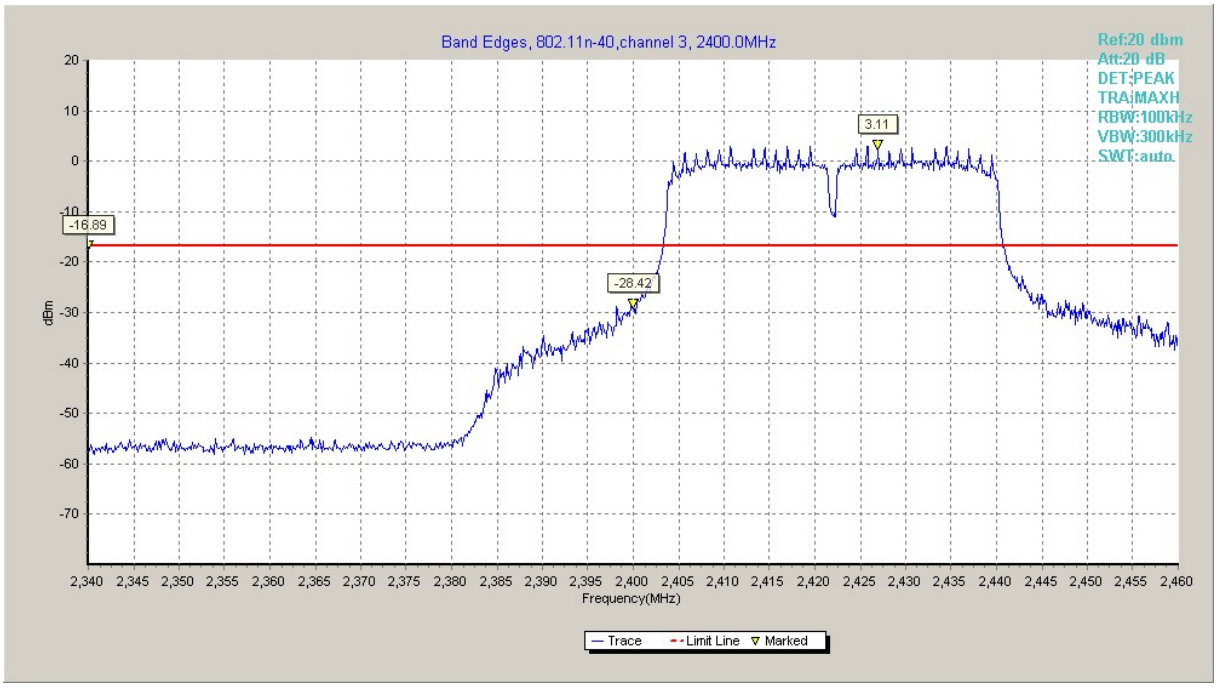


**Fig.A.5.7 Band Edges (802.11n-HT40, Ch 3)**

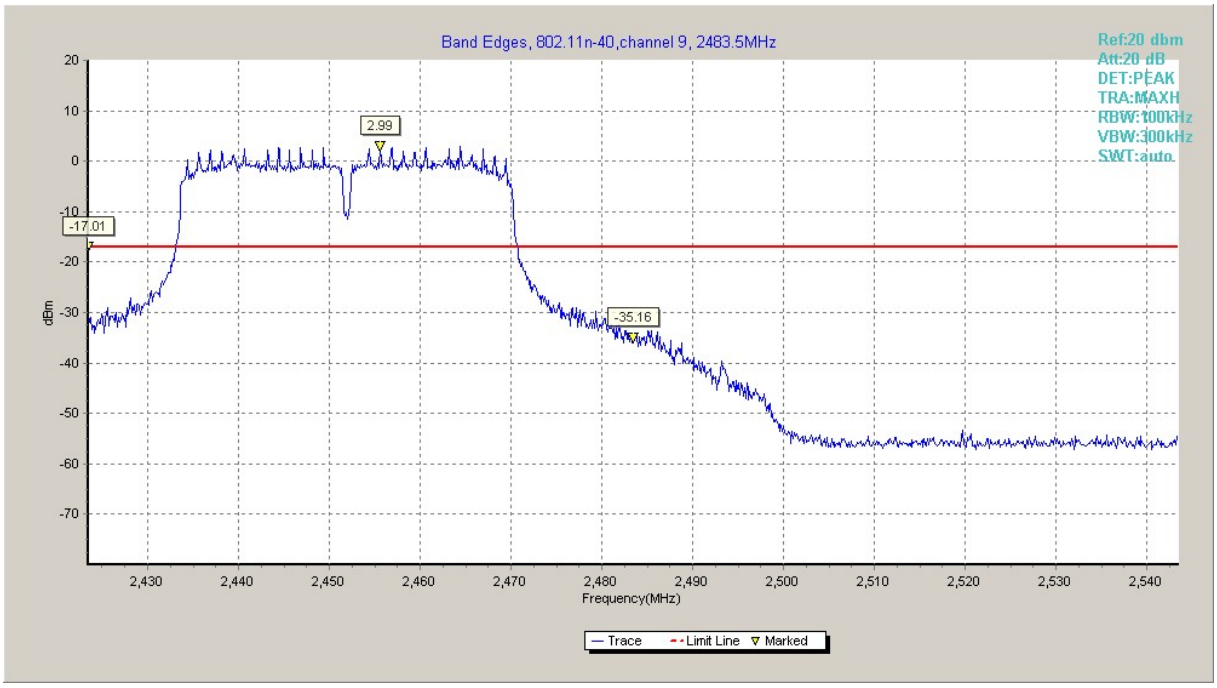


**Fig.A.5.8 Band Edges (802.11n-HT40, Ch 9)**

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## A.6. Transmitter Spurious Emission

### A.6.1 Transmitter Spurious Emission – Conducted

**Method of Measurement: See ANSI C63.10-2013-clause 11.11**

Establish a reference level by using the following procedure:

a) Set instrument center frequency to DTS channel center frequency
b) Set the span to ≥ 1.5 times the DTS bandwidth
c) Set the RBW= 100 kHz
d) Set the VBW= 300 kHz
e) Detector = Peak
f) Sweep time = auto couple
g) Trace mode = max hold
h) Allow trace to fully stabilize
i) Use the peak marker function to determine the maximum PSD level

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Establish an emission level by using the following procedure:

a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW = 300 kHz.
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

**Measurement Limit:**

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

**EUT ID: EUT1**

**Measurement Results:**

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**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** |

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**802.11g mode**

| MODE | Channel | Frequency Range | Test Results | Conclusion |
|---|---|---|---|---|
| 802.11g | 1 | 2.412 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** |
| | 6 | 2.437 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** |
| | 11 | 2.462 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** |

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**802.11n-HT20 mode**

| MODE | Channel | Frequency Range | Test Results | Conclusion |
|---|---|---|---|---|
| 802.11n (HT20) | 1 | 2.412 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** |
| | 6 | 2.437 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** |
| | 11 | 2.462 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** |

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**802.11n-HT40 mode**

| MODE | Channel | Frequency Range | Test Results | Conclusion |
|---|---|---|---|---|
| 802.11n (HT40) | 3 | 2.422 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** |
| | 6 | 2.437 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** |
| | 9 | 2.452 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** |

**Conclusion: Pass**

**Test graphs as below:**

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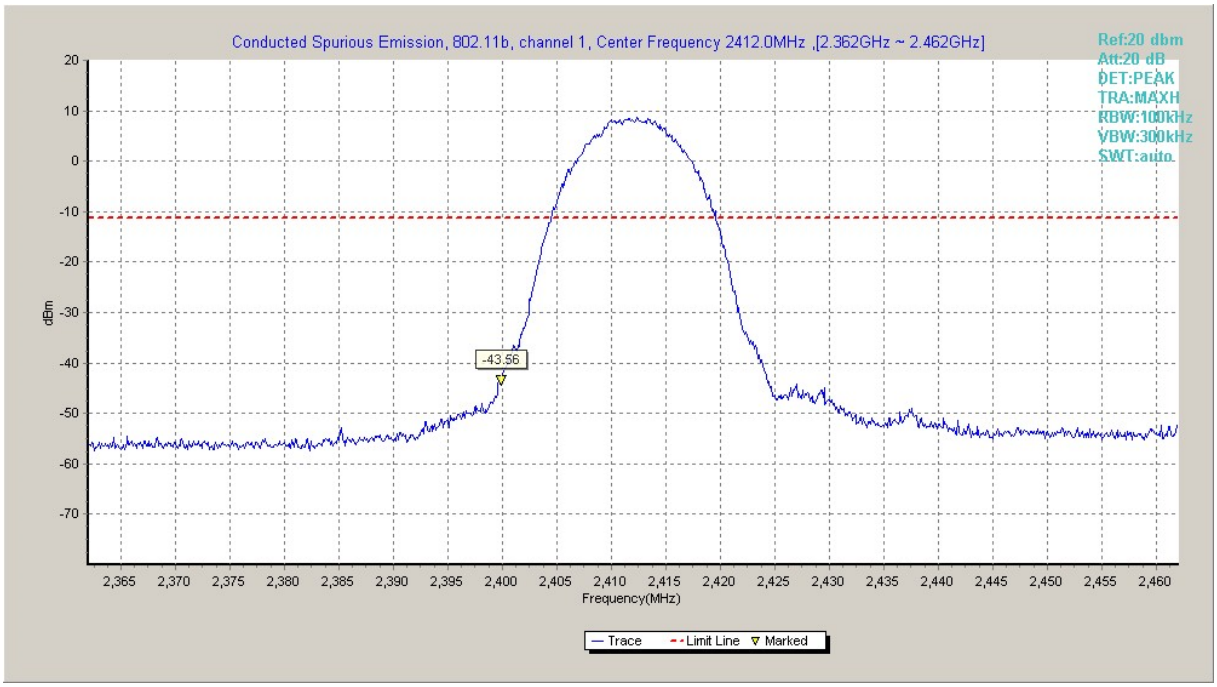


