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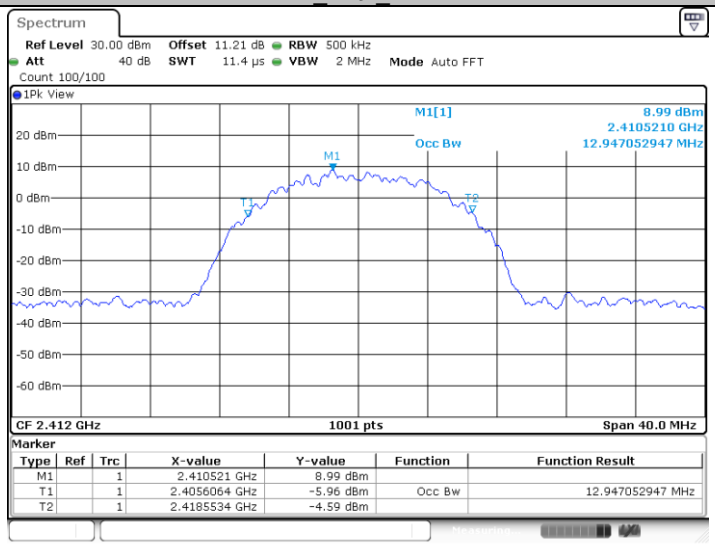
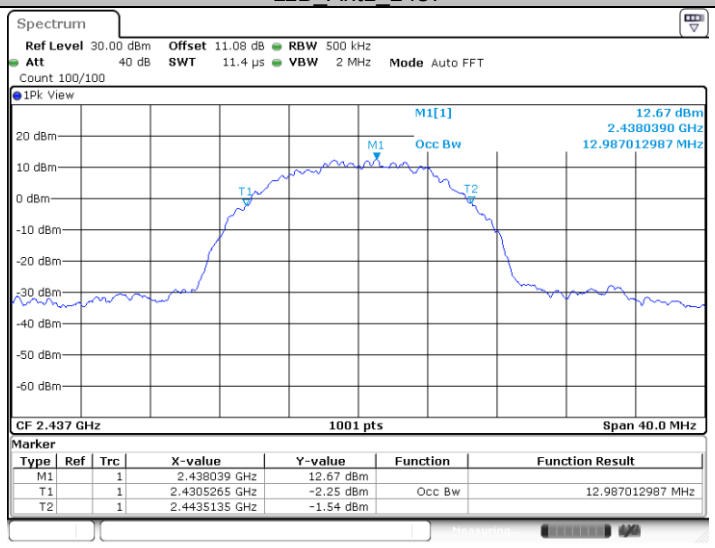
11B_Ant1_2412



11B_Ant1_2437



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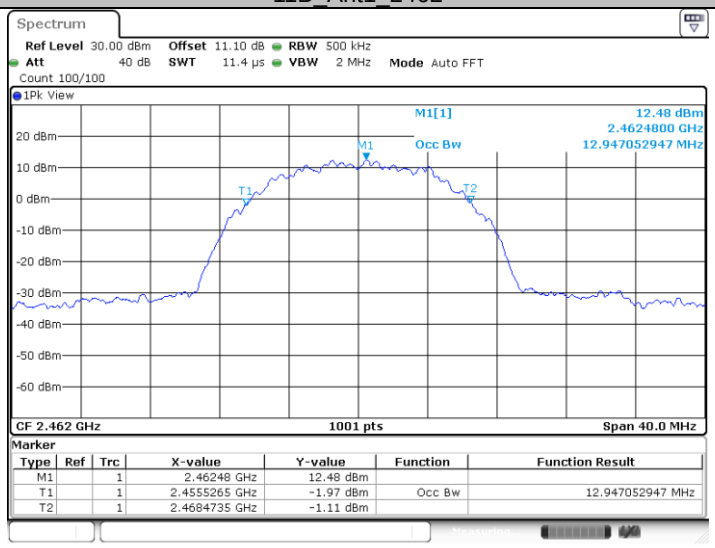

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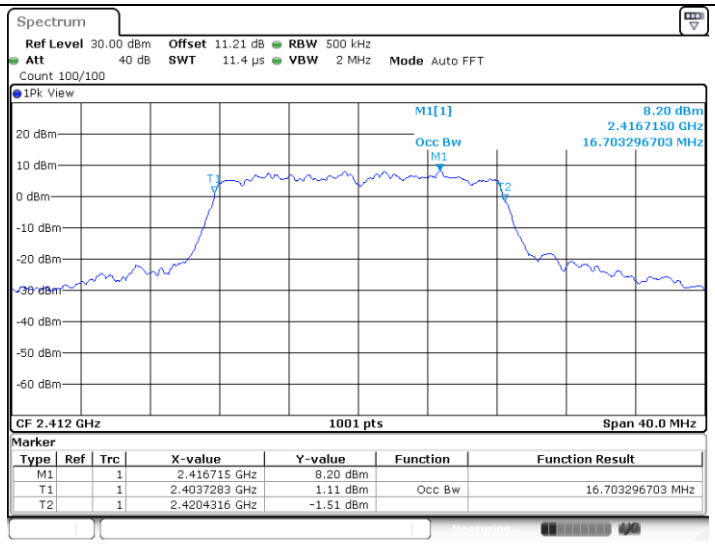

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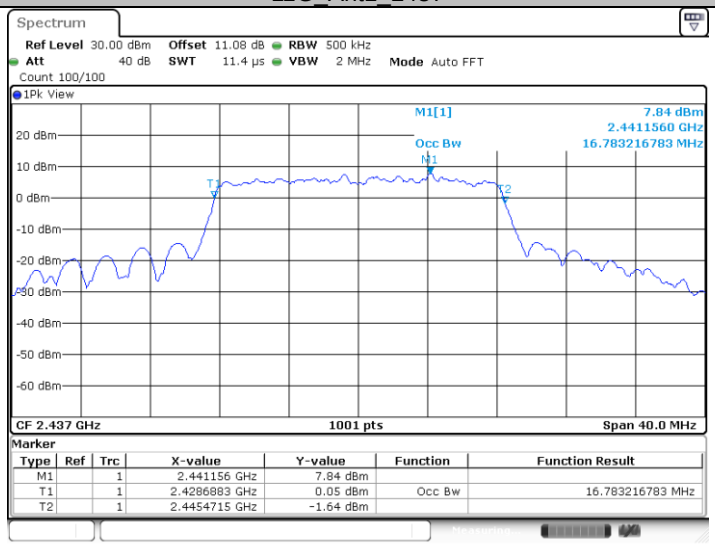

