

A.4. DTS 6-dB Signal Bandwidth

Method of Measurement: See KDB558074 section 8.1 (Option 1).

Measurement Limit:

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

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	54Mbps(OFDM)	MCS3(OFDM)	MCS3(OFDM)

Measurement Result:

802.11b/g mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11b	1	Fig.A.4.1	9400	P
	6	Fig.A.4.2	9250	P
	11	Fig.A.4.3	9250	P
	12	Fig.A.4.4	9550	P
	13	Fig.A.4.5	9750	P
802.11g	1	Fig.A.4.6	16250	P
	6	Fig.A.4.7	16050	P
	11	Fig.A.4.8	15650	P
	12	Fig.A.4.9	16300	P
	13	Fig.A.4.10	16400	P

802.11n-HT20 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT20)	1	Fig.A.4.11	16100	P
	6	Fig.A.4.12	17500	P
	11	Fig.A.4.13	16250	P
	12	Fig.A.4.14	17600	P
	13	Fig.A.4.15	17600	P

802.11n-HT40 mode

Mode	Channel	Occupied 6dB Bandwidth (kHz)		conclusion
802.11n (HT40)	3	Fig.A.4.16	36320	P
	6	Fig.A.4.17	36320	P
	9	Fig.A.4.18	36320	P
	10	Fig.A.4.19	36000	P
	11	Fig.A.4.20	36000	P

Conclusion: Pass

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz
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Test graphs as below:

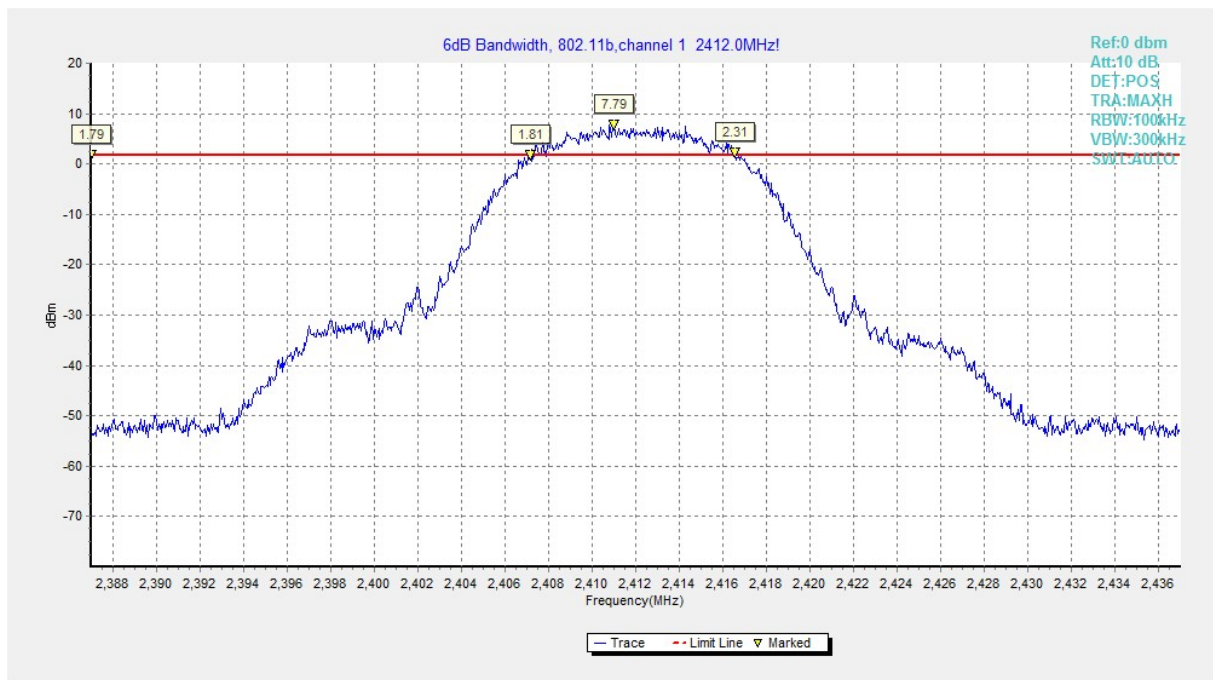


Fig.A.4.1 Occupied 6dB Bandwidth (802.11b, Ch 1)

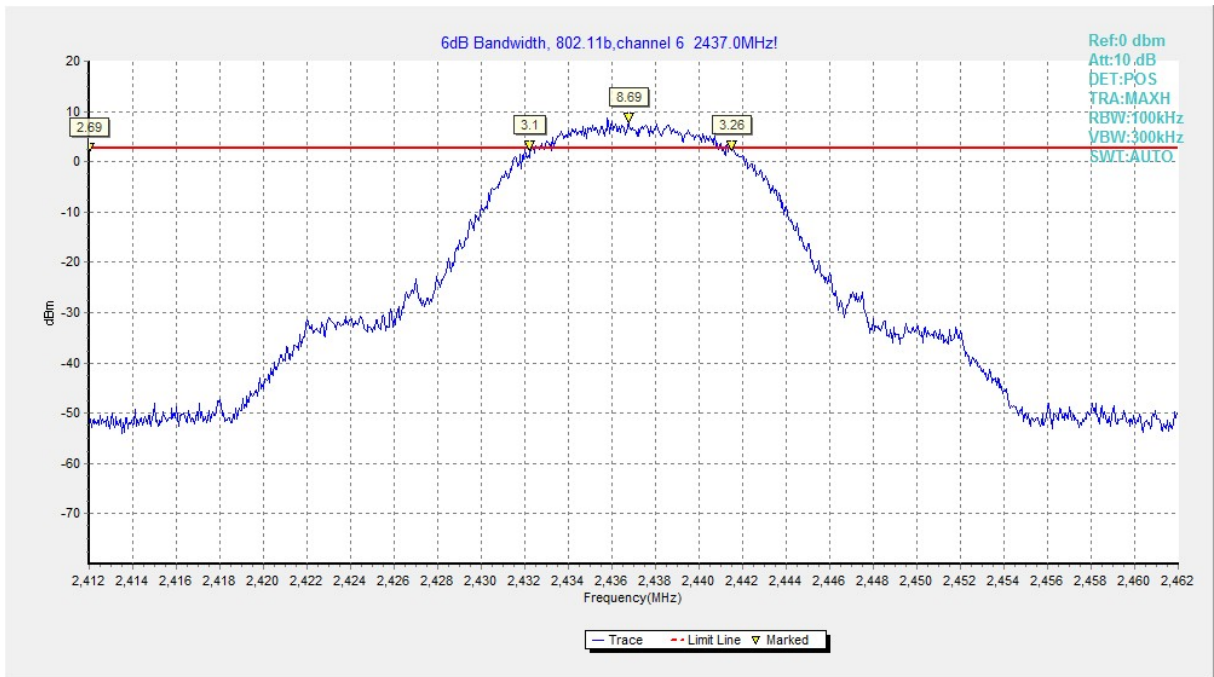


Fig.A.4.2 Occupied 6dB Bandwidth (802.11b, Ch 6)

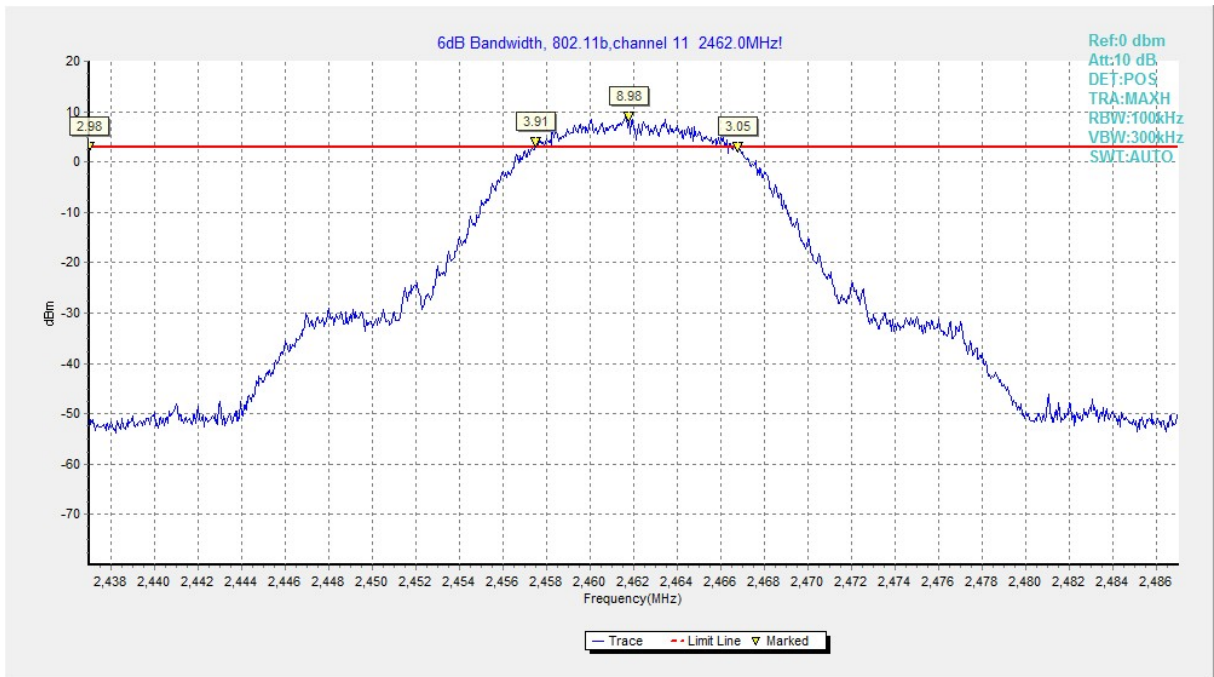


Fig.A.4.3 Occupied 6dB Bandwidth (802.11b, Ch 11)

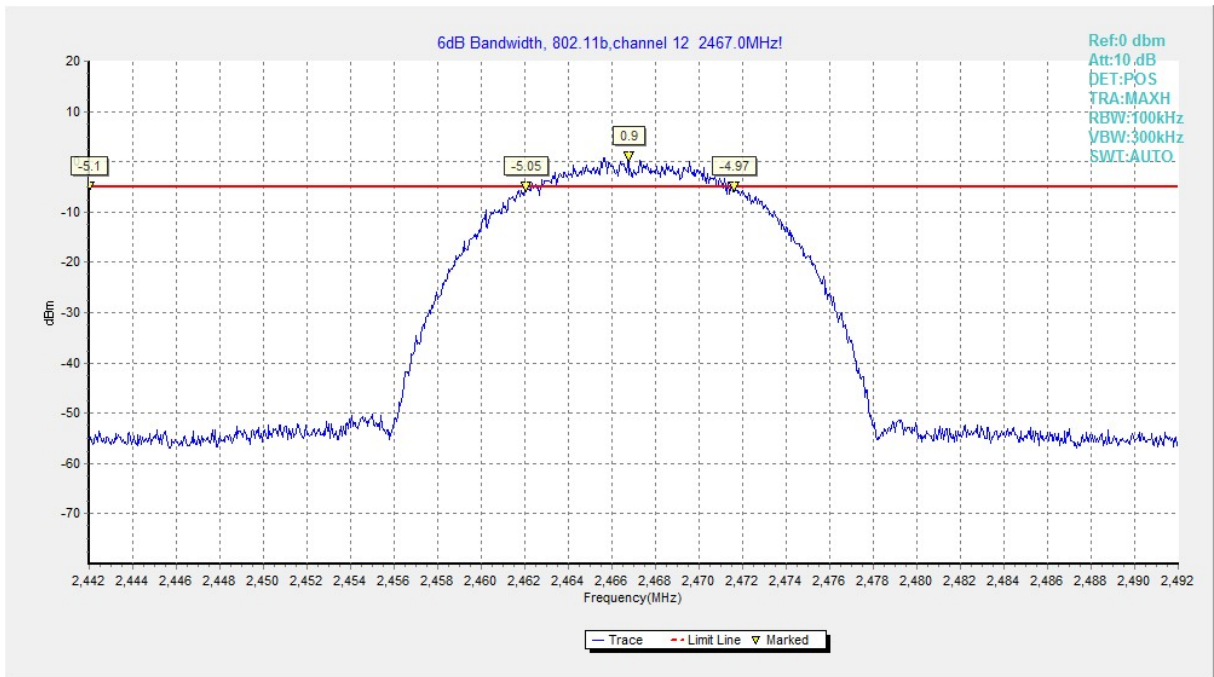


Fig.A.4.4 Occupied 6dB Bandwidth (802.11b, Ch 12)

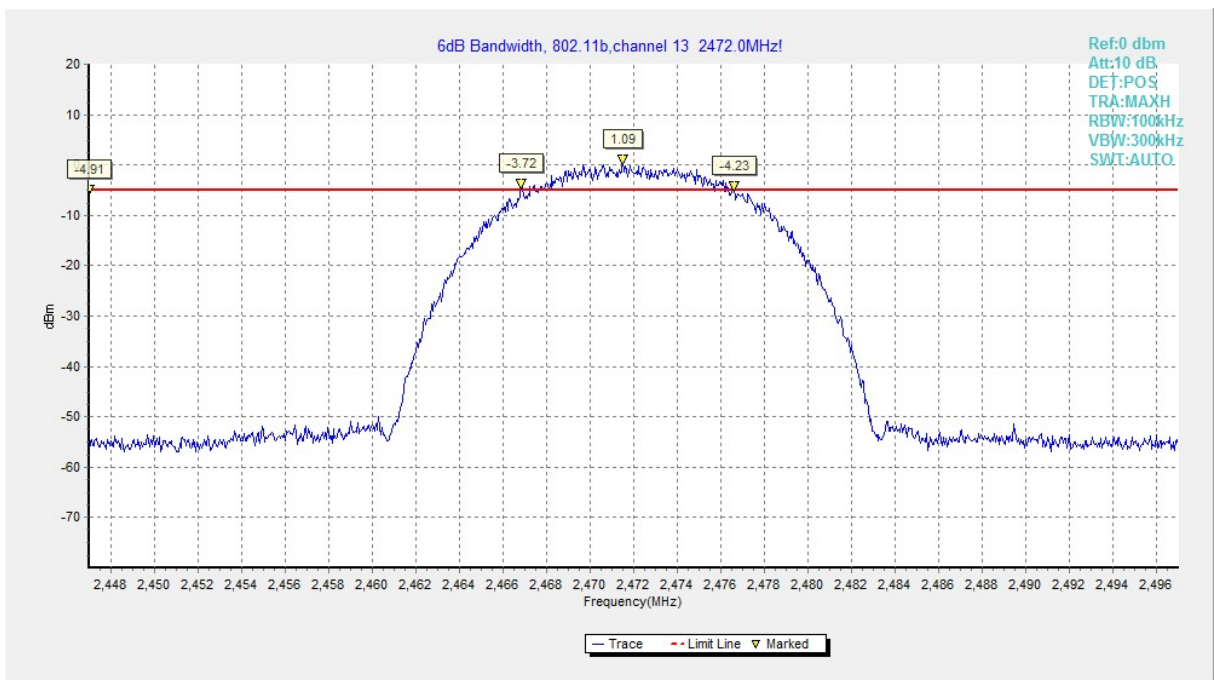


Fig.A.4.5 Occupied 6dB Bandwidth (802.11b, Ch 13)