**Fig.A.6.1.1 Transmitter Spurious Emission - Conducted (802.11b, Ch1, Center Frequency)**

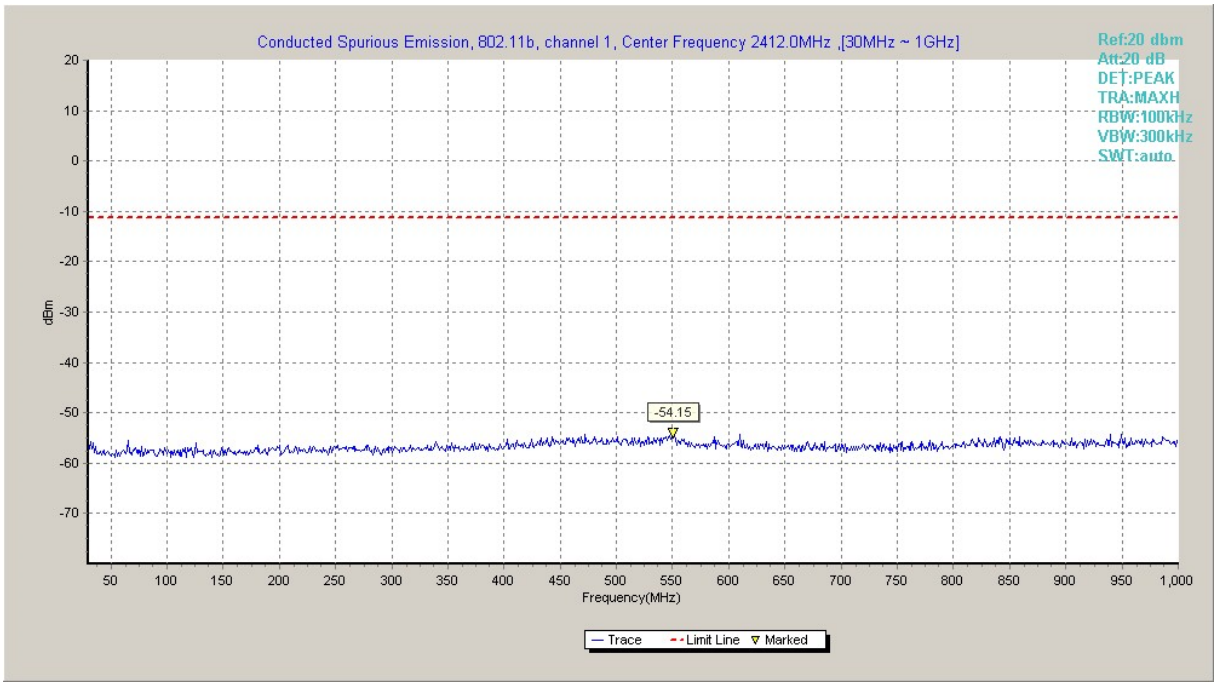


**Fig.A.6.1.2 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 30 MHz-1 GHz)**

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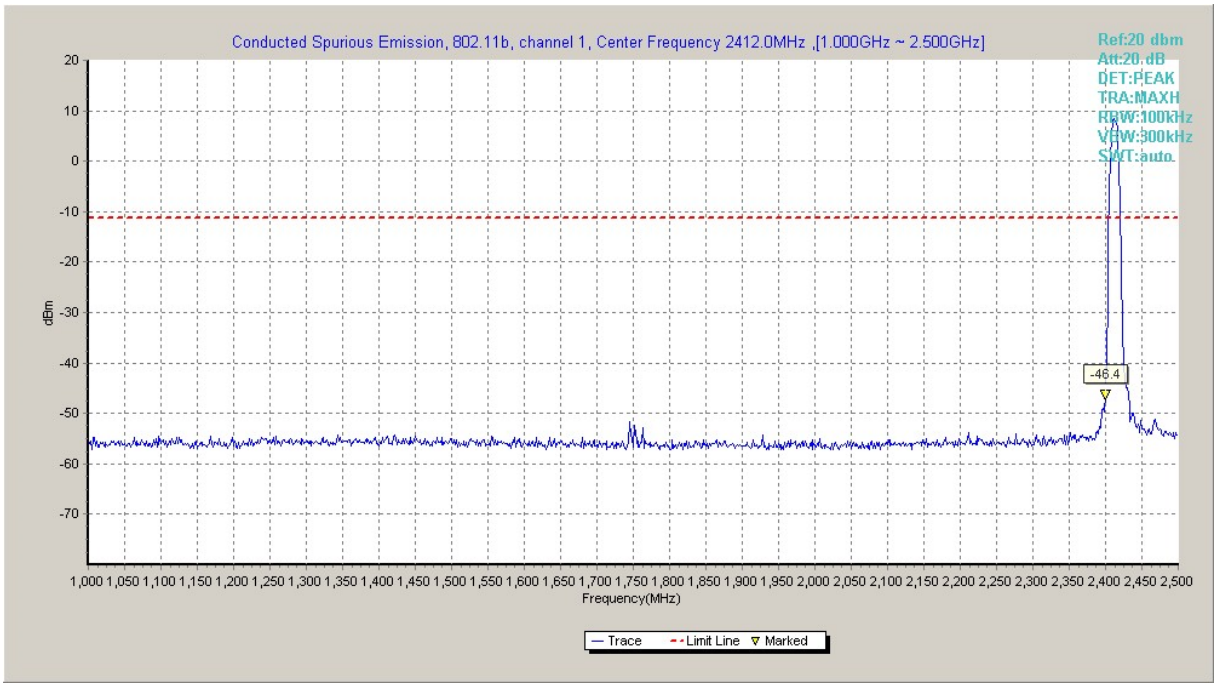


**Fig.A.6.1.3 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 1 GHz-2.5 GHz)**

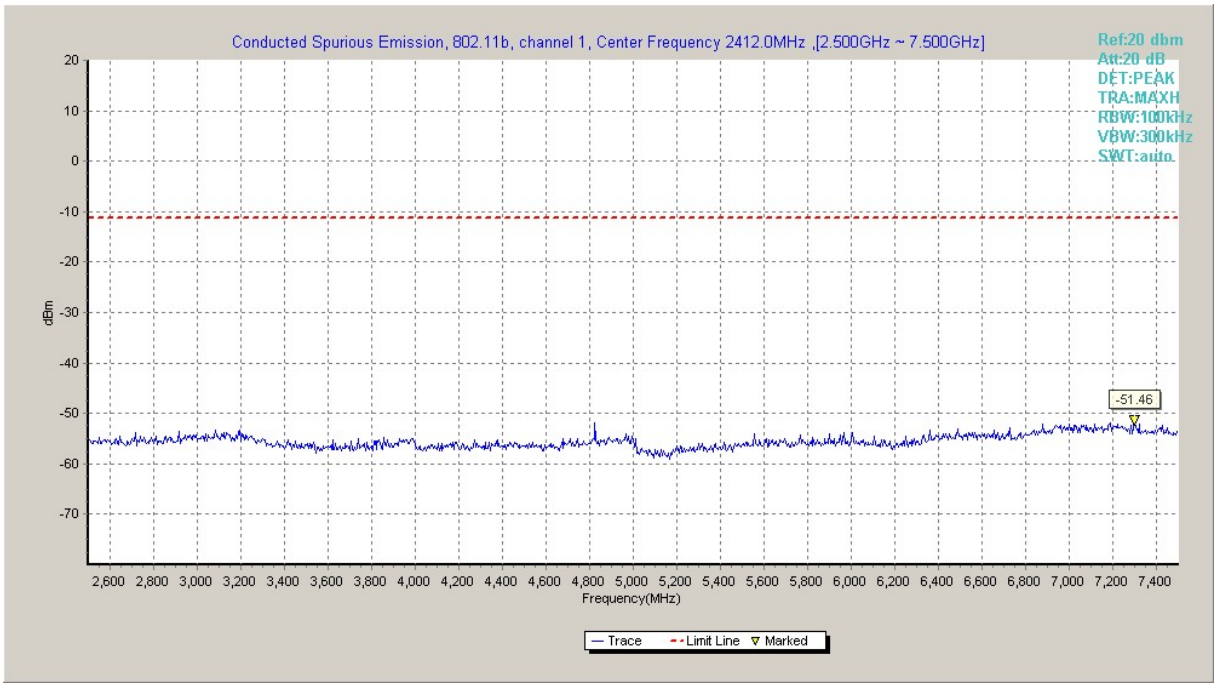


**Fig.A.6.1.4 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 2.5 GHz-7.5 GHz)**

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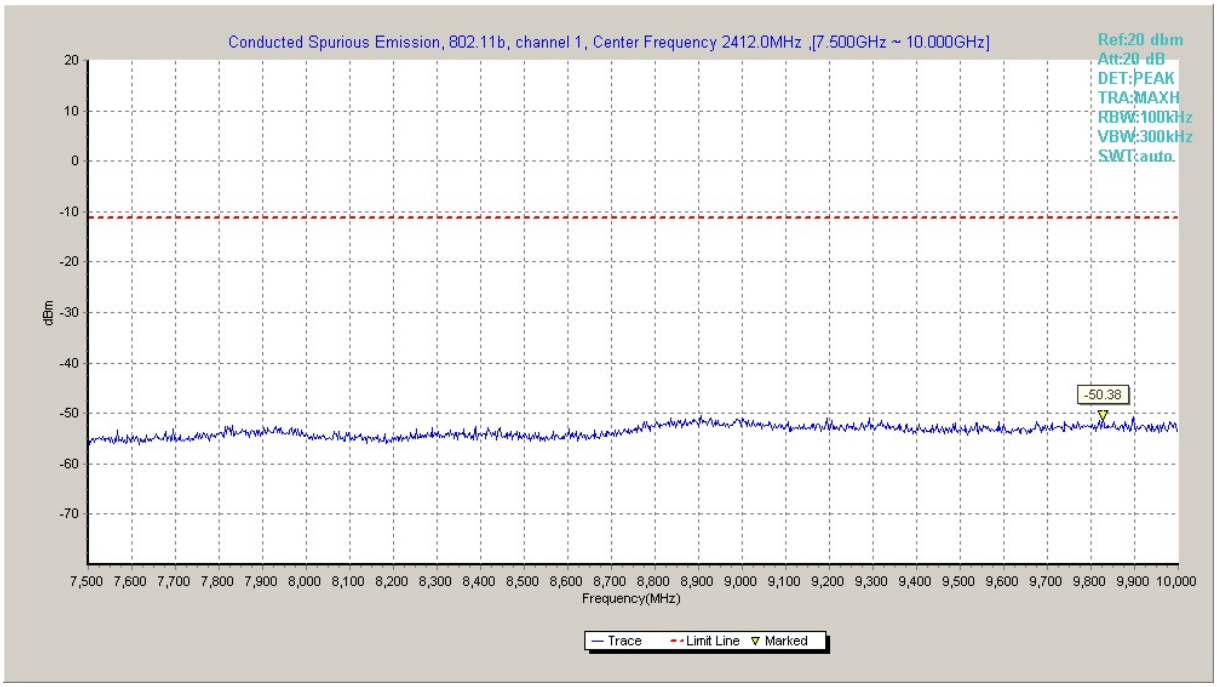