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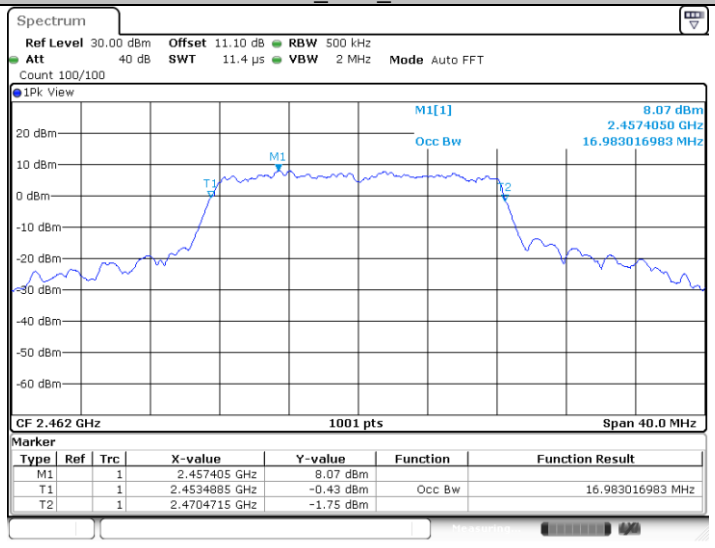

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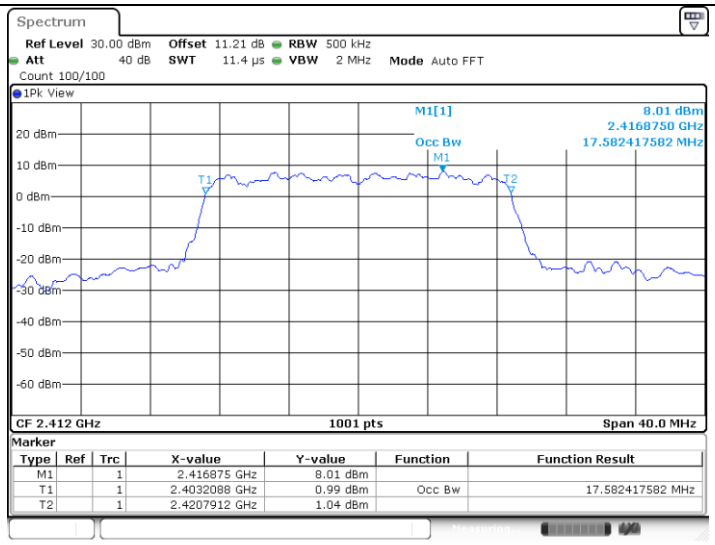

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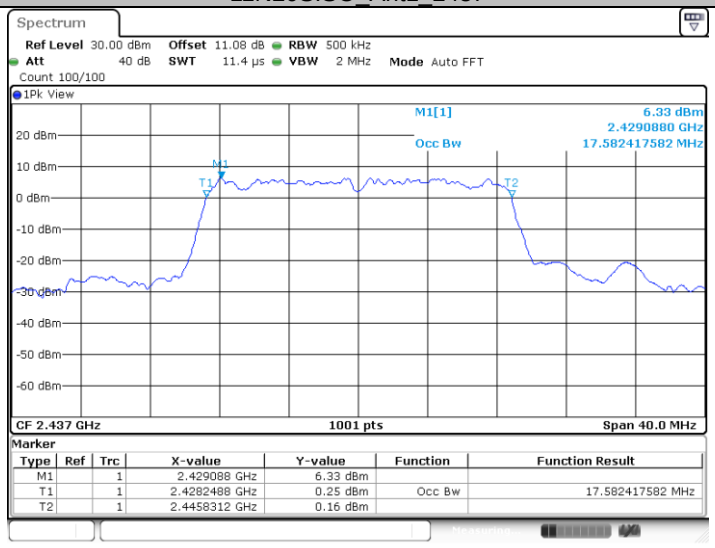

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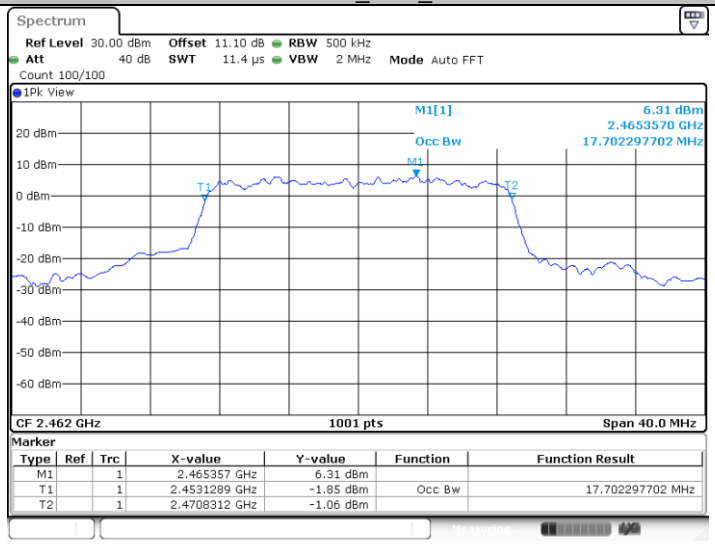

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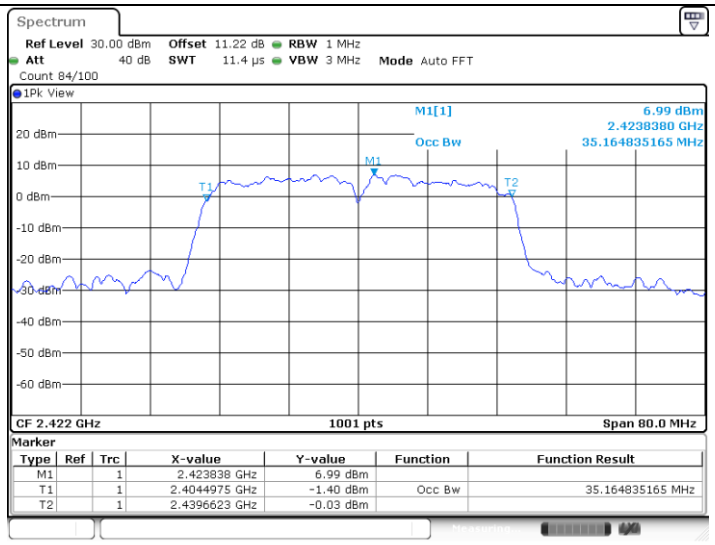

