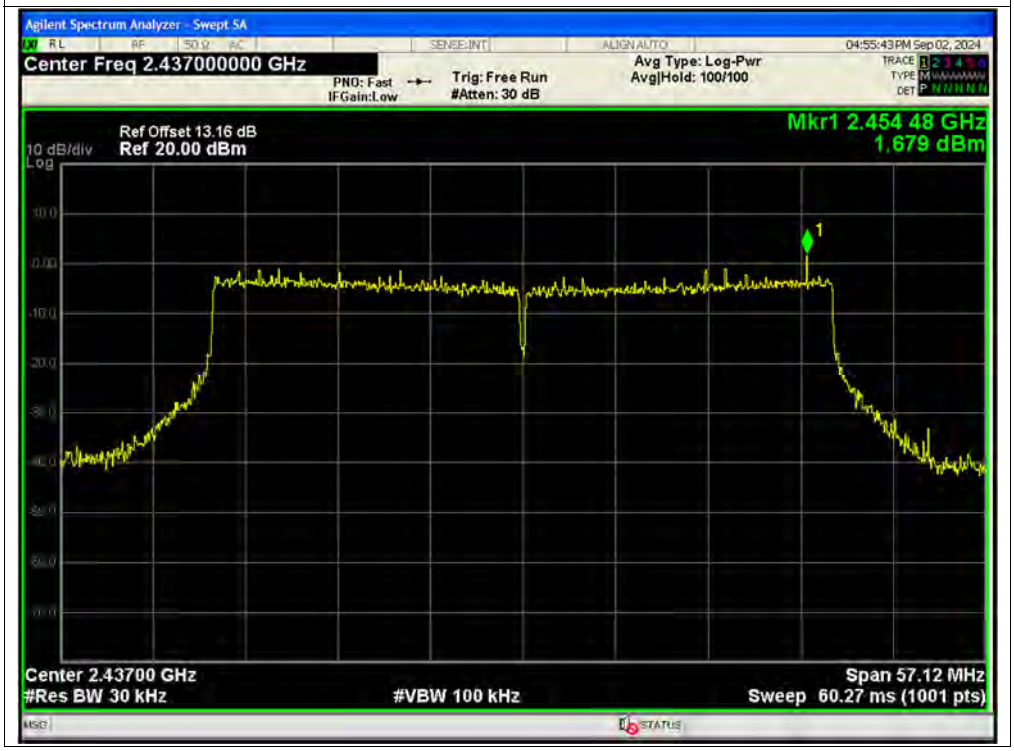
PSD NVNT ax40 2422MHz Ant1 SISO

PSD NVNT ax40 2437MHz Ant1 SISO



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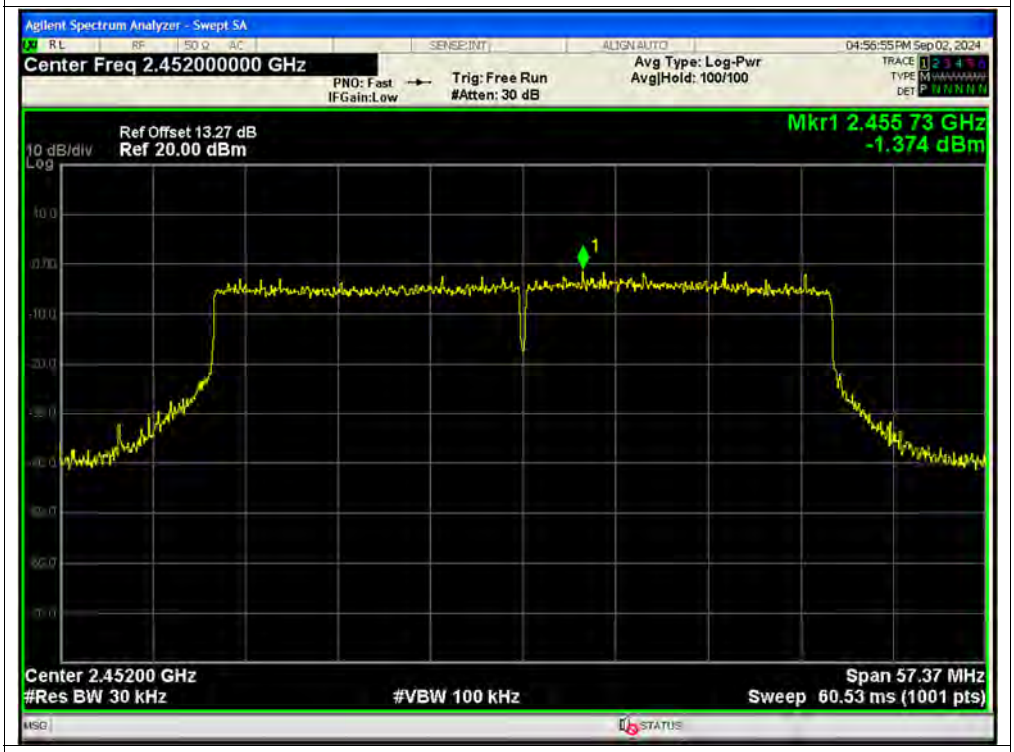
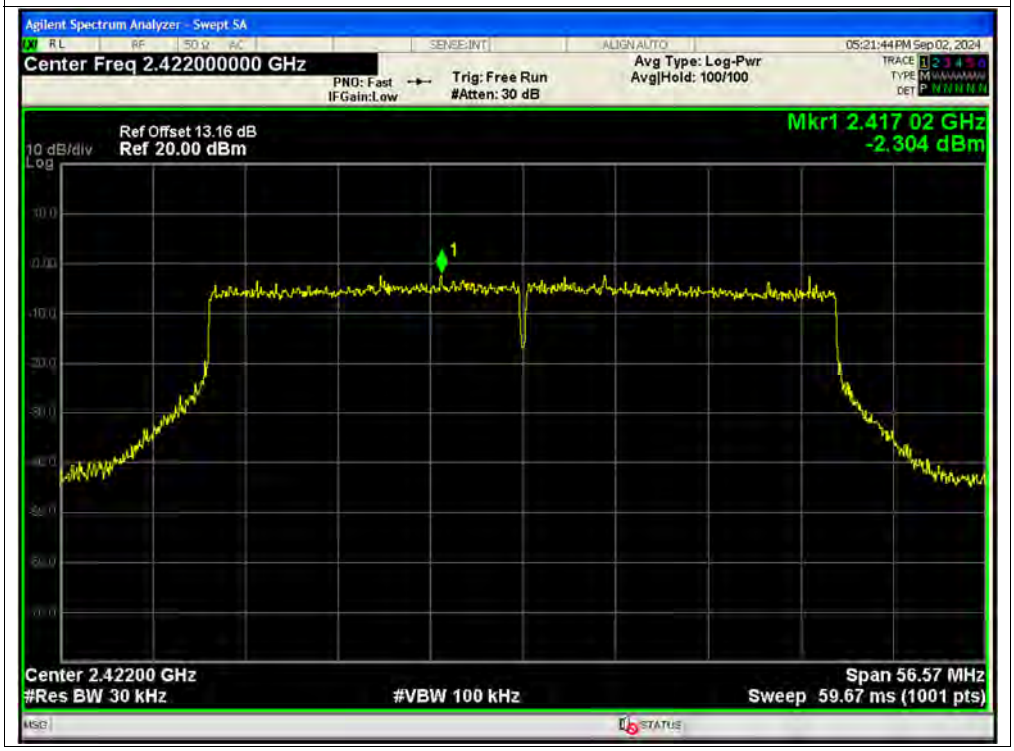


