

## A.6. Transmitter Spurious Emission

### A.6.1 Transmitter Spurious Emission - Conducted

**Measurement Limit:**

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

The measurement is made according to KDB558074, and section 12.2 is used for Transmitter Spurious Emission measurement.

**EUT ID: EUT2**

**Modulation type and data rate tested:**

802.11b	802.11g	802.11n-HT20
11Mbps(CCK)	54Mbps(OFDM)	MCS5(OFDM)

**Measurement Results:**

**802.11b mode**

MODE	Channel	Frequency Range	Test Results	Conclusion
802.11b	1	2.412 GHz	Fig.A.6.1.1	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.2	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.3	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.4	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.5	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.6	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.7	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.8	<b>P</b>
	6	2.437 GHz	Fig.A.6.1.9	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.10	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.11	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.12	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.13	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.14	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.15	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.16	<b>P</b>
	11	2.462 GHz	Fig.A.6.1.17	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.18	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.19	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.20	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.21	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.22	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.23	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.24	<b>P</b>

**802.11g mode**

<b>MODE</b>	<b>Channel</b>	<b>Frequency Range</b>	<b>Test Results</b>	<b>Conclusion</b>
802.11g	1	2.412 GHz	Fig.A.6.1.25	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.26	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.27	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.28	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.29	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.30	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.31	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.32	<b>P</b>
	6	2.437 GHz	Fig.A.6.1.33	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.34	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.35	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.36	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.37	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.38	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.39	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.40	<b>P</b>
	11	2.462 GHz	Fig.A.6.1.41	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.42	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.43	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.44	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.45	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.46	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.47	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.48	<b>P</b>

**802.11n-HT20 mode**

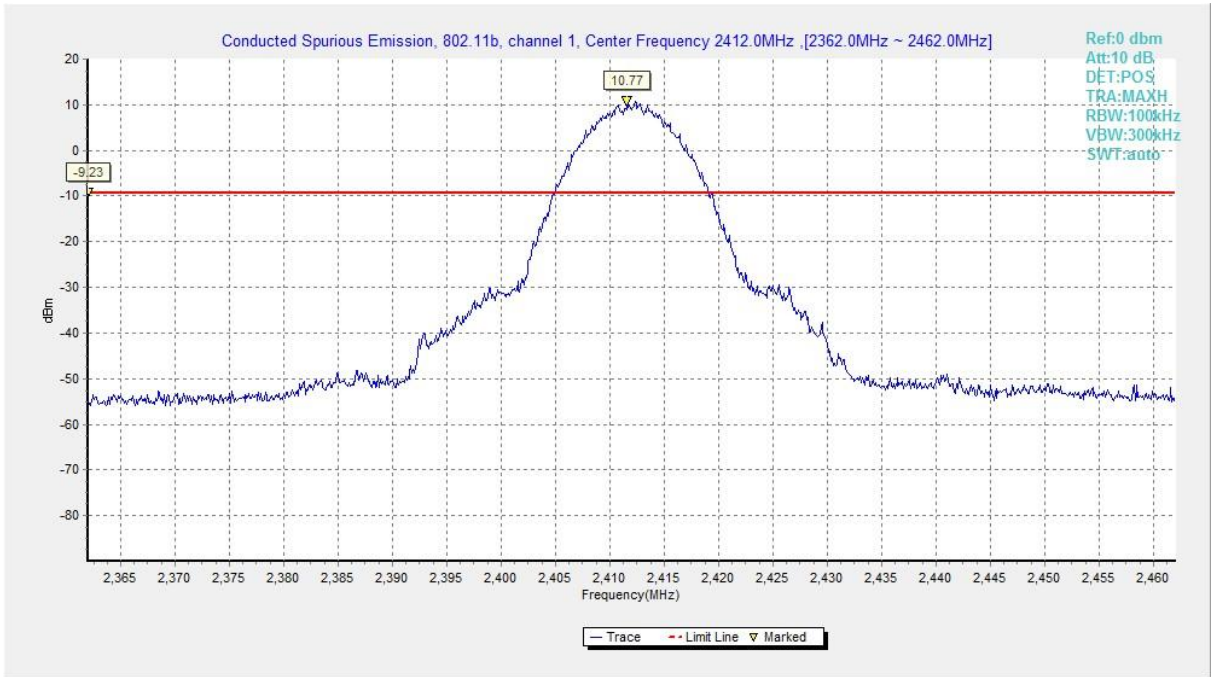
MODE	Channel	Frequency Range	Test Results	Conclusion
802.11n (HT20)	1	2.412 GHz	Fig.A.6.1.49	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.50	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.51	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.52	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.53	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.54	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.55	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.56	<b>P</b>
	6	2.437 GHz	Fig.A.6.1.57	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.58	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.59	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.60	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.61	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.62	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.63	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.64	<b>P</b>
	11	2.462 GHz	Fig.A.6.1.65	<b>P</b>
		30 MHz ~ 1 GHz	Fig.A.6.1.66	<b>P</b>
		1 GHz ~ 2.5 GHz	Fig.A.6.1.67	<b>P</b>
		2.5 GHz ~ 7.5 GHz	Fig.A.6.1.68	<b>P</b>
		7.5 GHz ~ 10 GHz	Fig.A.6.1.69	<b>P</b>
		10 GHz ~ 15 GHz	Fig.A.6.1.70	<b>P</b>
		15 GHz ~ 20 GHz	Fig.A.6.1.71	<b>P</b>
		20 GHz ~ 26 GHz	Fig.A.6.1.72	<b>P</b>

**Conclusion: Pass**

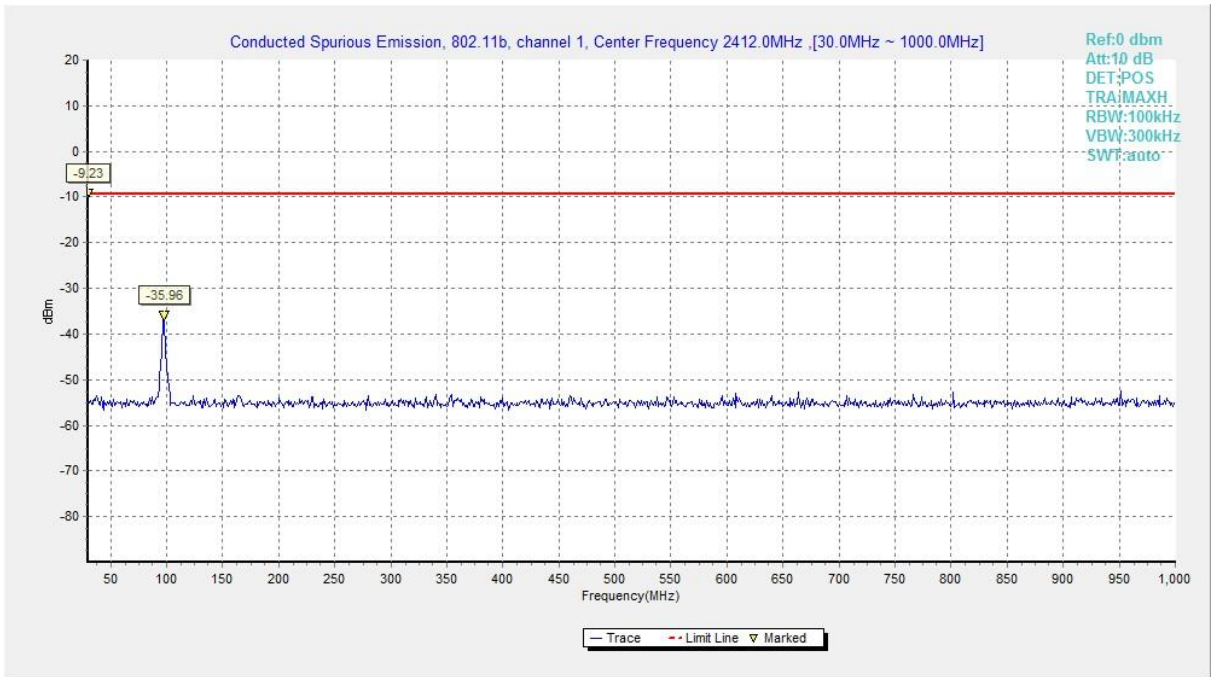
**Measurement Uncertainty:**

Frequency Range	Uncertainty(dB)
30MHz ≤ f ≤ 2GHz	0.63
2GHz ≤ f ≤ 3.6GHz	0.82
3.6GHz ≤ f ≤ 8GHz	1.55
8GHz ≤ f ≤ 20GHz	1.86
20GHz ≤ f ≤ 22GHz	1.90
22GHz ≤ f ≤ 26GHz	2.20

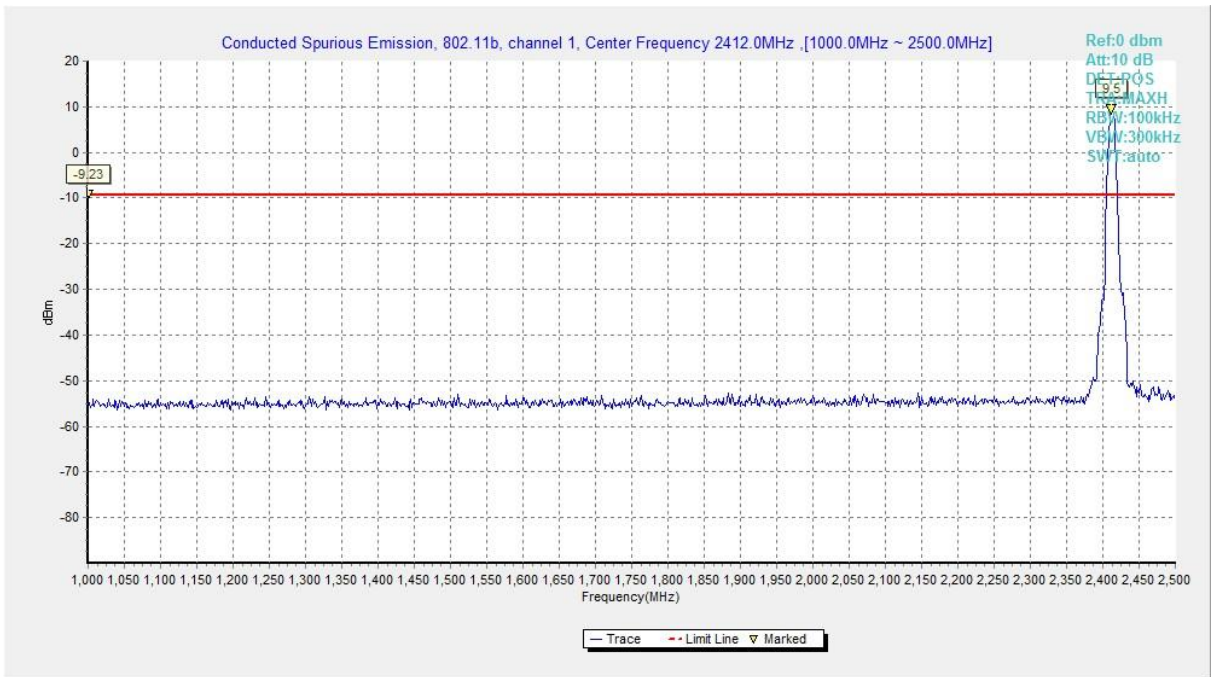
**Test graphs as below:**



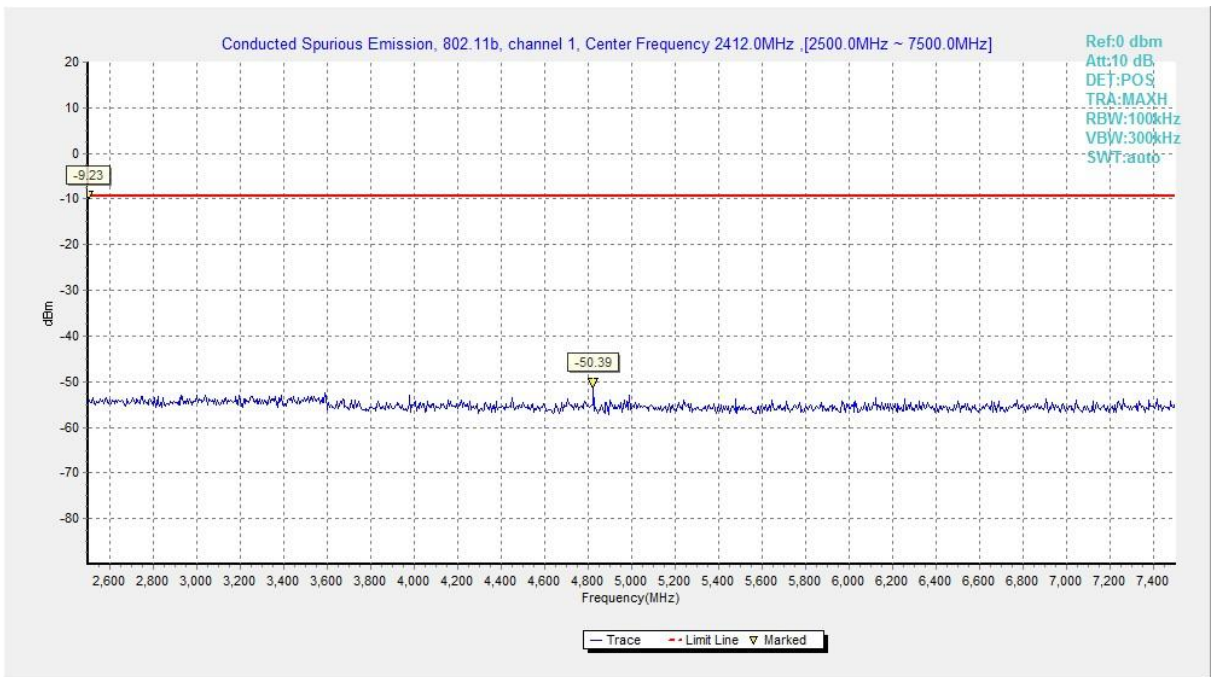
**Fig.A.6.1.1 Conducted Spurious Emission (802.11b, Ch1, Center Frequency)**



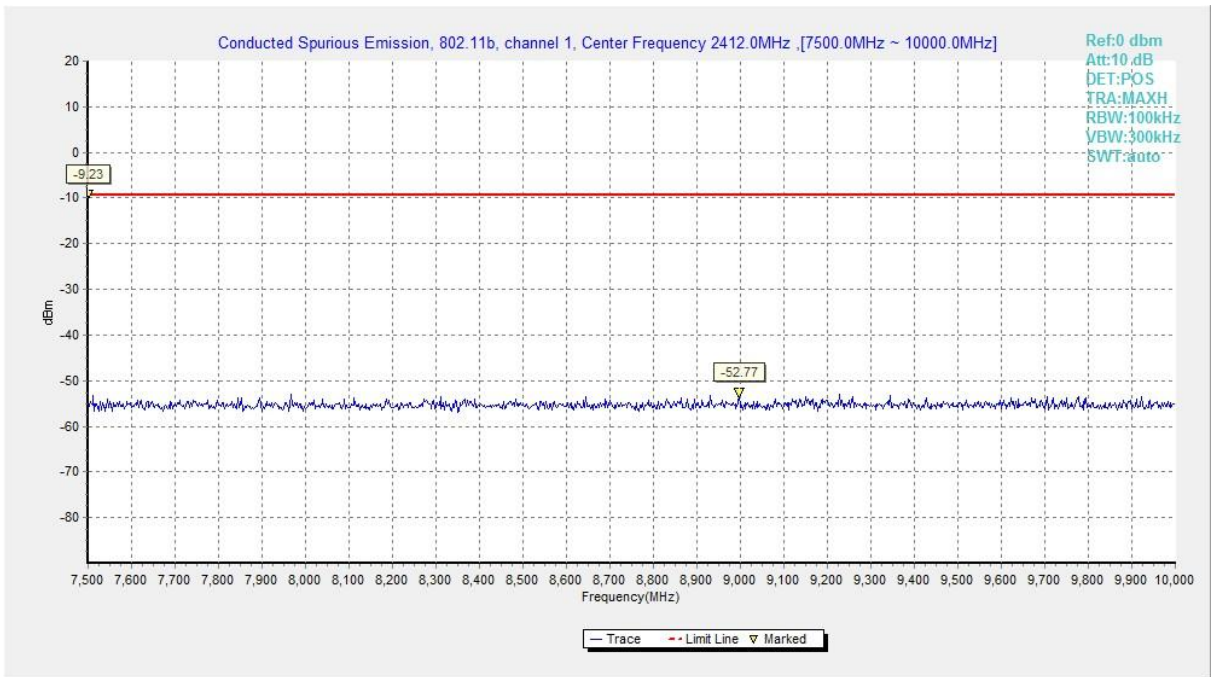
**Fig.A.6.1.2 Conducted Spurious Emission (802.11b, Ch1, 30 MHz-1 GHz)**



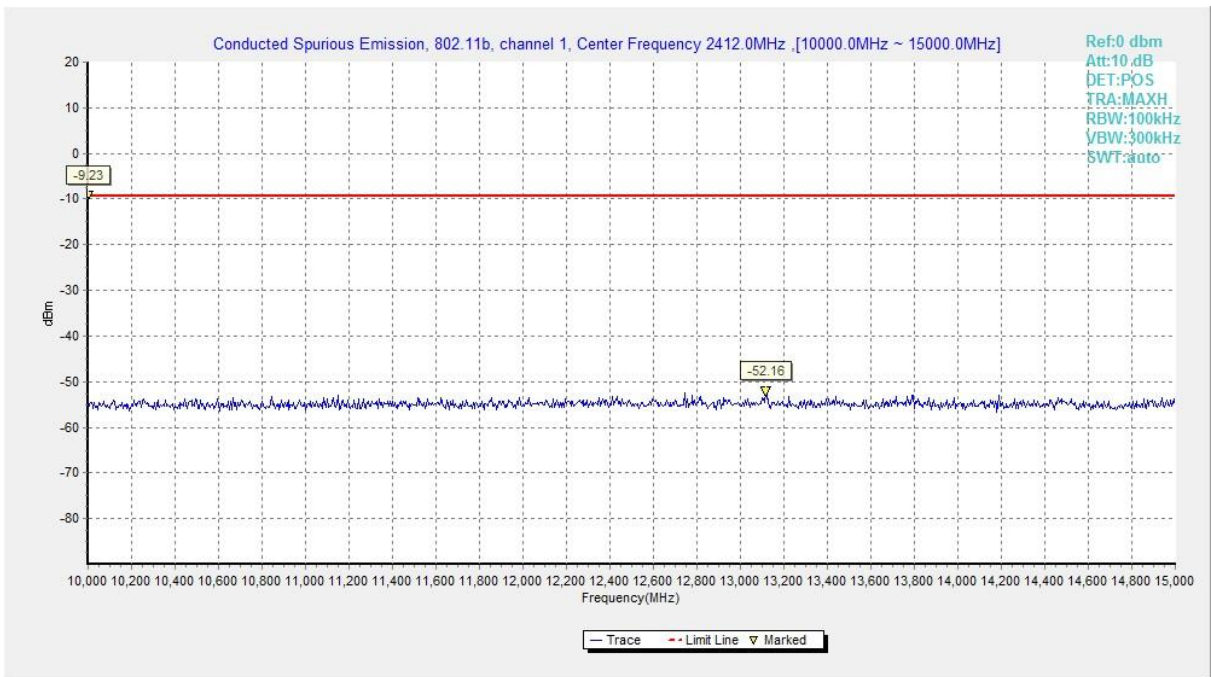
**Fig.A.6.1.3 Conducted Spurious Emission (802.11b, Ch1, 1 GHz-2.5 GHz)**