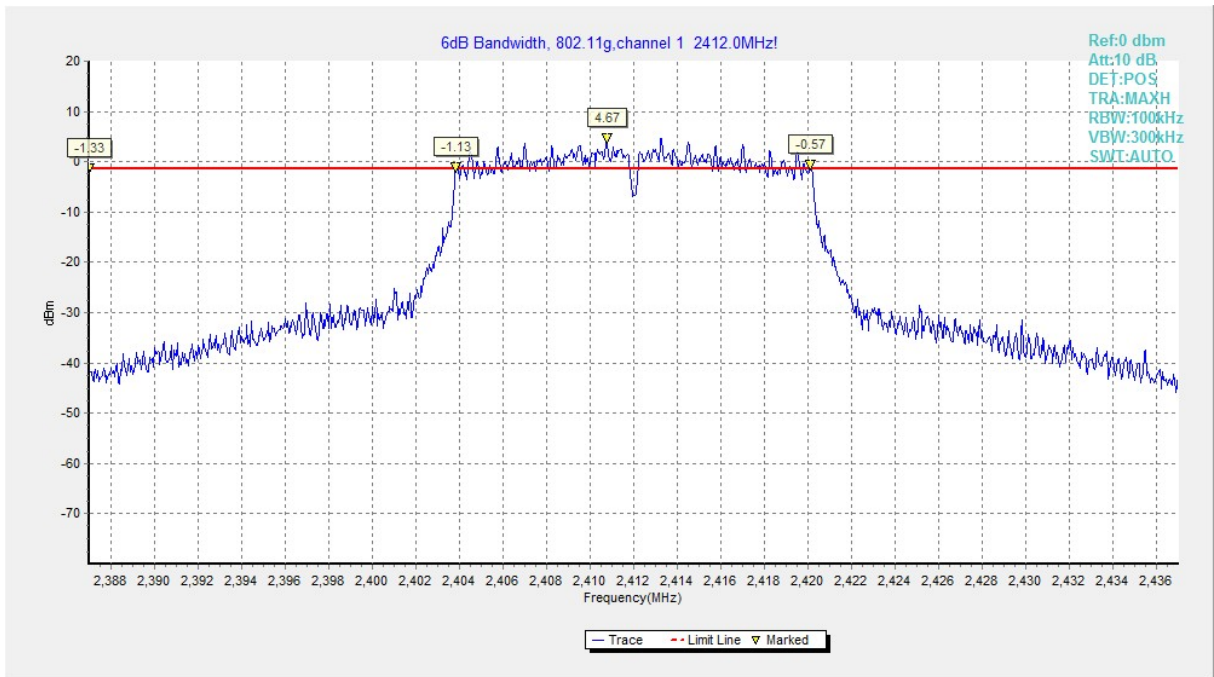


Fig.A.4.6 Occupied 6dB Bandwidth (802.11g, Ch 1)

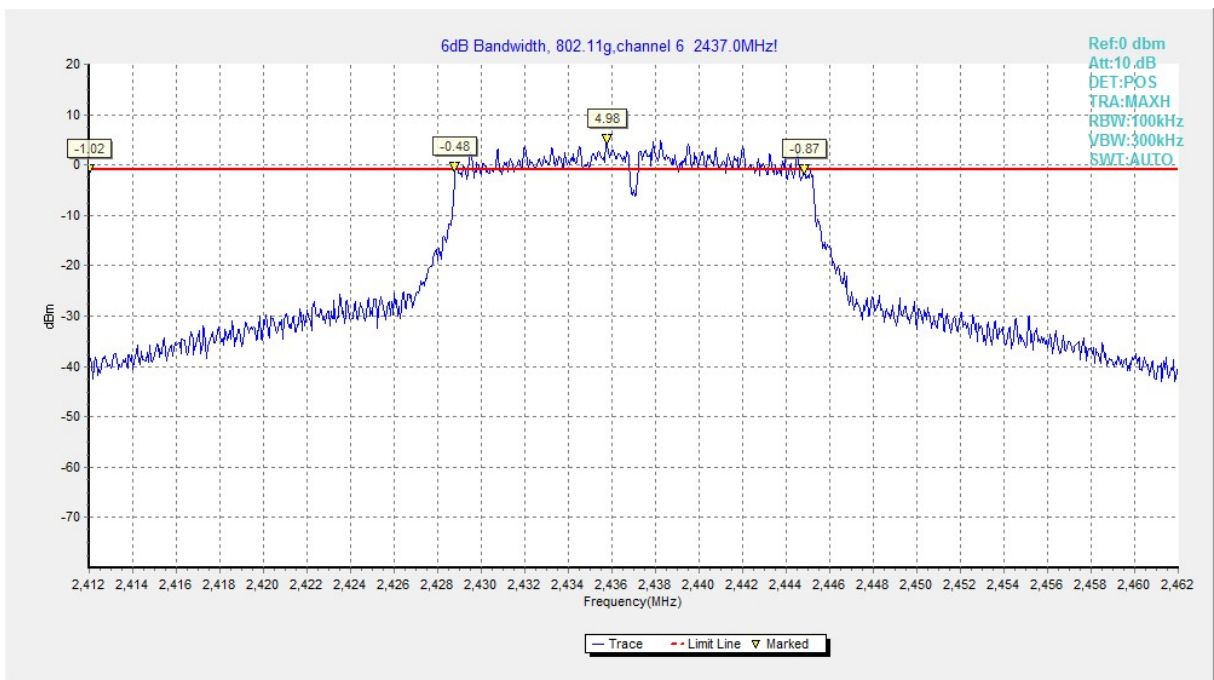


Fig.A.4.7 Occupied 6dB Bandwidth (802.11g, Ch 6)

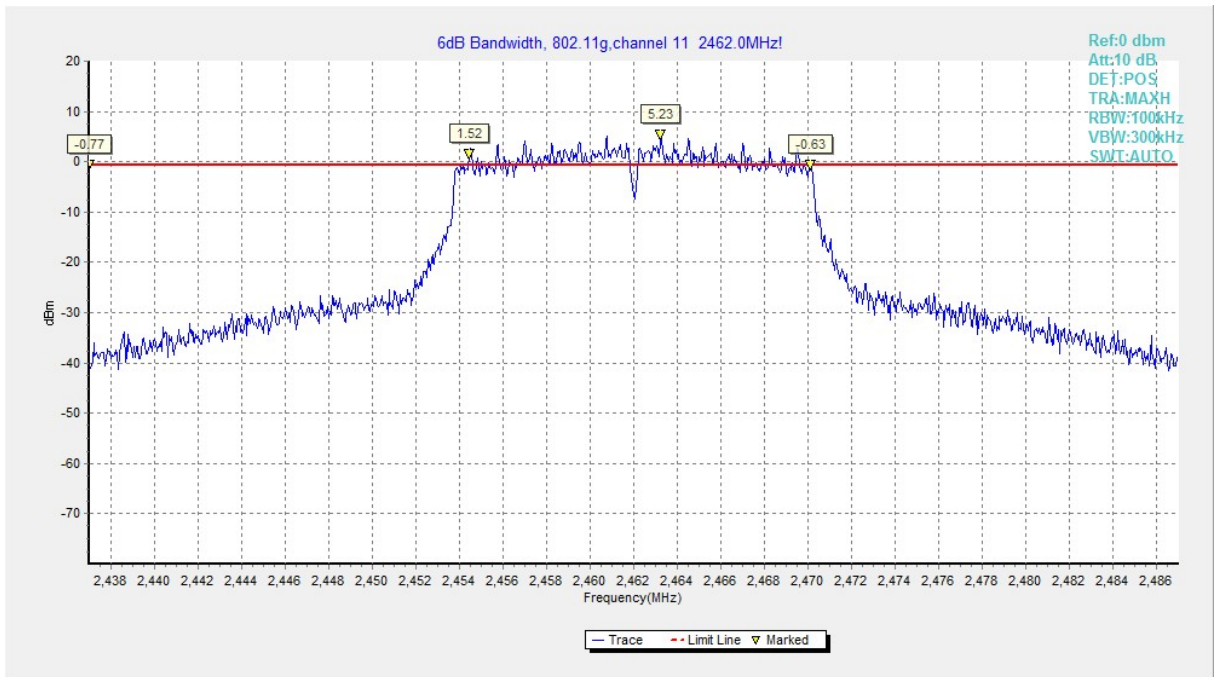


Fig.A.4.8 Occupied 6dB Bandwidth (802.11g, Ch 11)

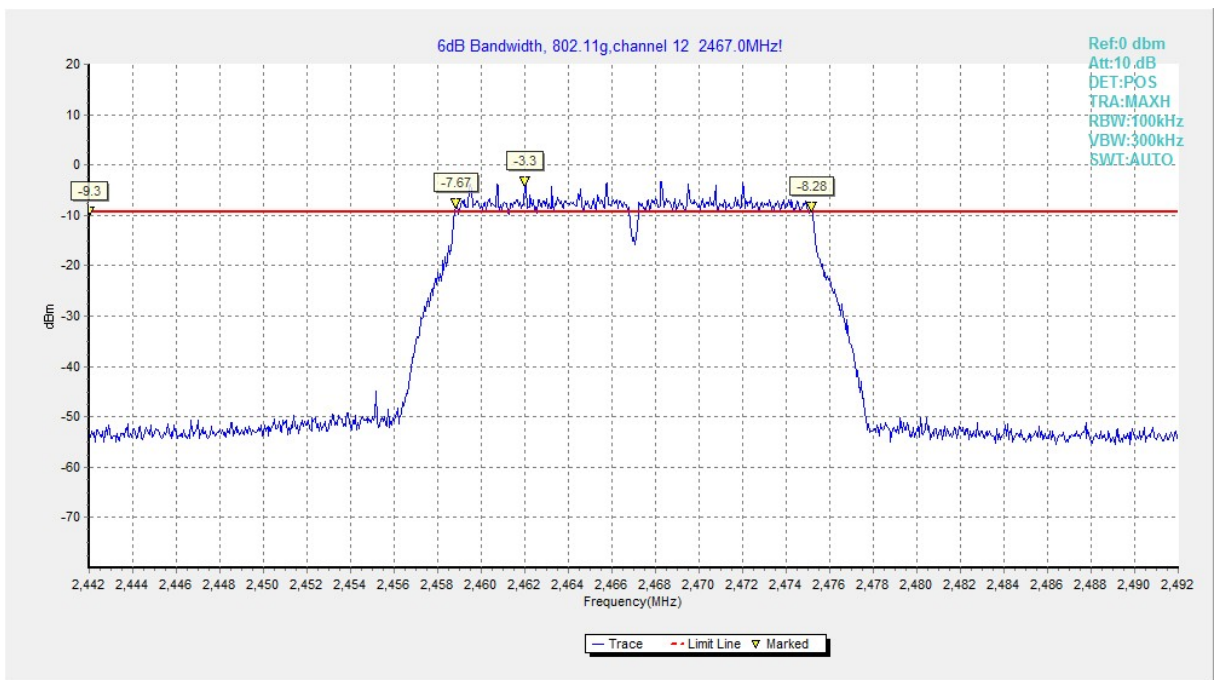


Fig.A.4.9 Occupied 6dB Bandwidth (802.11g, Ch 12)

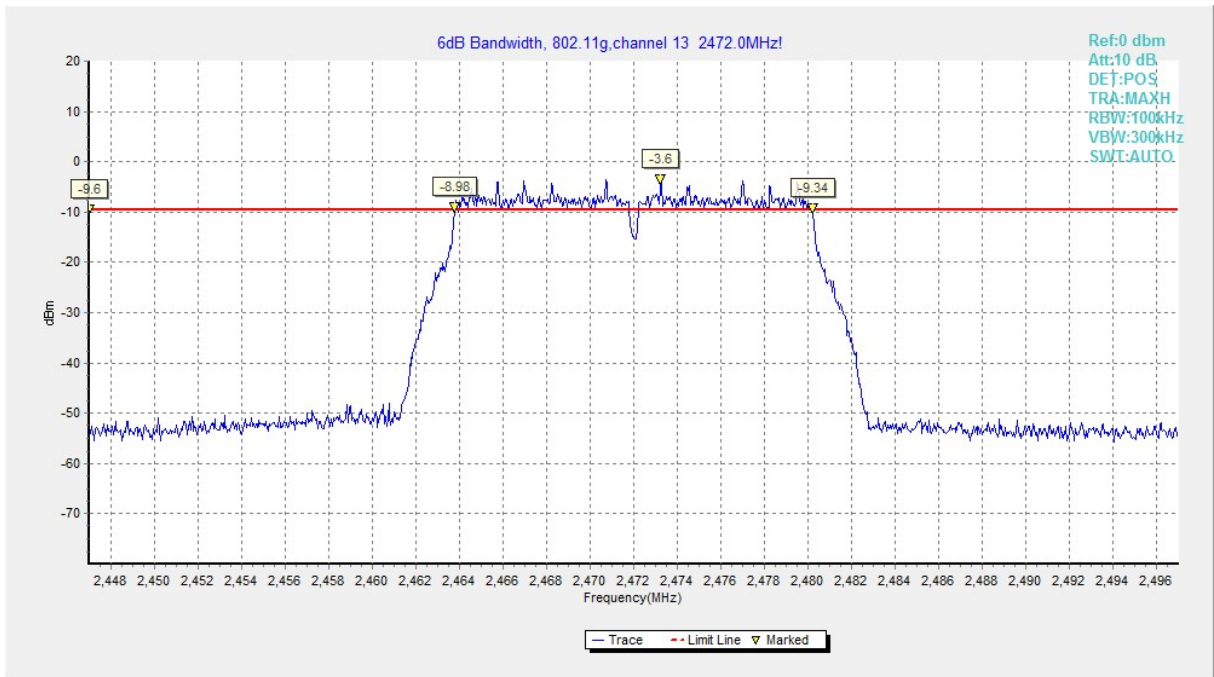


Fig.A.4.10 Occupied 6dB Bandwidth (802.11g, Ch 13)

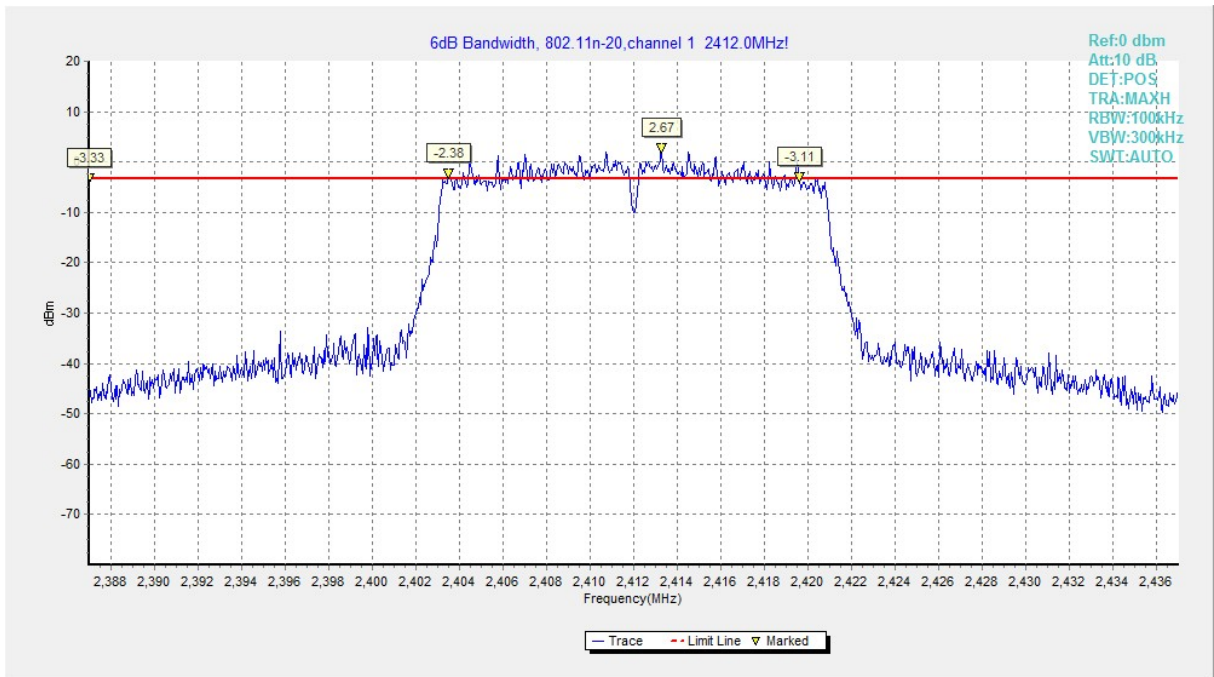


Fig.A.4.11 Occupied 6dB Bandwidth (802.11n-20MHz, Ch 1)

