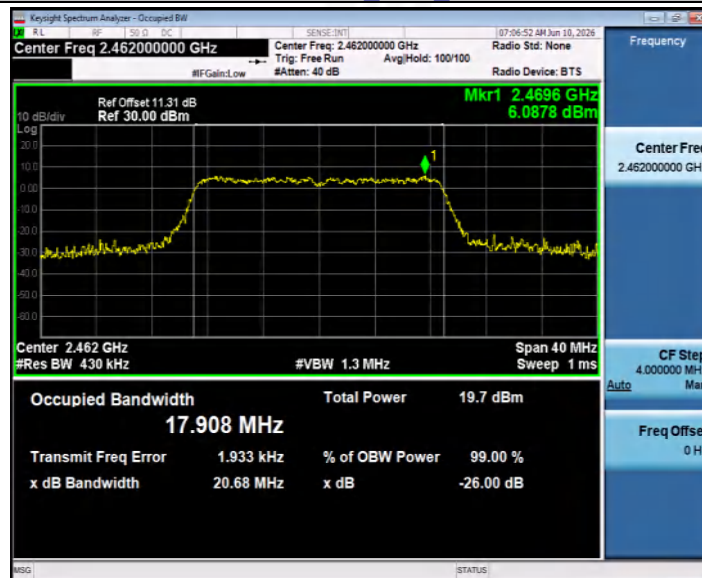
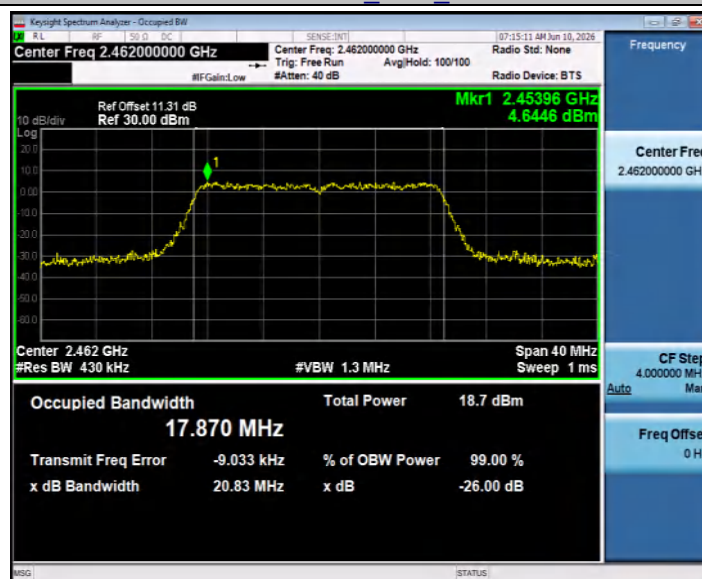




11N20MIMO_Ant2_2437



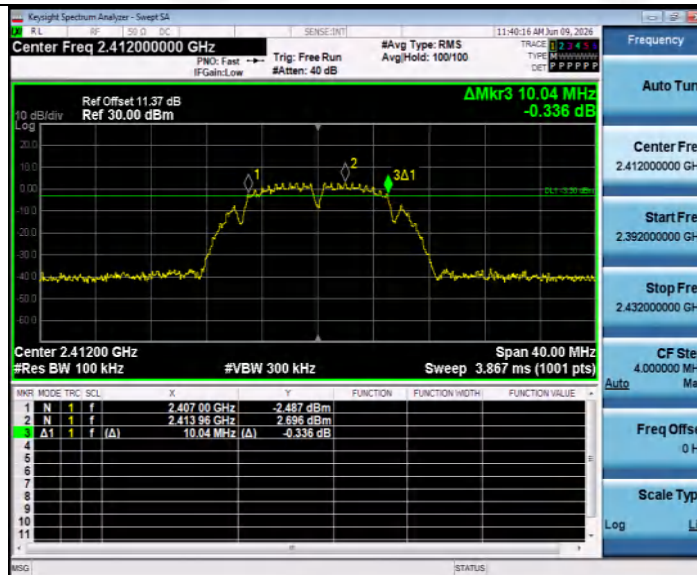
11N20MIMO_Ant1_2462



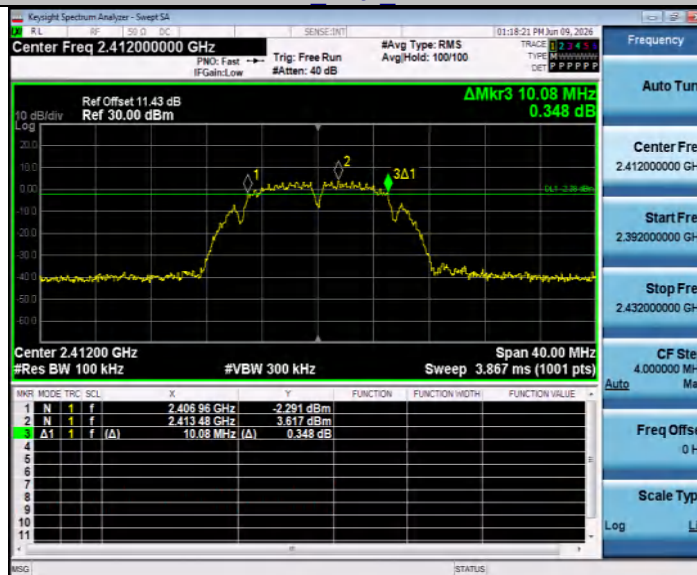
11N20MIMO_Ant2_2462



TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.040	2407.000	2417.040	0.5	PASS
	Ant2	2412	10.080	2406.960	2417.040	0.5	PASS
	Ant1	2437	10.040	2431.960	2442.000	0.5	PASS
	Ant2	2437	9.960	2432.040	2442.000	0.5	PASS
	Ant1	2462	9.800	2456.960	2466.760	0.5	PASS
	Ant2	2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	16.400	2403.800	2420.200	0.5	PASS
	Ant2	2412	16.360	2403.800	2420.160	0.5	PASS
	Ant1	2437	16.360	2428.800	2445.160	0.5	PASS
	Ant2	2437	16.400	2428.800	2445.200	0.5	PASS
	Ant1	2462	16.360	2453.800	2470.160	0.5	PASS
	Ant2	2462	16.320	2453.840	2470.160	0.5	PASS
11N20MIMO	Ant1	2412	17.000	2403.520	2420.520	0.5	PASS
	Ant2	2412	17.080	2403.480	2420.560	0.5	PASS
	Ant1	2437	17.560	2428.200	2445.760	0.5	PASS
	Ant2	2437	17.040	2428.480	2445.520	0.5	PASS
	Ant1	2462	17.040	2453.480	2470.520	0.5	PASS
	Ant2	2462	17.520	2453.240	2470.760	0.5	PASS



