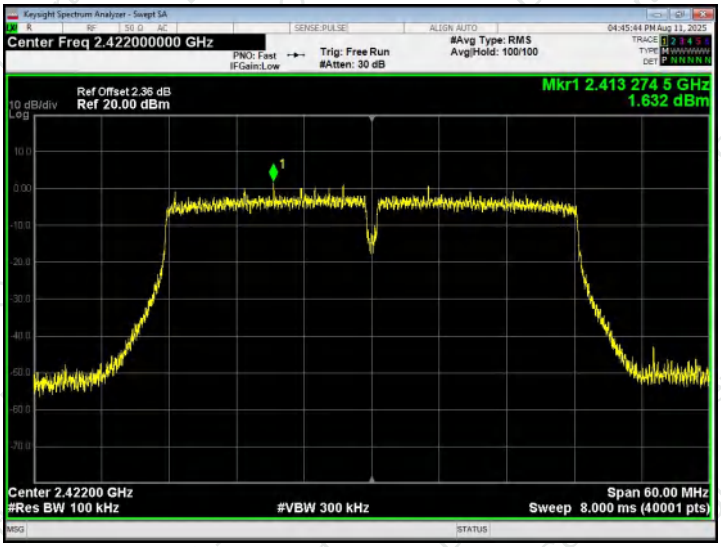
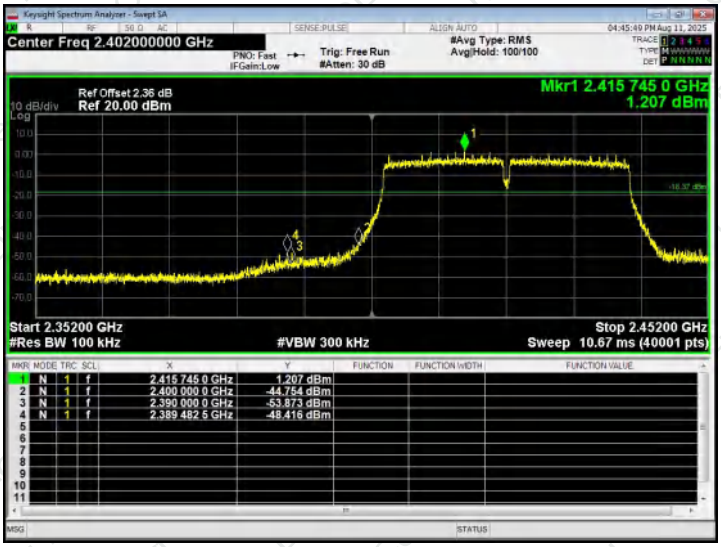
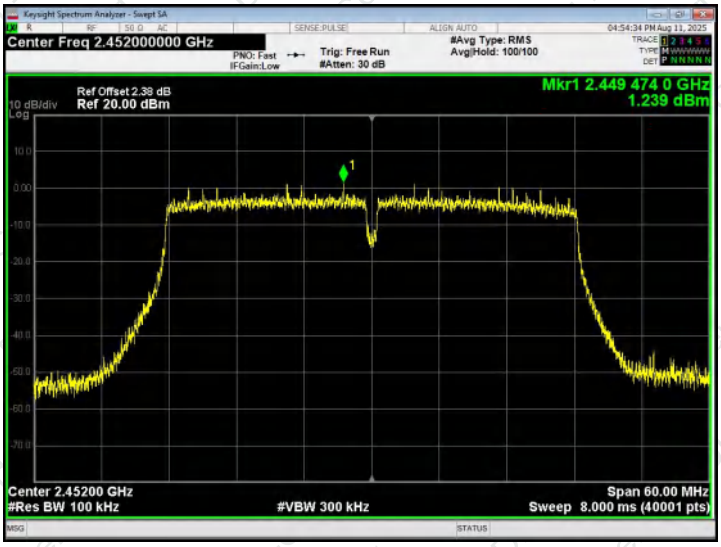
MIMO A - 802.11n40

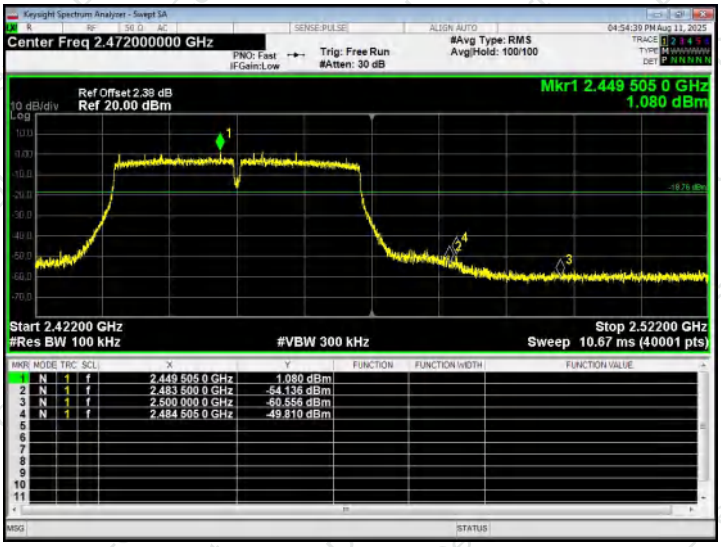
Lowest channel





Highest channel

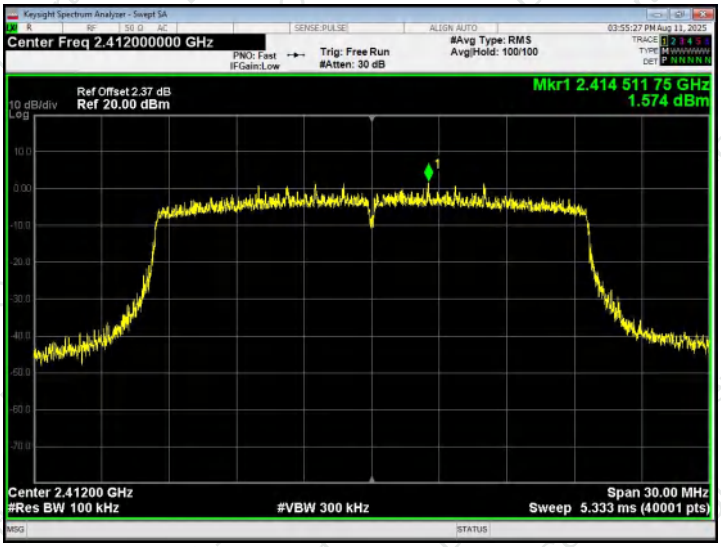


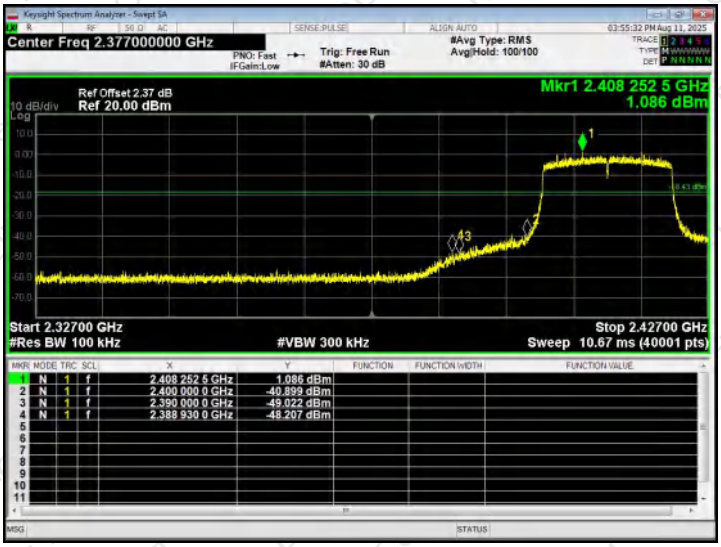


Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

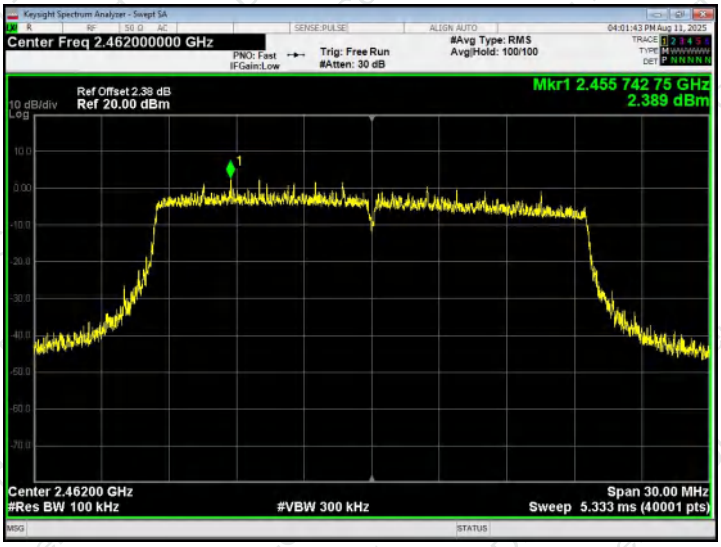
SISO ANT A - 802.11ax20

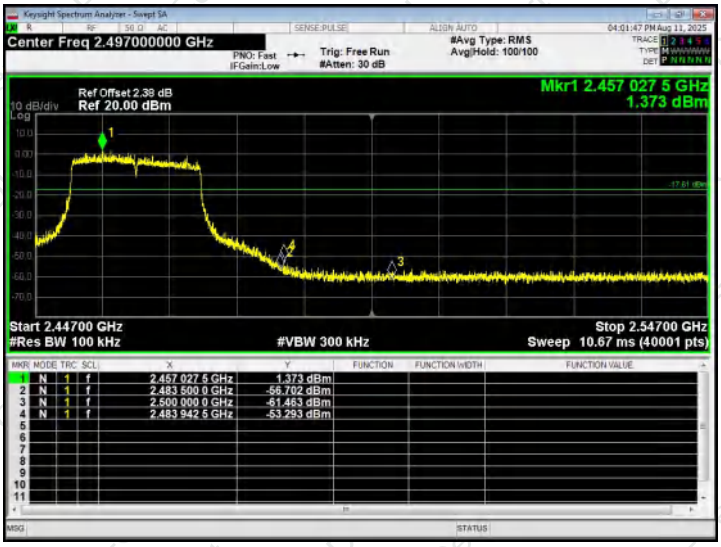
Lowest channel





Highest channel

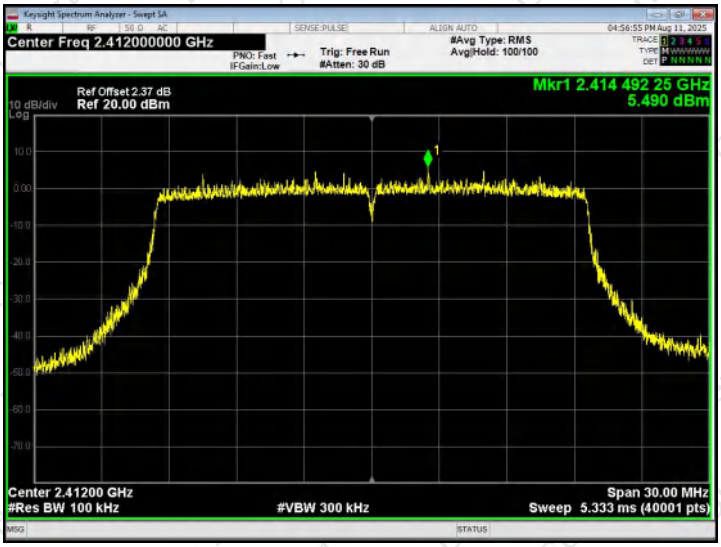


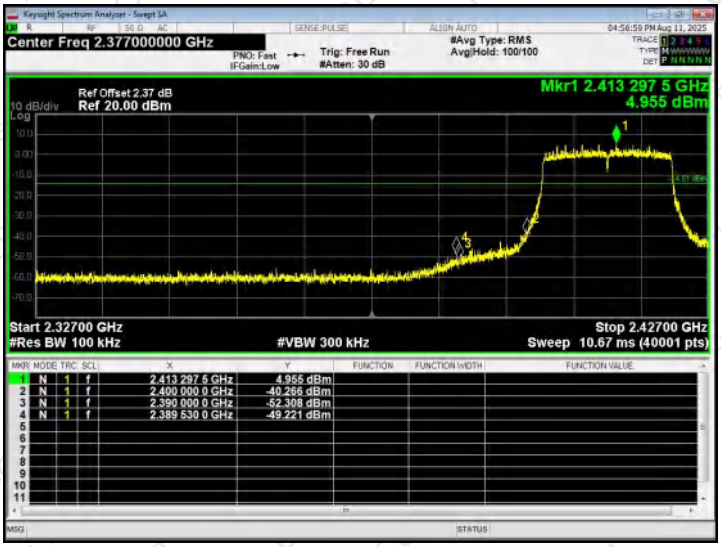


Note:Both SISO ANT A and B were tested, and the results showed only the worst SISO ANT A.

