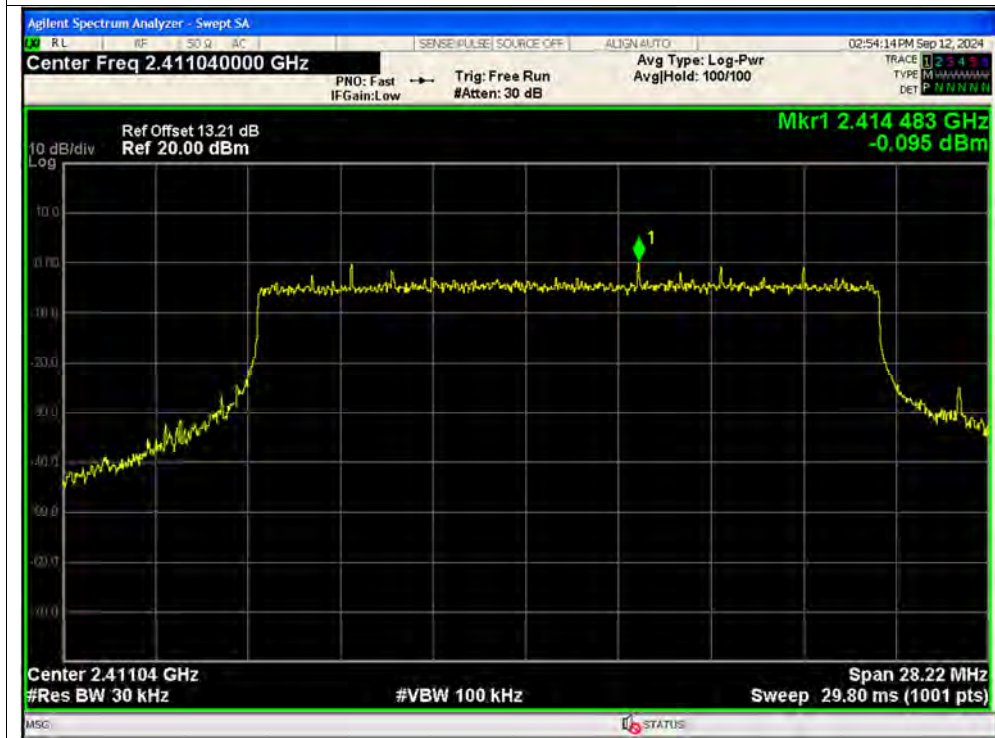


PSD NVNT ax40 242@61 2422MHz Ant12 MIMO



PSD NVNT ax40 242@61 2422MHz Ant13 MIMO



PSD NVNT ax40 242@61 2437MHz Ant12 MIMO



PSD NVNT ax40 242@61 2437MHz Ant13 MIMO



PSD NVNT ax40 242@61 2452MHz Ant12 MIMO



PSD NVNT ax40 242@61 2452MHz Ant13 MIMO

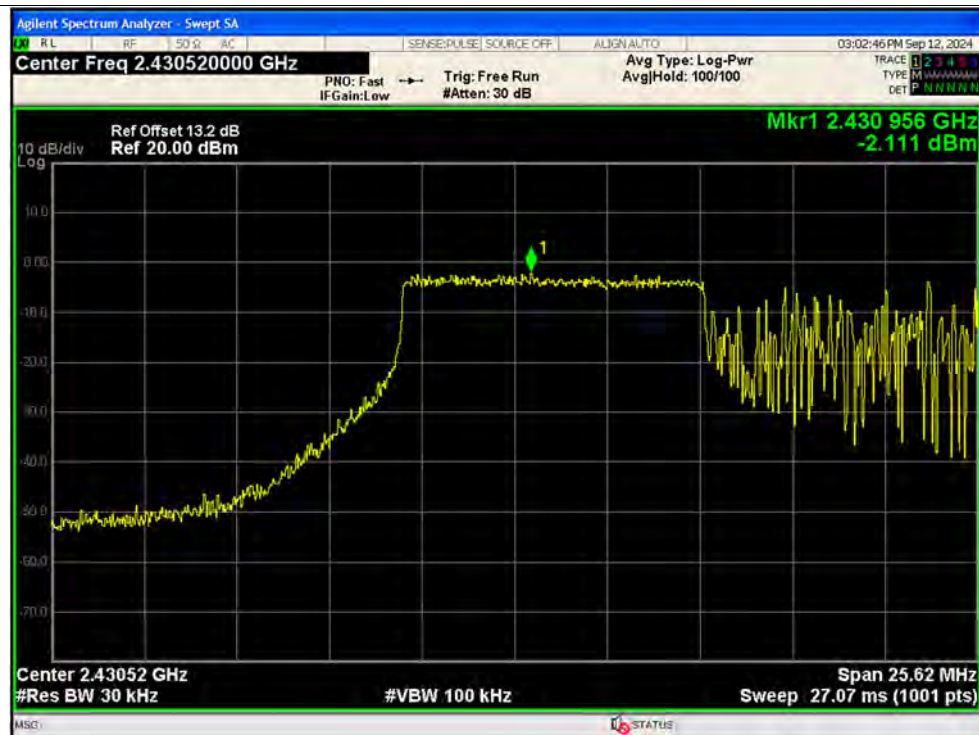




PSD NVNT be20 106@53 2412MHz Ant12 SISO



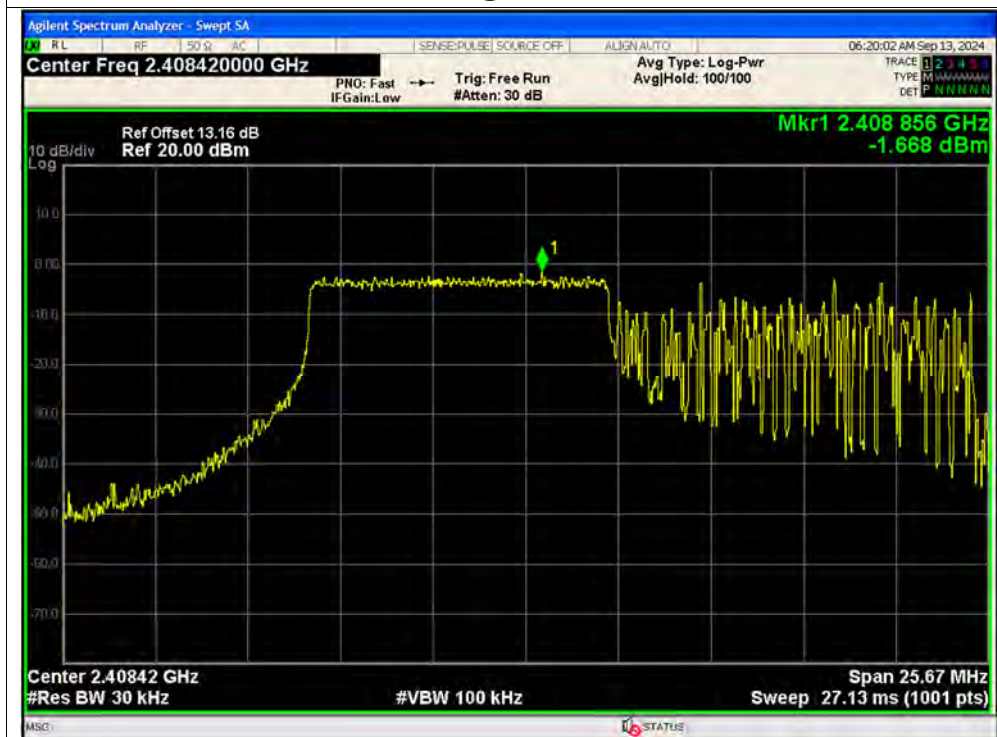
PSD NVNT be20 106@53 2437MHz Ant12 SISO



PSD NVNT be20 106@53 2462MHz Ant12 SISO



PSD NVNT be20 106@53 2412MHz Ant13 SISO



PSD NVNT be20 106@53 2437MHz Ant13 SISO



PSD NVNT be20 106@53 2462MHz Ant13 SISO



PSD NVNT be20 106@53 2412MHz Ant12 MIMO



PSD NVNT be20 106@53 2412MHz Ant13 MIMO





PSD NVNT be20 106@53 2437MHz Ant12 MIMO

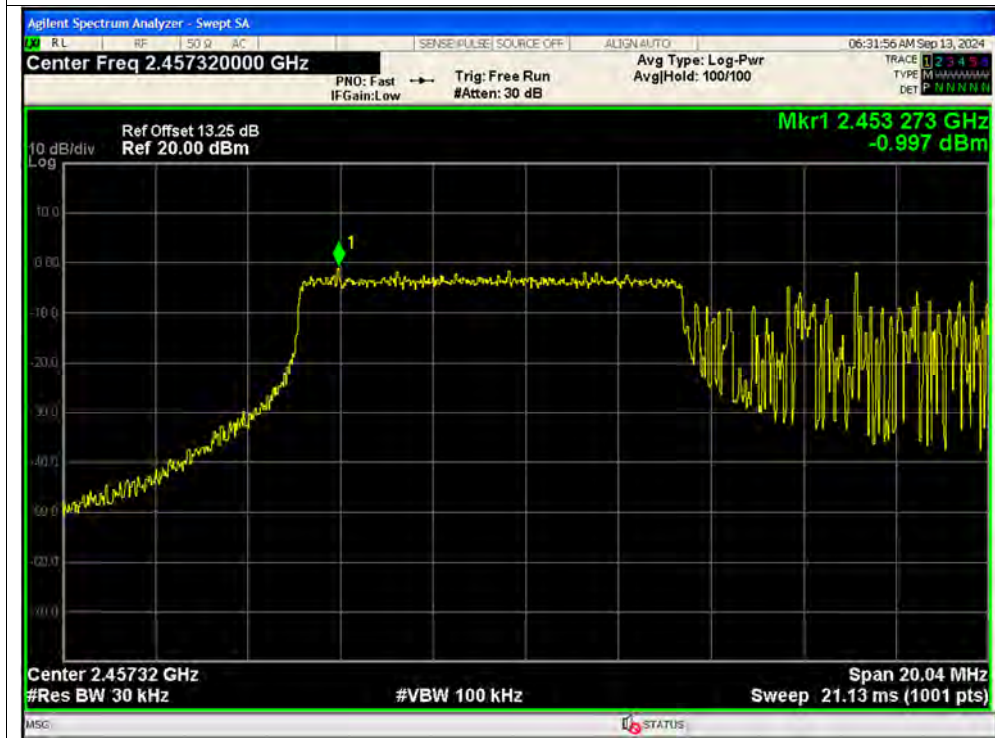


PSD NVNT be20 106@53 2437MHz Ant13 MIMO

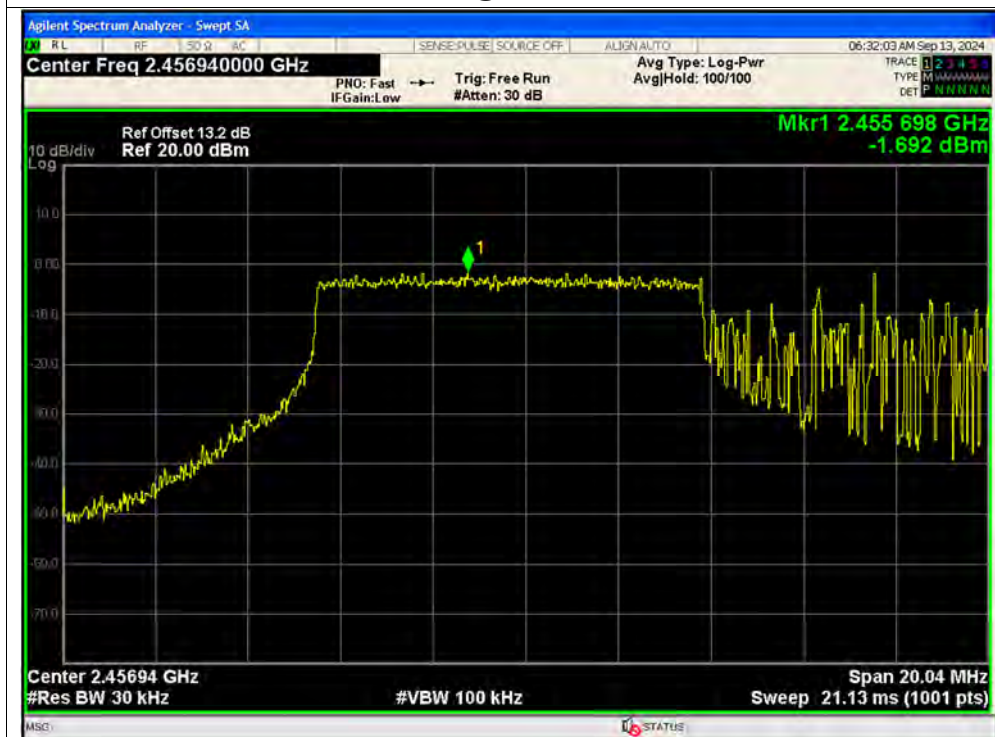




PSD NVNT be20 106@53 2462MHz Ant12 MIMO



PSD NVNT be20 106@53 2462MHz Ant13 MIMO





PSD NVNT be20 26@0 2412MHz Ant12 SISO



PSD NVNT be20 26@0 2437MHz Ant12 SISO





PSD NVNT be20 26@0 2462MHz Ant12 SISO



PSD NVNT be20 26@0 2412MHz Ant13 SISO





PSD NVNT be20 26@0 2437MHz Ant13 SISO



PSD NVNT be20 26@0 2462MHz Ant13 SISO





PSD NVNT be20 26@0 2412MHz Ant12 MIMO



PSD NVNT be20 26@0 2412MHz Ant13 MIMO





PSD NVNT be20 26@0 2437MHz Ant12 MIMO



PSD NVNT be20 26@0 2437MHz Ant13 MIMO





PSD NVNT be20 26@0 2462MHz Ant12 MIMO



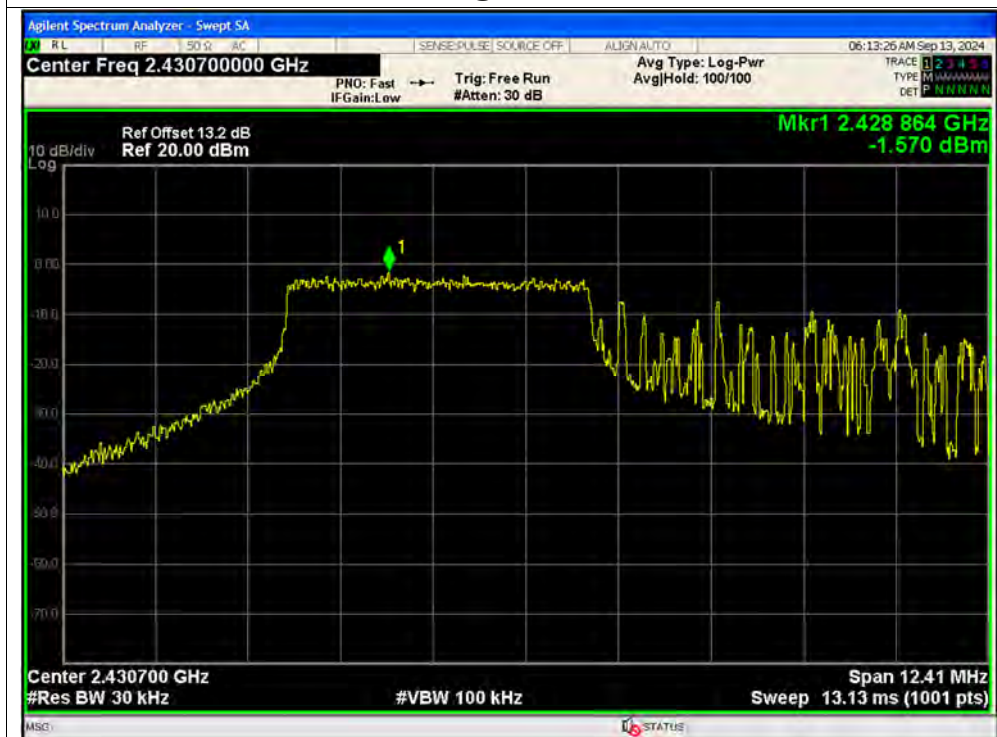
PSD NVNT be20 26@0 2462MHz Ant13 MIMO



PSD NVNT be20 52@37 2412MHz Ant12 SISO



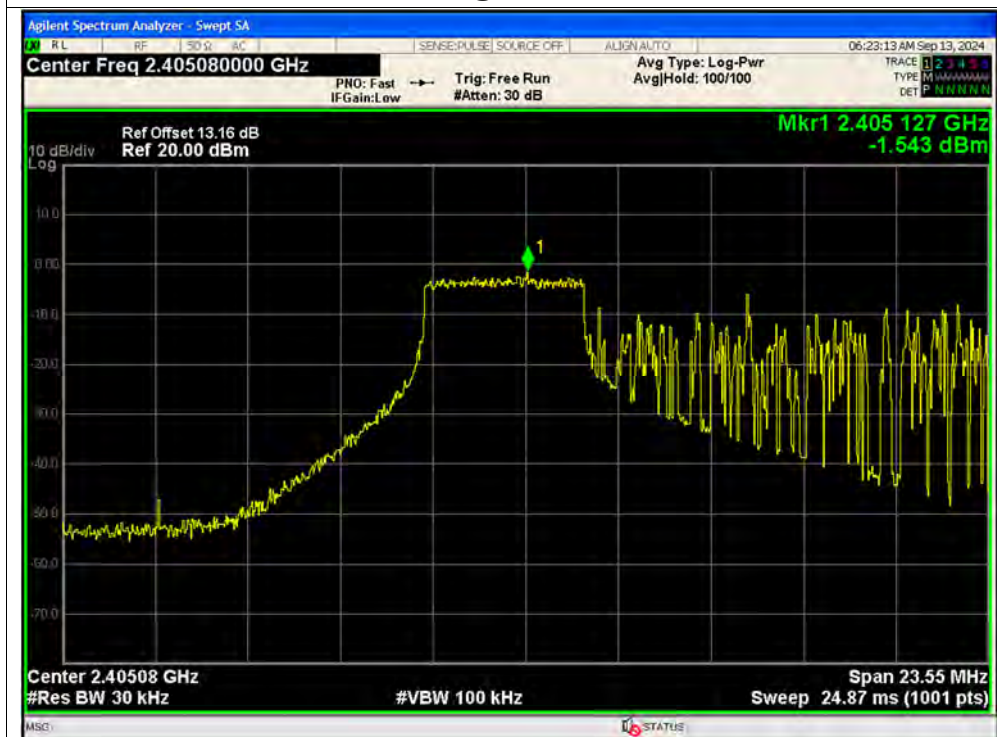
PSD NVNT be20 52@37 2437MHz Ant12 SISO



PSD NVNT be20 52@37 2462MHz Ant12 SISO



PSD NVNT be20 52@37 2412MHz Ant13 SISO



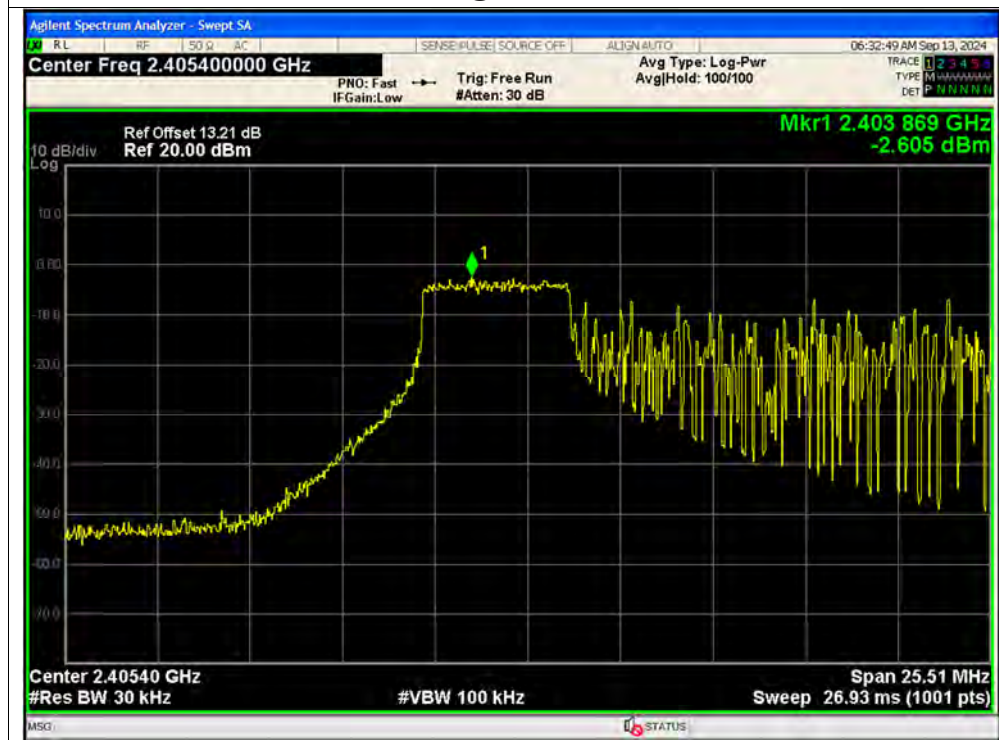
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PSD NVNT be20 52@37 2462MHz Ant13 SISO