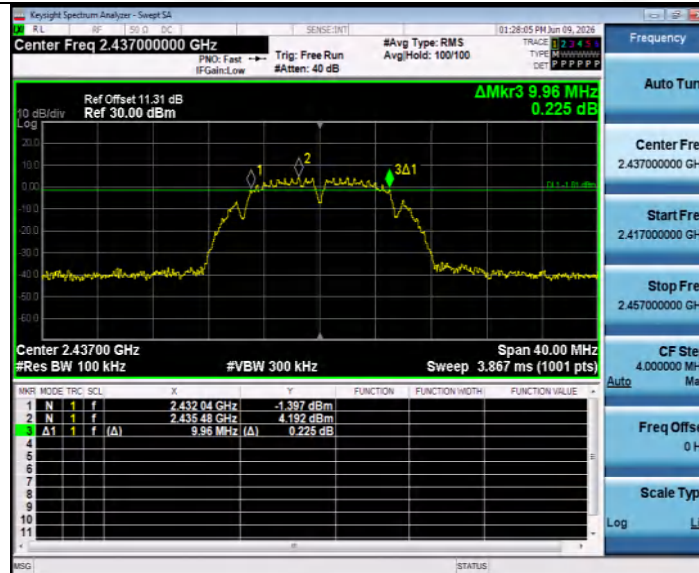
11B Ant1 2412



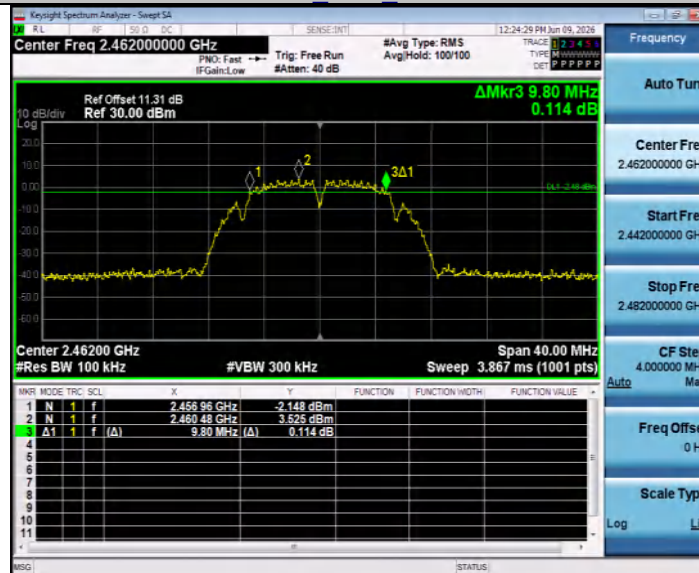
11B Ant2 2412



11B Ant1 2437



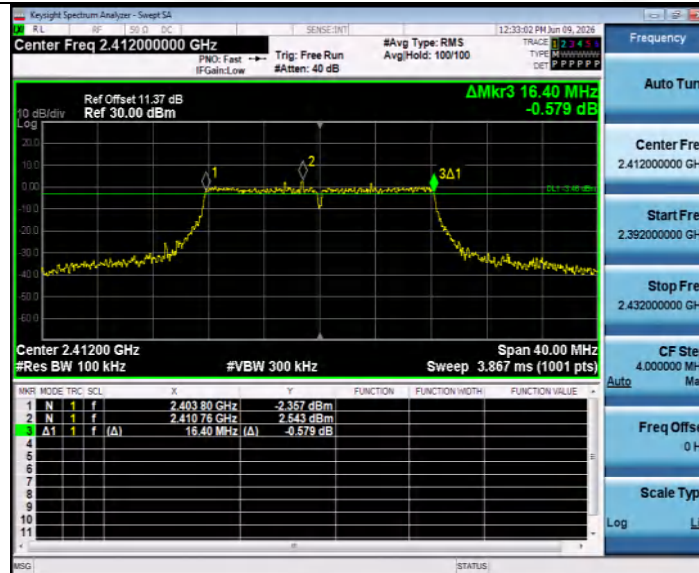
11B Ant2 2437



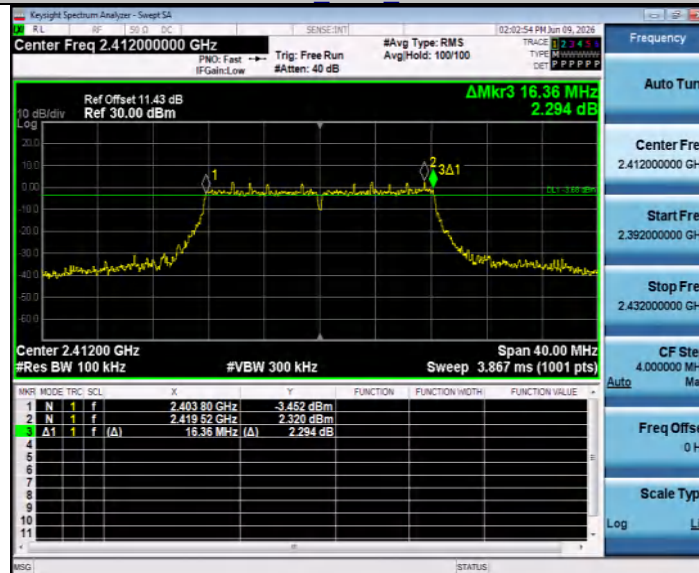
11B Ant1 2462



11B Ant2 2462



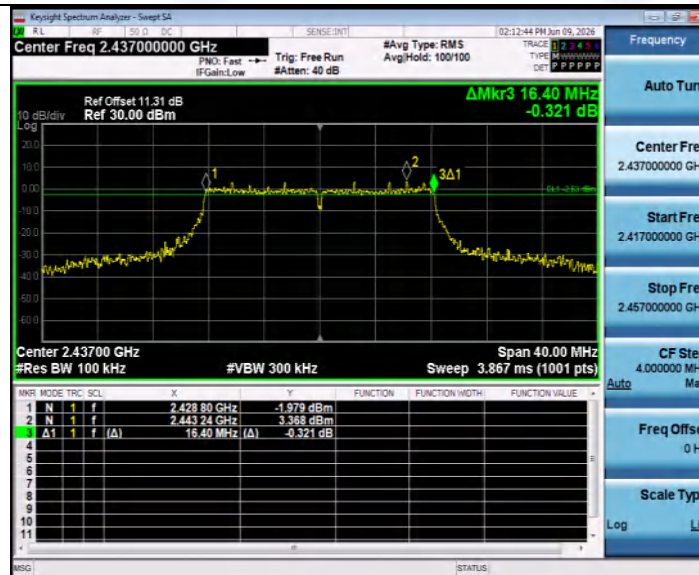
11G Ant1 2412



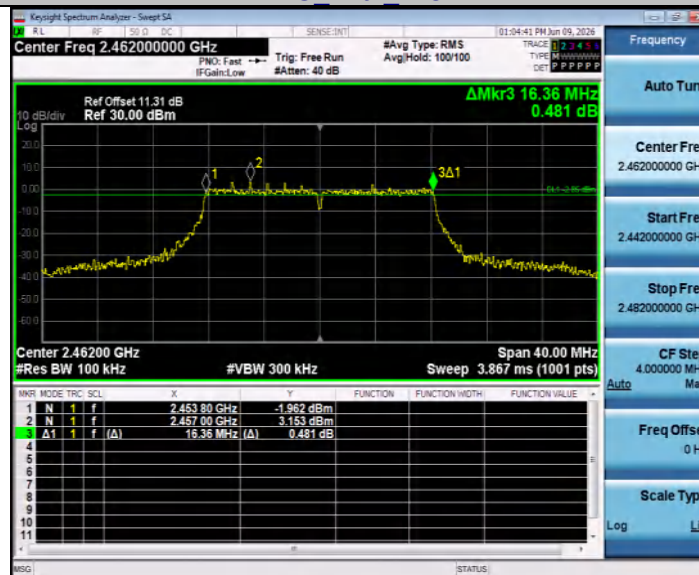
11G Ant2 2412



11G Ant1 2437



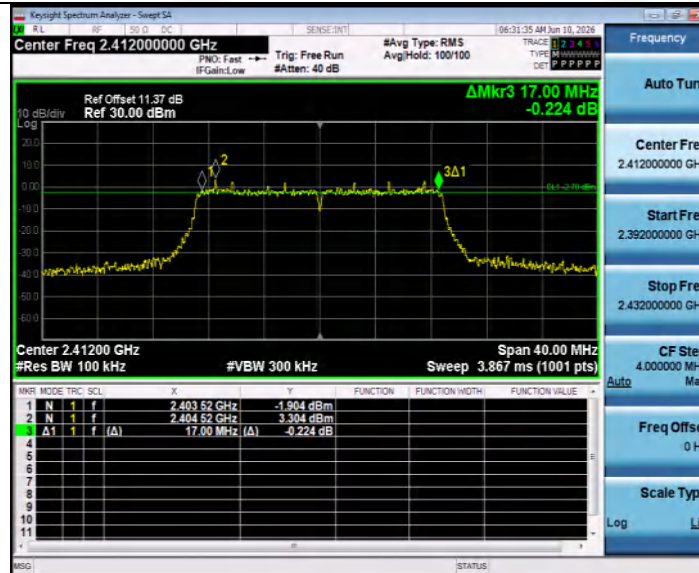
11G Ant2 2437



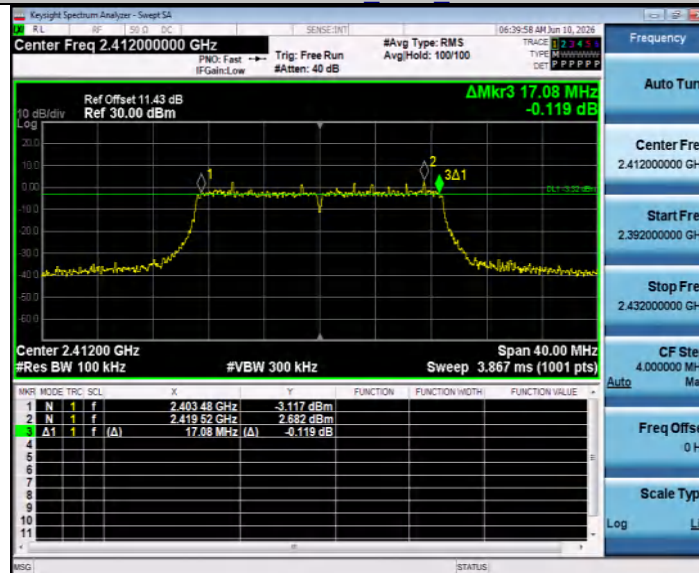
11G Ant1 2462



11G Ant2 2462



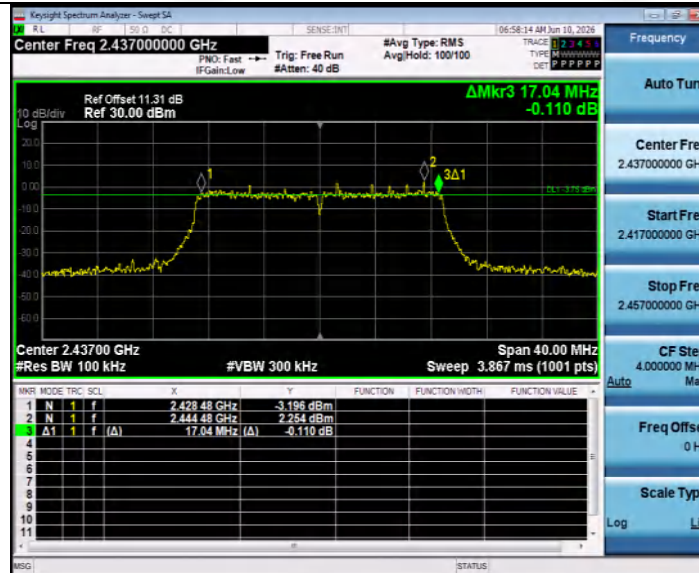
11N20MIMO_Ant1_2412



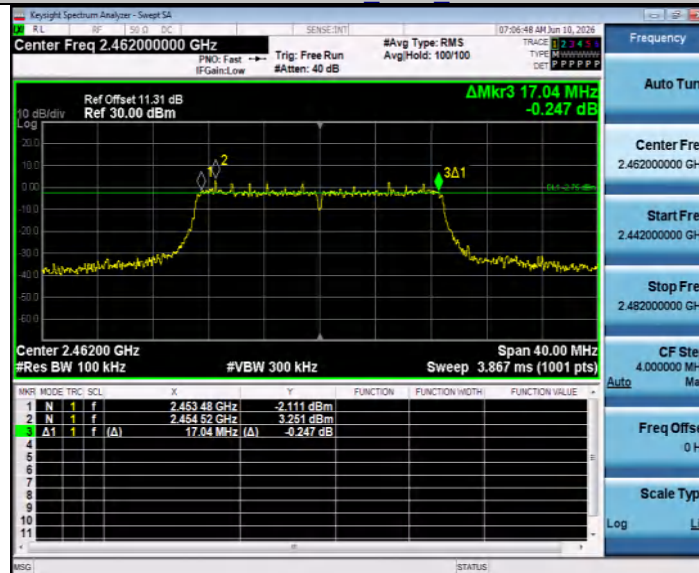
11N20MIMO_Ant2_2412



11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



8. PEAK OUTPUT POWER TEST

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10-2020+Cor 1-2023 and KDB558074 D01DTS Meas Guidancev05r02

8.1 APPLIED PROCEDURES/LIMIT

FCC Part15 (15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

8.2 TEST PROCEDURE

- The EUT was directly connected to the Power meter

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



8.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	DC 51.2V

Test Result: Peak Power

Test Mode	Antenna	Frequency [MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	15.72	≤30.00	PASS
	Ant2	2412	16.46	≤30.00	PASS
	Ant1	2437	16.35	≤30.00	PASS
	Ant2	2437	17.04	≤30.00	PASS
	Ant1	2462	16.31	≤30.00	PASS
	Ant2	2462	16.89	≤30.00	PASS
11G	Ant1	2412	21.45	≤30.00	PASS
	Ant2	2412	20.62	≤30.00	PASS
	Ant1	2437	21.96	≤30.00	PASS
	Ant2	2437	21.93	≤30.00	PASS
	Ant1	2462	21.76	≤30.00	PASS
	Ant2	2462	21.85	≤30.00	PASS
11N20MIMO	Ant1	2412	20.91	≤30.00	PASS
	Ant2	2412	20.42	≤30.00	PASS
	total	2412	23.68	≤30.00	PASS
	Ant1	2437	20.60	≤30.00	PASS
	Ant2	2437	19.83	≤30.00	PASS
	total	2437	23.24	≤30.00	PASS
	Ant1	2462	20.82	≤30.00	PASS
	Ant2	2462	19.91	≤30.00	PASS
	total	2462	23.40	≤30.00	PASS

Remark:

Antenna gain: 802.11 b/g/n Max 2.48dBi



9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10-2020+Cor 1-2023 and KDB558074 D01DTS Meas Guidancev05r02

9.1 APPLICABLE STANDARD

in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in§15.205(a), must also comply with the radiated emission limits specified in15.209(a).

9.2 TEST PROCEDURE

Using the following spectrum analyzer setting:

- A) Set the RBW = 100KHz.
- B) Set the VBW = 300KHz.
- C) Sweep time = auto couple.
- D) Detector function = peak.
- E) Trace mode = max hold.
- F) Allow trace to fully stabilize.

9.3 DEVIATION FROM STANDARD

No deviation.

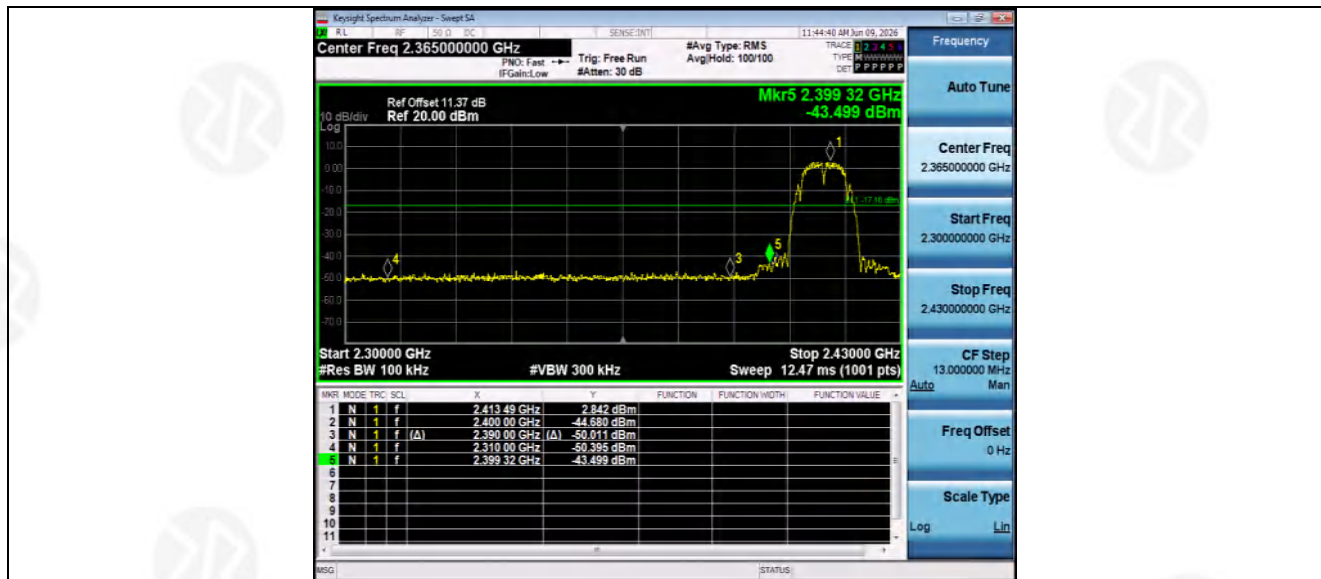
9.4 TEST SETUP



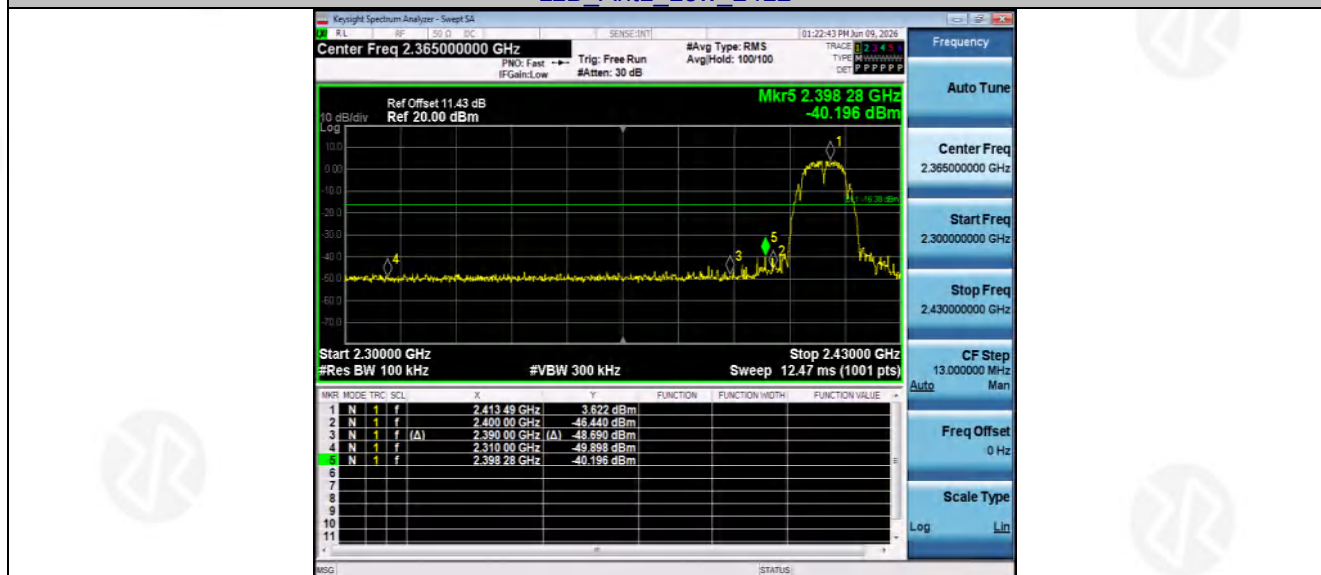
9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