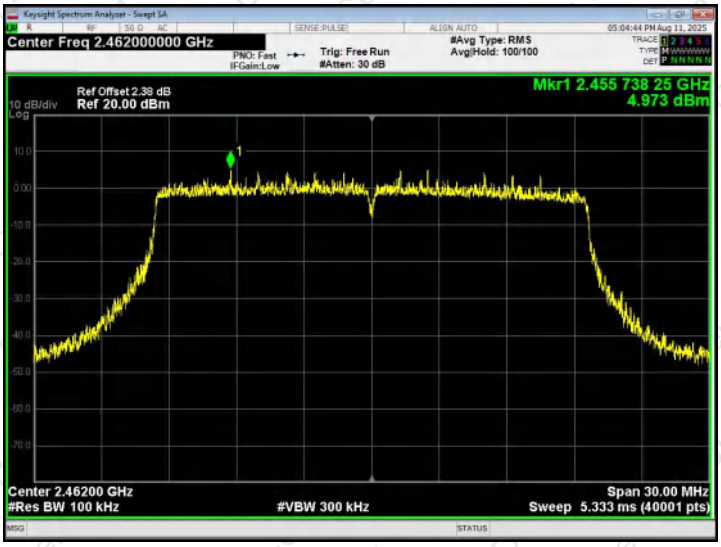
MIMO A - 802.11ax20

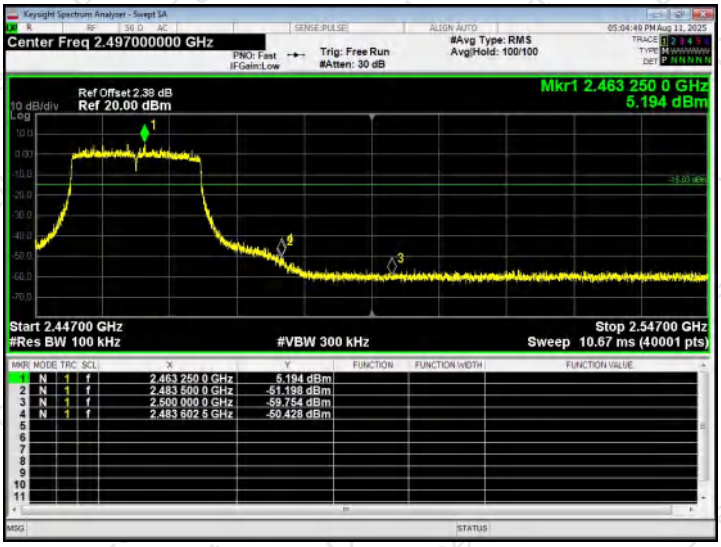
Lowest channel





Highest channel

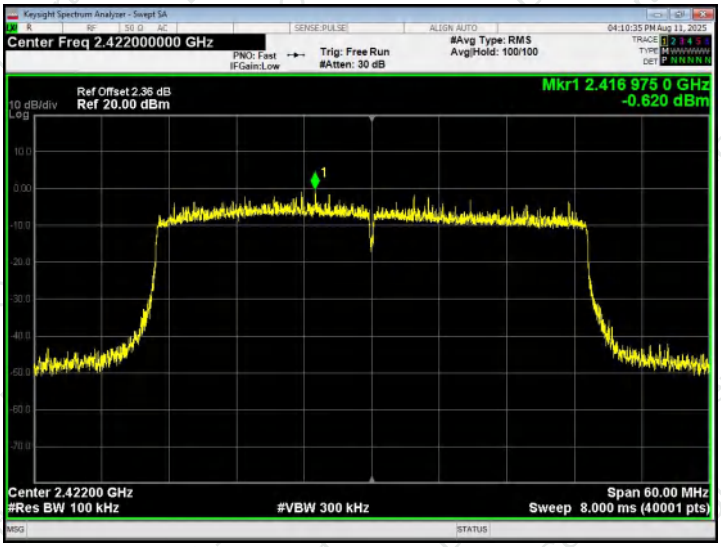


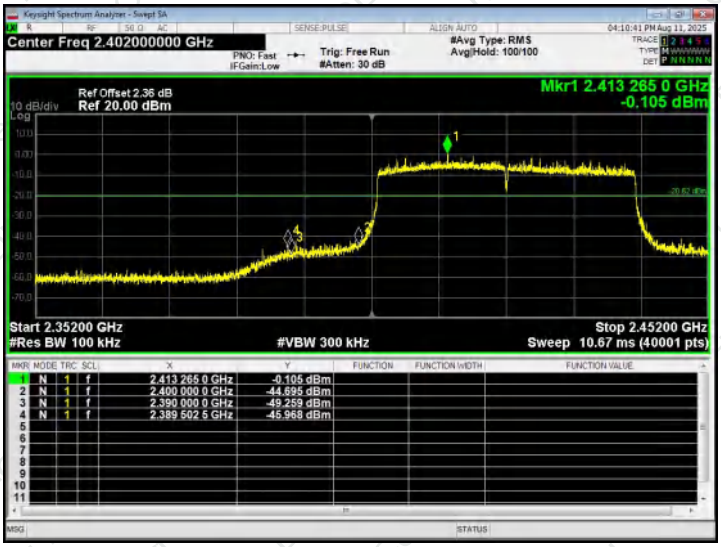


Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

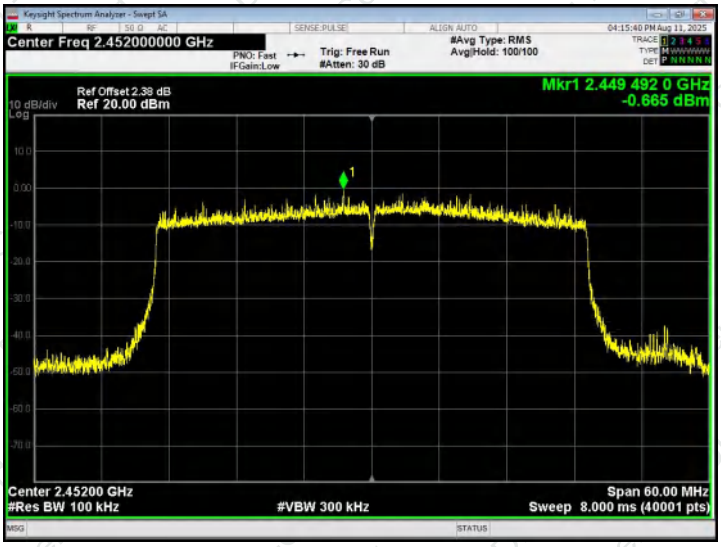
SISO ANT A - 802.11ax40

Lowest channel





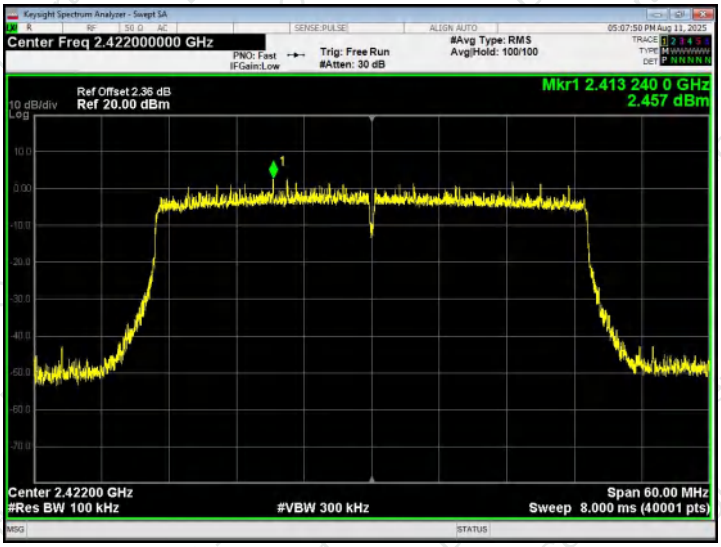
Highest channel

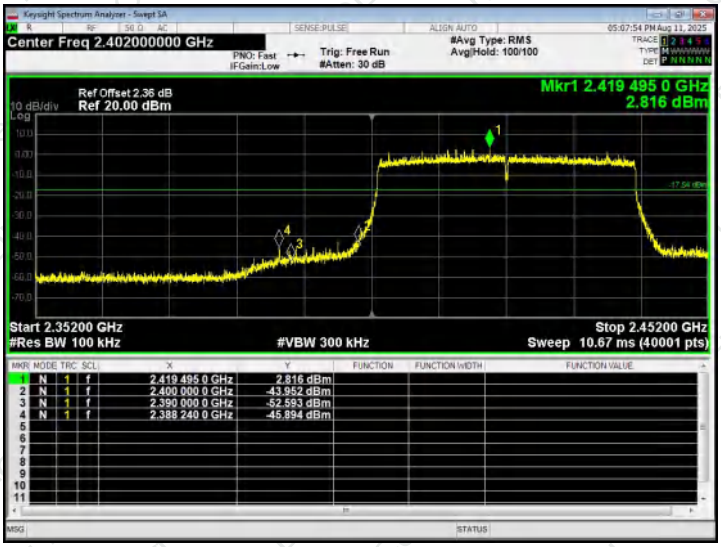


Note:Both SISO ANT A and B were tested, and the results showed only the worst SISO ANT A.