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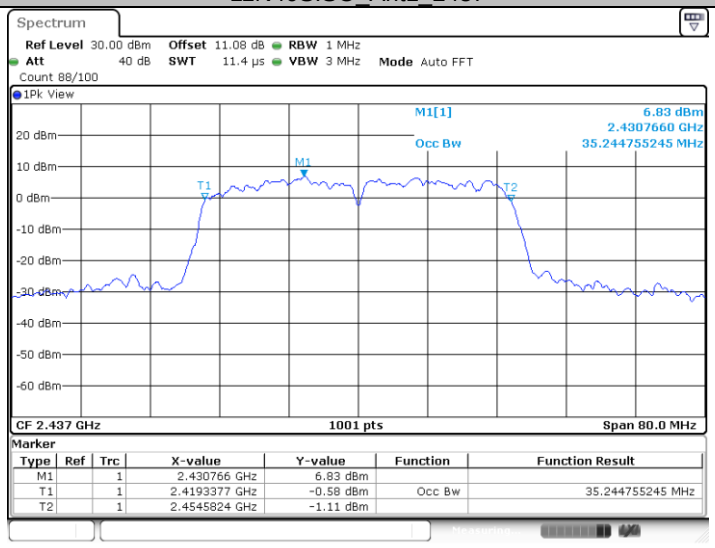

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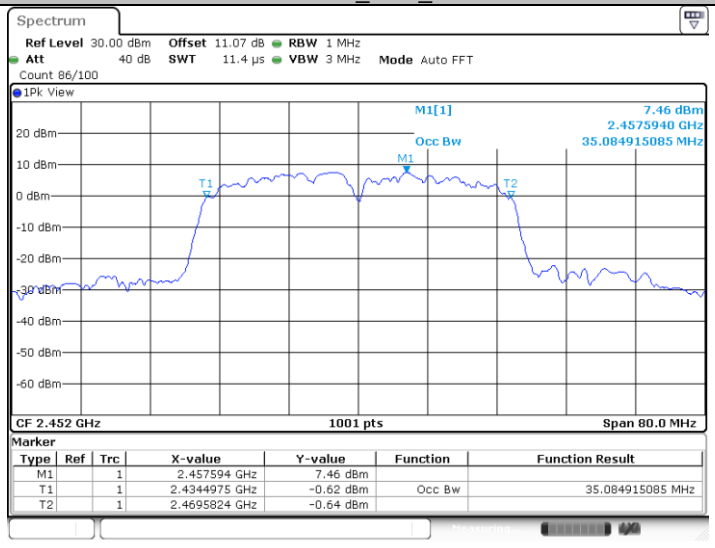
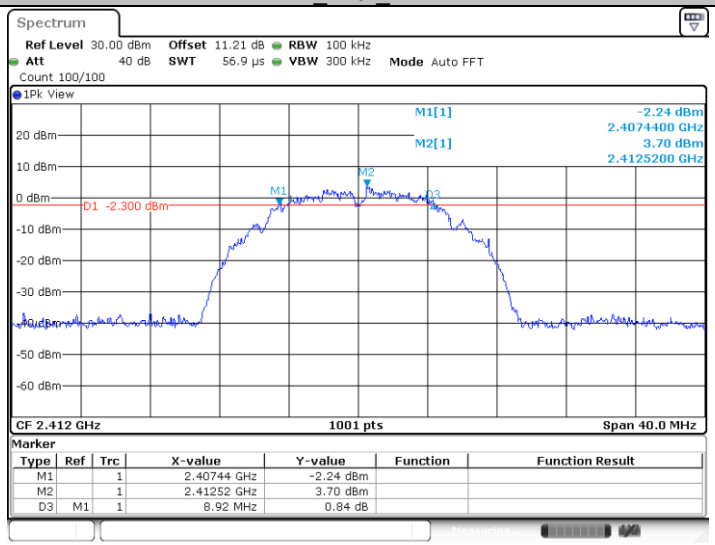


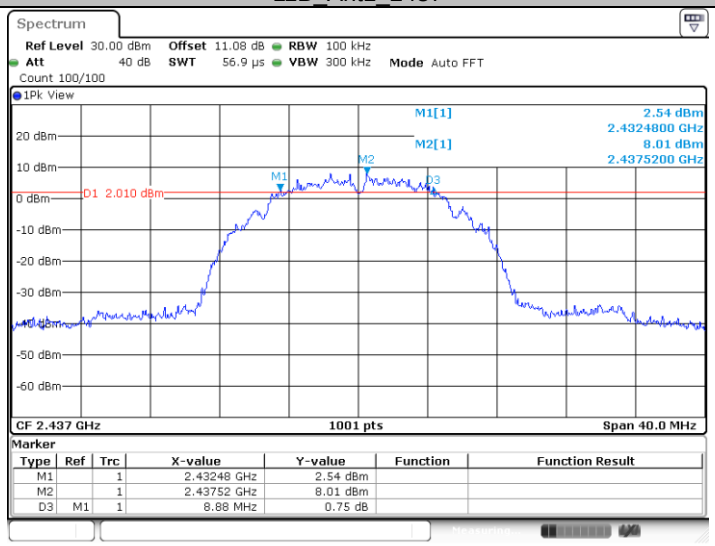
DTS Bandwidth:

11B_Ant1_2412



Date: 17.FEB.2025 16:37:14

11B_Ant1_2437



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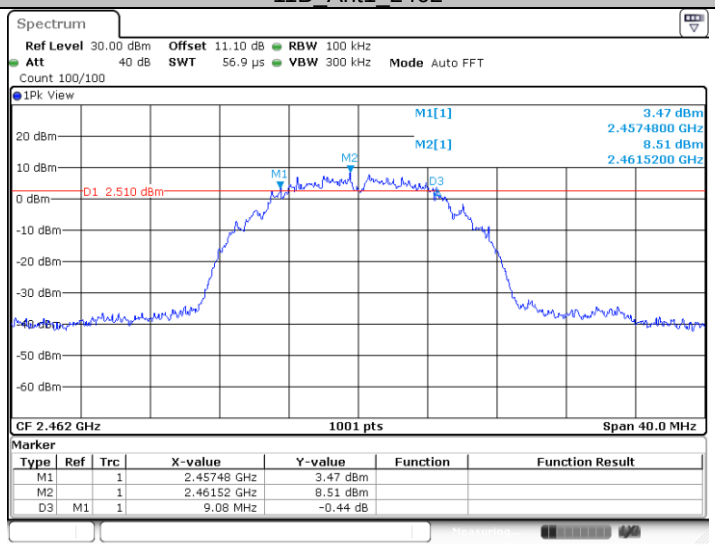
11B_Ant1_2462