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

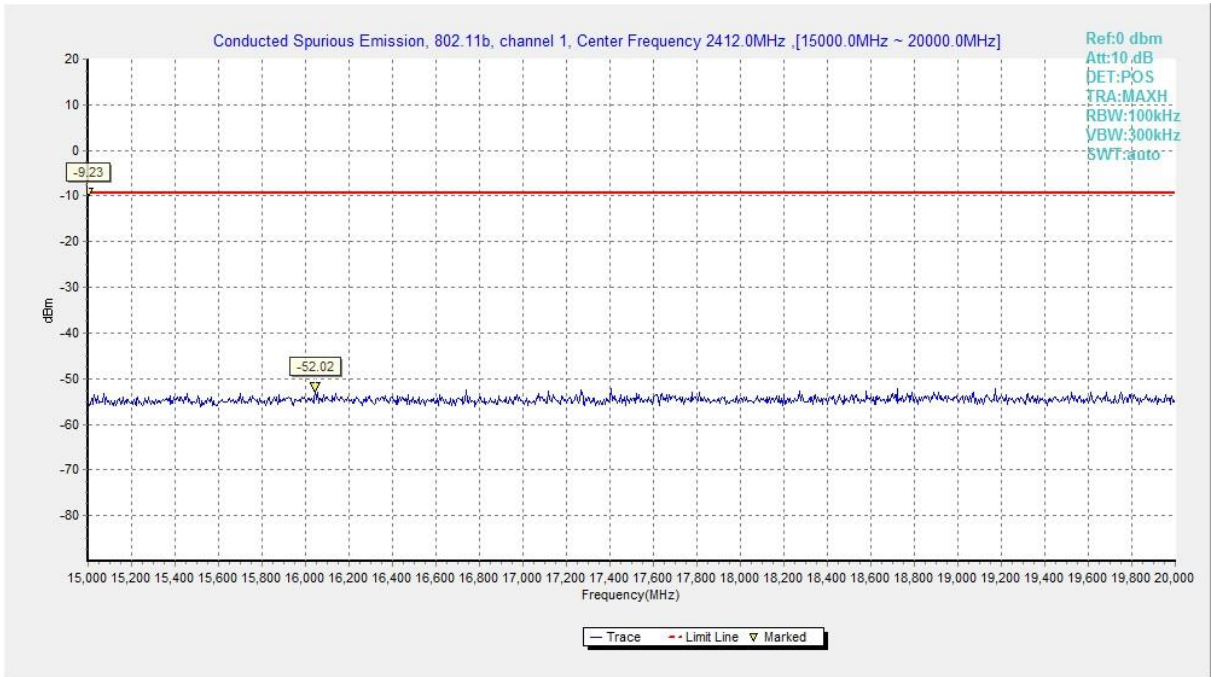


**Fig.A.6.1.5 Conducted Spurious Emission (802.11b, Ch1, 7.5 GHz-10 GHz)**

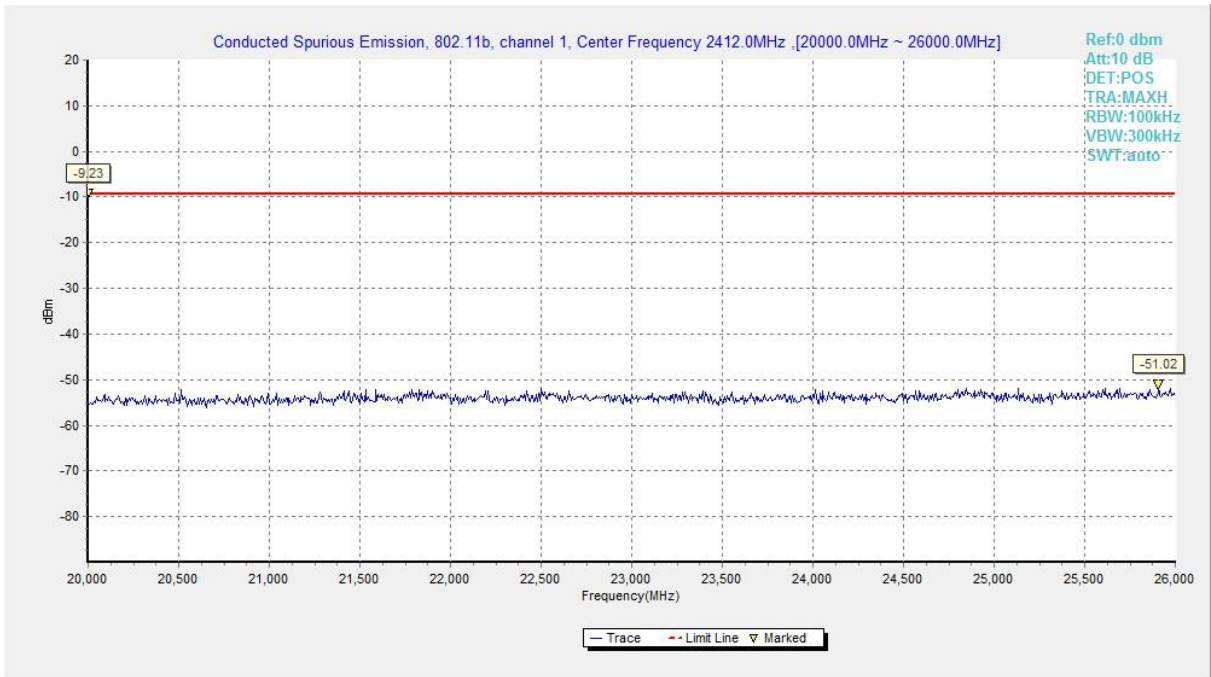


**Fig.A.6.1.6 Conducted Spurious Emission (802.11b, Ch1, 10 GHz-15 GHz)**

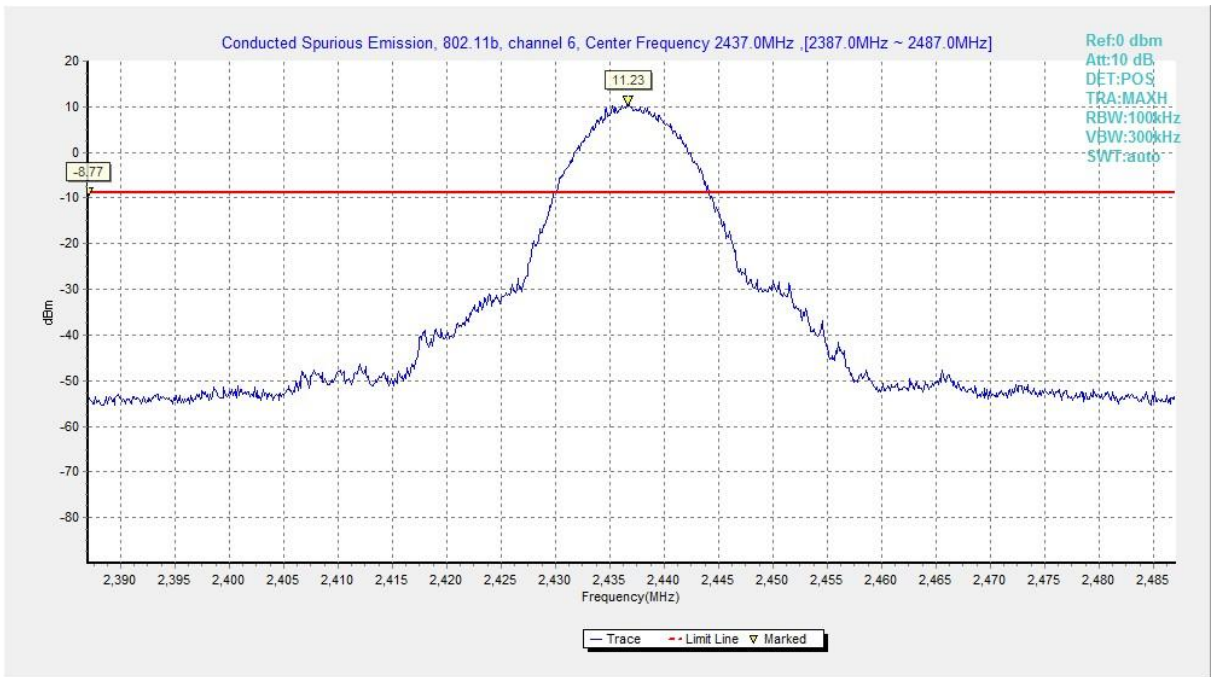




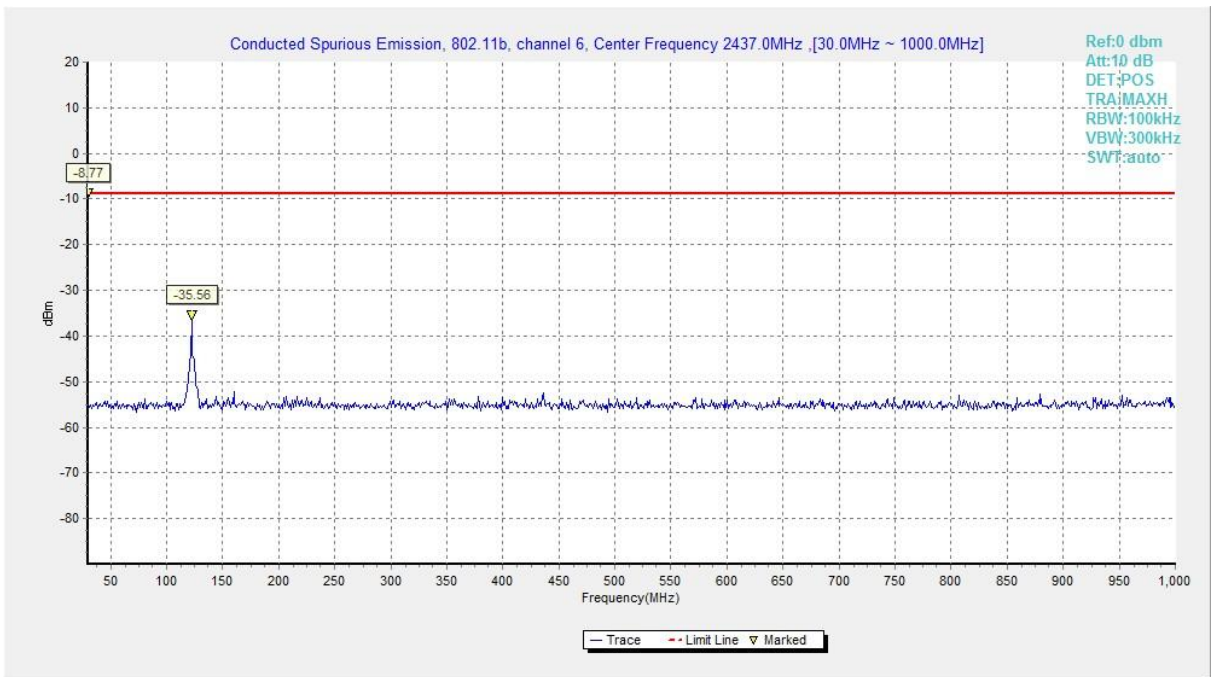
**Fig.A.6.1.7 Conducted Spurious Emission (802.11b, Ch1, 15 GHz-20 GHz)**