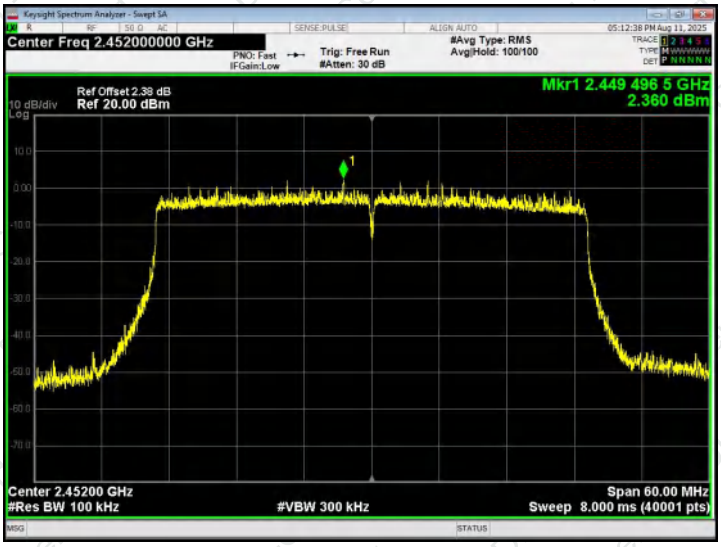
MIMO A - 802.11ax40

Lowest channel





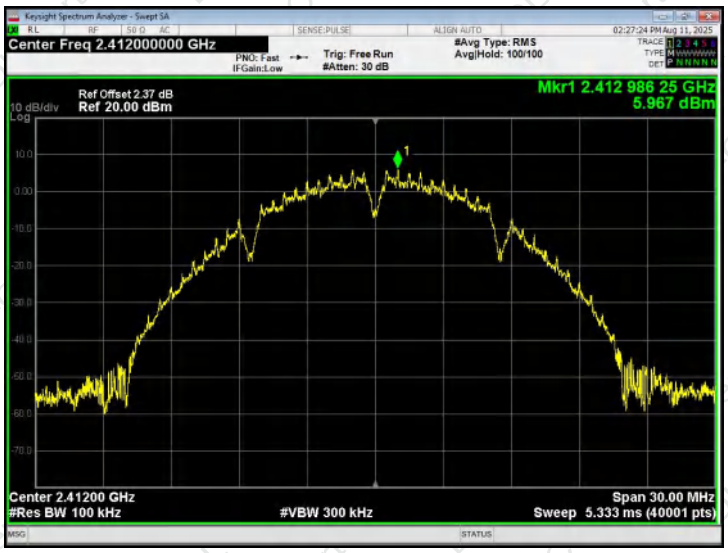
Highest channel

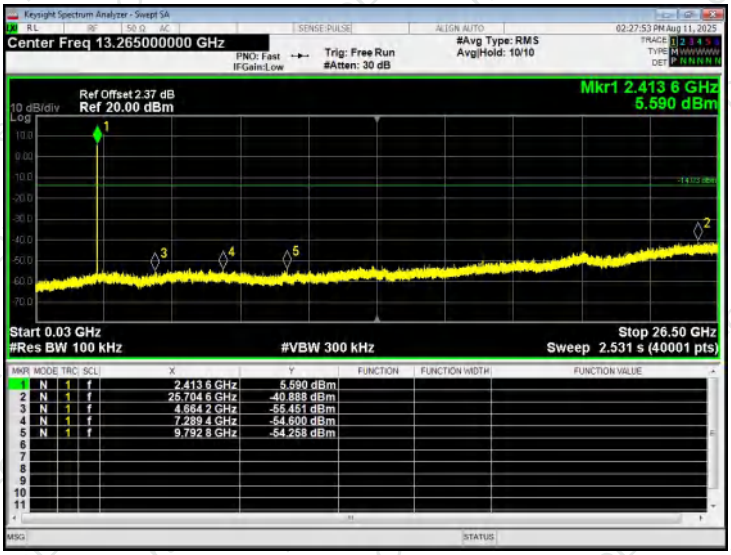


Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

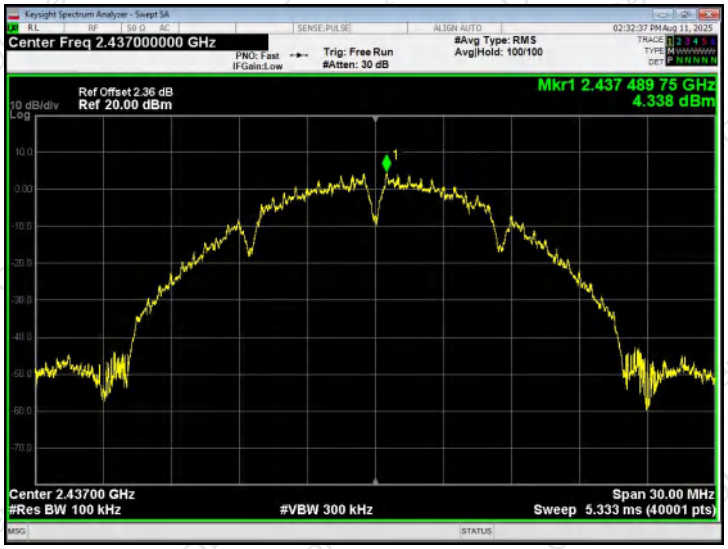
SISO ANT A - 802.11b

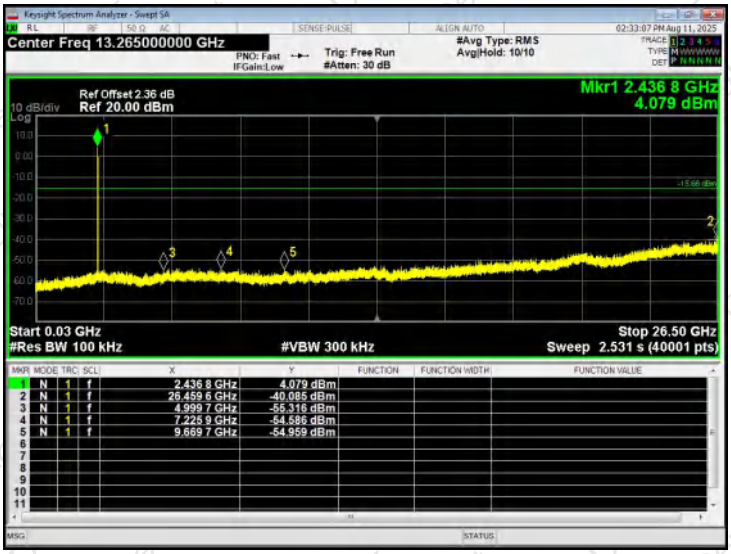
Lowest channel



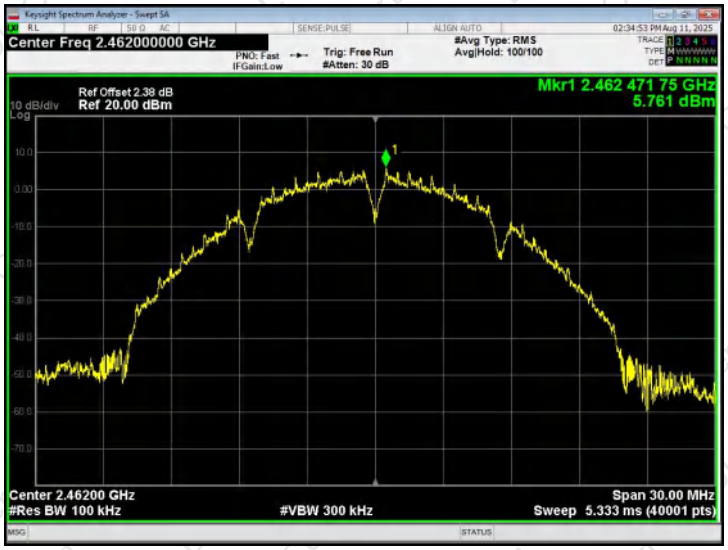


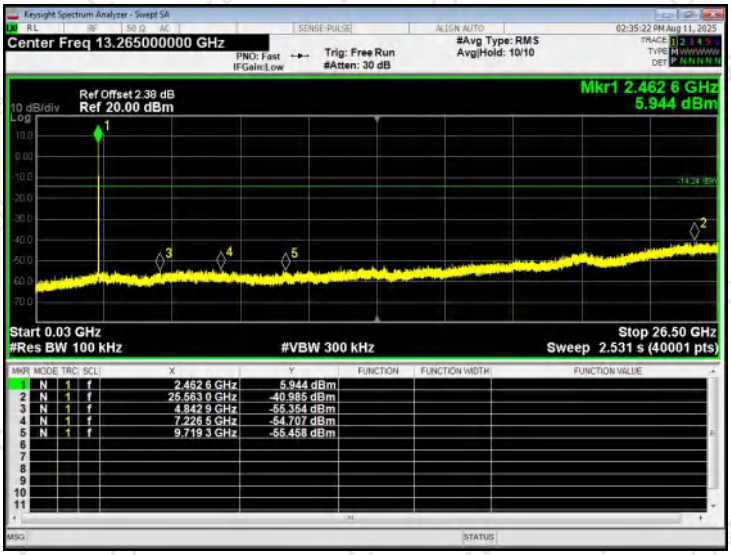
Middle channel





Highest channel

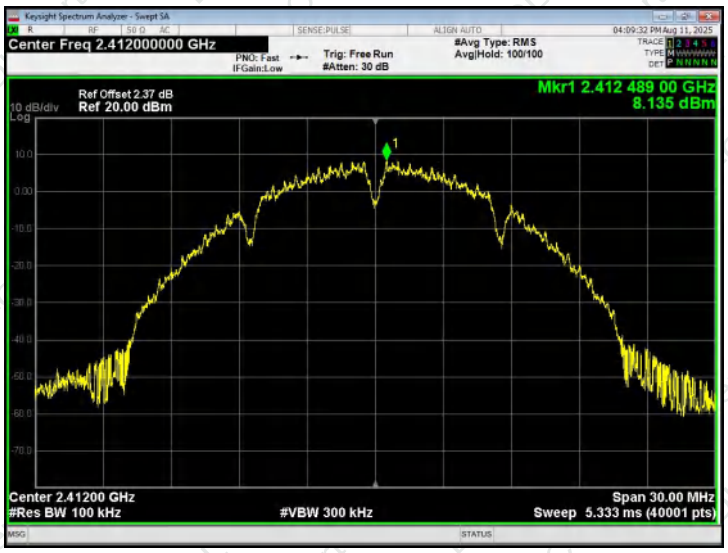


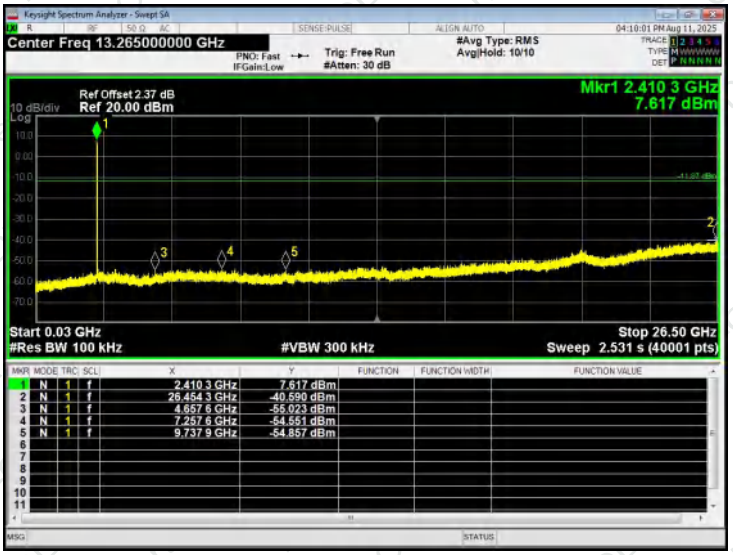


30MHz ~ 26.5GHz

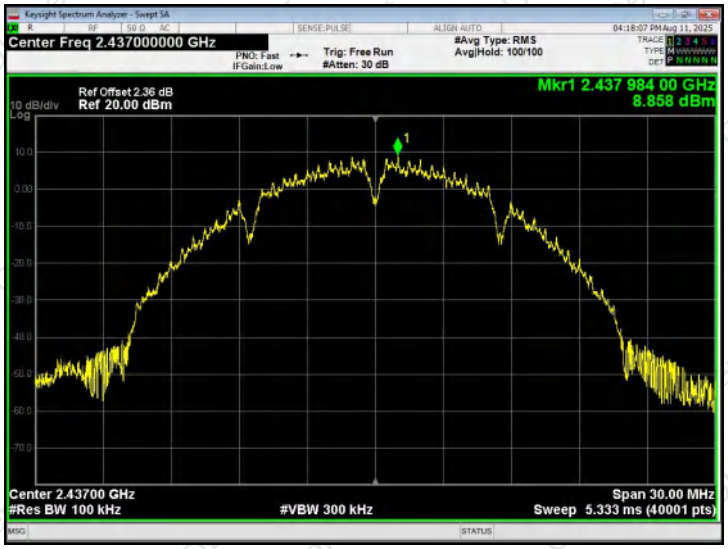
SISO ANT B - 802.11b

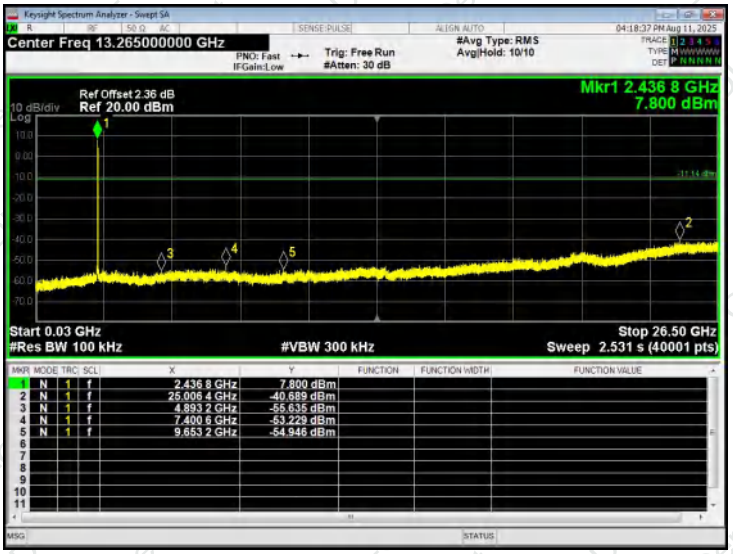
Lowest channel



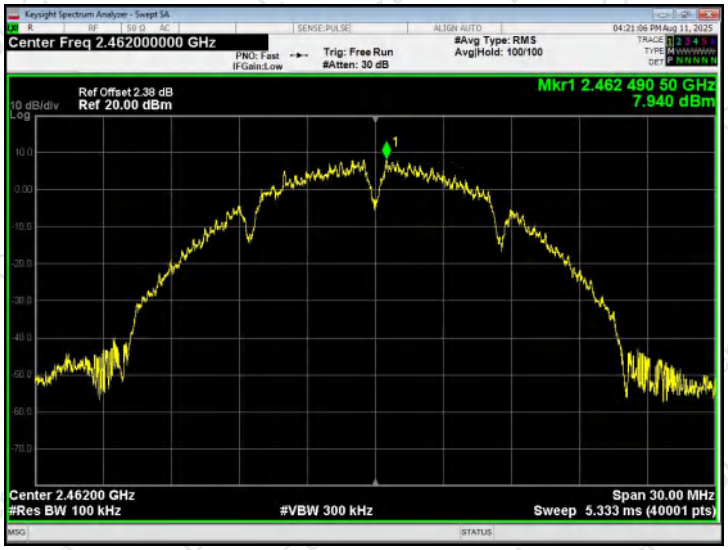


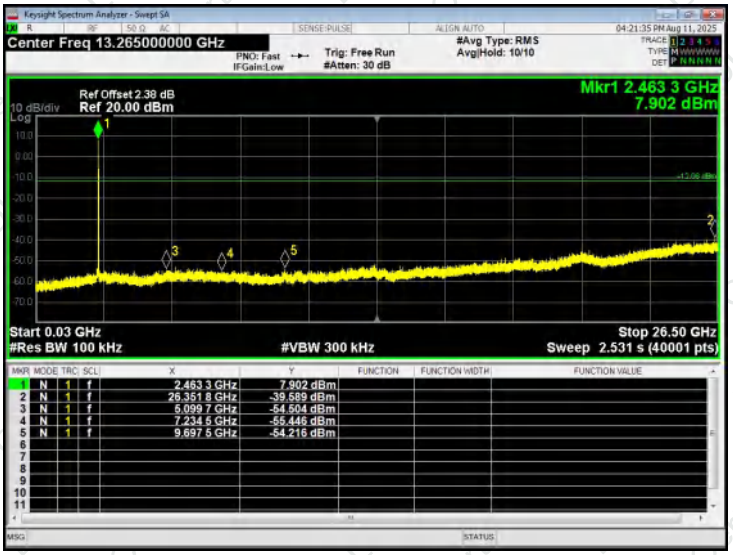
Middle channel





Highest channel

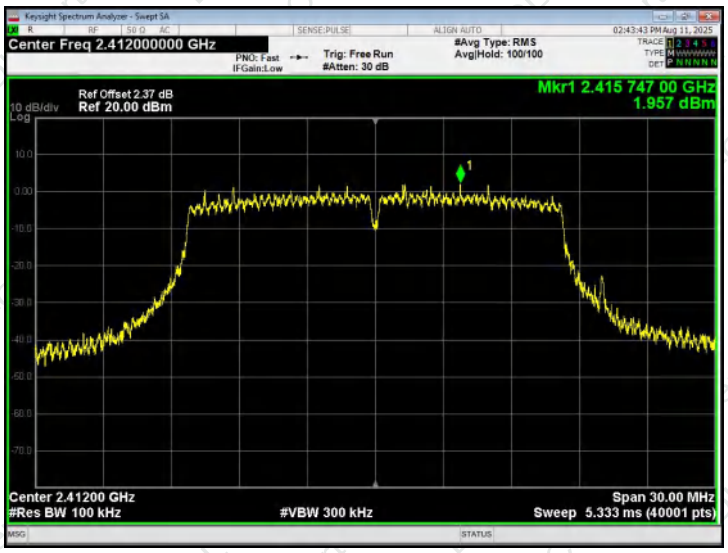


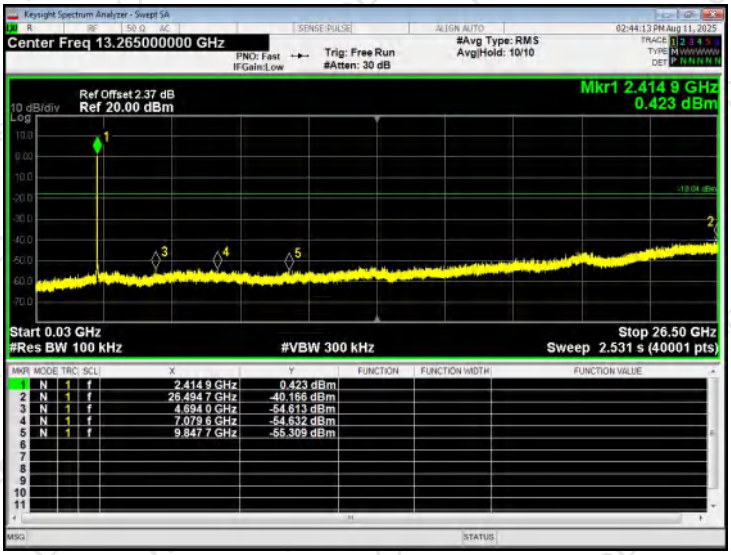


30MHz ~ 26.5GHz

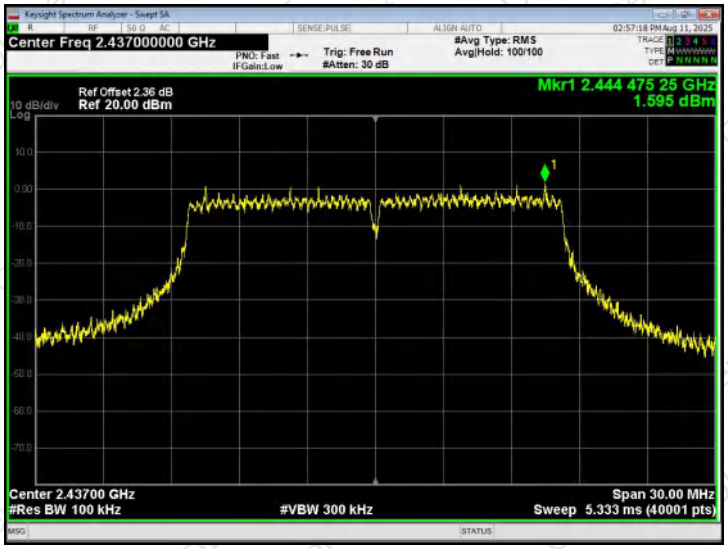
SISO ANT A - 802.11g

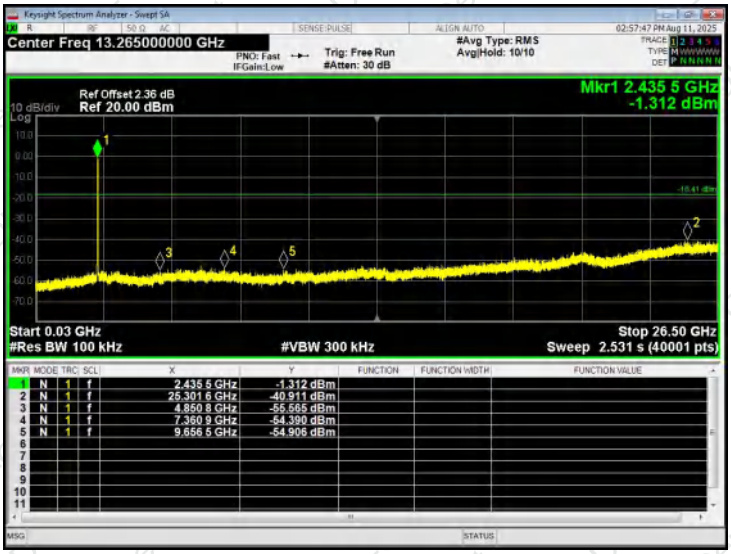