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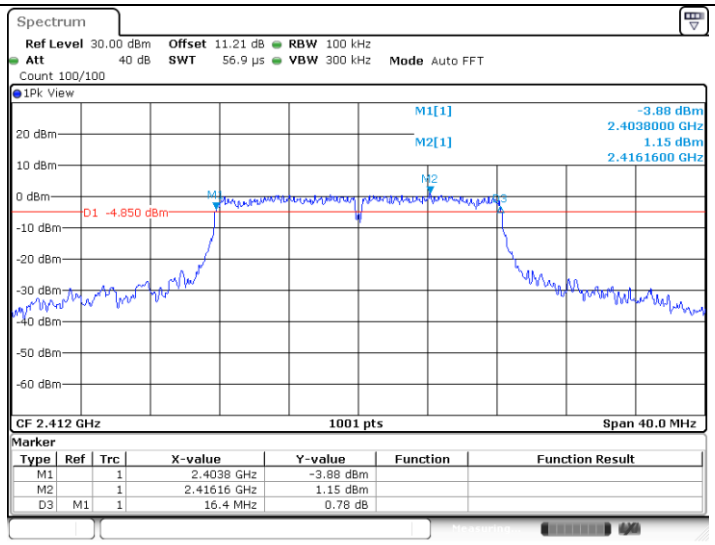
11G_Ant1_2412



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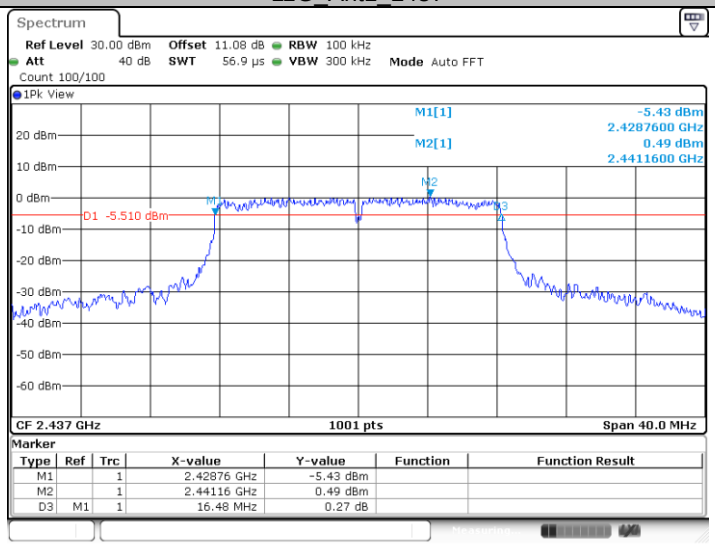

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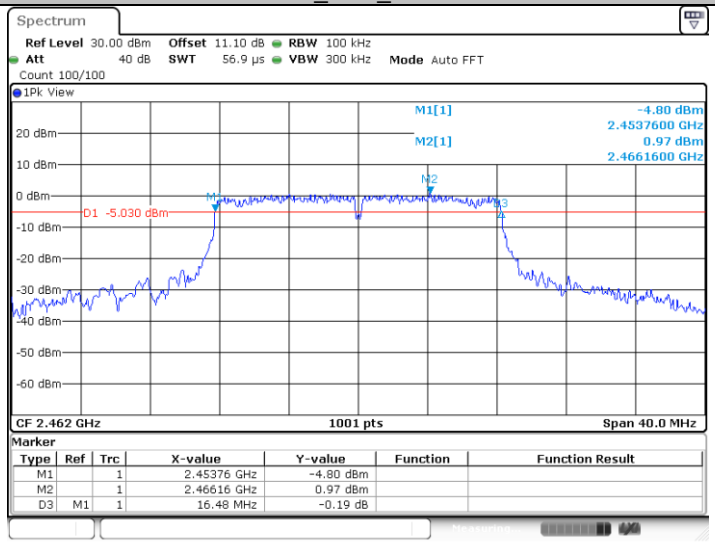

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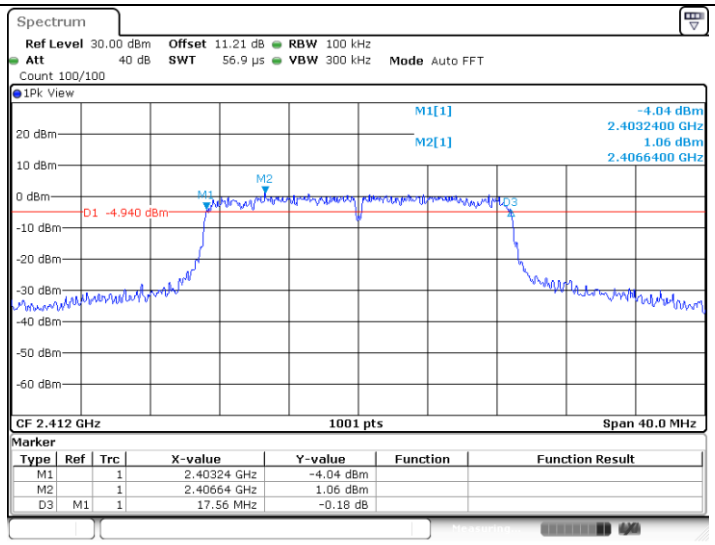