**Fig.A.6.1.8 Conducted Spurious Emission (802.11b, Ch1, 20 GHz-26 GHz)**

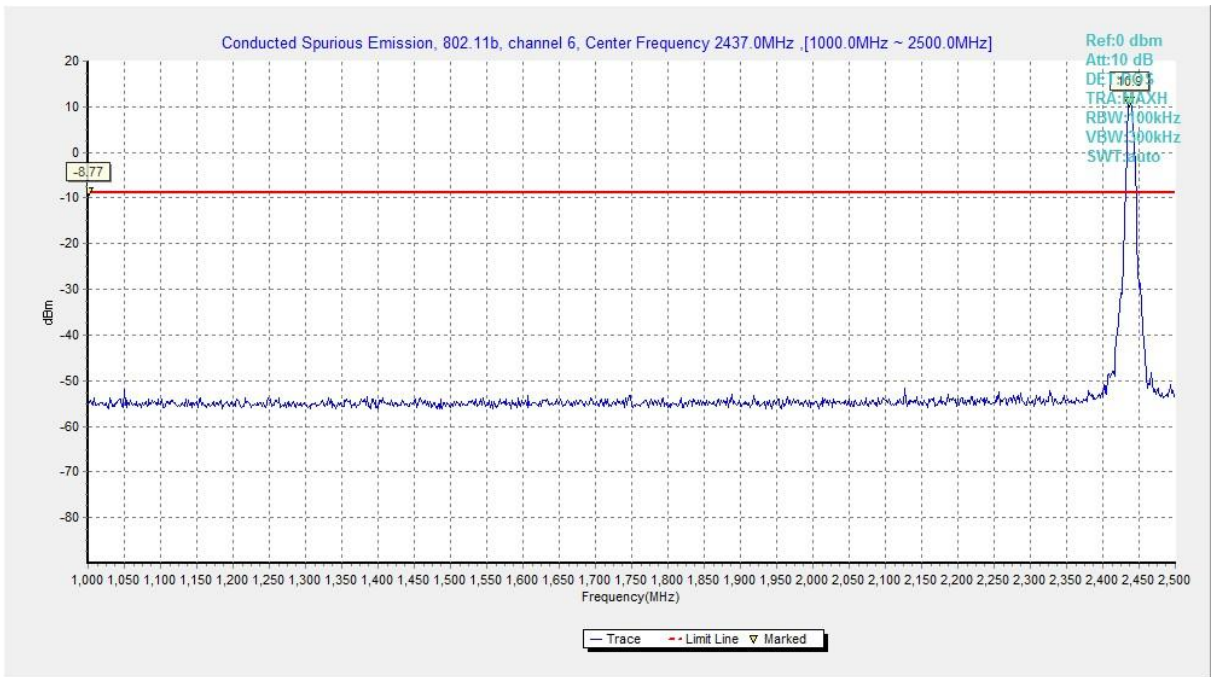


**Fig.A.6.1.9 Conducted Spurious Emission (802.11b, Ch6, Center Frequency)**

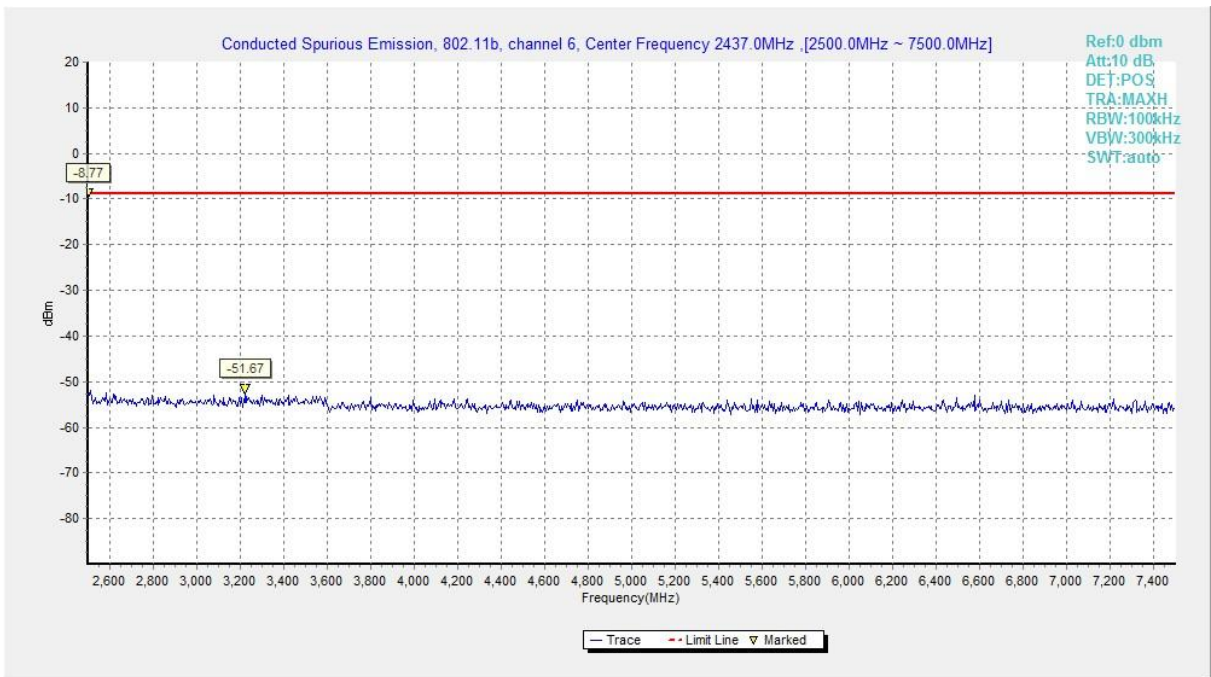


**Fig.A.6.1.10 Conducted Spurious Emission (802.11b, Ch6, 30 MHz-1 GHz)**

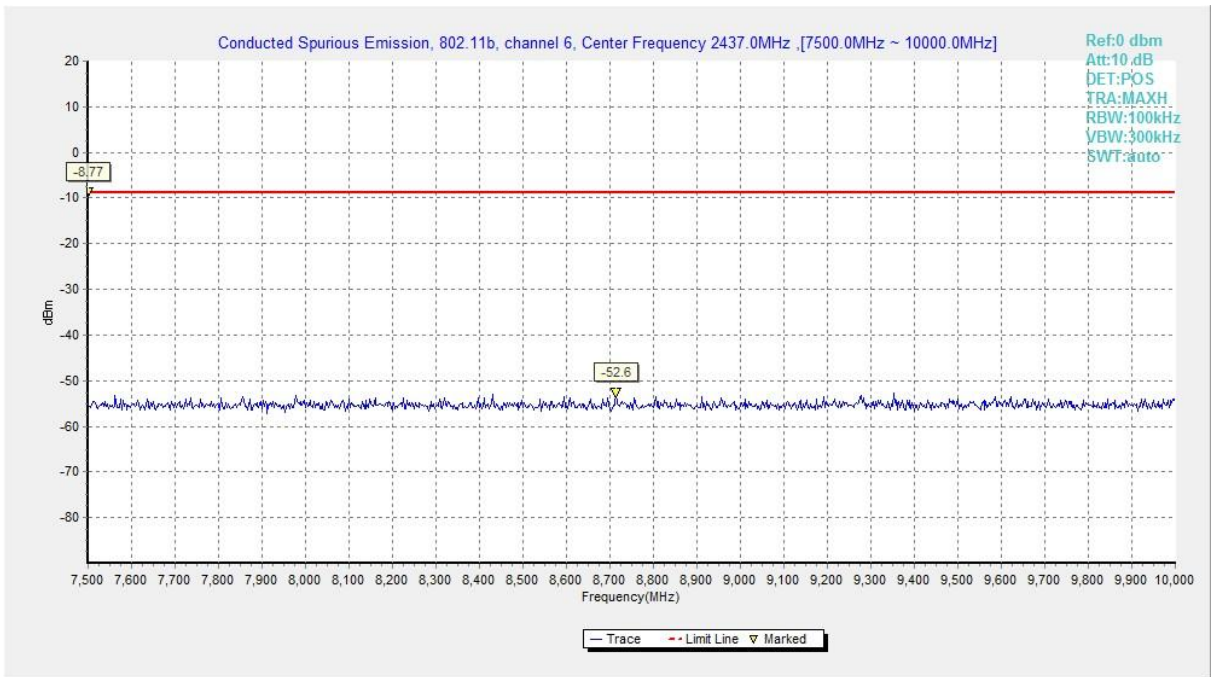




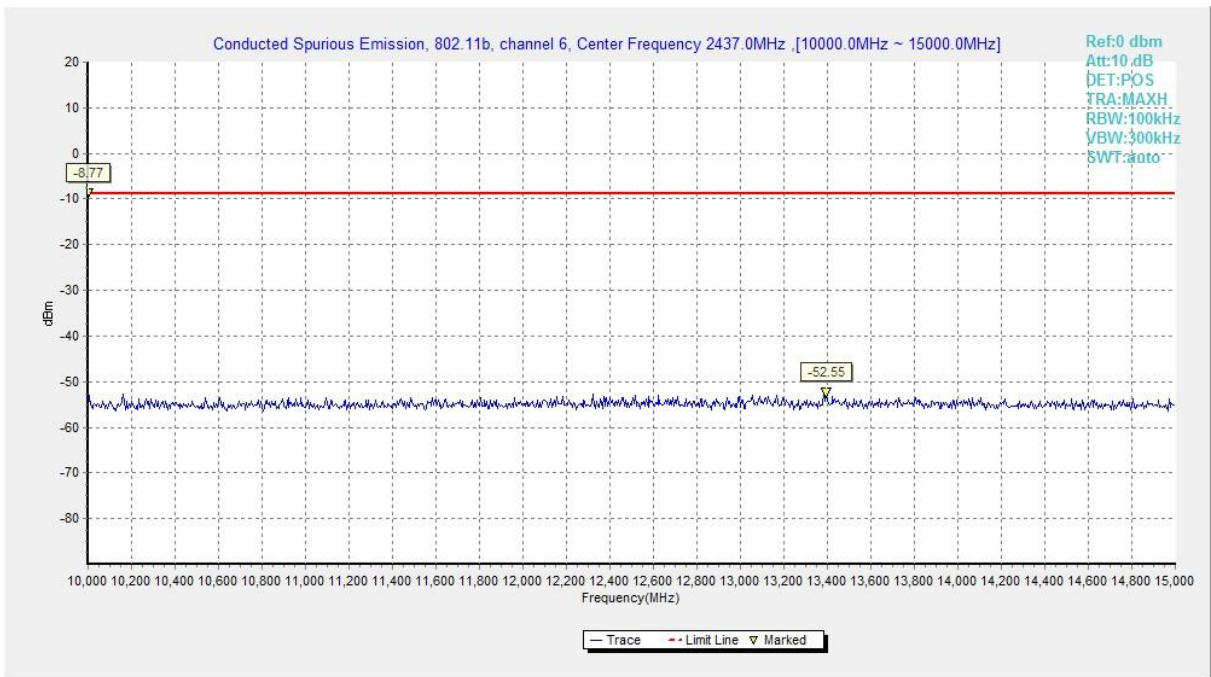
**Fig.A.6.1.11 Conducted Spurious Emission (802.11b, Ch6, 1 GHz-2.5 GHz)**



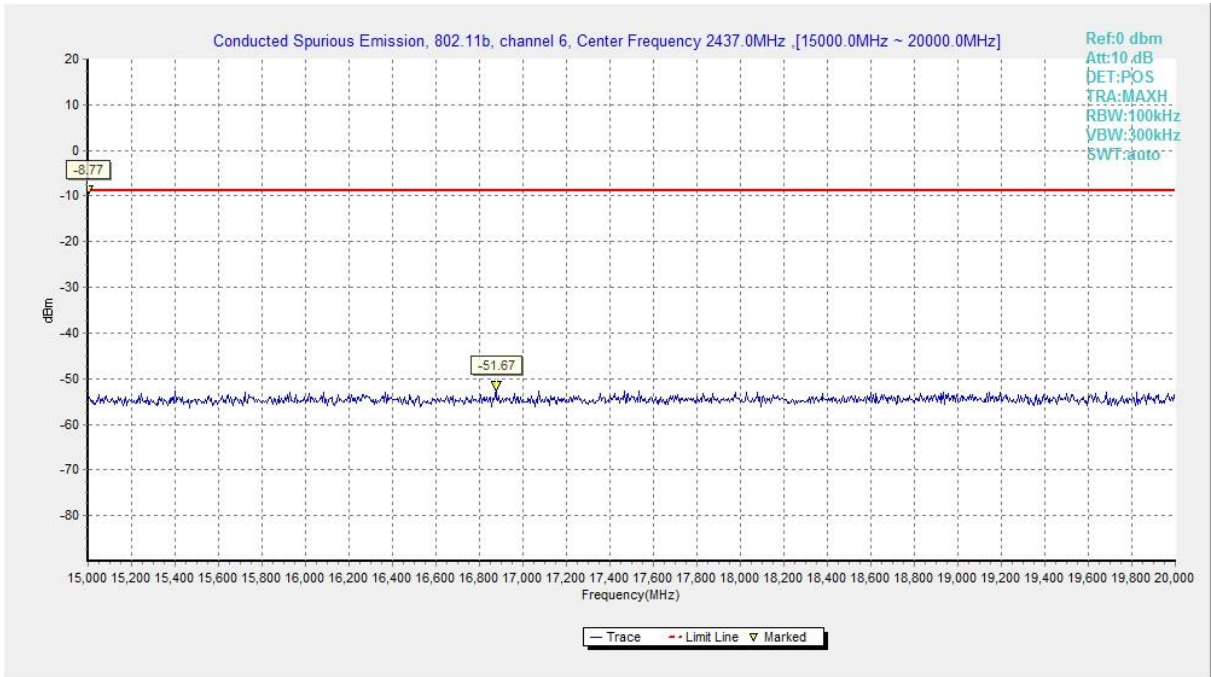
**Fig.A.6.1.12 Conducted Spurious Emission (802.11b, Ch6, 2.5 GHz-7.5 GHz)**



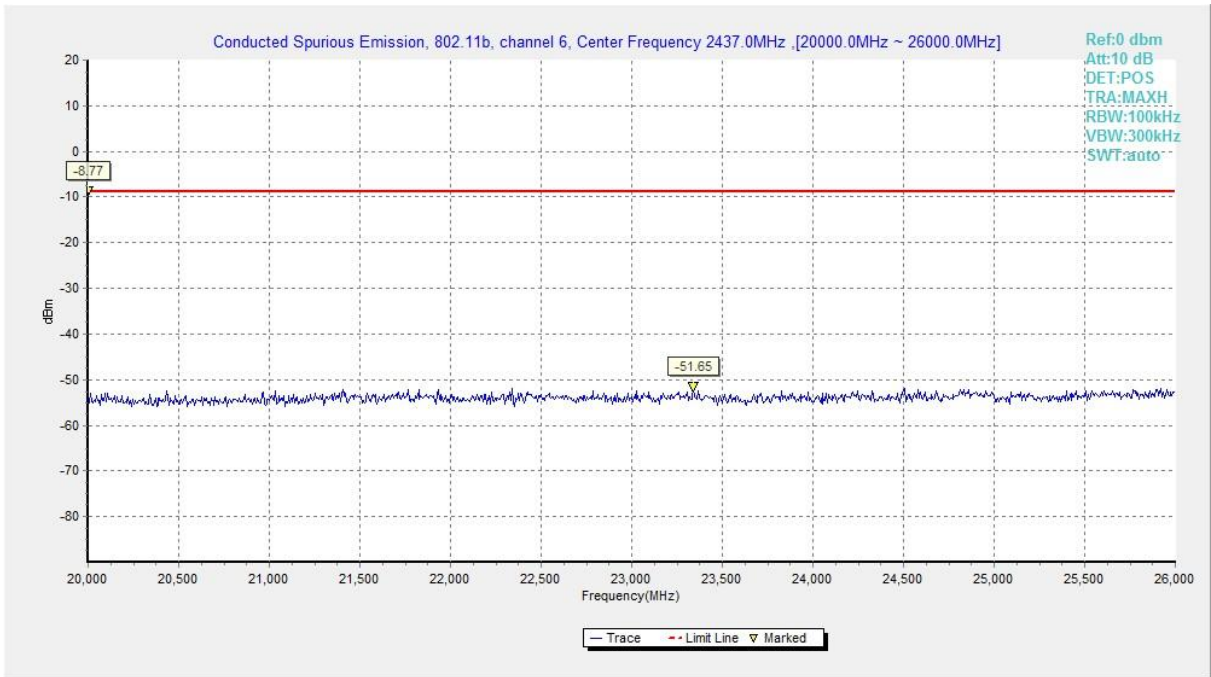
**Fig.A.6.1.13 Conducted Spurious Emission (802.11b, Ch6, 7.5 GHz-10 GHz)**



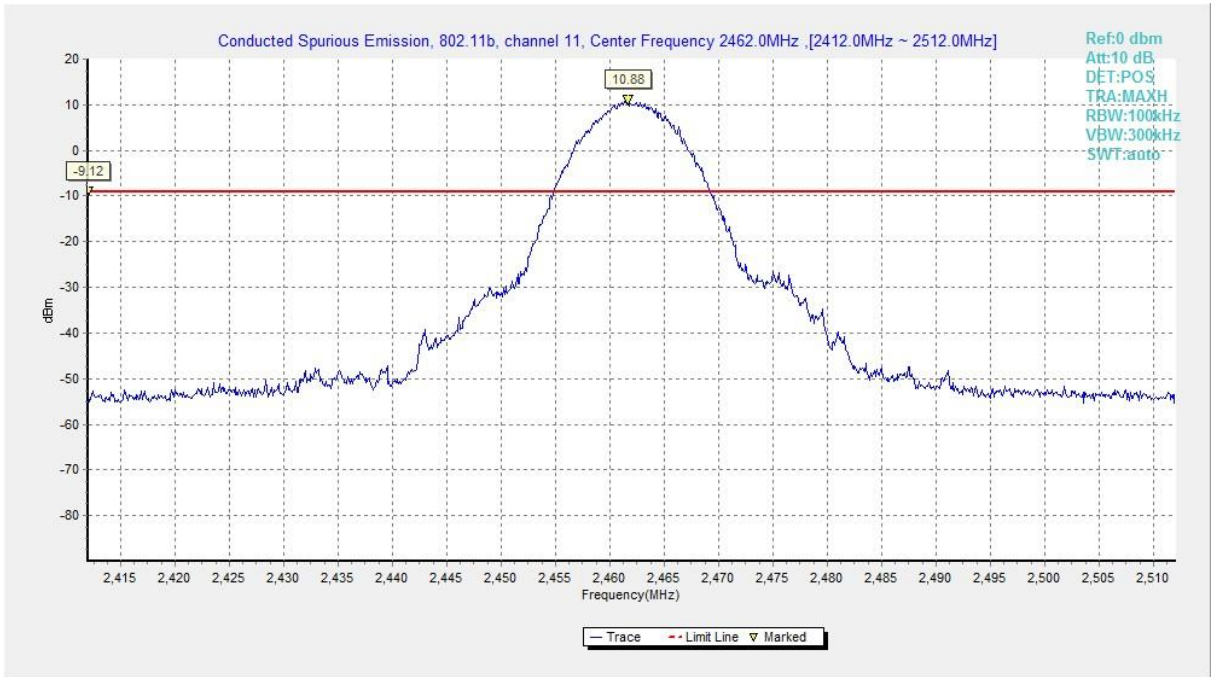
**Fig.A.6.1.14 Conducted Spurious Emission (802.11b, Ch6, 10 GHz-15 GHz)**



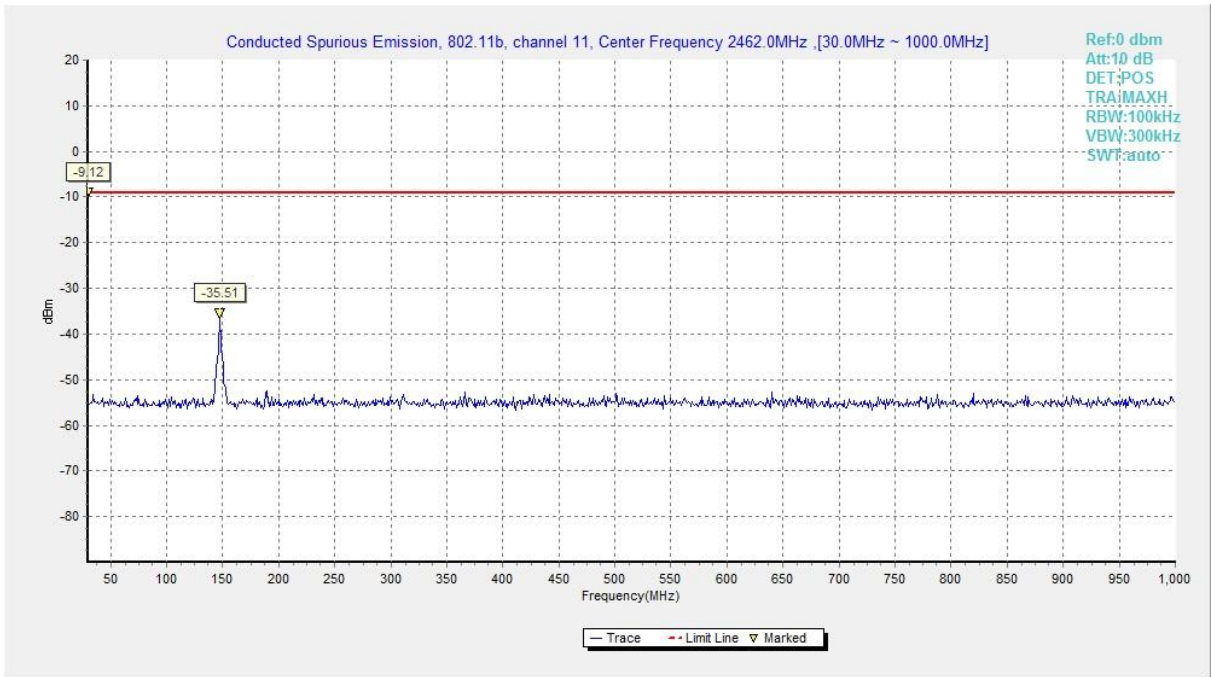
**Fig.A.6.1.15 Conducted Spurious Emission (802.11b, Ch6, 15 GHz-20 GHz)**