**Fig.A.6.1.5 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 7.5 GHz-10 GHz)**

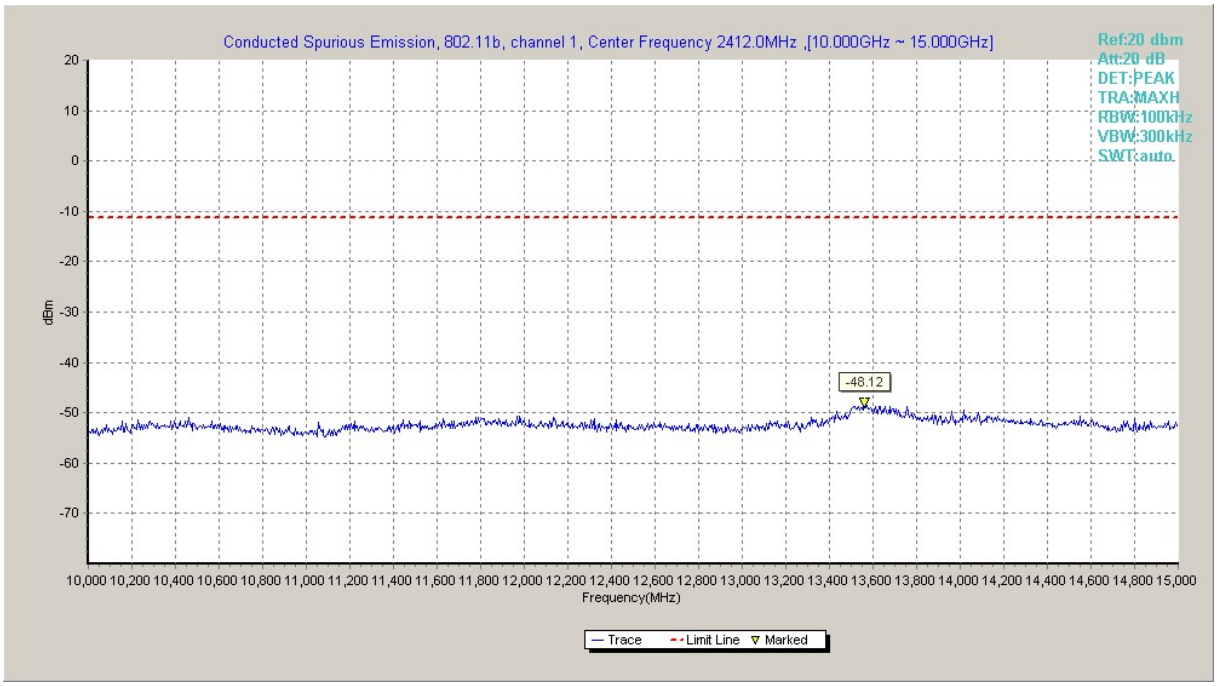


**Fig.A.6.1.6 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 10 GHz-15 GHz)**

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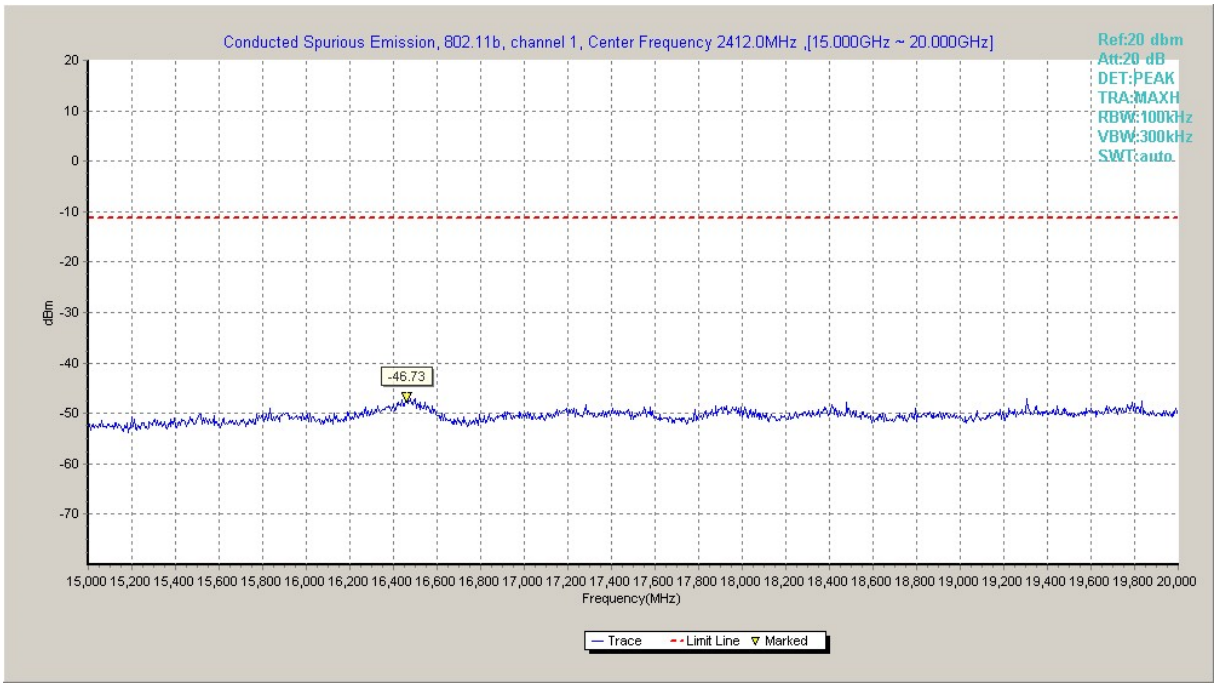


**Fig.A.6.1.7 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 15 GHz-20 GHz)**

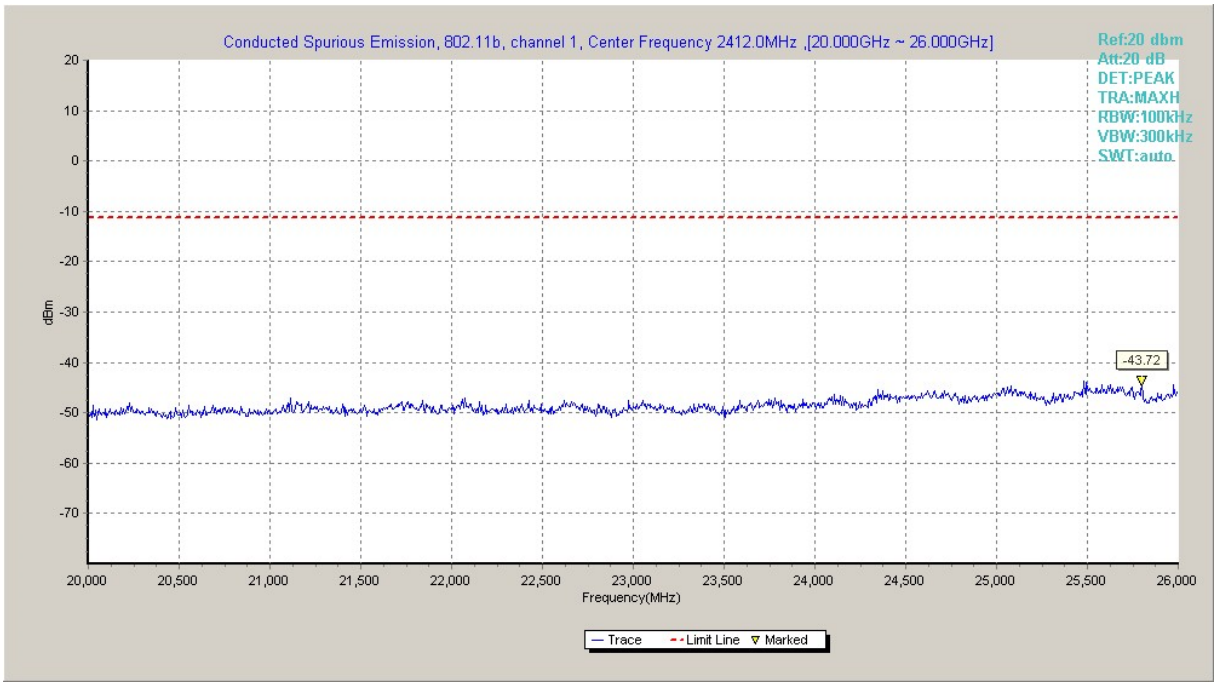


**Fig.A.6.1.8 Transmitter Spurious Emission - Conducted (802.11b, Ch1, 20 GHz-26 GHz)**

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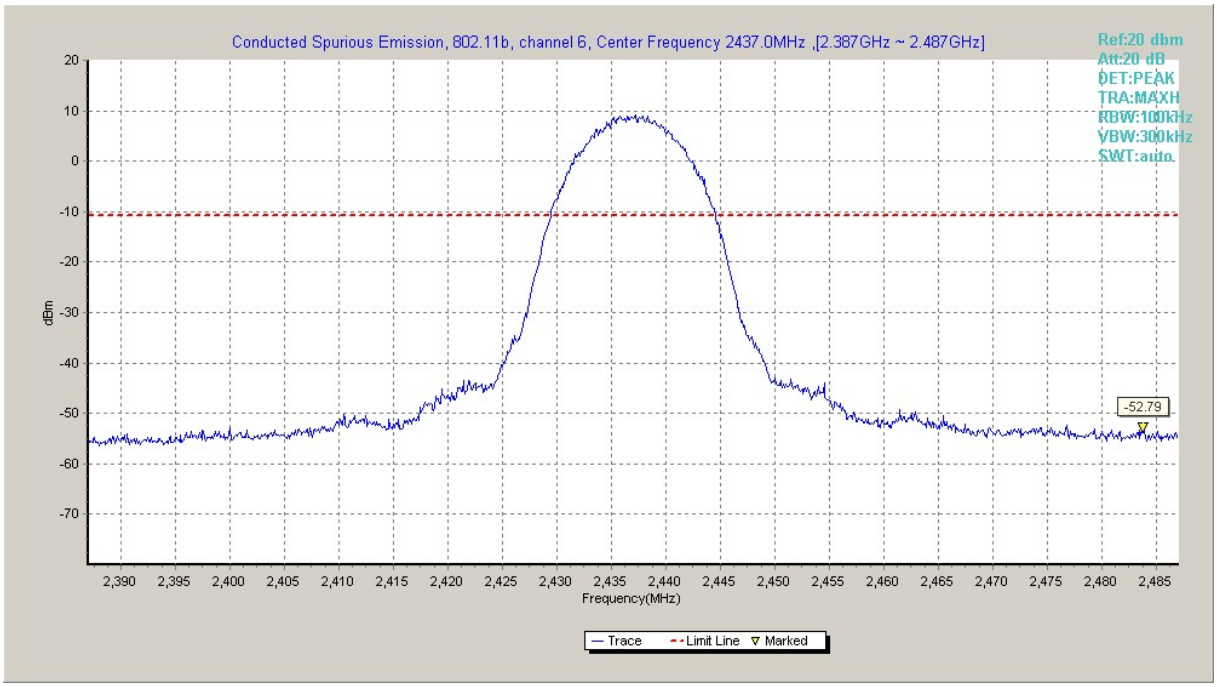