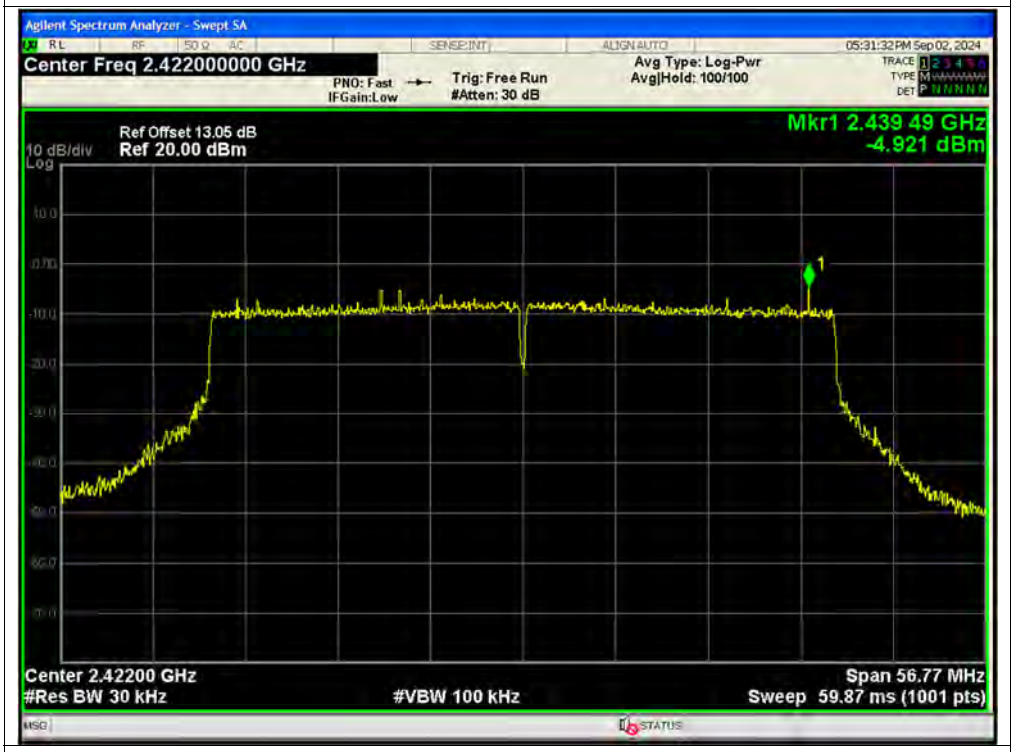
PSD NVNT ax40 2422MHz Ant2 SISO



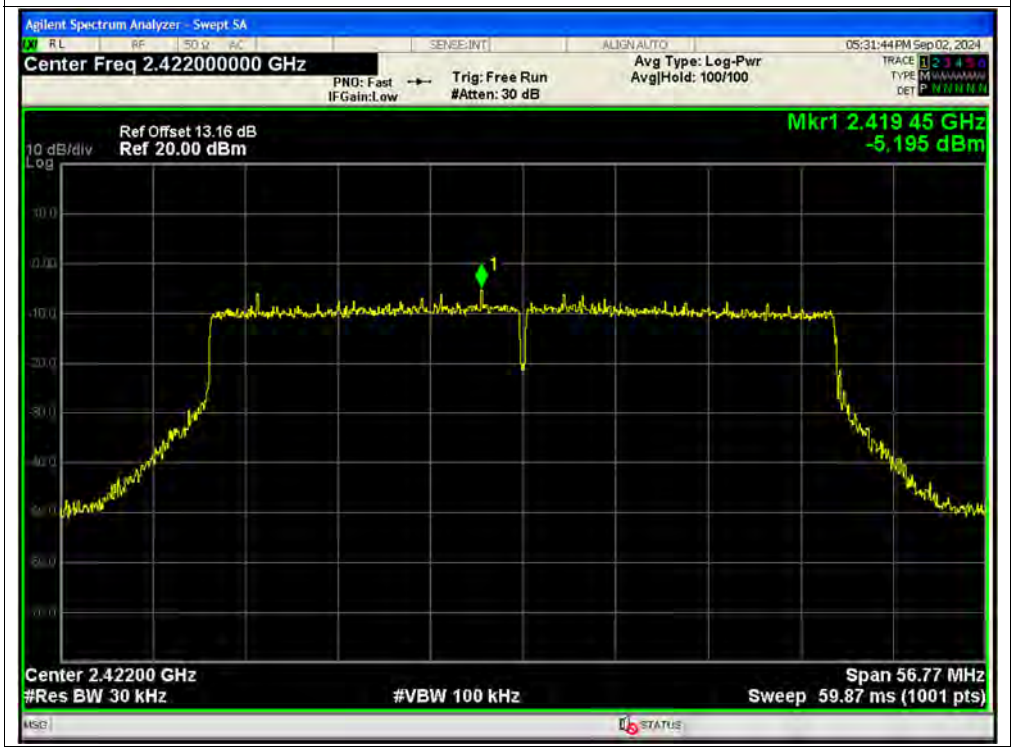
PSD NVNT ax40 2437MHz Ant2 SISO

PSD NVNT ax40 2452MHz Ant2 SISO

PSD NVNT ax40 2422MHz Ant1 MIMO

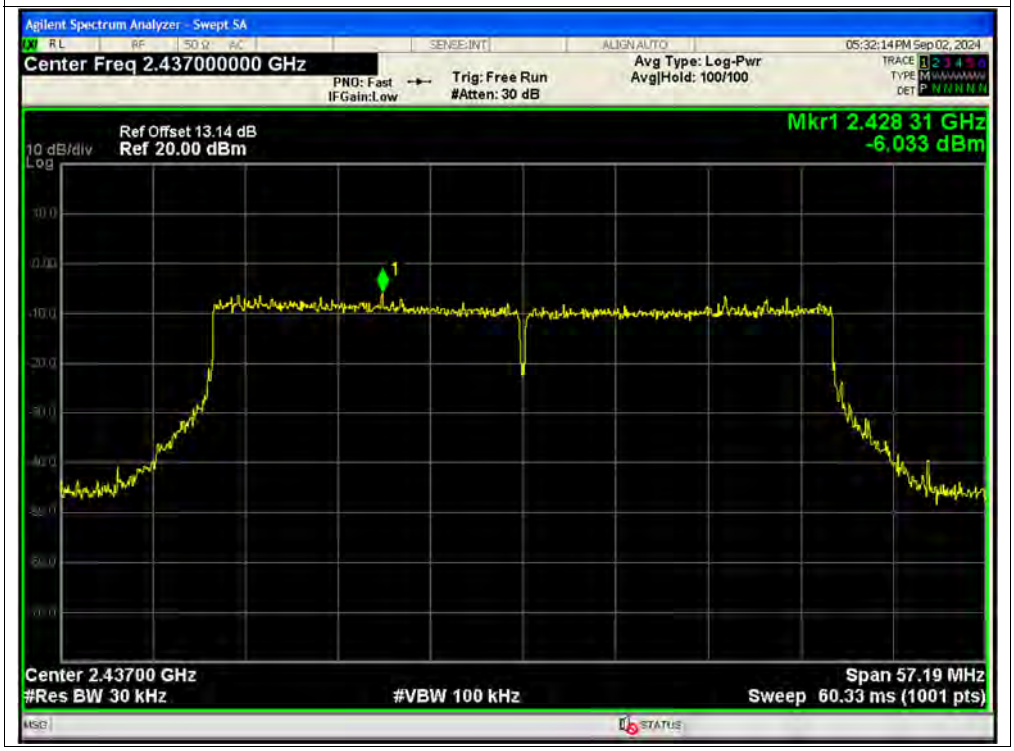


PSD NVNT ax40 2422MHz Ant2 MIMO

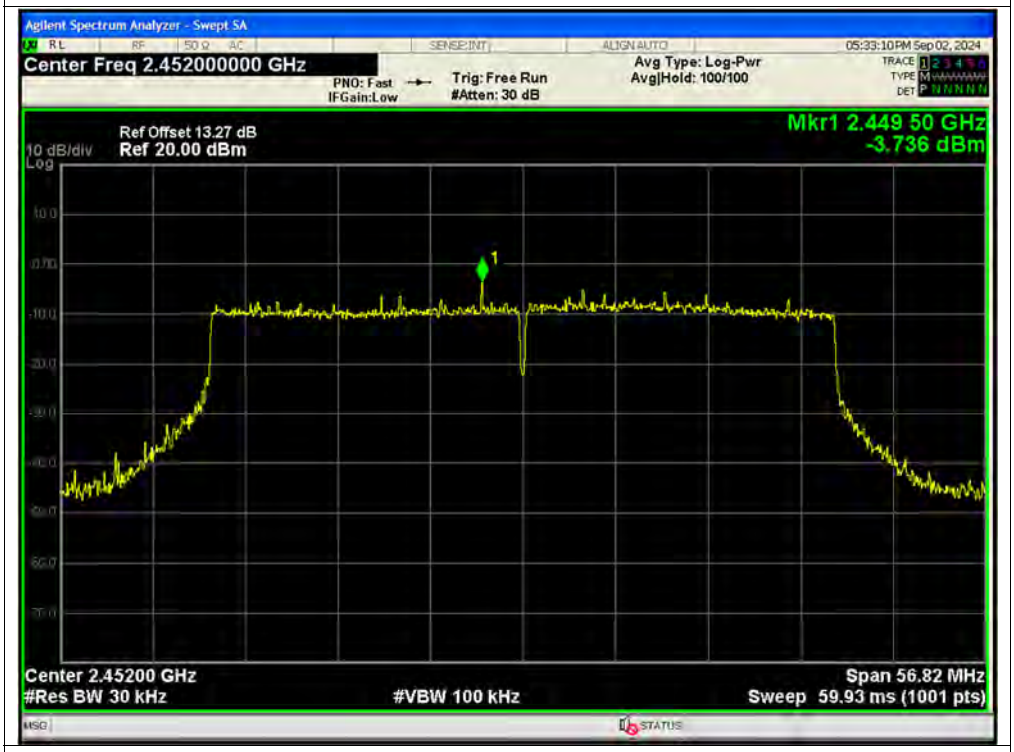


PSD NVNT ax40 2437MHz Ant1 MIMO

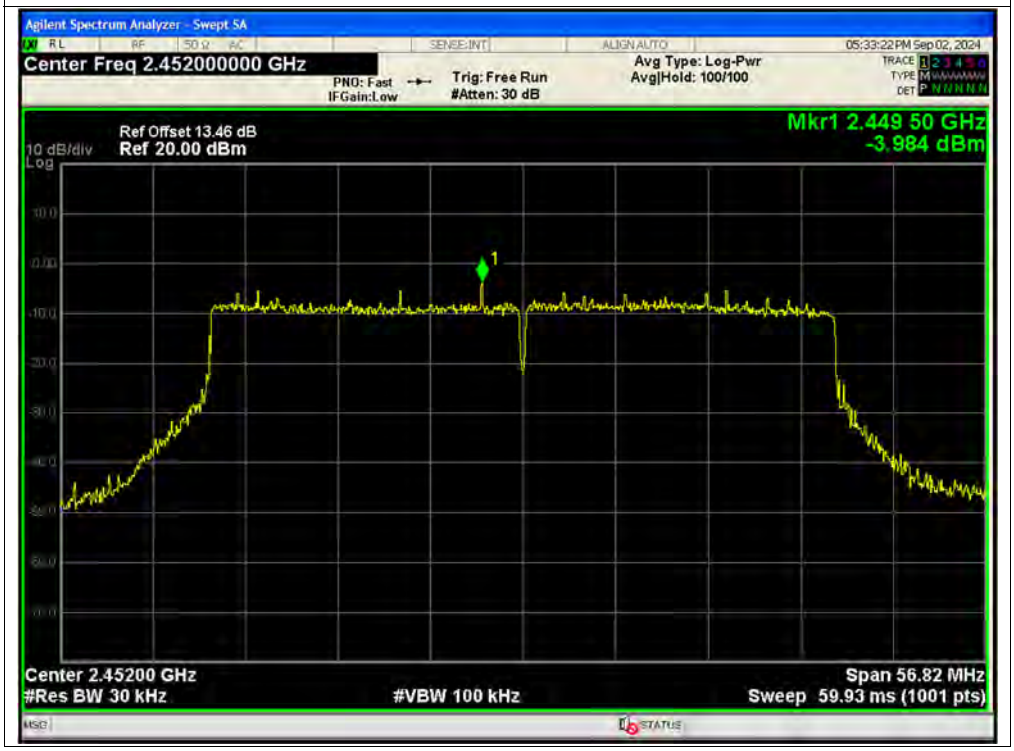