**Fig.A.6.1.16 Conducted Spurious Emission (802.11b, Ch6, 20 GHz-26 GHz)**

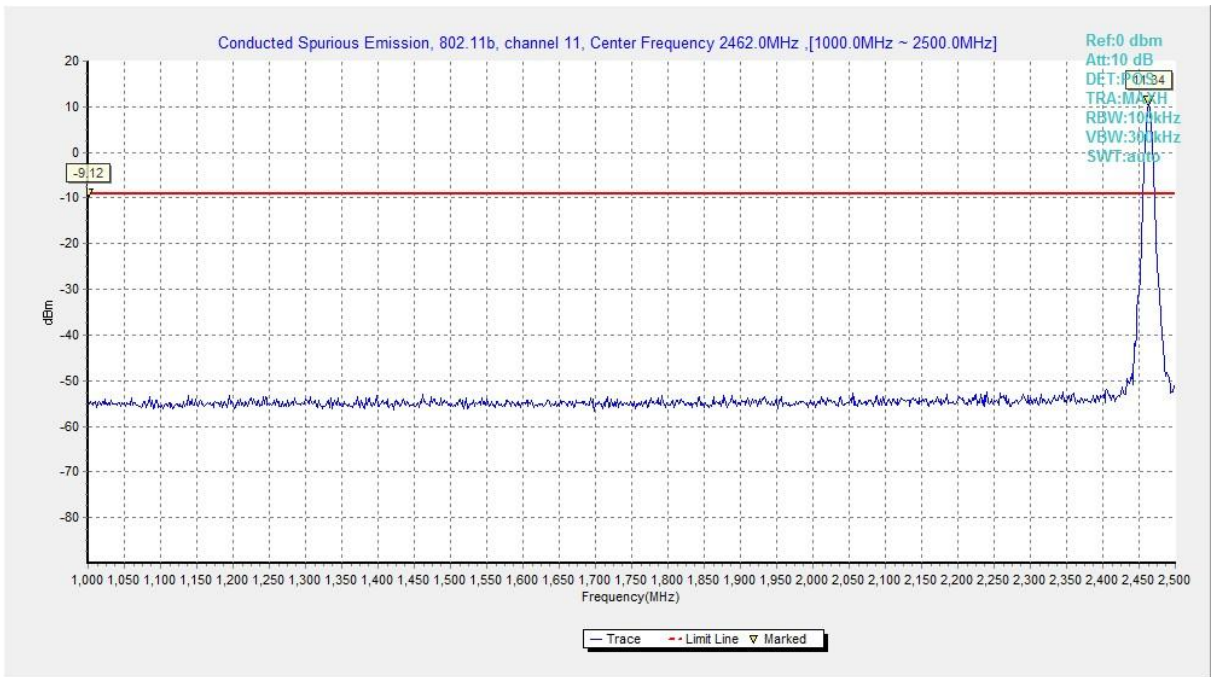


**Fig.A.6.1.17 Conducted Spurious Emission (802.11b, Ch11, Center Frequency)**

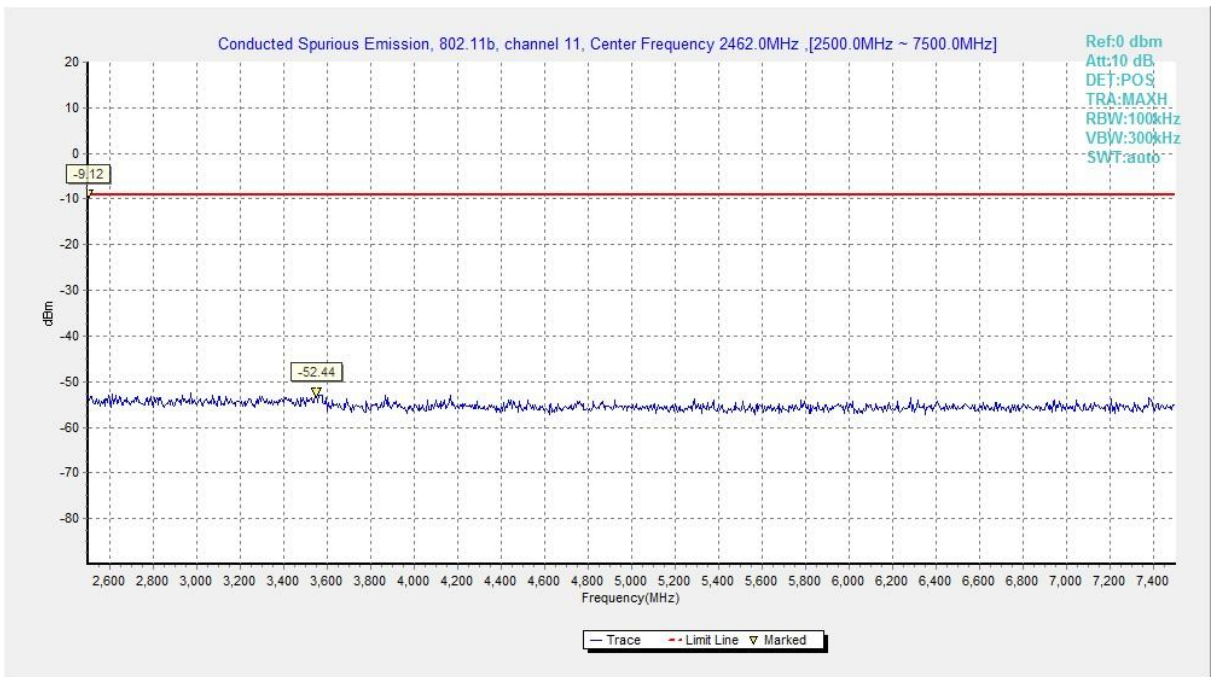


**Fig.A.6.1.18 Conducted Spurious Emission (802.11b, Ch11, 30 MHz-1 GHz)**





**Fig.A.6.1.19 Conducted Spurious Emission (802.11b, Ch11, 1 GHz-2.5 GHz)**



**Fig.A.6.1.20 Conducted Spurious Emission (802.11b, Ch11, 2.5 GHz-7.5 GHz)**



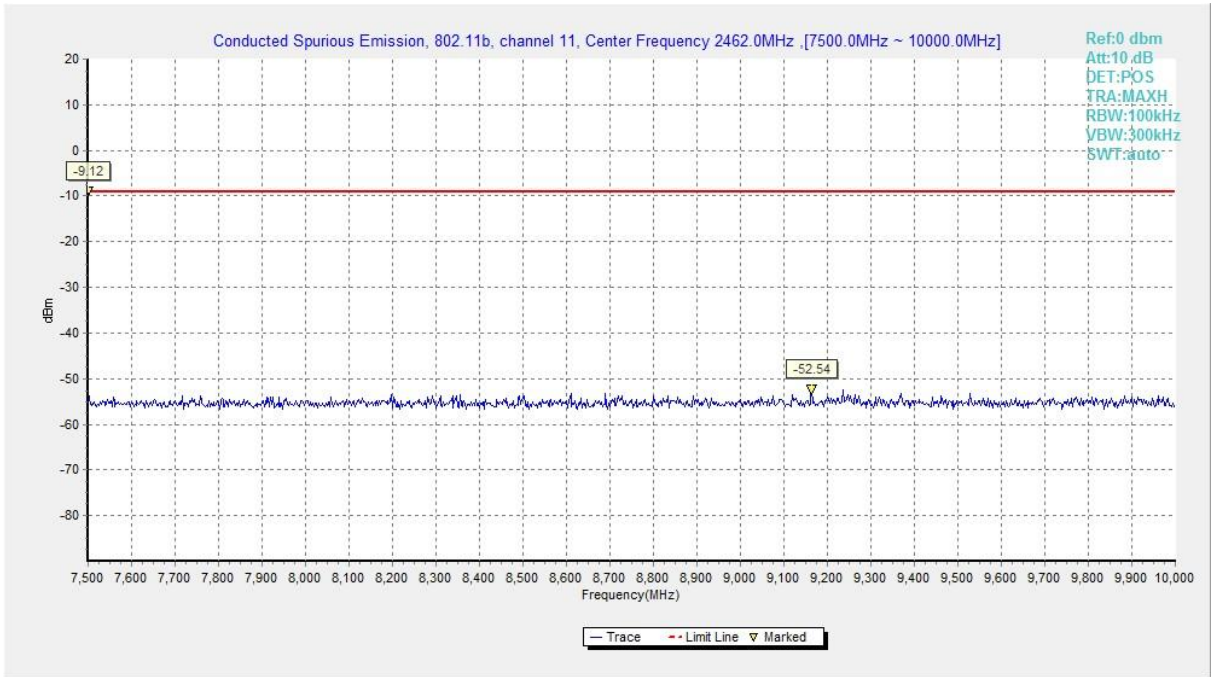


Fig.A.6.1.21 Conducted Spurious Emission (802.11b, Ch11, 7.5 GHz-10 GHz)

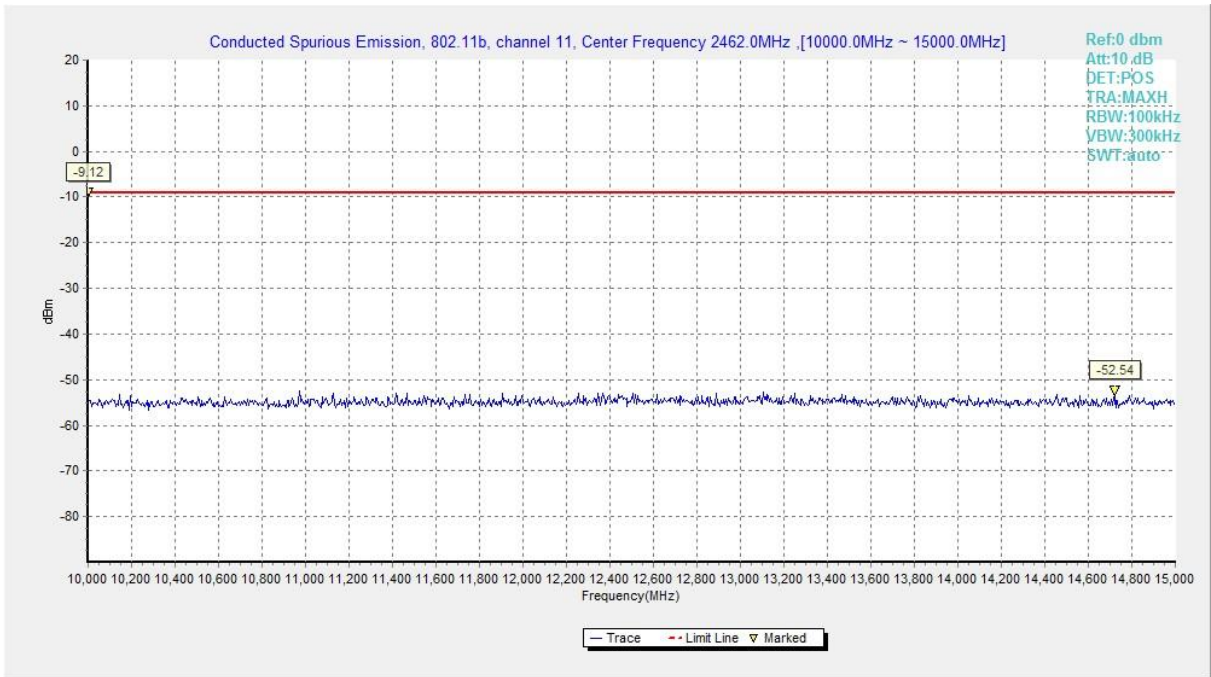
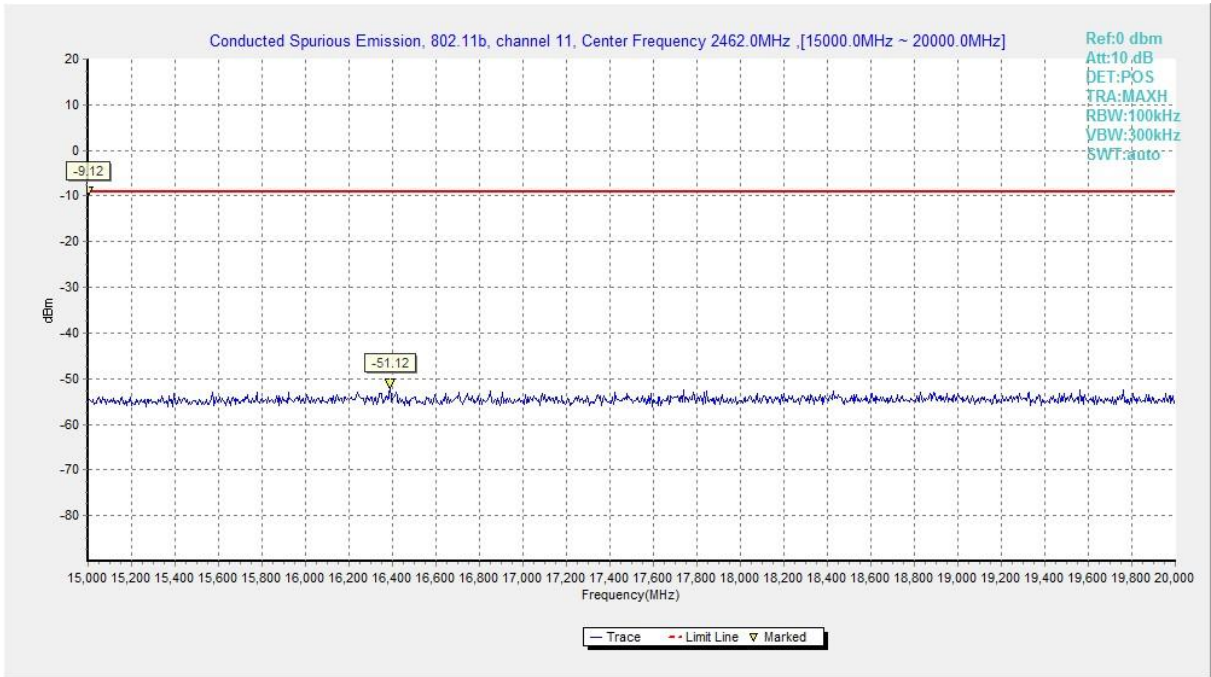
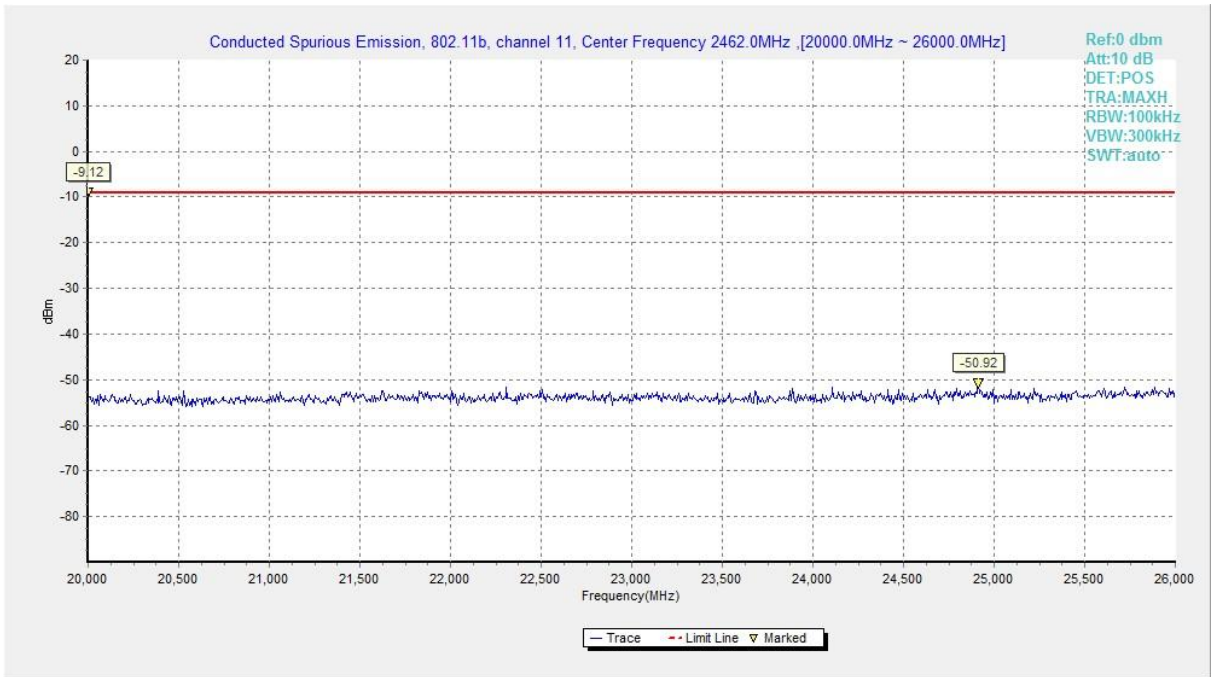


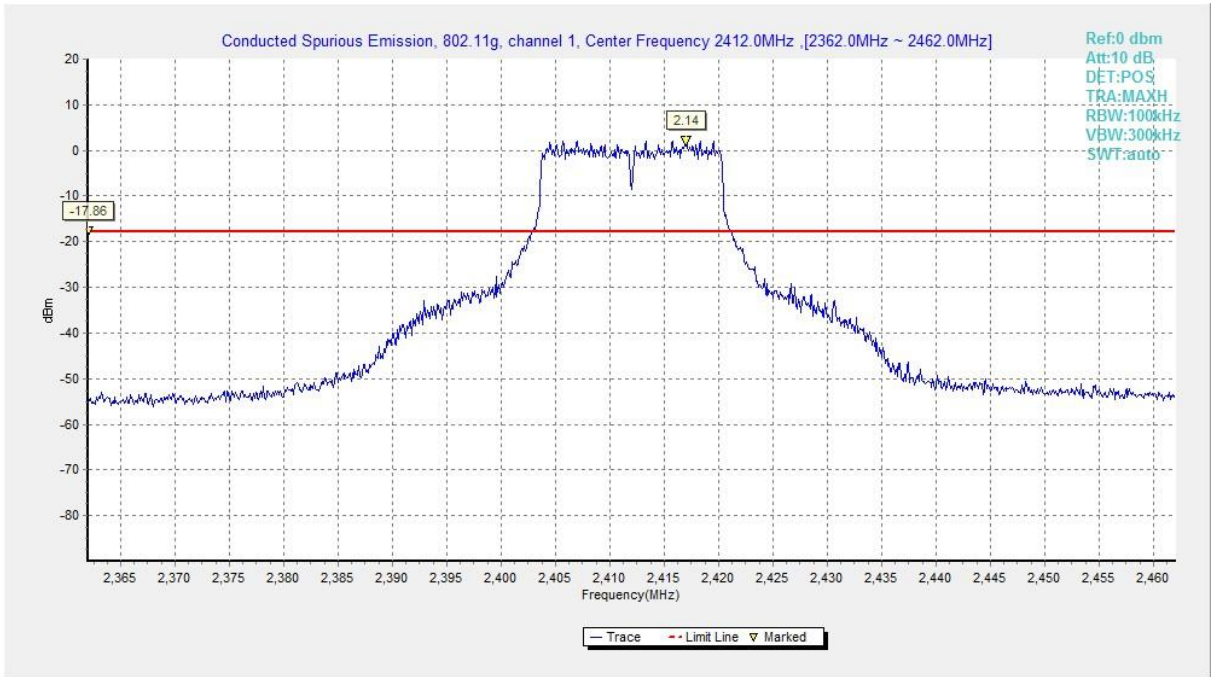
Fig.A.6.1.22 Conducted Spurious Emission (802.11b, Ch11, 10 GHz-15 GHz)



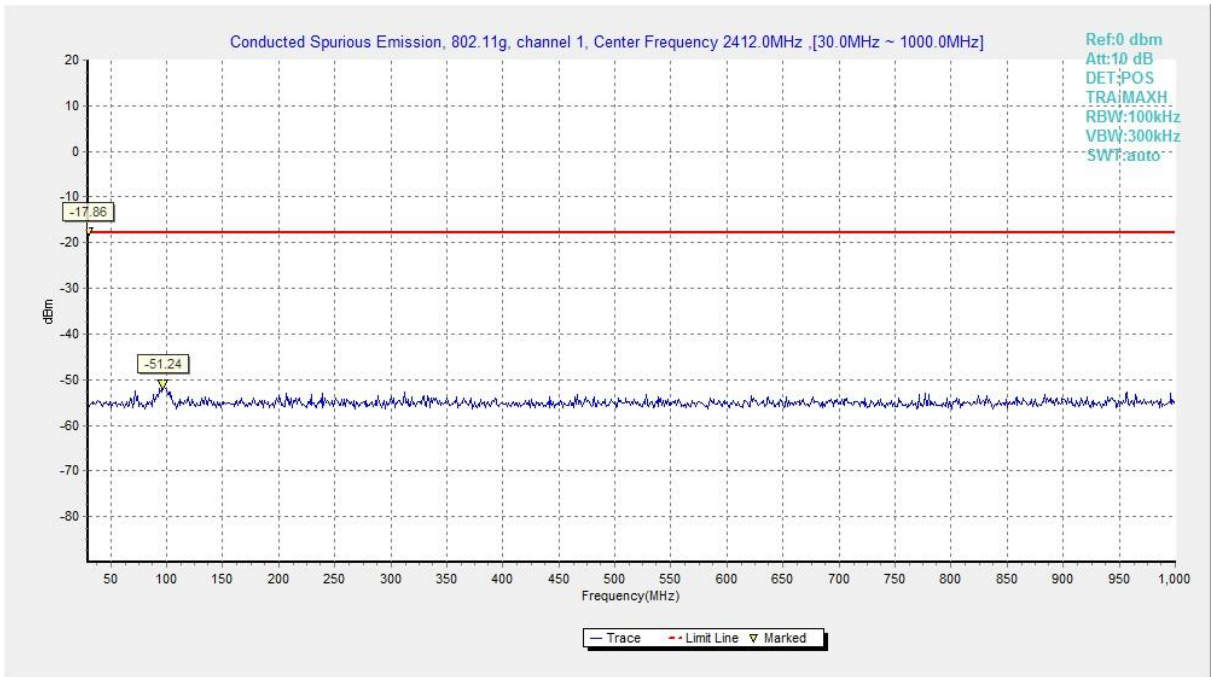
**Fig.A.6.1.23 Conducted Spurious Emission (802.11b, Ch11, 15 GHz-20 GHz)**



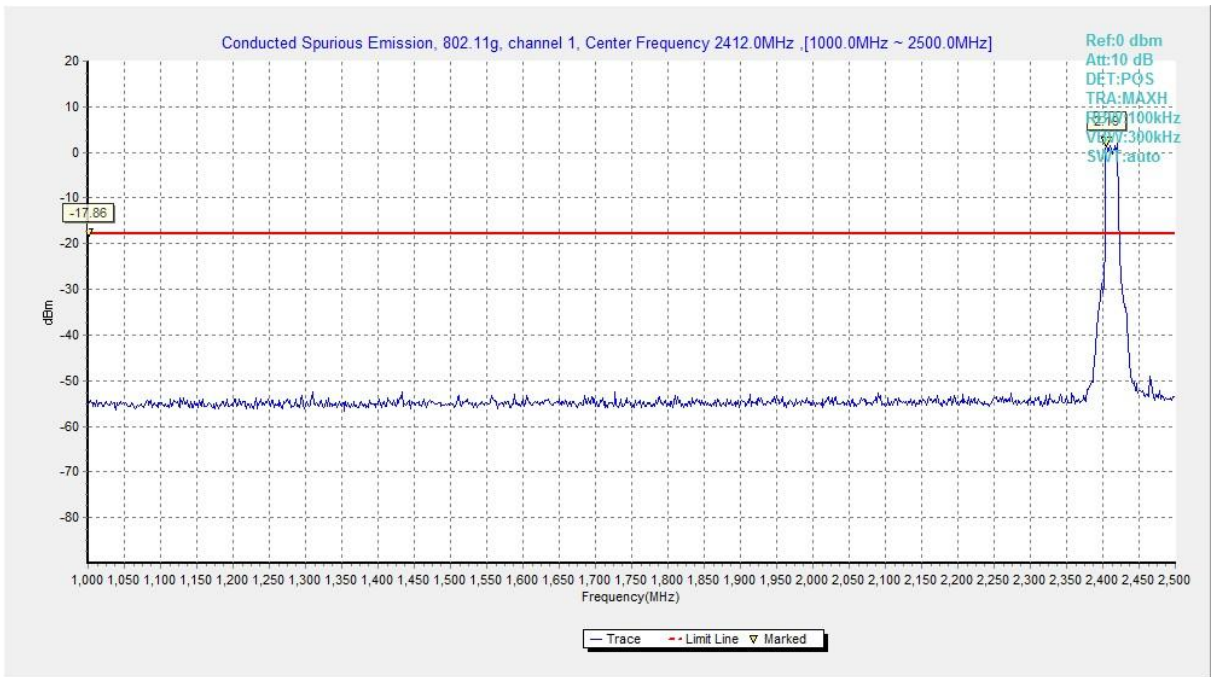
**Fig.A.6.1.24 Conducted Spurious Emission (802.11b, Ch11, 20 GHz-26 GHz)**