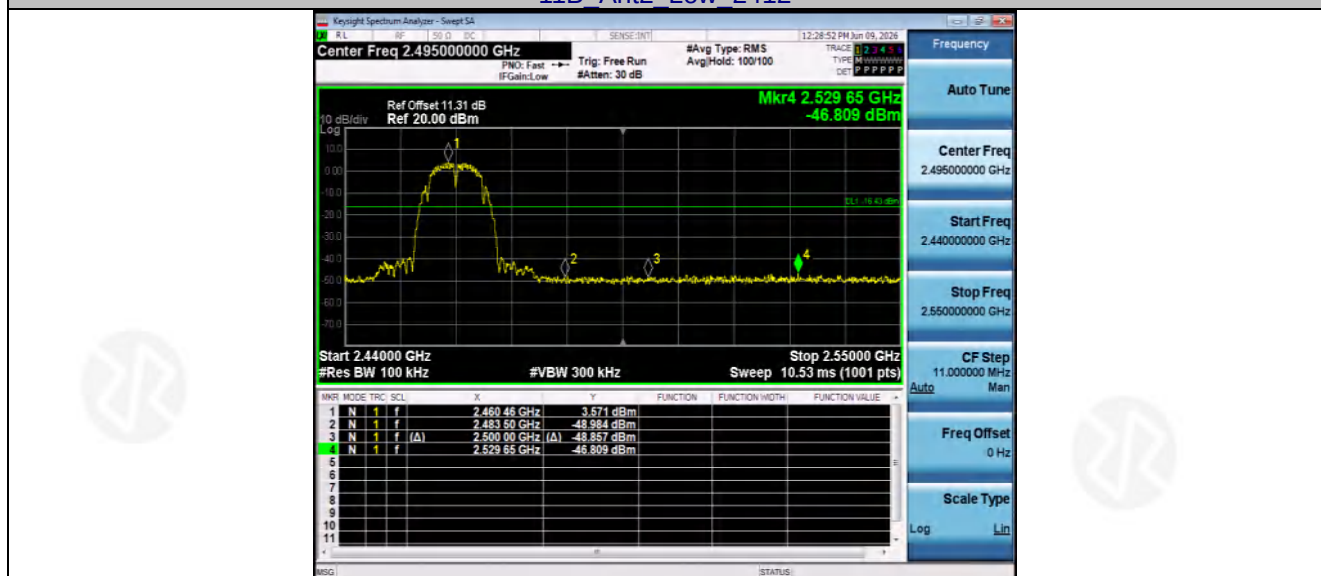
9.6 TEST RESULTS



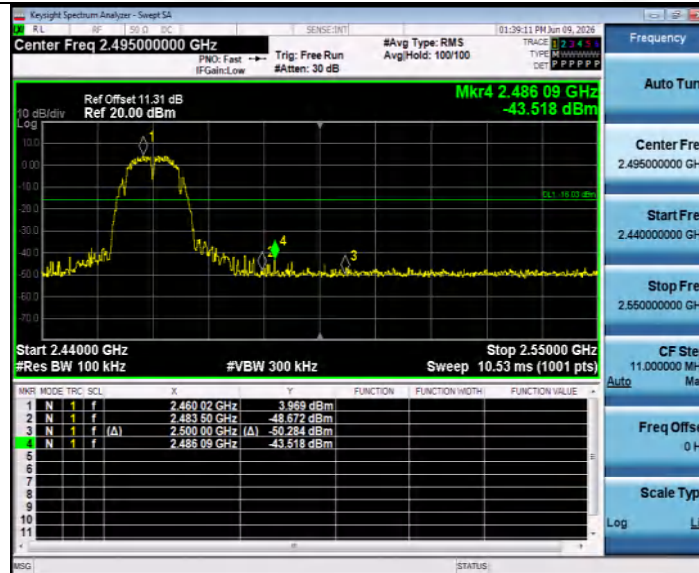
11B_Ant1_Low_2412



11B_Ant2_Low_2412



11B_Ant1_High_2462



11B Ant2 High 2462



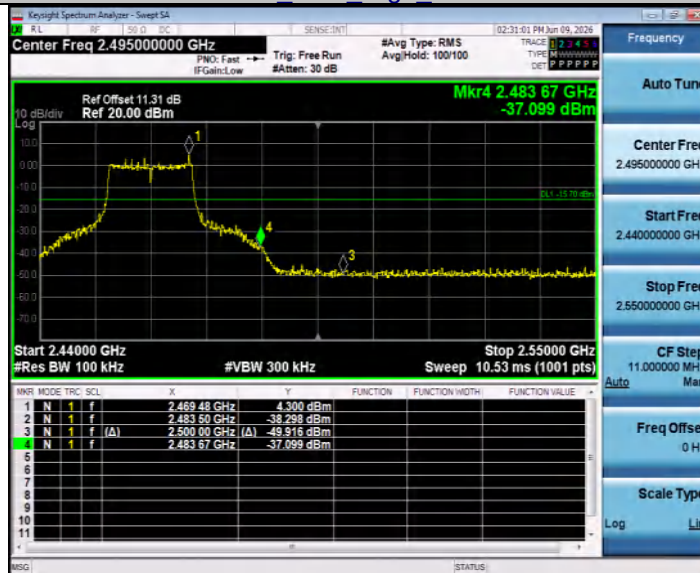
11G Ant1 Low 2412



11G Ant2 Low 2412



11G Ant1 High 2462



11G Ant2 High 2462



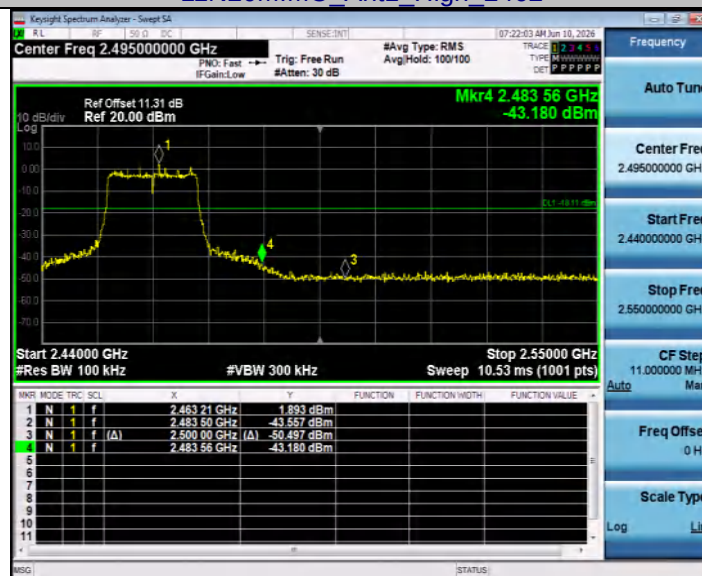
11N20MIMO Ant1 Low 2412



11N20MIMO Ant2 Low 2412



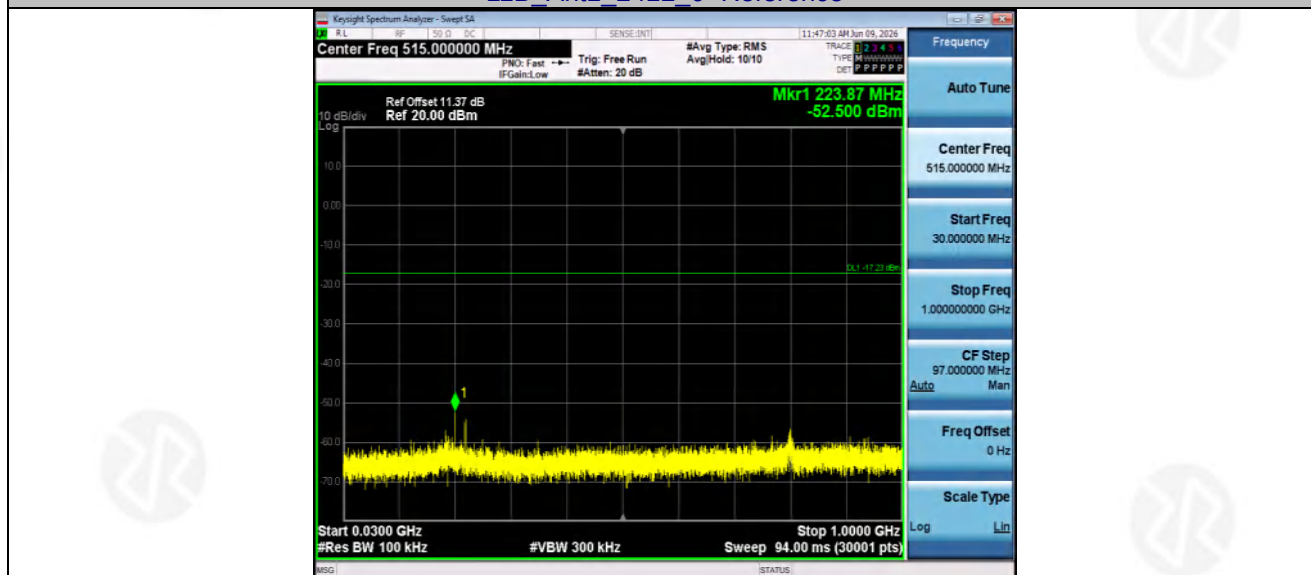
11N20MIMO Ant1 High 2462



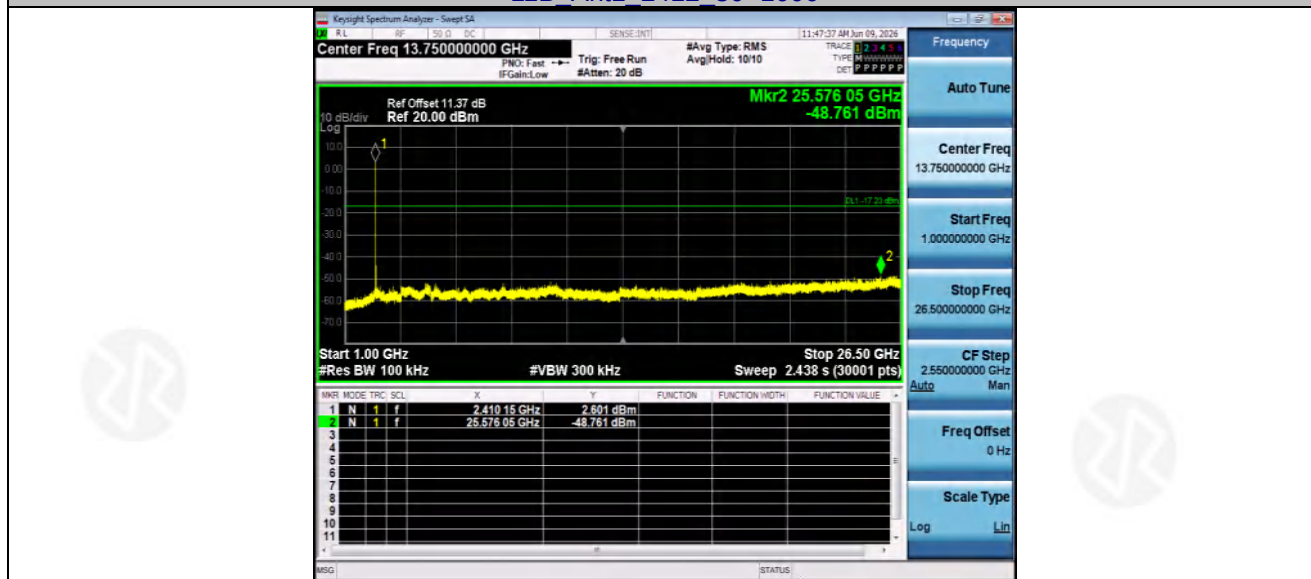
11N20MIMO Ant2 High 2462



11B_Ant1_2412_0~Reference



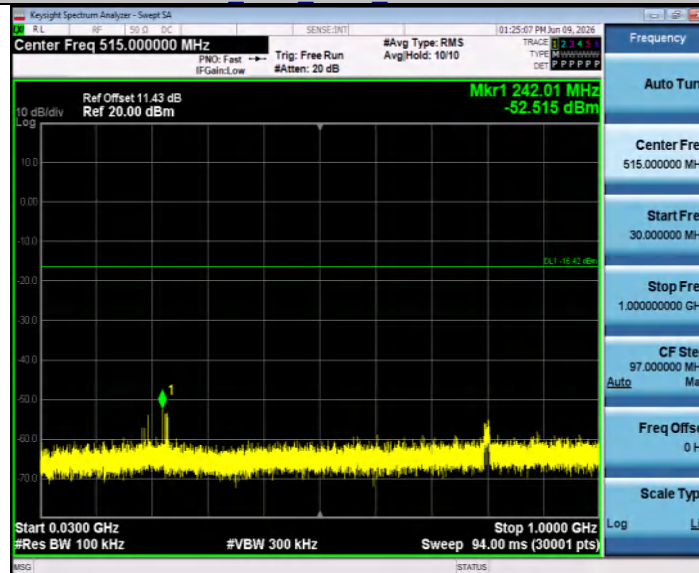
11B_Ant1_2412_30~1000



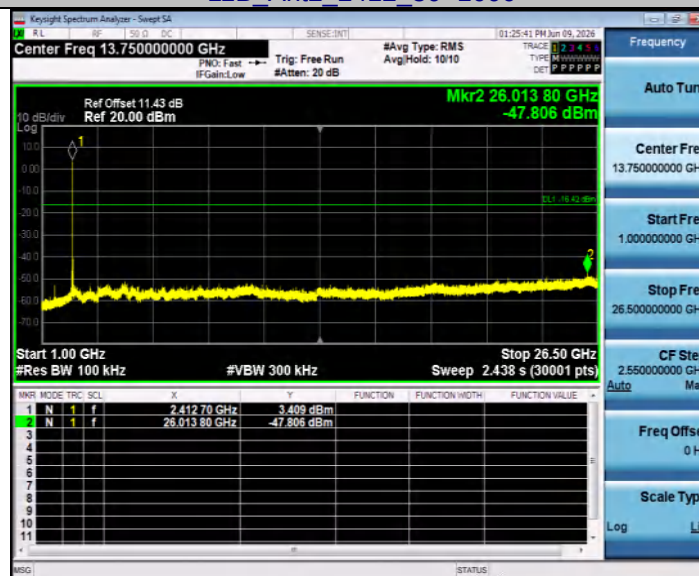
11B_Ant1_2412_1000~26500



11B_Ant2_2412_0~Reference