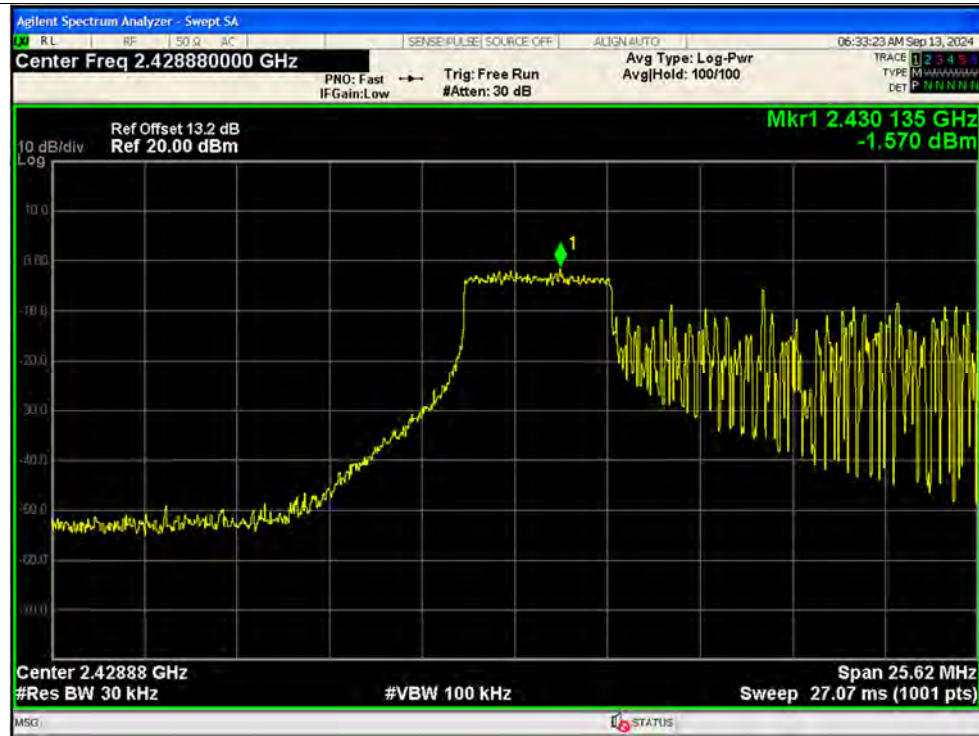
PSD NVNT be20 52@37 2412MHz Ant12 MIMO



PSD NVNT be20 52@37 2412MHz Ant13 MIMO



PSD NVNT be20 52@37 2437MHz Ant12 MIMO



PSD NVNT be20 52@37 2437MHz Ant13 MIMO





PSD NVNT be20 52@37 2462MHz Ant12 MIMO



PSD NVNT be20 52@37 2462MHz Ant13 MIMO





PSD NVNT be20 2412MHz Ant12 SISO



PSD NVNT be20 2437MHz Ant12 SISO



PSD NVNT be20 2462MHz Ant12 SISO



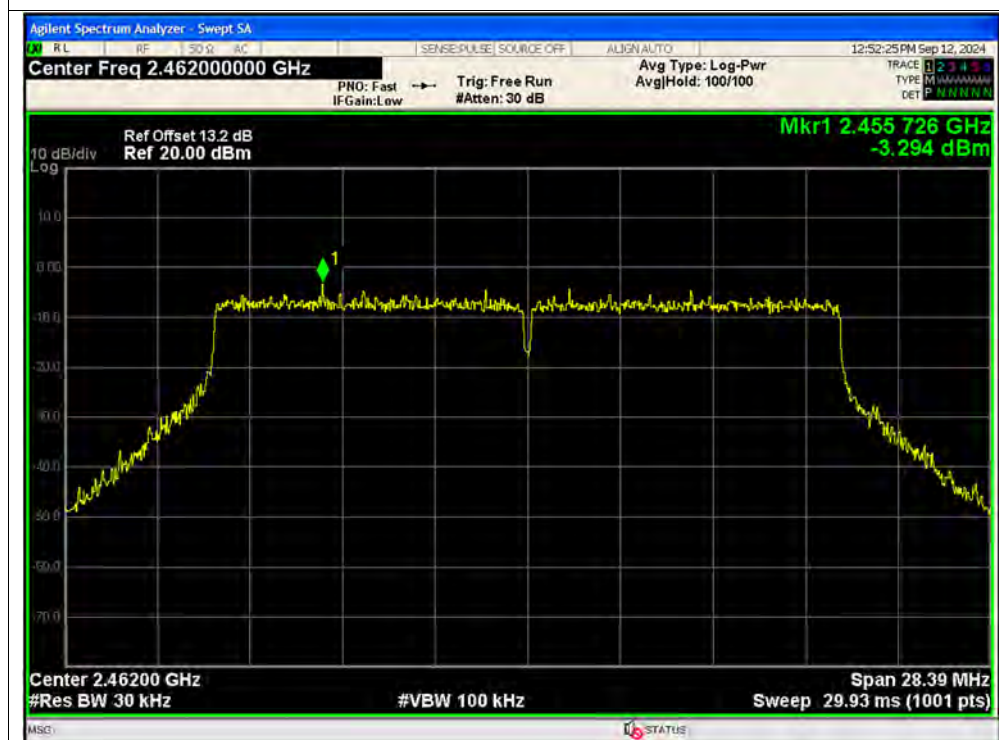
PSD NVNT be20 2412MHz Ant13 SISO



PSD NVNT be20 2437MHz Ant13 SISO



PSD NVNT be20 2462MHz Ant13 SISO





PSD NVNT be20 2412MHz Ant12 MIMO



PSD NVNT be20 2412MHz Ant13 MIMO



PSD NVNT be20 2437MHz Ant12 MIMO



PSD NVNT be20 2437MHz Ant13 MIMO





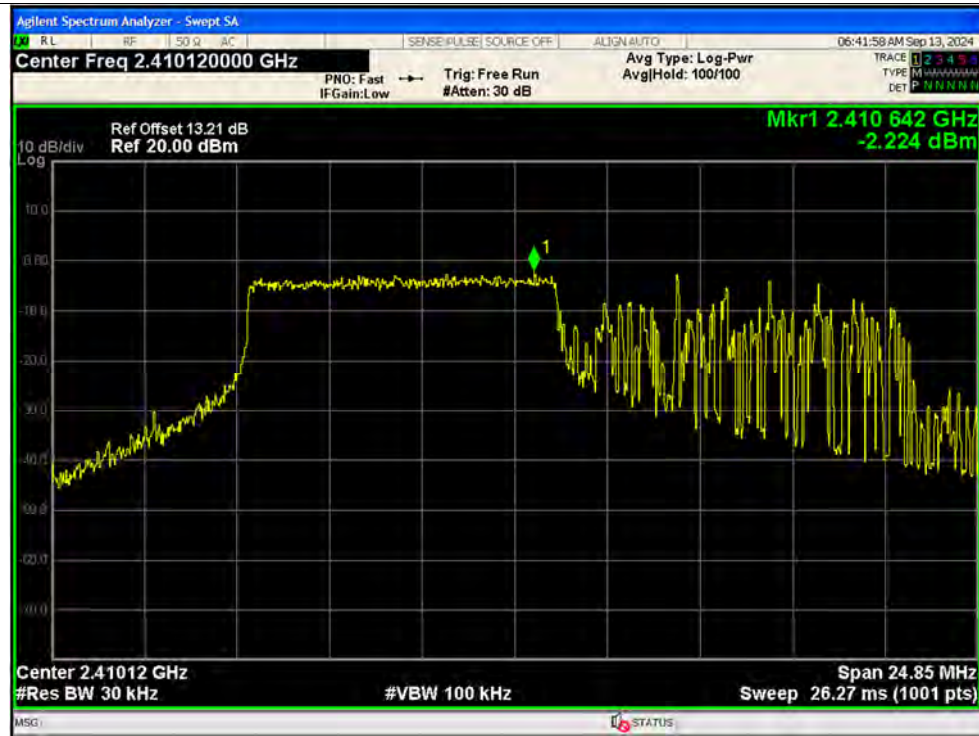
PSD NVNT be20 2462MHz Ant12 MIMO



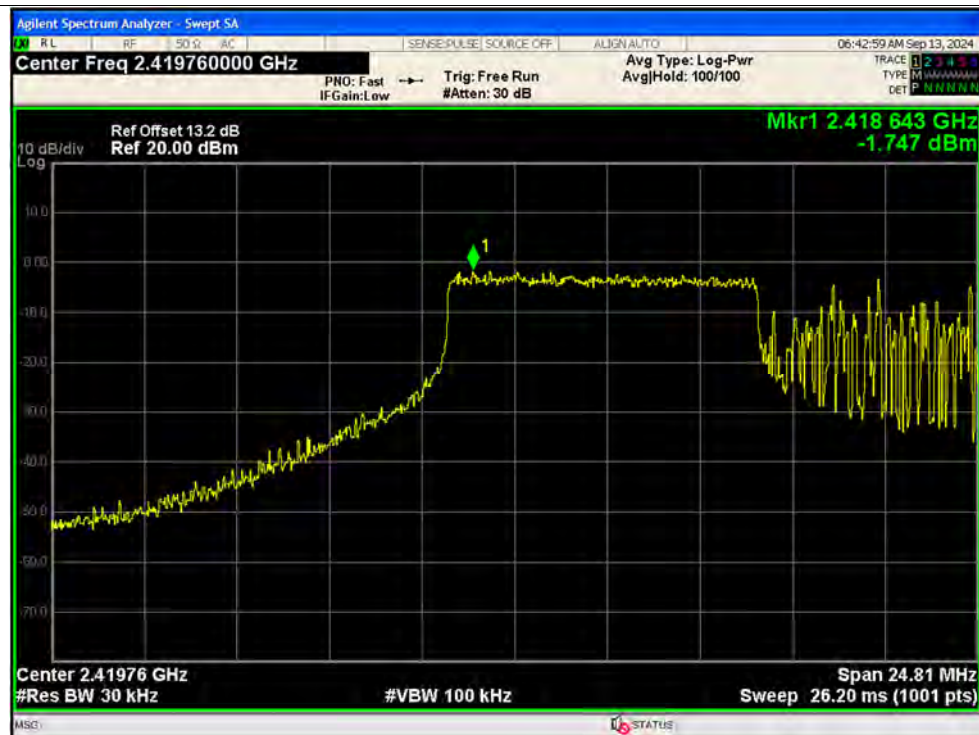
PSD NVNT be20 2462MHz Ant13 MIMO



PSD NVNT be40 106@53 2422MHz Ant12 SISO



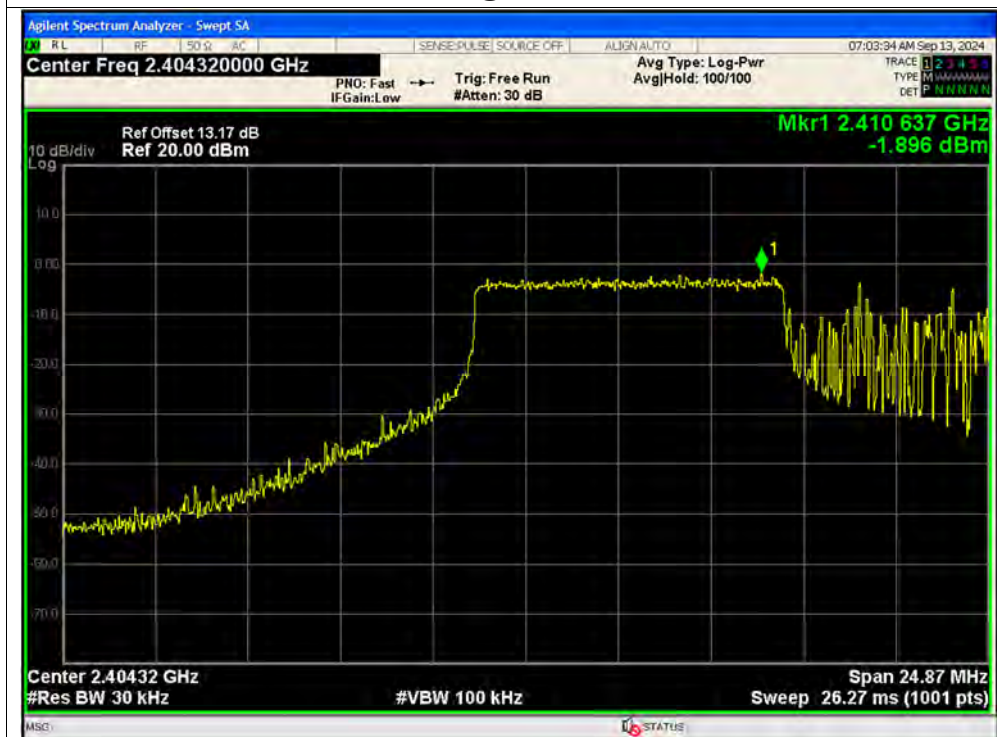
PSD NVNT be40 106@53 2437MHz Ant12 SISO



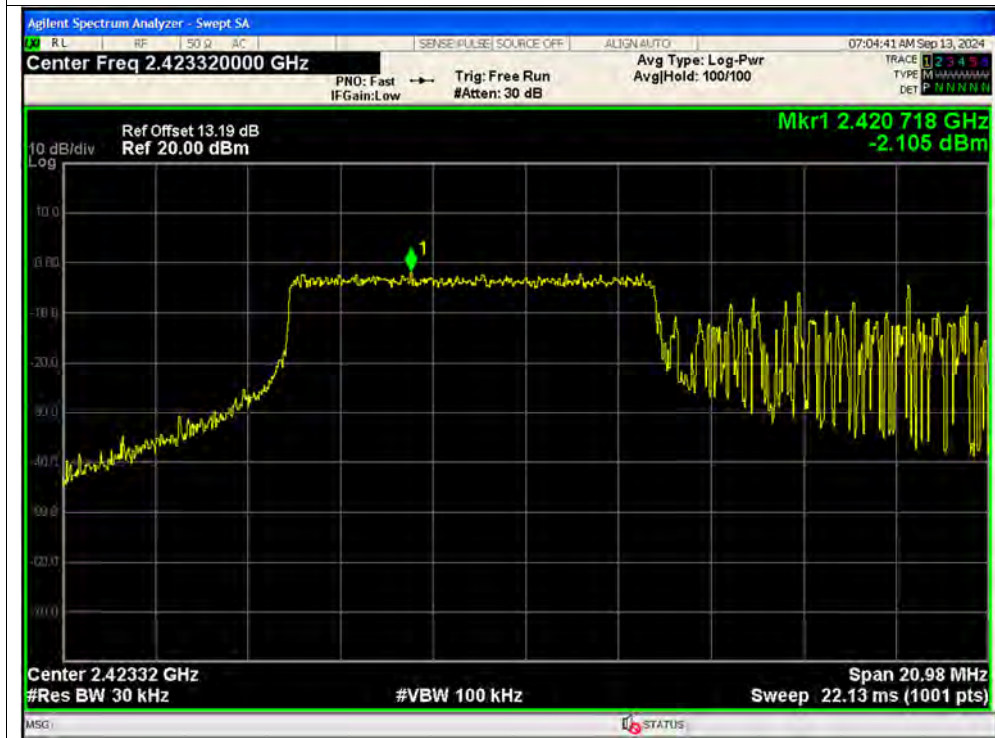
PSD NVNT be40 106@53 2452MHz Ant12 SISO



