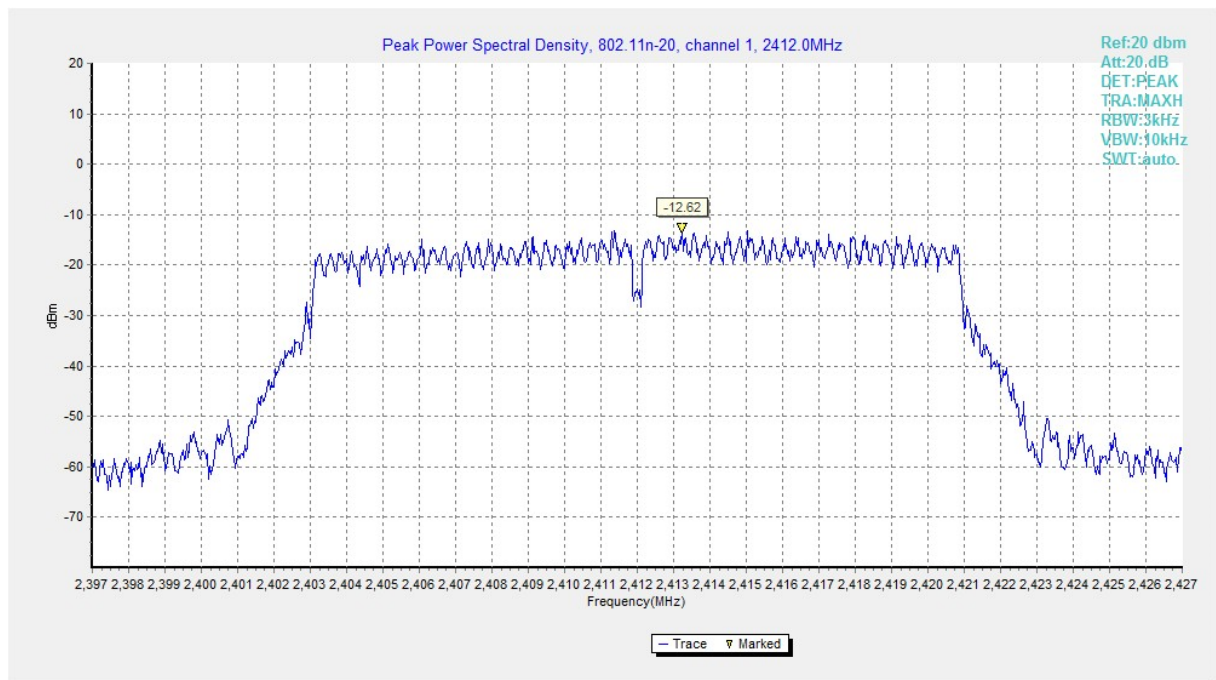


Fig.A.3.7 Power Spectral Density (802.11n-HT20, Ch 1)

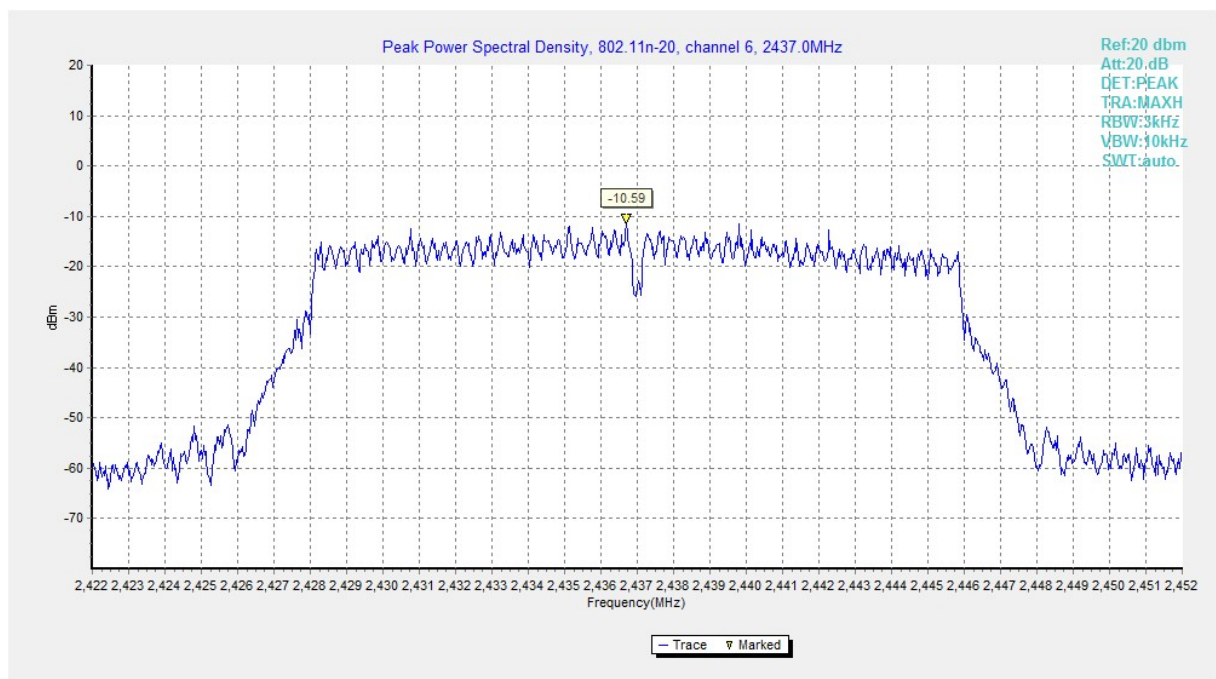


Fig.A.3.8 Power Spectral Density (802.11n-HT20, Ch 6)