**Fig.A.6.1.9 Transmitter Spurious Emission - Conducted (802.11b, Ch6, Center Frequency)**

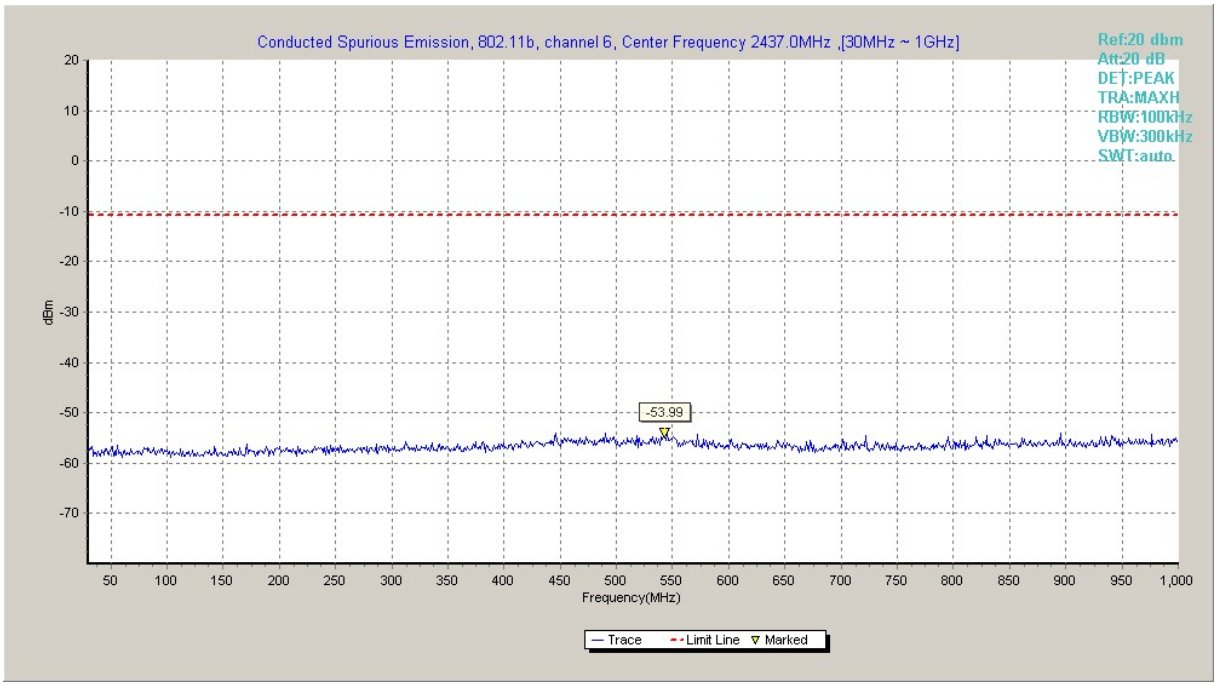


**Fig.A.6.1.10 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 30 MHz-1 GHz)**

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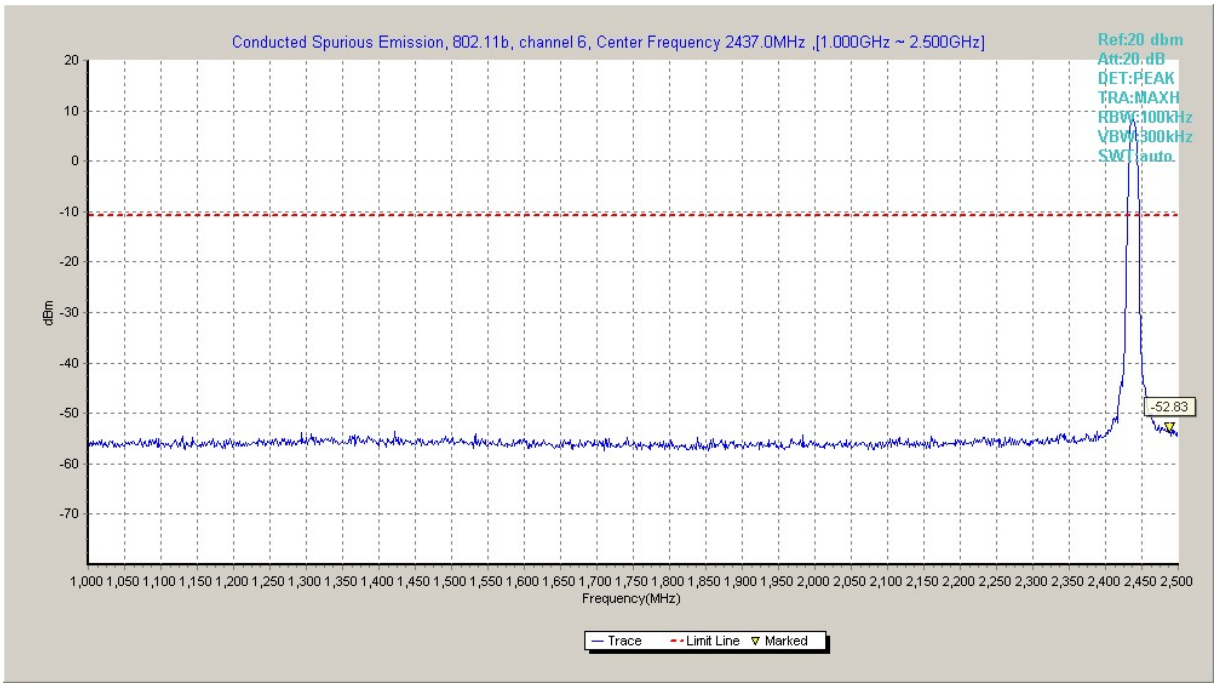


**Fig.A.6.1.11 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 1 GHz-2.5 GHz)**

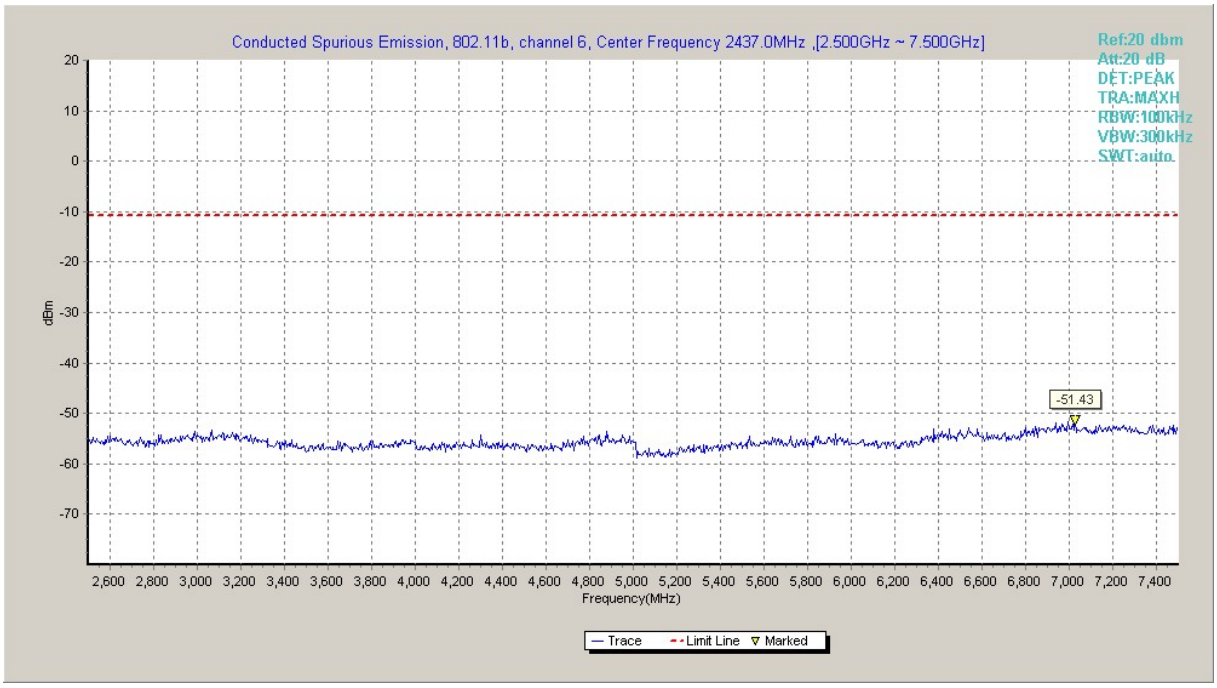


**Fig.A.6.1.12 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 2.5 GHz-7.5 GHz)**

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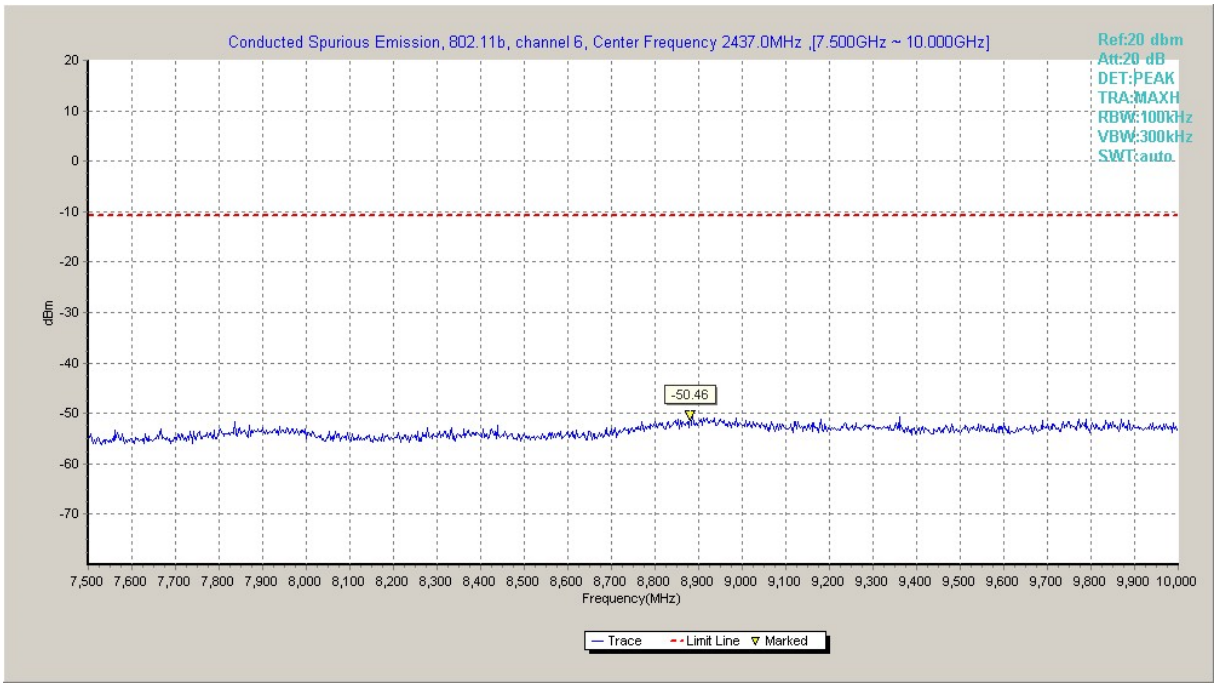