PSD NVNT be40 106@53 2422MHz Ant13 SISO



PSD NVNT be40 106@53 2437MHz Ant13 SISO

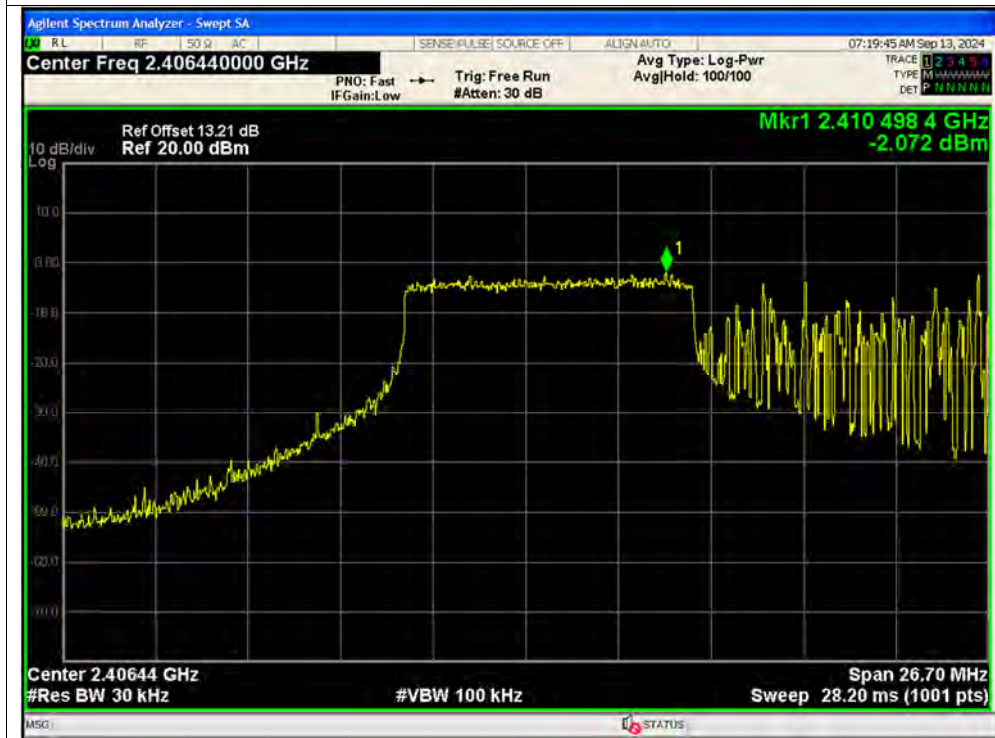


PSD NVNT be40 106@53 2452MHz Ant13 SISO





PSD NVNT be40 106@53 2422MHz Ant12 MIMO



PSD NVNT be40 106@53 2422MHz Ant13 MIMO



PSD NVNT be40 106@53 2437MHz Ant12 MIMO



PSD NVNT be40 106@53 2437MHz Ant13 MIMO





PSD NVNT be40 106@53 2452MHz Ant12 MIMO

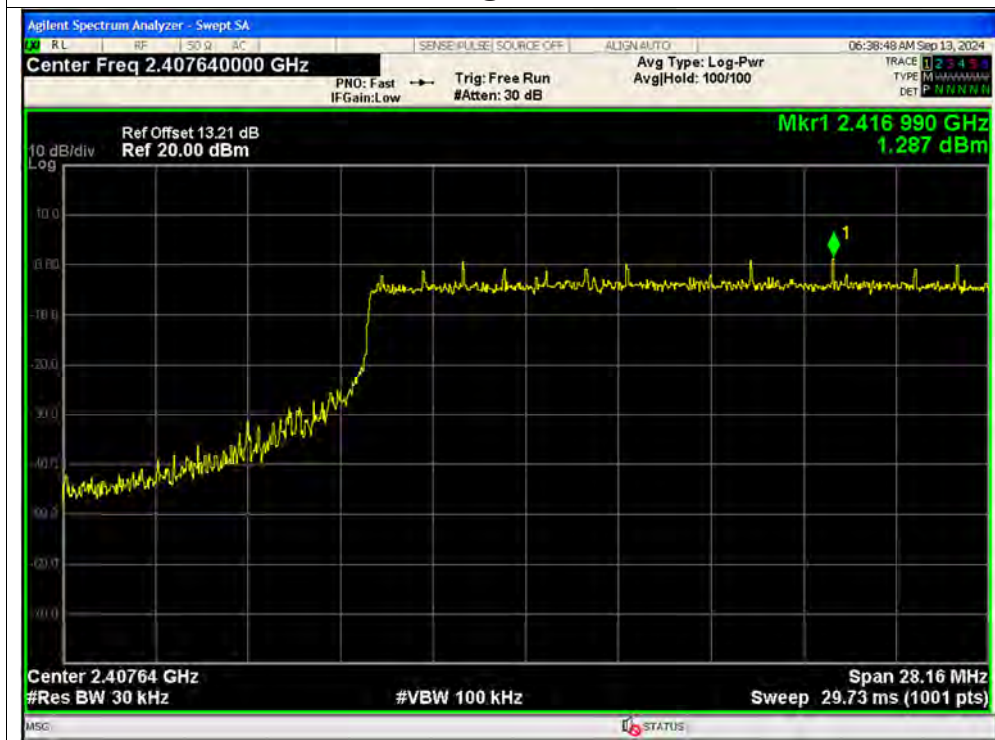


PSD NVNT be40 106@53 2452MHz Ant13 MIMO

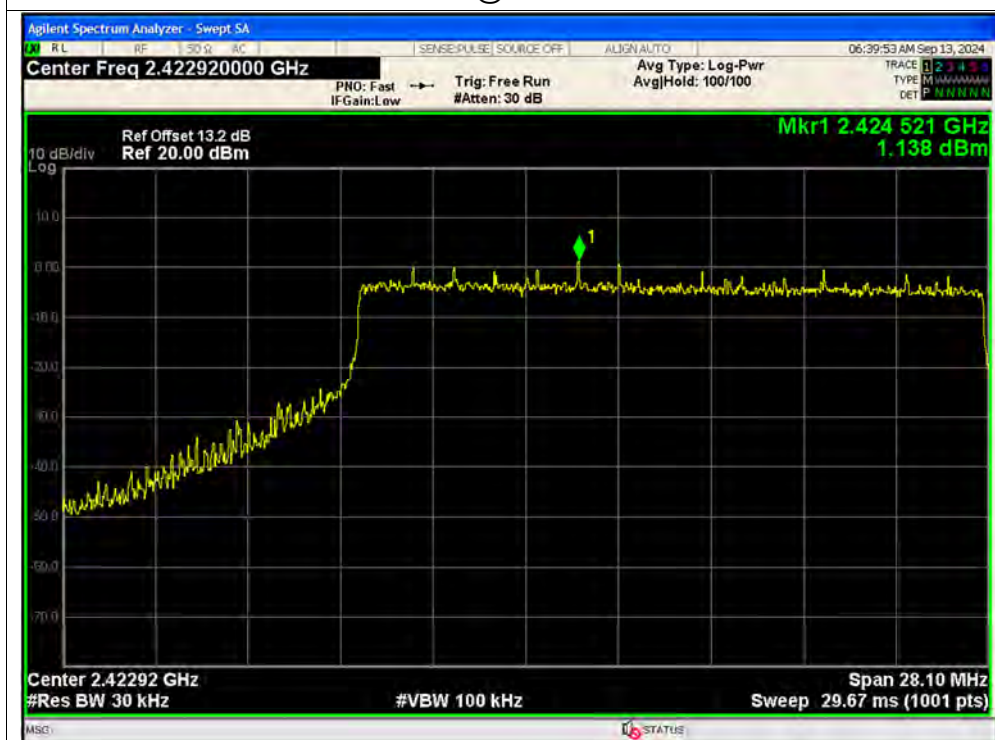




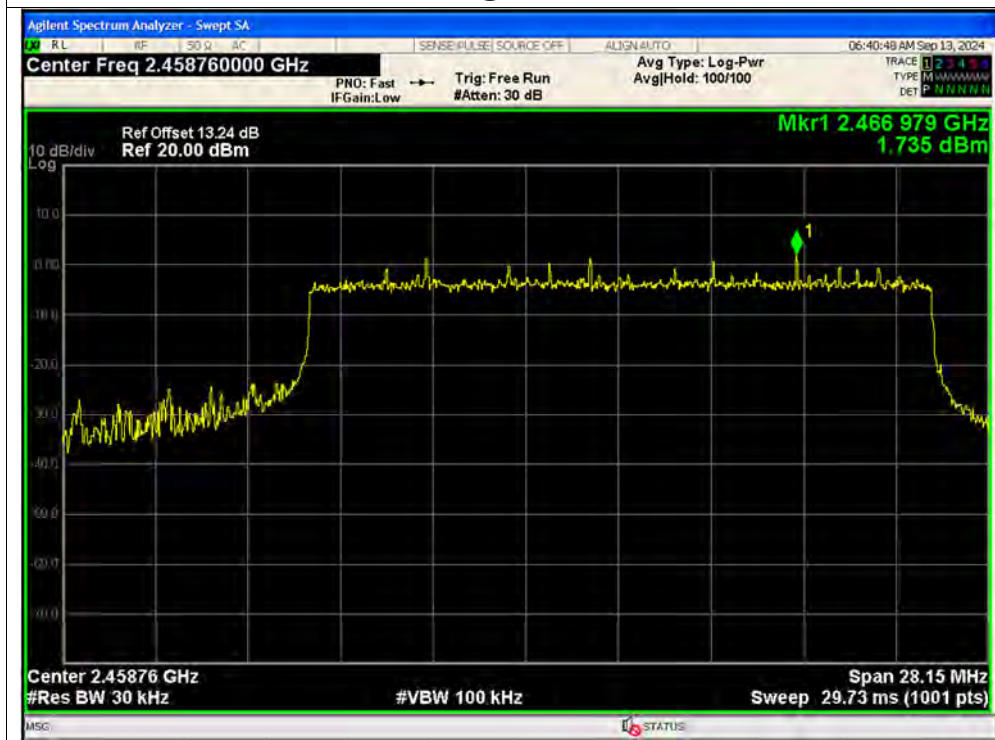
PSD NVNT be40 242@61 2422MHz Ant12 SISO



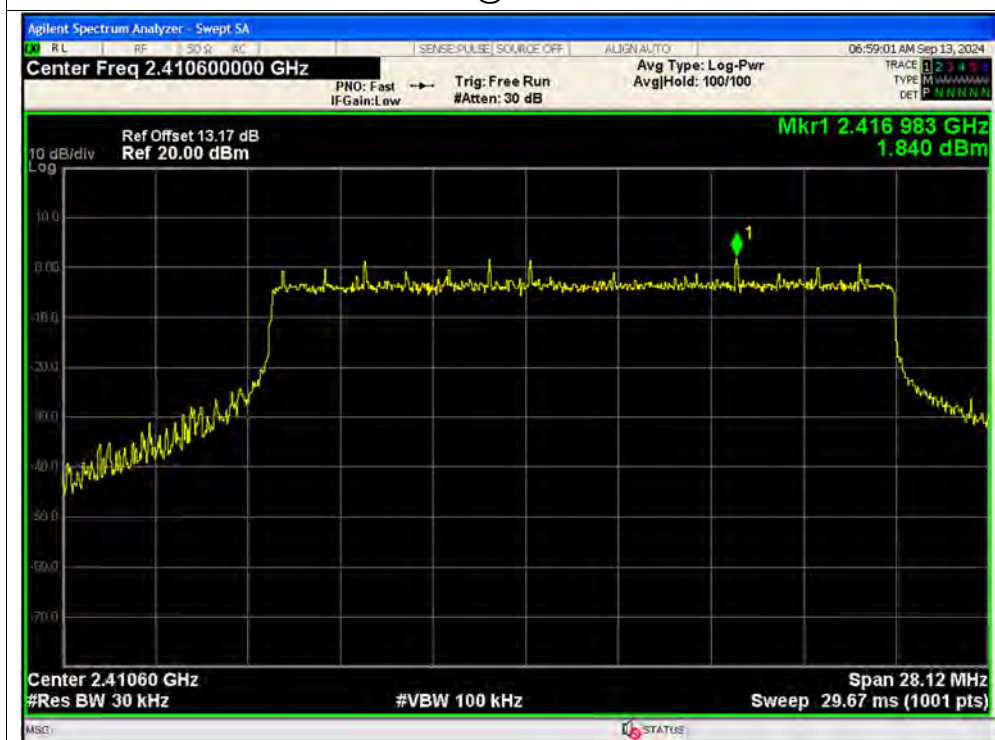
PSD NVNT be40 242@61 2437MHz Ant12 SISO



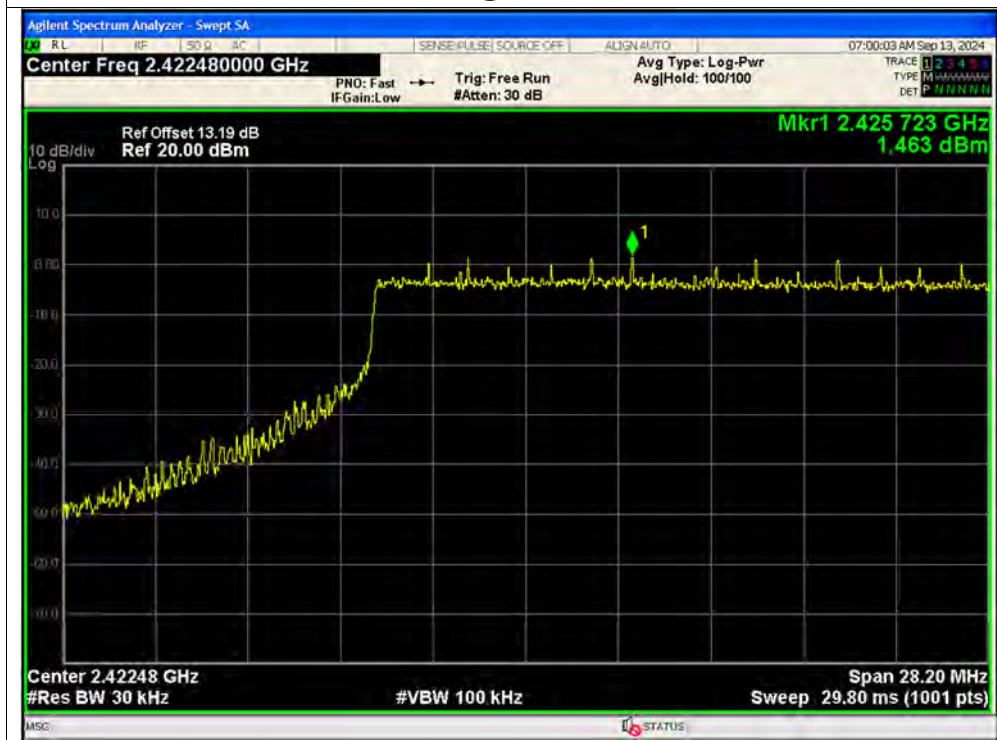
PSD NVNT be40 242@61 2452MHz Ant12 SISO



PSD NVNT be40 242@61 2422MHz Ant13 SISO



PSD NVNT be40 242@61 2437MHz Ant13 SISO



PSD NVNT be40 242@61 2452MHz Ant13 SISO





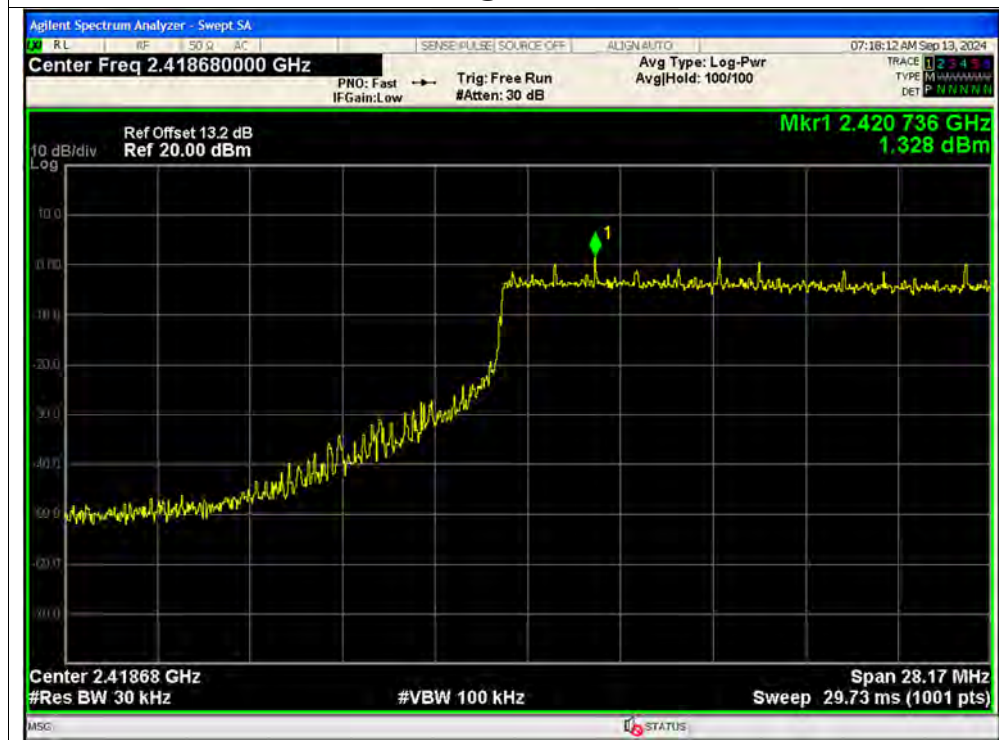
PSD NVNT be40 242@61 2422MHz Ant12 MIMO



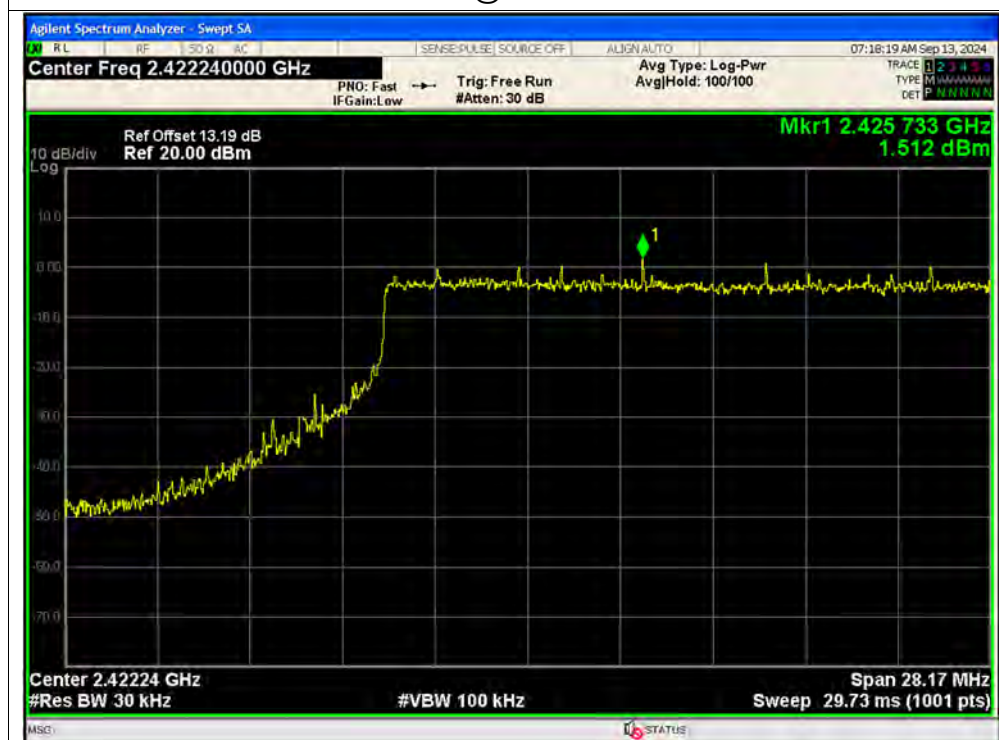