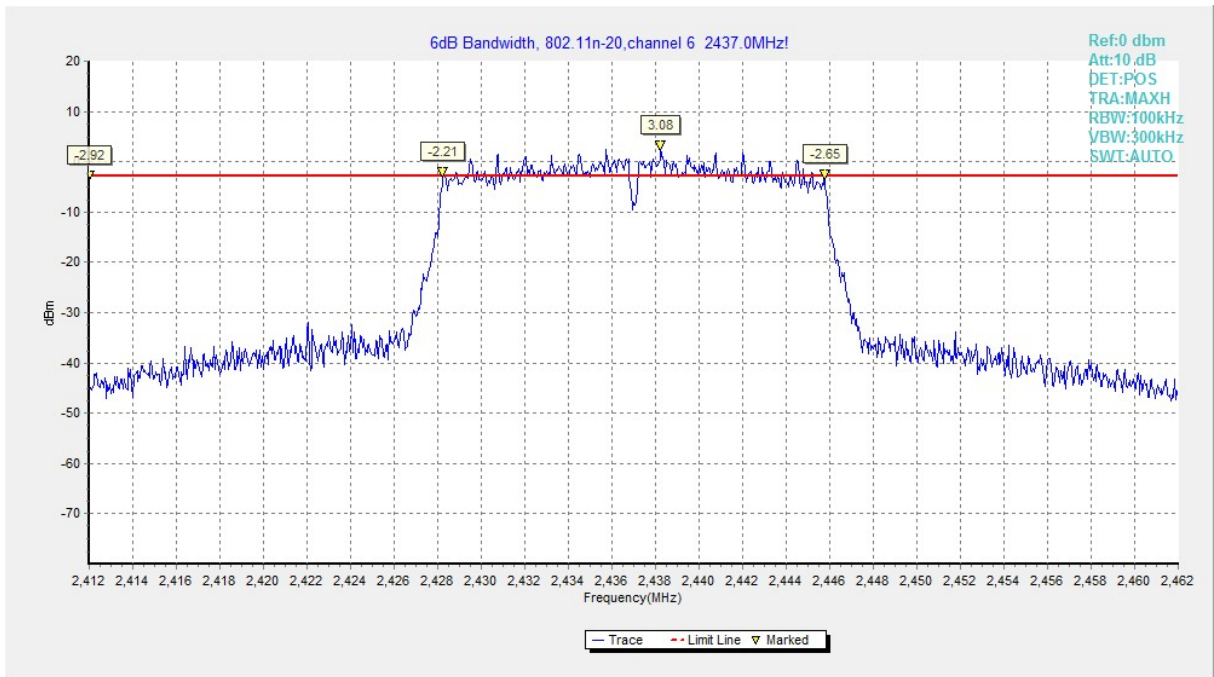


Fig.A.4.12 Occupied 6dB Bandwidth (802.11n-HT20, Ch 6)

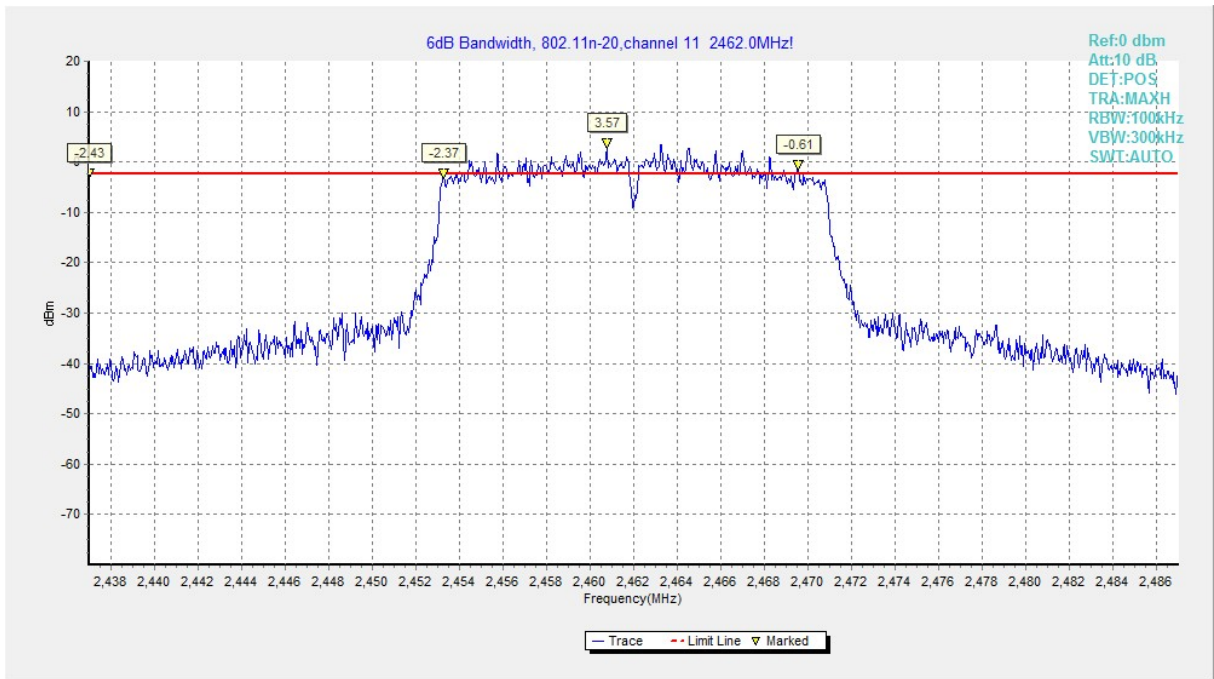


Fig.A.4.13 Occupied 6dB Bandwidth (802.11n-HT20, Ch 11)

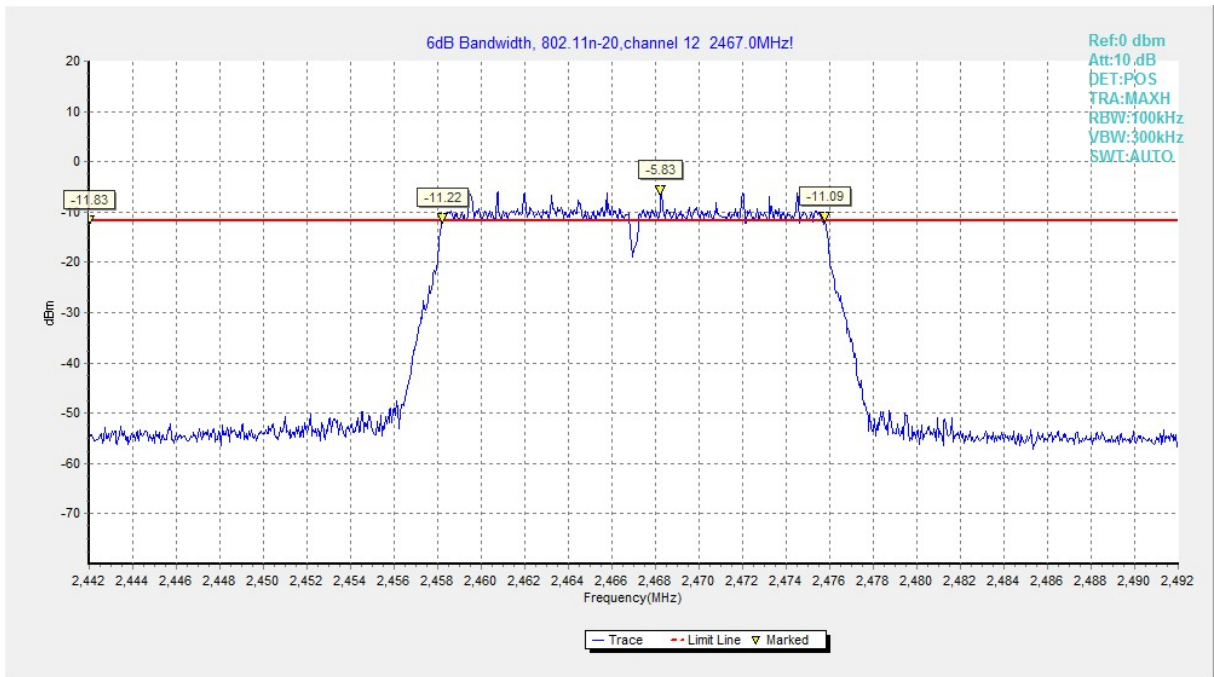


Fig.A.4.14 Occupied 6dB Bandwidth (802.11 n-HT20, Ch 12)

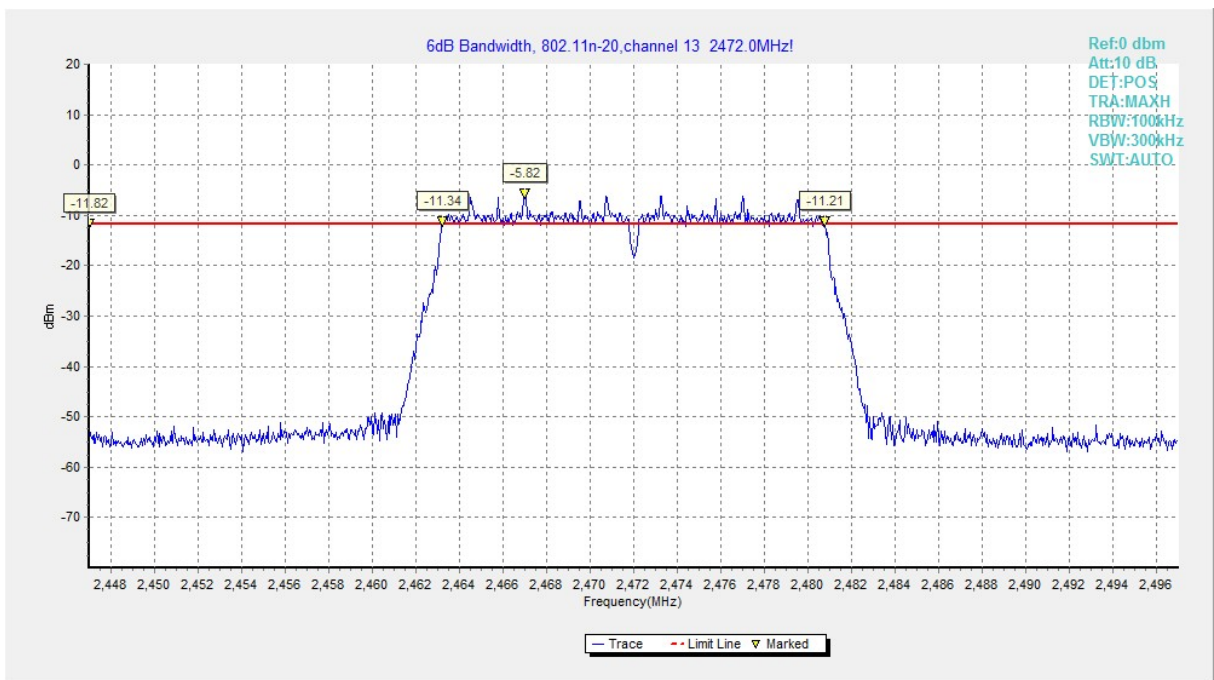


Fig.A.4.15 Occupied 6dB Bandwidth (802.11 n-HT20, Ch 13)

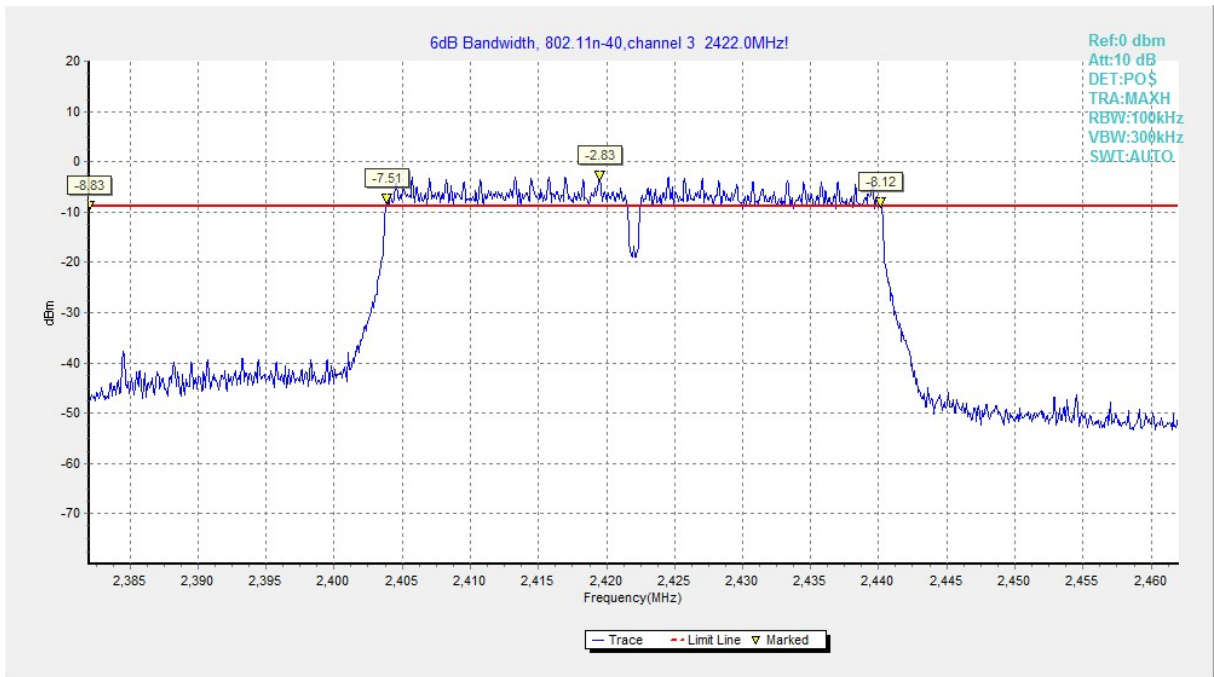


Fig.A.4.16 Occupied 6dB Bandwidth (802.11n-40MHz, Ch 3)

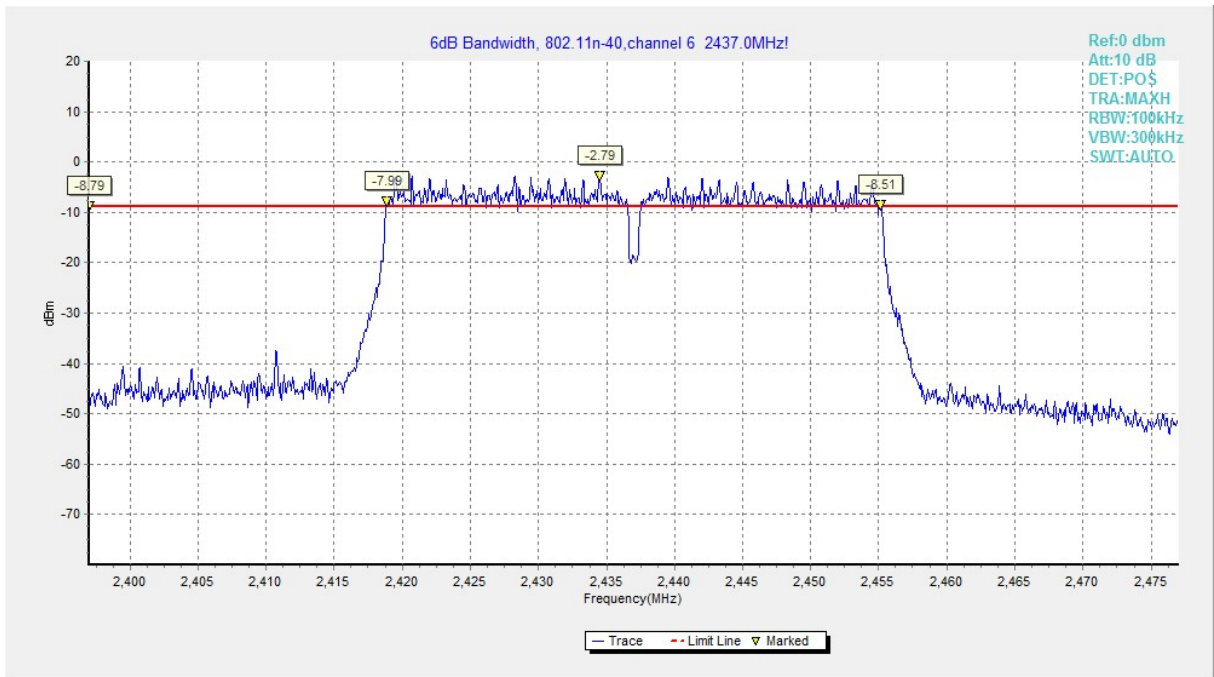


Fig.A.4.17 Occupied 6dB Bandwidth (802.11n-HT40, Ch 6)