**Fig.A.6.1.13 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 7.5 GHz-10 GHz)**

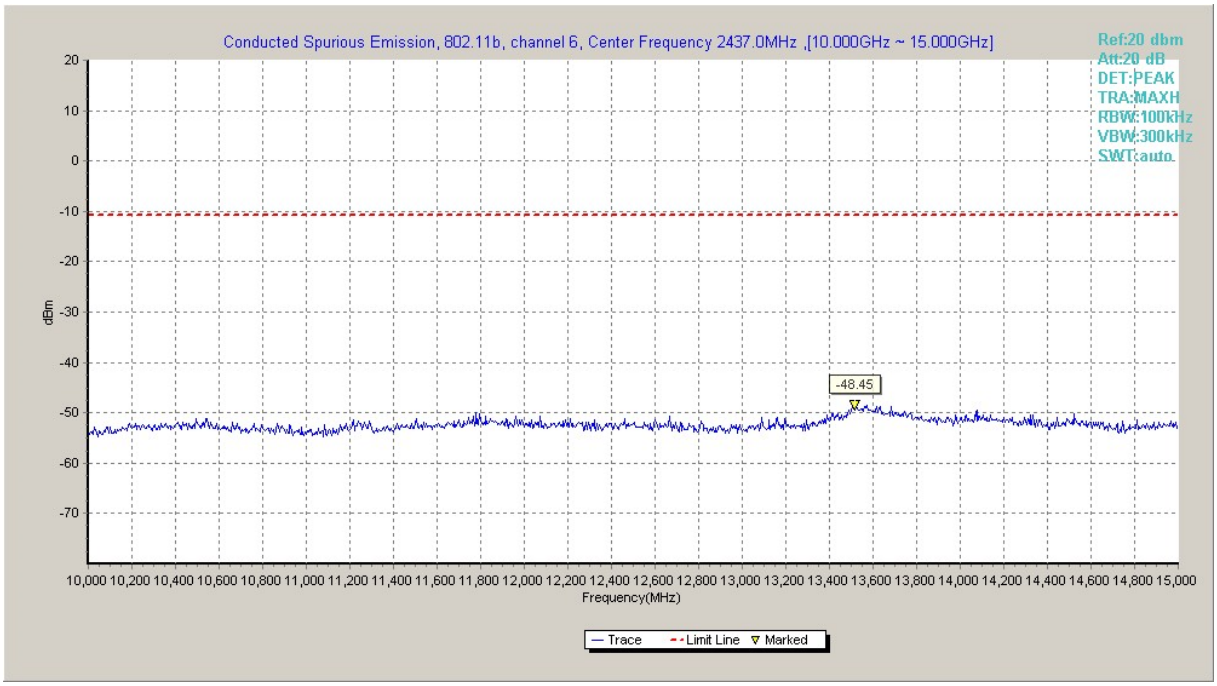


**Fig.A.6.1.14 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 10 GHz-15 GHz)**

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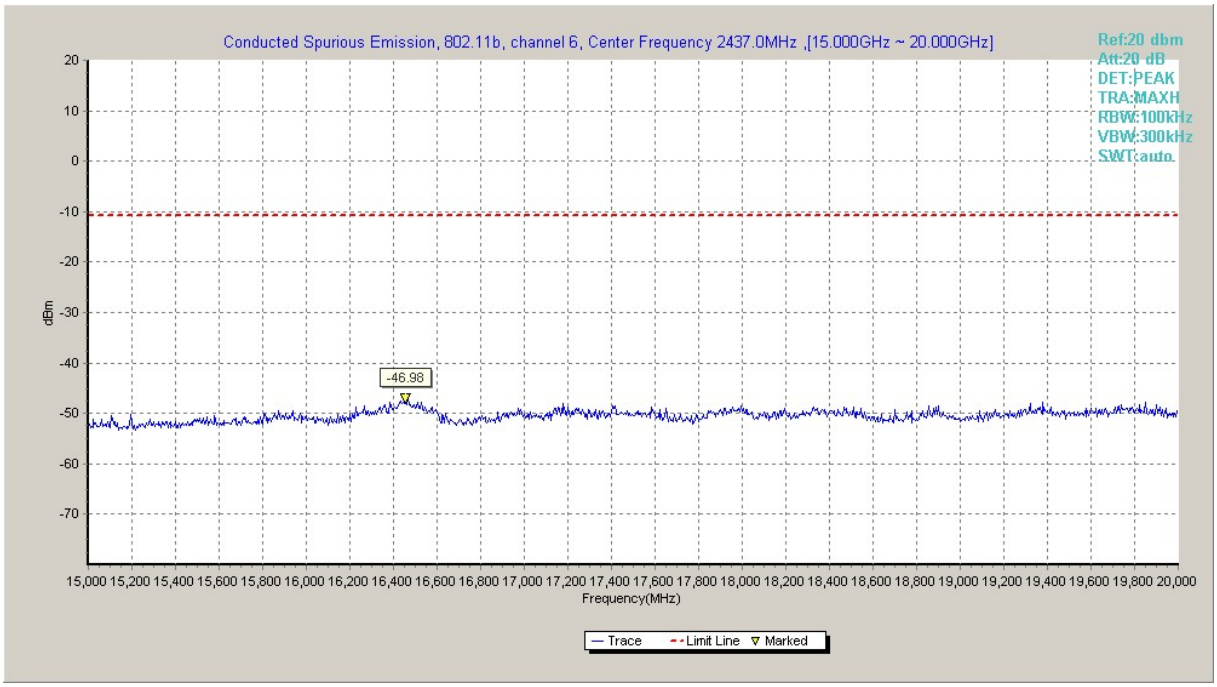


**Fig.A.6.1.15 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 15 GHz-20 GHz)**

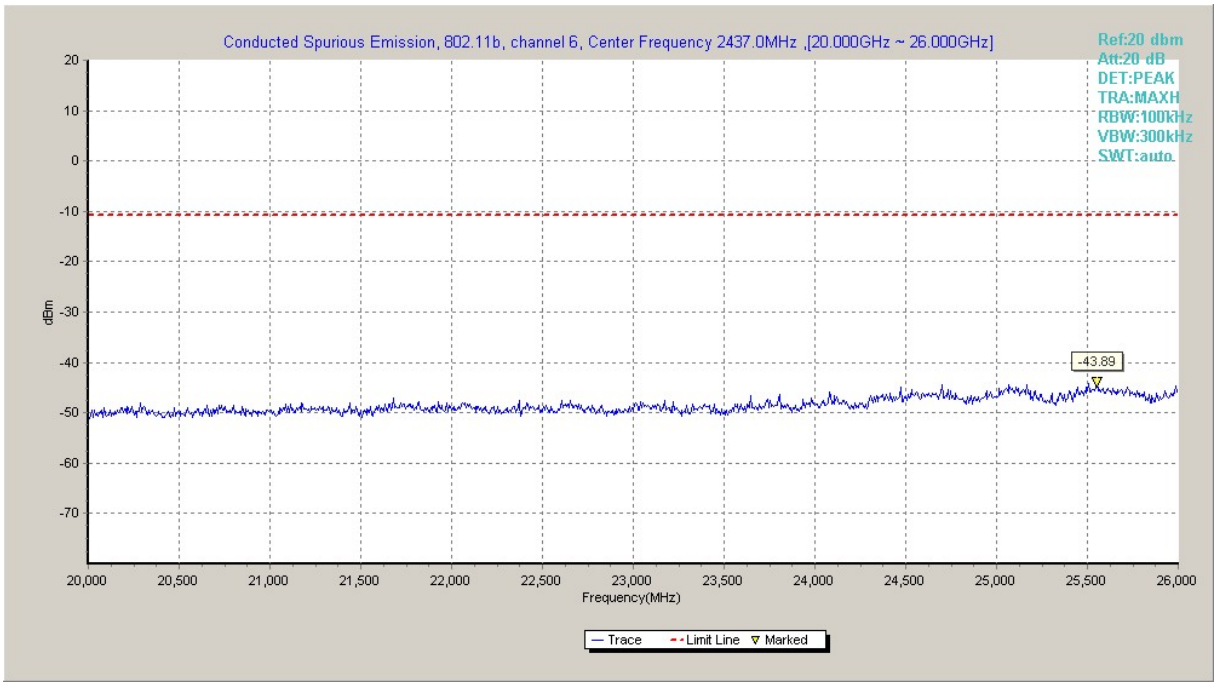


**Fig.A.6.1.16 Transmitter Spurious Emission - Conducted (802.11b, Ch6, 20 GHz-26 GHz)**

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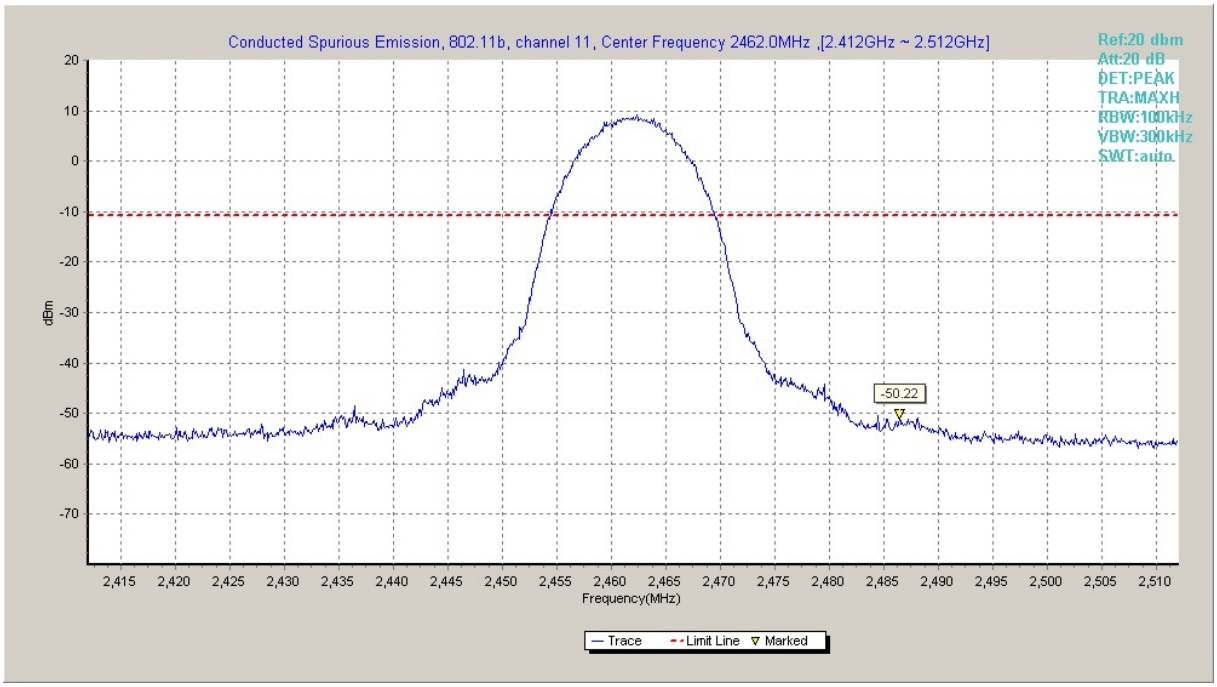