PSD NVNT be40 242@61 2422MHz Ant13 MIMO



PSD NVNT be40 242@61 2437MHz Ant12 MIMO

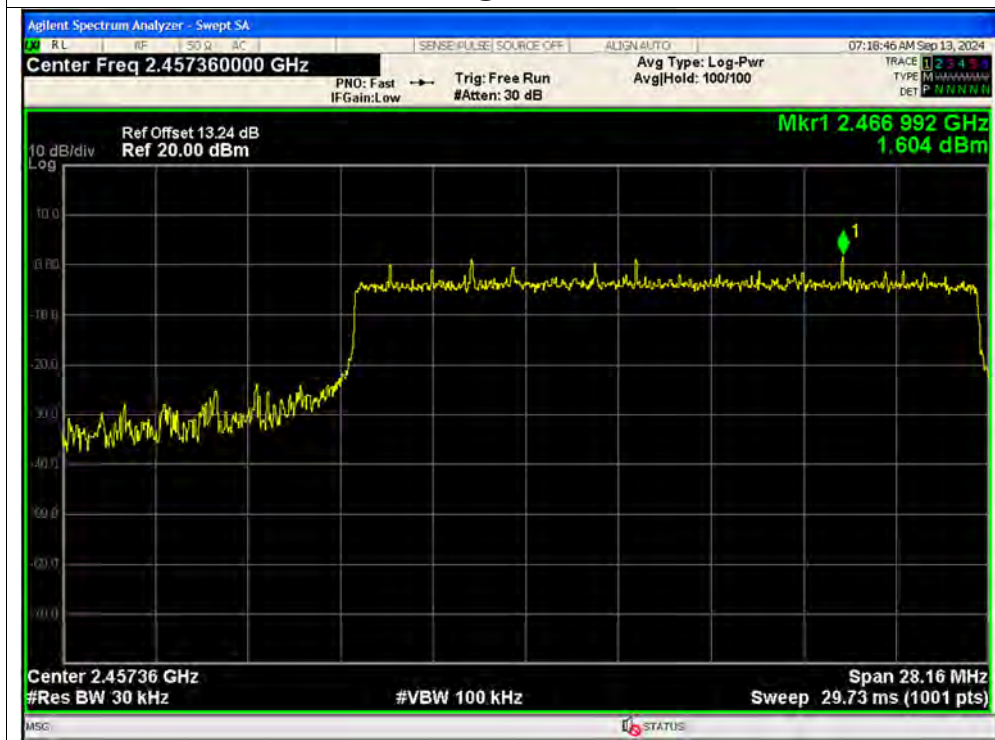


PSD NVNT be40 242@61 2437MHz Ant13 MIMO





PSD NVNT be40 242@61 2452MHz Ant12 MIMO



PSD NVNT be40 242@61 2452MHz Ant13 MIMO





PSD NVNT be40 26@0 2422MHz Ant12 SISO



PSD NVNT be40 26@0 2437MHz Ant12 SISO





PSD NVNT be40 26@0 2452MHz Ant12 SISO



PSD NVNT be40 26@0 2422MHz Ant13 SISO





PSD NVNT be40 26@0 2437MHz Ant13 SISO



PSD NVNT be40 26@0 2452MHz Ant13 SISO



PSD NVNT be40 26@0 2422MHz Ant12 MIMO



PSD NVNT be40 26@0 2422MHz Ant13 MIMO





PSD NVNT be40 26@0 2437MHz Ant12 MIMO



PSD NVNT be40 26@0 2437MHz Ant13 MIMO





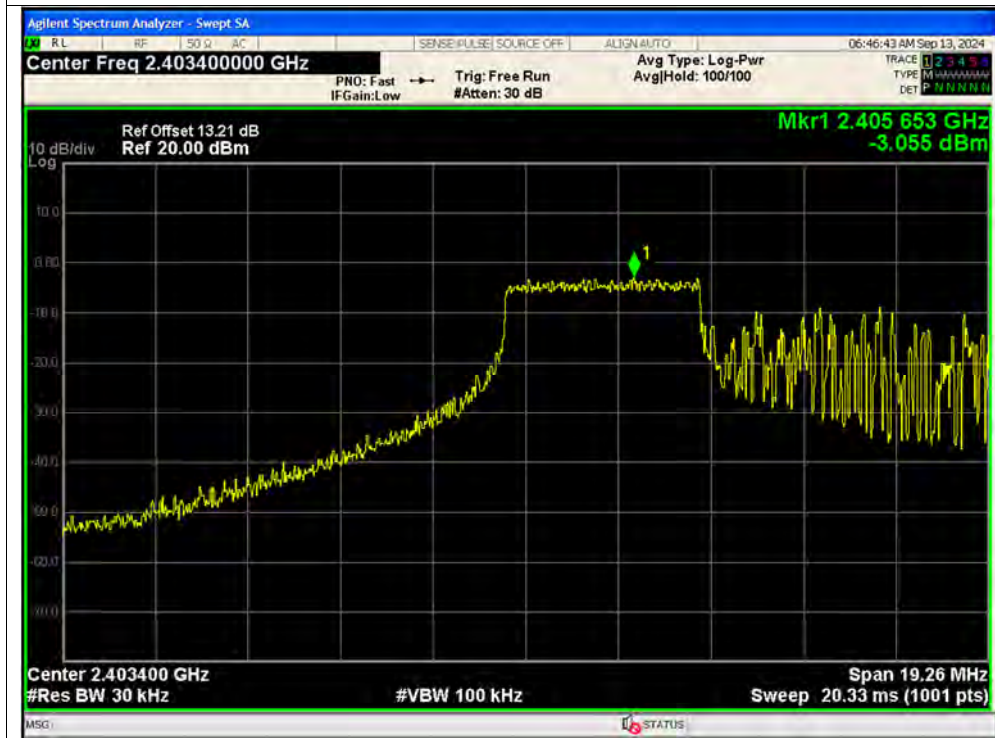
PSD NVNT be40 26@0 2452MHz Ant12 MIMO



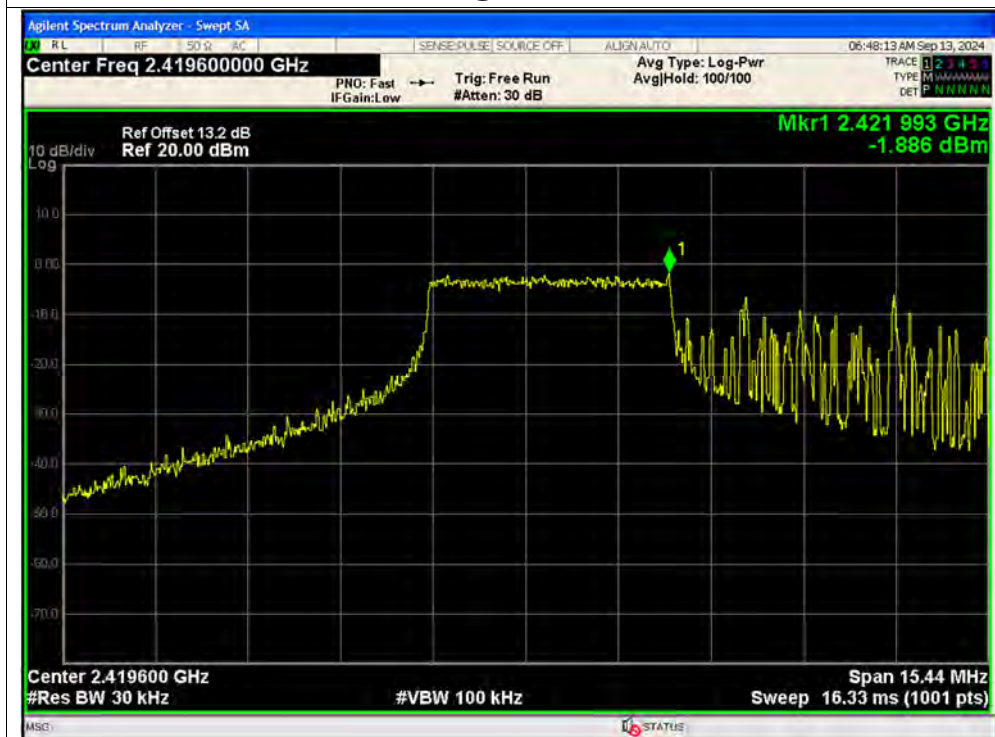
PSD NVNT be40 26@0 2452MHz Ant13 MIMO



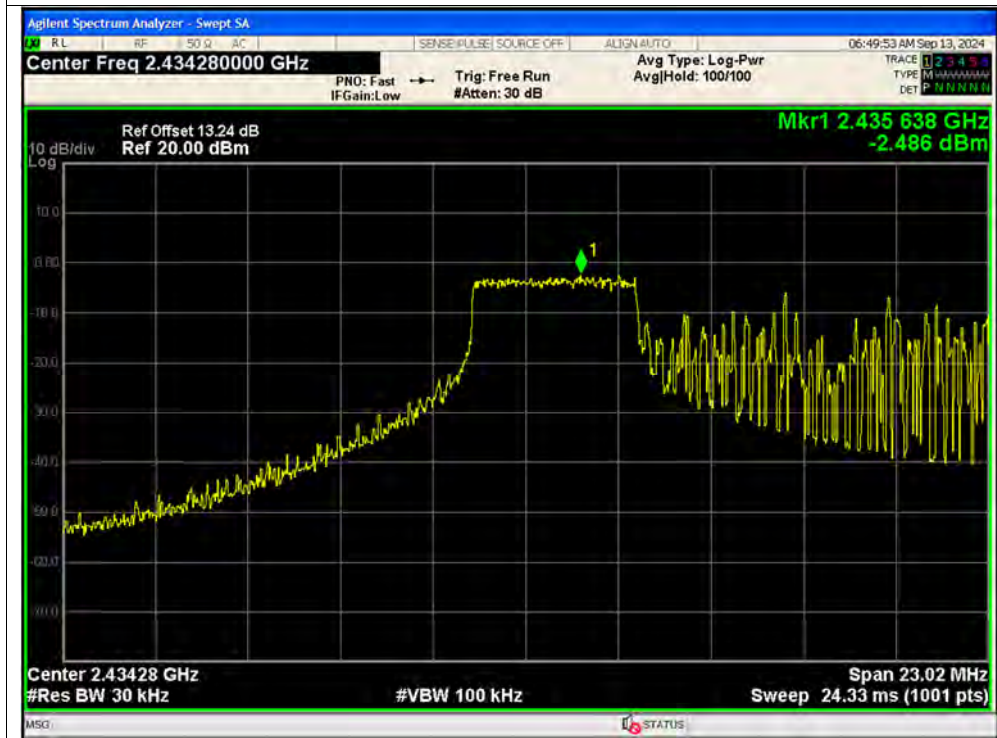
PSD NVNT be40 52@37 2422MHz Ant12 SISO



PSD NVNT be40 52@37 2437MHz Ant12 SISO



PSD NVNT be40 52@37 2452MHz Ant12 SISO



PSD NVNT be40 52@37 2422MHz Ant13 SISO



PSD NVNT be40 52@37 2437MHz Ant13 SISO