PSD NVNT ax40 2437MHz Ant2 MIMO



PSD NVNT ax40 2452MHz Ant1 MIMO



PSD NVNT ax40 2452MHz Ant2 MIMO



PSD NVNT ax20 26@0 2412MHz Ant1 SISO

PSD NVNT ax20 26@0 2437MHz Ant1 SISO

PSD NVNT ax20 26@0 2462MHz Ant1 SISO

PSD NVNT ax20 26@0 2412MHz Ant2 SISO

PSD NVNT ax20 26@0 2437MHz Ant2 SISO

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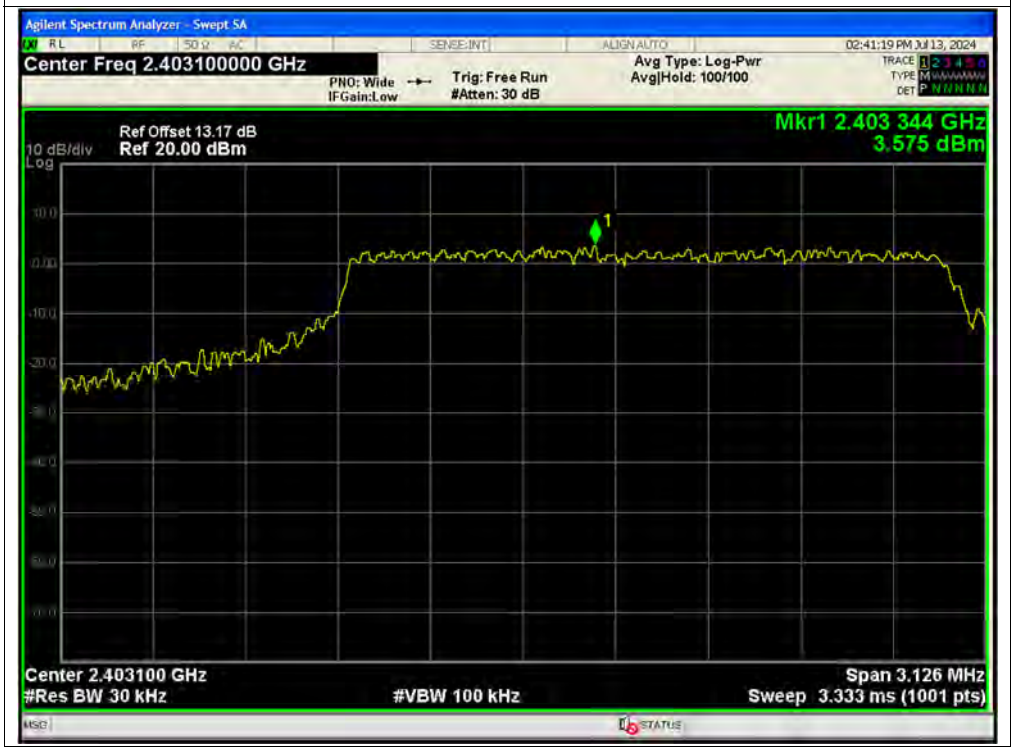
PSD NVNT ax20 26@0 2412MHz Ant2 MIMO