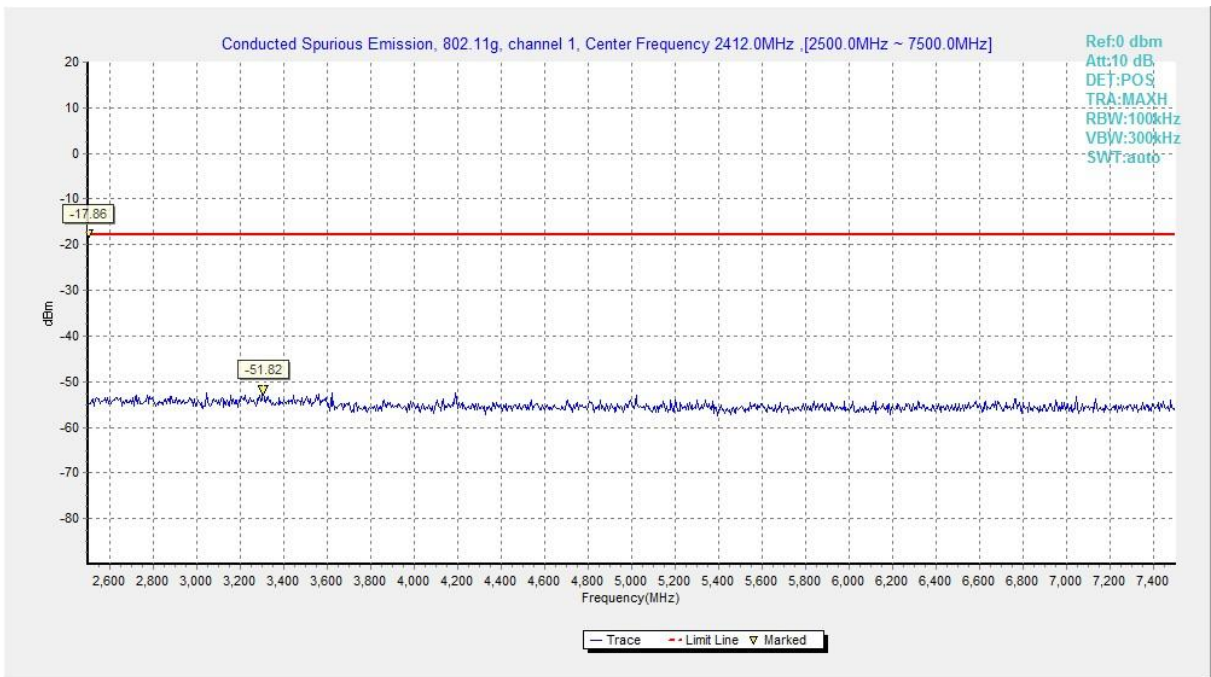
**Fig.A.6.1.25 Conducted Spurious Emission (802.11g, Ch1, Center Frequency)**



**Fig.A.6.1.26 Conducted Spurious Emission (802.11g, Ch1, 30 MHz-1 GHz)**

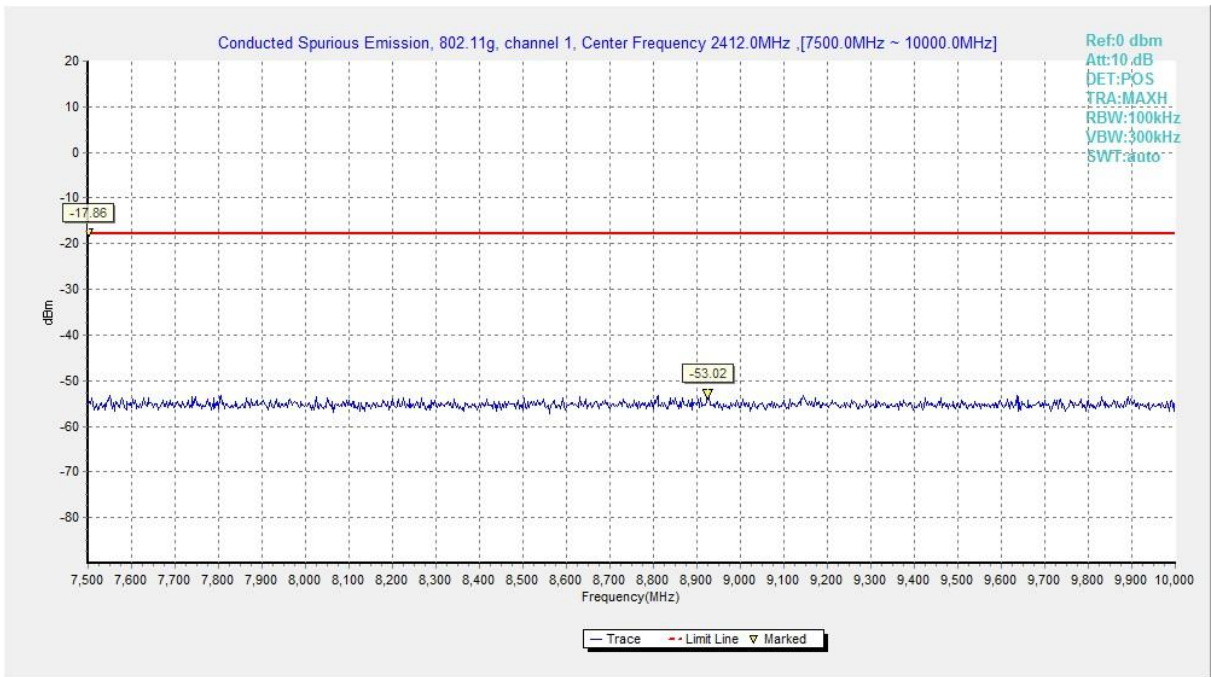


**Fig.A.6.1.27 Conducted Spurious Emission (802.11g, Ch1, 1 GHz-2.5 GHz)**

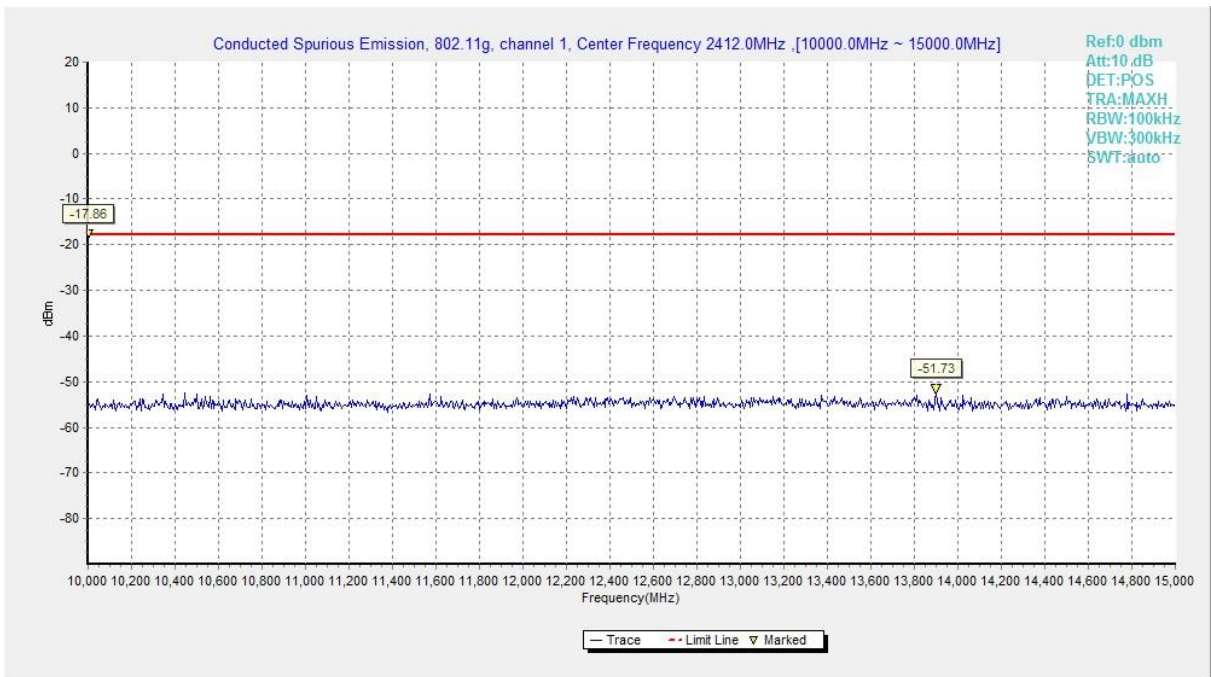


**Fig.A.6.1.28 Conducted Spurious Emission (802.11g, Ch1, 2.5 GHz-7.5 GHz)**



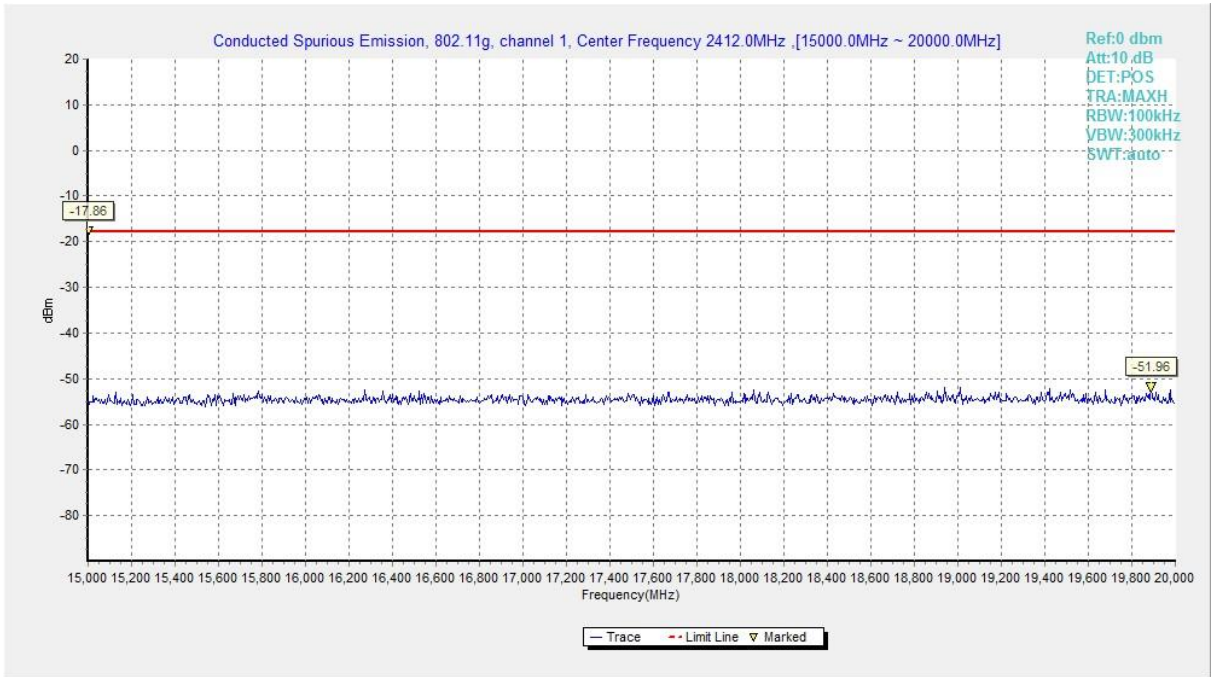


**Fig.A.6.1.29 Conducted Spurious Emission (802.11g, Ch1, 7.5 GHz-10 GHz)**

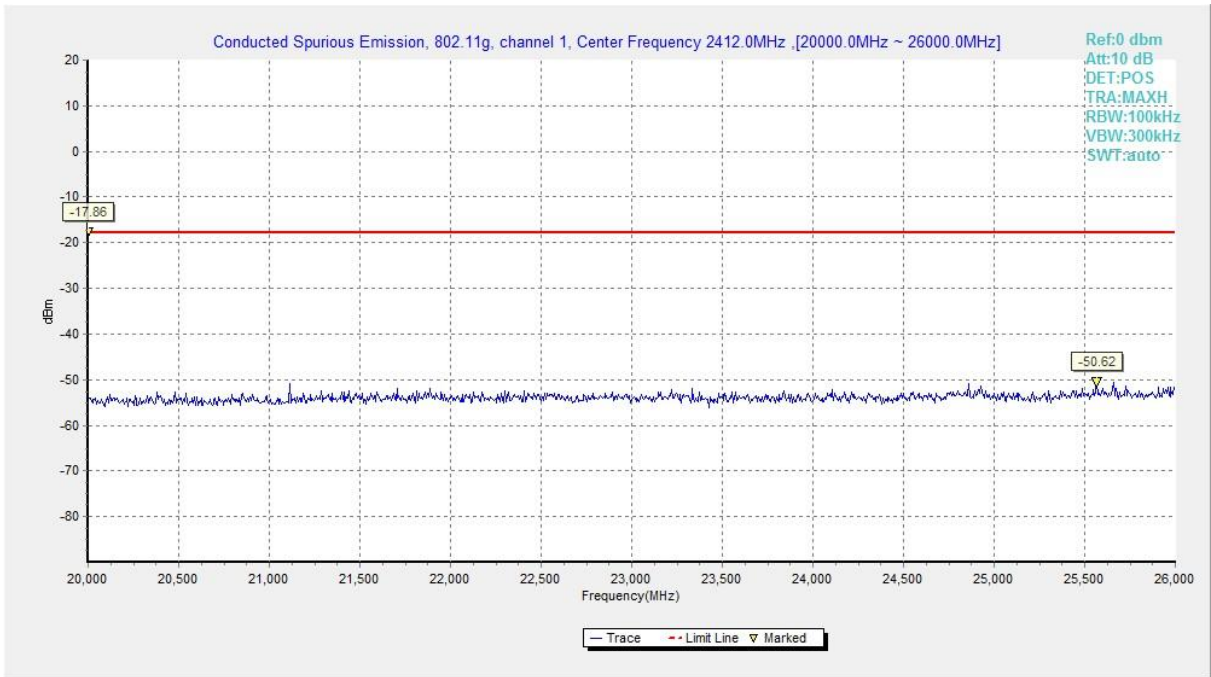


**Fig.A.6.1.30 Conducted Spurious Emission (802.11g, Ch1, 10 GHz-15 GHz)**

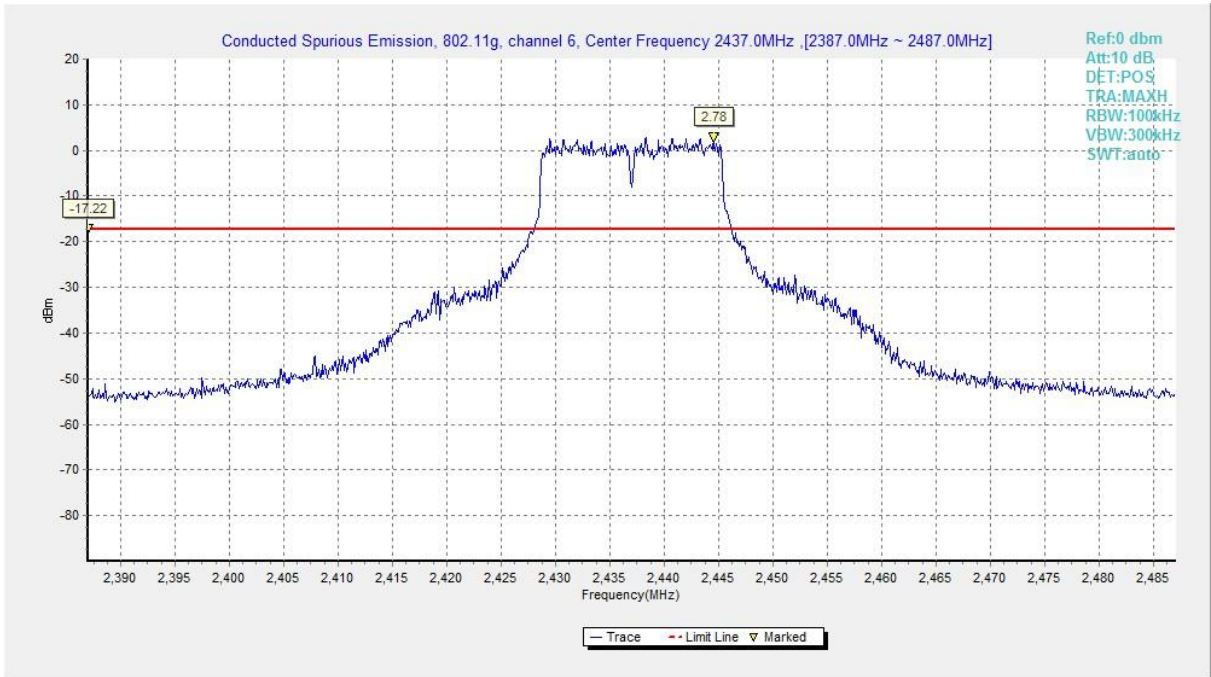




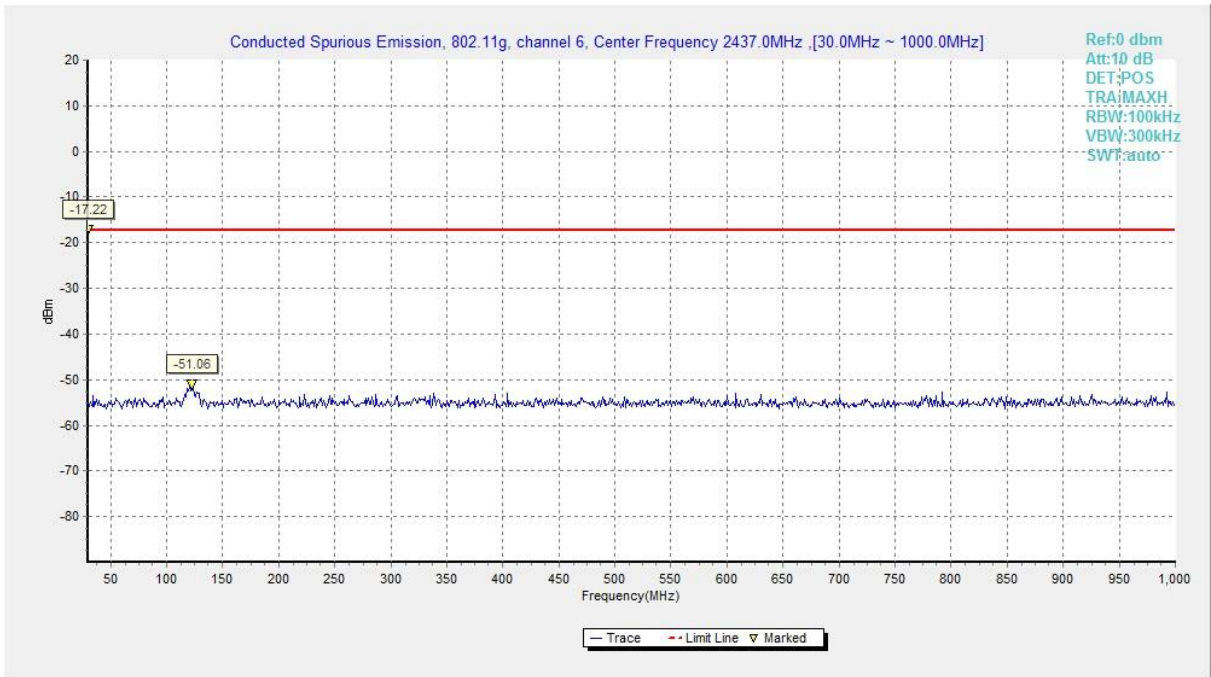
**Fig.A.6.1.31 Conducted Spurious Emission (802.11g, Ch1, 15 GHz-20 GHz)**