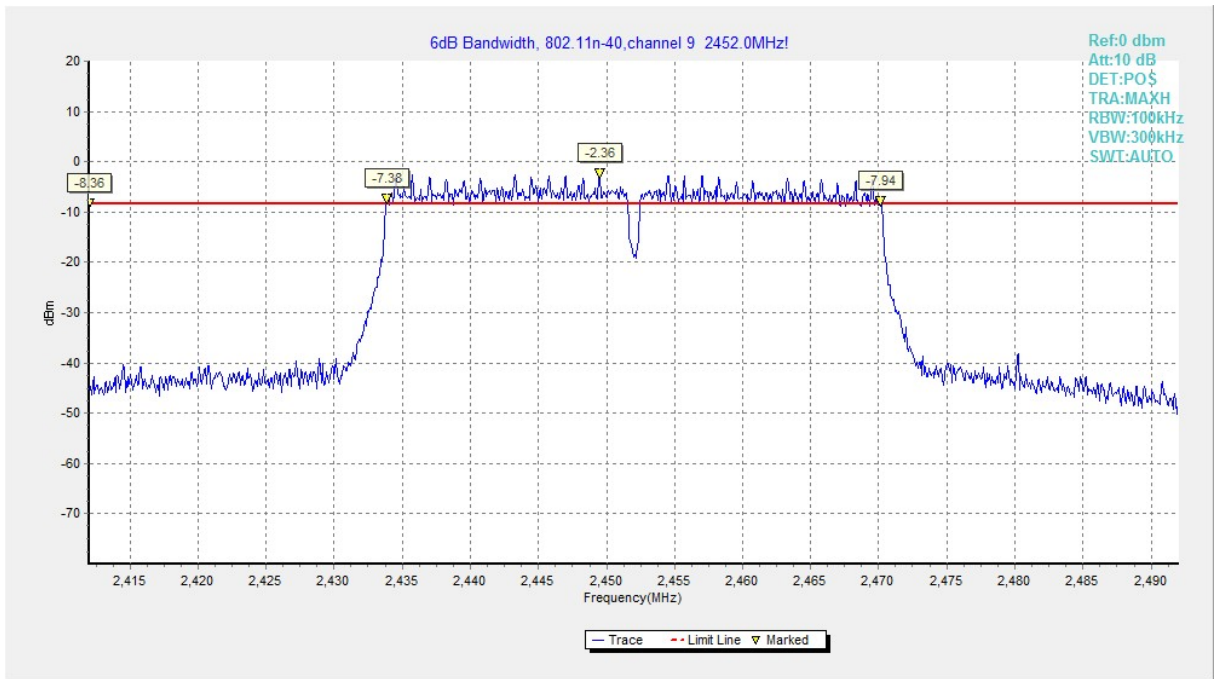


Fig.A.4.18 Occupied 6dB Bandwidth (802.11n-HT40, Ch 9)

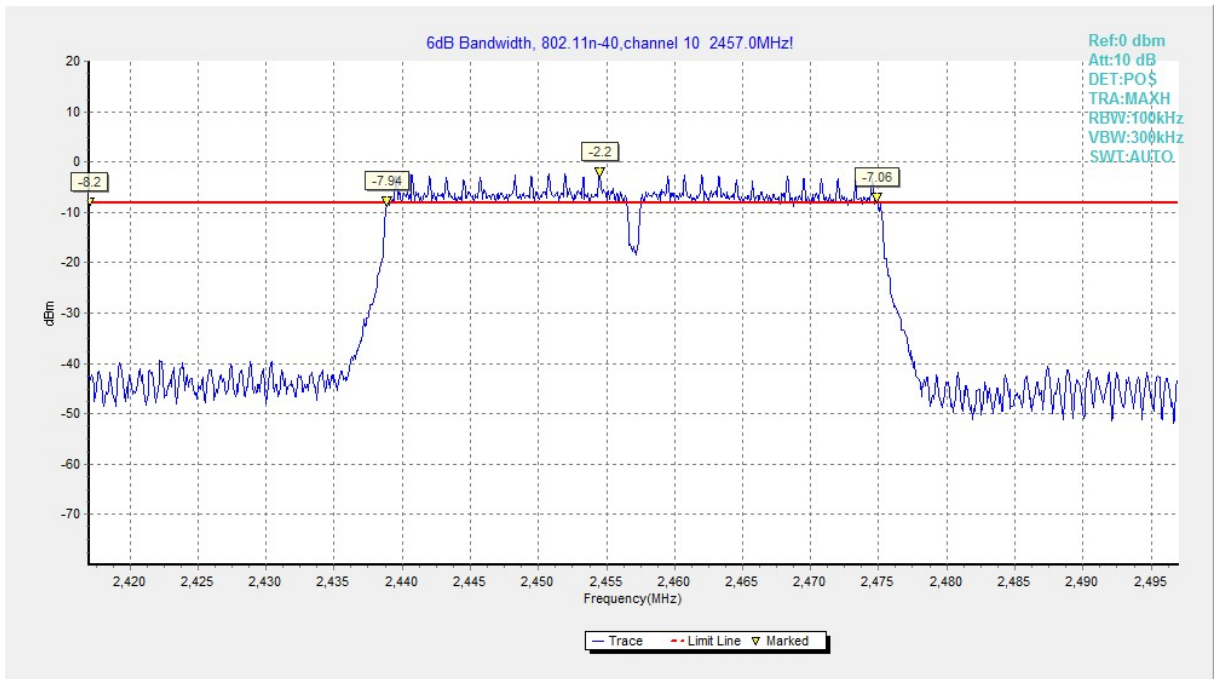


Fig.A.4.19 Occupied 6dB Bandwidth (802.11 n-HT40, Ch 10)

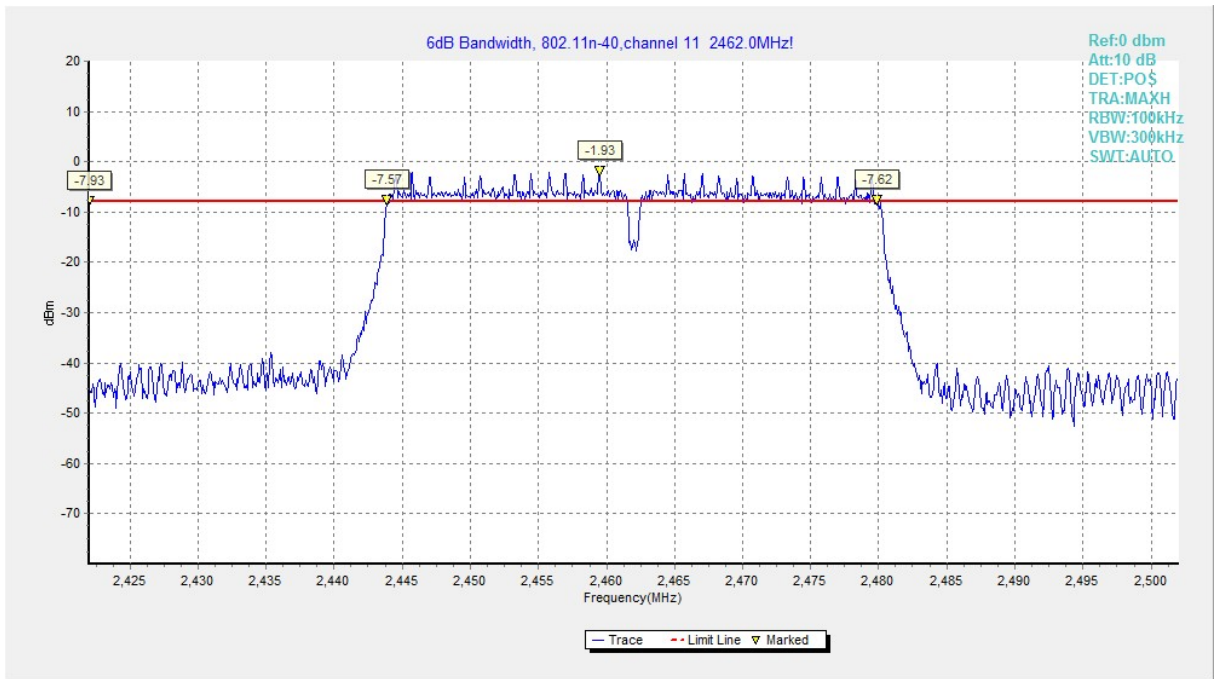


Fig.A.4.20 Occupied 6dB Bandwidth (802.11 n-HT40, Ch 11)

A.5. Band Edges Compliance

Method of Measurement: See KDB558074 section 13.1(Marker-delta method).

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	> 20

The measurement is made according to KDB558074.

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	54Mbps(OFDM)	MCS3(OFDM)	MCS3(OFDM)

Measurement Result:

802.11b/g mode

Mode	Channel	Test Results	Conclusion
802.11b	1	Fig.A.5.1	P
	11	Fig.A.5.2	P
	12	Fig.A.5.3	P
	13	Fig.A.5.4	P
802.11g	1	Fig.A.5.5	P
	11	Fig.A.5.6	P
	12	Fig.A.5.7	P
	13	Fig.A.5.8	P

802.11n-HT20 mode

Mode	Channel	Test Results	Conclusion
802.11n (HT20)	1	Fig.A.5.9	P
	11	Fig.A.5.10	P
	12	Fig.A.5.11	P
	13	Fig.A.5.12	P

802.11n-HT40 mode

Mode	Channel	Test Results	Conclusion
802.11n (HT40)	3	Fig.A.5.13	P
	9	Fig.A.5.14	P
	10	Fig.A.5.15	P
	11	Fig.A.5.16	P

Conclusion: Pass

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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Test graphs as below:

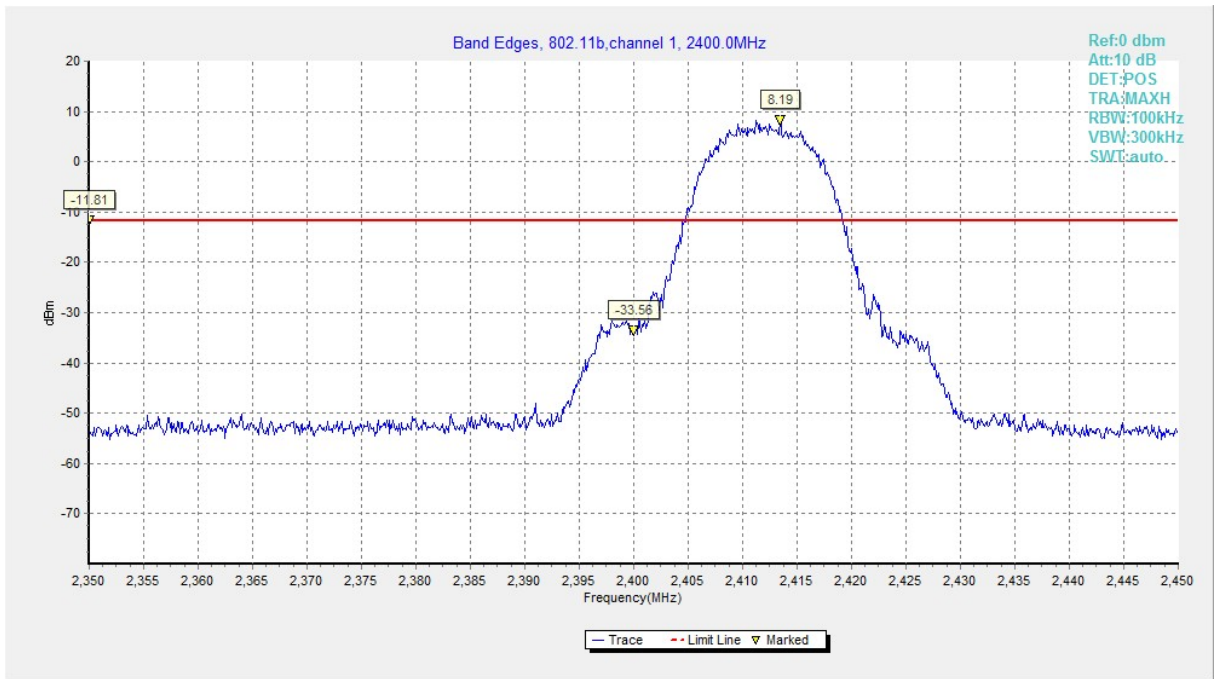


Fig.A.5.1 Band Edges (802.11b, Ch 1)

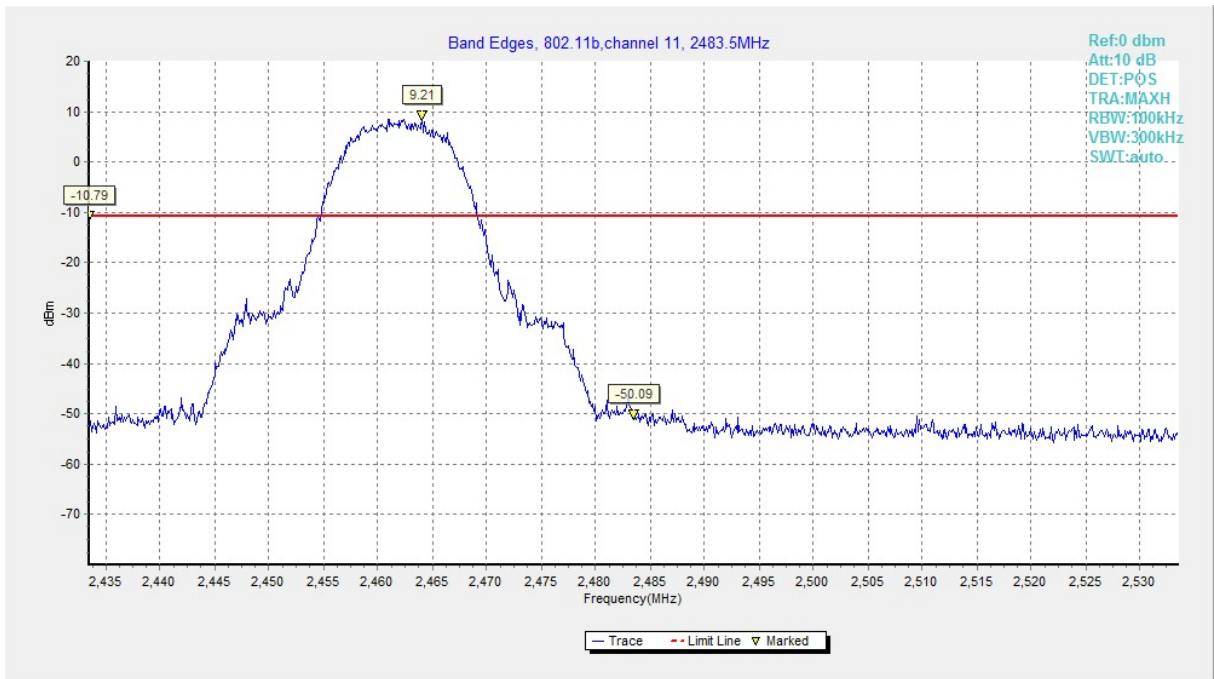


Fig.A.5.2 Band Edges (802.11b, Ch 11)