Lowest channel



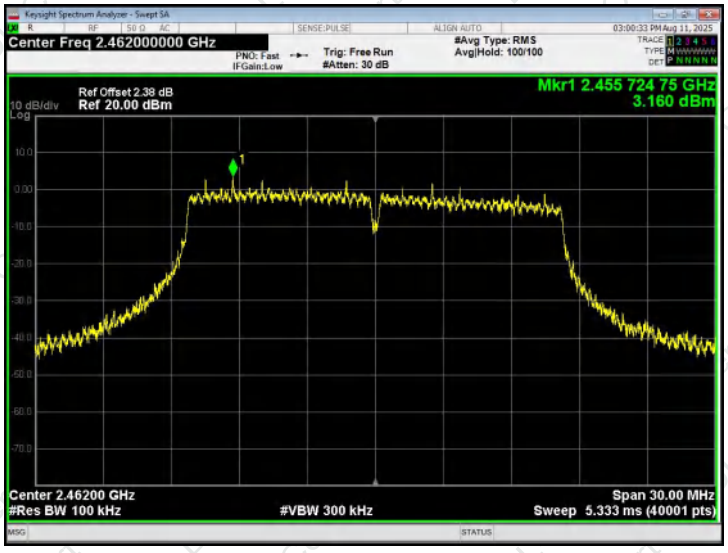


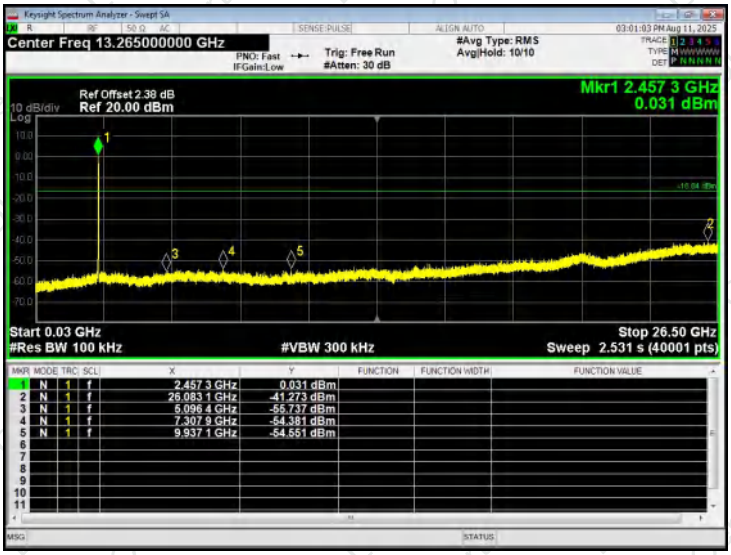
Middle channel





Highest channel

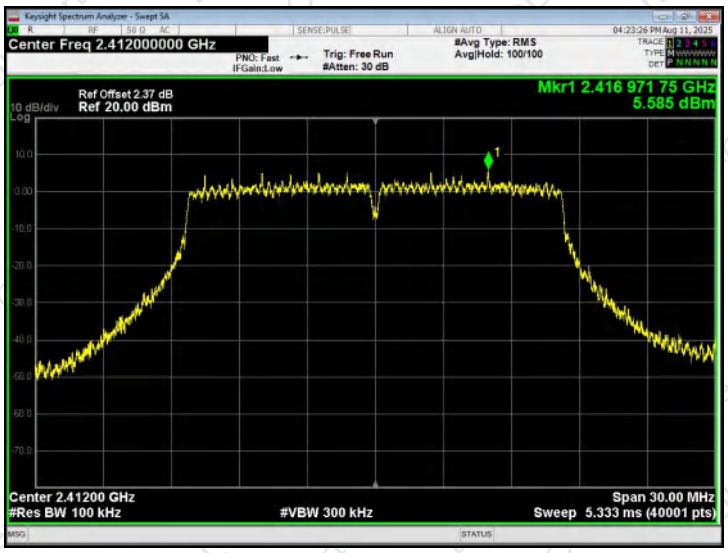


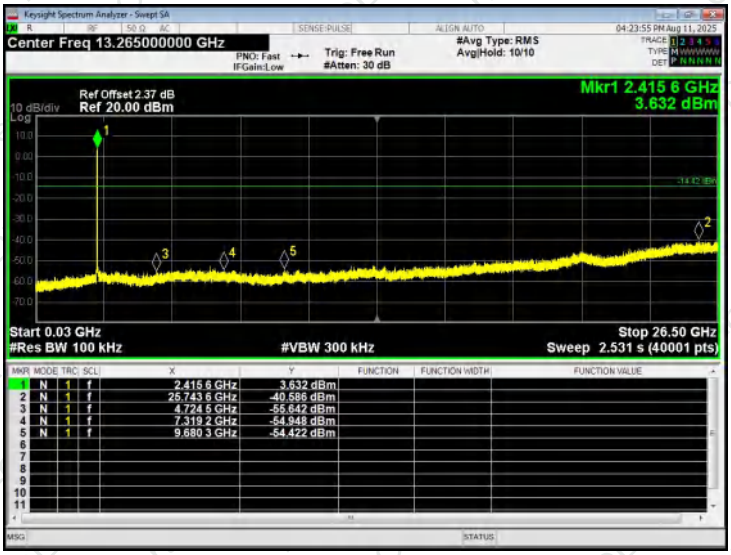


30MHz ~ 26.5GHz

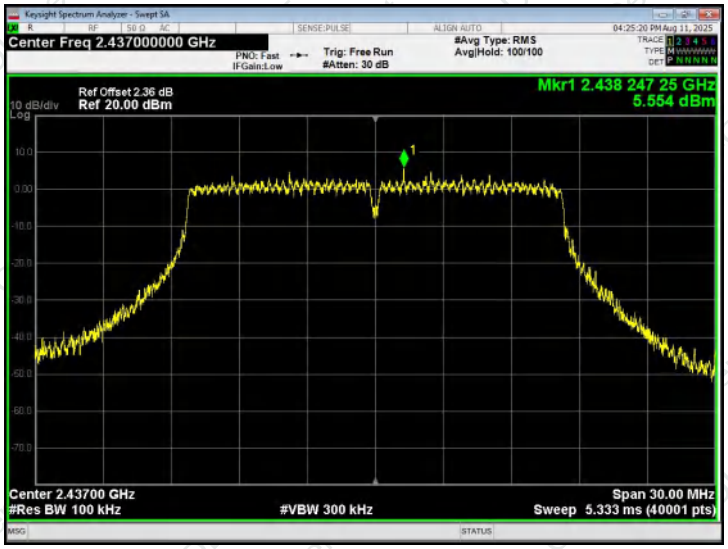
SISO ANT B - 802.11g

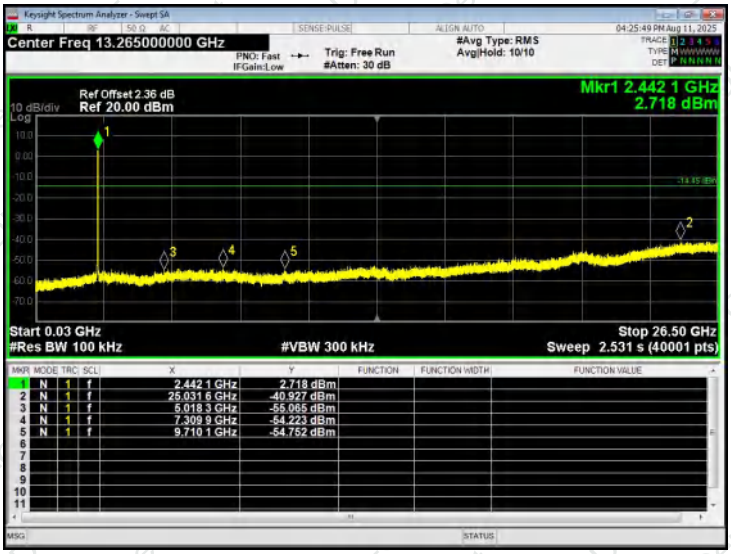
Lowest channel



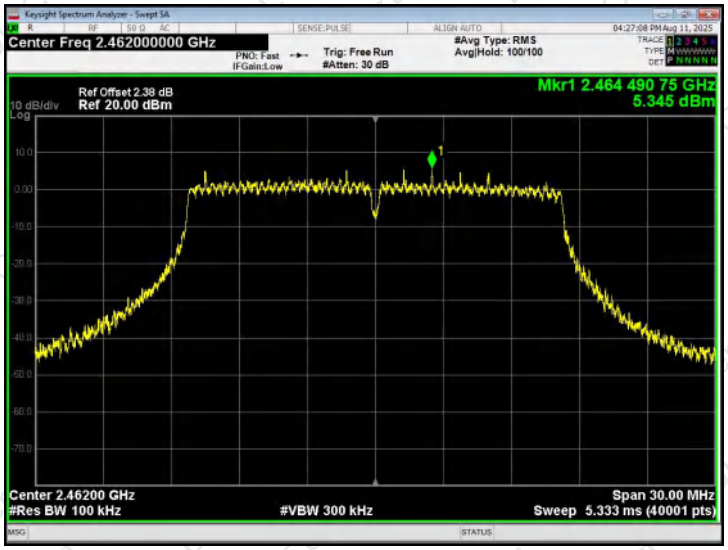


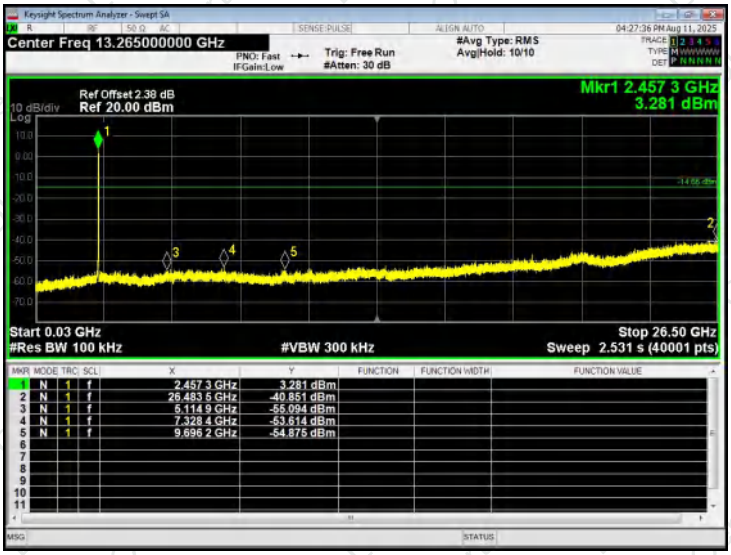
Middle channel





Highest channel

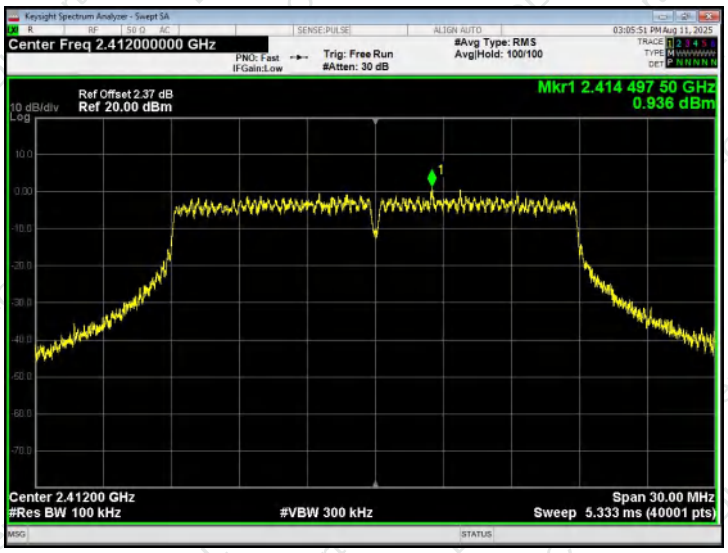


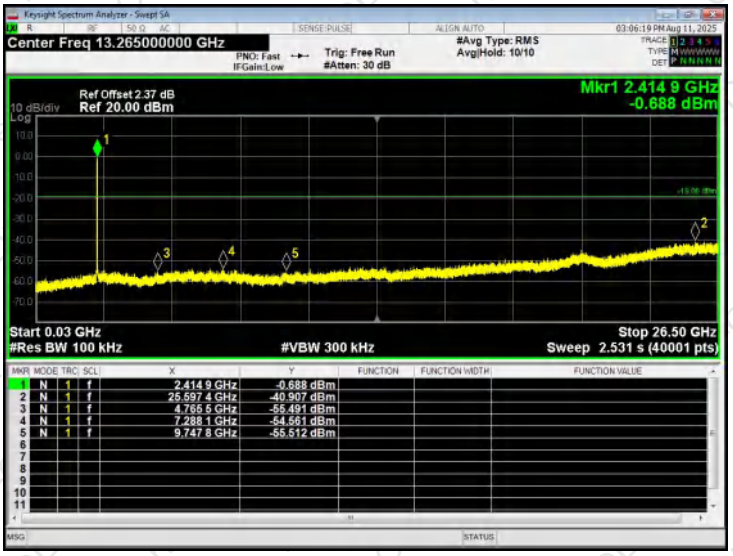


30MHz ~ 26.5GHz

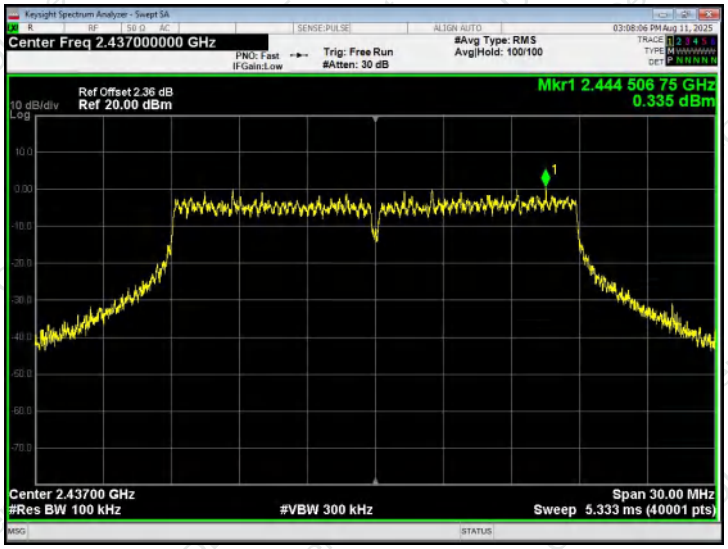
SISO ANT A - 802.11n20

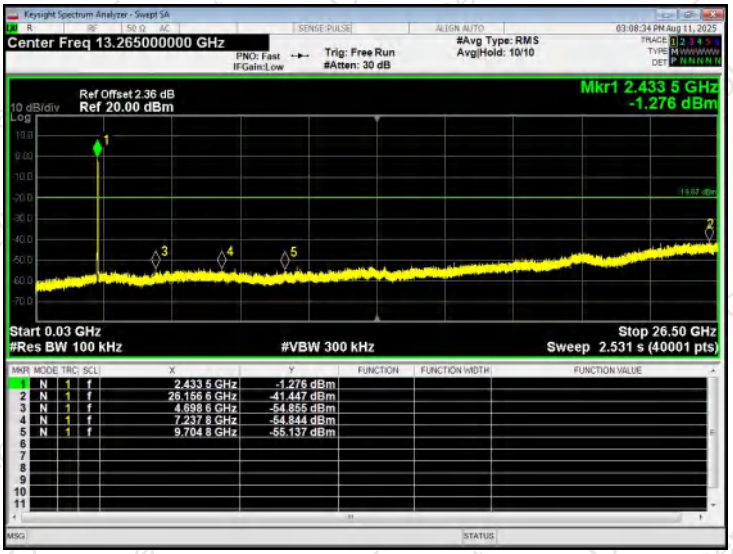
Lowest channel



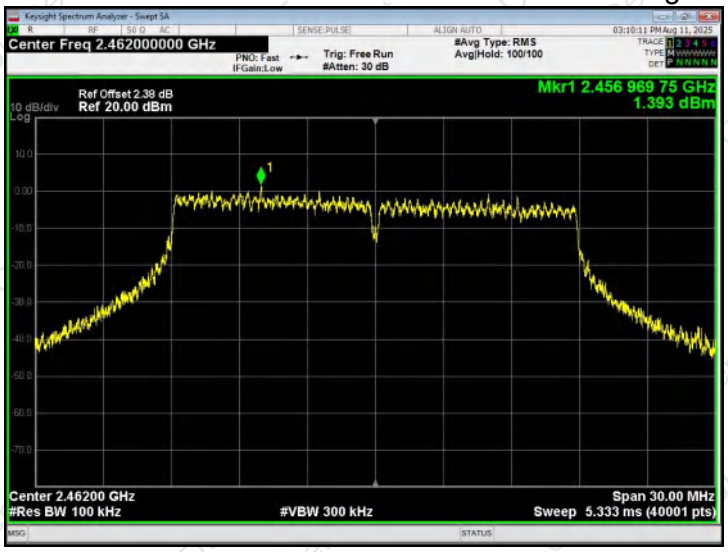


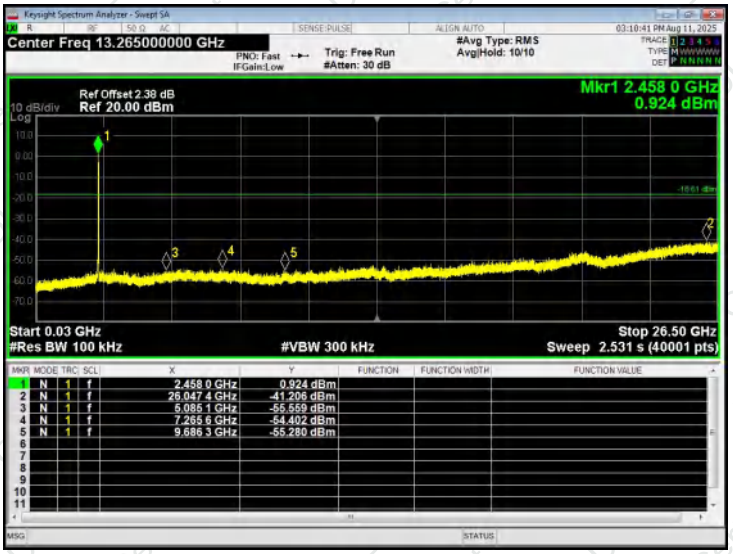
Middle channel





Highest channel



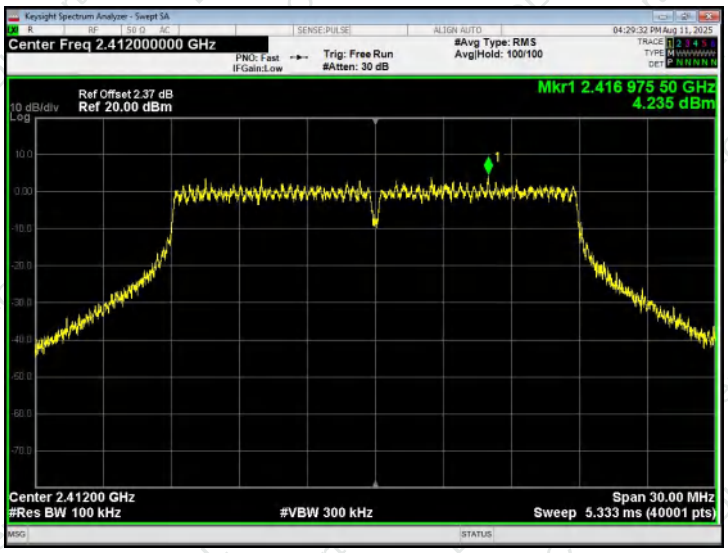


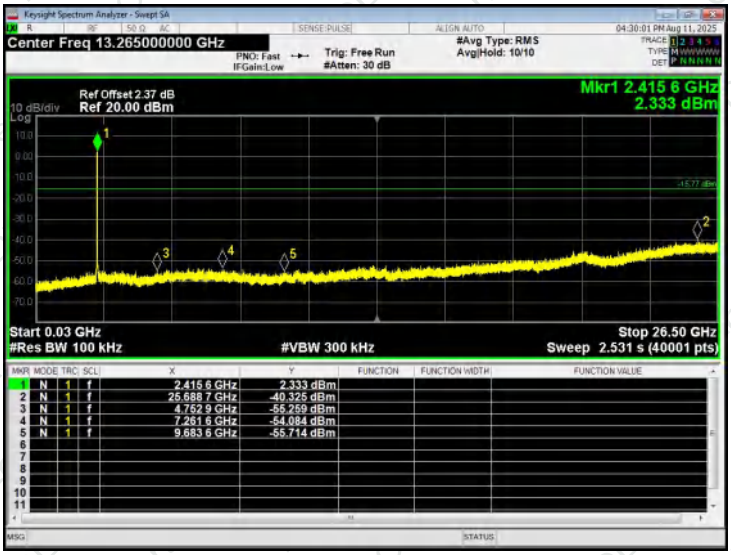
30MHz ~ 26.5GHz

Note:Both SISO ANT A and B were tested, and the results showed only the worst SISO ANT A.