**Fig.A.6.1.17 Transmitter Spurious Emission - Conducted (802.11b, Ch11, Center Frequency)**

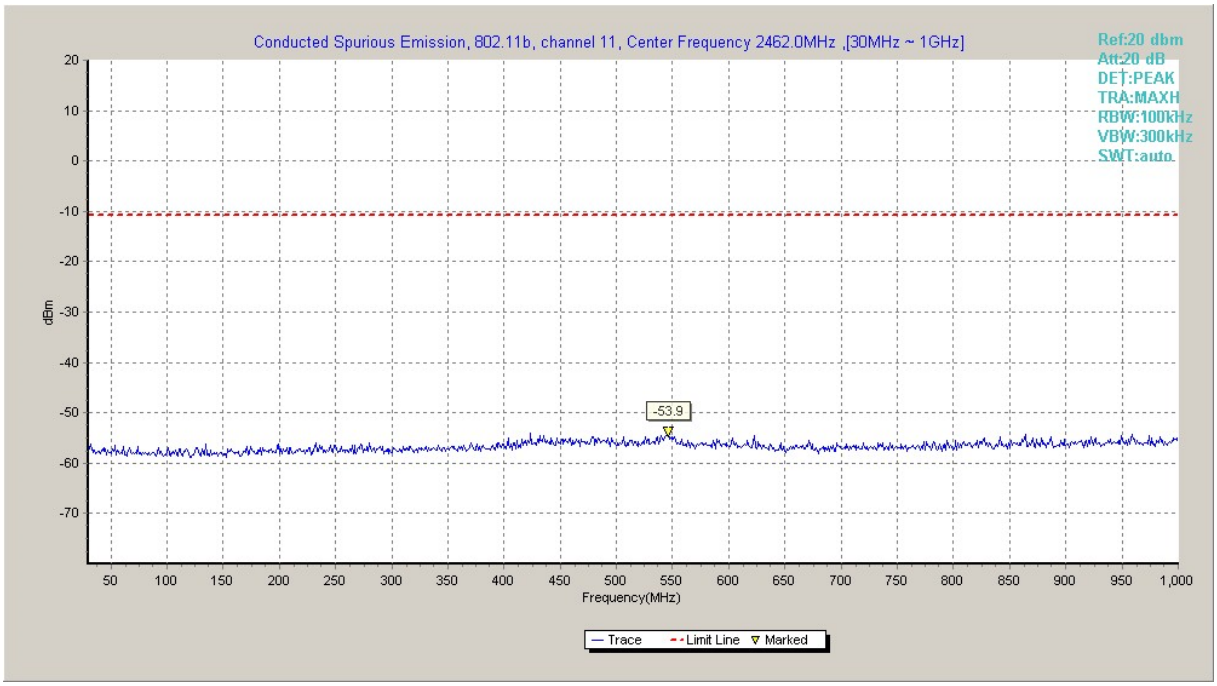


**Fig.A.6.1.18 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 30 MHz-1 GHz)**

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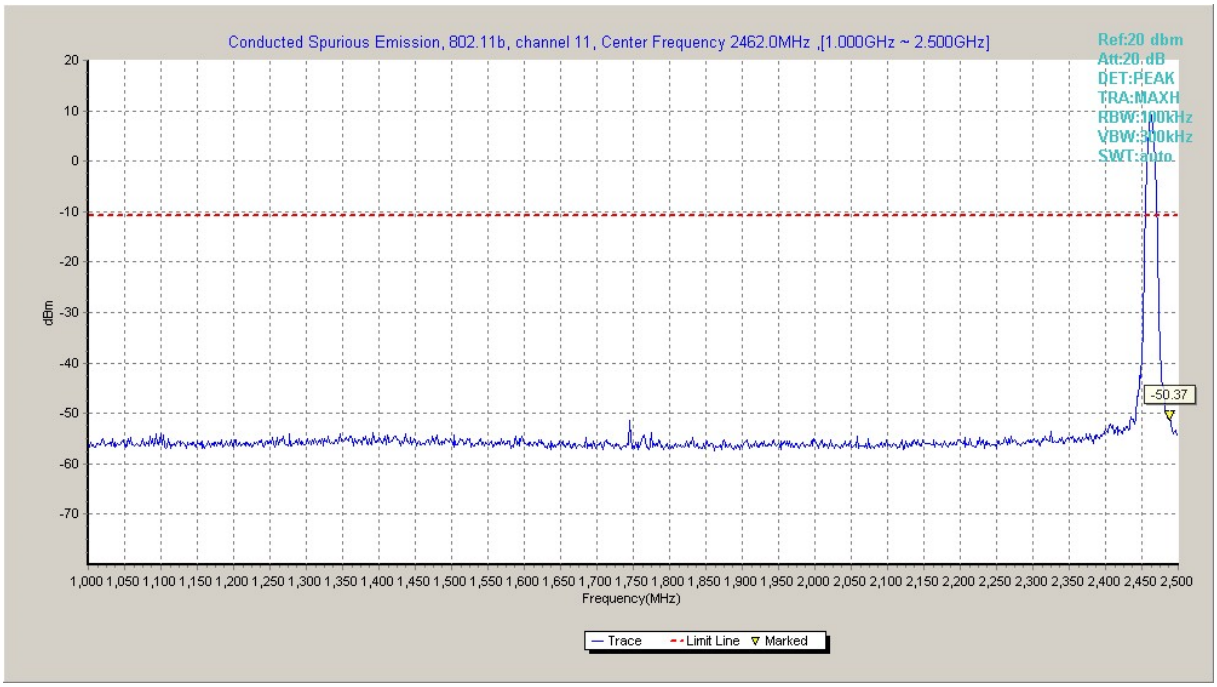


**Fig.A.6.1.19 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 1 GHz-2.5 GHz)**

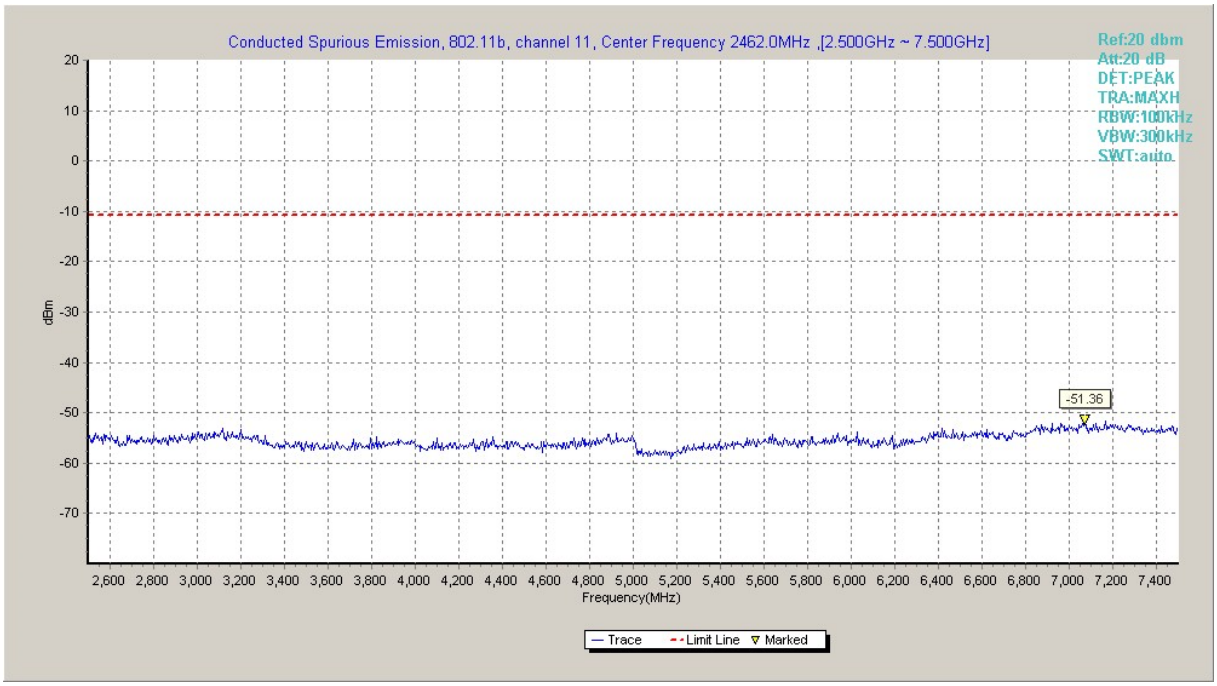


**Fig.A.6.1.20 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 2.5 GHz-7.5 GHz)**

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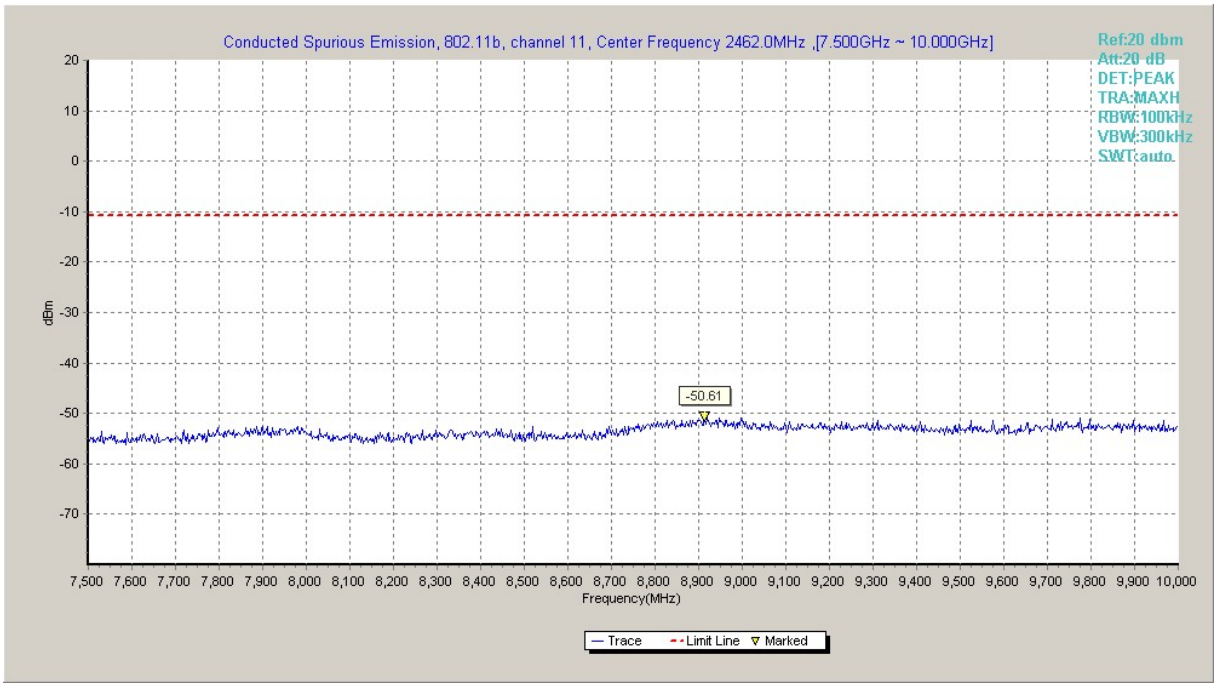