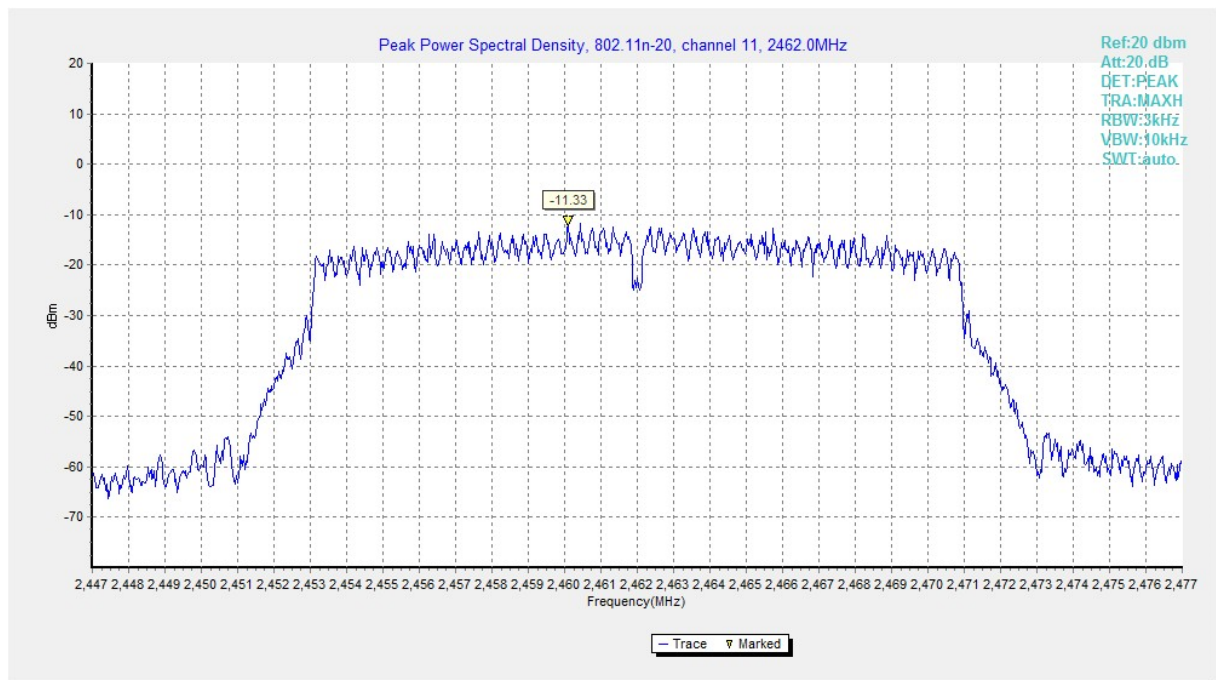


Fig.A.3.9 Power Spectral Density (802.11n-HT20, Ch 11)

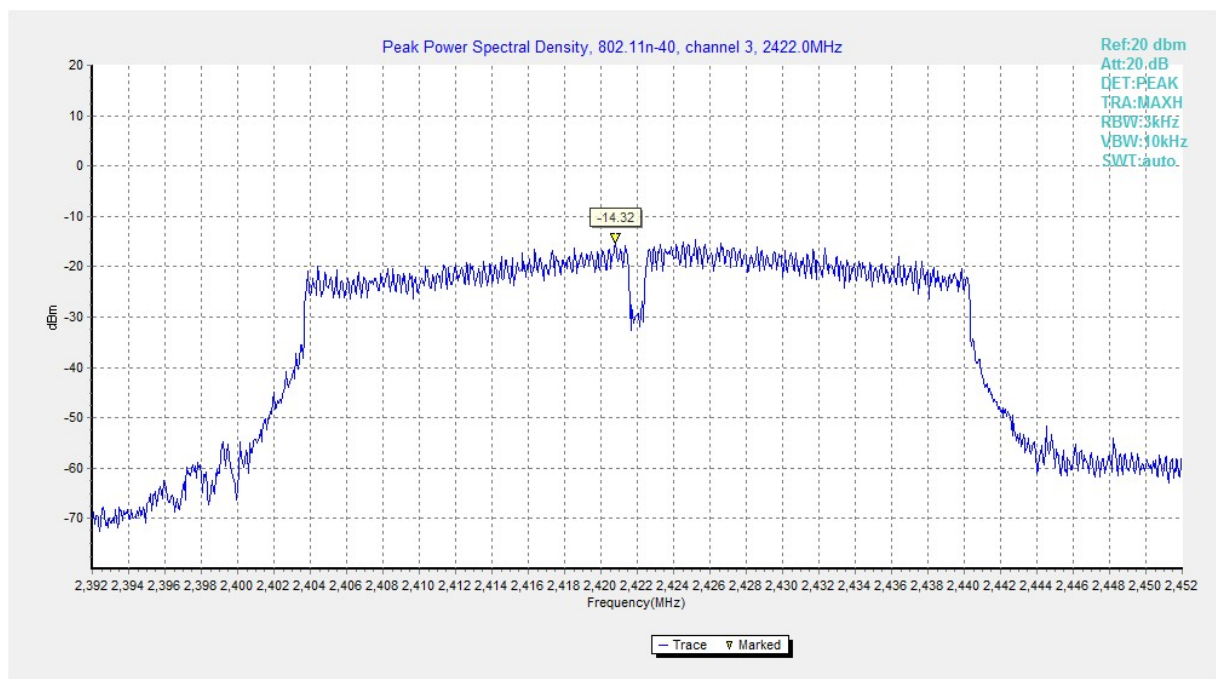


Fig.A.3.10 Power Spectral Density (802.11n-HT40, Ch 3)