PSD NVNT ax20 26@0 2437MHz Ant1 MIMO

PSD NVNT ax20 26@0 2437MHz Ant2 MIMO

PSD NVNT ax20 26@0 2462MHz Ant1 MIMO

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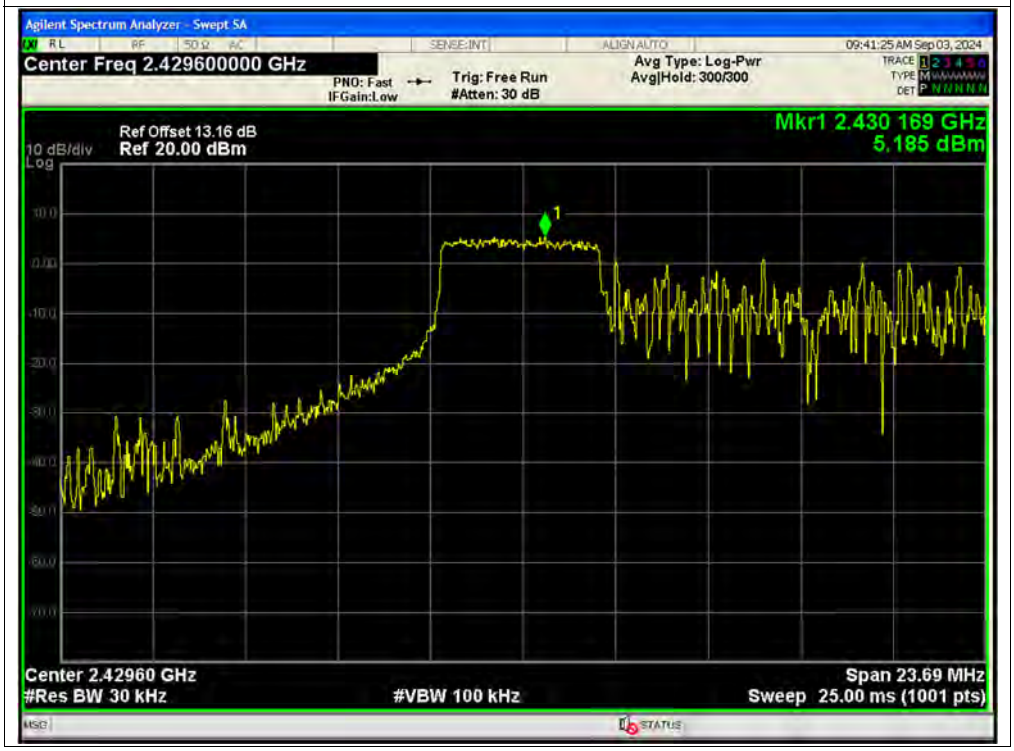
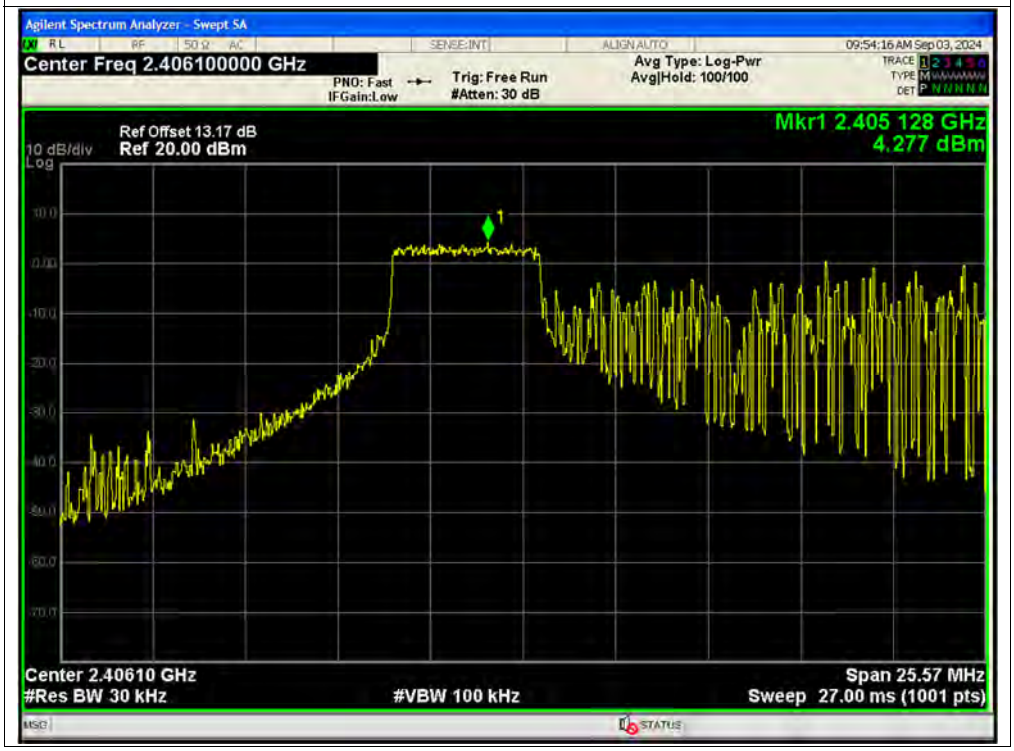
PSD NVNT ax20 52@37 2437MHz Ant1 SISO