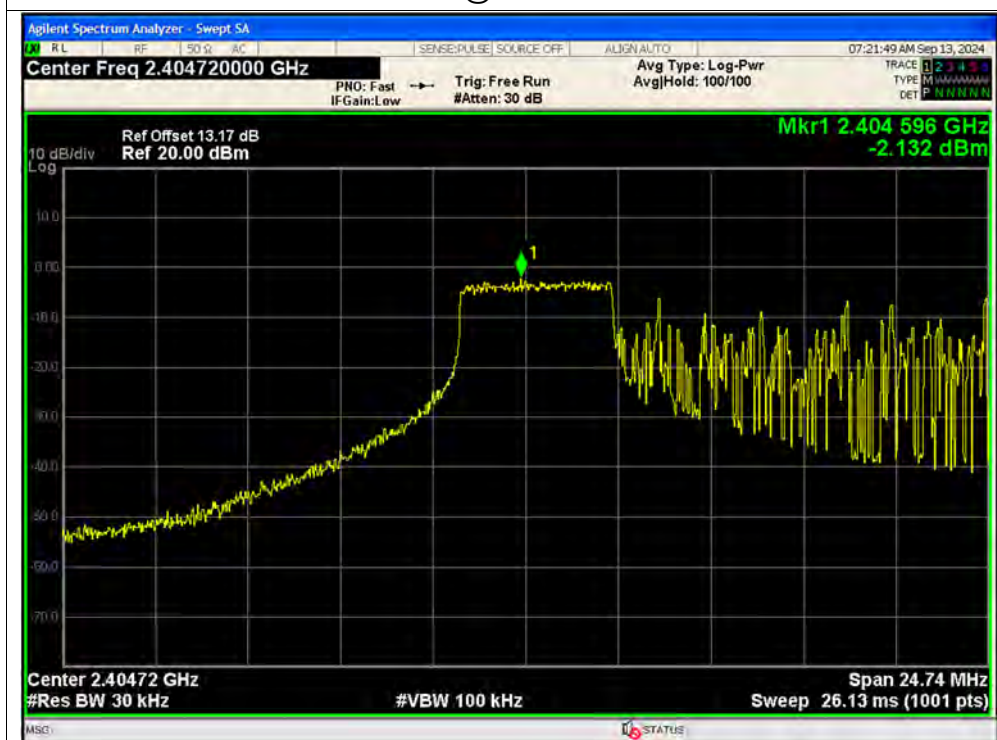
PSD NVNT be40 52@37 2452MHz Ant13 SISO



PSD NVNT be40 52@37 2422MHz Ant12 MIMO



PSD NVNT be40 52@37 2422MHz Ant13 MIMO





PSD NVNT be40 52@37 2437MHz Ant12 MIMO



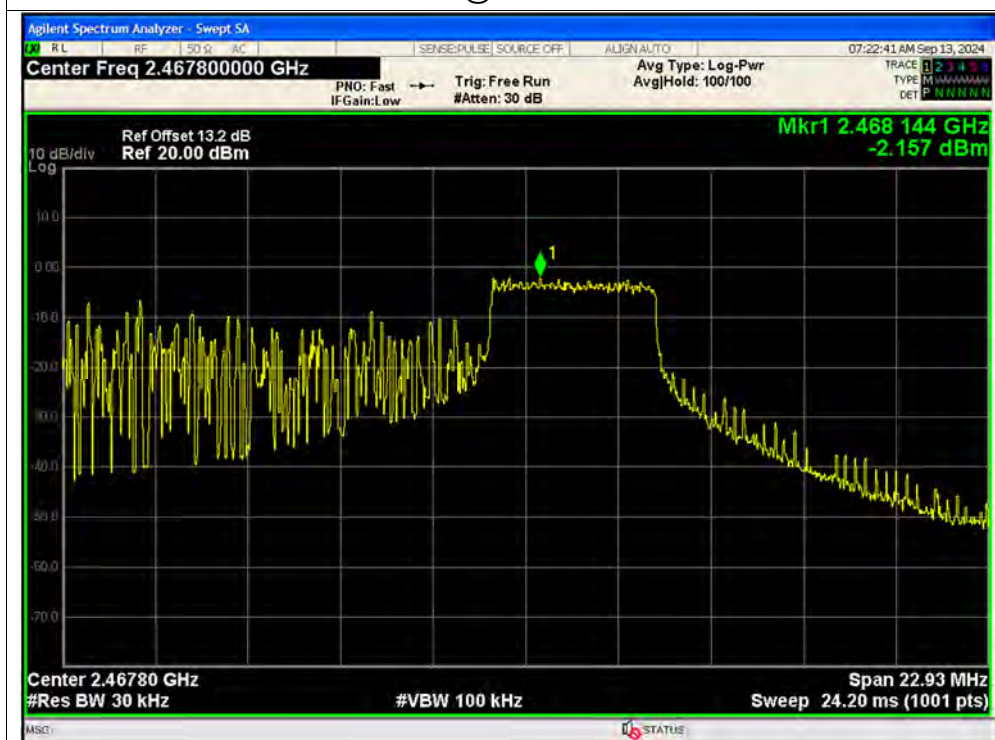
PSD NVNT be40 52@37 2437MHz Ant13 MIMO



PSD NVNT be40 52@37 2452MHz Ant12 MIMO



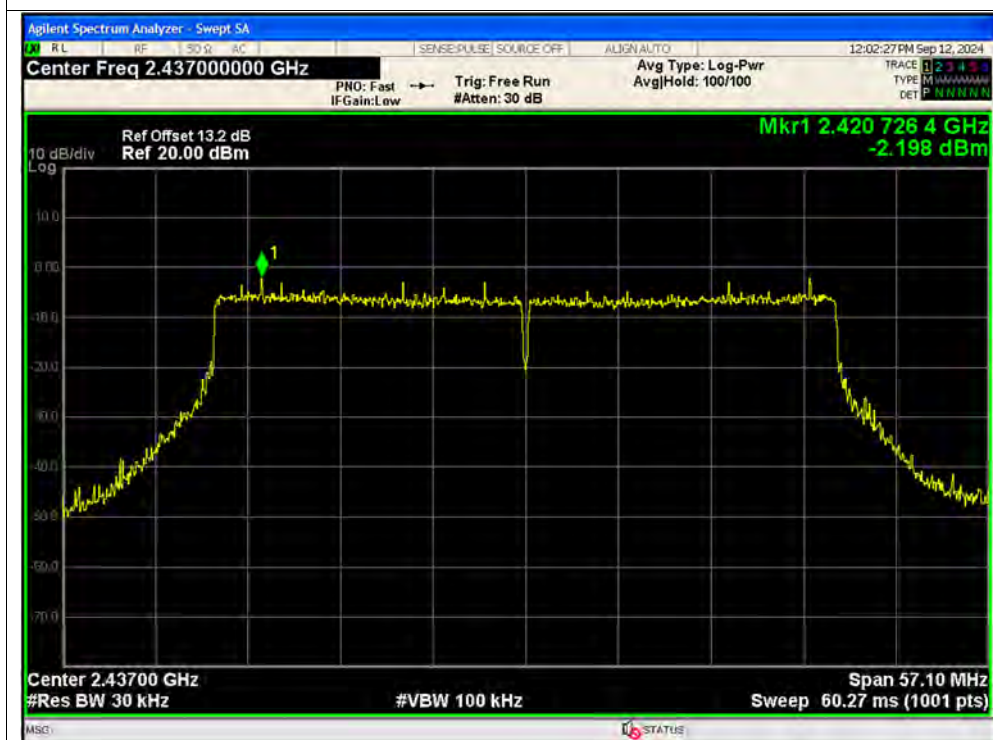
PSD NVNT be40 52@37 2452MHz Ant13 MIMO



PSD NVNT be40 2422MHz Ant12 SISO



PSD NVNT be40 2437MHz Ant12 SISO



PSD NVNT be40 2452MHz Ant12 SISO



PSD NVNT be40 2422MHz Ant13 SISO



PSD NVNT be40 2437MHz Ant13 SISO



PSD NVNT be40 2452MHz Ant13 SISO





PSD NVNT be40 2422MHz Ant12 MIMO



PSD NVNT be40 2422MHz Ant13 MIMO



PSD NVNT be40 2437MHz Ant12 MIMO



PSD NVNT be40 2437MHz Ant13 MIMO





PSD NVNT be40 2452MHz Ant12 MIMO



PSD NVNT be40 2452MHz Ant13 MIMO





A.8. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT + Adapter + Data line + WIFI TX

Test voltage: AC 120V/60Hz

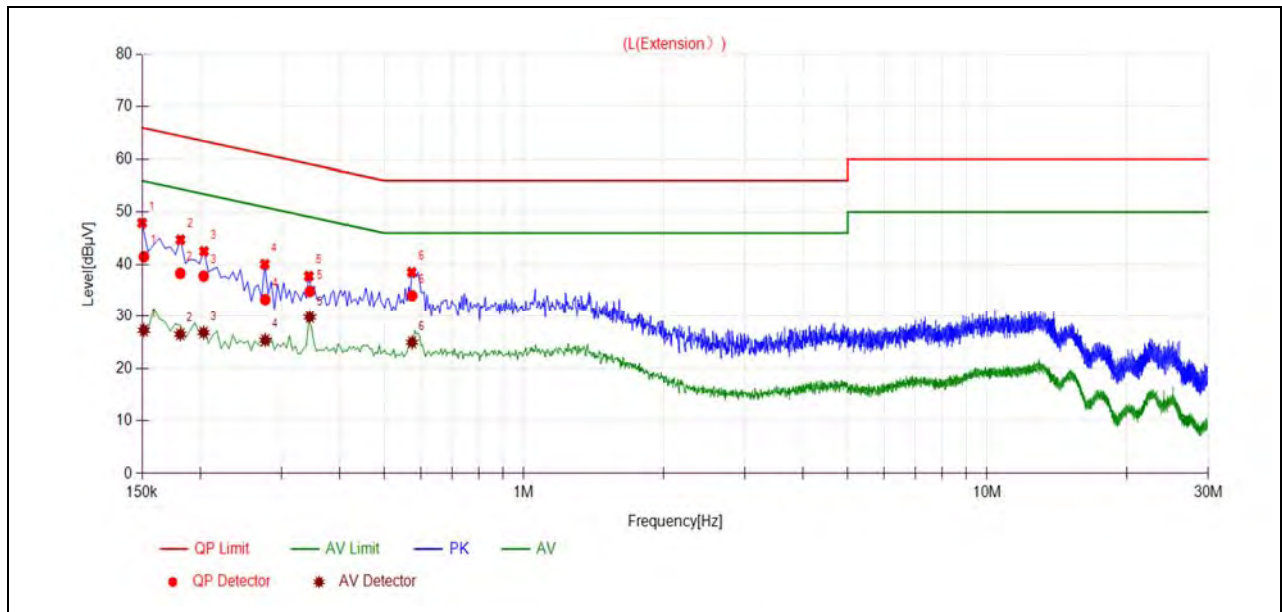