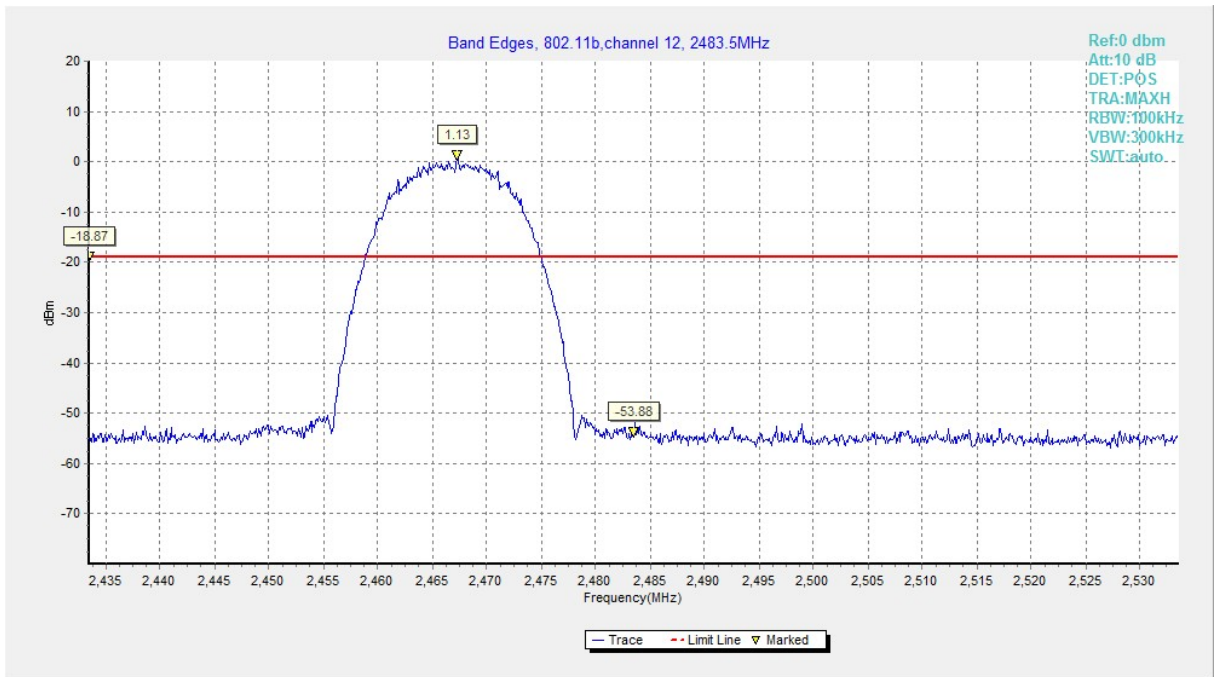


Fig.A.5.3 Band Edges (802.11b, Ch 12)

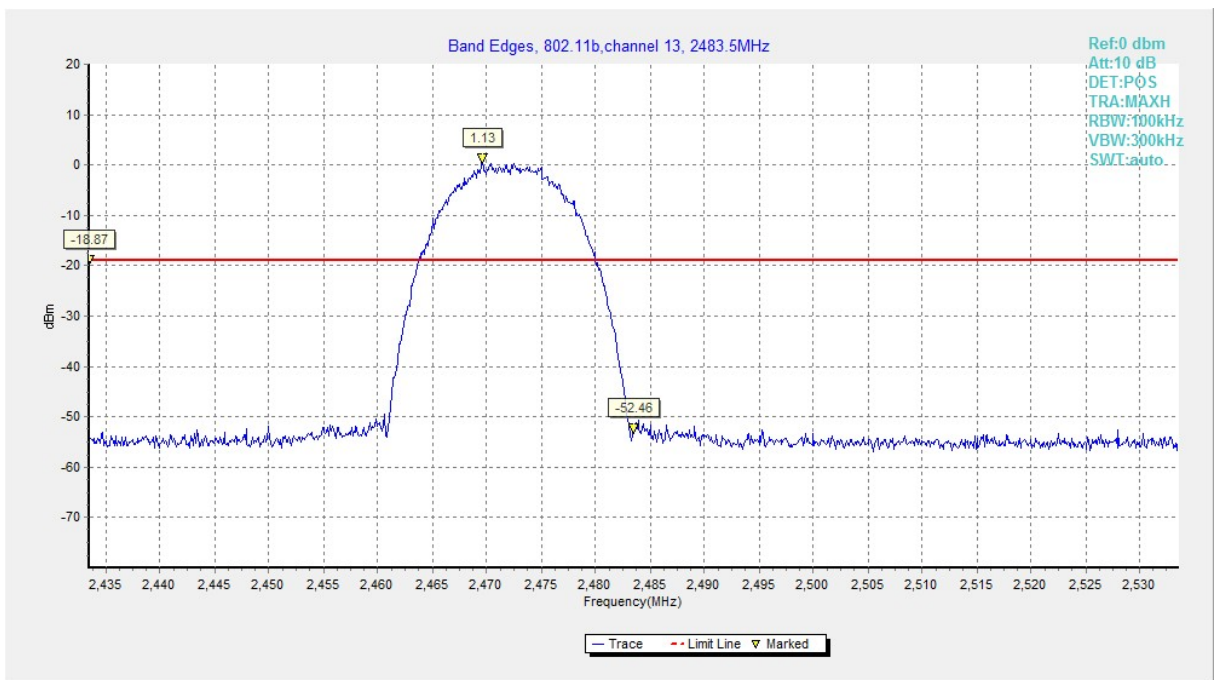


Fig.A.5.4 Band Edges (802.11b, Ch 13)

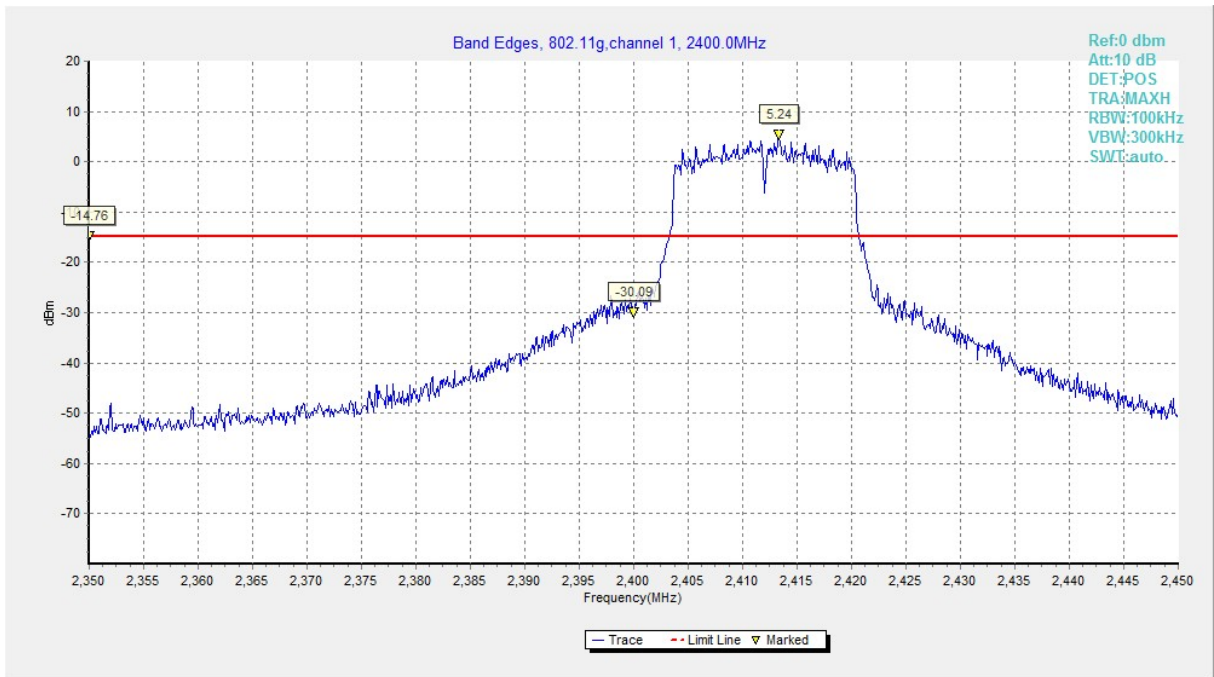


Fig.A.5.5 Band Edges (802.11g, Ch 1)

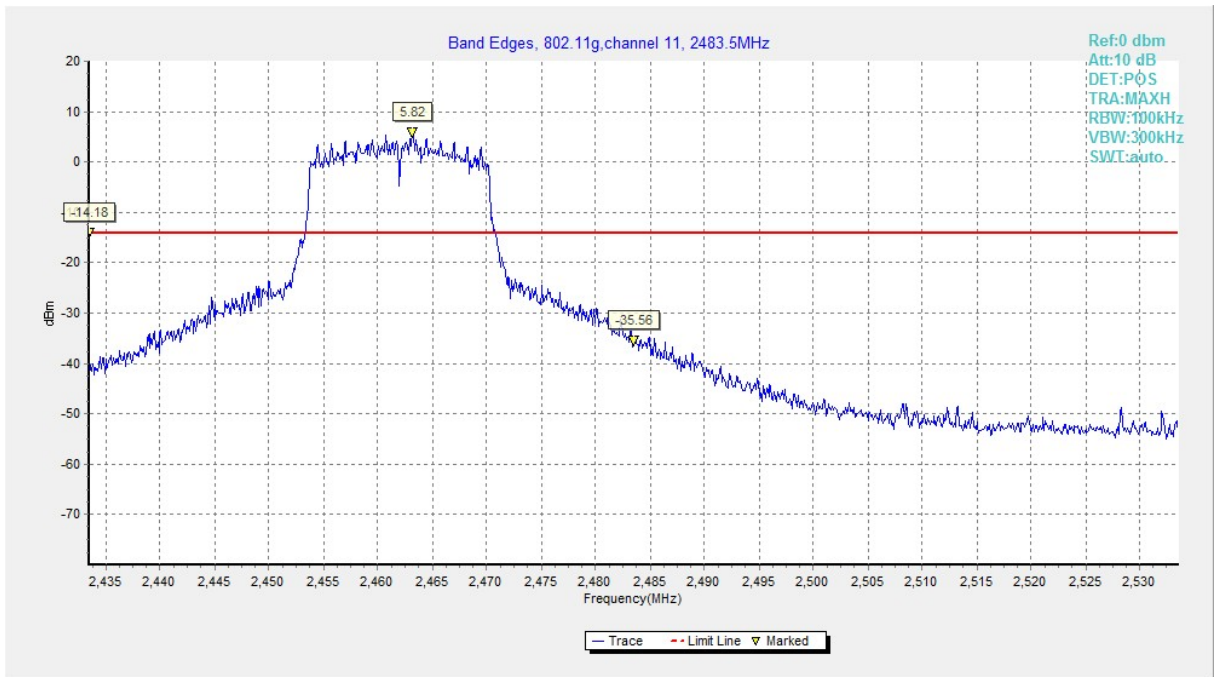


Fig.A.5.6 Band Edges (802.11g, Ch 11)

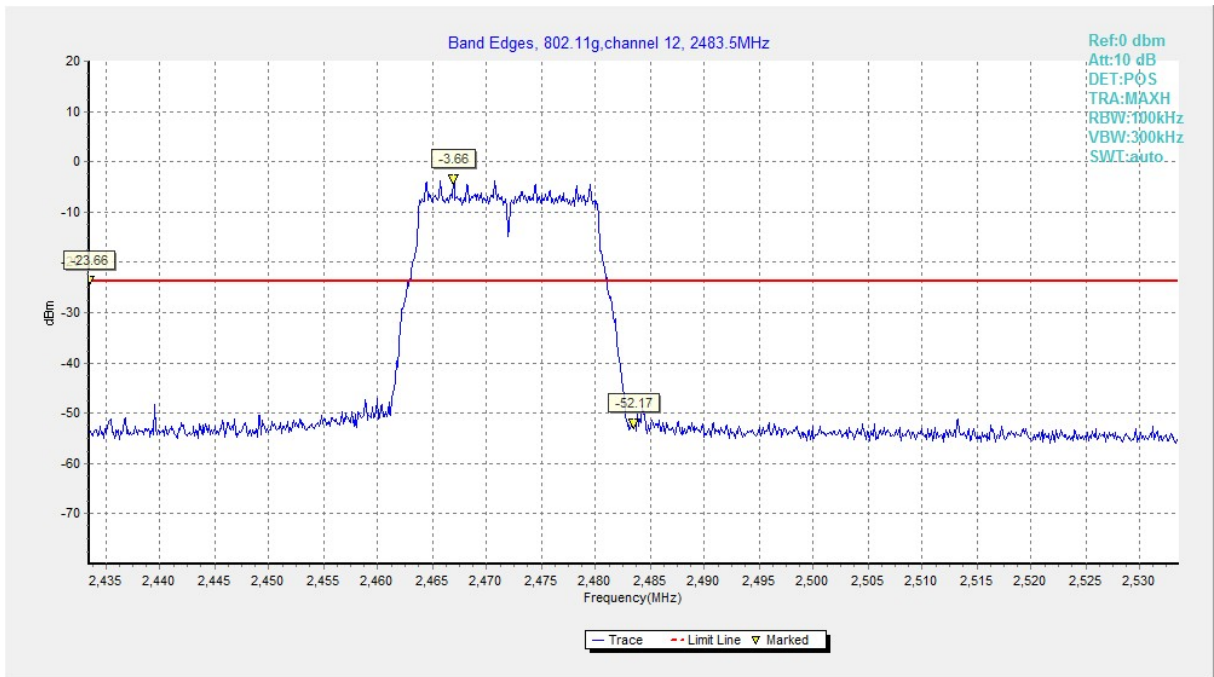


Fig.A.5.7 Band Edges (802.11g, Ch 12)

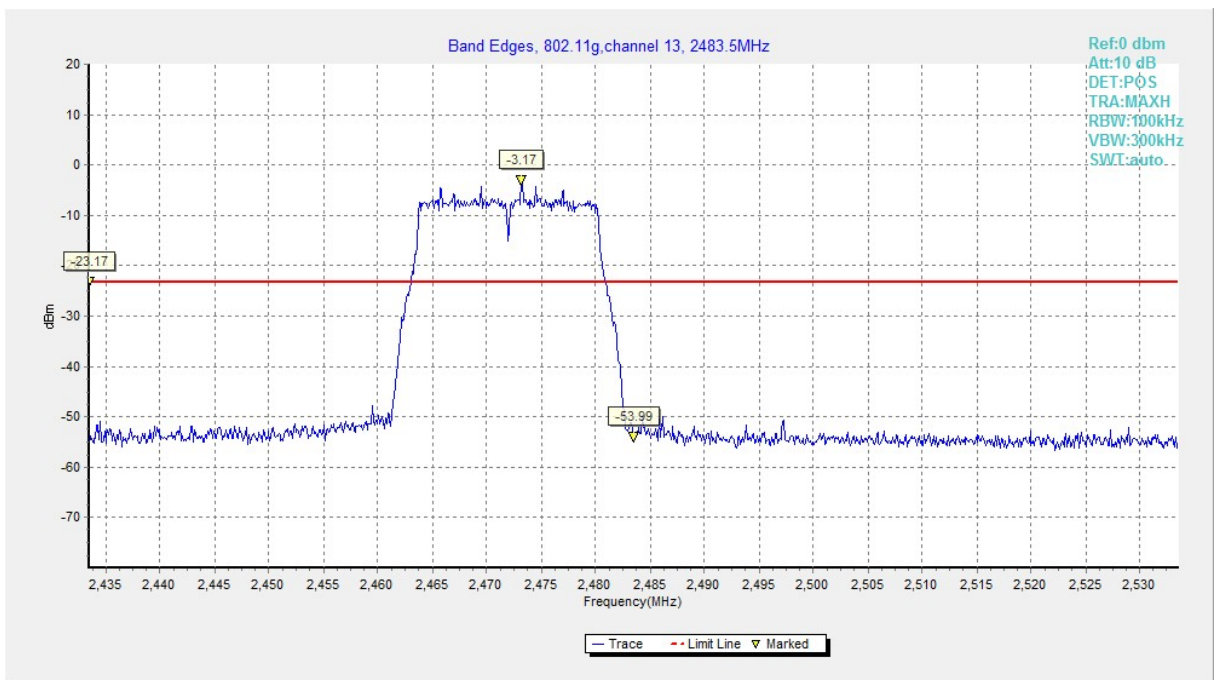


Fig.A.5.8 Band Edges (802.11g, Ch 13)