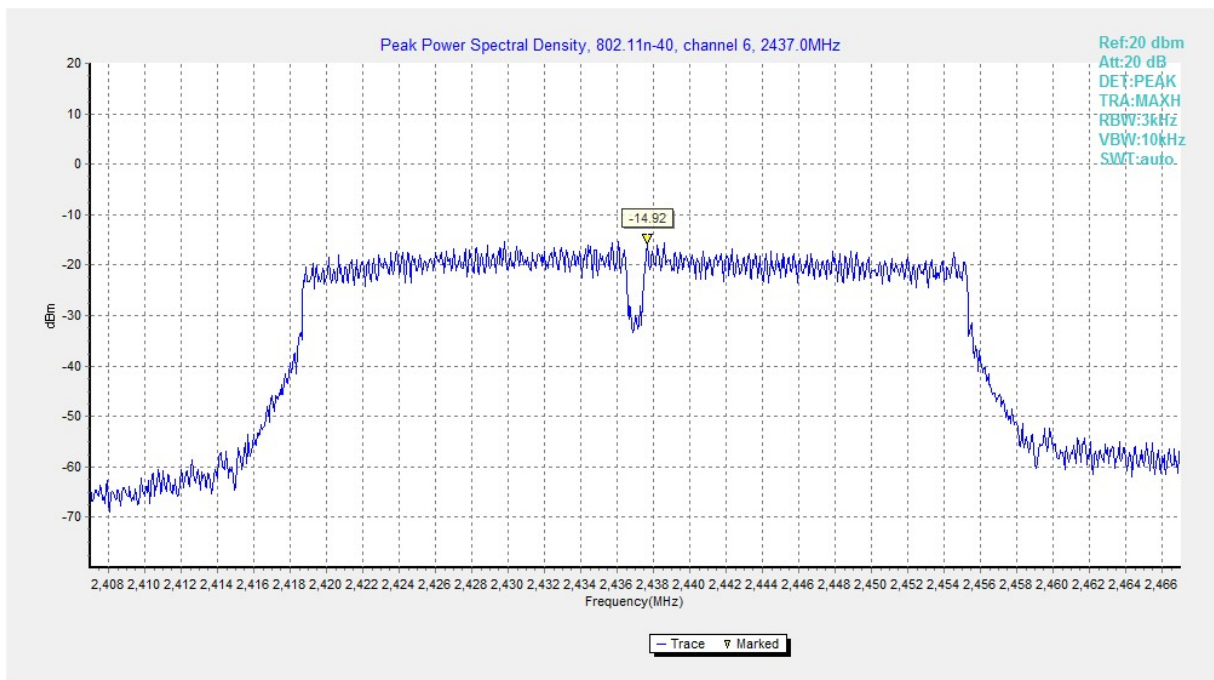


Fig.A.3.11 Power Spectral Density (802.11n-HT40, Ch 6)

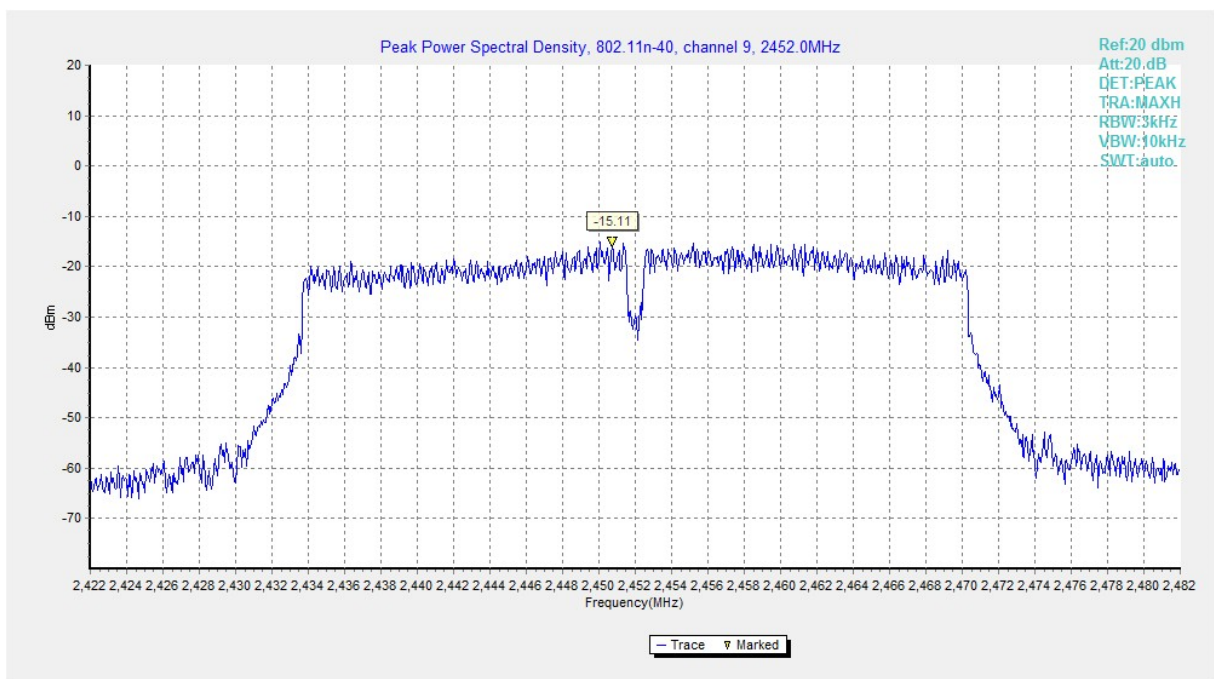


Fig.A.3.12 Power Spectral Density (802.11n-HT40, Ch 9)

A.4. DTS 6-dB Signal Bandwidth

Method of Measurement: See ANSI C63.10-2013 section 11.8.1.