The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V]} = U_R + L_{\text{Cable loss}} \text{ [dB]} + A_{\text{Factor}}$$

U_R : Receiver Reading

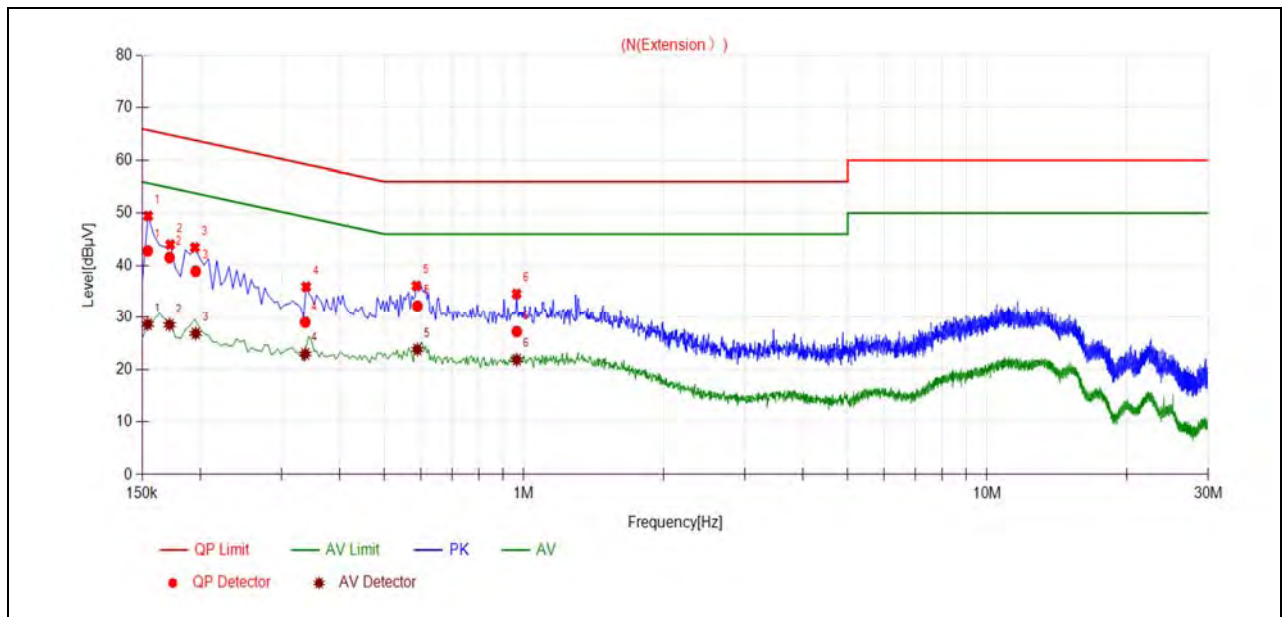
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1513	41.49	27.27	65.93	55.93	Line	PASS
2	0.1813	38.32	26.50	64.42	54.42		PASS
3	0.2036	37.78	26.82	63.46	53.46		PASS
4	0.2766	33.28	25.38	60.92	50.92		PASS
5	0.3452	34.85	29.82	59.08	49.08		PASS
6	0.5738	34.02	24.96	56.00	46.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1542	42.79	28.63	65.77	55.77	Neutral	PASS
2	0.1719	41.53	28.53	64.87	54.87		PASS
3	0.1957	38.90	26.86	63.79	53.79		PASS
4	0.3373	29.03	22.94	59.27	49.27		PASS
5	0.5890	32.24	23.78	56.00	46.00		PASS
6	0.9654	27.22	21.82	56.00	46.00		PASS



A.9. Restricted Frequency Bands

The lowest and highest channels are tested to verify the Restricted Frequency Bands.

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

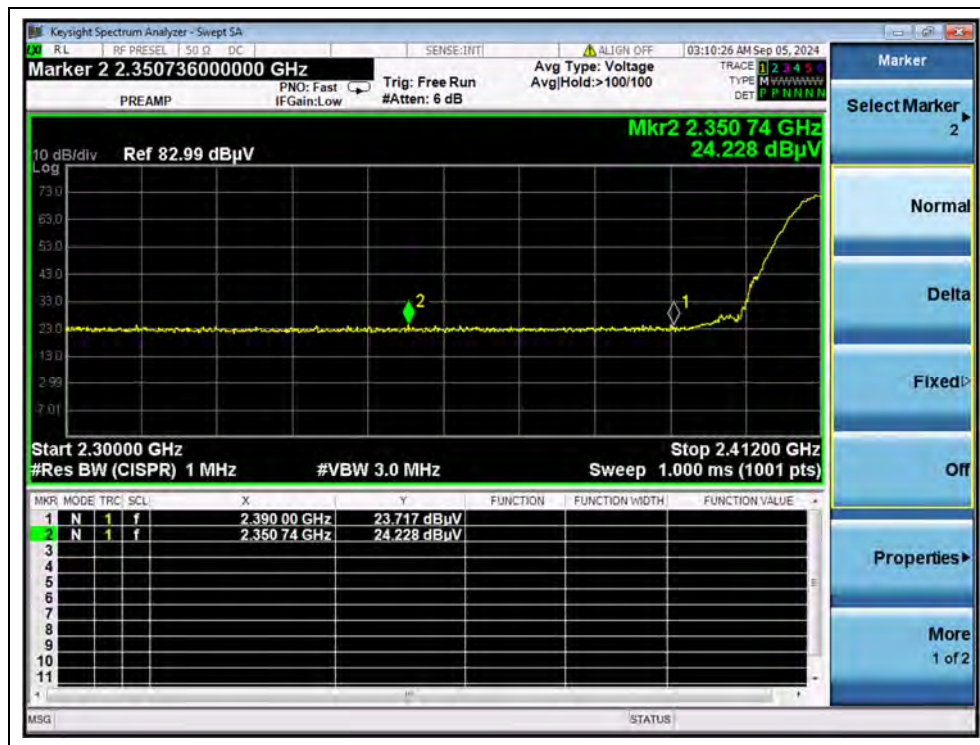
Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (horizontal) was recorded in this test report.