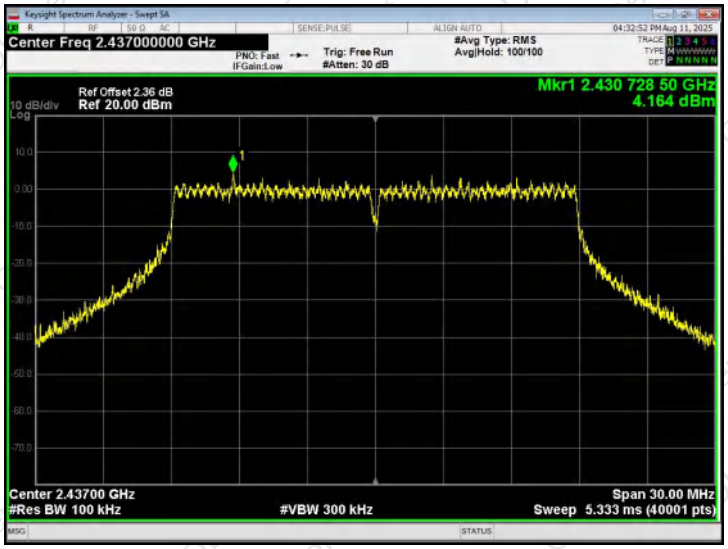
MIMO A - 802.11n20

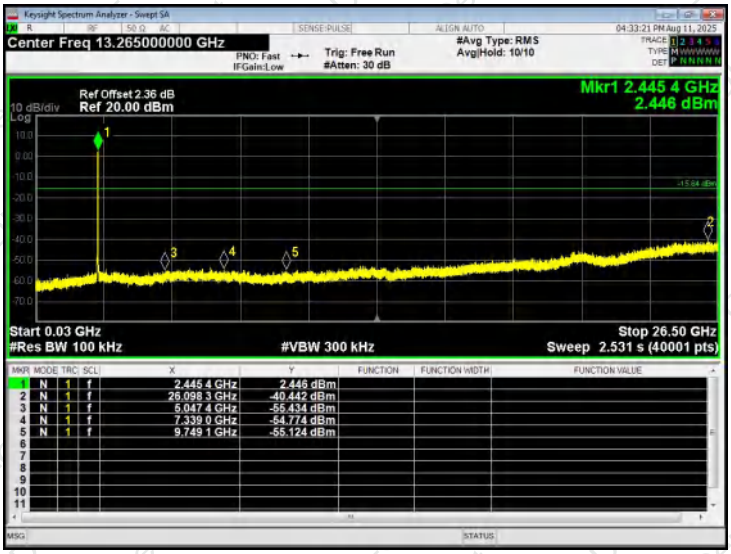
Lowest channel



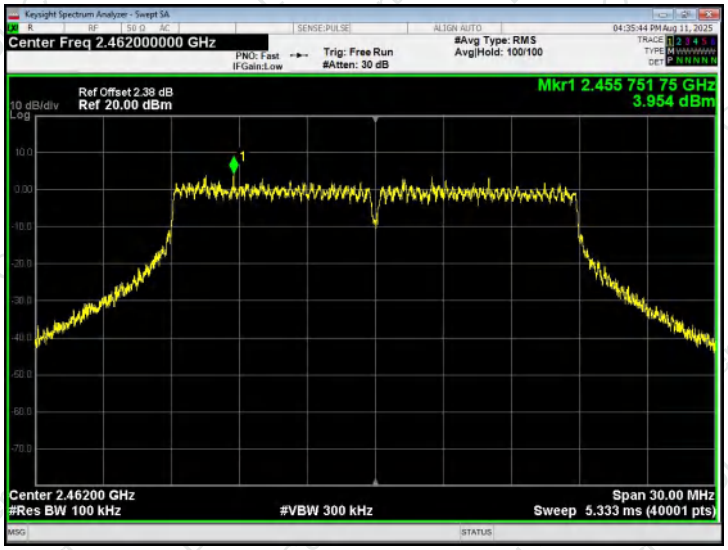


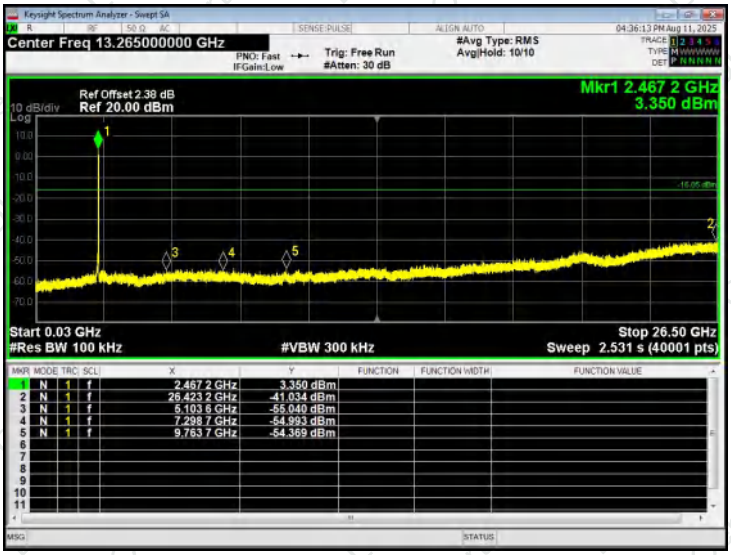
Middle channel





Highest channel



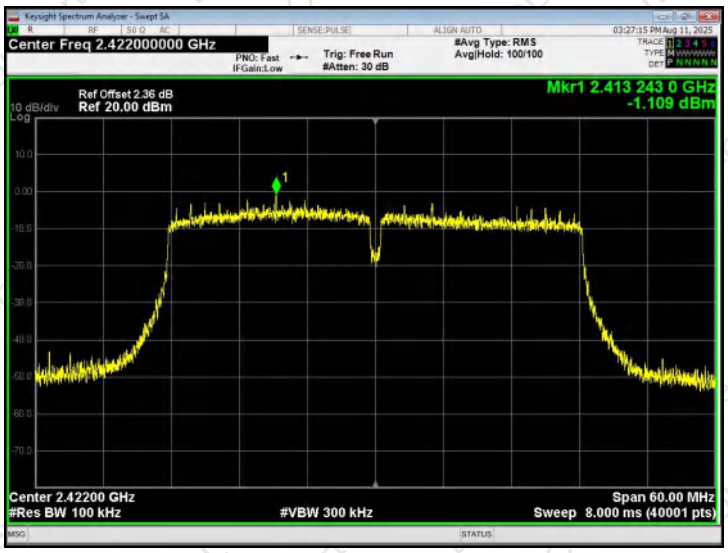


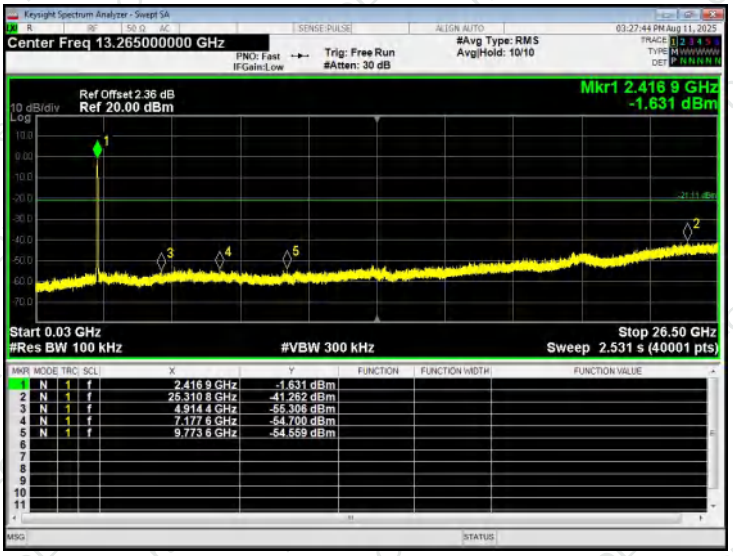
30MHz ~ 26.5GHz

Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

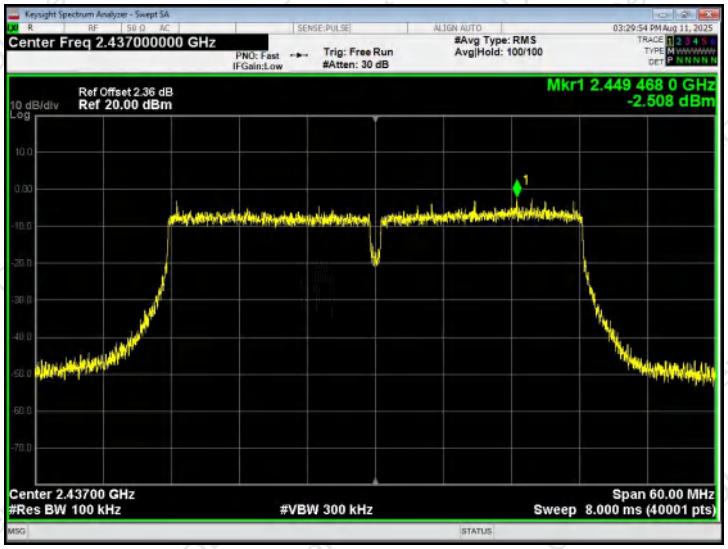
SISO ANT A - 802.11n40

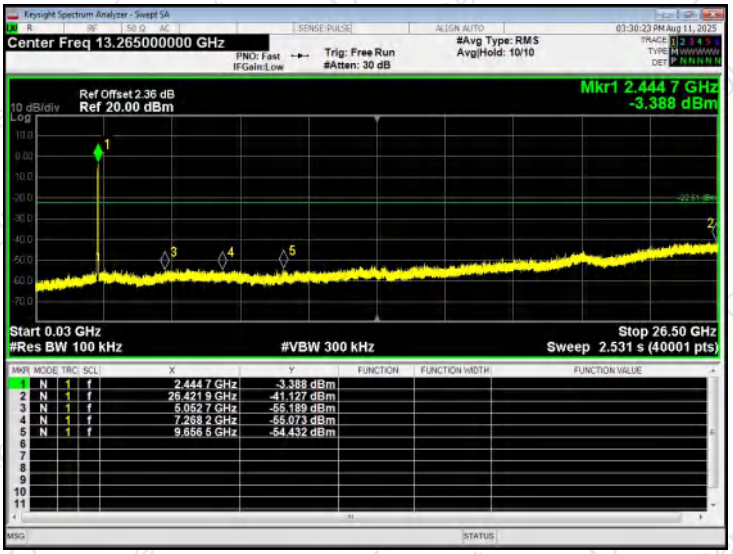
Lowest channel



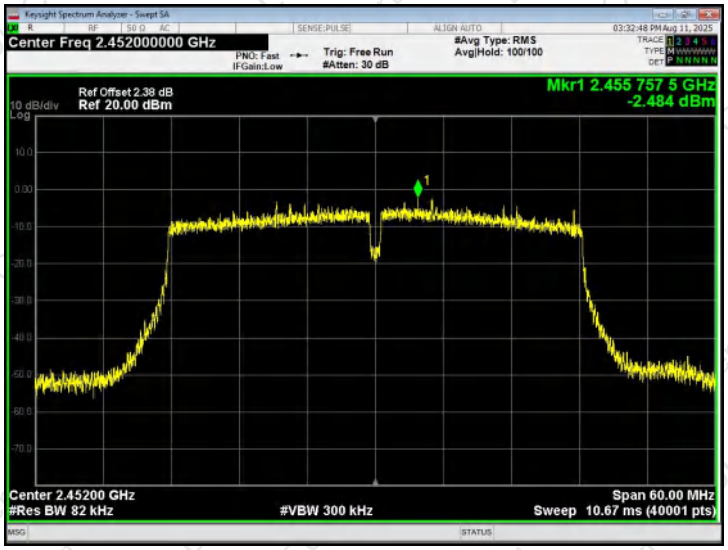


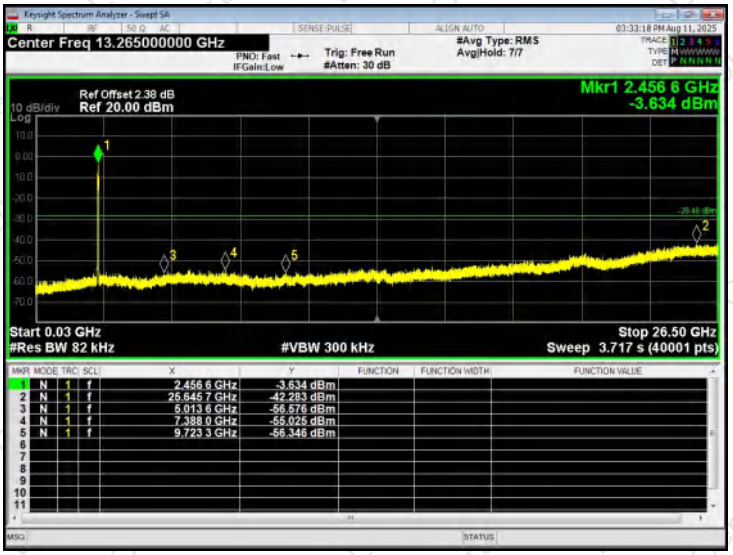
Middle channel





Highest channel



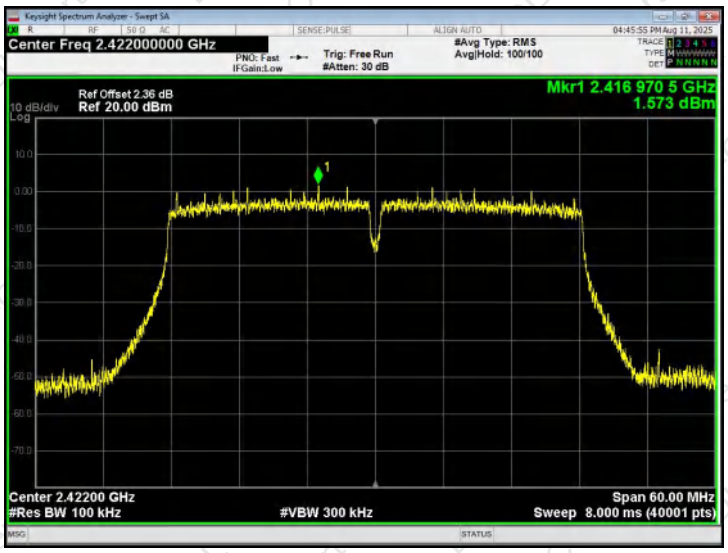


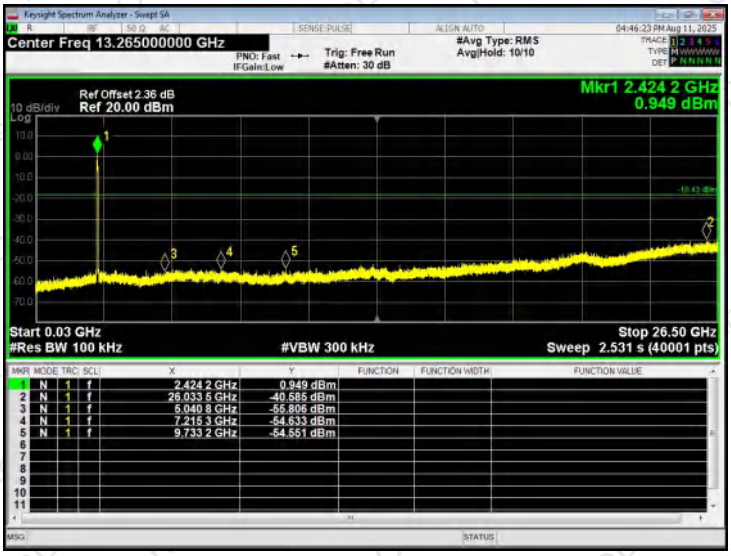
30MHz ~ 26.5GHz

Note:Both SISO ANT A and B were tested, and the results showed only the worst SISO ANT A.