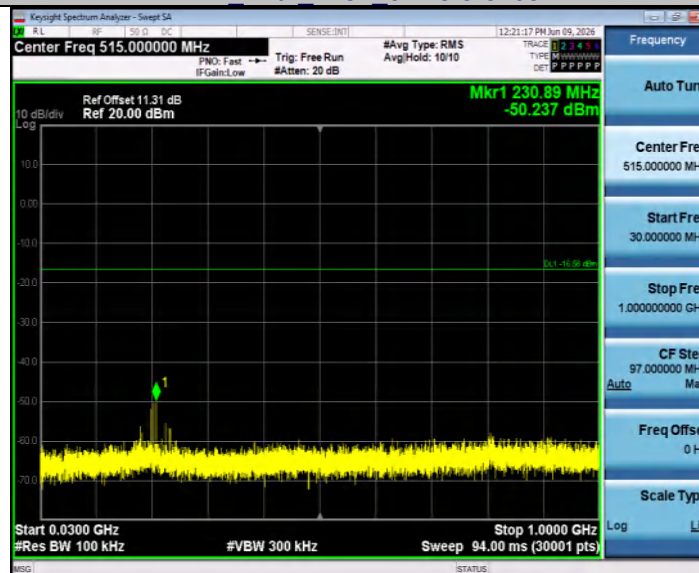
11B_Ant2_2412_30~1000



11B_Ant2_2412_1000~26500



11B_Ant1_2437_0~Reference



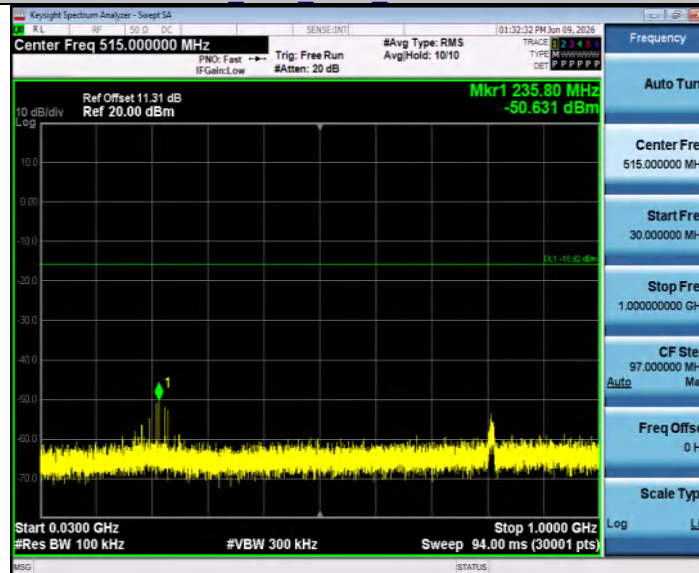
11B_Ant1_2437_30~1000



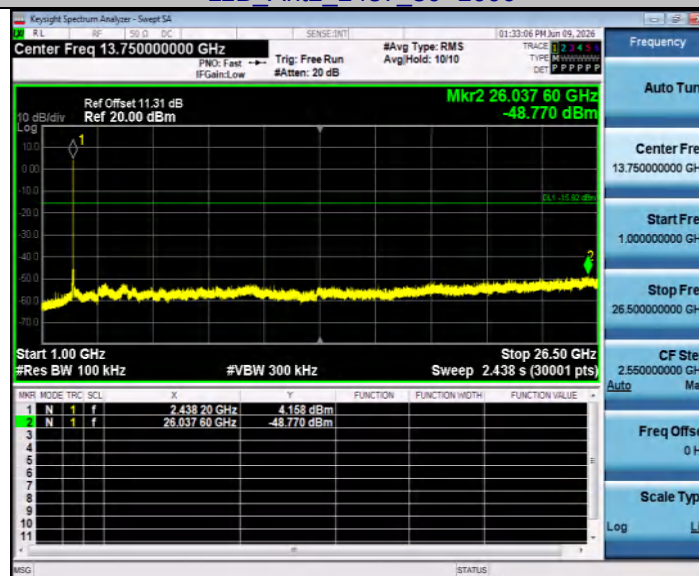
11B_Ant1_2437_1000~26500



11B_Ant2_2437_0~Reference



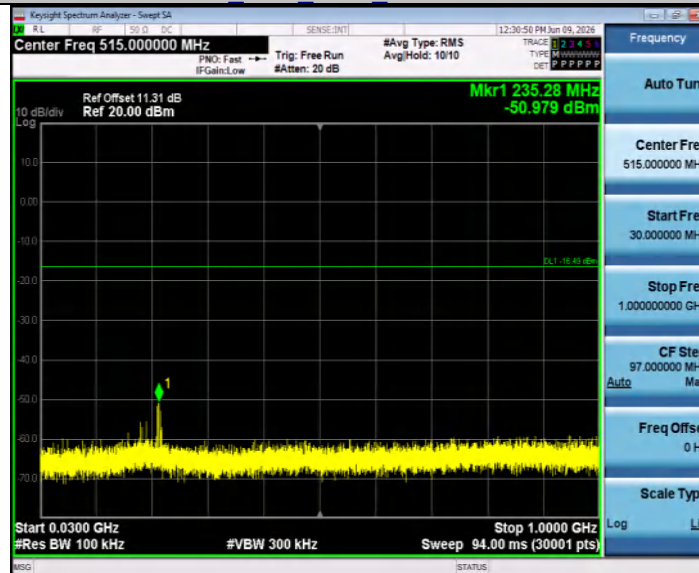
11B_Ant2_2437_30~1000



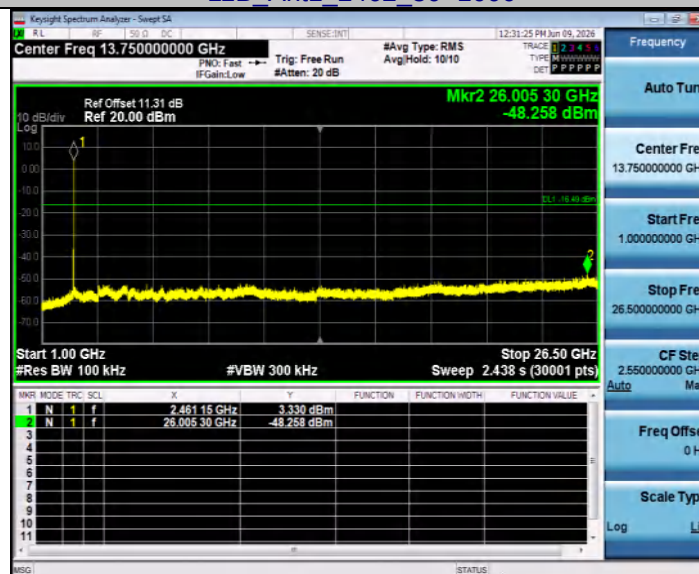
11B_Ant2_2437_1000~26500



11B_Ant1_2462_0~Reference



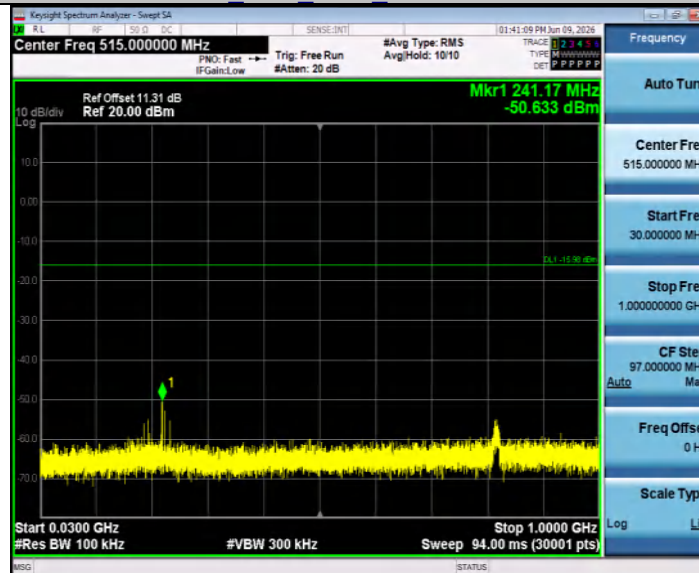
11B_Ant1_2462_30~1000



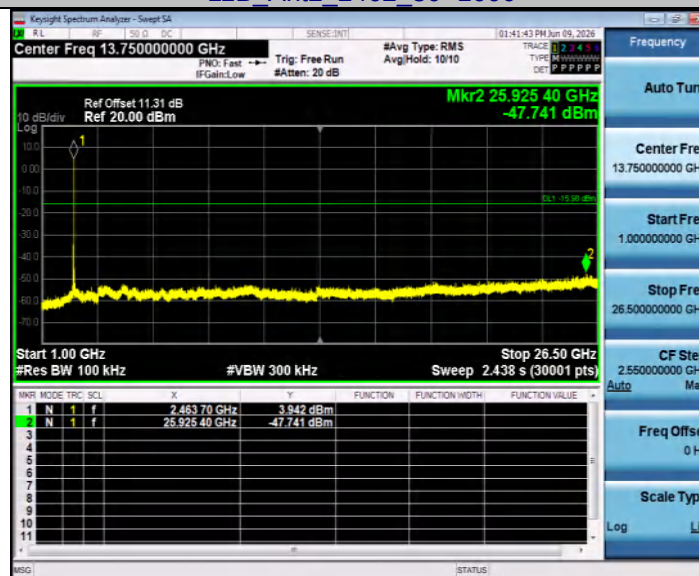
11B_Ant1_2462_1000~26500



11B_Ant2_2462_0~Reference



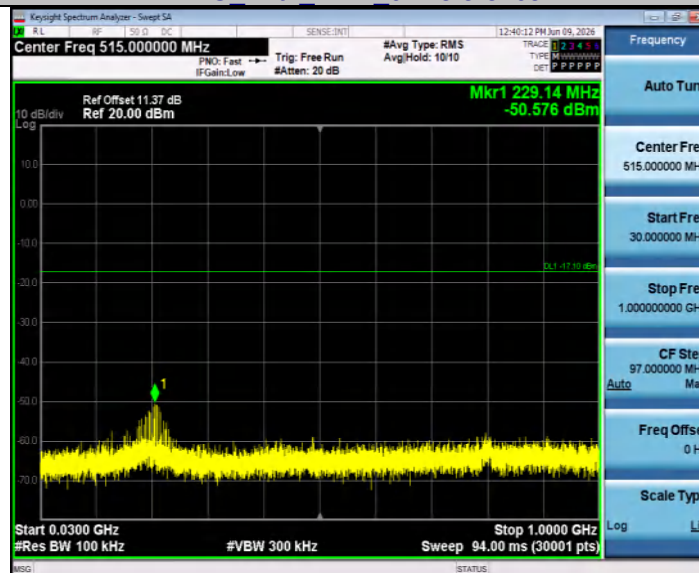
11B_Ant2_2462_30~1000



11B_Ant2_2462_1000~26500



11G_Ant1_2412_0~Reference