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) = 300 kHz.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	≥ 500

EUT ID: EUT2

Measurement Result:

802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11b	1	Fig.A.4.1	8050.00	P
	6	Fig.A.4.2	7300.00	P
	11	Fig.A.4.3	8050.00	P
802.11g	1	Fig.A.4.4	16500.00	P
	6	Fig.A.4.5	15650.00	P
	11	Fig.A.4.6	16400.00	P

802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT20)	1	Fig.A.4.7	17700.00	P
	6	Fig.A.4.8	15450.00	P
	11	Fig.A.4.9	17550.00	P

802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT40)	3	Fig.A.4.10	36480.00	P
	6	Fig.A.4.11	30000.00	P
	9	Fig.A.4.12	36480.00	P

Conclusion: Pass

Test graphs as below:

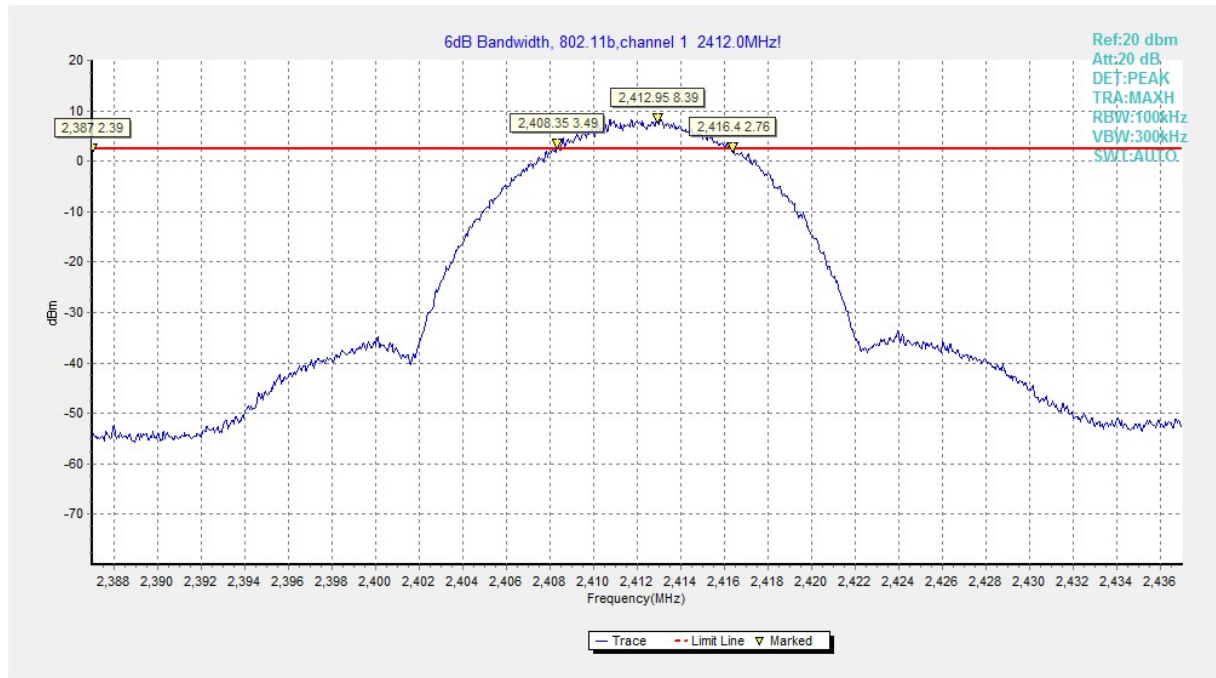


Fig.A.4.1 Occupied 6dB Bandwidth(802.11b,Ch 1)

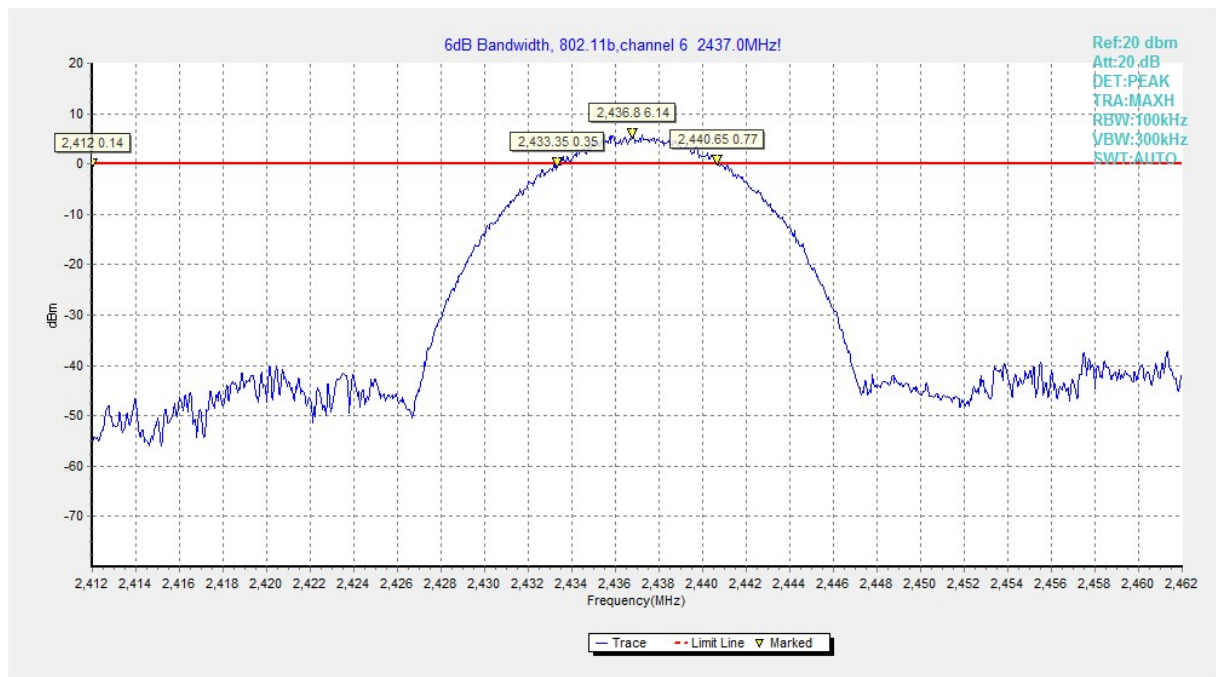


Fig.A.4.2 Occupied 6dB Bandwidth (802.11b, Ch 6)