PSD NVNT ax20 52@37 2462MHz Ant1 SISO

PSD NVNT ax20 52@37 2412MHz Ant2 SISO

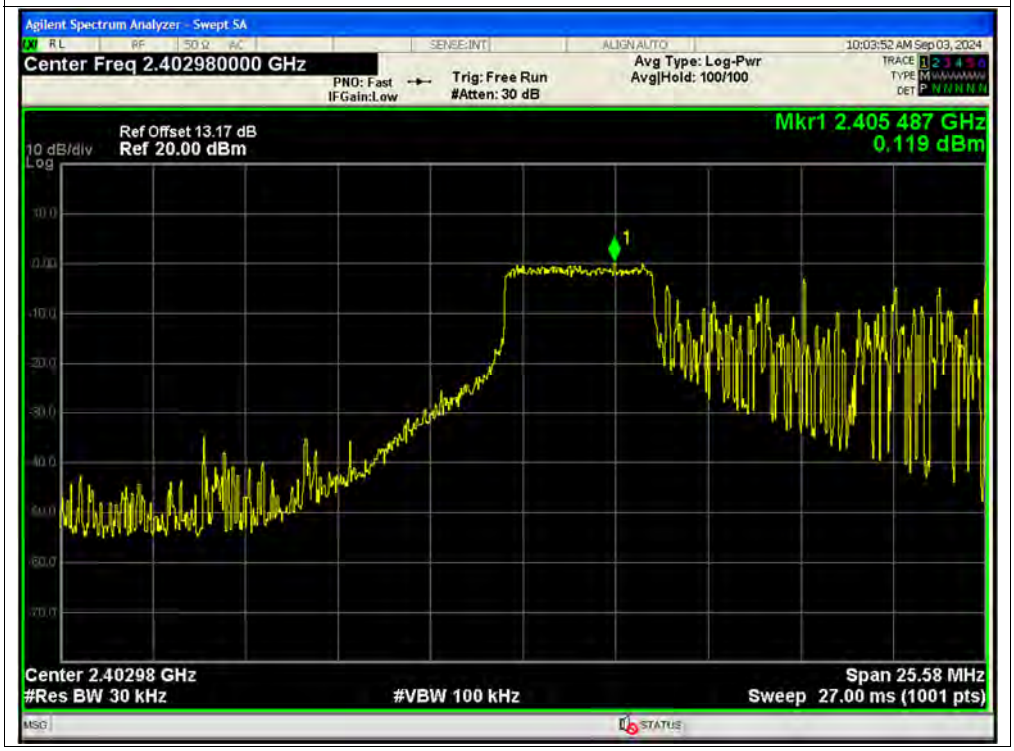


PSD NVNT ax20 52@37 2437MHz Ant2 SISO

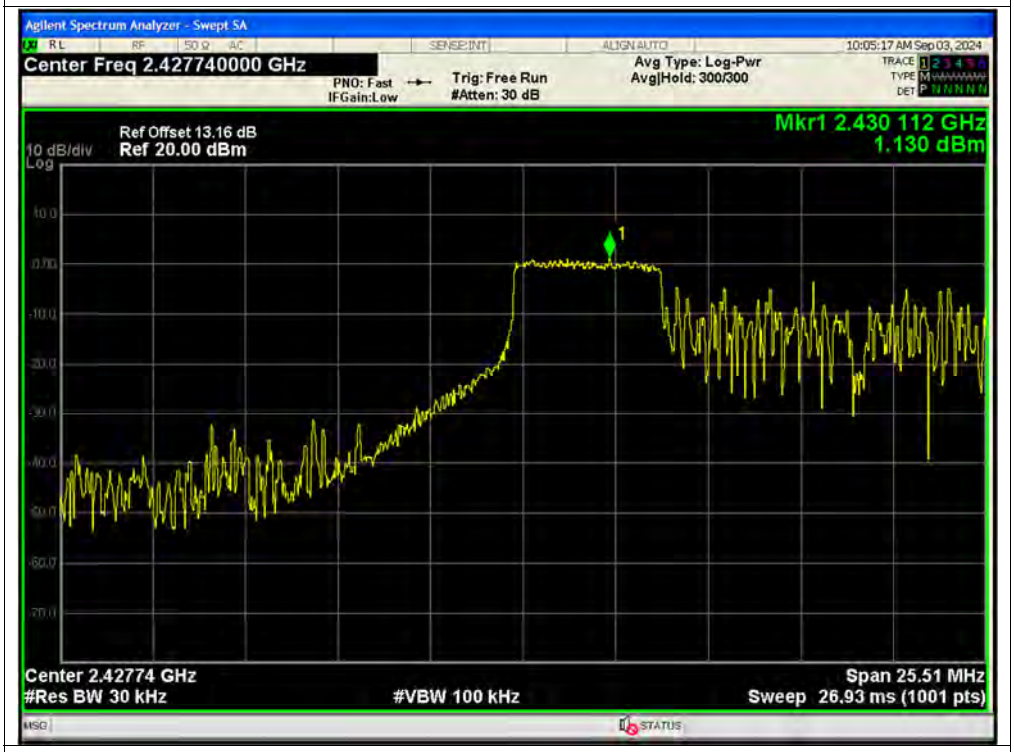
PSD NVNT ax20 52@37 2462MHz Ant2 SISO

PSD NVNT ax20 52@37 2412MHz Ant1 MIMO

PSD NVNT ax20 52@37 2412MHz Ant2 MIMO

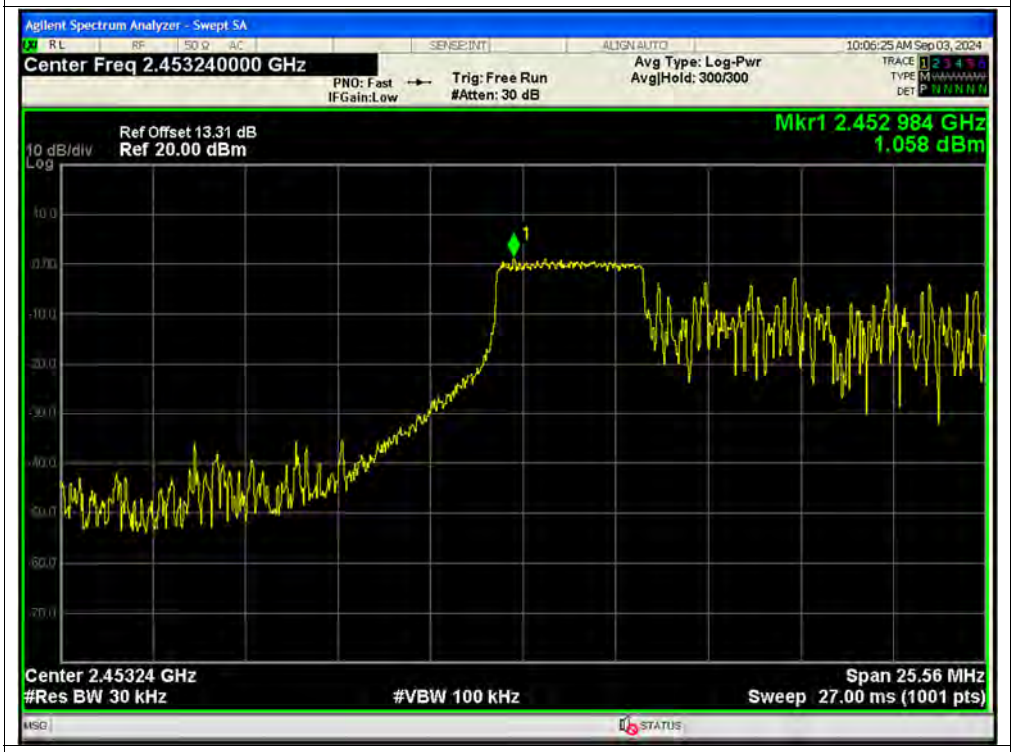


PSD NVNT ax20 52@37 2437MHz Ant1 MIMO

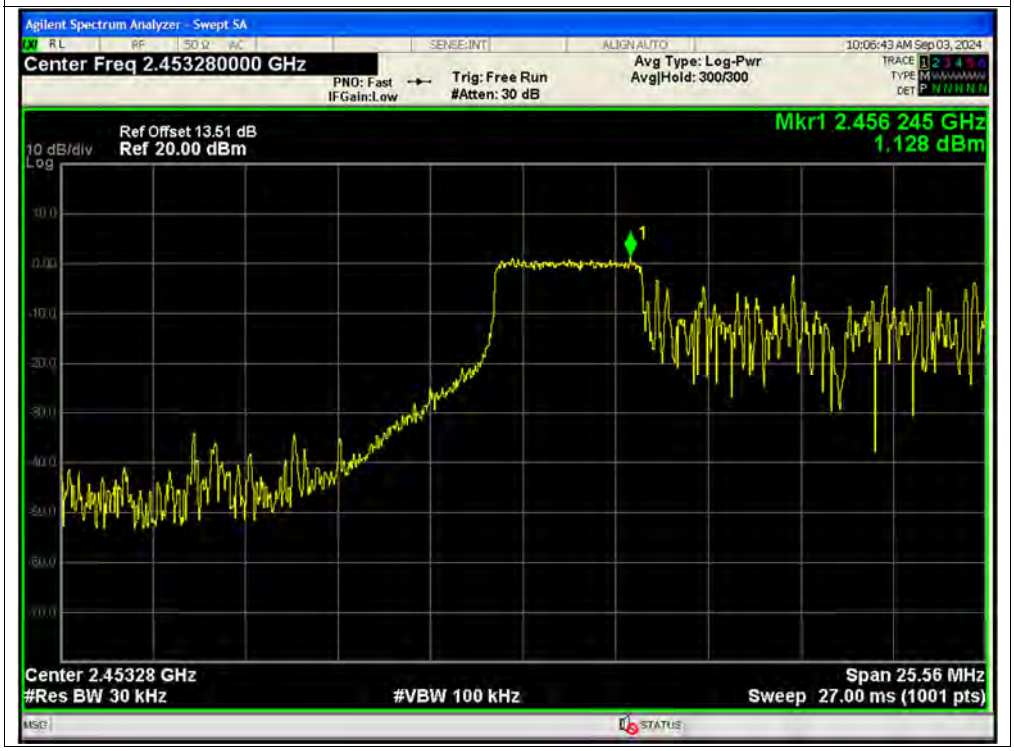