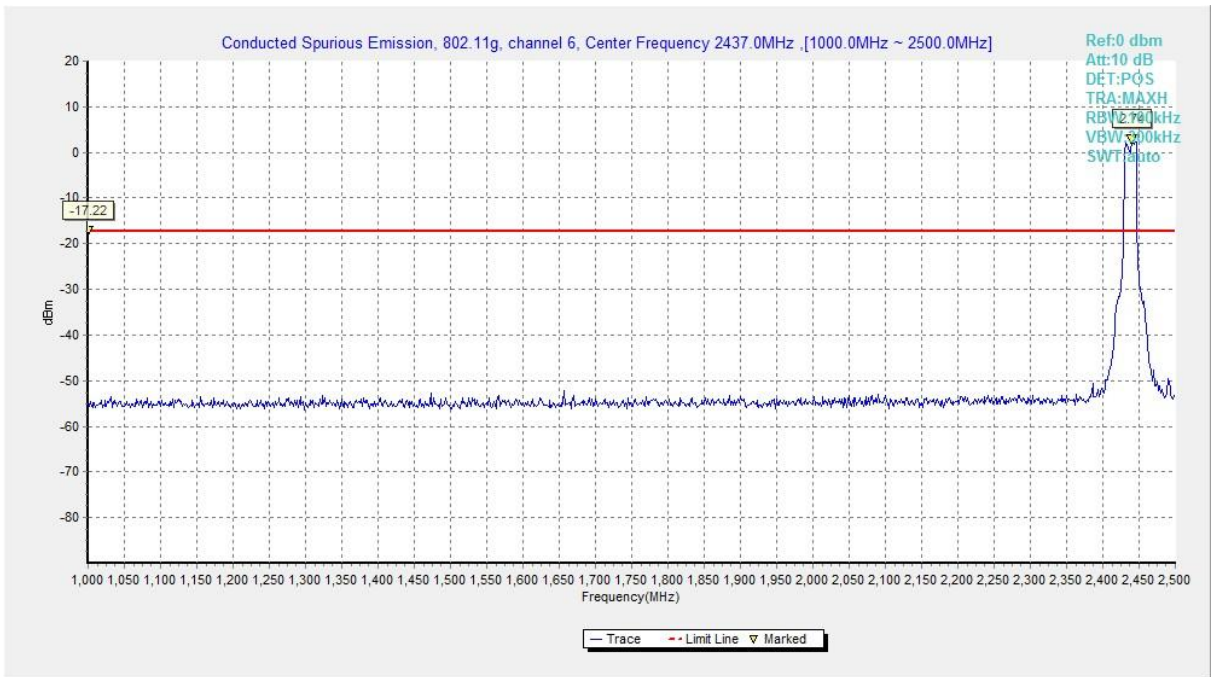
**Fig.A.6.1.32 Conducted Spurious Emission (802.11g, Ch1, 20 GHz-26 GHz)**



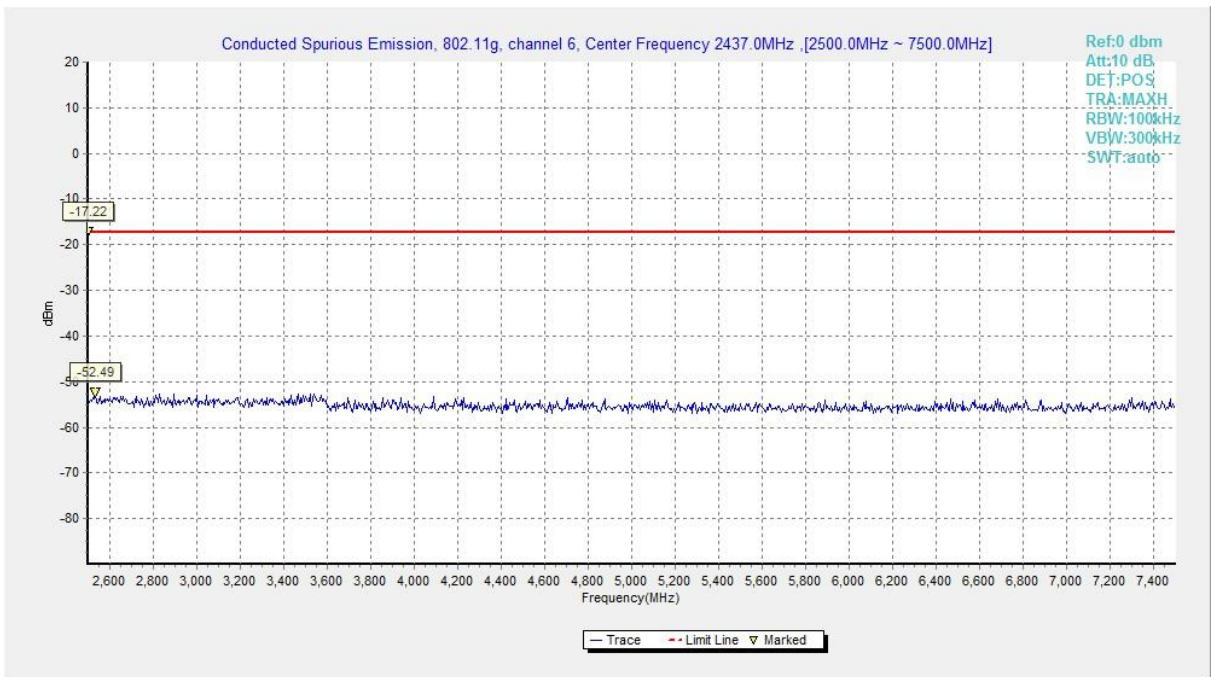
**Fig.A.6.1.33 Conducted Spurious Emission (802.11g, Ch6, Center Frequency)**



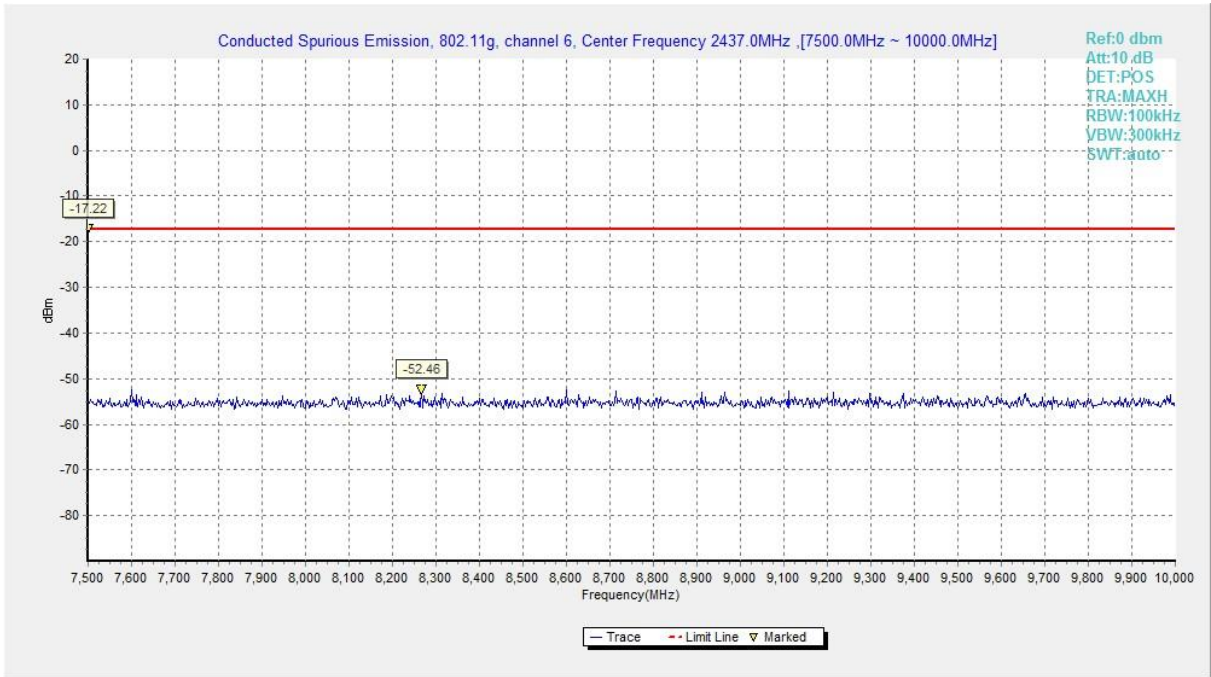
**Fig.A.6.1.34 Conducted Spurious Emission (802.11g, Ch6, 30 MHz-1 GHz)**



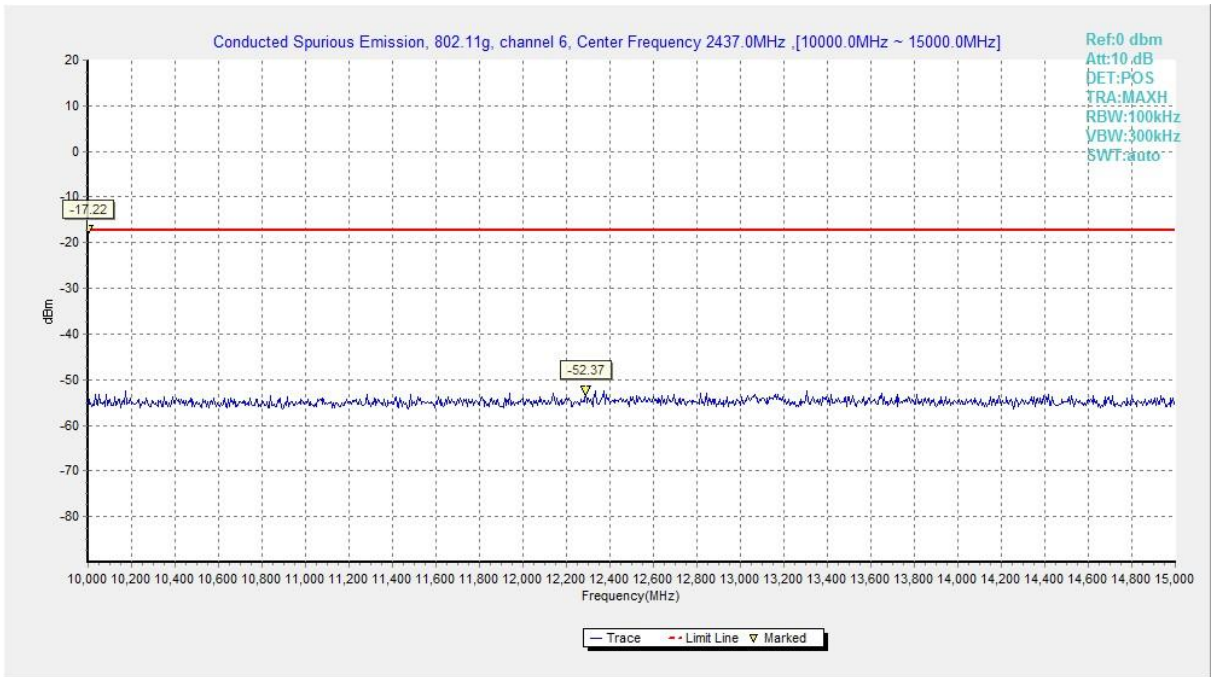
**Fig.A.6.1.35 Conducted Spurious Emission (802.11g, Ch6, 1 GHz-2.5 GHz)**