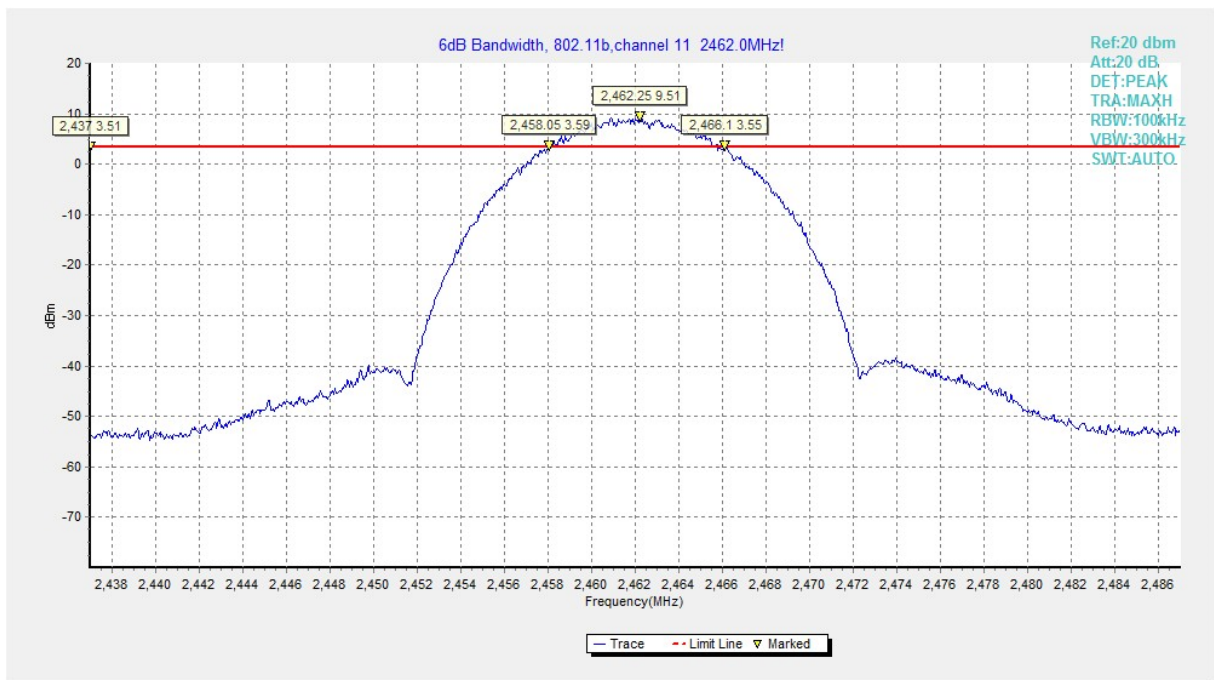


Fig.A.4.3 Occupied 6dB Bandwidth (802.11b, Ch 11)

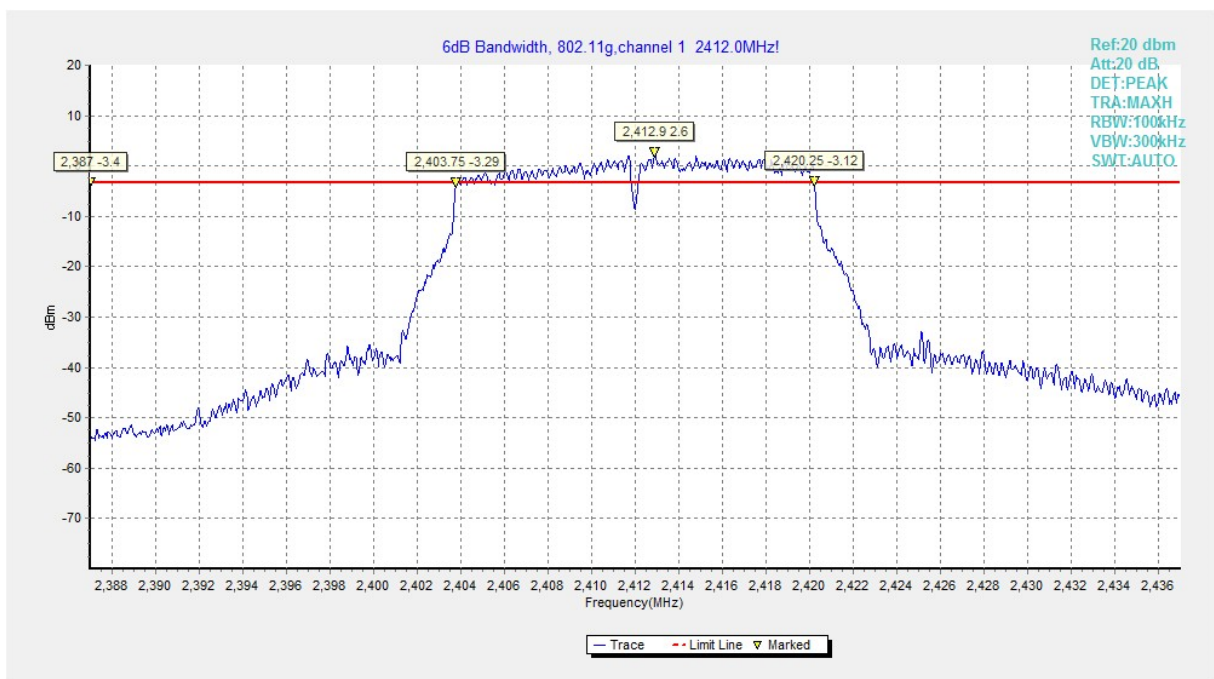


Fig.A.4.4 Occupied 6dB Bandwidth (802.11g, Ch 1)