PSD NVNT ax20 52@37 2437MHz Ant2 MIMO

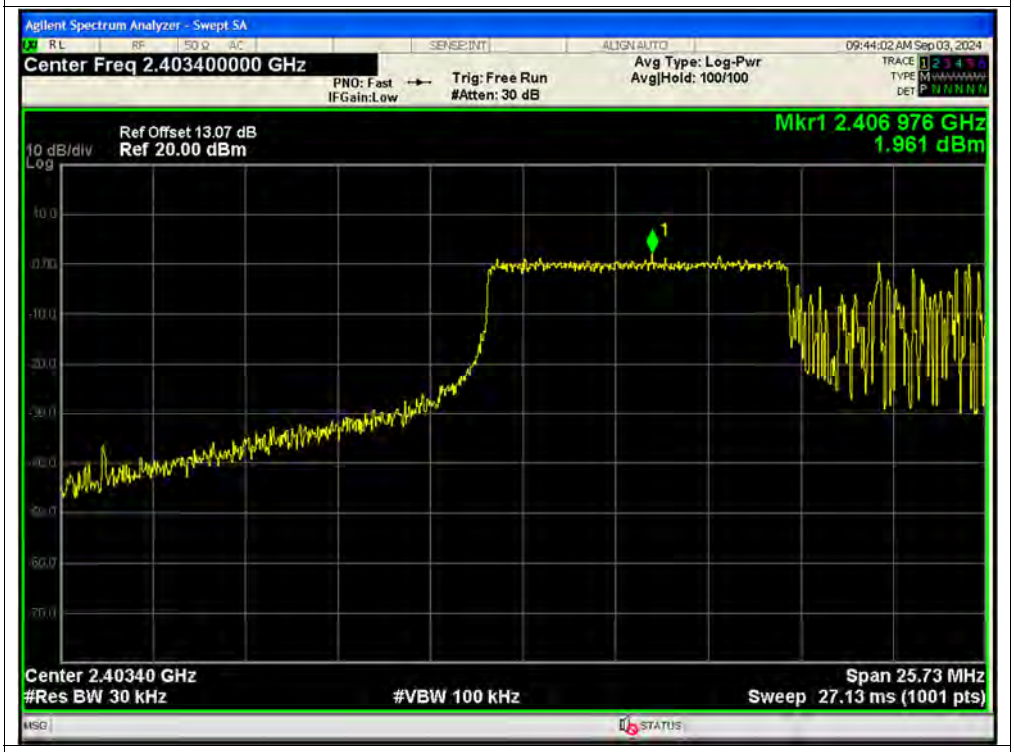
PSD NVNT ax20 52@37 2462MHz Ant1 MIMO



PSD NVNT ax20 52@37 2462MHz Ant2 MIMO



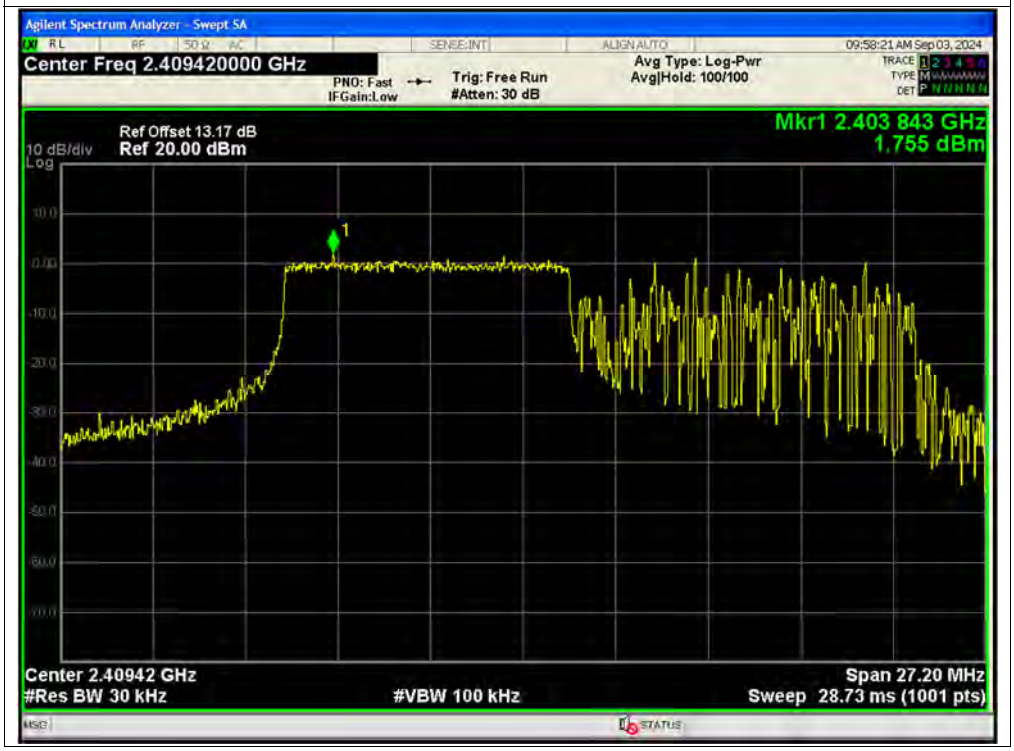
PSD NVNT ax20 106@53 2412MHz Ant1 SISO



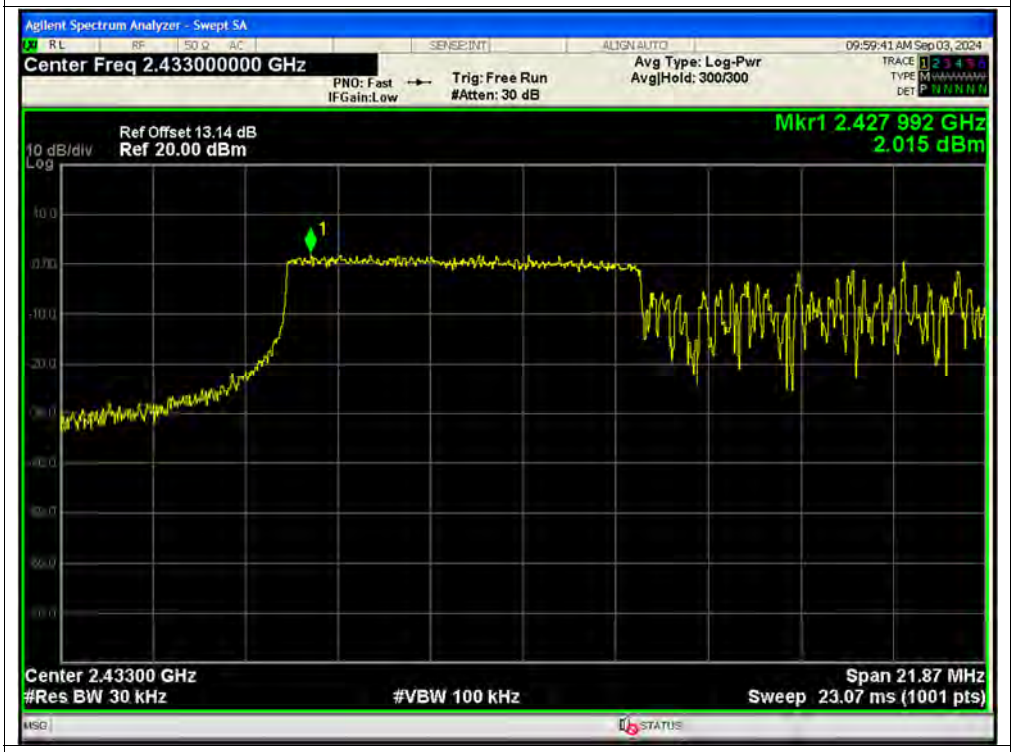
PSD NVNT ax20 106@53 2437MHz Ant1 SISO

PSD NVNT ax20 106@53 2462MHz Ant1 SISO

PSD NVNT ax20 106@53 2412MHz Ant2 SISO