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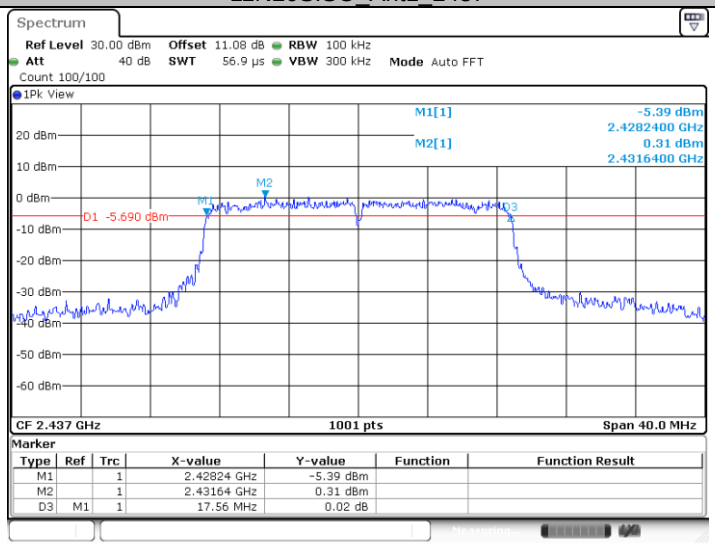
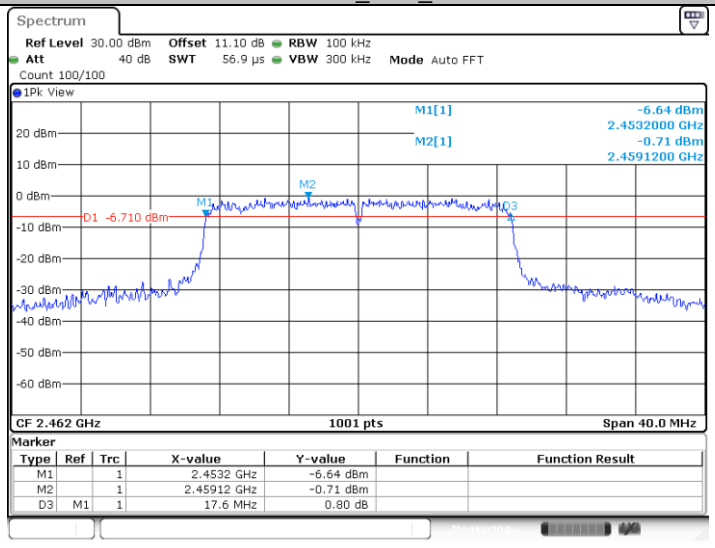
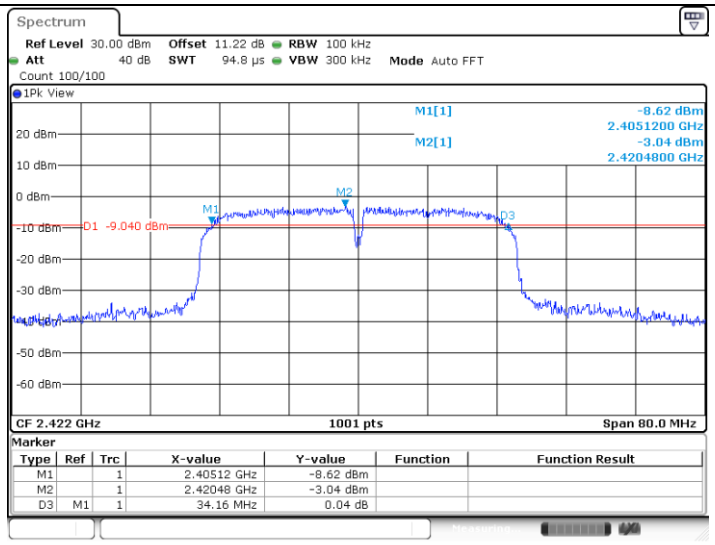


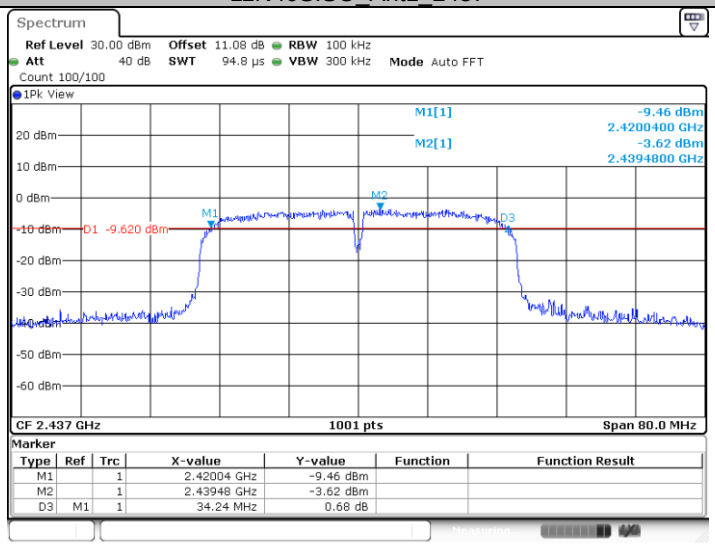
11N20SISO_Ant1_2462



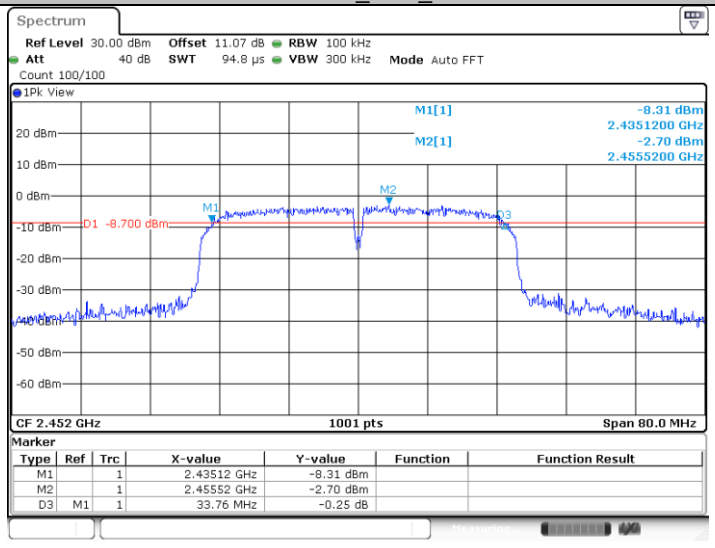
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



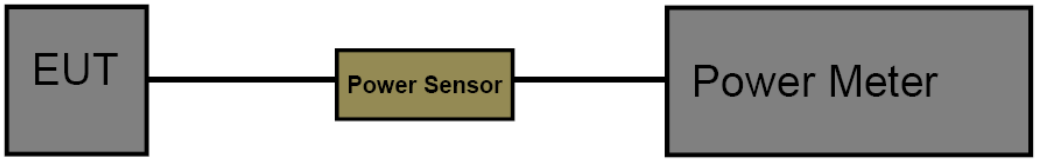
3.6. Maximum Conducted Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)

Section	Test Item	Limit	Frequency Range (MHz)
FCC CFR 47 Part15.247 (b)(3)	Maximum Conducted Output Power	1 Watt or 30dBm	2400~2483.5

Test Configuration



Test Procedure

1. The maximum conducted output power may be measured using a broadband RF power meter.
2. Power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Frequency (MHz)	Average Output Power (dBm)	FCC Limit (dBm)	Verdict
802.11b	2412	17.44	≤30	Pass
	2437	17.07	≤30	Pass
	2462	17.00	≤30	Pass
802.11g	2412	15.23	≤30	Pass
	2437	15.11	≤30	Pass
	2462	15.27	≤30	Pass
802.11n(HT20)	2412	14.74	≤30	Pass
	2437	14.30	≤30	Pass
	2462	13.79	≤30	Pass
802.11n(HT40)	2422	14.21	≤30	Pass
	2437	14.31	≤30	Pass
	2452	14.27	≤30	Pass