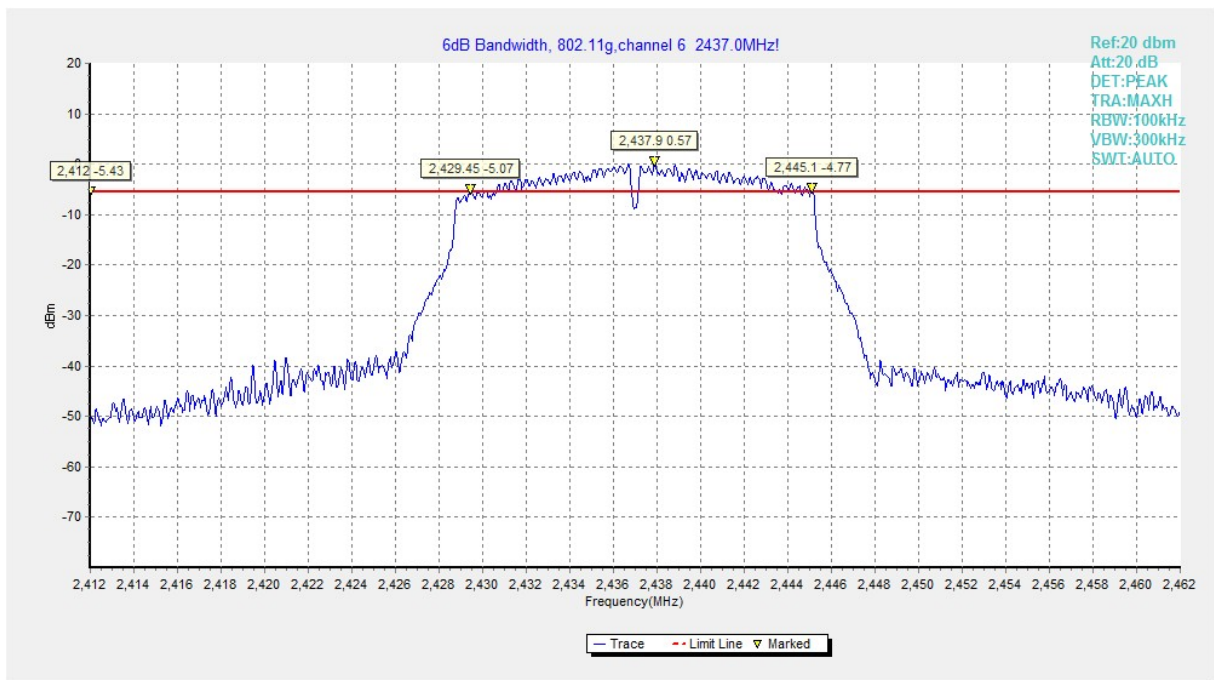


Fig.A.4.5 Occupied 6dB Bandwidth (802.11g, Ch 6)

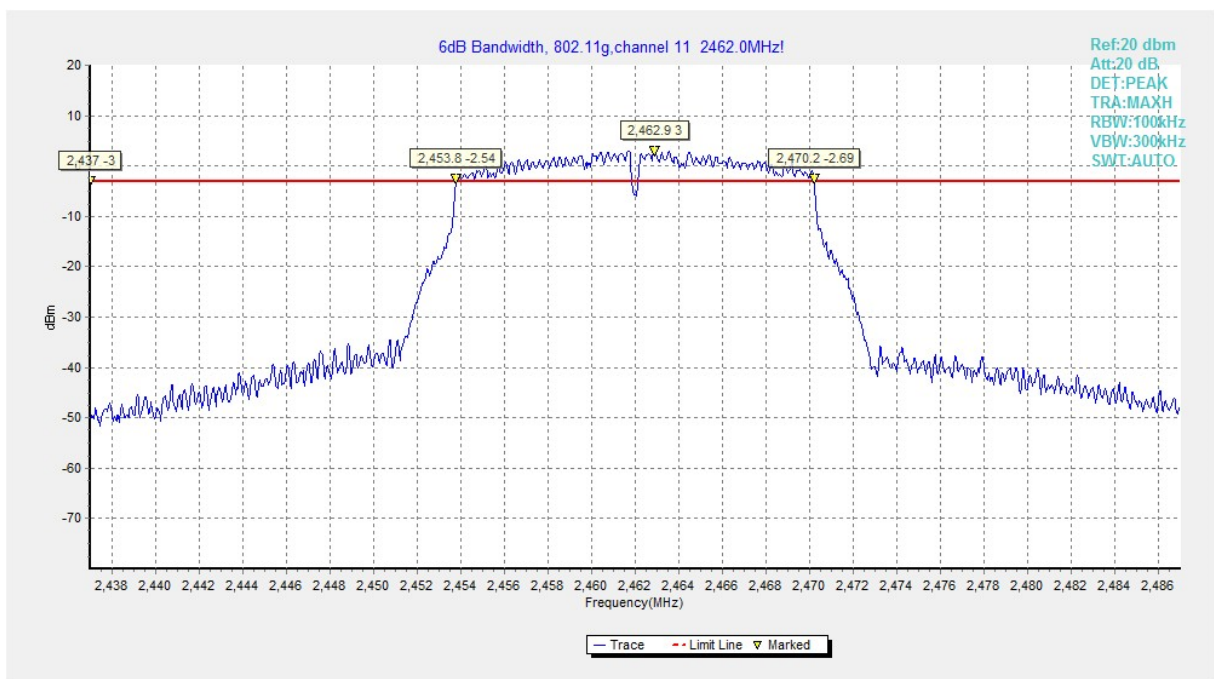


Fig.A.4.6 Occupied 6dB Bandwidth (802.11g, Ch 11)