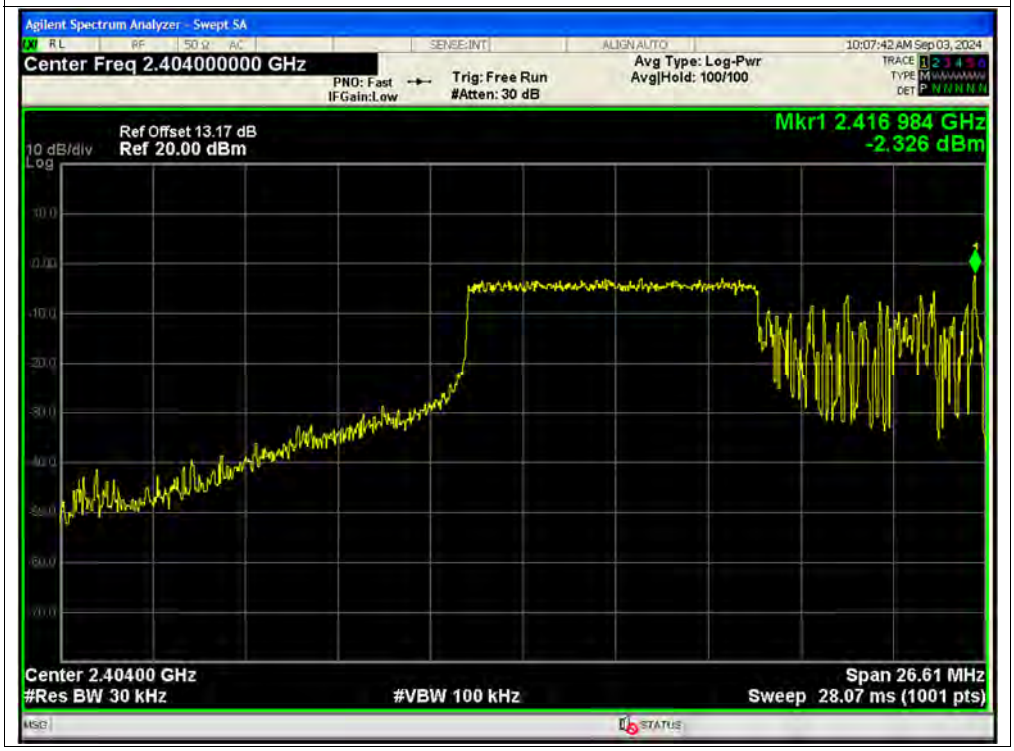
PSD NVNT ax20 106@53 2437MHz Ant2 SISO



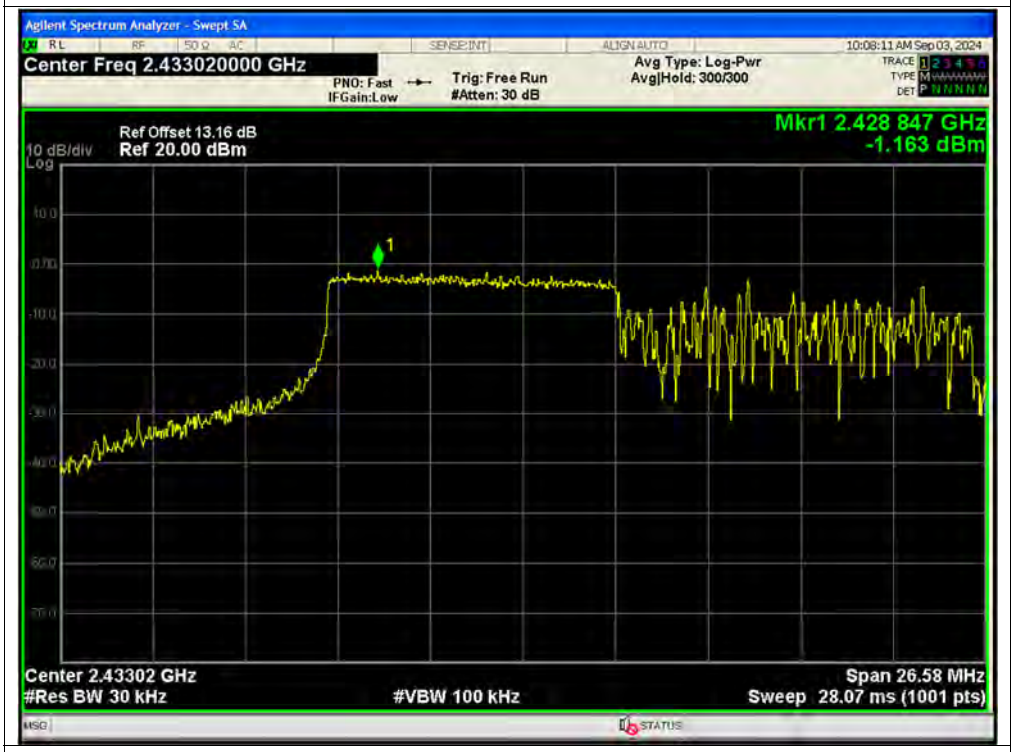
PSD NVNT ax20 106@53 2462MHz Ant2 SISO

PSD NVNT ax20 106@53 2412MHz Ant1 MIMO

PSD NVNT ax20 106@53 2412MHz Ant2 MIMO



PSD NVNT ax20 106@53 2437MHz Ant1 MIMO

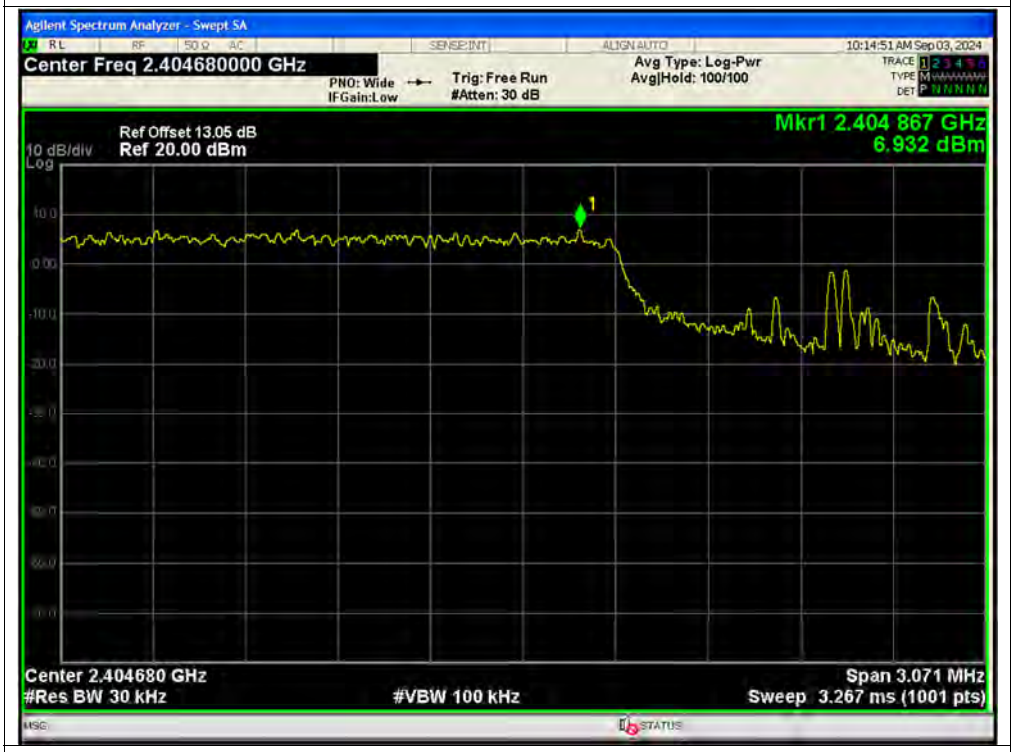


PSD NVNT ax20 106@53 2437MHz Ant2 MIMO

PSD NVNT ax20 106@53 2462MHz Ant1 MIMO

PSD NVNT ax20 106@53 2462MHz Ant2 MIMO