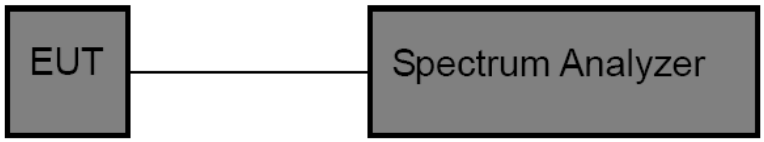
3.7. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)

Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	8 dBm (in any 3 kHz)	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:

Set analyzer center frequency to DTS channel center frequency.
Set span to at least 1.5 times the OBW.
Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
Set VBW ≥ [3 × RBW].
Detector = power averaging (rms) or sample detector (when rms not available).
Ensure that the number of measurement points in the sweep ≥ [2 × span / RBW].
Sweep time = auto couple.
Employ trace averaging (rms) mode over a minimum of 100 traces.
Use the peak marker function to determine the maximum amplitude level.
If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

Test Mode

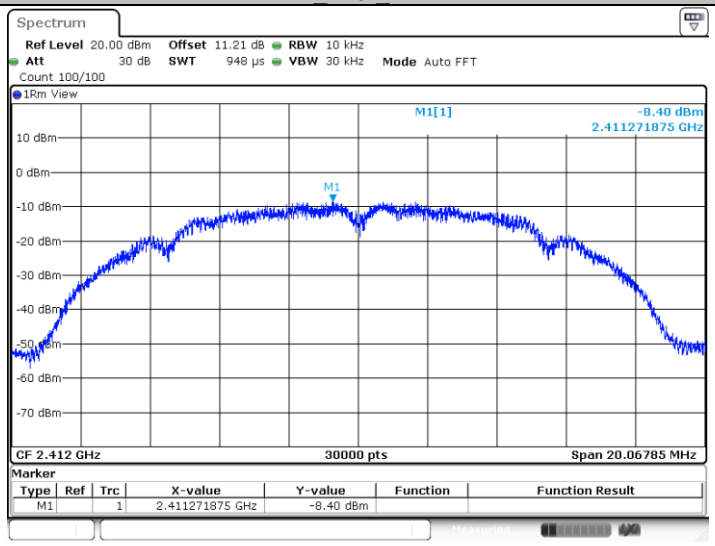
Please refer to the clause 2.4.

Test Result

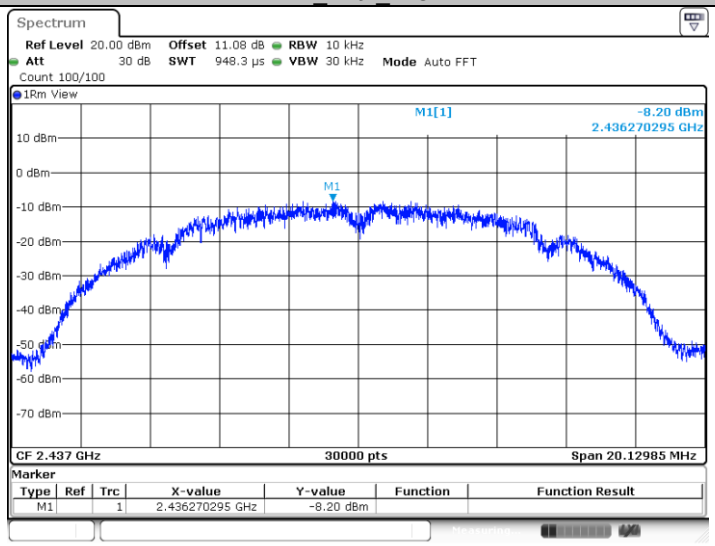
Test Mode	Frequency (MHz)	Power Spectral Density (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
802.11b	2412	-8.40	≤8	Pass
	2437	-8.20	≤8	Pass
	2462	-9.00	≤8	Pass
802.11g	2412	-13.59	≤8	Pass
	2437	-12.99	≤8	Pass
	2462	-13.75	≤8	Pass
802.11n(HT20)	2412	-13.66	≤8	Pass
	2437	-14.15	≤8	Pass
	2462	-15.16	≤8	Pass
802.11n(HT40)	2422	-16.84	≤8	Pass
	2437	-16.39	≤8	Pass
	2452	-16.88	≤8	Pass