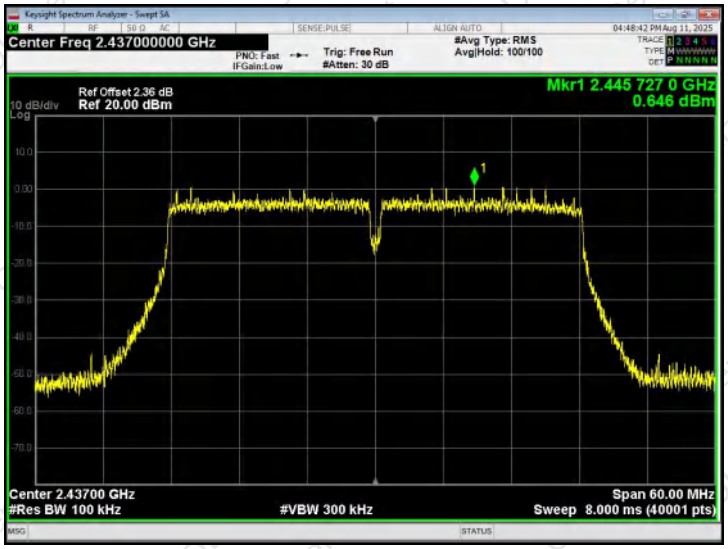
MIMO A - 802.11n40

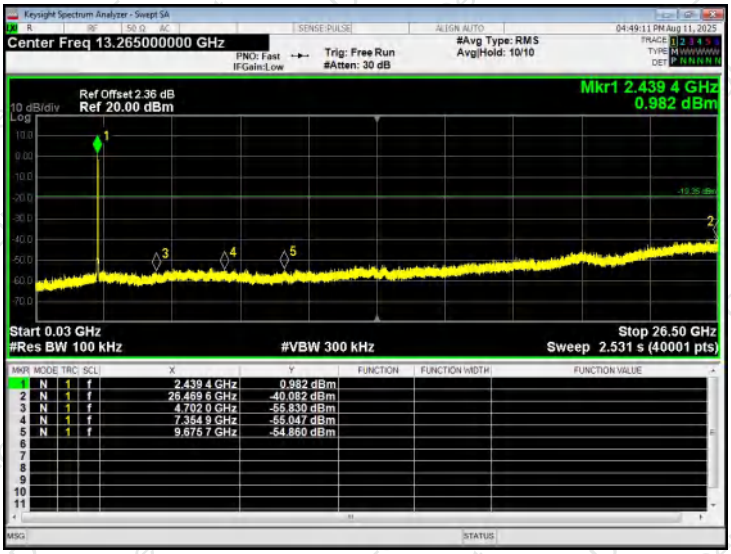
Lowest channel



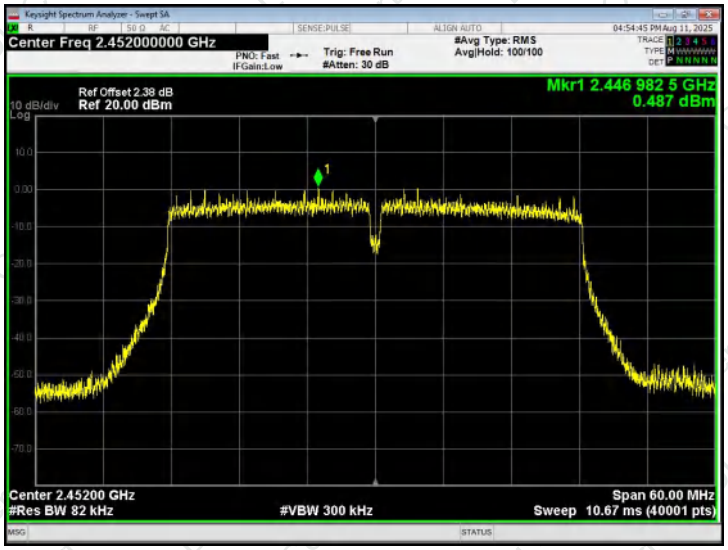


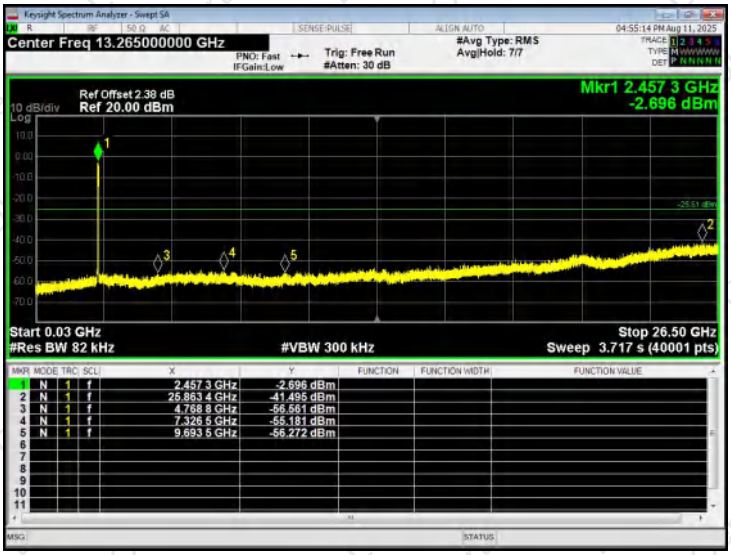
Middle channel





Highest channel



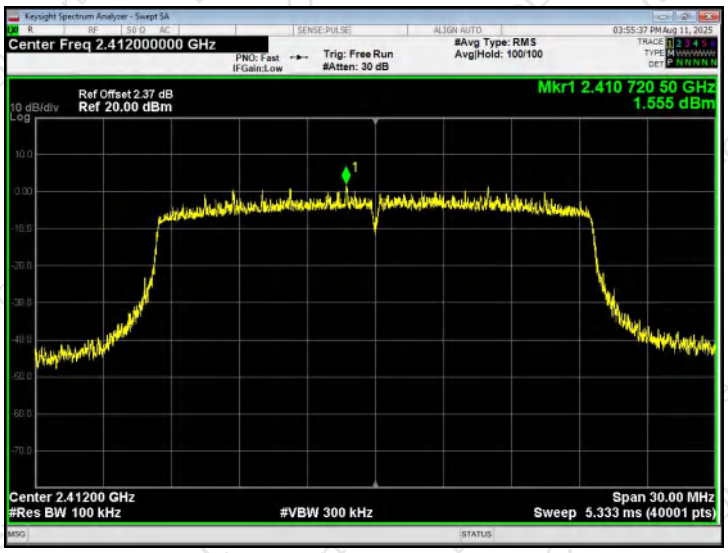


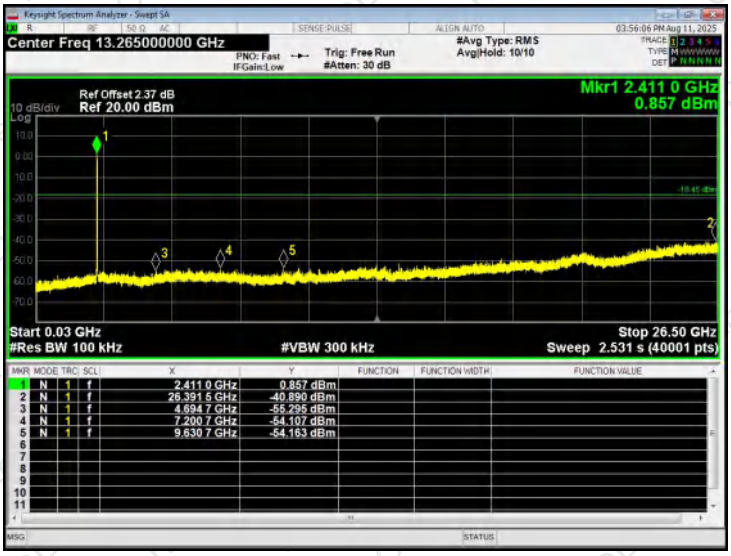
30MHz ~ 26.5GHz

Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

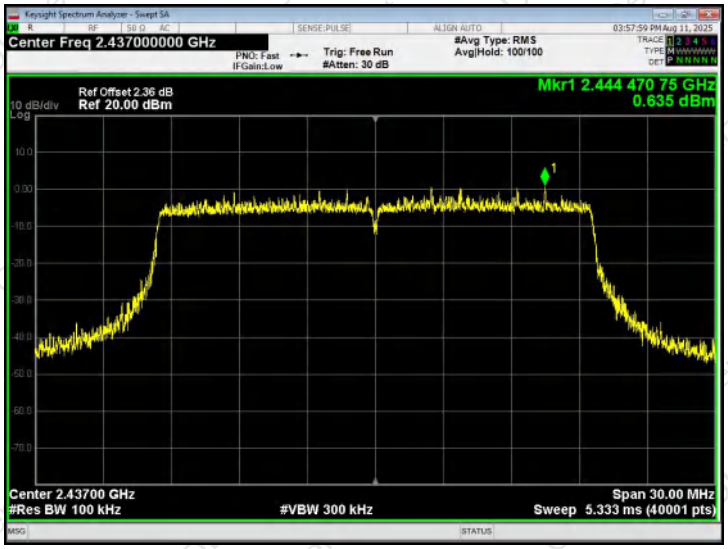
SISO ANT A - 802.11ax20

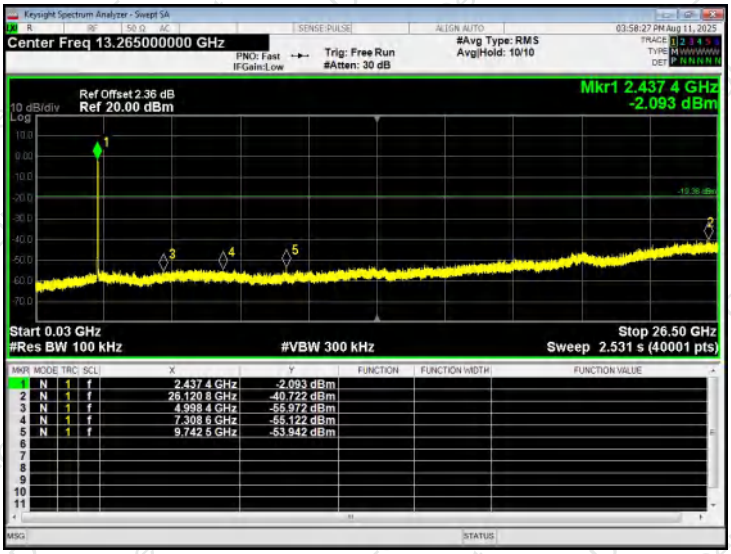
Lowest channel



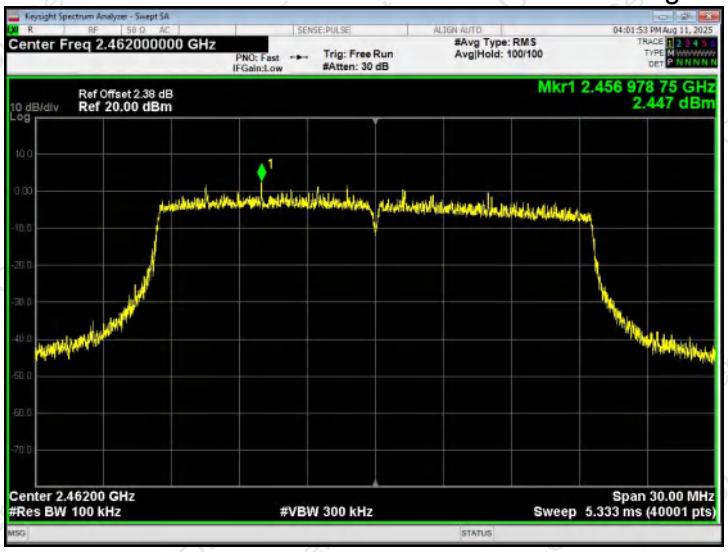


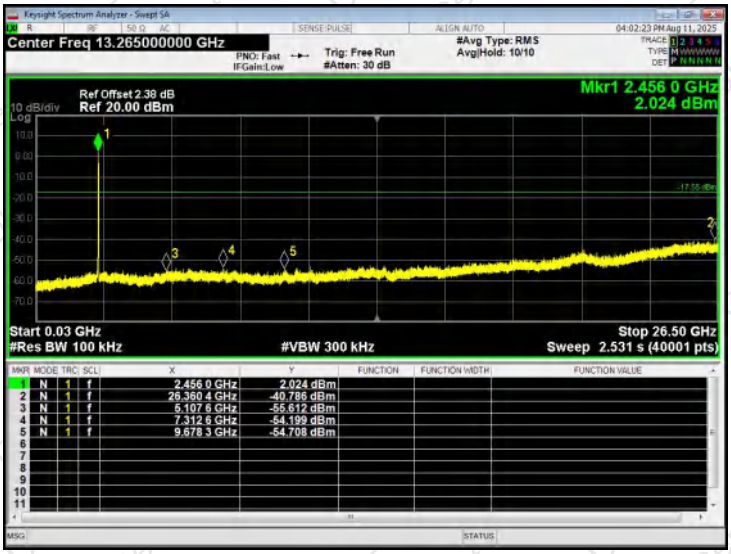
Middle channel





Highest channel



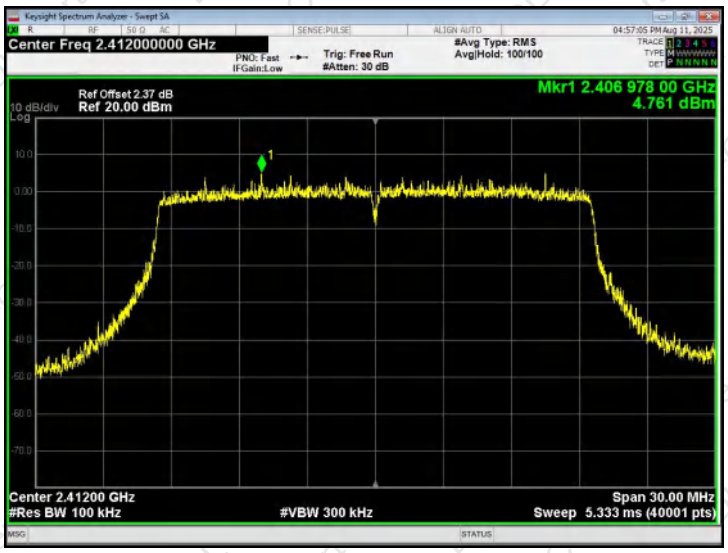


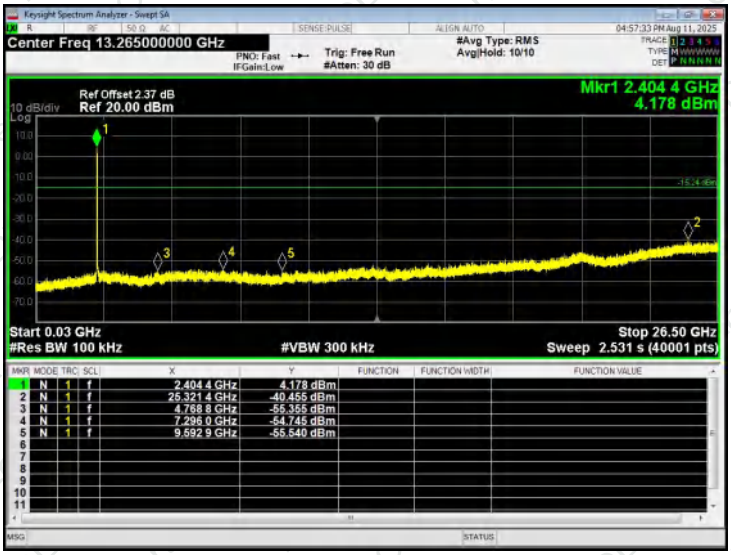
30MHz ~ 26.5GHz

Note:Both SISO ANT A and B were tested, and the results showed only the worst SISO ANT A.