**Fig.A.6.1.36 Conducted Spurious Emission (802.11g, Ch6, 2.5 GHz-7.5 GHz)**

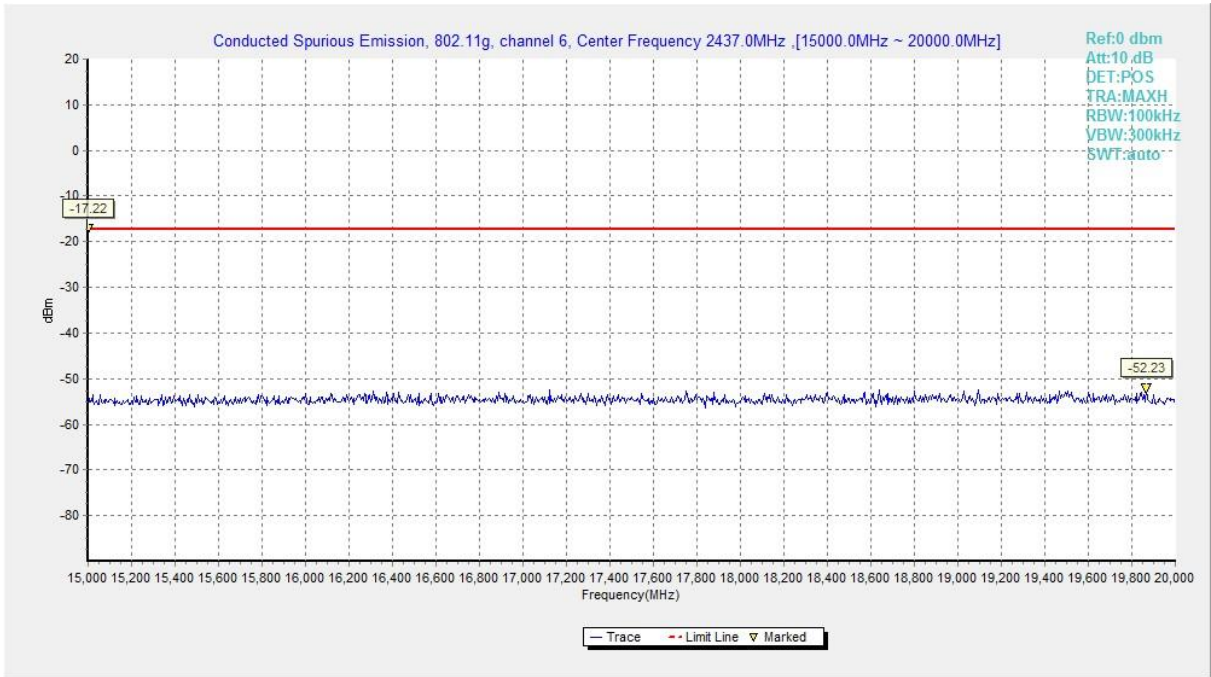


**Fig.A.6.1.37 Conducted Spurious Emission (802.11g, Ch6, 7.5 GHz-10 GHz)**

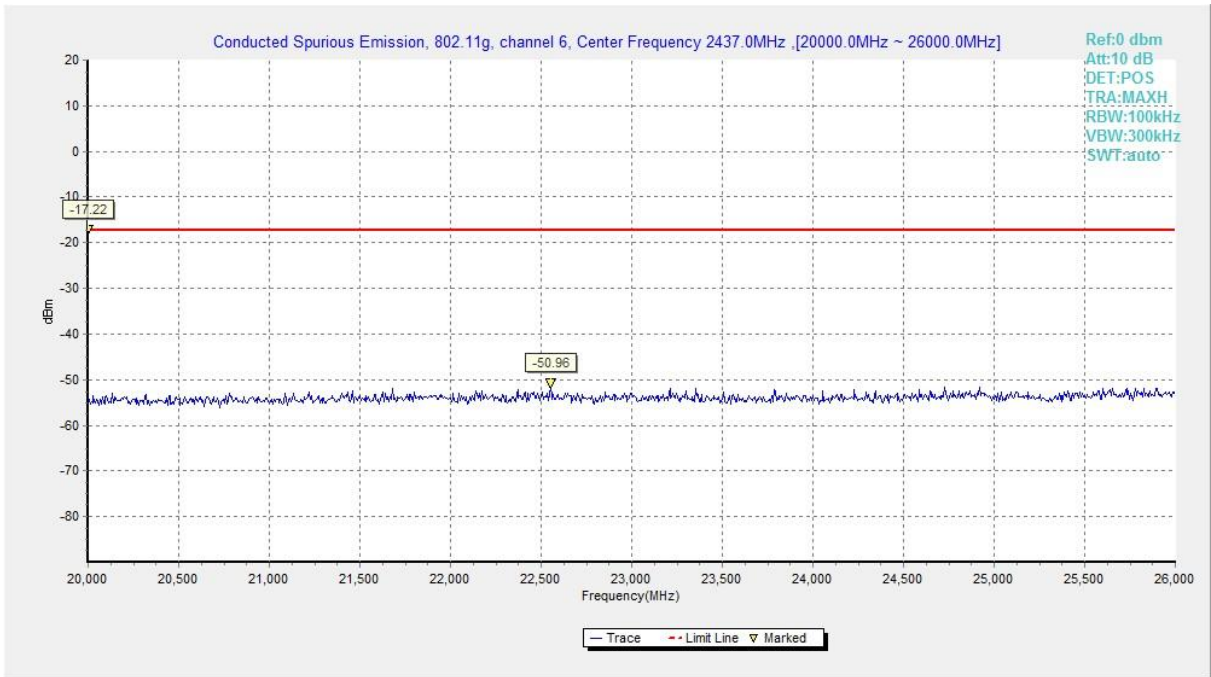


**Fig.A.6.1.38 Conducted Spurious Emission (802.11g, Ch6, 10 GHz-15 GHz)**



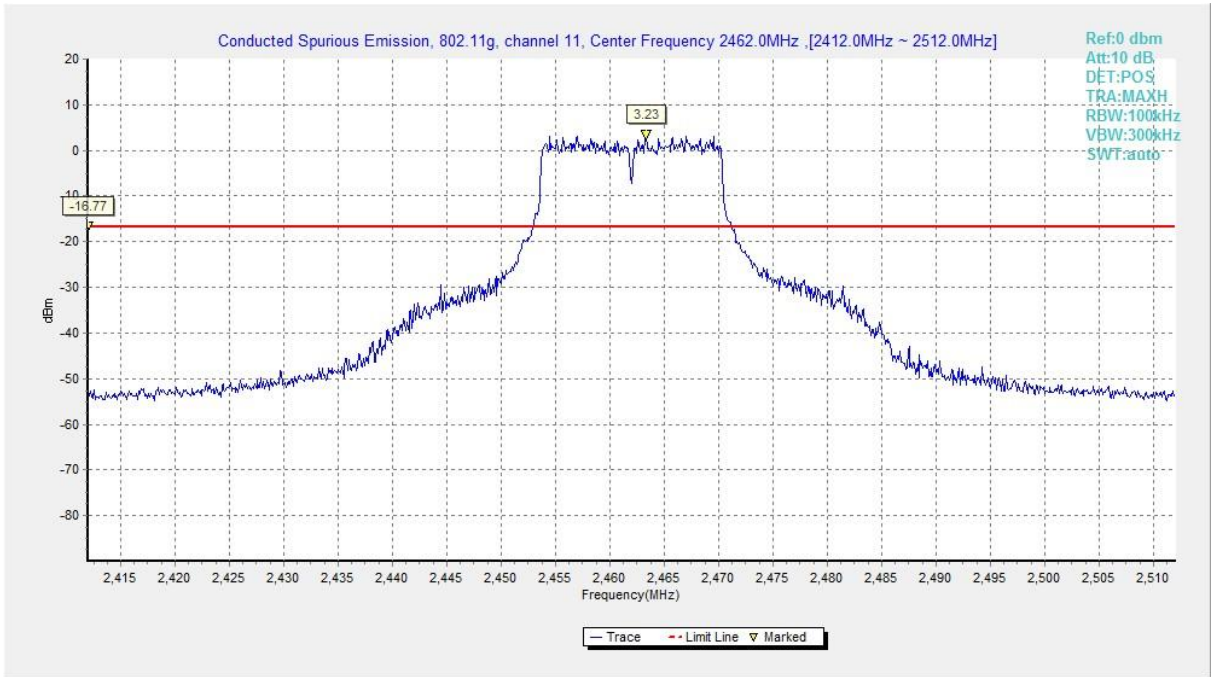


**Fig.A.6.1.39 Conducted Spurious Emission (802.11g, Ch6, 15 GHz-20 GHz)**

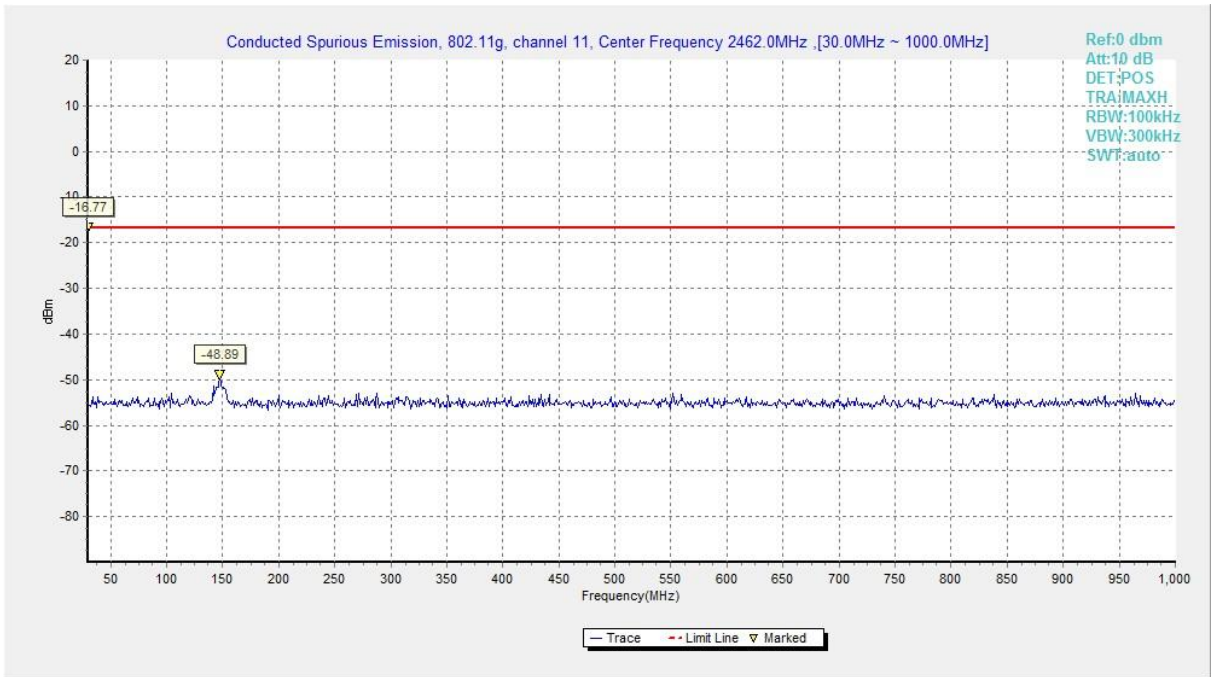


**Fig.A.6.1.40 Conducted Spurious Emission (802.11g, Ch6, 20 GHz-26 GHz)**

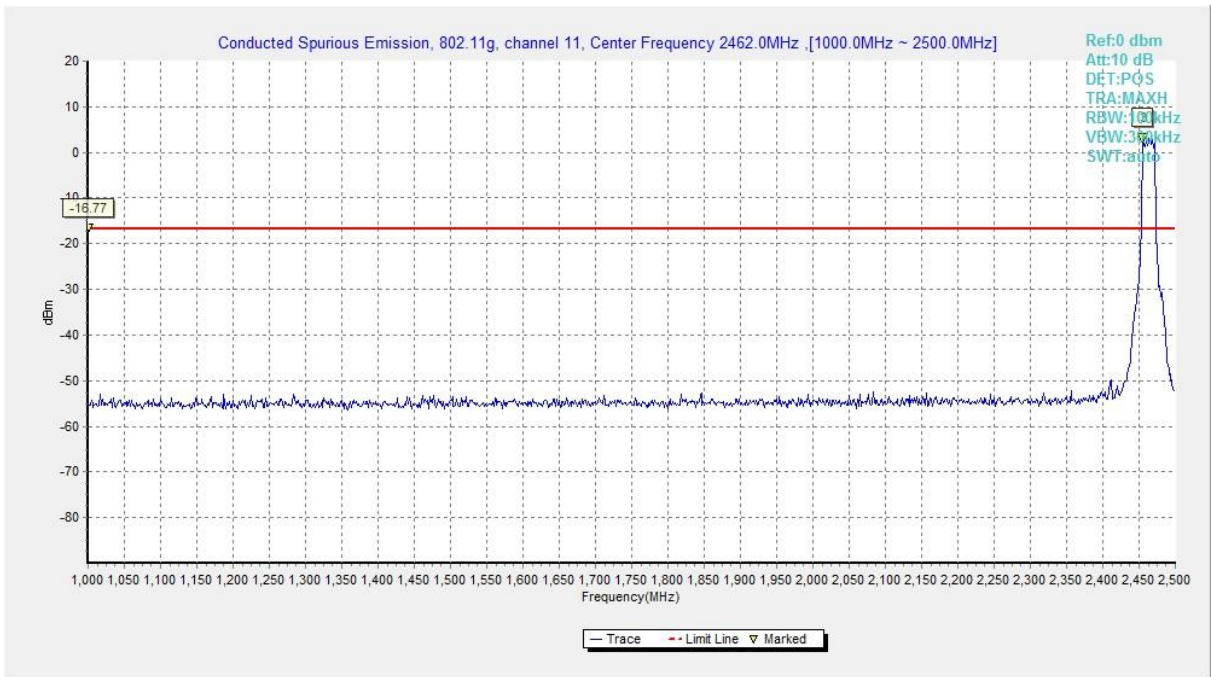




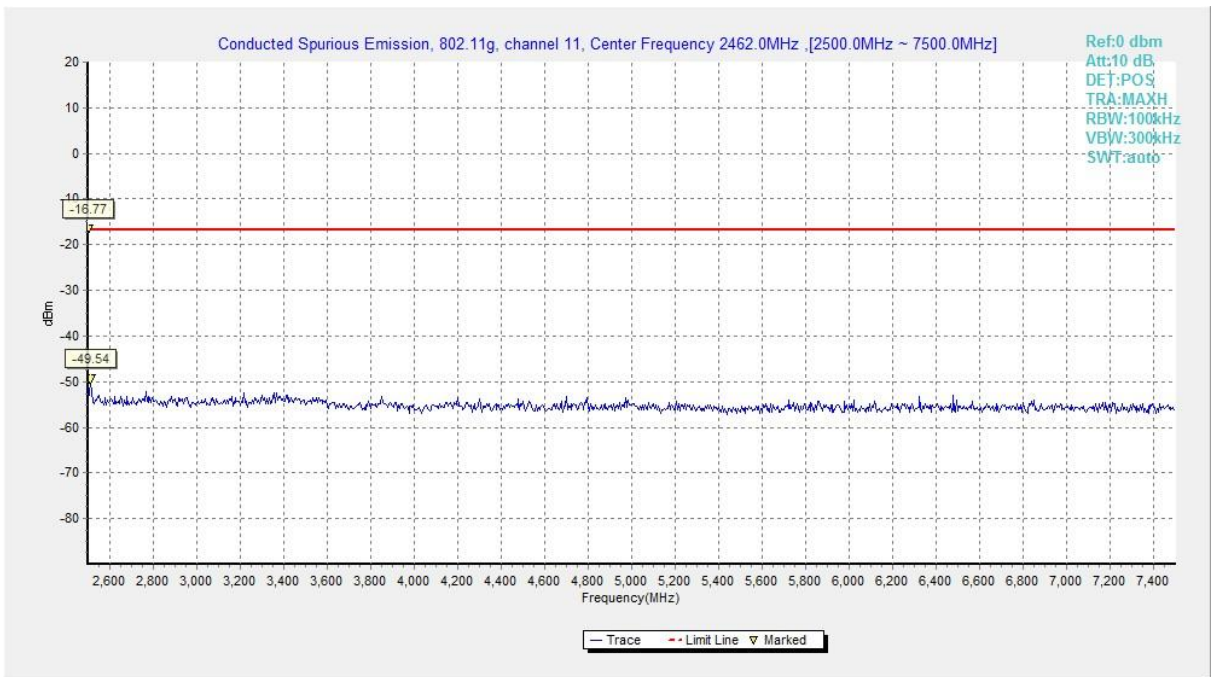
**Fig.A.6.1.41 Conducted Spurious Emission (802.11g, Ch11, Center Frequency)**



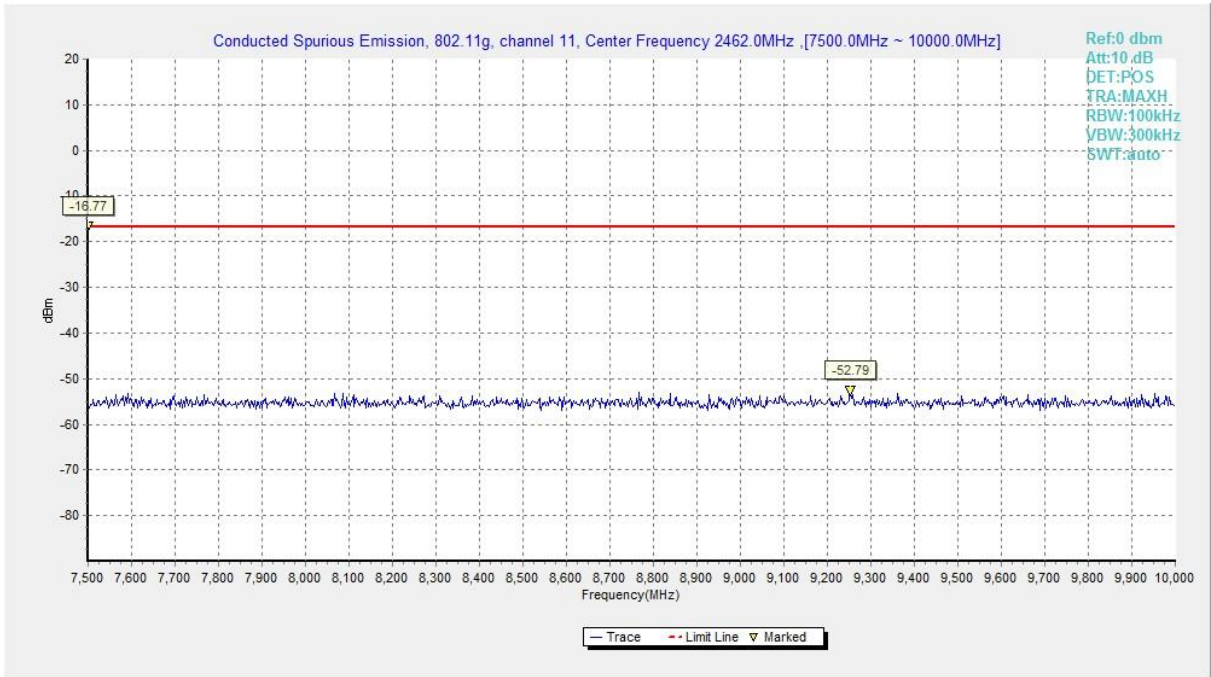
**Fig.A.6.1.42 Conducted Spurious Emission (802.11g, Ch11, 30 MHz-1 GHz)**



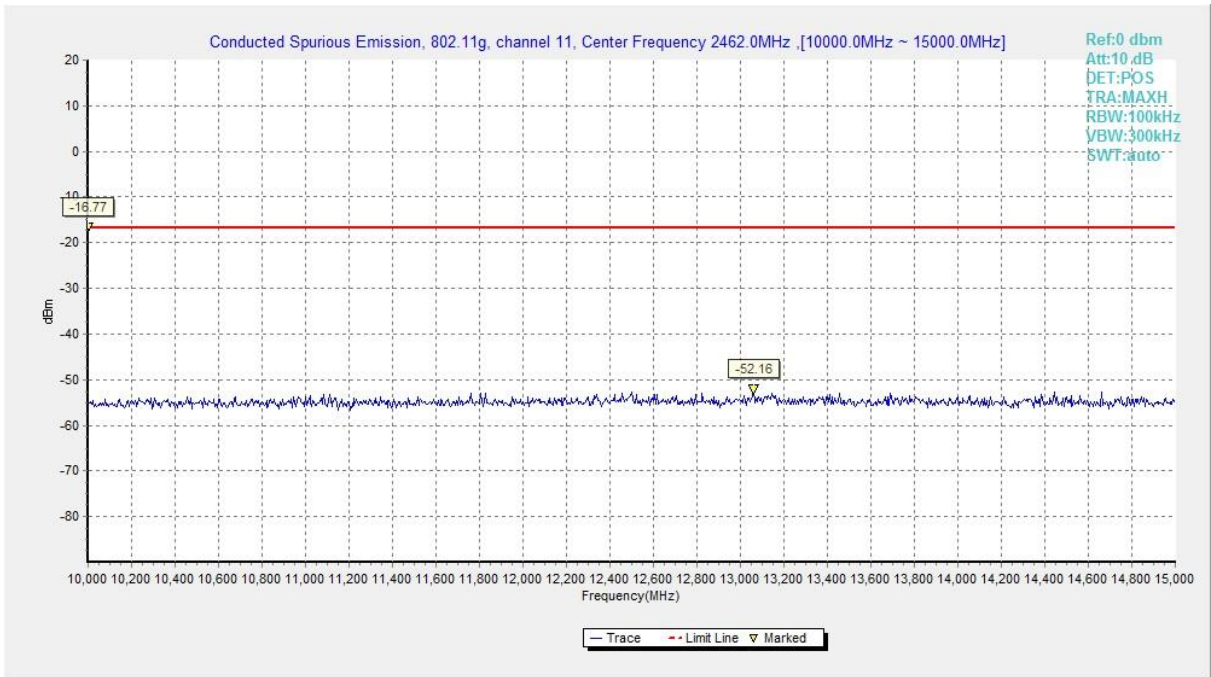
**Fig.A.6.1.43 Conducted Spurious Emission (802.11g, Ch11, 1 GHz-2.5 GHz)**



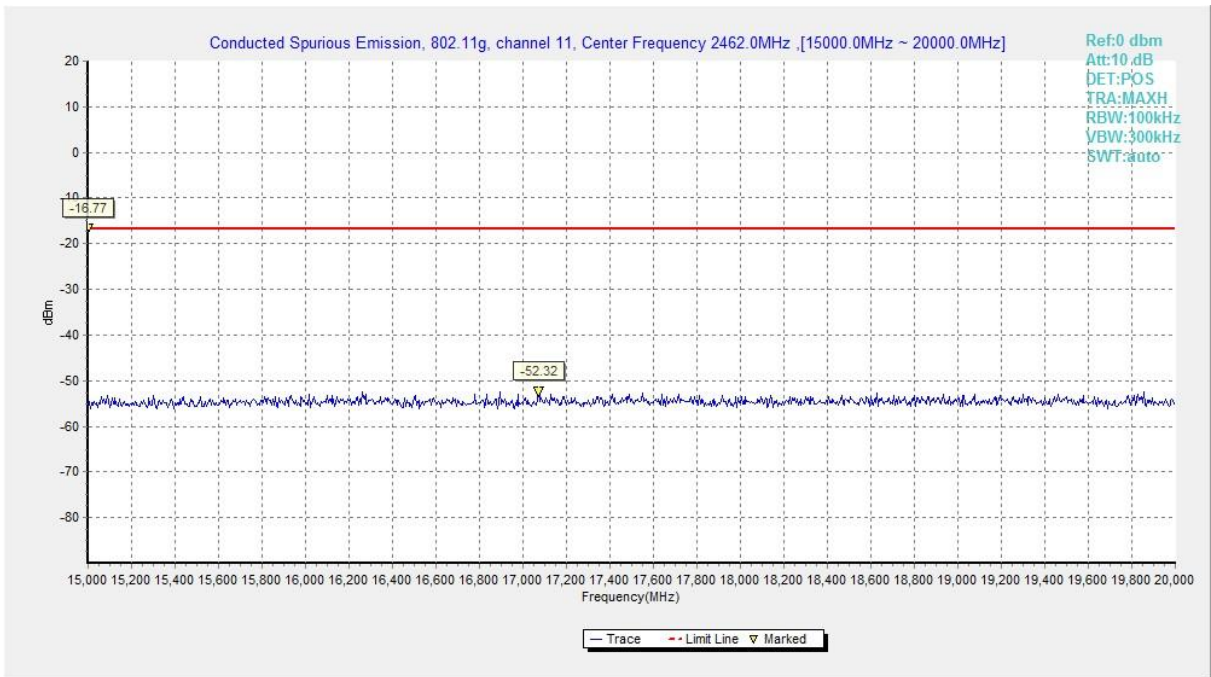
**Fig.A.6.1.44 Conducted Spurious Emission (802.11g, Ch11, 2.5 GHz-7.5 GHz)**