Test Graphs

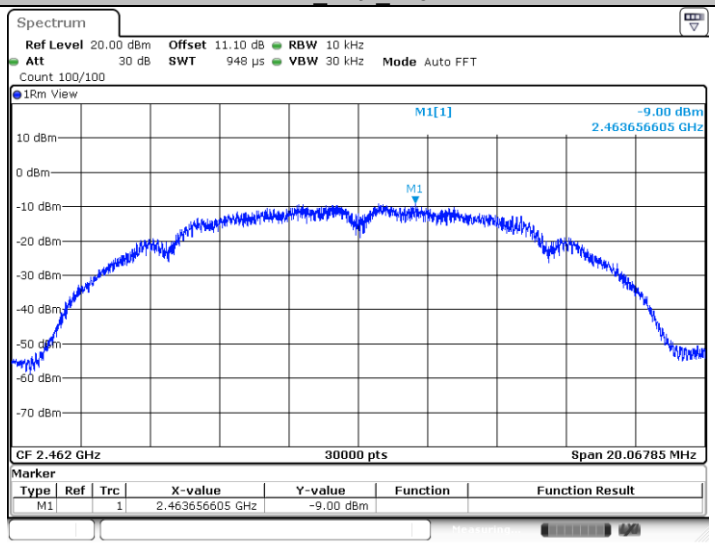
11B_Ant1_2412



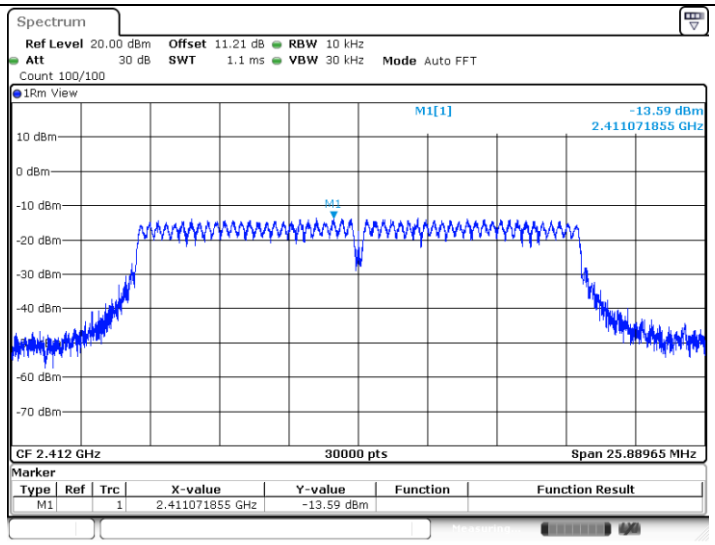
11B_Ant1_2437



11B_Ant1_2462



11G_Ant1_2412



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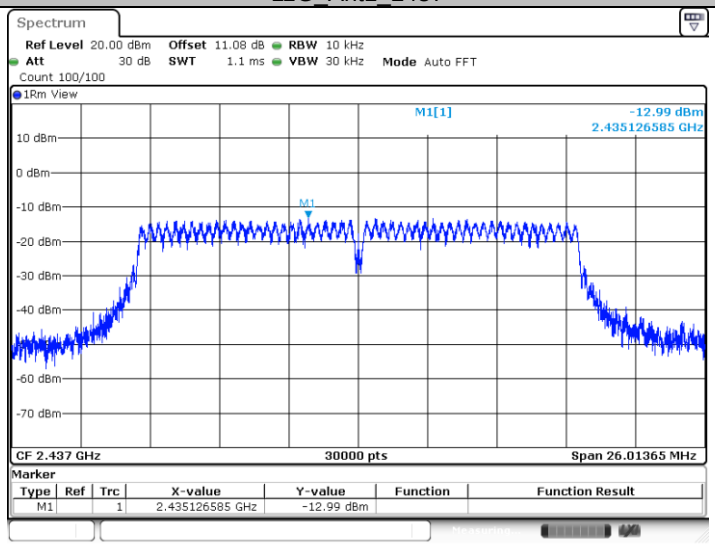

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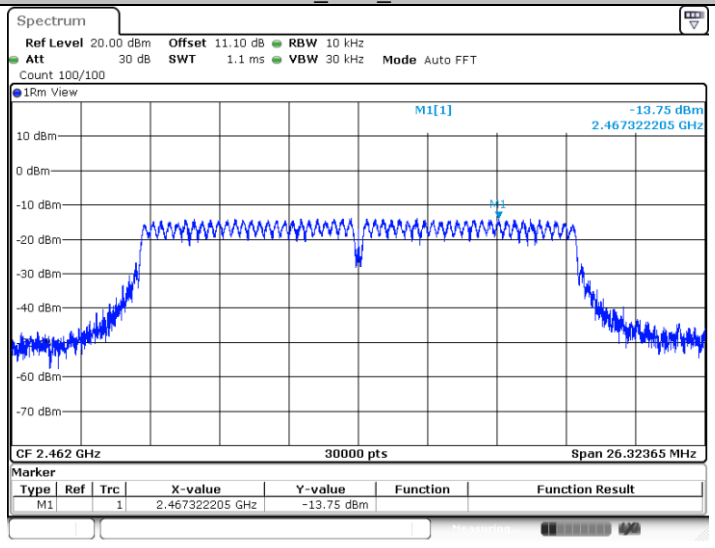
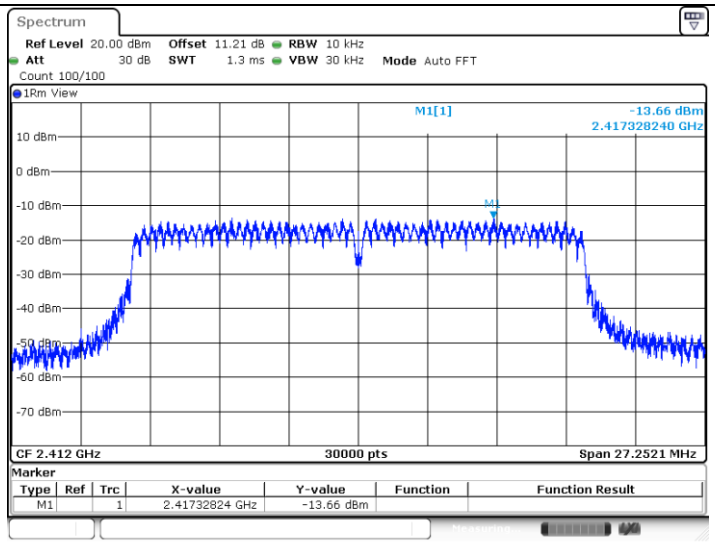


11N20SISO_Ant1_2412



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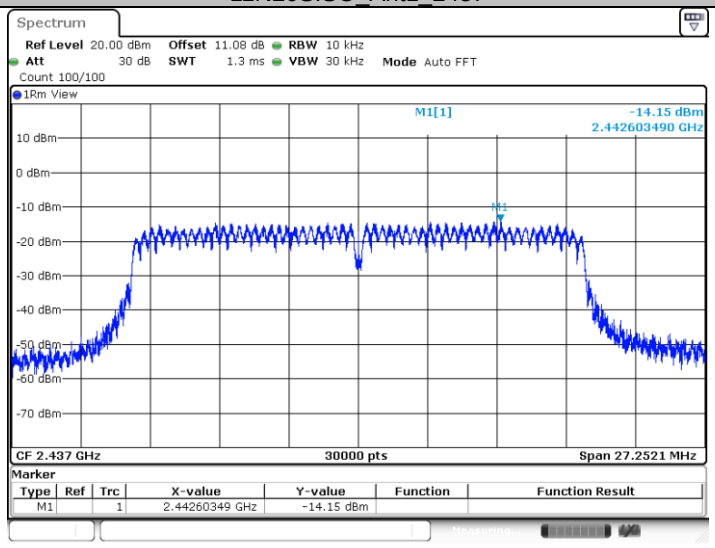