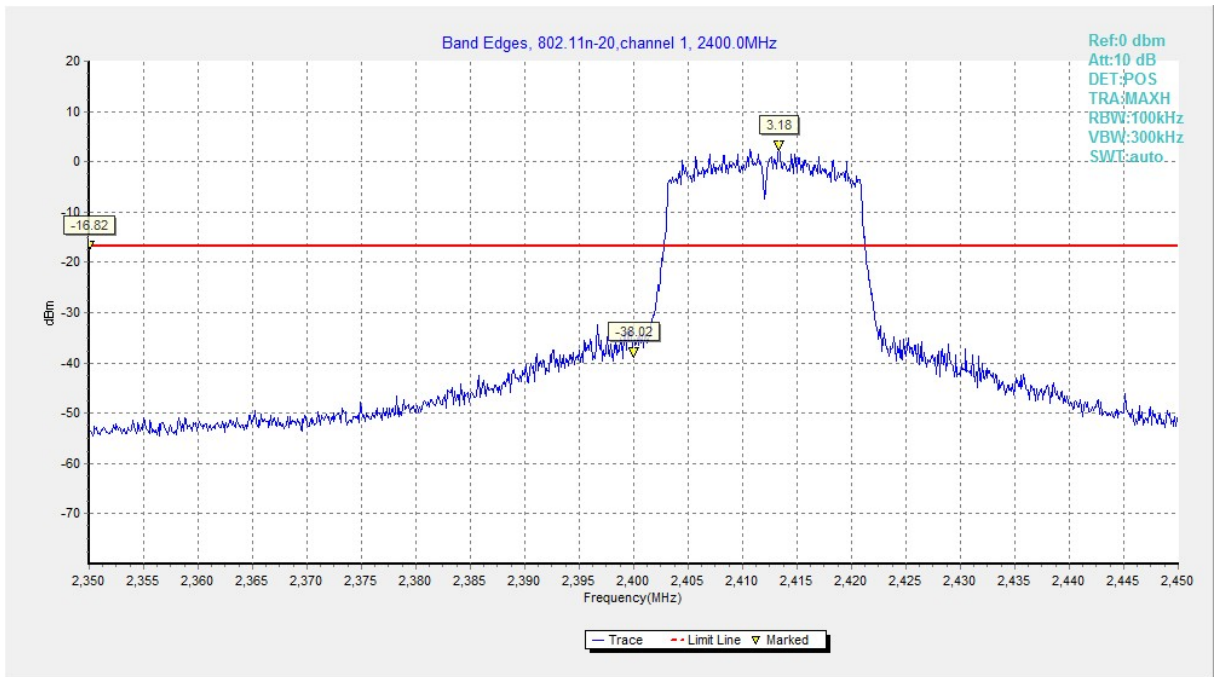


Fig.A.5.9 Band Edges (802.11n-HT20, Ch 1)

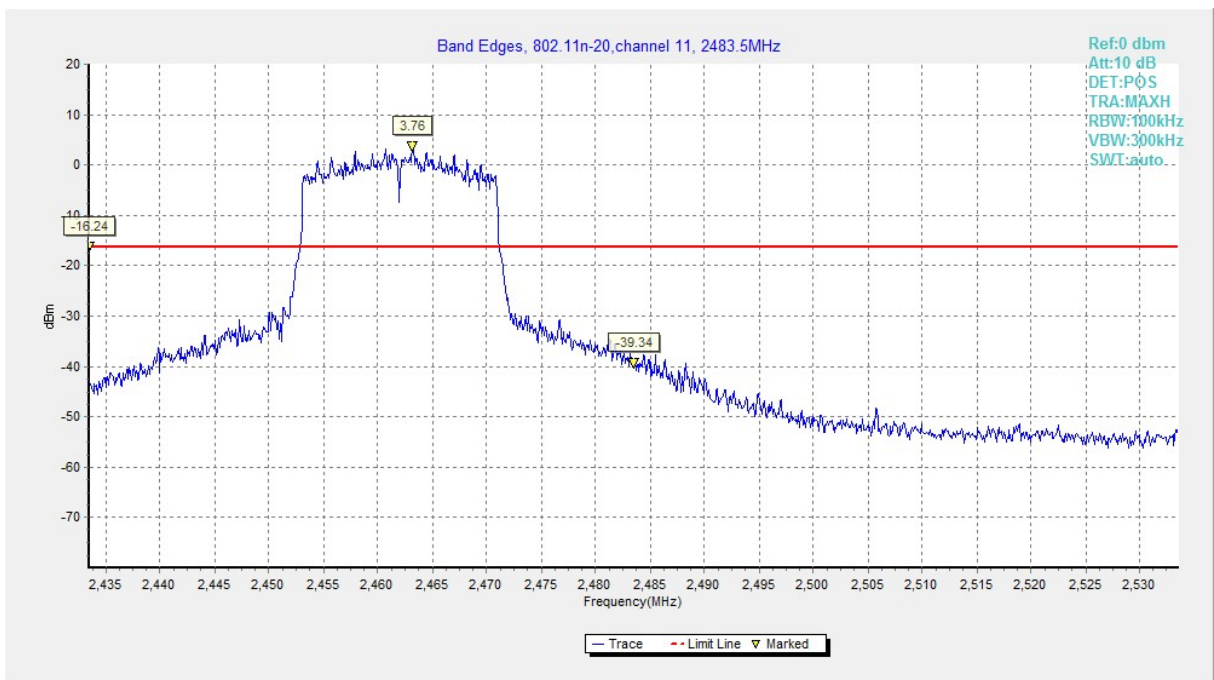


Fig.A.5.10 Band Edges (802.11n-HT20, Ch 11)

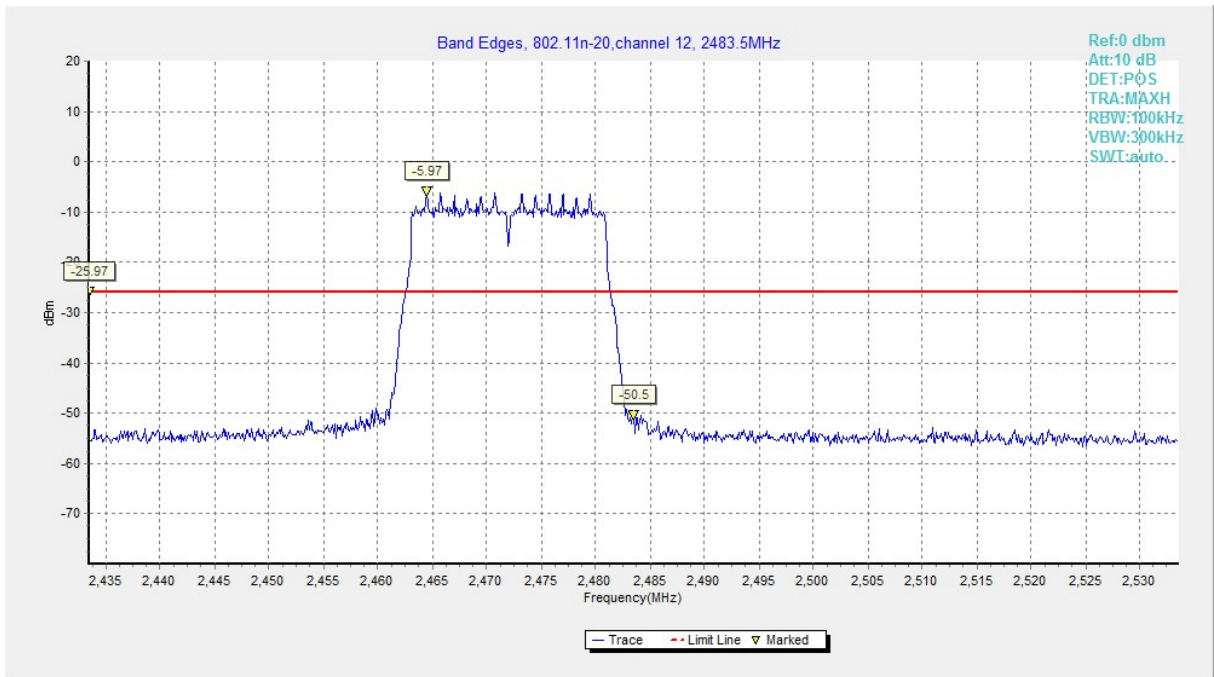


Fig.A.5.11 Band Edges (802.11n-HT20, Ch 12)

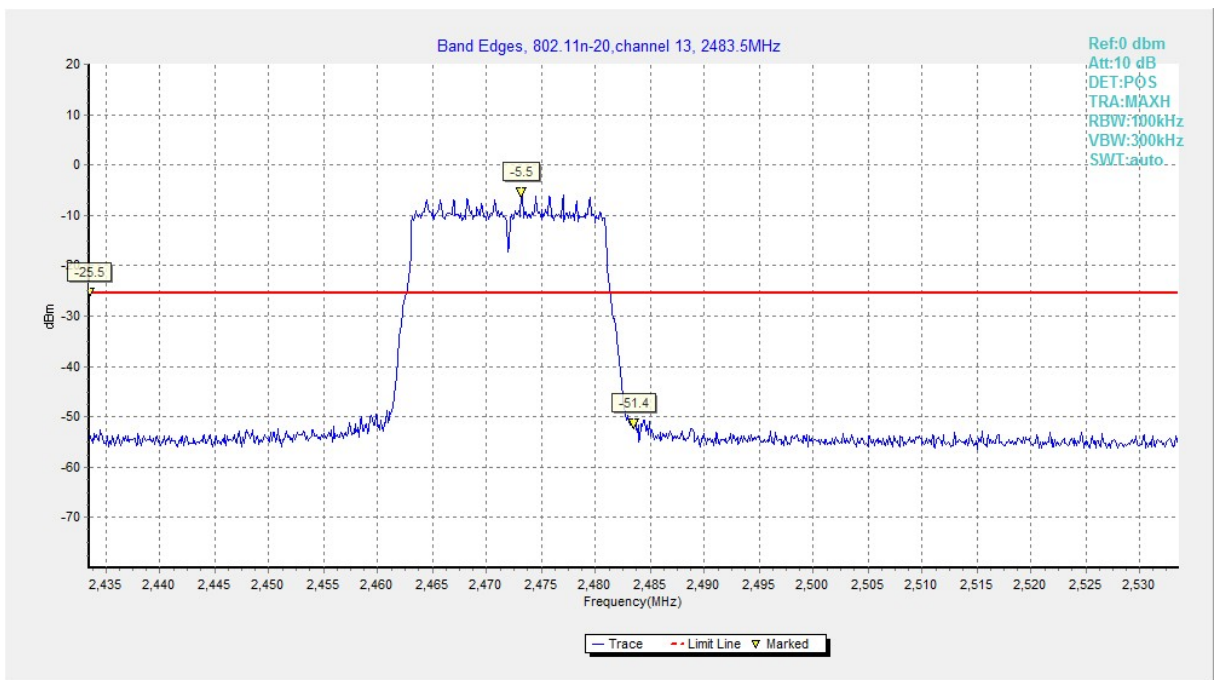


Fig.A.5.12 Band Edges (802.11 n-HT20, Ch 13)

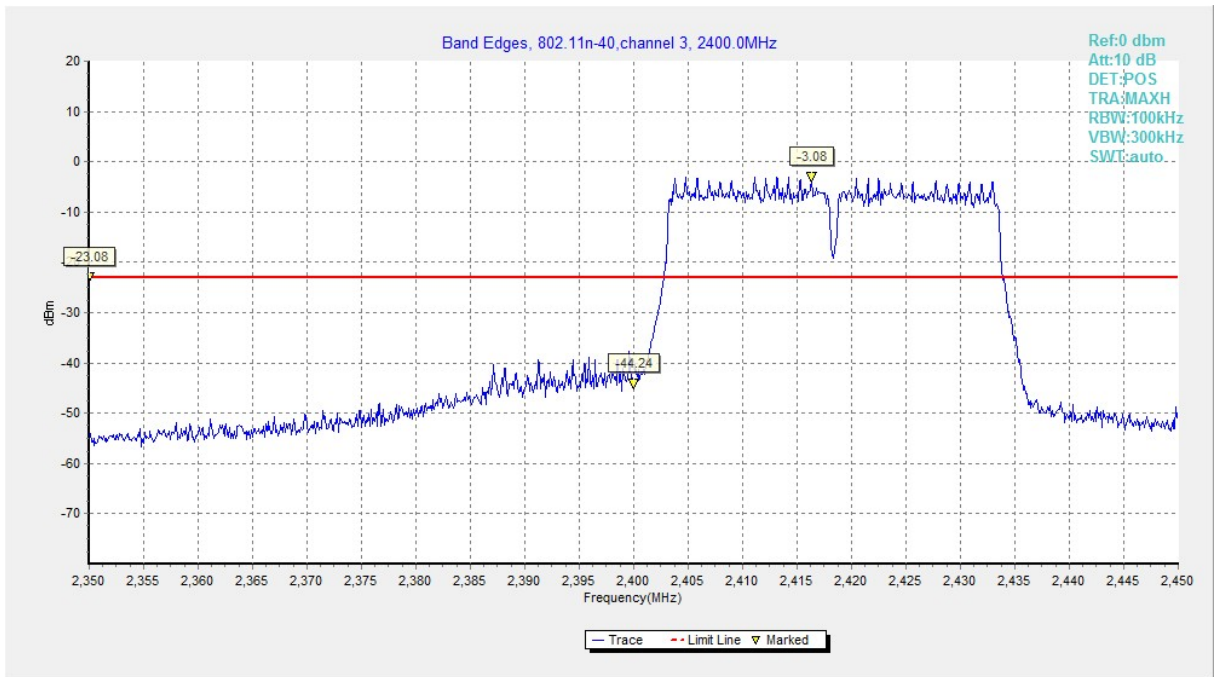


Fig.A.5.13 Band Edges (802.11n-HT40, Ch 3)

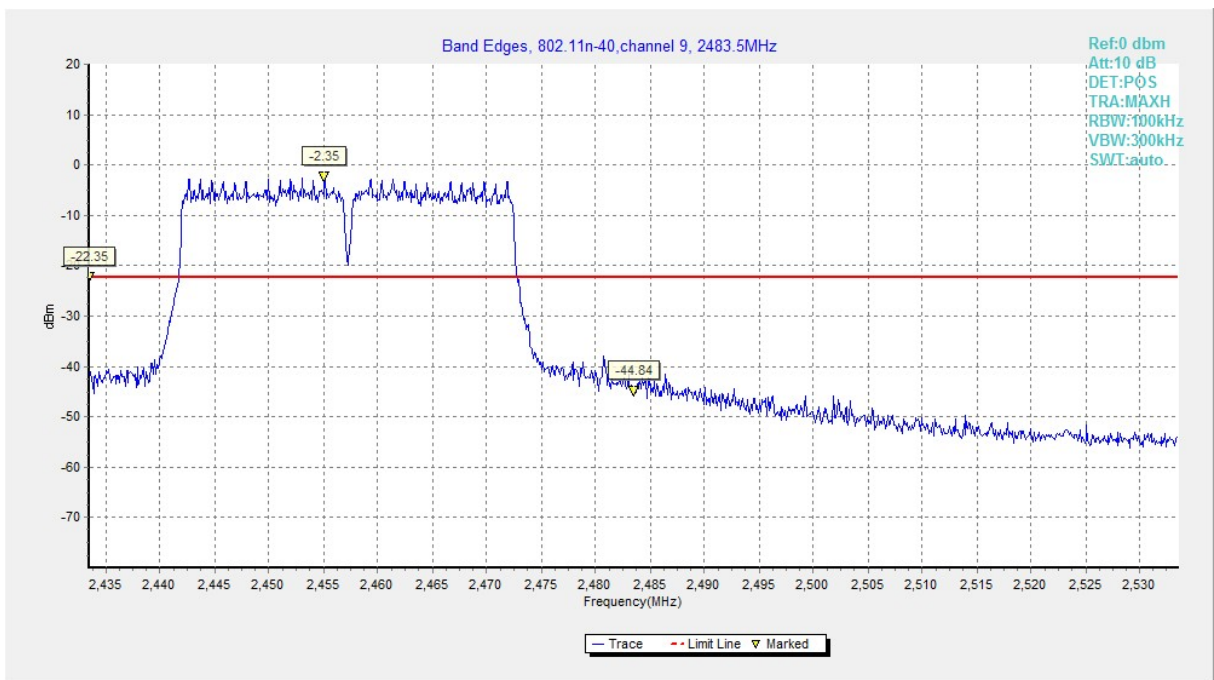


Fig.A.5.14 Band Edges (802.11n-HT40, Ch 9)