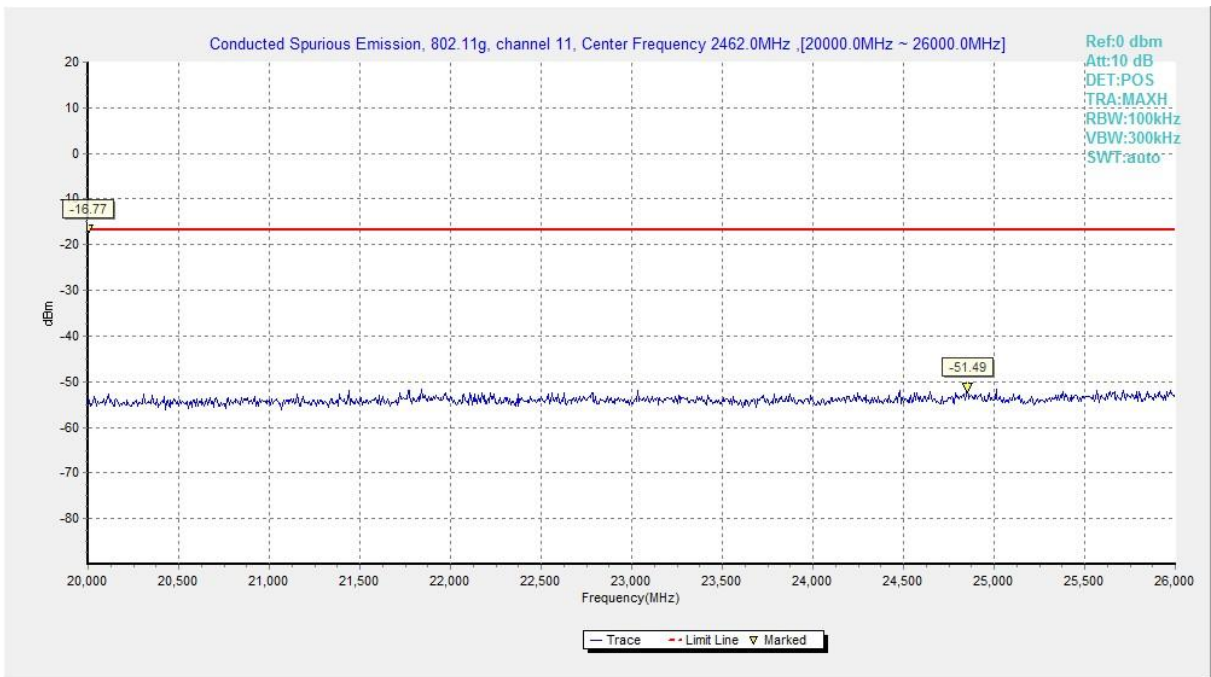
**Fig.A.6.1.45 Conducted Spurious Emission (802.11g, Ch11, 7.5 GHz-10 GHz)**



**Fig.A.6.1.46 Conducted Spurious Emission (802.11g, Ch11, 10 GHz-15 GHz)**



**Fig.A.6.1.47 Conducted Spurious Emission (802.11g, Ch11, 15 GHz-20 GHz)**



**Fig.A.6.1.48 Conducted Spurious Emission (802.11g, Ch11, 20 GHz-26 GHz)**



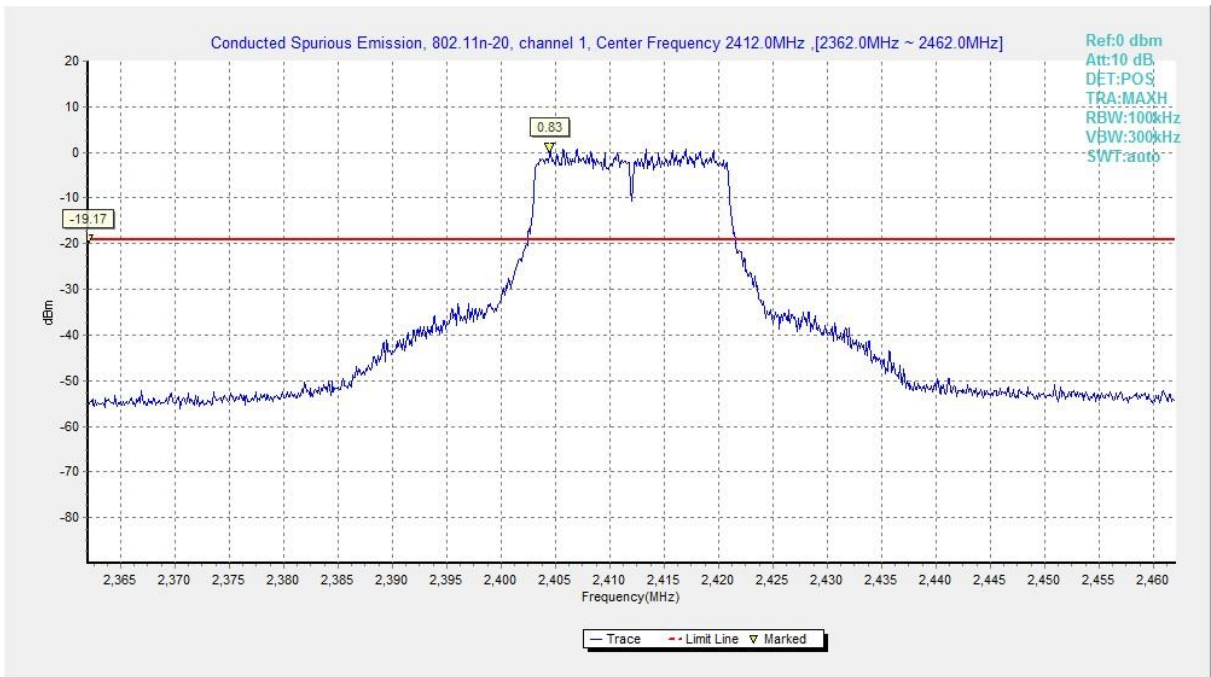


Fig.A.6.1.49 Conducted Spurious Emission (802.11n-HT20, Ch1, Center Frequency)

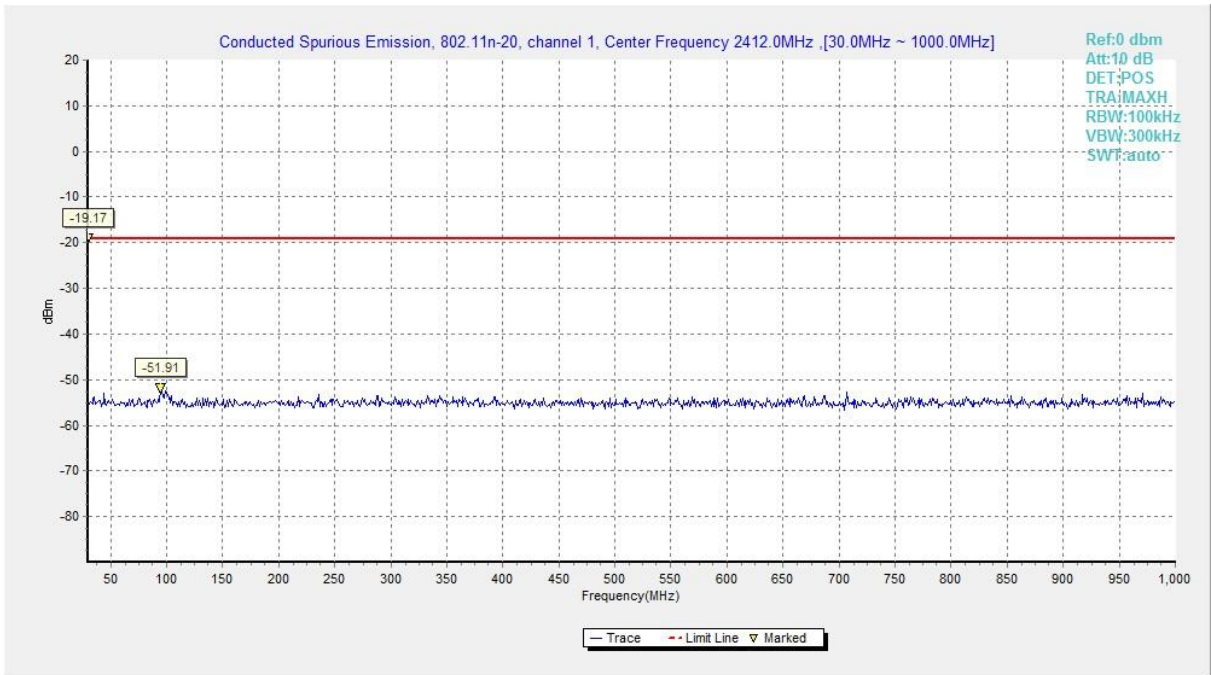
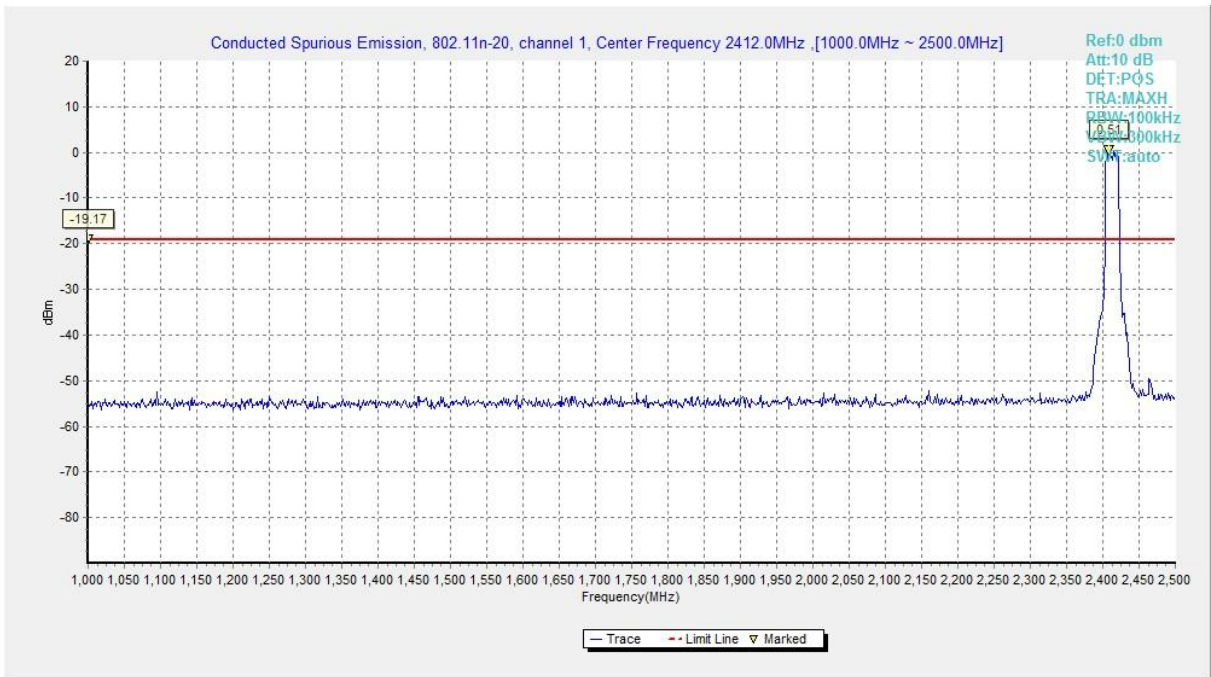
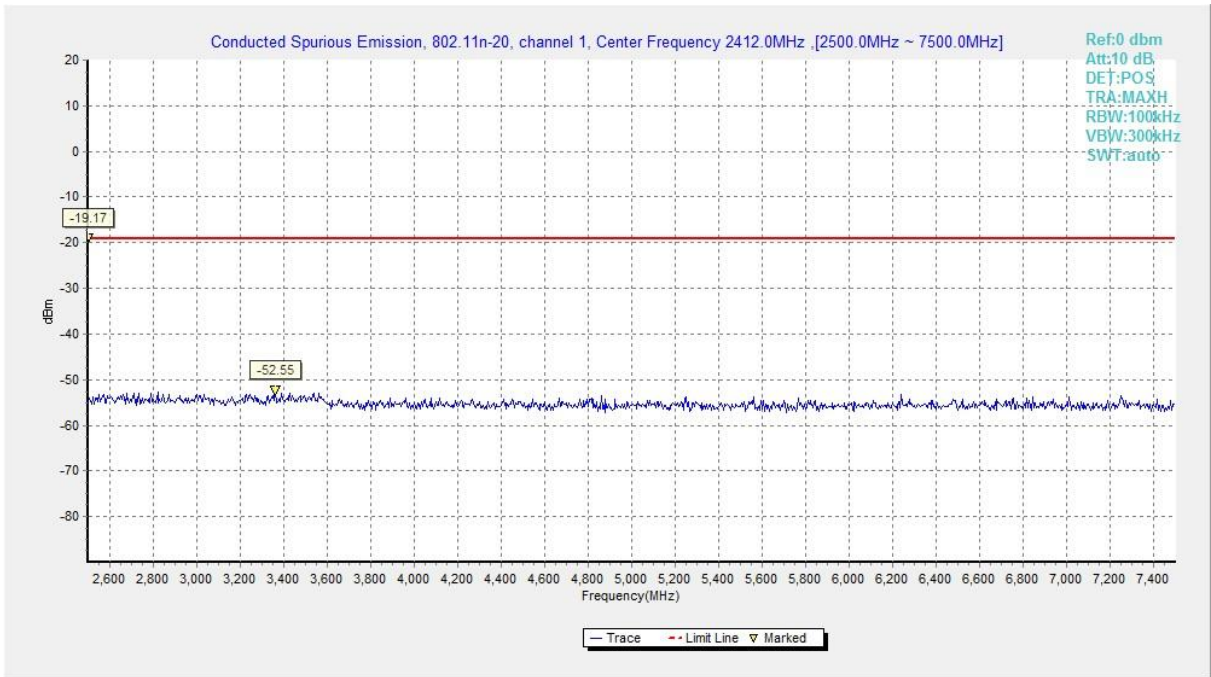


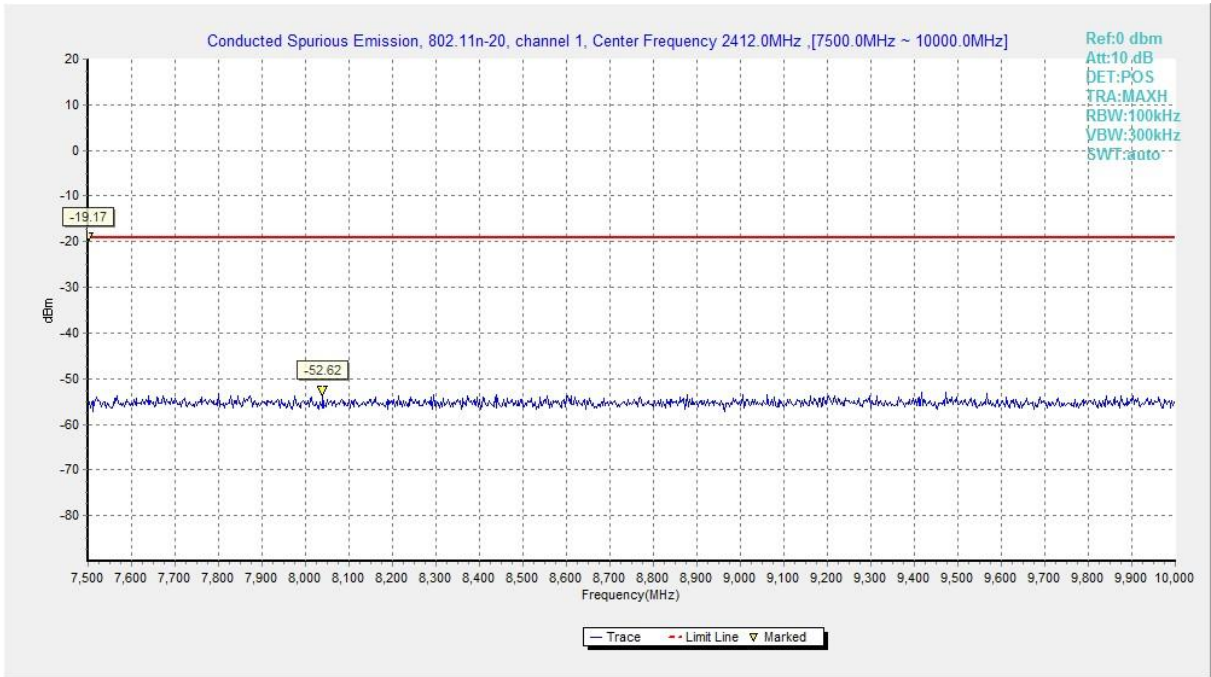
Fig.A.6.1.50 Conducted Spurious Emission (802.11n-HT20, Ch1, 30 MHz-1 GHz)



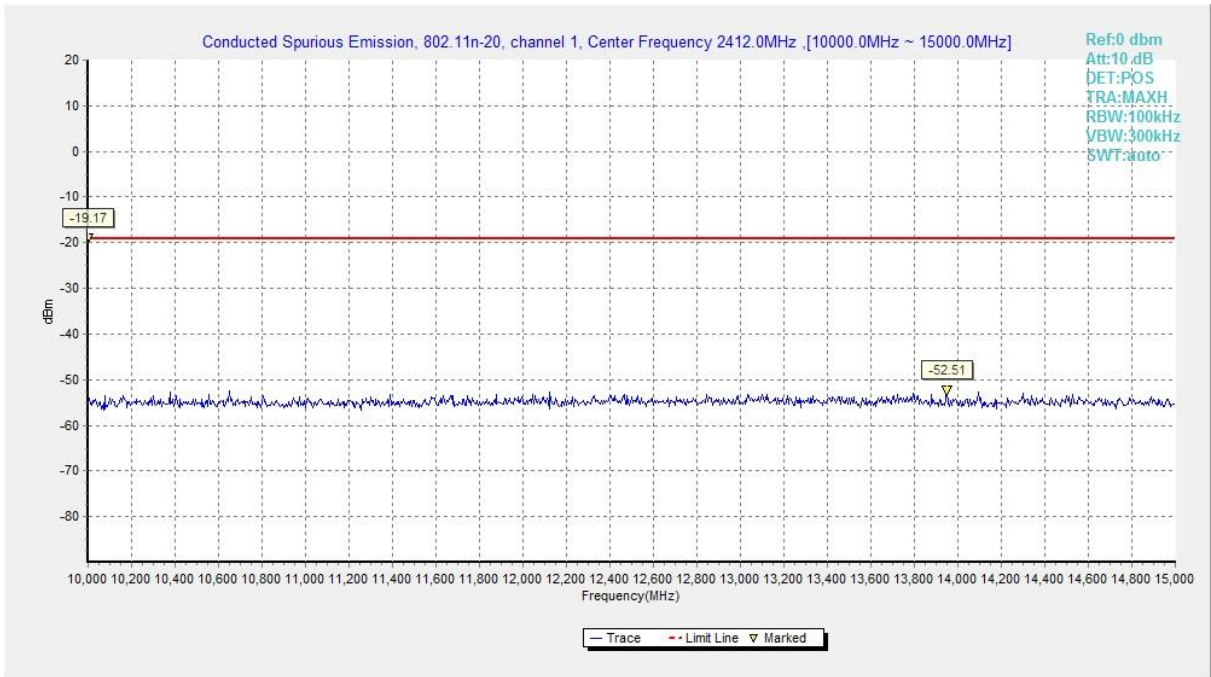
**Fig.A.6.1.51 Conducted Spurious Emission (802.11n-HT20, Ch1, 1 GHz-2.5 GHz)**



**Fig.A.6.1.52 Conducted Spurious Emission (802.11n-HT20, Ch1, 2.5 GHz-7.5 GHz)**



**Fig.A.6.1.53 Conducted Spurious Emission (802.11n-HT20, Ch1, 7.5 GHz-10 GHz)**



**Fig.A.6.1.54 Conducted Spurious Emission (802.11n-HT20, Ch1, 10 GHz-15 GHz)**