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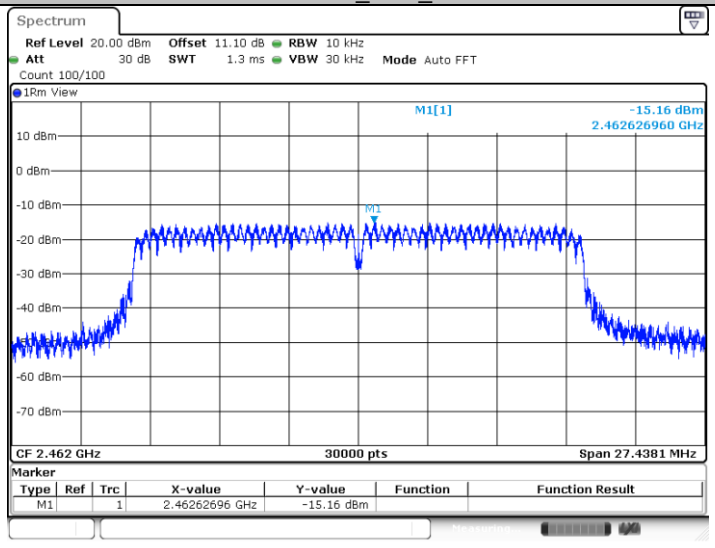

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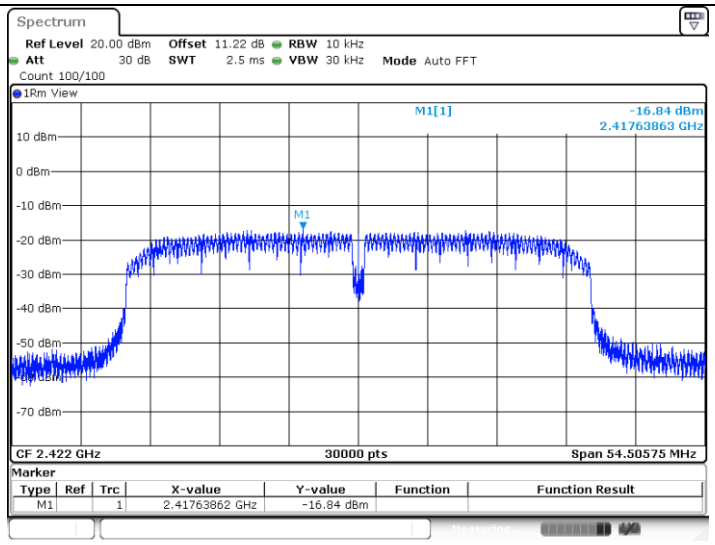

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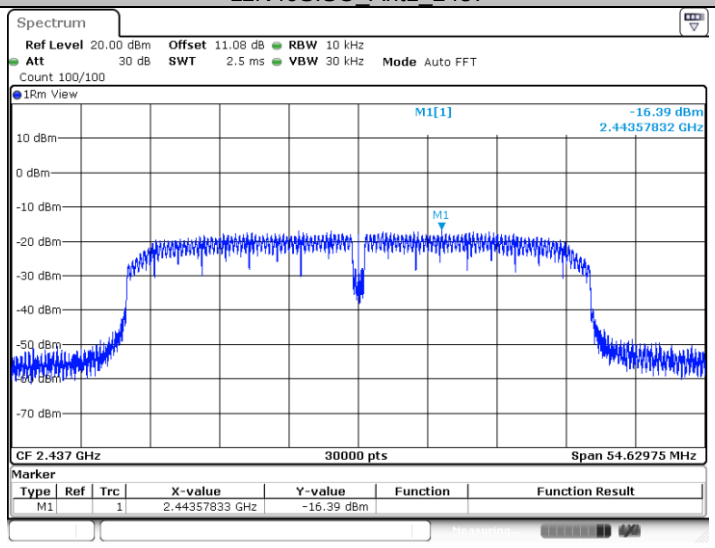

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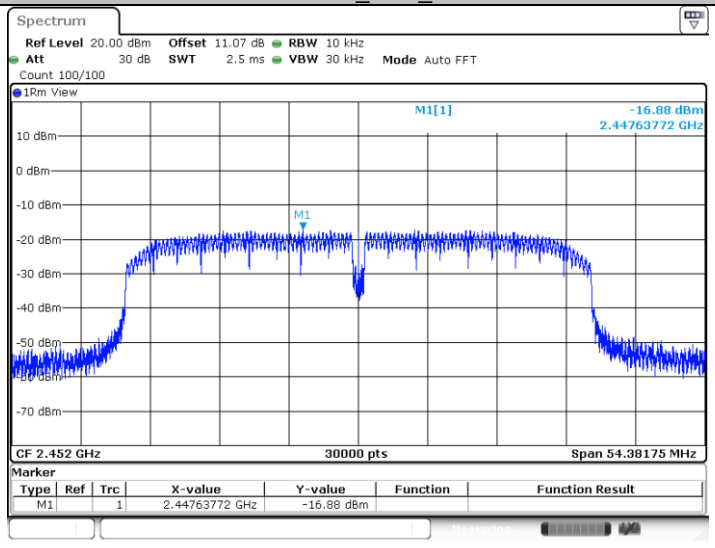
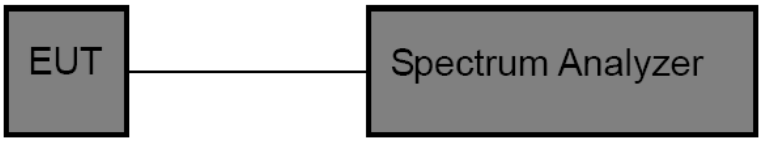


3.8. Duty Cycle

Limit

None, for report purposes only.

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:

Set analyzer center frequency to test channel center frequency.
Set the span to 0Hz.
Set the RBW to 10MHz.
Set the VBW to 10MHz.
Detector: Peak.
Sweep time: Auto.

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Frequency (MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)	1/T Minimum VBW (kHz)	Final Setting for VBW (Hz)
802.11b	2412	19.00	19.00	100.00	---	10
	2437	19.00	19.00	100.00	---	10
	2462	19.00	19.00	100.00	---	10
802.11g	2412	19.00	19.00	100.00	---	10
	2437	19.00	19.00	100.00	---	10
	2462	19.00	19.00	100.00	---	10
802.11n(HT20)	2412	19.00	19.00	100.00	---	10
	2437	19.00	19.00	100.00	---	10
	2462	19.00	19.00	100.00	---	10
802.11n(HT40)	2422	19.00	19.00	100.00	---	10
	2437	19.00	19.00	100.00	---	10
	2452	19.00	19.00	100.00	---	10

Note: When the duty cycle is greater than 98%, set the VBW to 10 Hz.

3.9. Antenna Requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i)
(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The directional gain of the antenna is less than 6dBi, please refer to the EUT internal photographs antenna photo.

Result

PASS.
The EUT has 1 antenna: a FPC Antenna for WIFI.
Note: ☒Antenna use a permanently attached antenna which is not replaceable.
☐Not using a standard antenna jack or electrical connector for antenna replacement.
☐The antenna has to be professionally installed (please provide method of installation).

**************************THE END OF REPORT*************************