**Fig.A.6.1.21 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 7.5 GHz-10 GHz)**

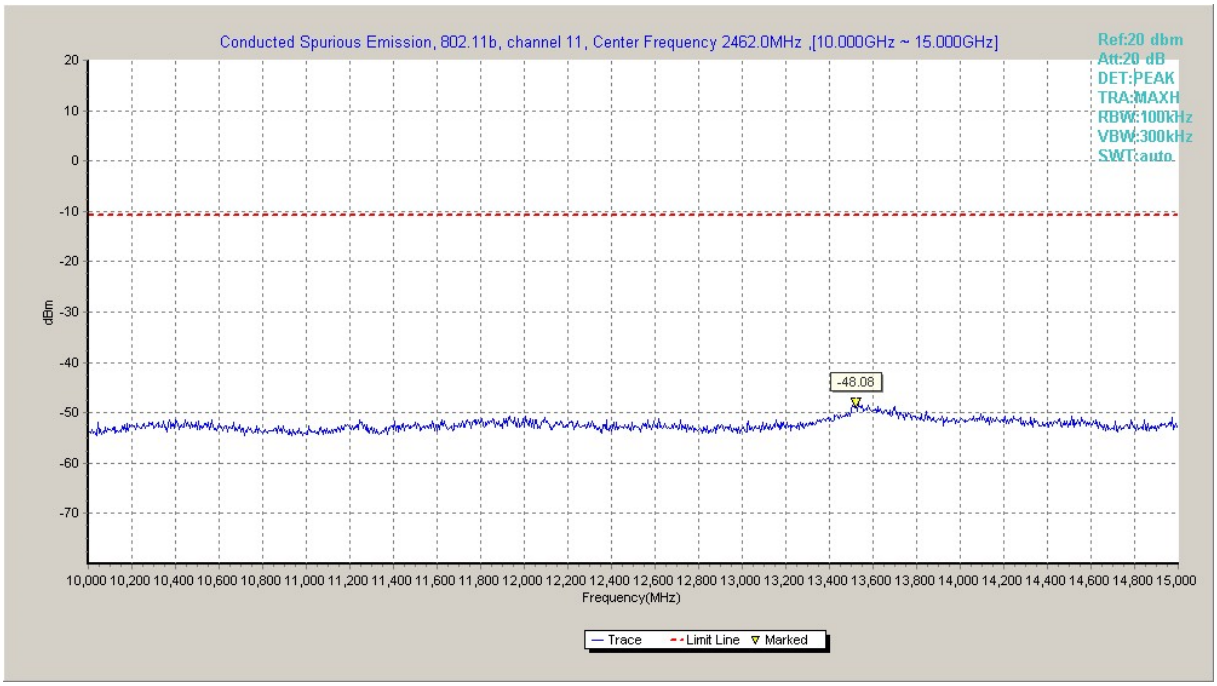


**Fig.A.6.1.22 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 10 GHz-15 GHz)**

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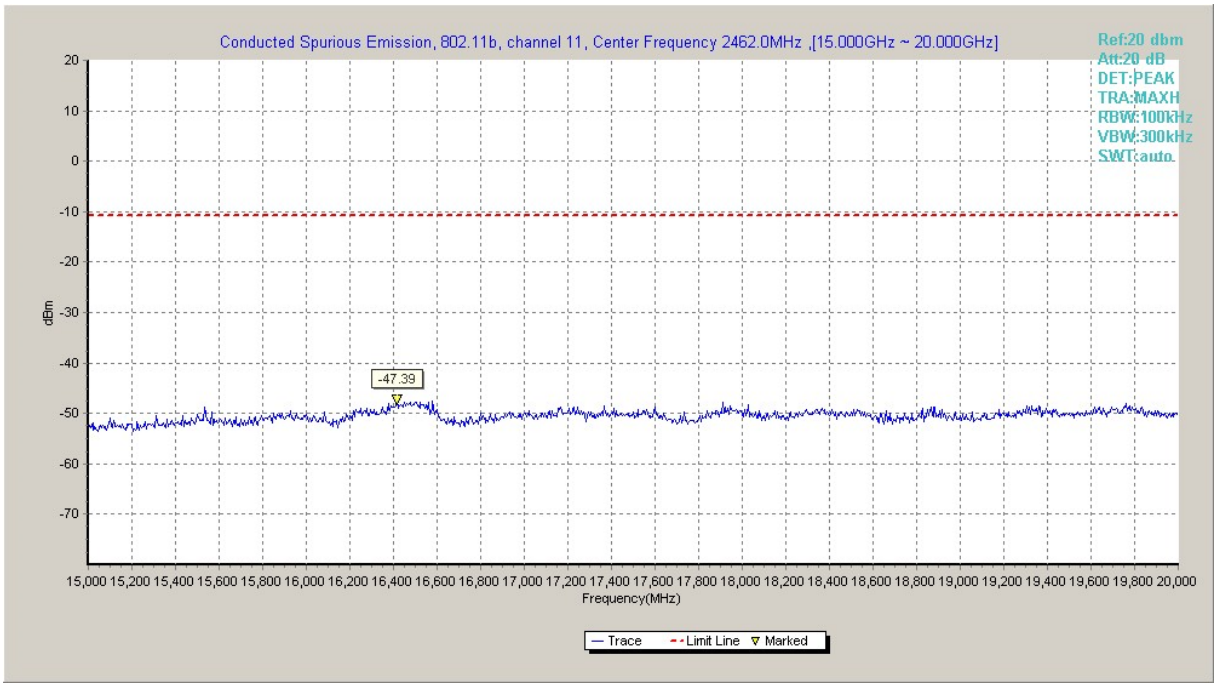


**Fig.A.6.1.23 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 15 GHz-20 GHz)**

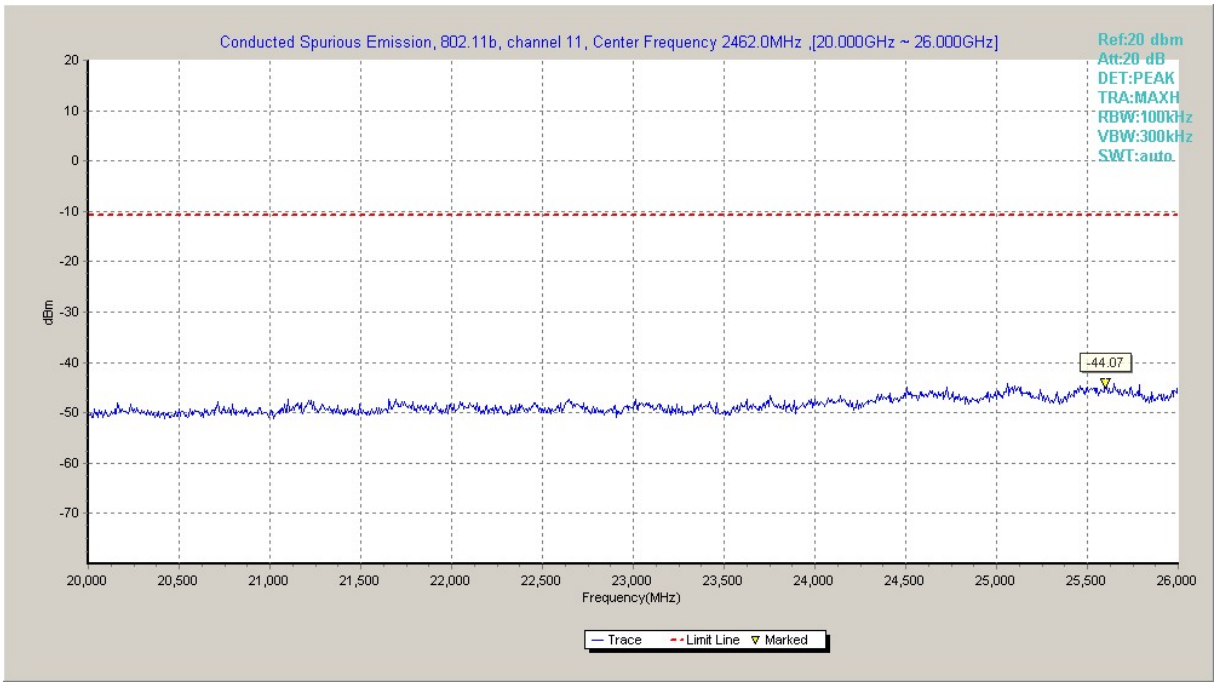


**Fig.A.6.1.24 Transmitter Spurious Emission - Conducted (802.11b, Ch11, 20 GHz-26 GHz)**

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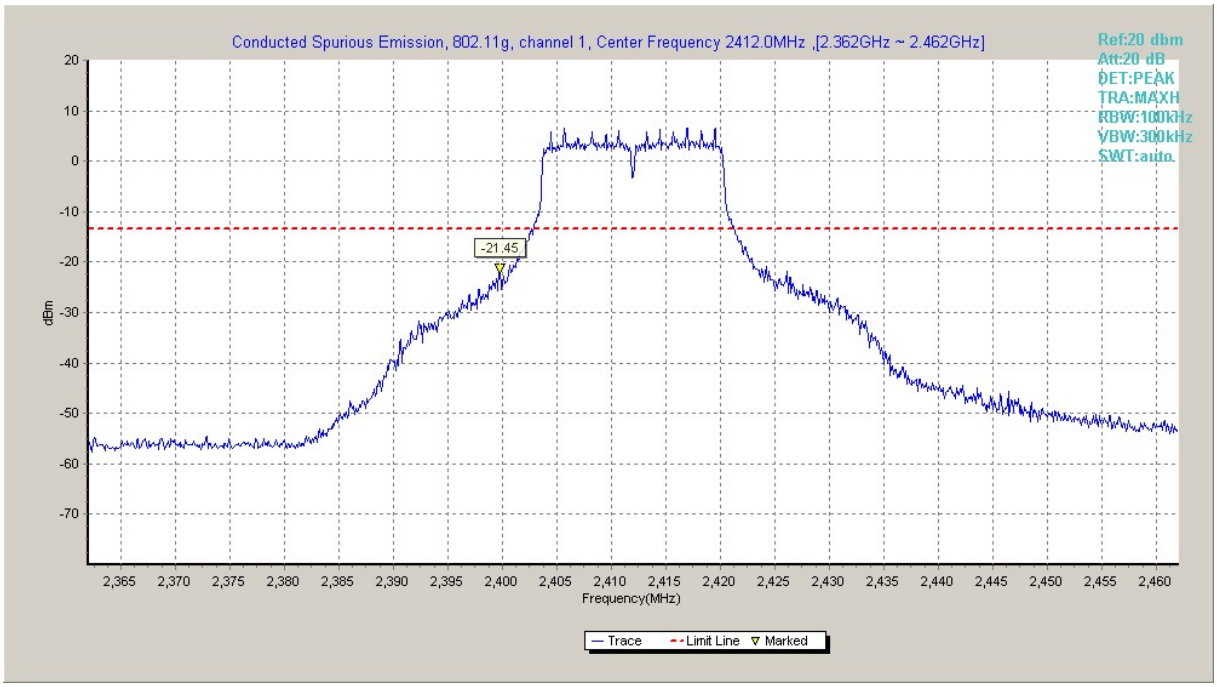