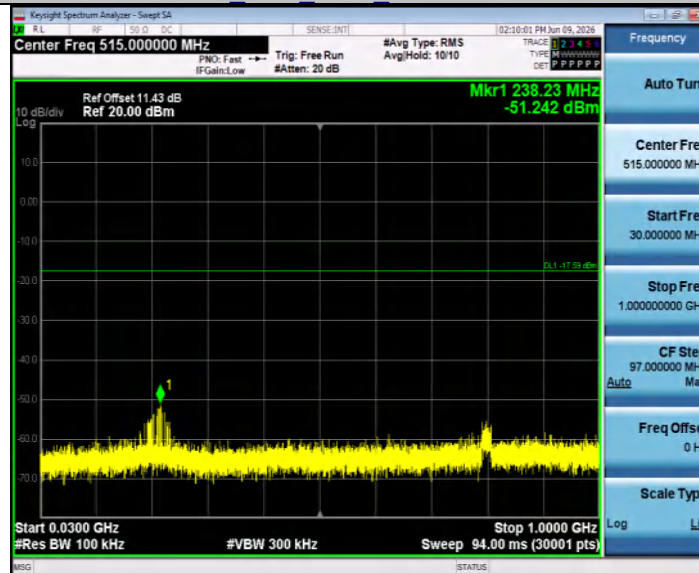
11G_Ant1_2412_30~1000



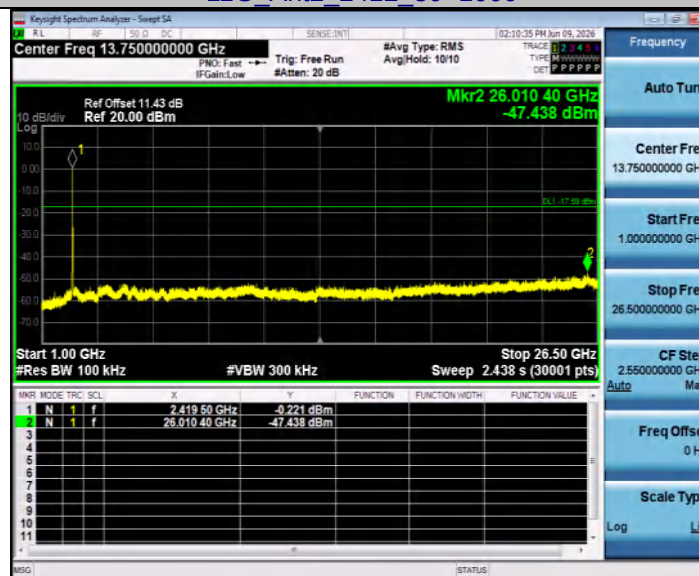
11G_Ant1_2412_1000~26500



11G_Ant2_2412_0~Reference



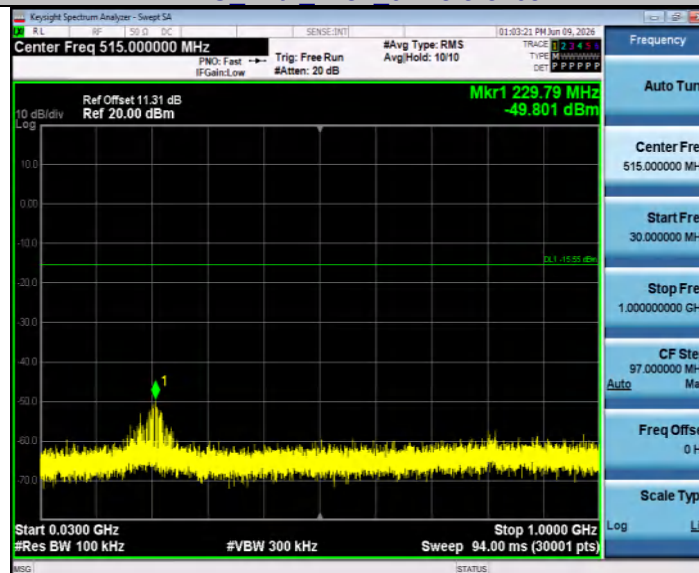
11G_Ant2_2412_30~1000



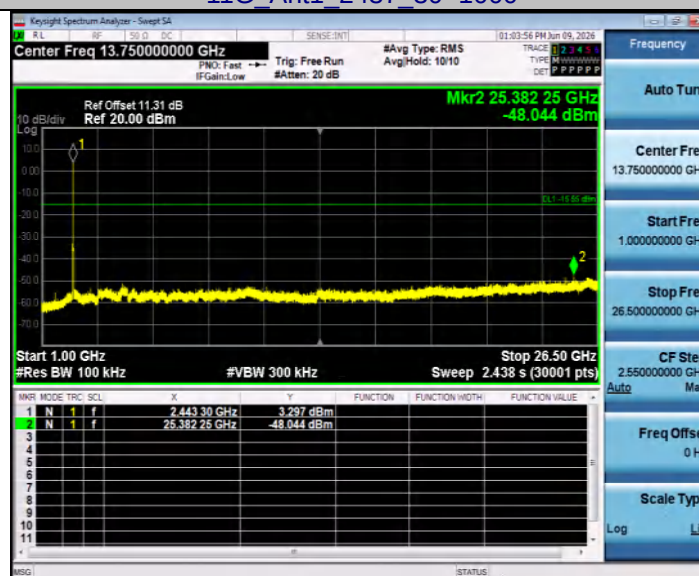
11G_Ant2_2412_1000~26500



11G Ant1 2437 0~Reference



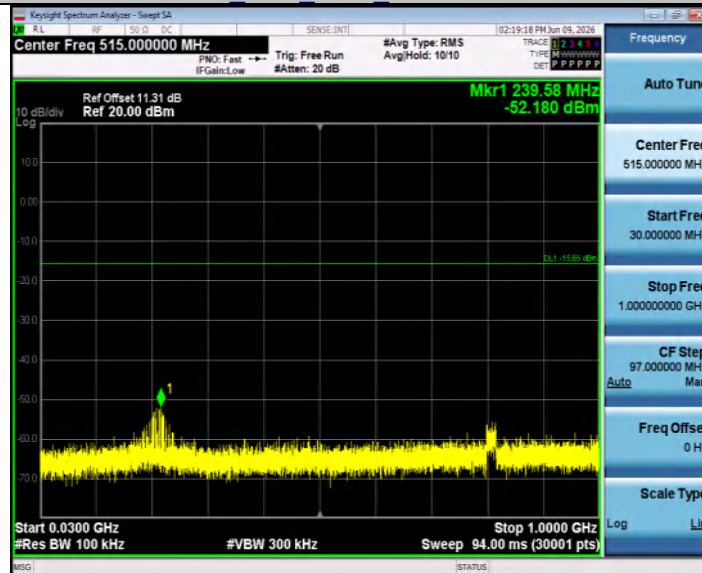
11G Ant1 2437 30~1000



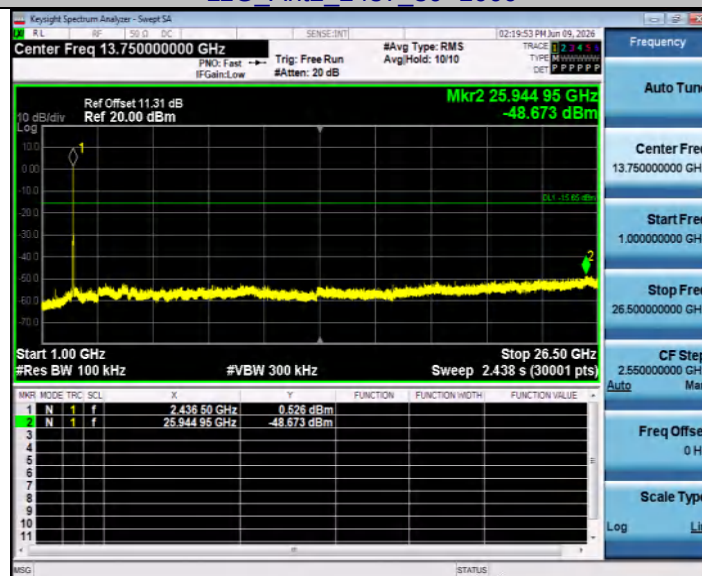
11G Ant1 2437 1000~26500



11G_Ant2_2437_0~Reference



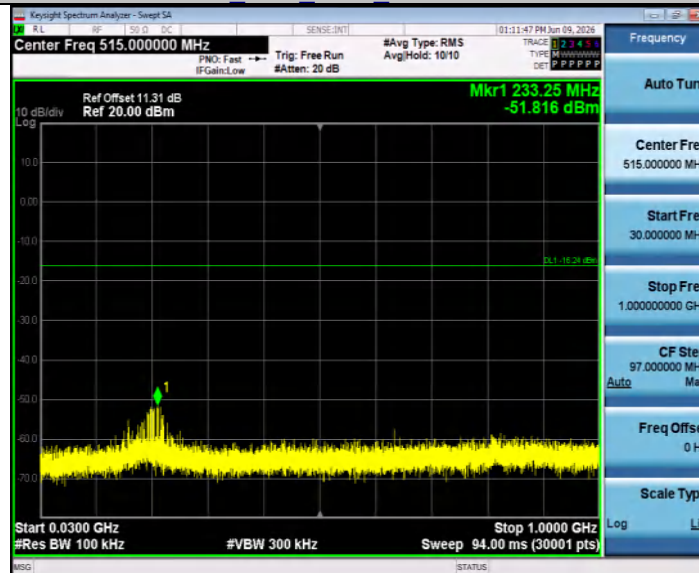
11G_Ant2_2437_30~1000



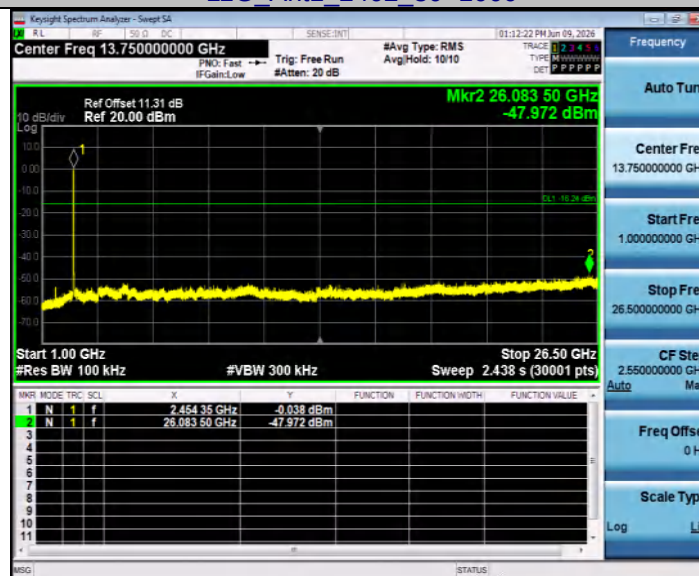
11G_Ant2_2437_1000~26500



11G_Ant1_2462_0~Reference



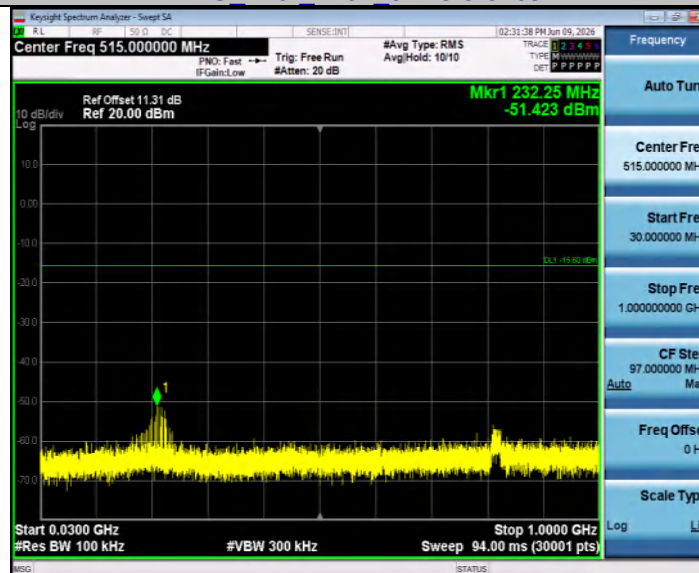
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