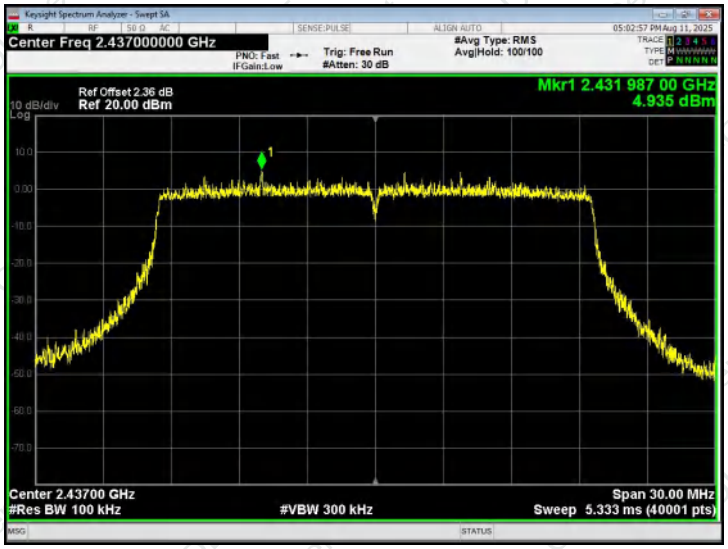
MIMO A - 802.11ax20

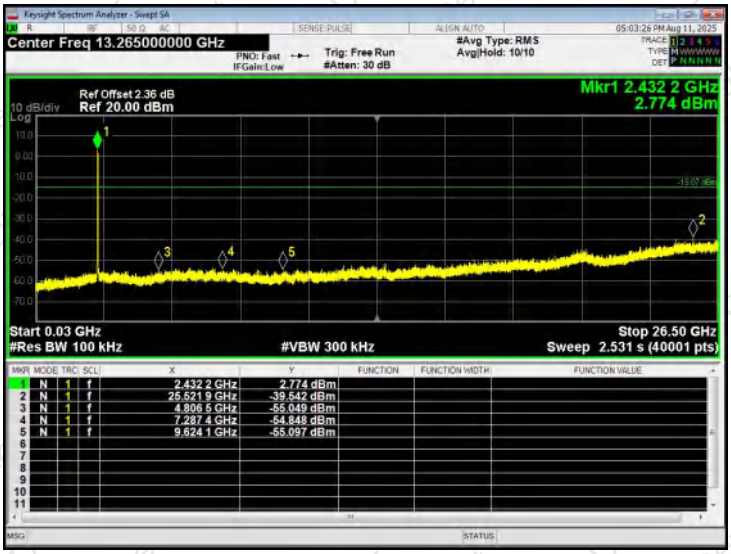
Lowest channel



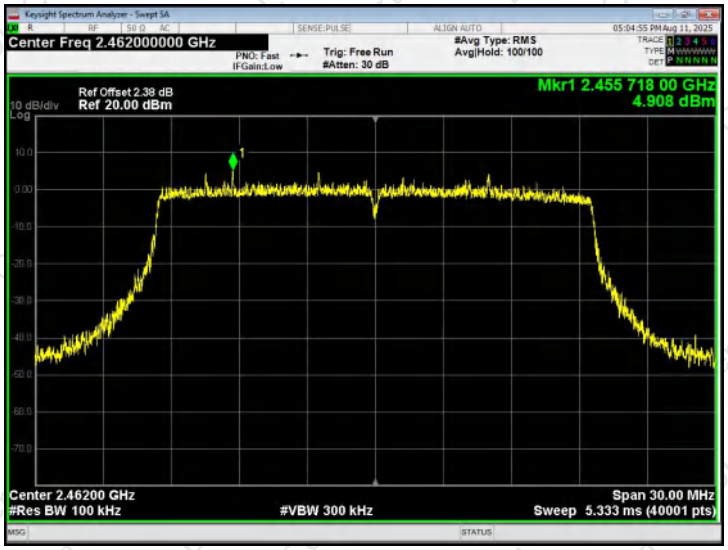


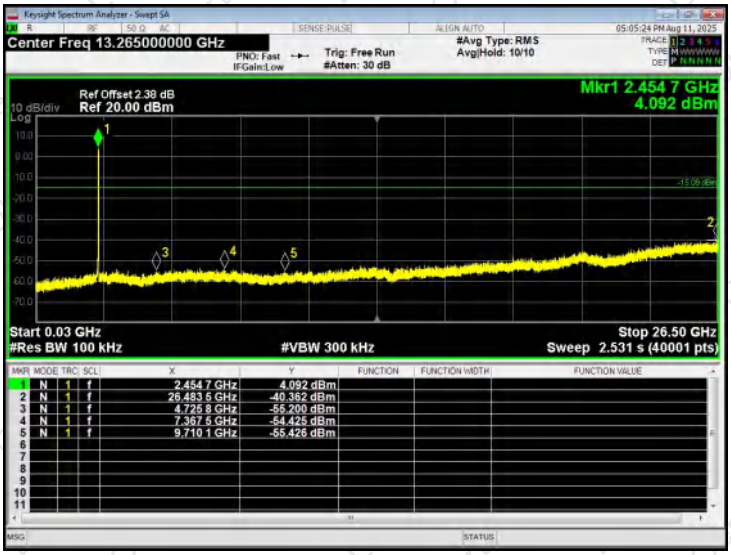
Middle channel





Highest channel



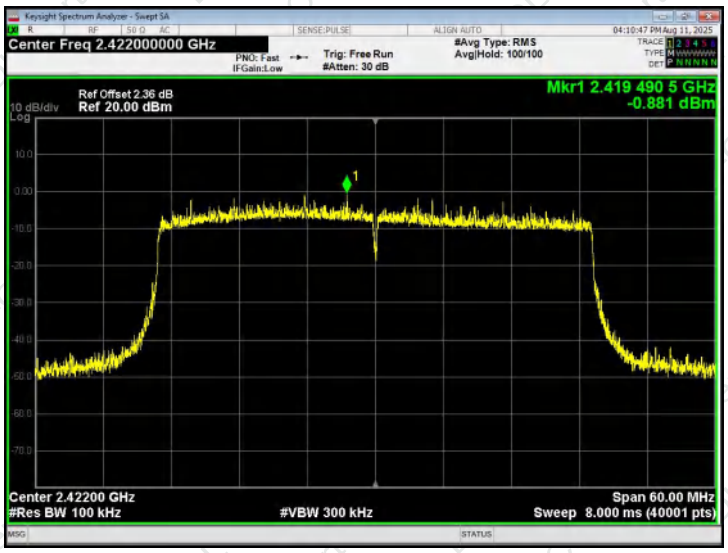


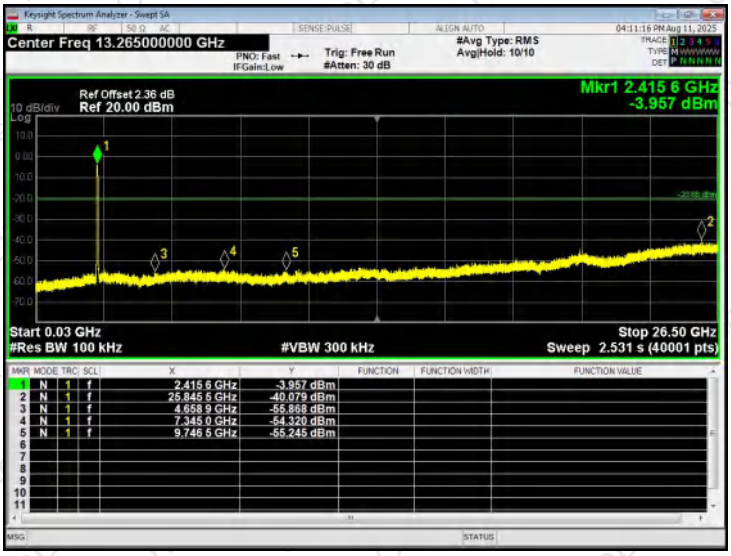
30MHz ~ 26.5GHz

Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

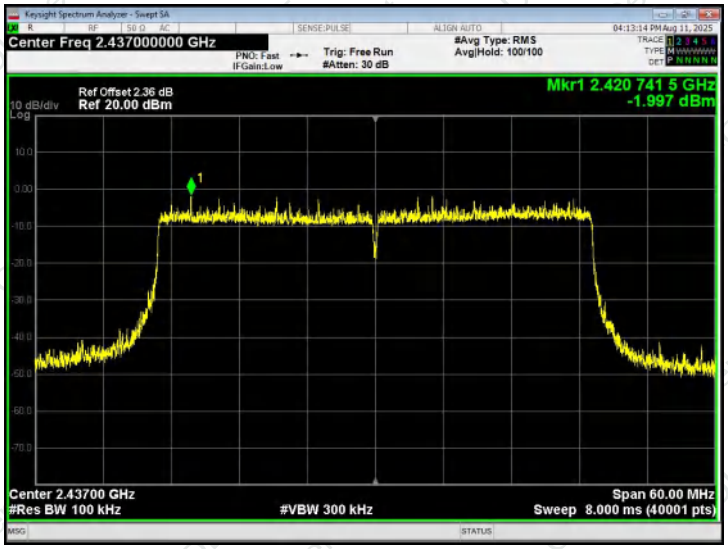
SISO ANT A - 802.11ax40

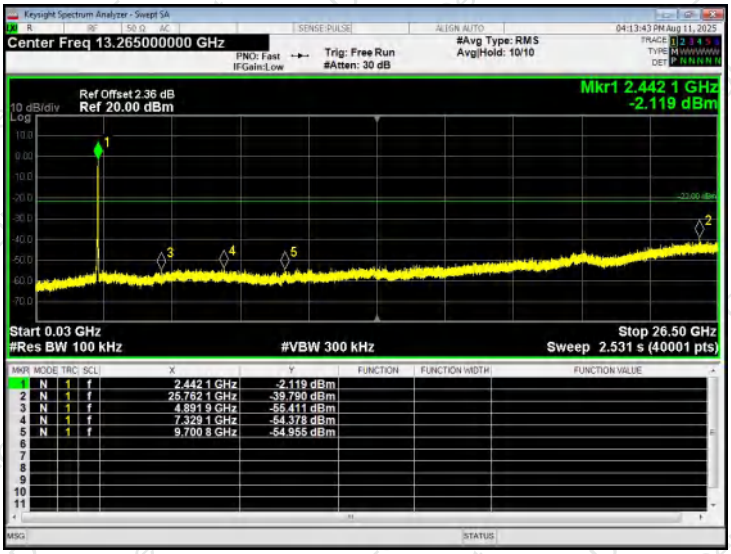
Lowest channel



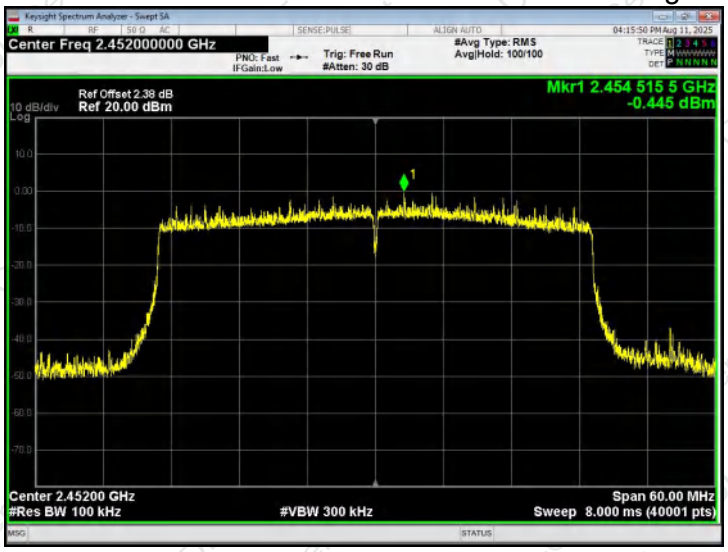


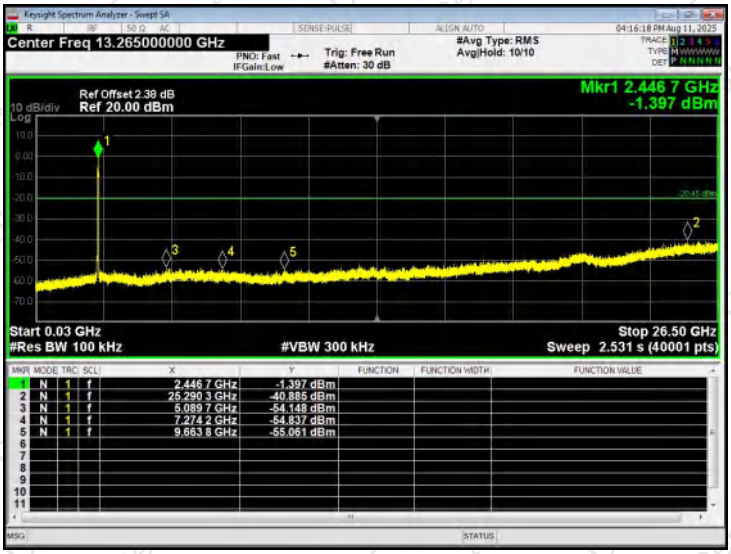
Middle channel





Highest channel



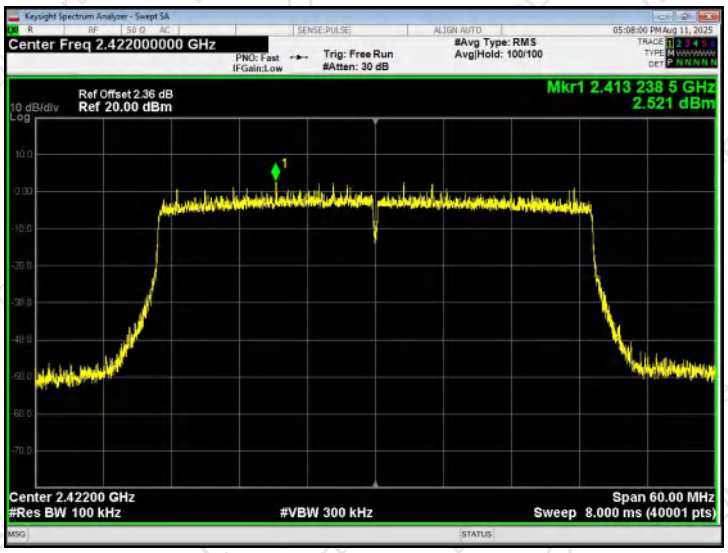


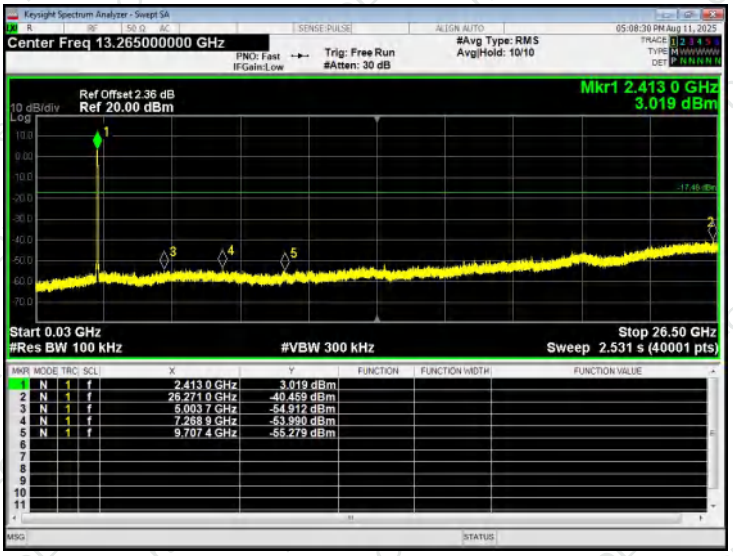
30MHz ~ 26.5GHz

Note:Both SISO ANT A and B were tested, and the results showed only the worst SISO ANT A.

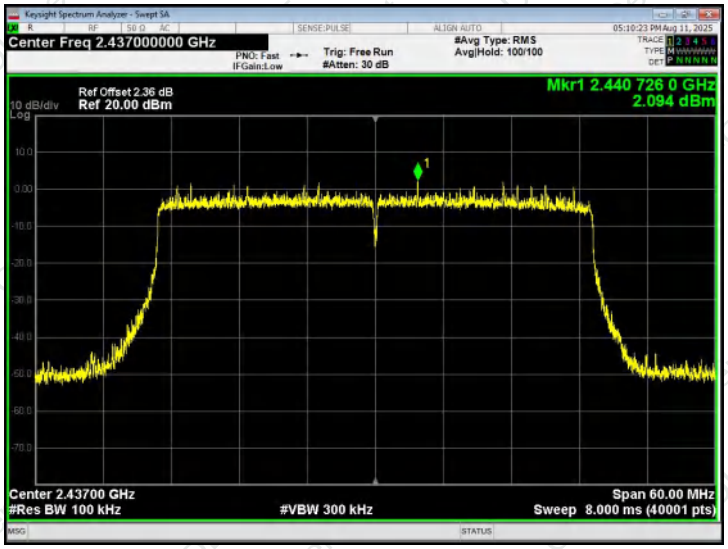
MIMO A - 802.11ax40

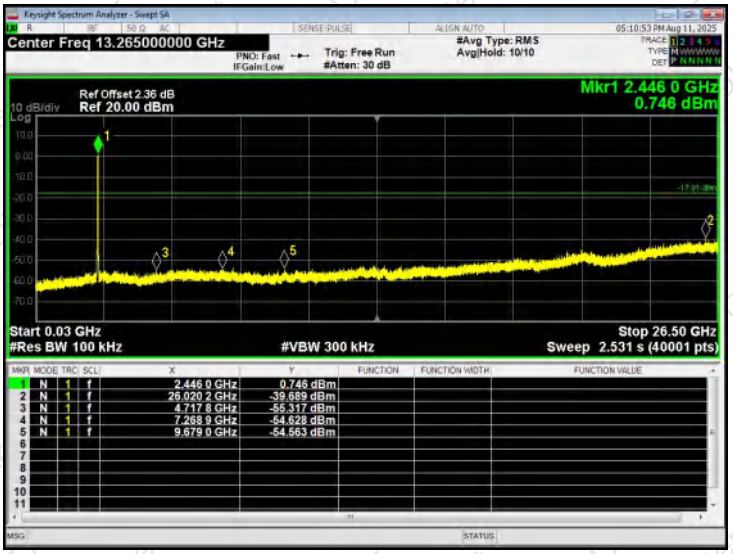
Lowest channel



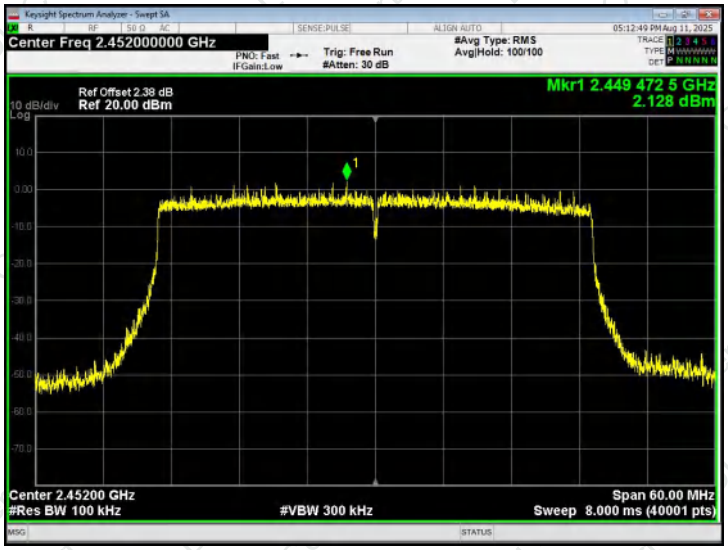


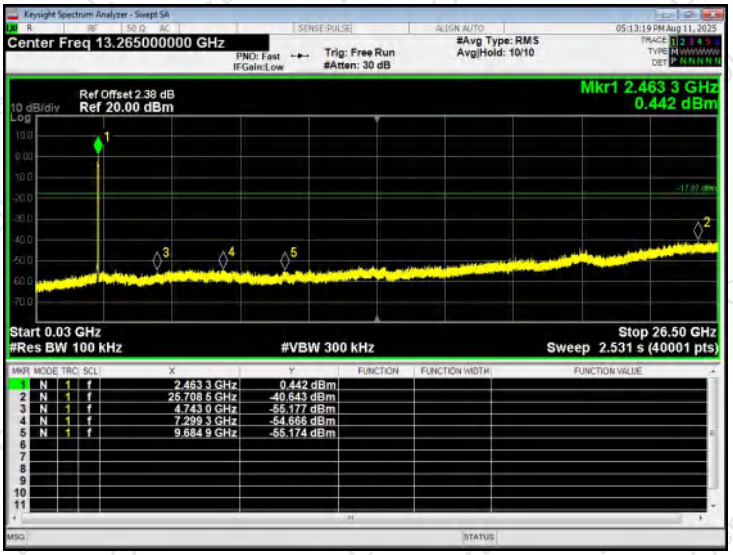
Middle channel





Highest channel





30MHz ~ 26.5GHz

Note:Both MIMO A and B were tested, and the results showed only the worst MIMO A.

10.DUTY CYCLE

Test Method:	ANSI C63.10:2013

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 ≥ OBW if possible; otherwise, set RBW to the largest available value.

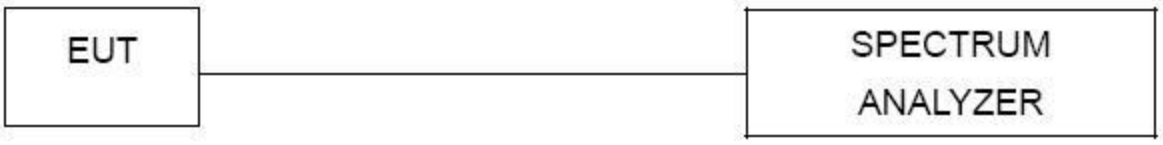
3) Set VBW ≥ RBW. Set detector = peak or average.

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 $T \leq 16.7$ µs.)

10.2 DEVIATION FROM STANDARD

No deviation.

10.3 TEST SETUP

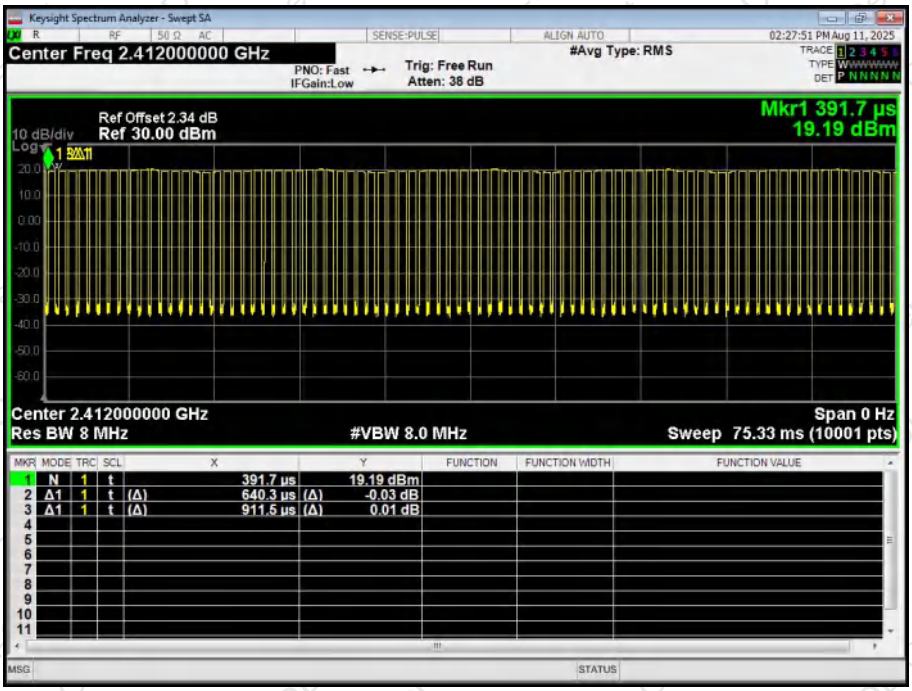


10.4 TEST RESULTS

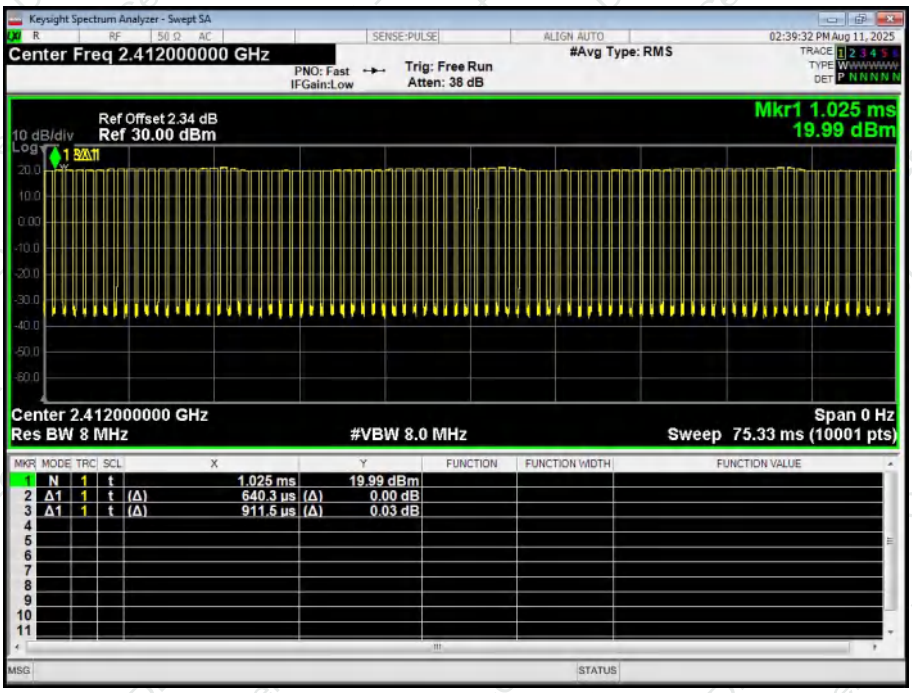
Mode	Antenna	Frequency (MHz)	Duty Cycle (%)	Correction Factor (dB)
802.11b	SISO ANT A	2412	70.33	1.53
	SISO ANT B	2412	70.33	1.53
802.11g	SISO ANT A	2412	94.79	0.23
	SISO ANT B	2412	94.34	0.25
802.11n20	SISO ANT A	2412	95.21	0.21
	SISO ANT B	2412	95.04	0.22
	MIMO A+B	2412	98.14	0.08
802.11n40	SISO ANT A	2422	97.47	0.11
	SISO ANT B	2422	97.47	0.11
	MIMO A+B	2422	100.00	0
802.11ax20	SISO ANT A	2412	96.27	0.17
	SISO ANT B	2412	96.27	0.17
	MIMO A+B	2412	99.28	0.03
802.11ax40	SISO ANT A	2422	97.57	0.11
	SISO ANT B	2422	97.57	0.11
	MIMO A+B	2422	100.00	0

Note: Duty Cycle= Ton /Total*100%
Correction Factor = 10*log10(1/Duty Cycle)