Note 2: Restricted Frequency Bands were performed in X, Y, Z axis direction, and only the worst axis (X axis) test condition was recorded in this test report.

Note 3: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

802.11b Mode

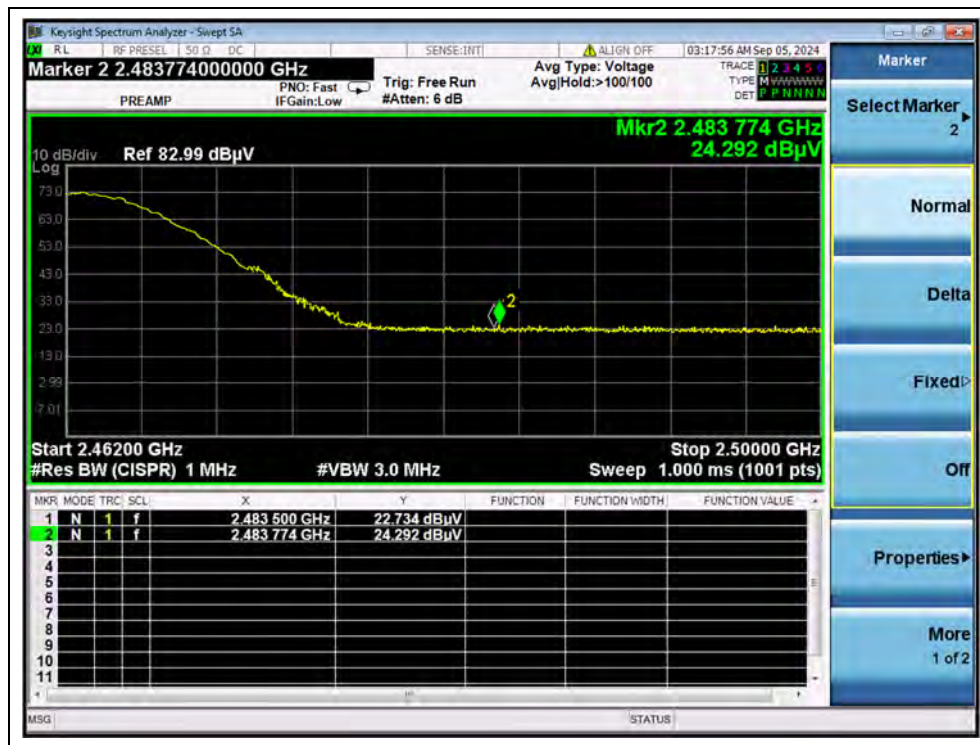
Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dB μ V)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
1	2350.74	PK	24.23	6.74	27.20	58.17	74	PASS
1	2386.91	AV	13.26	6.74	27.20	47.20	54	PASS
11	2483.77	PK	24.29	6.74	27.20	58.23	74	PASS
11	2484.12	AV	12.82	6.74	27.20	46.76	54	PASS



(PEAK, Channel 1, 802.11b)



(AVERAGE, Channel 1, 802.11b)



(PEAK, Channel 11, 802.11b)



(AVERAGE, Channel 11, 802.11b)

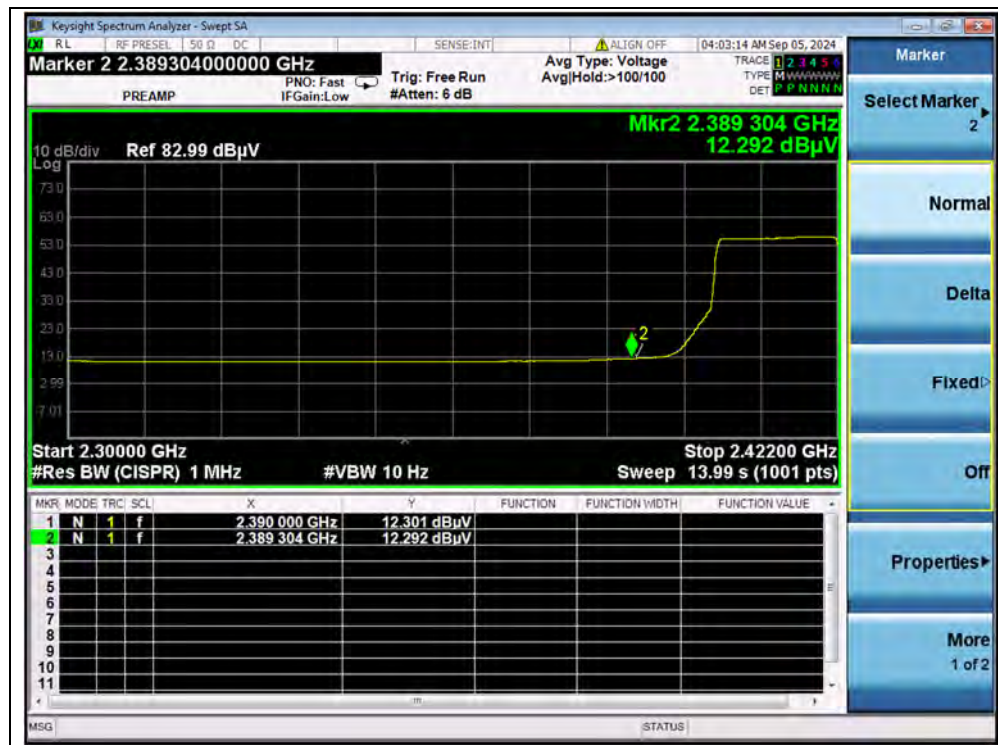


802.11ax (HEW40) Mode

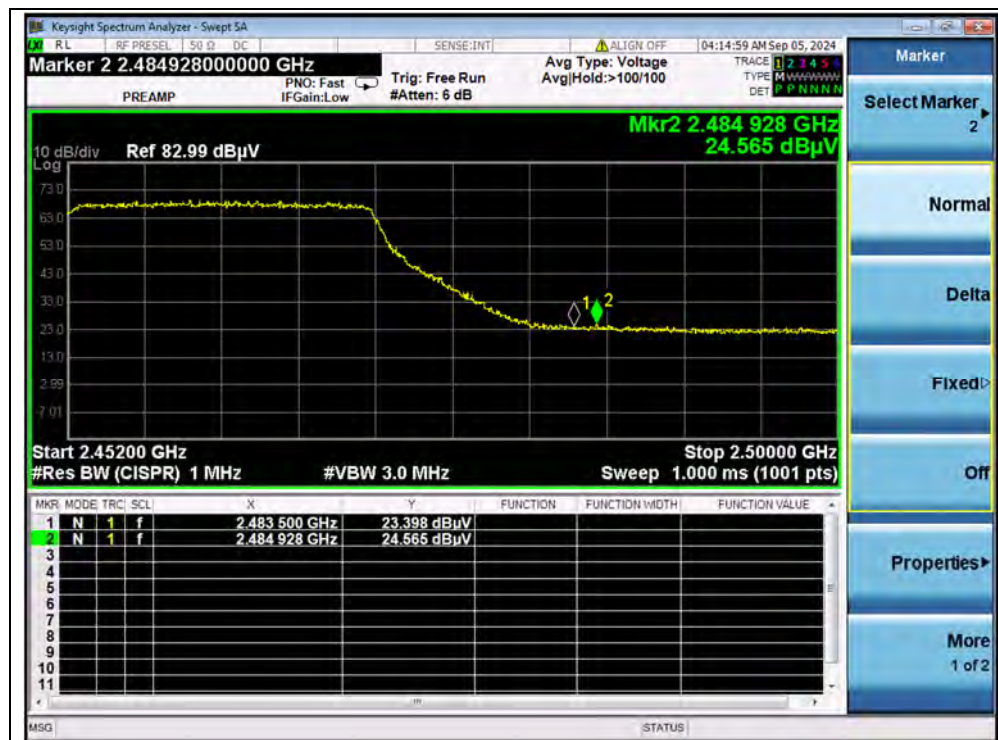
Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dB μ V)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
3	2386.74	PK	24.96	6.74	27.20	58.90	74	PASS
3	2390.00	AV	12.30	6.74	27.20	46.24	54	PASS
9	2484.93	PK	24.57	6.74	27.20	58.51	74	PASS
9	2483.50	AV	12.79	6.74	27.20	46.73	54	PASS



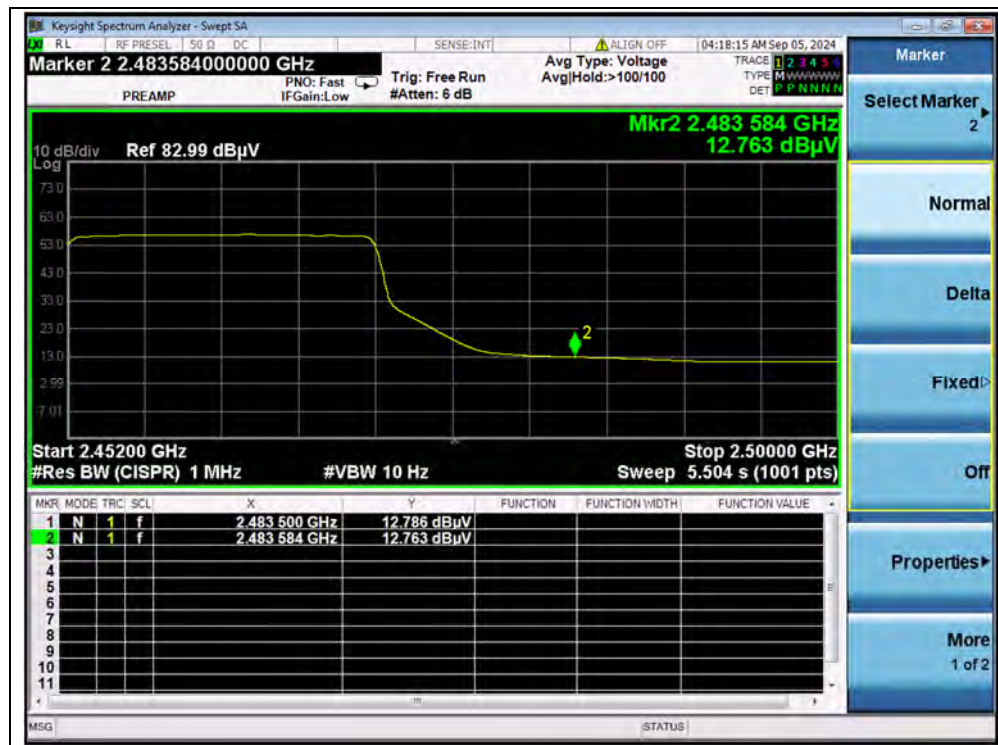
(PEAK, Channel 3, 802.11ax (HEW40))



(AVERAGE, Channel 3, 802.11ax (HEW40))



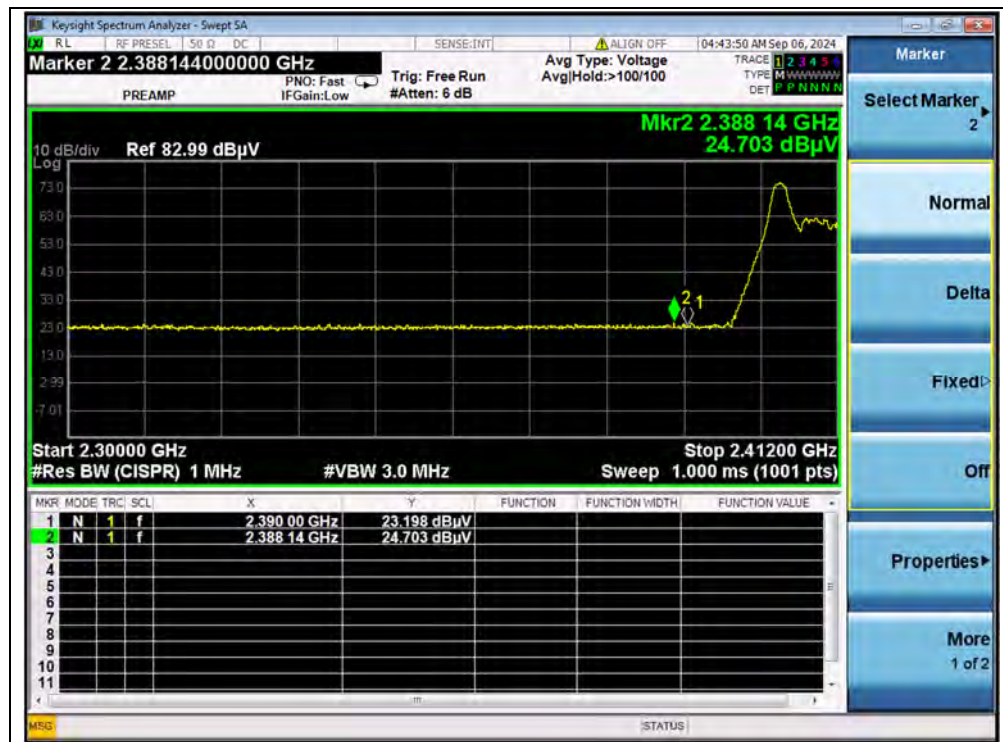
(PEAK, Channel 9, 802.11ax (HEW40))