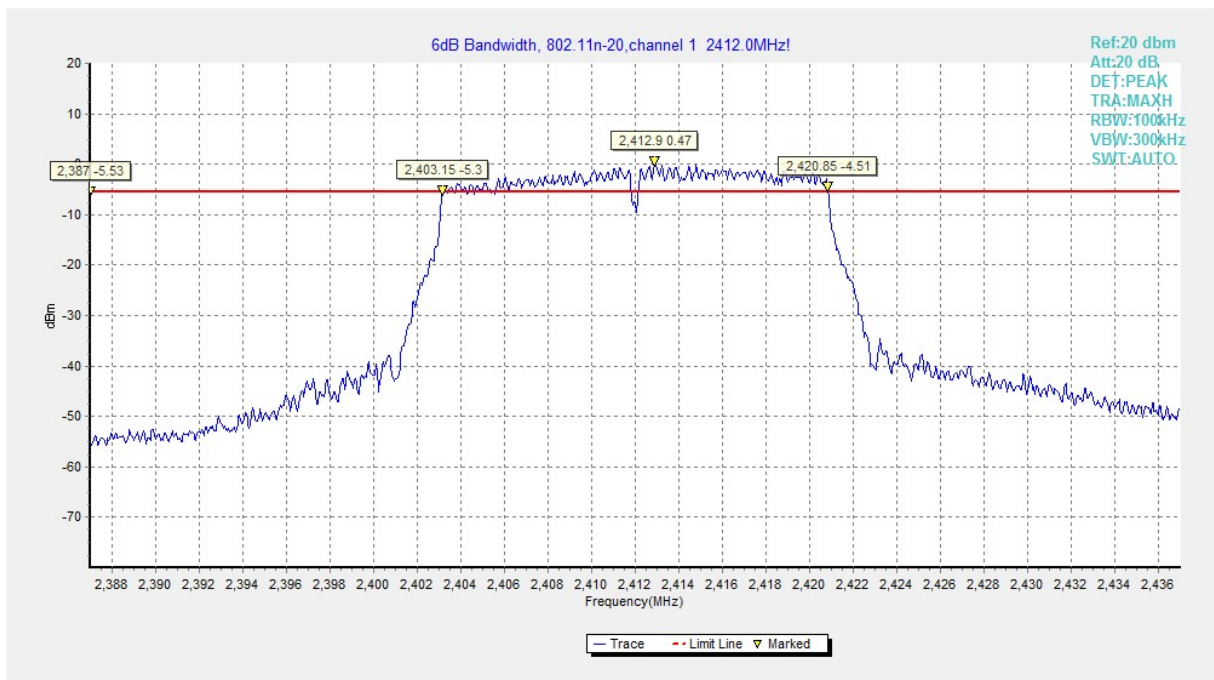


Fig.A.4.7 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)

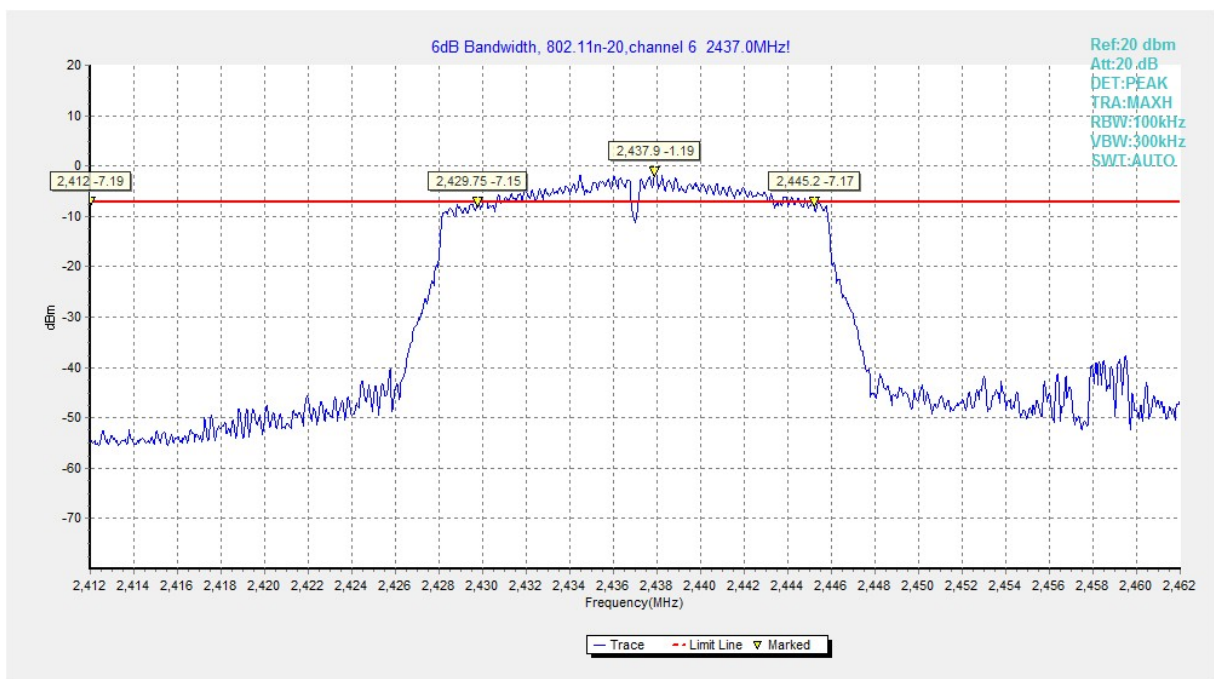


Fig.A.4.8 Occupied 6dB Bandwidth (802.11n-HT20, Ch 6)