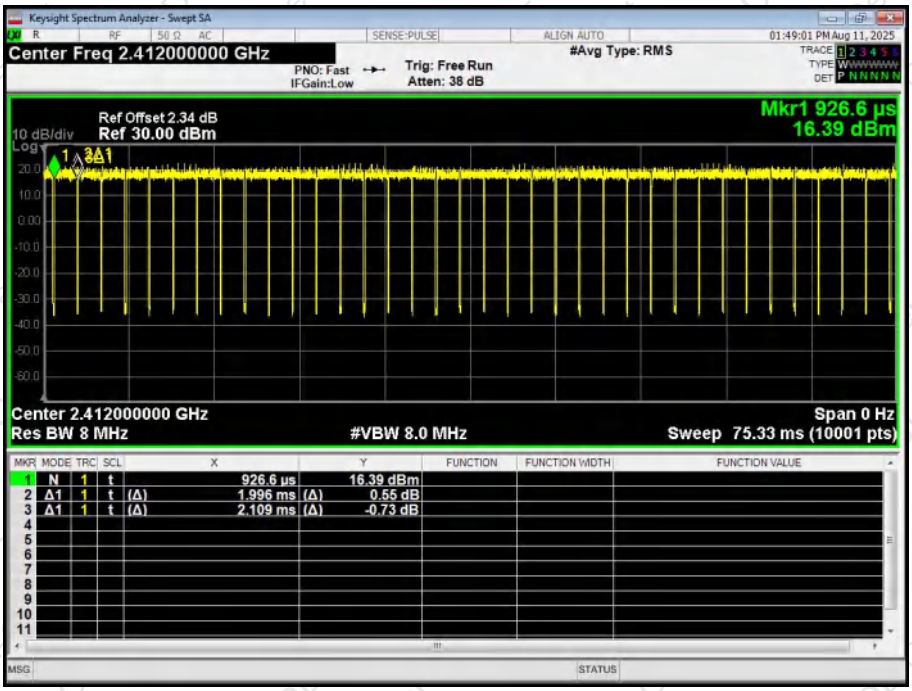
SISO ANT A - 802.11b 2412MHz



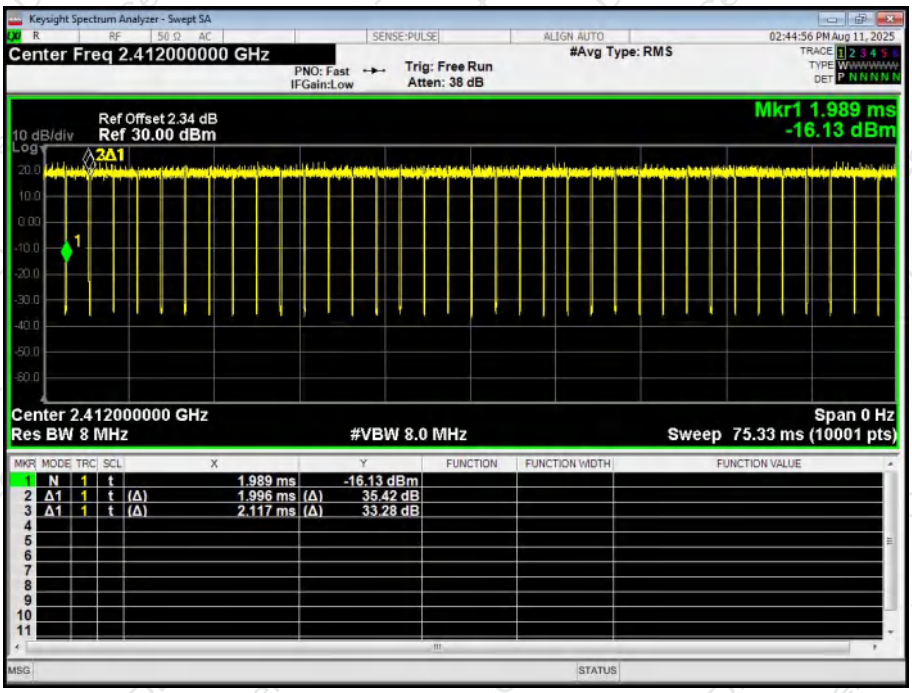
SISO ANT B - 802.11b 2412MHz



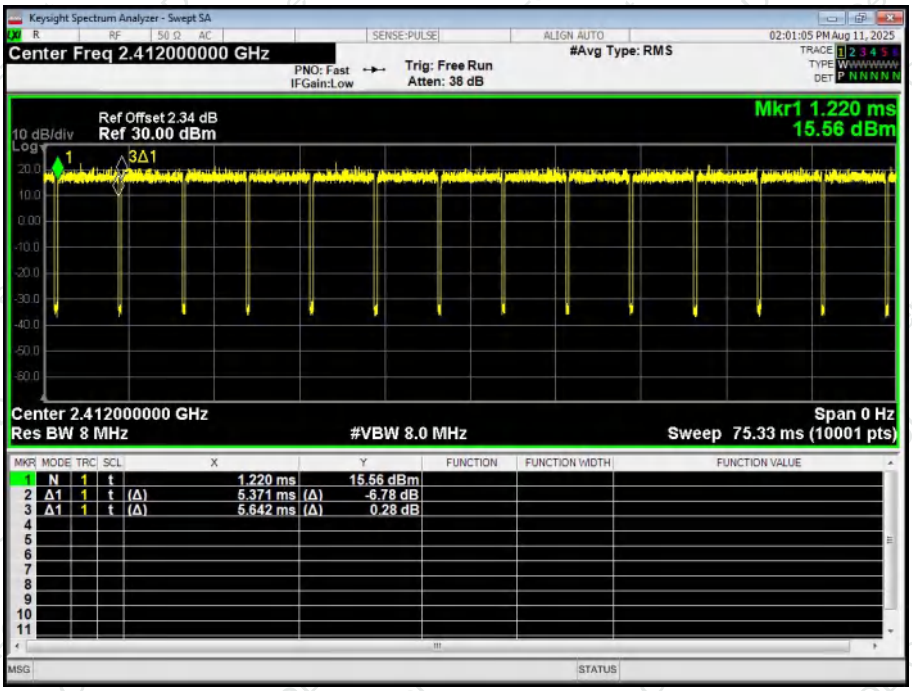
SISO ANT A - 802.11g 2412MHz



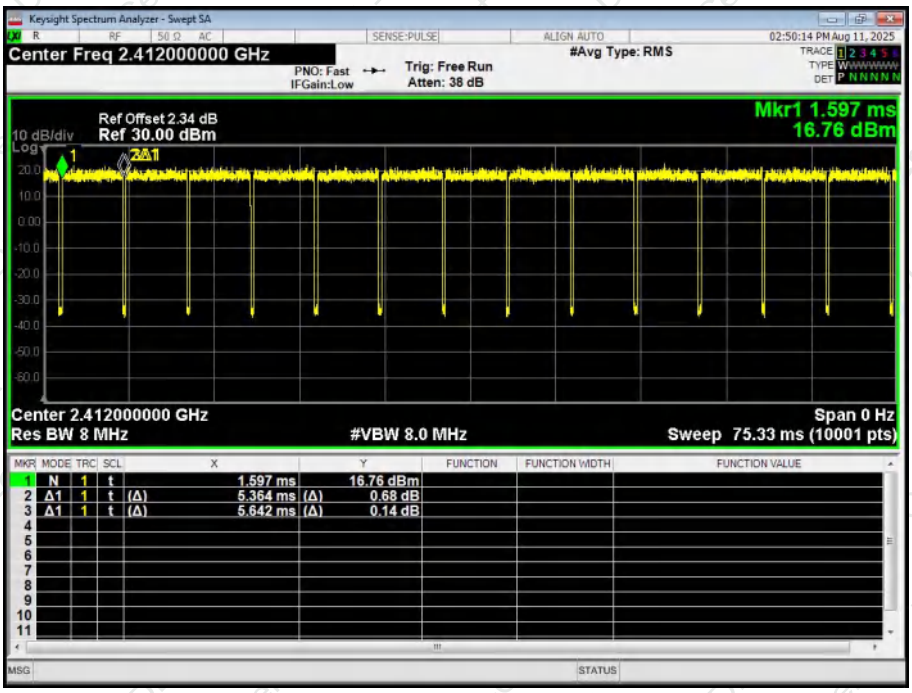
SISO ANT B - 802.11g 2412MHz



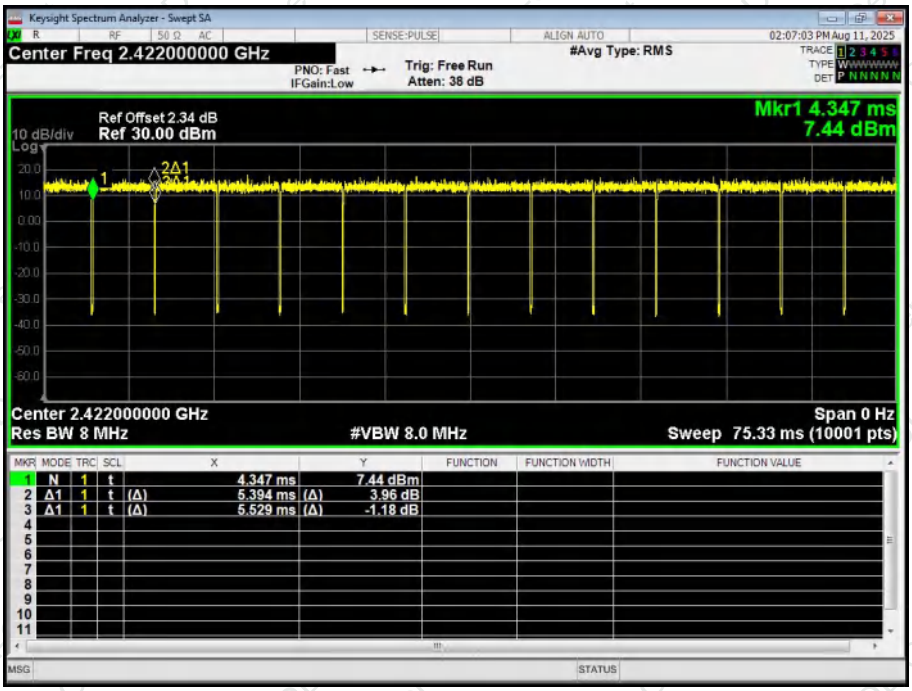
SISO ANT A - 802.11n20 2412MHz



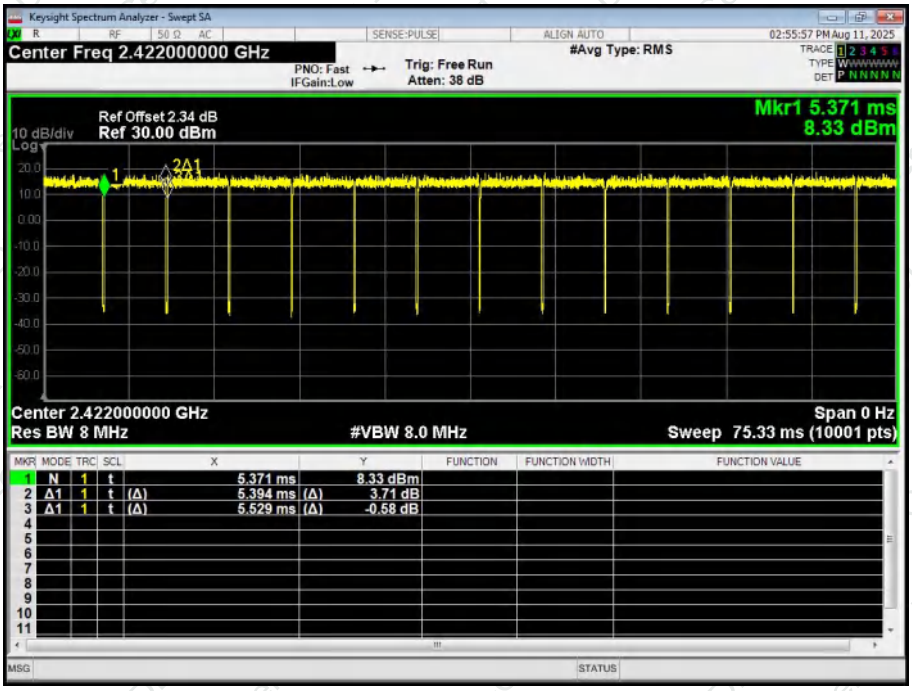
SISO ANT B - 802.11n20 2412MHz



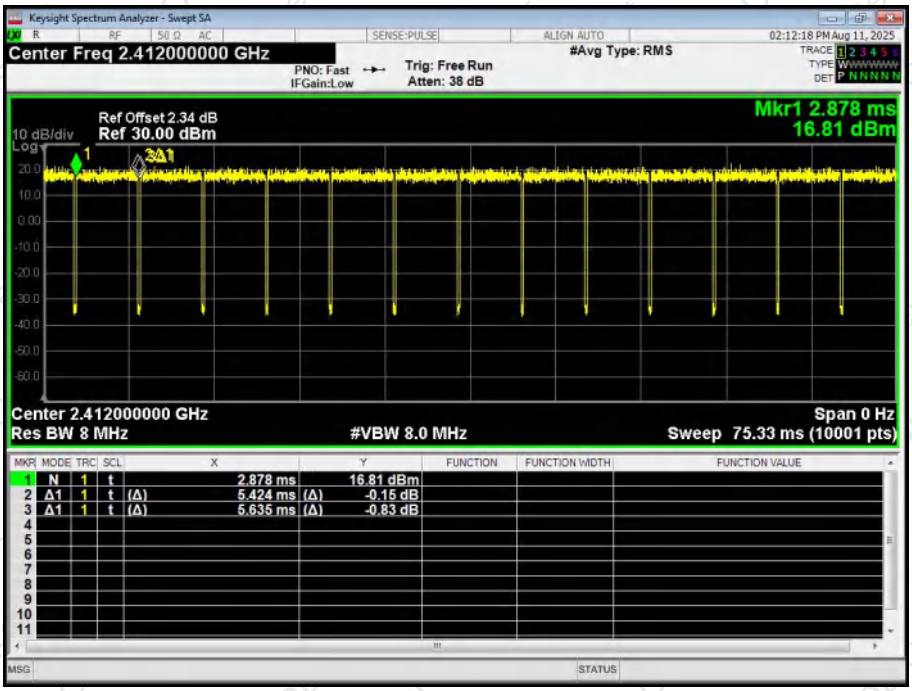
SISO ANT A - 802.11n40 2422MHz



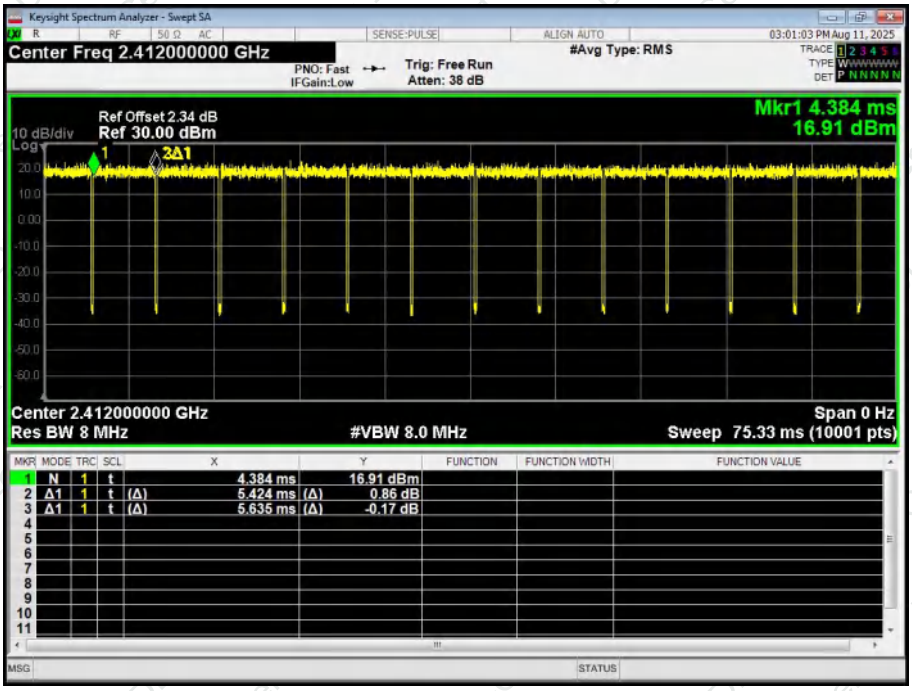
SISO ANT B - 802.11n40 2422MHz



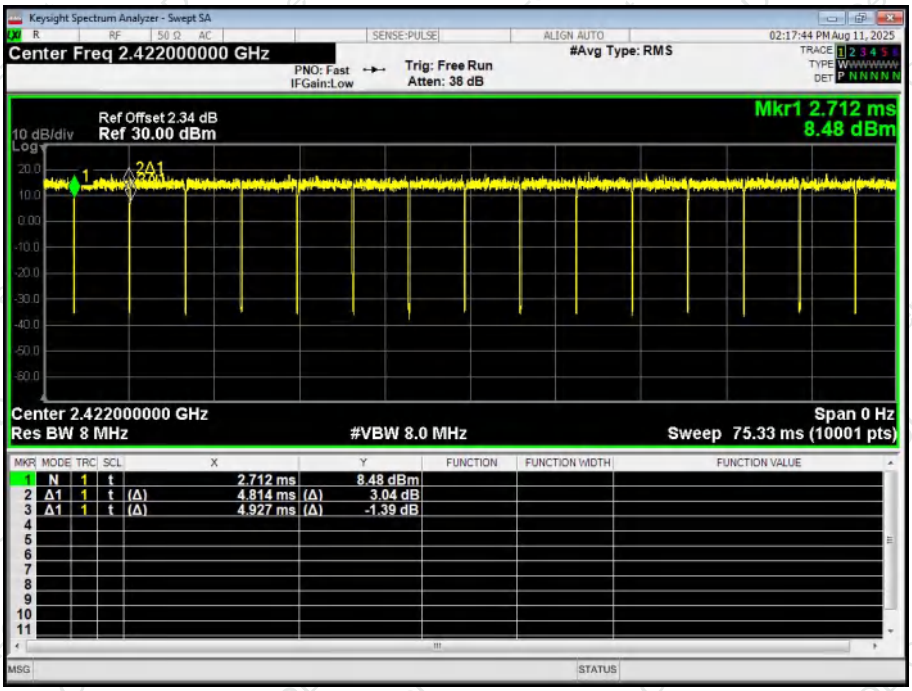
SISO ANT A - 802.11ax20 2412MHz



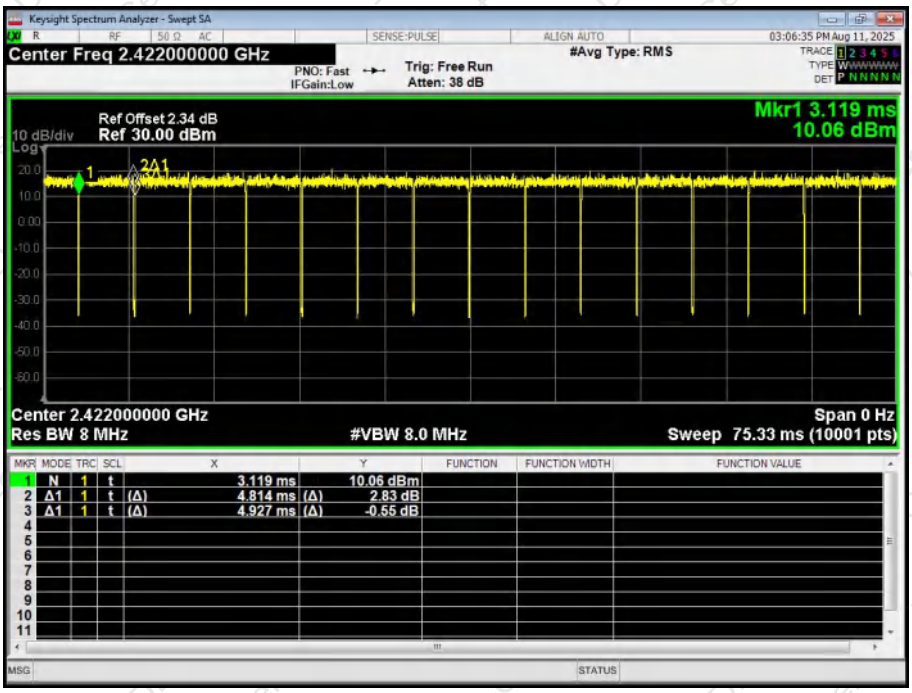
SISO ANT B - 802.11ax20 2412MHz



SISO ANT A - 802.11ax40 2422MHz



SISO ANT B - 802.11ax40 2422MHz



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:	
The antenna is FPC ANT A&B, See page 7 for specific antenna gain, 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 ※※※※※