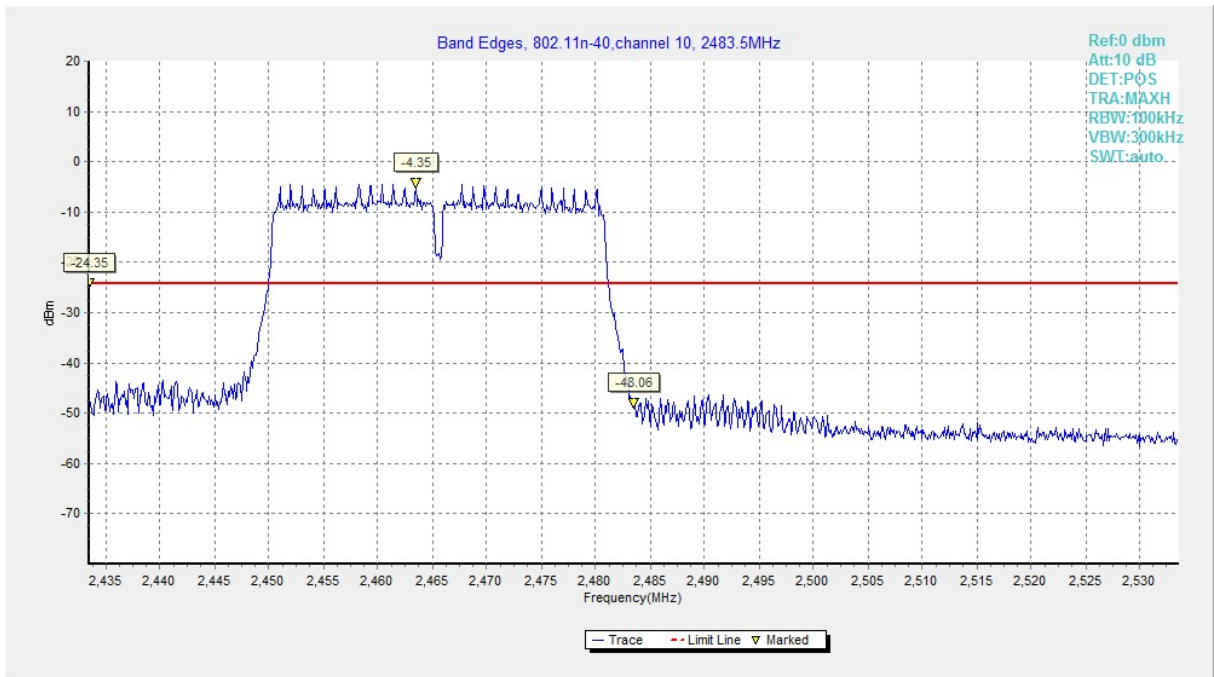


Fig.A.5.15 Band Edges (802.11n-HT40, Ch 10)

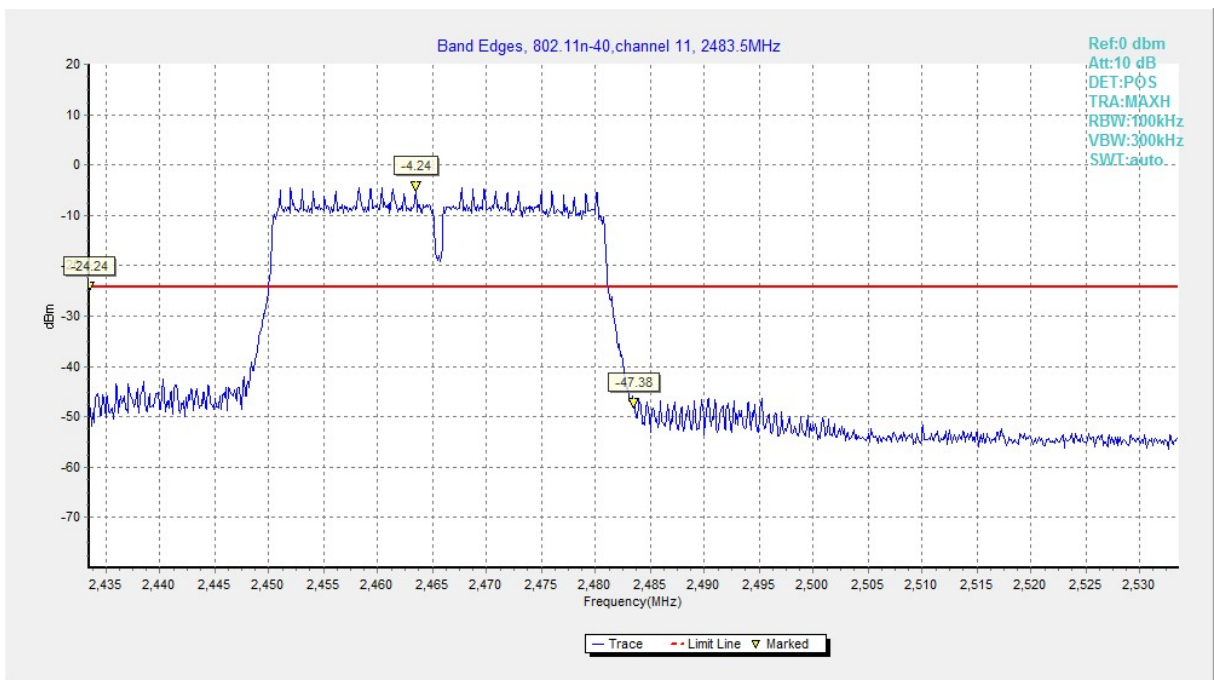


Fig.A.5.16 Band Edges (802.11 n-HT40, Ch 11)

A.6. Transmitter Spurious Emission

A.6.1 Transmitter Spurious Emission - Conducted

Method of Measurement: See KDB558074 section 12.2.

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

Modulation type and data rate tested:

802.11b	802.11g	802.11n-HT20	802.11n-HT40
11Mbps(CCK)	54Mbps(OFDM)	MCS3(OFDM)	MCS3(OFDM)

Measurement Results:

802.11b mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412 GHz	Fig.A.6.1.1	P
		30 MHz ~ 1 GHz	Fig.A.6.1.2	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.3	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.4	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.5	P
		10 GHz ~ 15 GHz	Fig.A.6.1.6	P
		15 GHz ~ 20 GHz	Fig.A.6.1.7	P
		20 GHz ~ 26 GHz	Fig.A.6.1.8	P
	6	2.437 GHz	Fig.A.6.1.9	P
		30 MHz ~ 1 GHz	Fig.A.6.1.10	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.11	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.12	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.13	P
		10 GHz ~ 15 GHz	Fig.A.6.1.14	P
		15 GHz ~ 20 GHz	Fig.A.6.1.15	P
		20 GHz ~ 26 GHz	Fig.A.6.1.16	P
	11	2.462 GHz	Fig.A.6.1.17	P
		30 MHz ~ 1 GHz	Fig.A.6.1.18	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.19	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.20	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.21	P
		10 GHz ~ 15 GHz	Fig.A.6.1.22	P
		15 GHz ~ 20 GHz	Fig.A.6.1.23	P
		20 GHz ~ 26 GHz	Fig.A.6.1.24	P
	12	2.467 GHz	Fig.A.6.1.25	P
		30 MHz ~ 1 GHz	Fig.A.6.1.26	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.27	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.28	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.29	P
		10 GHz ~ 15 GHz	Fig.A.6.1.30	P
		15 GHz ~ 20 GHz	Fig.A.6.1.31	P
		20 GHz ~ 26 GHz	Fig.A.6.1.32	P
	13	2.472 GHz	Fig.A.6.1.33	P
		30 MHz ~ 1 GHz	Fig.A.6.1.34	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.35	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.36	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.37	P
		10 GHz ~ 15 GHz	Fig.A.6.1.38	P
		15 GHz ~ 20 GHz	Fig.A.6.1.39	P
		20 GHz ~ 26 GHz	Fig.A.6.1.40	P

802.11g mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11g	1	2.412 GHz	Fig.A.6.1.41	P
		30 MHz ~ 1 GHz	Fig.A.6.1.42	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.43	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.44	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.45	P
		10 GHz ~ 15 GHz	Fig.A.6.1.46	P
		15 GHz ~ 20 GHz	Fig.A.6.1.47	P
		20 GHz ~ 26 GHz	Fig.A.6.1.48	P
	6	2.437 GHz	Fig.A.6.1.49	P
		30 MHz ~ 1 GHz	Fig.A.6.1.50	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.51	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.52	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.53	P
		10 GHz ~ 15 GHz	Fig.A.6.1.54	P
		15 GHz ~ 20 GHz	Fig.A.6.1.55	P
		20 GHz ~ 26 GHz	Fig.A.6.1.56	P
	11	2.462 GHz	Fig.A.6.1.57	P
		30 MHz ~ 1 GHz	Fig.A.6.1.58	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.59	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.60	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.61	P
		10 GHz ~ 15 GHz	Fig.A.6.1.62	P
		15 GHz ~ 20 GHz	Fig.A.6.1.63	P
		20 GHz ~ 26 GHz	Fig.A.6.1.64	P
	12	2.467 GHz	Fig.A.6.1.65	P
		30 MHz ~ 1 GHz	Fig.A.6.1.66	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.67	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.68	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.69	P
		10 GHz ~ 15 GHz	Fig.A.6.1.70	P
15 GHz ~ 20 GHz		Fig.A.6.1.71	P	
20 GHz ~ 26 GHz		Fig.A.6.1.72	P	
13	2.472 GHz	Fig.A.6.1.73	P	
	30 MHz ~ 1 GHz	Fig.A.6.1.74	P	
	1 GHz ~ 2.5 GHz	Fig.A.6.1.75	P	
	2.5 GHz ~ 7.5 GHz	Fig.A.6.1.76	P	
	7.5 GHz ~ 10 GHz	Fig.A.6.1.77	P	
	10 GHz ~ 15 GHz	Fig.A.6.1.78	P	
	15 GHz ~ 20 GHz	Fig.A.6.1.79	P	
	20 GHz ~ 26 GHz	Fig.A.6.1.80	P	

802.11n-HT20 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.412 GHz	Fig.A.6.1.81	P
		30 MHz ~ 1 GHz	Fig.A.6.1.82	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.83	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.84	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.85	P
		10 GHz ~ 15 GHz	Fig.A.6.1.86	P
		15 GHz ~ 20 GHz	Fig.A.6.1.87	P
		20 GHz ~ 26 GHz	Fig.A.6.1.88	P
	6	2.437 GHz	Fig.A.6.1.89	P
		30 MHz ~ 1 GHz	Fig.A.6.1.90	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.91	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.92	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.93	P
		10 GHz ~ 15 GHz	Fig.A.6.1.94	P
		15 GHz ~ 20 GHz	Fig.A.6.1.95	P
		20 GHz ~ 26 GHz	Fig.A.6.1.96	P
	11	2.462 GHz	Fig.A.6.1.97	P
		30 MHz ~ 1 GHz	Fig.A.6.1.98	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.99	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.100	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.101	P
		10 GHz ~ 15 GHz	Fig.A.6.1.102	P
		15 GHz ~ 20 GHz	Fig.A.6.1.103	P
		20 GHz ~ 26 GHz	Fig.A.6.1.104	P
	12	2.467 GHz	Fig.A.6.1.105	P
		30 MHz ~ 1 GHz	Fig.A.6.1.106	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.107	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.108	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.109	P
		10 GHz ~ 15 GHz	Fig.A.6.1.110	P
		15 GHz ~ 20 GHz	Fig.A.6.1.111	P
		20 GHz ~ 26 GHz	Fig.A.6.1.112	P
	13	2.472 GHz	Fig.A.6.1.113	P
		30 MHz ~ 1 GHz	Fig.A.6.1.114	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.115	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.116	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.117	P
		10 GHz ~ 15 GHz	Fig.A.6.1.118	P
		15 GHz ~ 20 GHz	Fig.A.6.1.119	P
		20 GHz ~ 26 GHz	Fig.A.6.1.120	P

802.11n-HT40 mode

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT40)	3	2.422 GHz	Fig.A.6.1.121	P
		30 MHz ~ 1 GHz	Fig.A.6.1.122	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.123	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.124	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.125	P
		10 GHz ~ 15 GHz	Fig.A.6.1.126	P
		15 GHz ~ 20 GHz	Fig.A.6.1.127	P
		20 GHz ~ 26 GHz	Fig.A.6.1.128	P
	6	2.437 GHz	Fig.A.6.1.129	P
		30 MHz ~ 1 GHz	Fig.A.6.1.130	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.131	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.132	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.133	P
		10 GHz ~ 15 GHz	Fig.A.6.1.134	P
		15 GHz ~ 20 GHz	Fig.A.6.1.135	P
		20 GHz ~ 26 GHz	Fig.A.6.1.136	P
	9	2.452 GHz	Fig.A.6.1.137	P
		30 MHz ~ 1 GHz	Fig.A.6.1.138	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.139	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.140	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.141	P
		10 GHz ~ 15 GHz	Fig.A.6.1.142	P
		15 GHz ~ 20 GHz	Fig.A.6.1.143	P
		20 GHz ~ 26 GHz	Fig.A.6.1.144	P
	10	2.457 GHz	Fig.A.6.1.145	P
		30 MHz ~ 1 GHz	Fig.A.6.1.146	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.147	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.148	P
		7.5 GHz ~ 10 GHz	Fig.A.6.1.149	P
		10 GHz ~ 15 GHz	Fig.A.6.1.150	P
		15 GHz ~ 20 GHz	Fig.A.6.1.151	P
		20 GHz ~ 26 GHz	Fig.A.6.1.152	P
	11	2.462 GHz	Fig.A.6.1.153	P
		30 MHz ~ 1 GHz	Fig.A.6.1.154	P
		1 GHz ~ 2.5 GHz	Fig.A.6.1.155	P
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.156	P
7.5 GHz ~ 10 GHz		Fig.A.6.1.157	P	
10 GHz ~ 15 GHz		Fig.A.6.1.158	P	
15 GHz ~ 20 GHz		Fig.A.6.1.159	P	
20 GHz ~ 26 GHz		Fig.A.6.1.160	P	

Conclusion: Pass

Measurement Uncertainty:

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	0.63
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	0.82
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.55
$8\text{GHz} \leq f \leq 20\text{GHz}$	1.86
$20\text{GHz} \leq f \leq 22\text{GHz}$	1.90
$22\text{GHz} \leq f \leq 26\text{GHz}$	2.20

Test graphs as below:

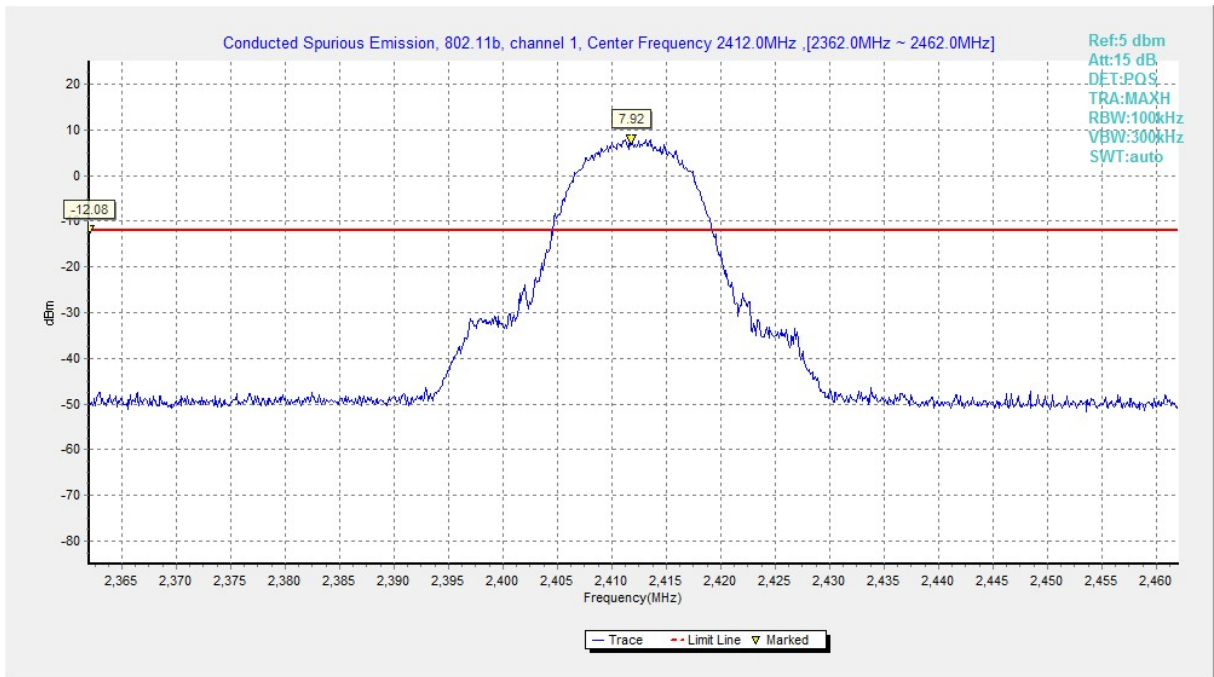


Fig.A.6.1.1 Conducted Spurious Emission (802.11b, Ch1, Center Frequency)

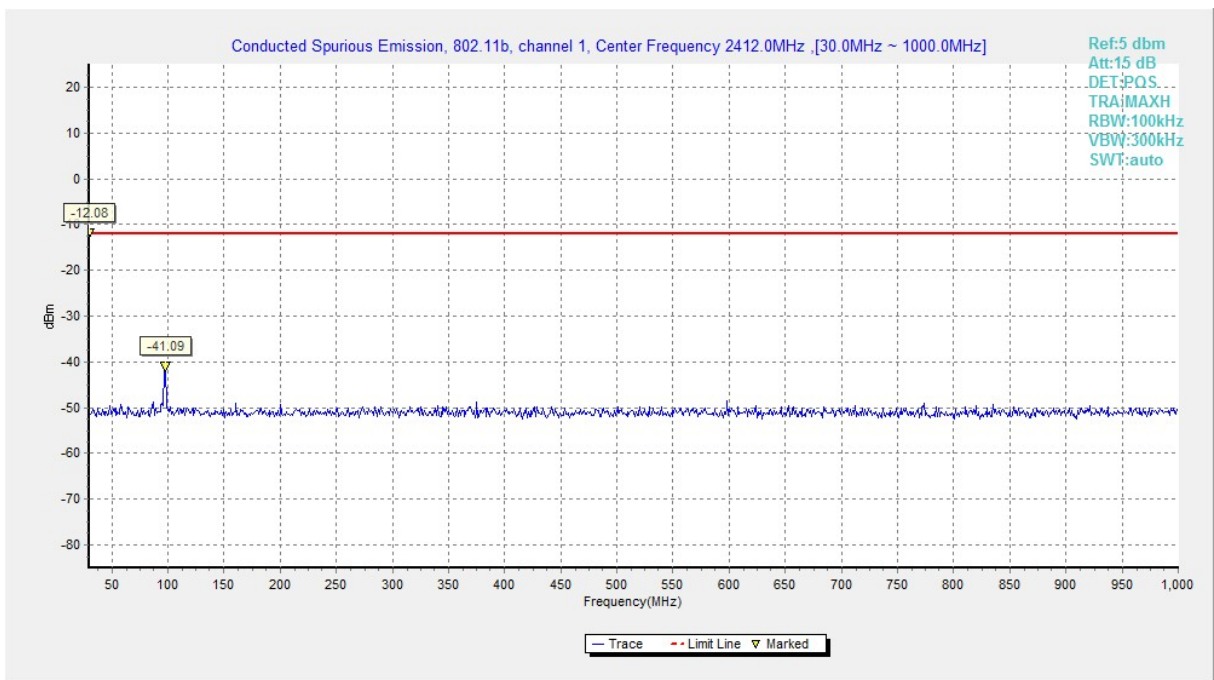


Fig.A.6.1.2 Conducted Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)

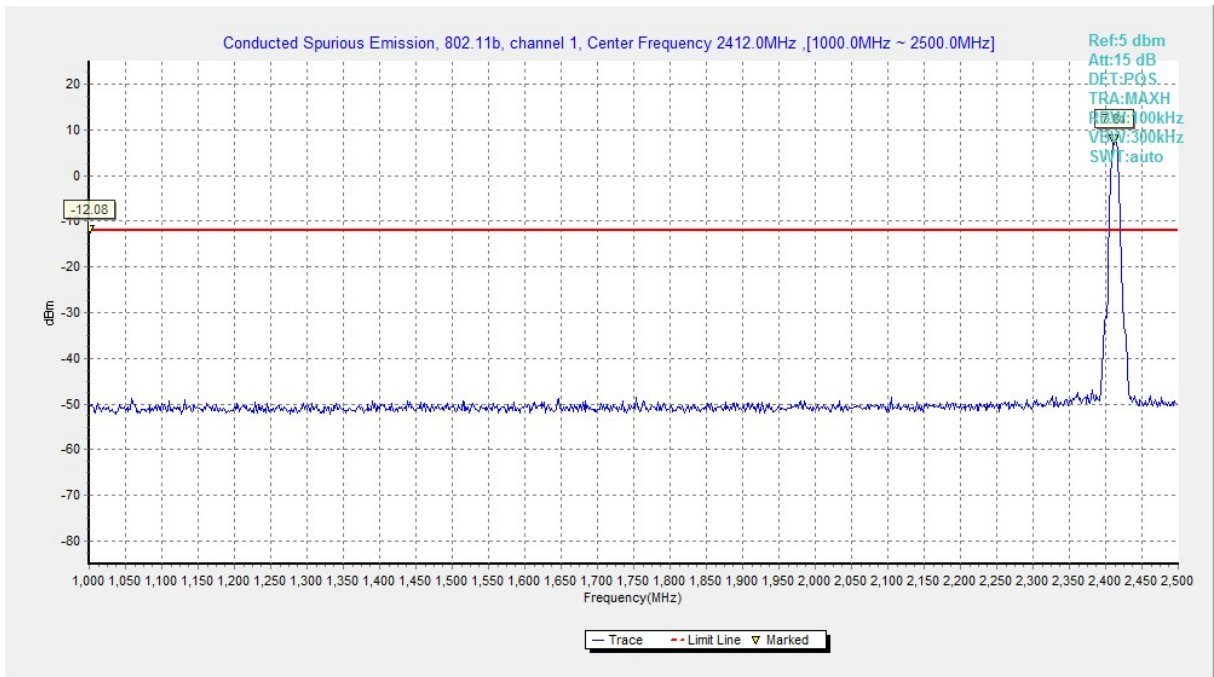


Fig.A.6.1.3 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)

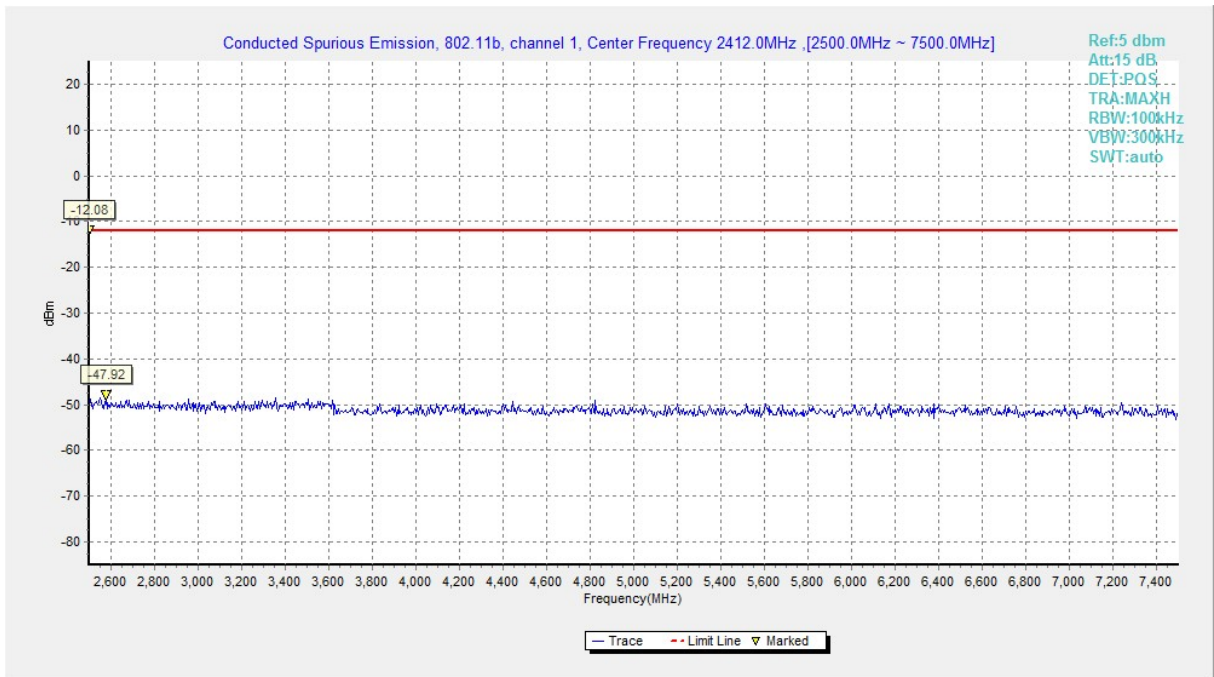


Fig.A.6.1.4 Conducted Spurious Emission (802.11b, Ch1, 2.5 GHz-7.5 GHz)

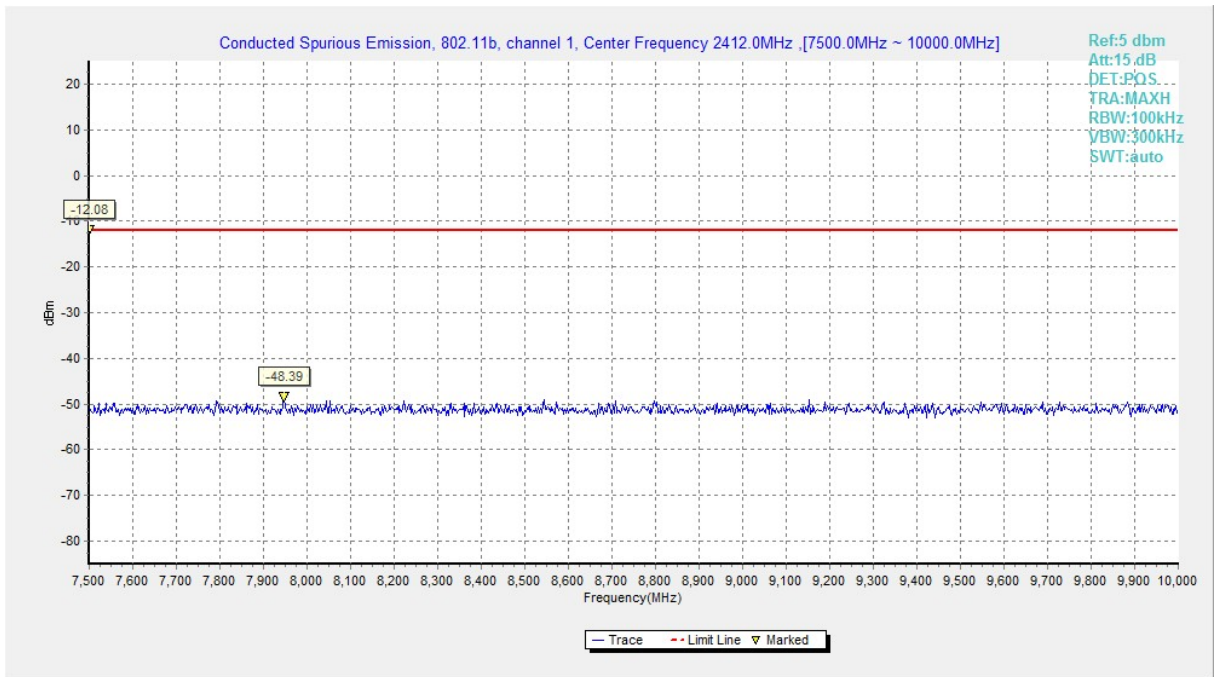


Fig.A.6.1.5 Conducted Spurious Emission (802.11b, Ch1, 7.5 GHz-10 GHz)

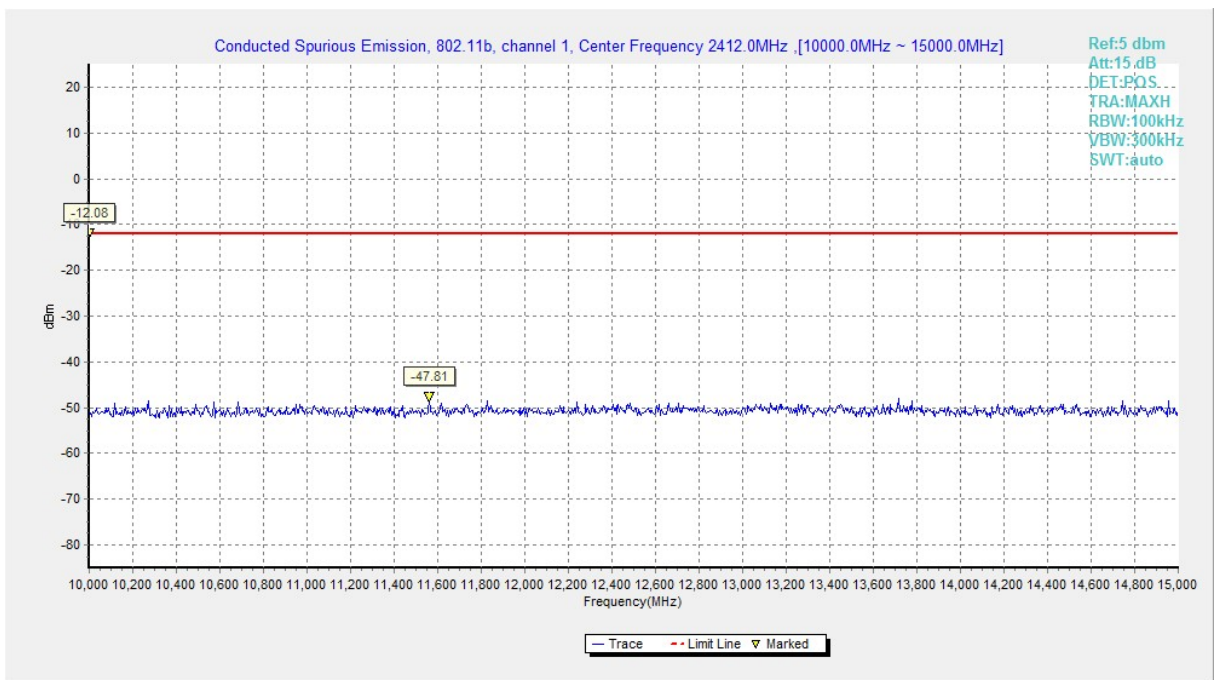


Fig.A.6.1.6 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)