11G_Ant2_2462_0~Reference



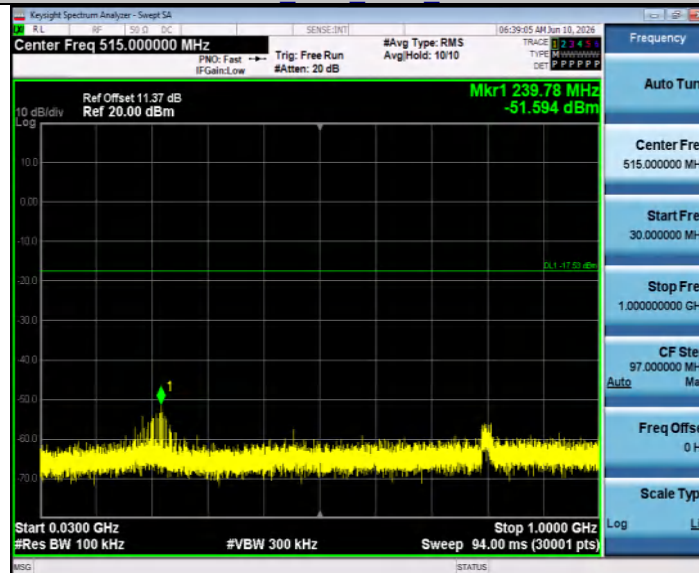
11G_Ant2_2462_30~1000



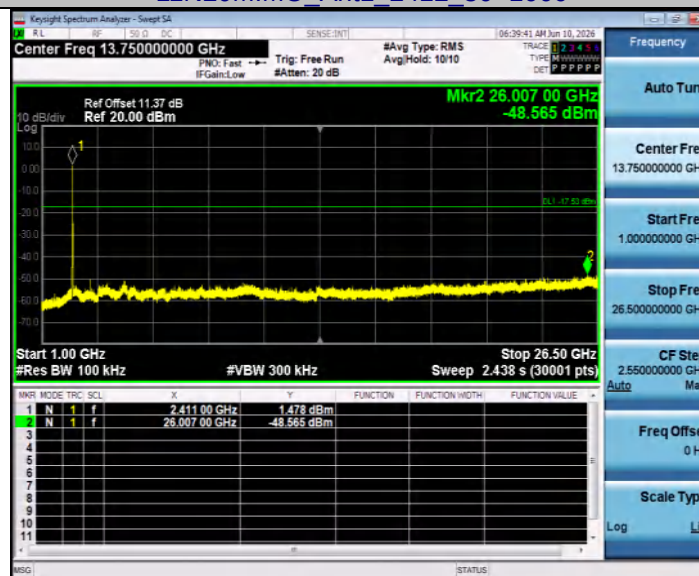
11G_Ant2_2462_1000~26500



11N20MIMO Ant1 2412 0~Reference



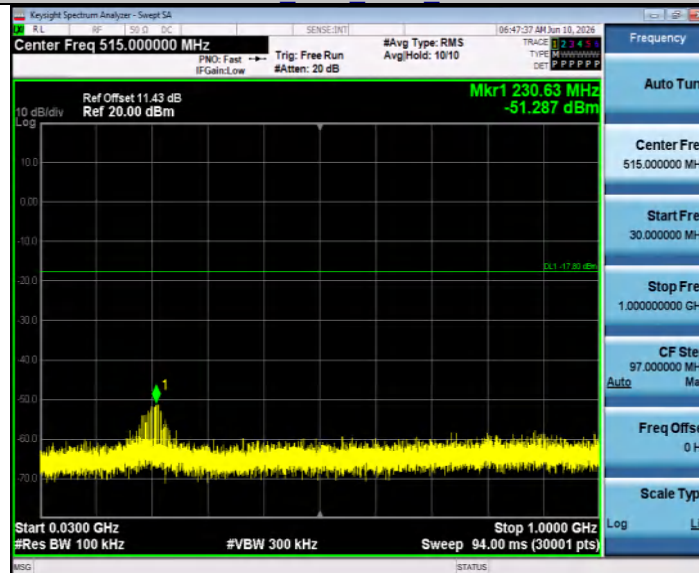
11N20MIMO Ant1 2412 30~1000



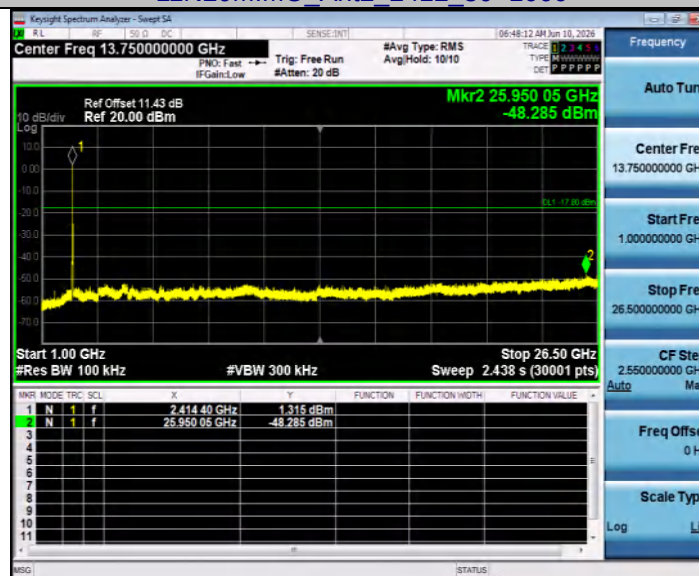
11N20MIMO Ant1 2412 1000~26500



11N20MIMO Ant2 2412 0~Reference



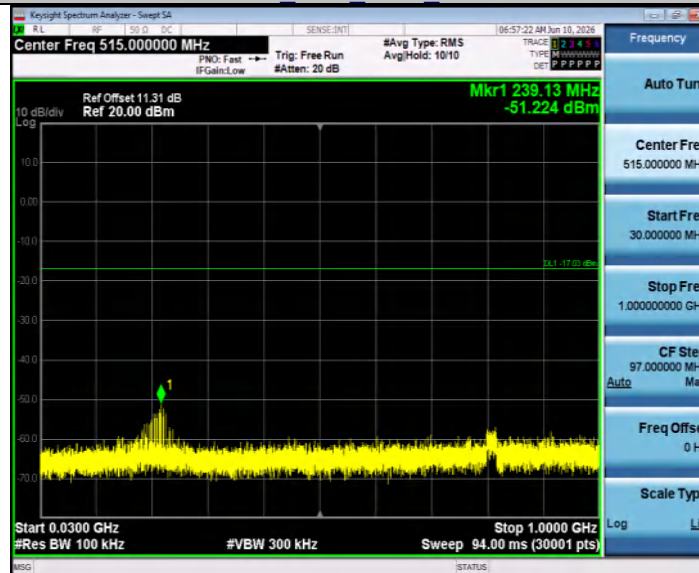
11N20MIMO Ant2 2412 30~1000



11N20MIMO Ant2 2412 1000~26500



11N20MIMO Ant1 2437 0-Reference



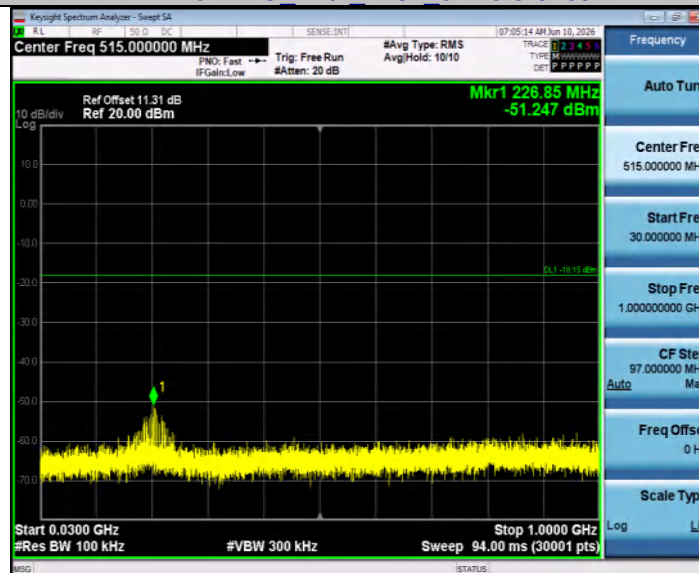
11N20MIMO Ant1 2437 30-1000



11N20MIMO Ant1 2437 1000-26500



11N20MIMO Ant2 2437 0~Reference



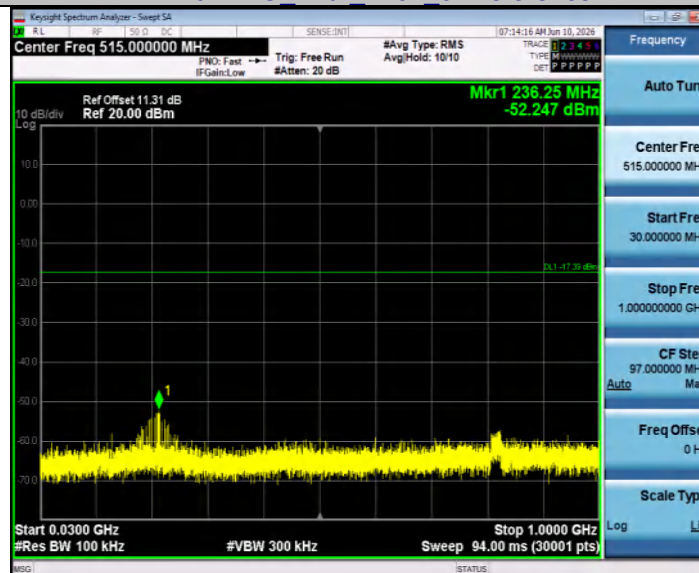
11N20MIMO Ant2 2437 30~1000



11N20MIMO Ant2 2437 1000~26500



11N20MIMO Ant1_2462_0~Reference



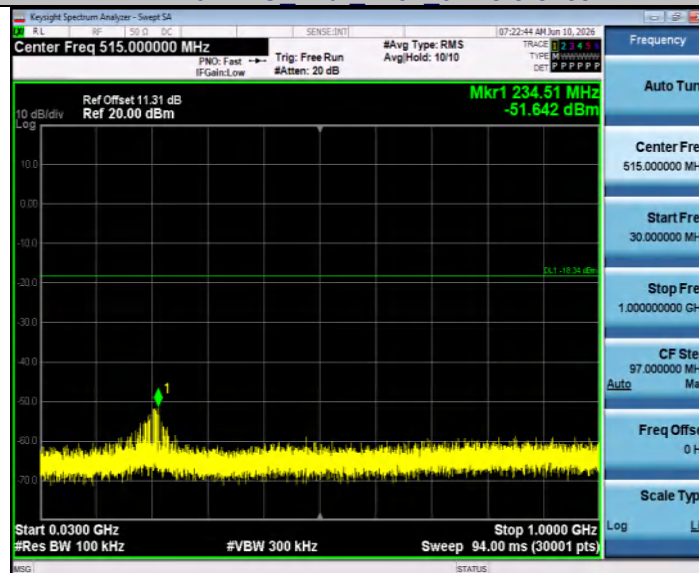
11N20MIMO Ant1_2462_30~1000



11N20MIMO Ant1_2462_1000~26500



11N20MIMO Ant2 2462 0~Reference



11N20MIMO Ant2 2462 30~1000



11N20MIMO Ant2 2462 1000~26500



10. DUTY CYCLE

Test Method:	ANSI C63.10-2020+Cor 1-2023
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10.1 APPLIED PROCEDURES / LIMIT

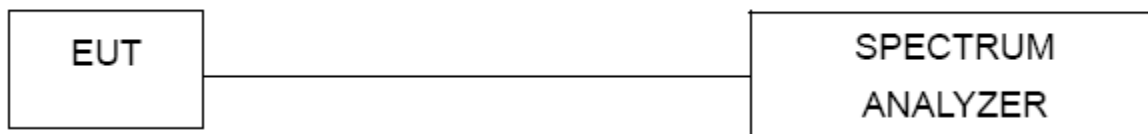
Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.
- b) The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
 - 1) Set the center frequency of the instrument to the center frequency of the transmission.
 - 2) Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.
 - 3) Set $VBW \geq RBW$. Set detector = peak or average.
 - 4) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \leq 16.7 \mu s$.)

10.2 DEVIATION FROM STANDARD

No deviation.