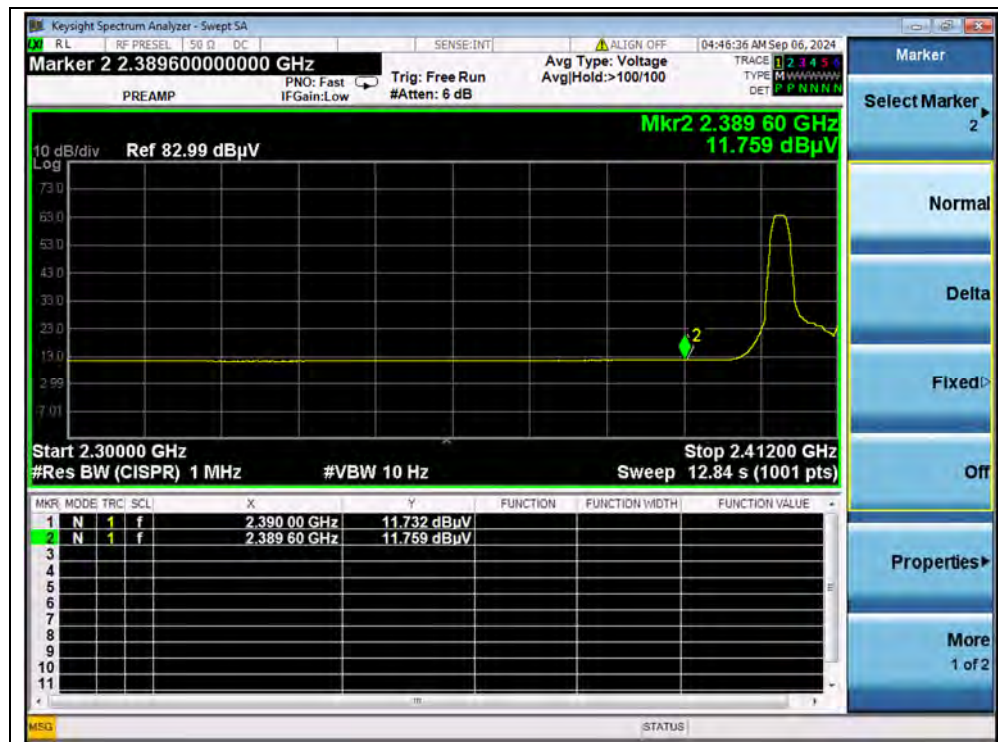
(AVERAGE, Channel 9, 802.11ax (HEW40))

**802.11ax (HEW20) RU26 Mode**

Channel	Frequency (MHz)	Detector	Receiver Reading U_R (dB μ V)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
1	2388.14	PK	24.70	6.74	27.20	58.64	74	PASS
1	2389.60	AV	11.76	6.74	27.20	45.70	54	PASS
11	2483.55	PK	24.80	6.74	27.20	58.74	74	PASS
11	2483.55	AV	11.62	6.74	27.20	45.56	54	PASS



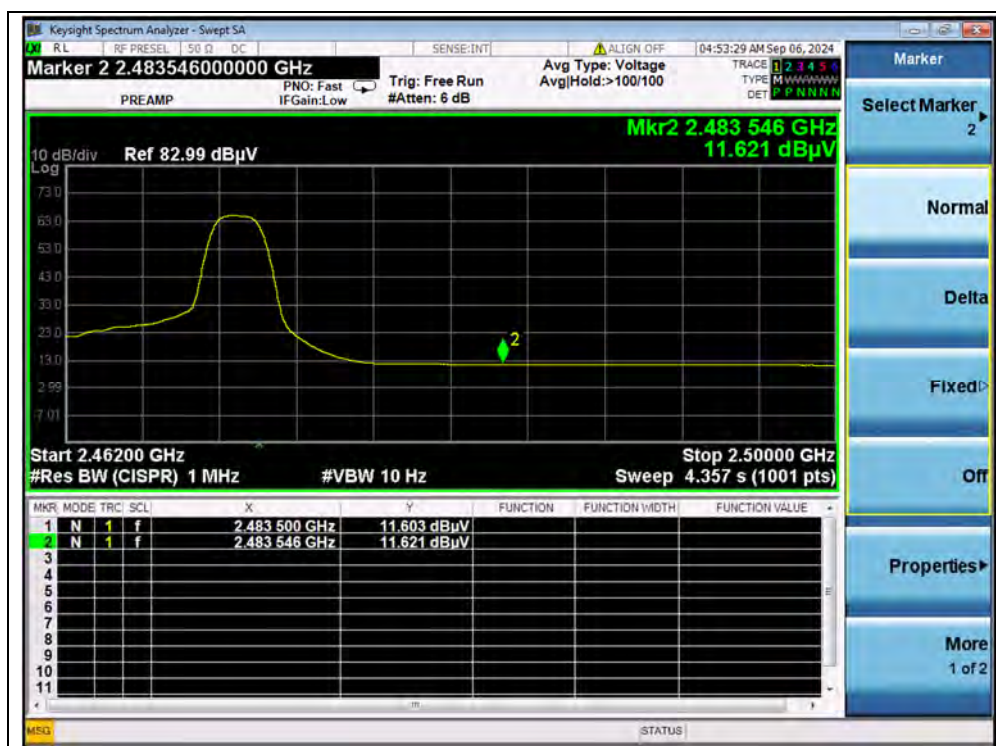
(PEAK, Channel 1, 802.11ax (HEW20) RU26)



(AVERAGE, Channel 1, 802.11ax (HEW20) RU26)



(PEAK, Channel 11, 802.11ax (HEW20) RU26)



(AVERAGE, Channel 11, 802.11ax (HEW20) RU26)



A.10. Radiated Emission

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V}/\text{m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis (X axis) test condition was recorded in this test report.

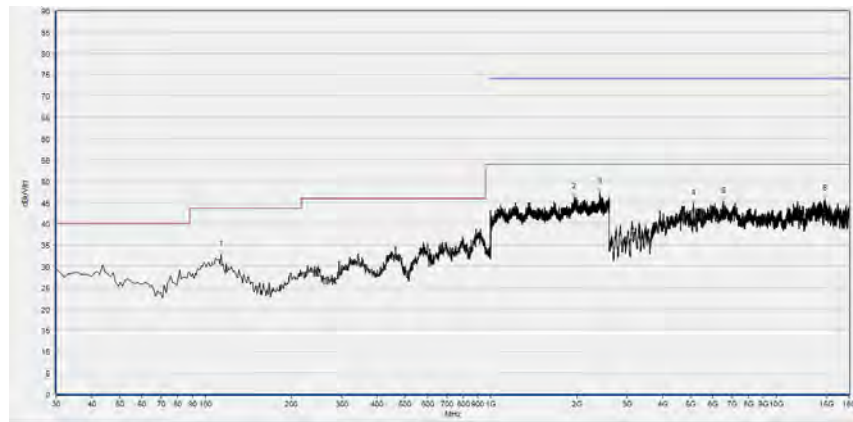
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 4: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

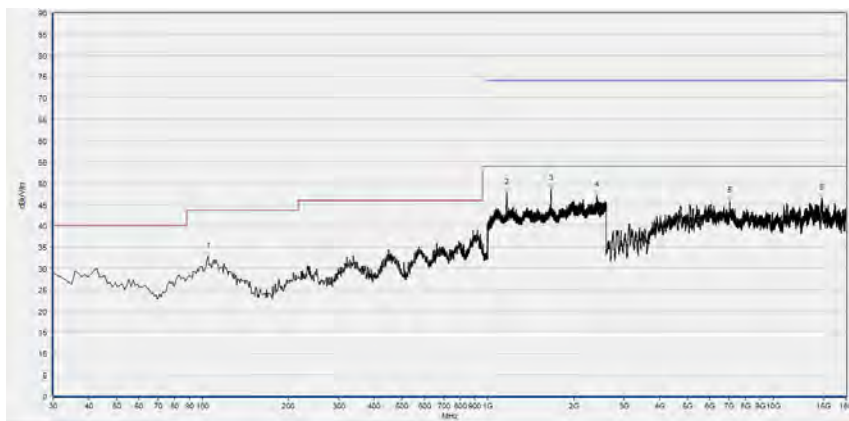
**802.11b Mode**

Plot for Channel 1



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
113.420	32.61	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1962.667	46.24	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2409.600	47.49	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5110.200	44.82	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6511.600	45.24	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
14762.920	45.72	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

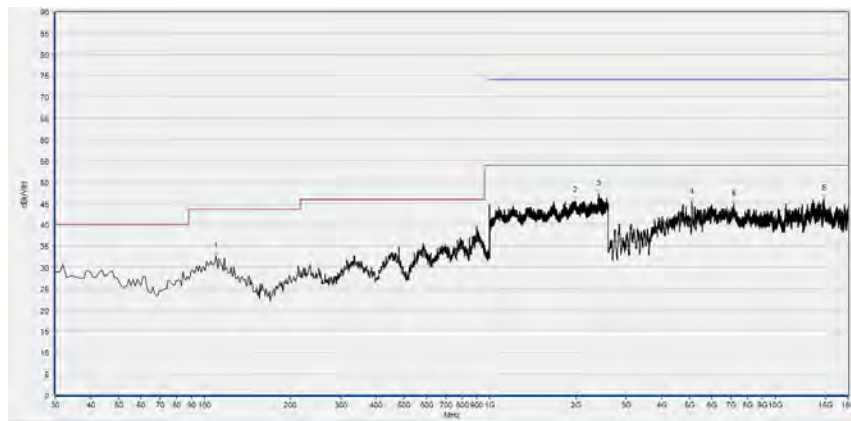


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
104.690	32.75	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1166.933	47.74	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1662.933	48.61	N/A	34.89	74.00	N/A	54.00	Vertical	PASS
2411.200	47.02	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7053.680	45.82	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
14830.680	46.36	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

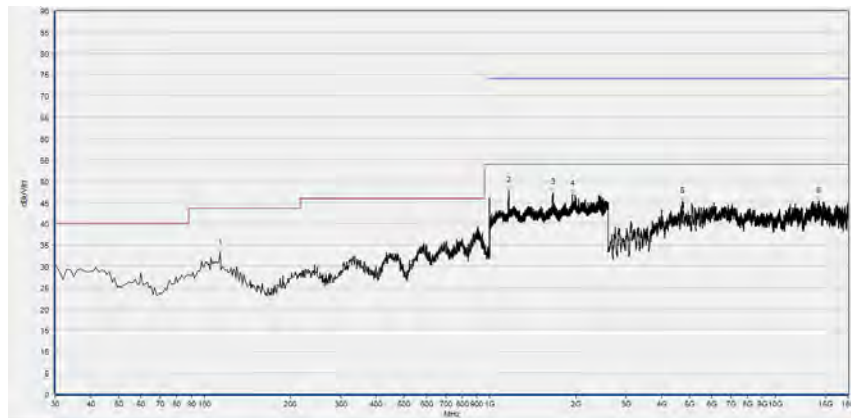


Plot for Channel 6



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
109.540	32.51	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
1994.667	45.58	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2411.200	47.06	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5107.120	45.23	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7170.720	44.73	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
14775.240	46.01	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)

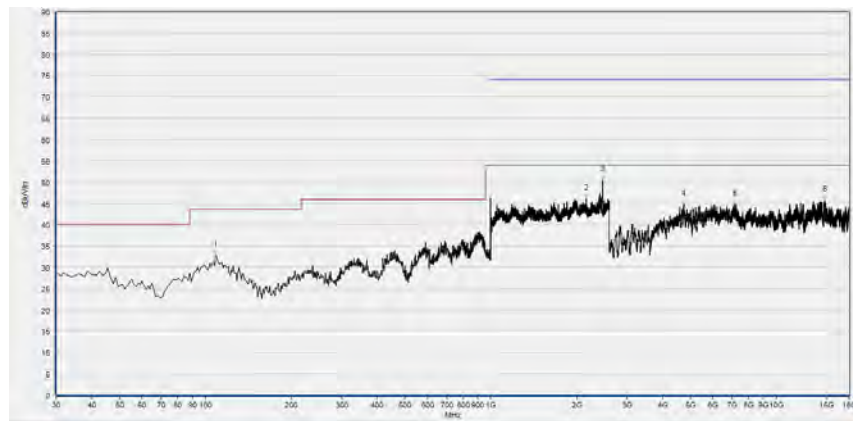


Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
113.420	33.15	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1163.733	47.79	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1665.067	47.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1945.600	46.92	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4737.520	45.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
14183.880	45.25	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

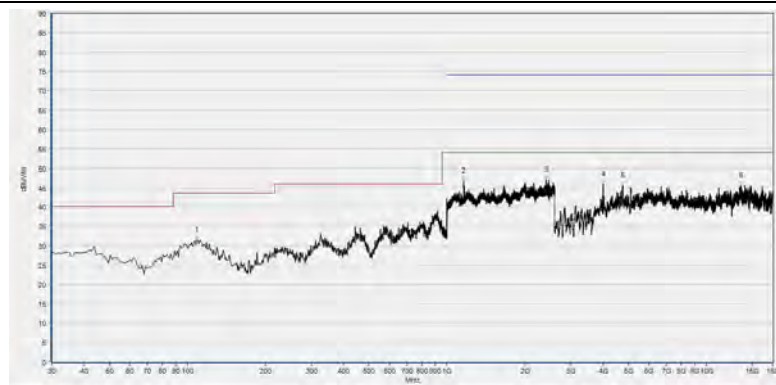


Plot for Channel 11



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
108.570	32.92	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2156.800	46.04	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2462.933	50.51	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4740.600	44.77	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7161.480	44.69	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
14824.520	45.76	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
108.570	31.48	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
1161.067	46.72	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2409.067	47.10	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
3992.160	45.90	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4749.840	45.52	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
13574.040	45.50	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

END OF REPORT