**Fig.A.6.1.25 Transmitter Spurious Emission - Conducted (802.11g, Ch1, Center Frequency)**

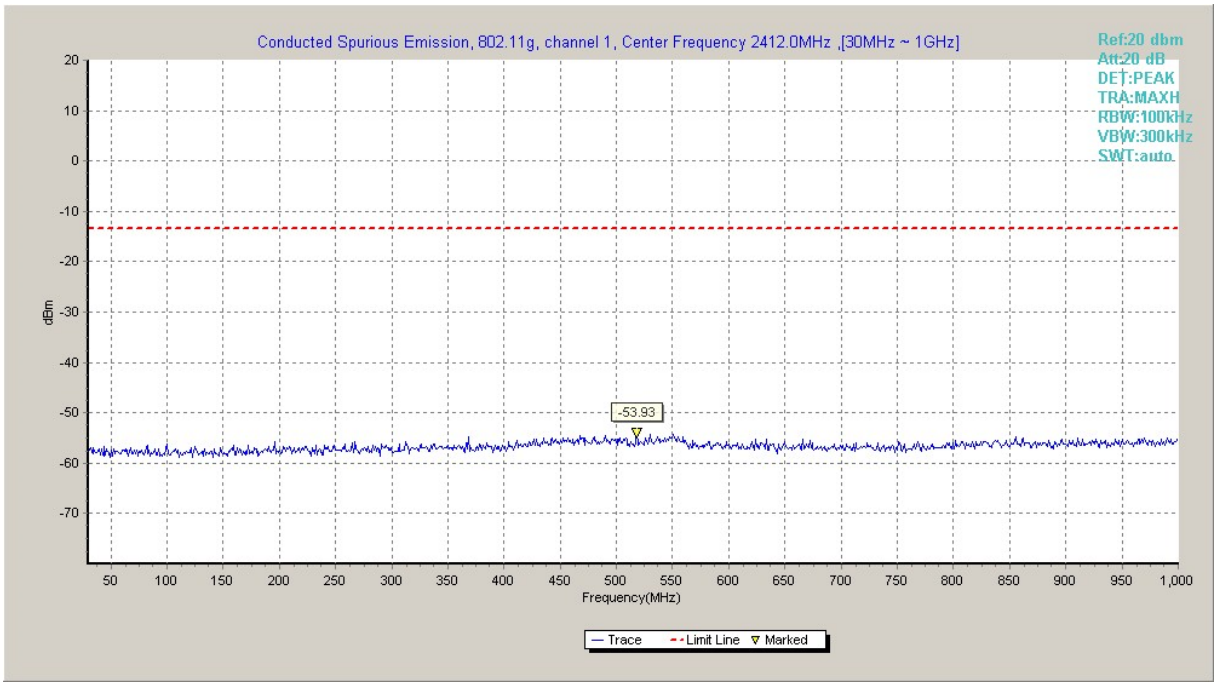


**Fig.A.6.1.26 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 30 MHz-1 GHz)**

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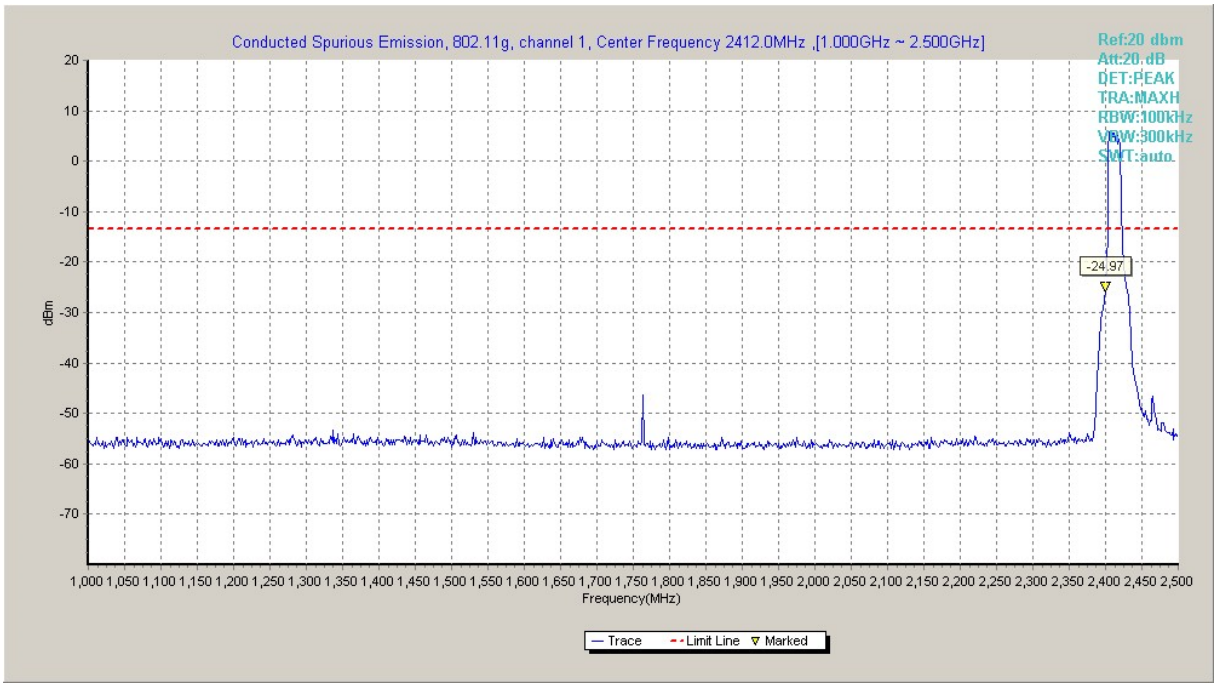


**Fig.A.6.1.27 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 1 GHz-2.5 GHz)**

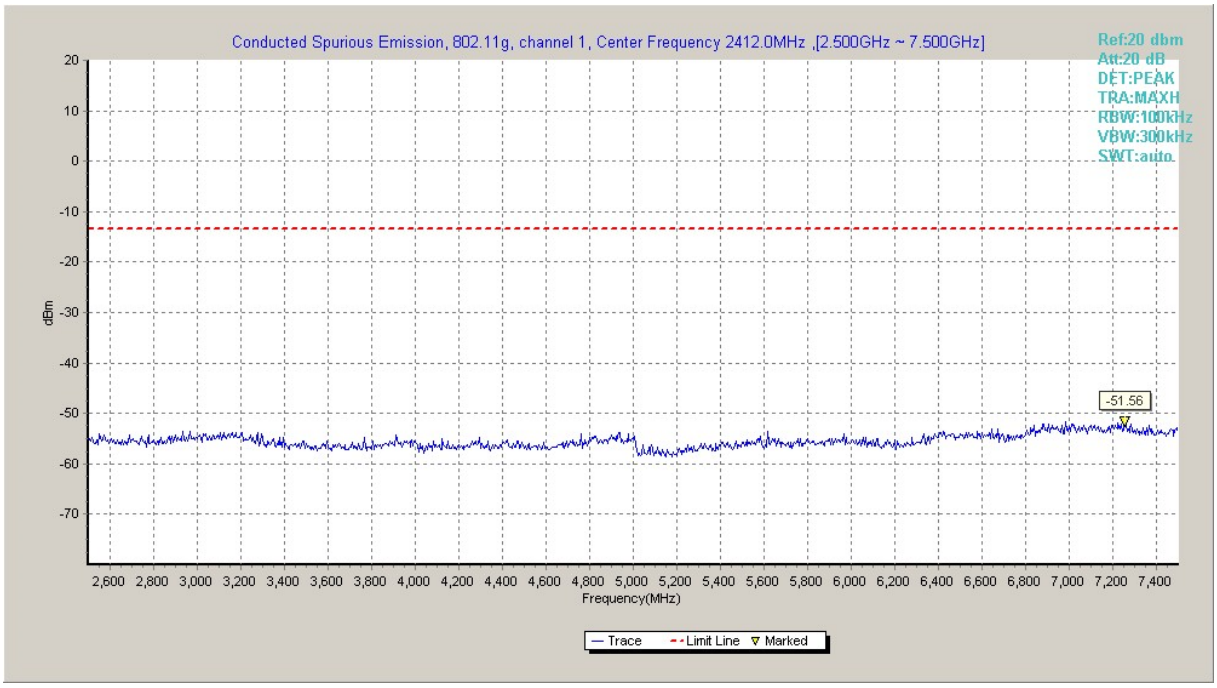


**Fig.A.6.1.28 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 2.5 GHz-7.5 GHz)**

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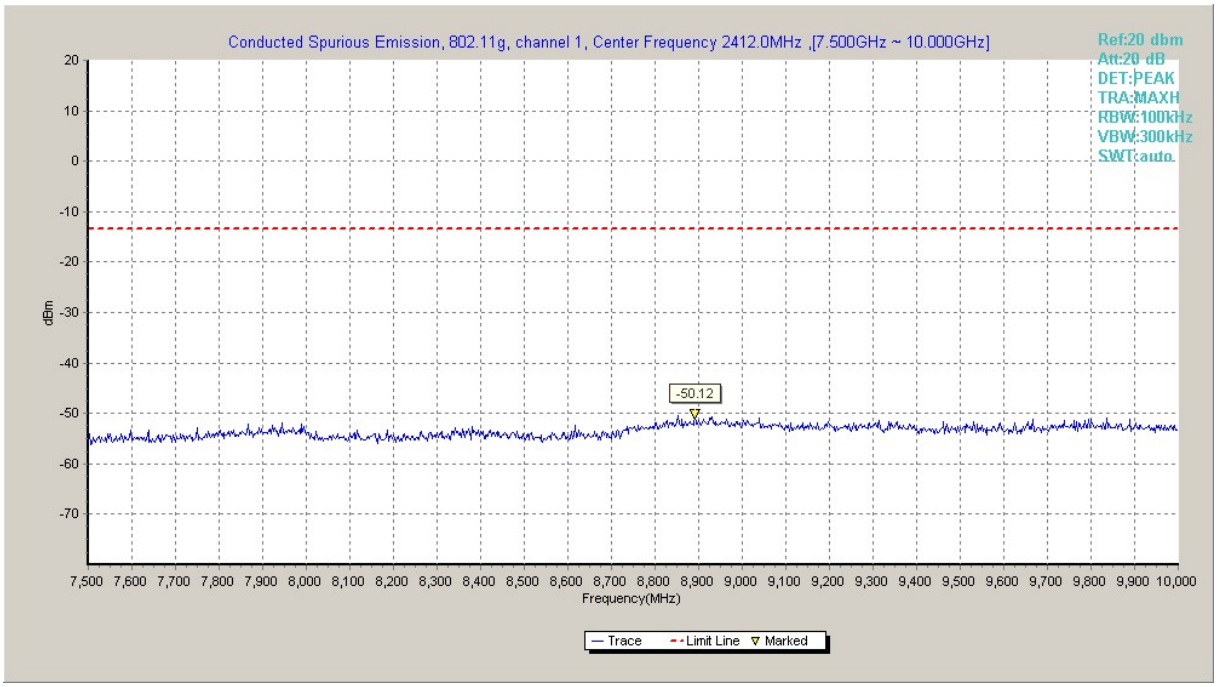


**Fig.A.6.1.29 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 7.5 GHz-10 GHz)**

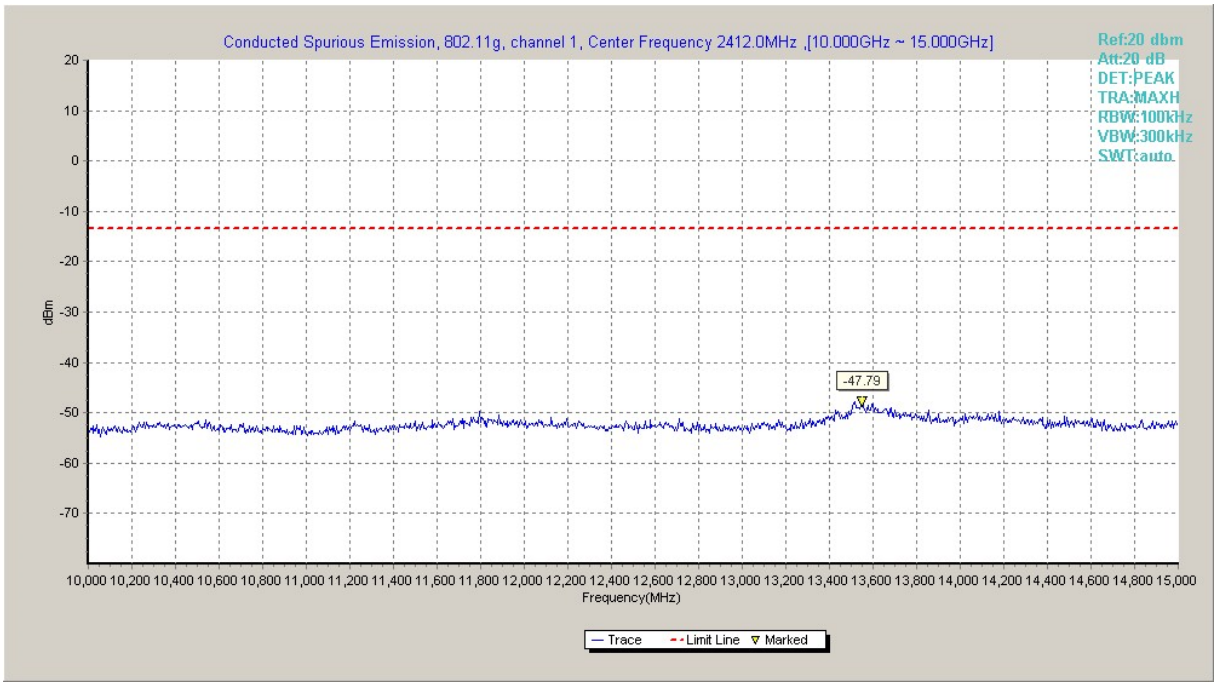


**Fig.A.6.1.30 Transmitter Spurious Emission - Conducted (802.11g, Ch1, 10 GHz-15 GHz)**

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