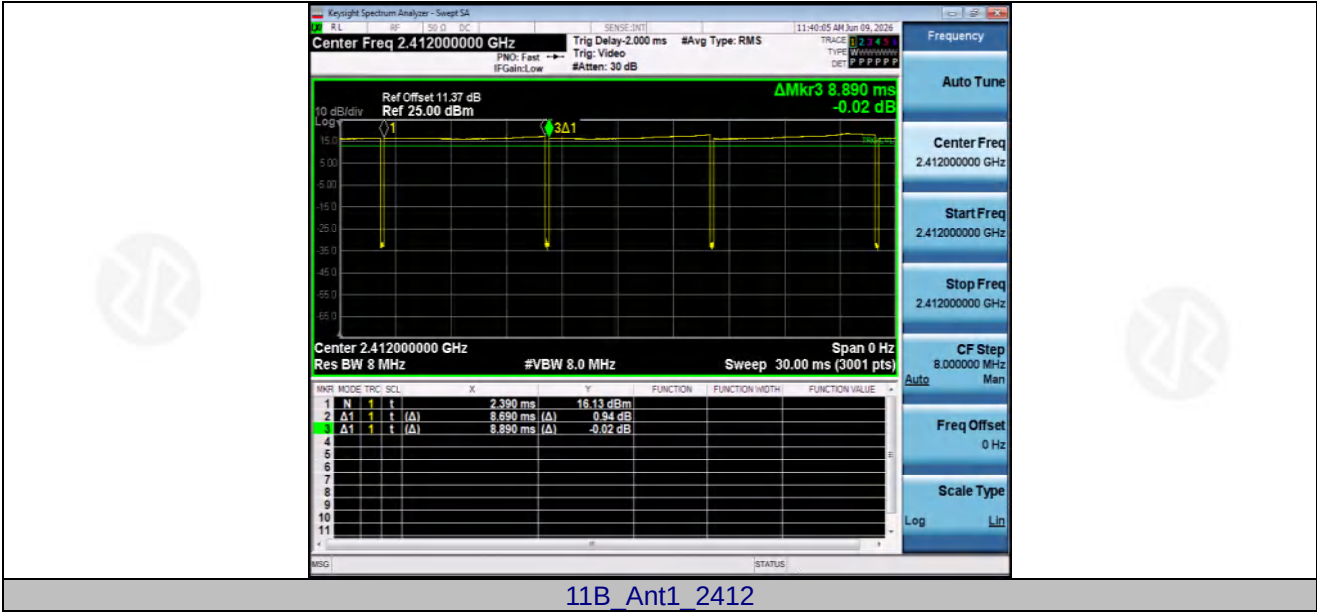
10.3 TEST SETUP

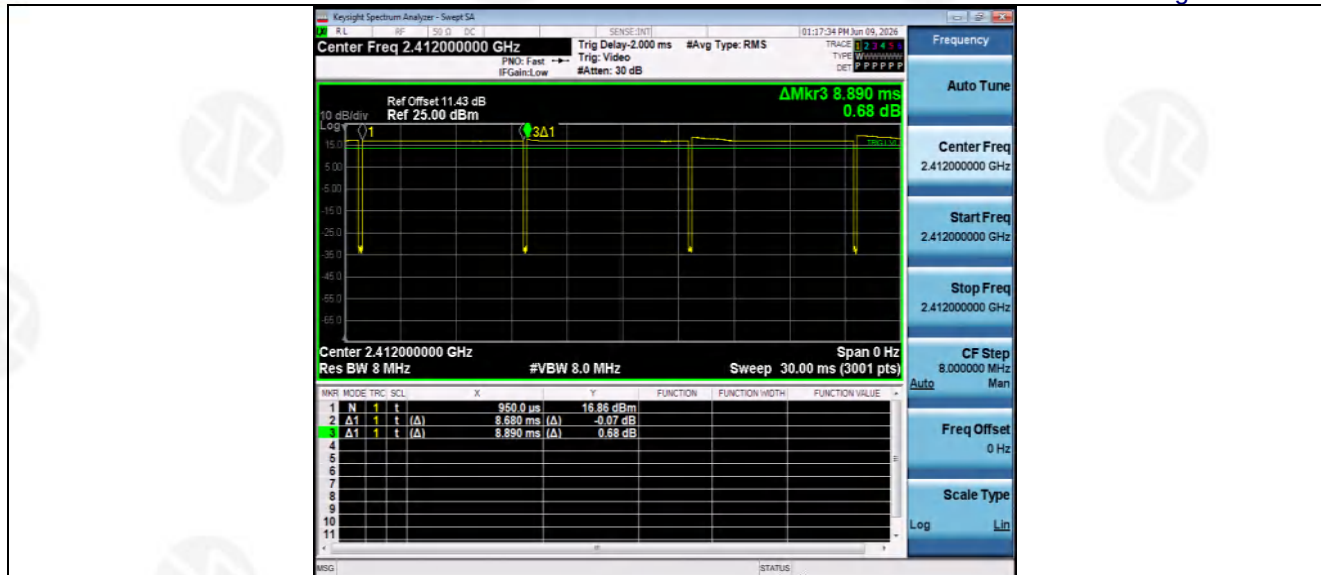




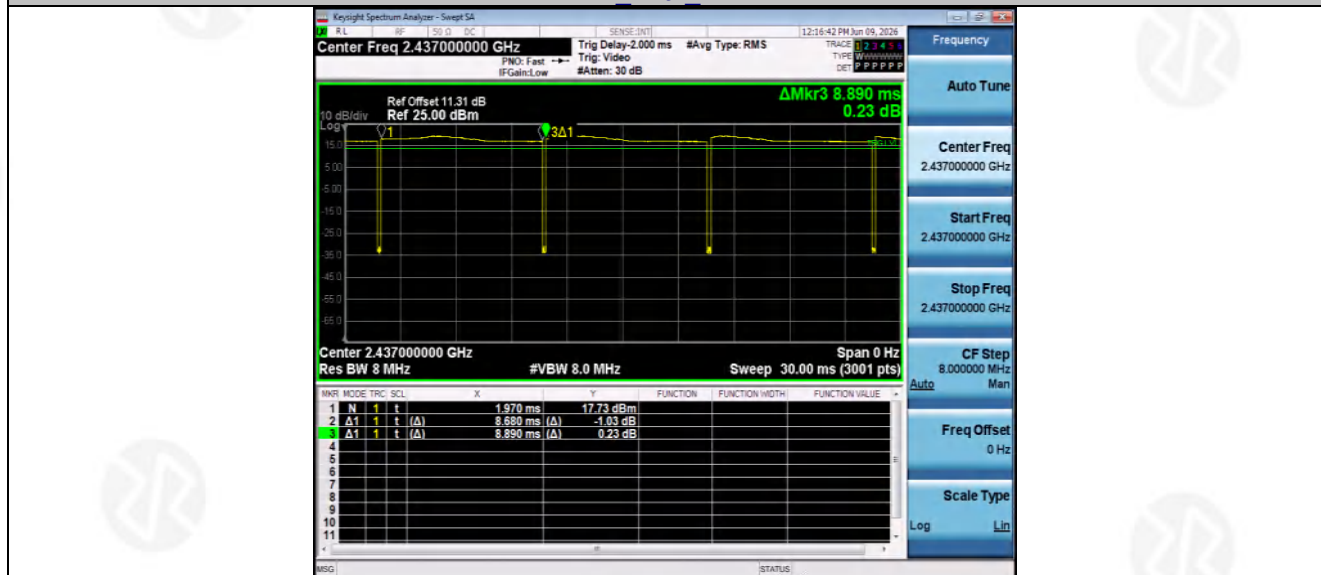
10.4 TEST RESULTS

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	8.69	8.89	97.75
	Ant2	2412	8.68	8.89	97.64
	Ant1	2437	8.68	8.89	97.64
	Ant2	2437	8.69	8.89	97.75
	Ant1	2462	8.69	8.89	97.75
	Ant2	2462	8.68	8.89	97.64
11G	Ant1	2412	1.44	1.65	87.27
	Ant2	2412	1.44	1.65	87.27
	Ant1	2437	1.44	1.65	87.27
	Ant2	2437	1.44	1.65	87.27
	Ant1	2462	1.44	1.65	87.27
	Ant2	2462	1.44	1.65	87.27
11N20MIMO	Ant1	2412	1.35	1.55	87.10
	Ant2	2412	1.34	1.55	86.45
	Ant1	2437	1.34	1.55	86.45
	Ant2	2437	1.34	1.55	86.45
	Ant1	2462	1.35	1.55	87.10
	Ant2	2462	1.35	1.55	87.10