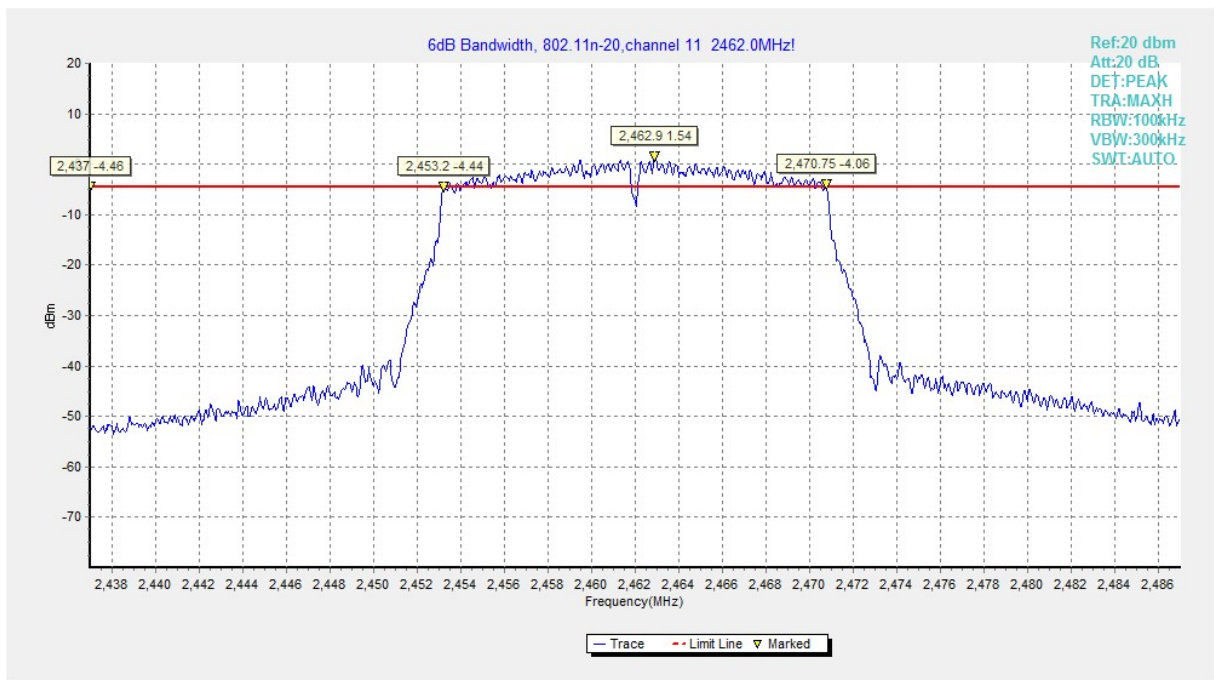


Fig.A.4.9 Occupied 6dB Bandwidth (802.11n-HT20, Ch 11)

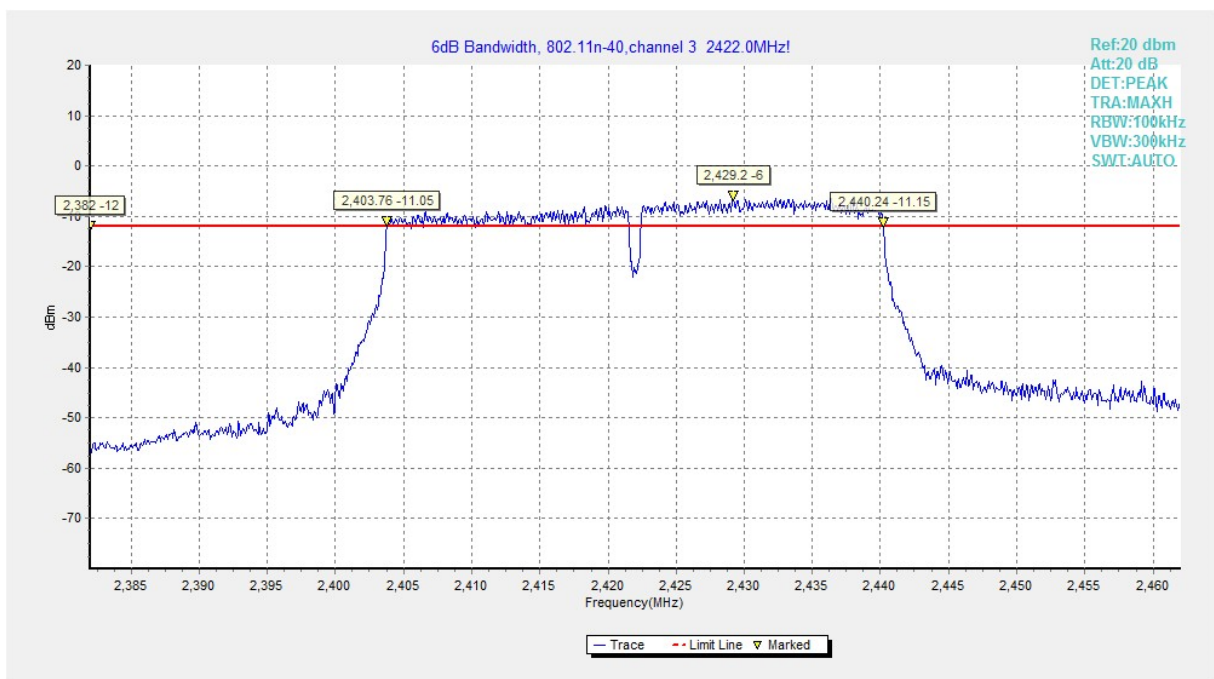


Fig.A.4.10 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 3)