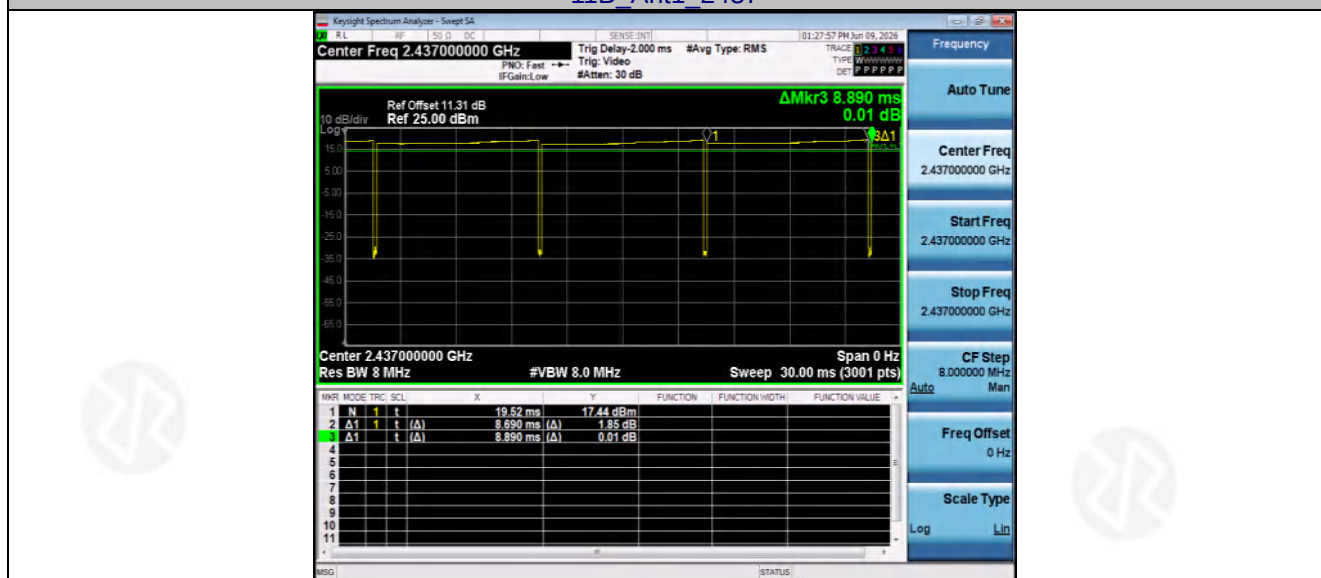




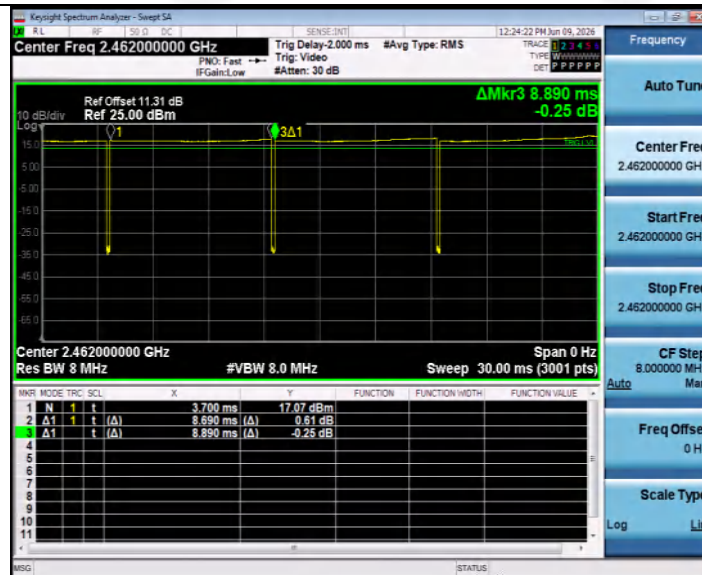
11B Ant2 2412



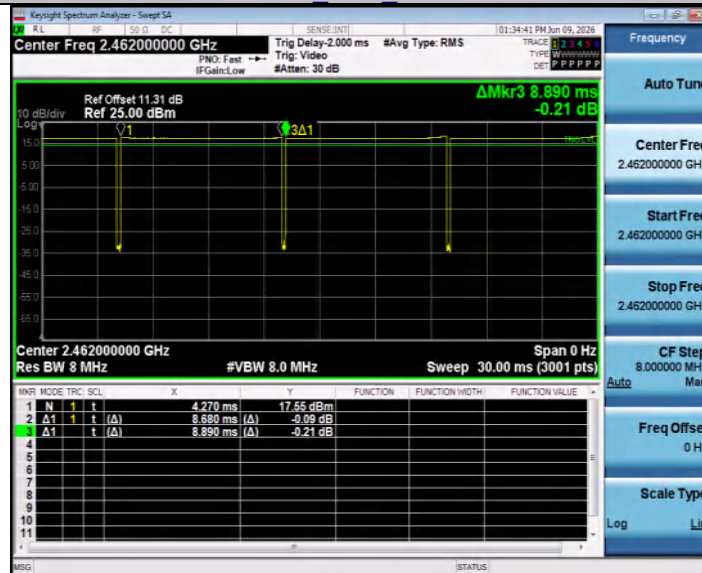
11B Ant1 2437



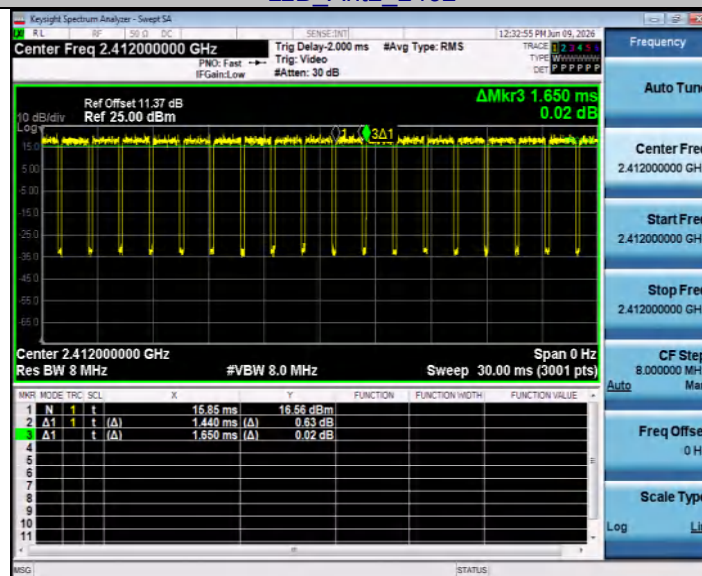
11B Ant2 2437



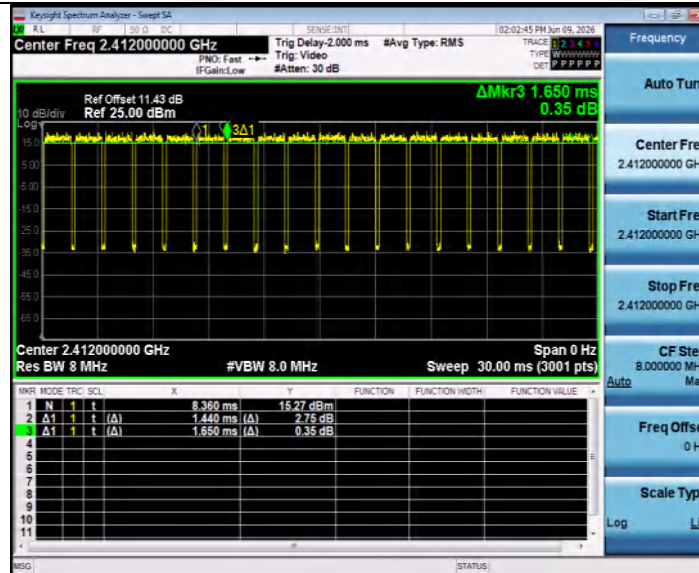
11B Ant1 2462



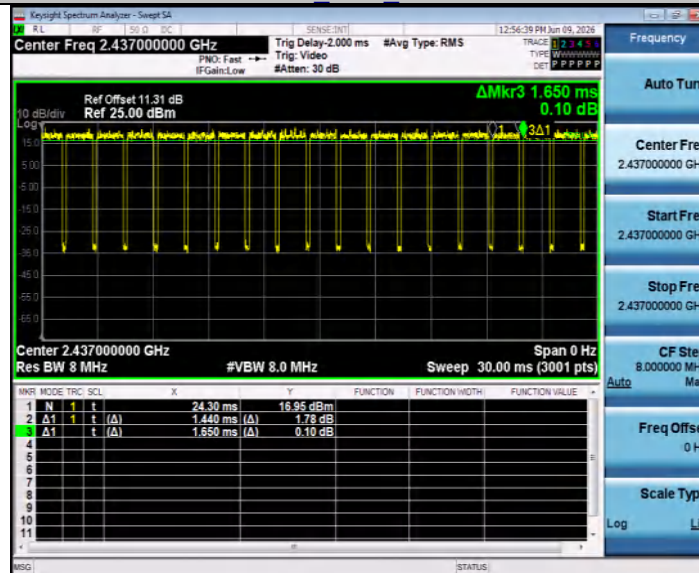
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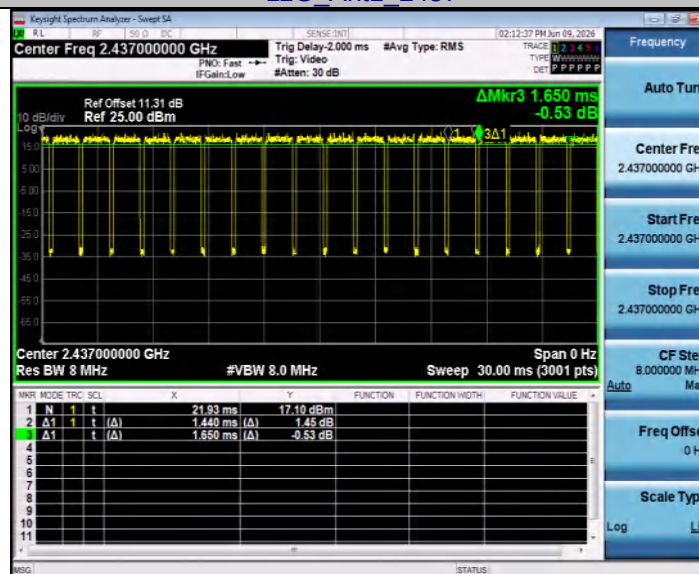
11G Ant1 2412



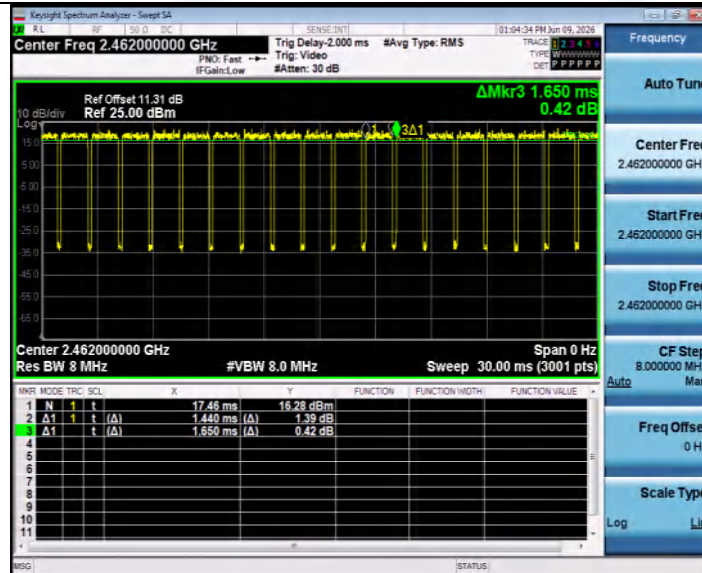
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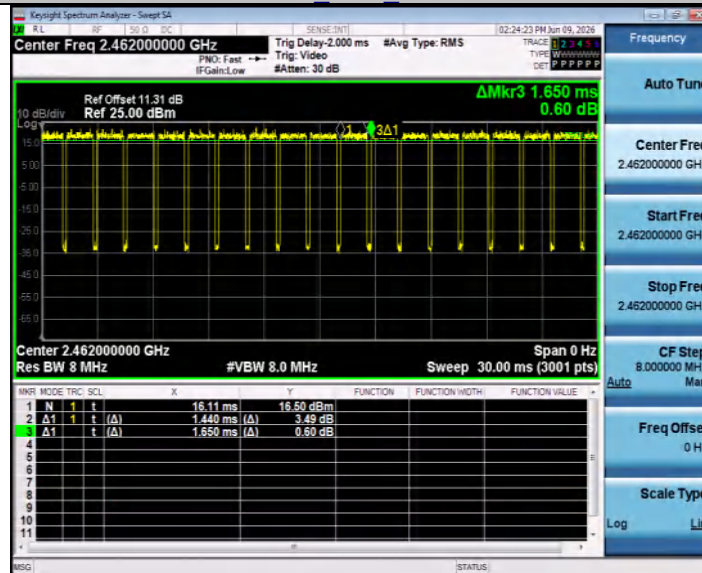
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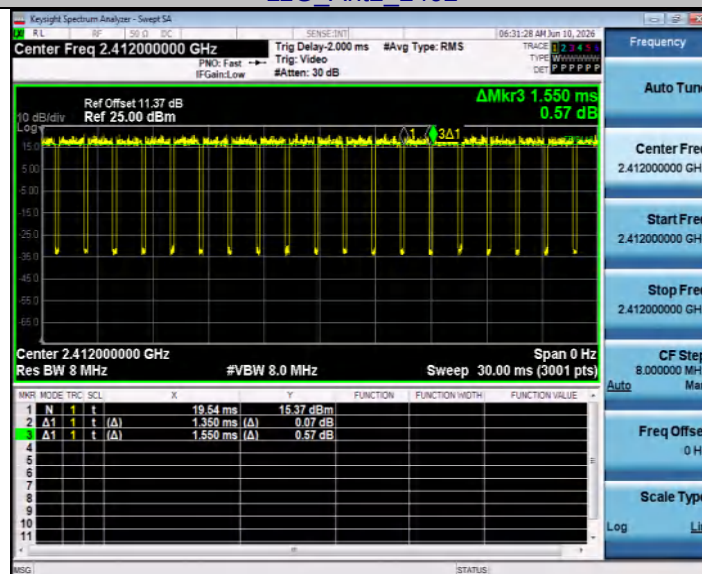
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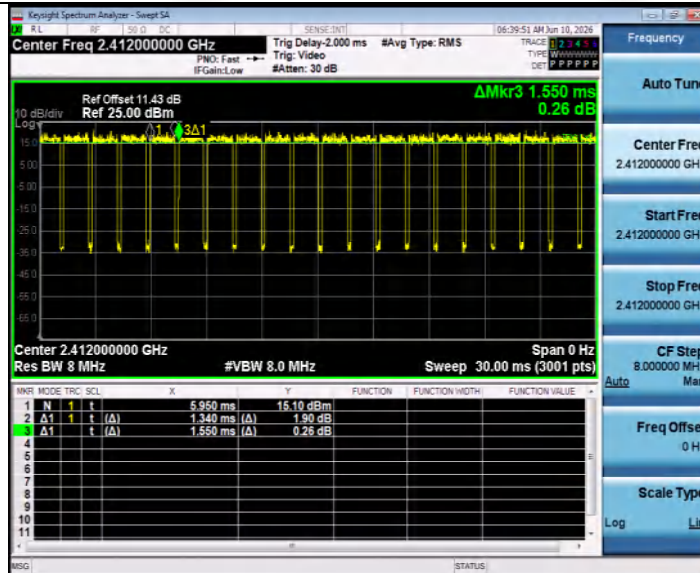
11G Ant1 2462



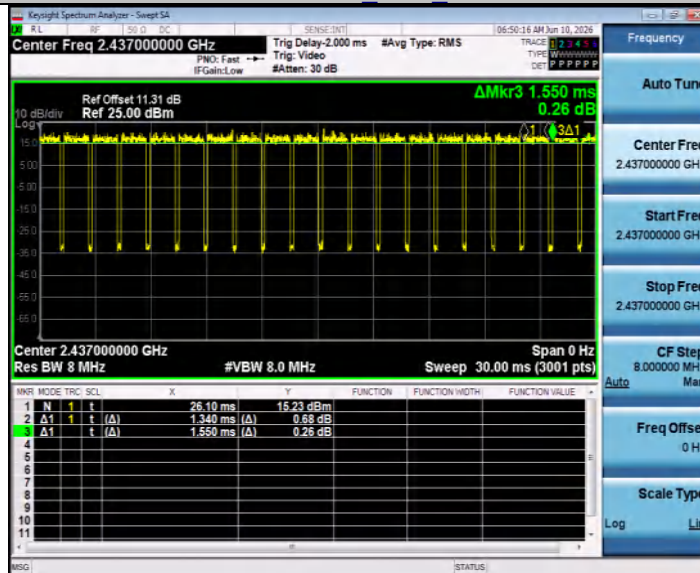
11G Ant2 2462



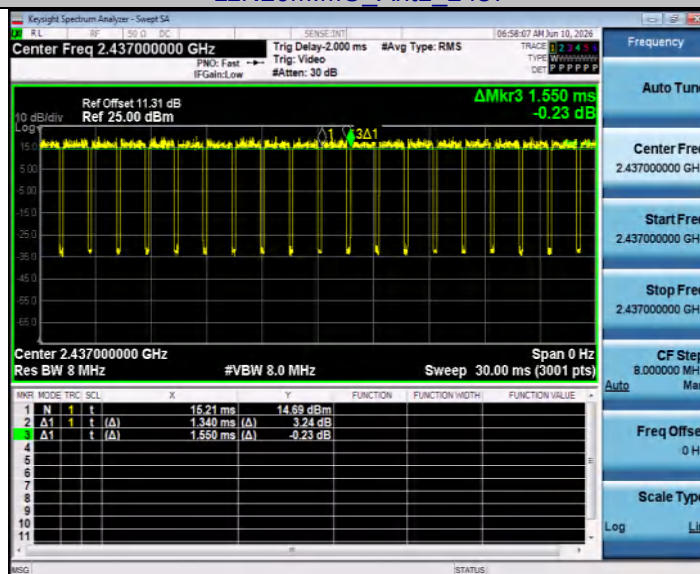
11N20MIMO Ant1 2412



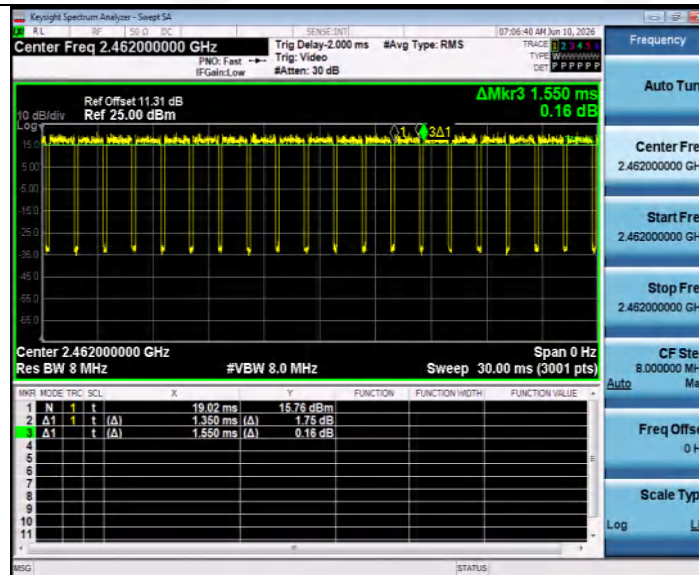
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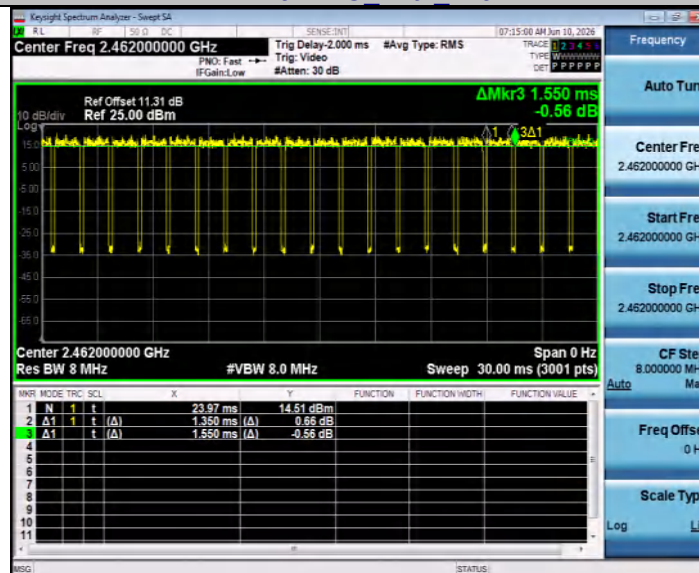
11N20MIMO_Ant1_2437



11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



11. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: 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 an 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. 15.247(c) (1)(i) requirement: (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. A transmitter can only be sold or operated with antennas with which it was approved.	
EUT Antenna:	
Two FPC Antennas for WiFi,two antennas are same that max antenna gain is 2.48dBi,, The transmit signals are completely uncorrelated, According to KDB 662911 D01 Multiple Transmitter Output v02r01, Directional gain is 2.48dBi reference to the appendix II for details	

12. TEST SETUP PHOTO

Reference to the appendix I for details.

13. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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