PSD NVNT ax40 26@0 2422MHz Ant1 SISO

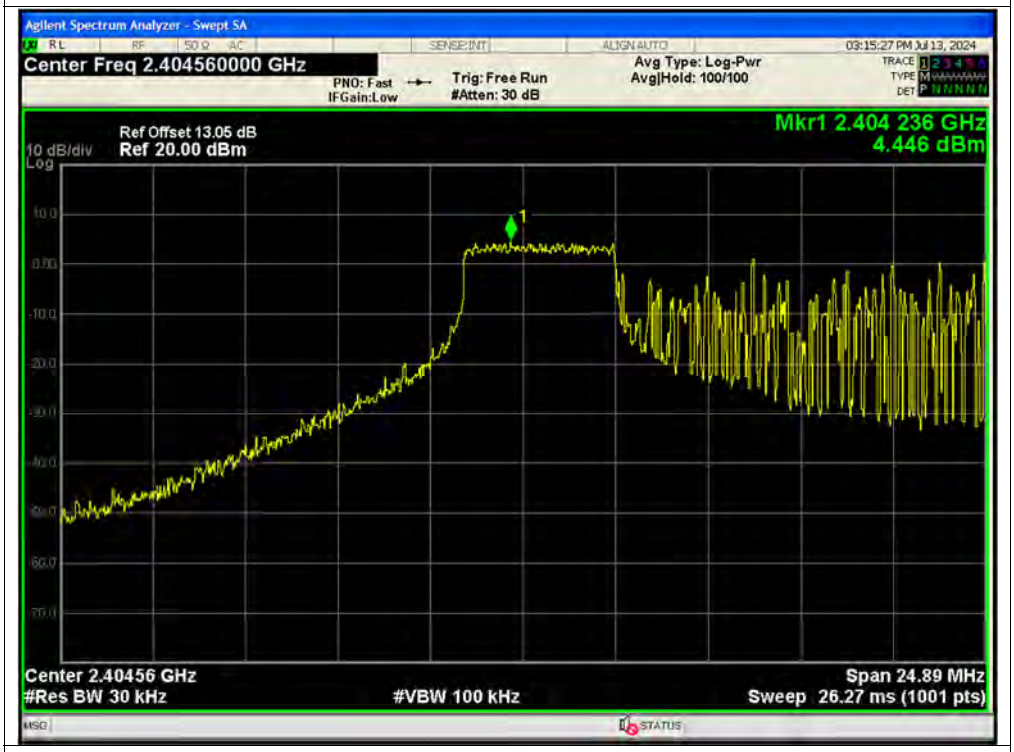


PSD NVNT ax40 26@0 2422MHz Ant2 SISO

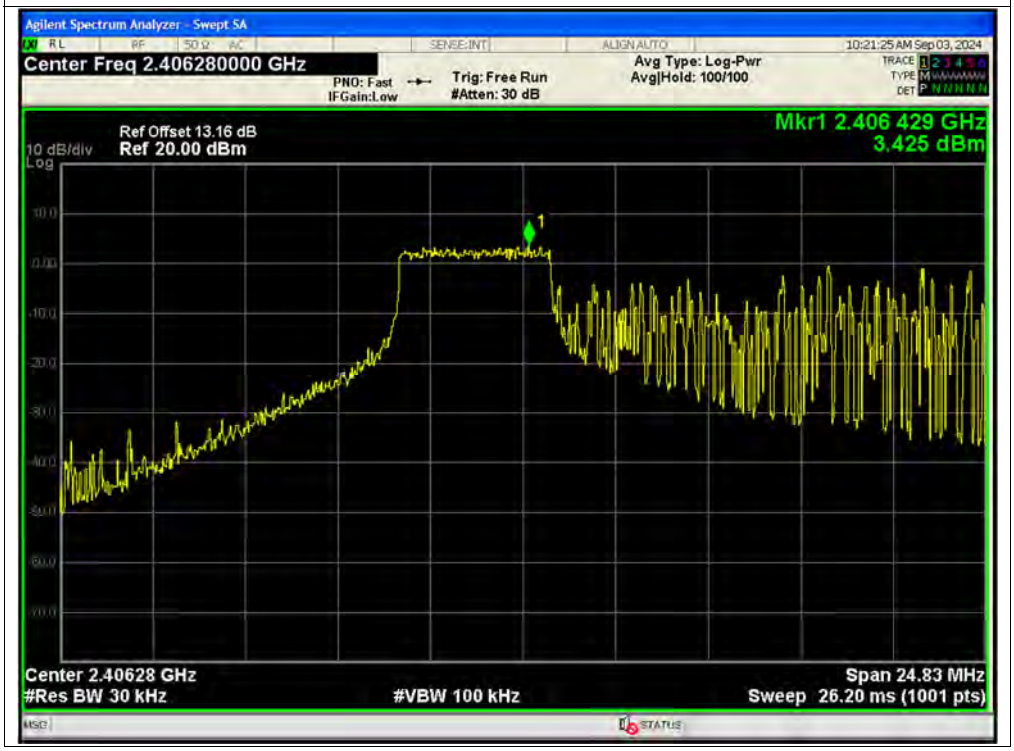
PSD NVNT ax40 26@0 2422MHz Ant1 MIMO

PSD NVNT ax40 26@0 2422MHz Ant2 MIMO

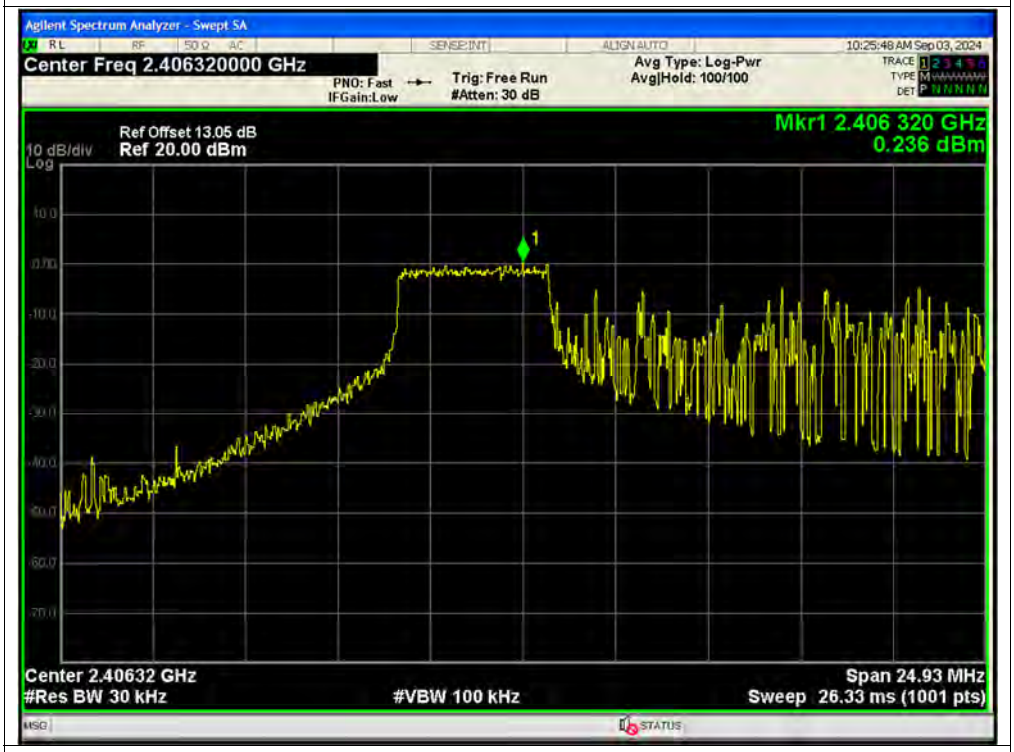
PSD NVNT ax40 52@37 2422MHz Ant1 SISO



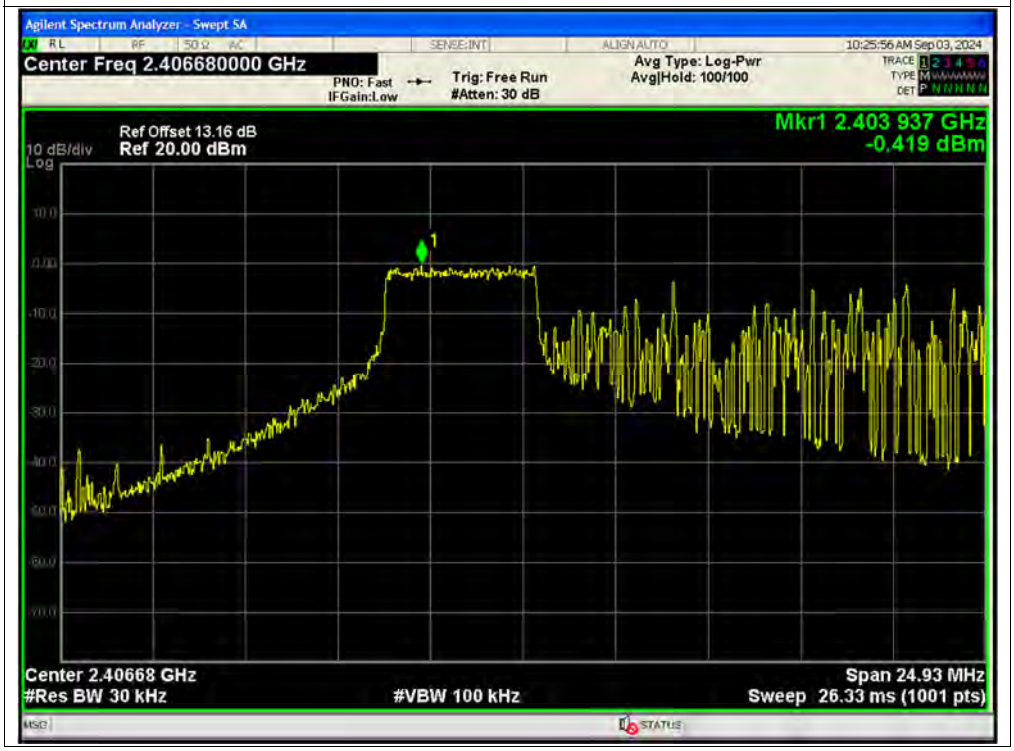
PSD NVNT ax40 52@37 2422MHz Ant2 SISO



PSD NVNT ax40 52@37 2422MHz Ant1 MIMO



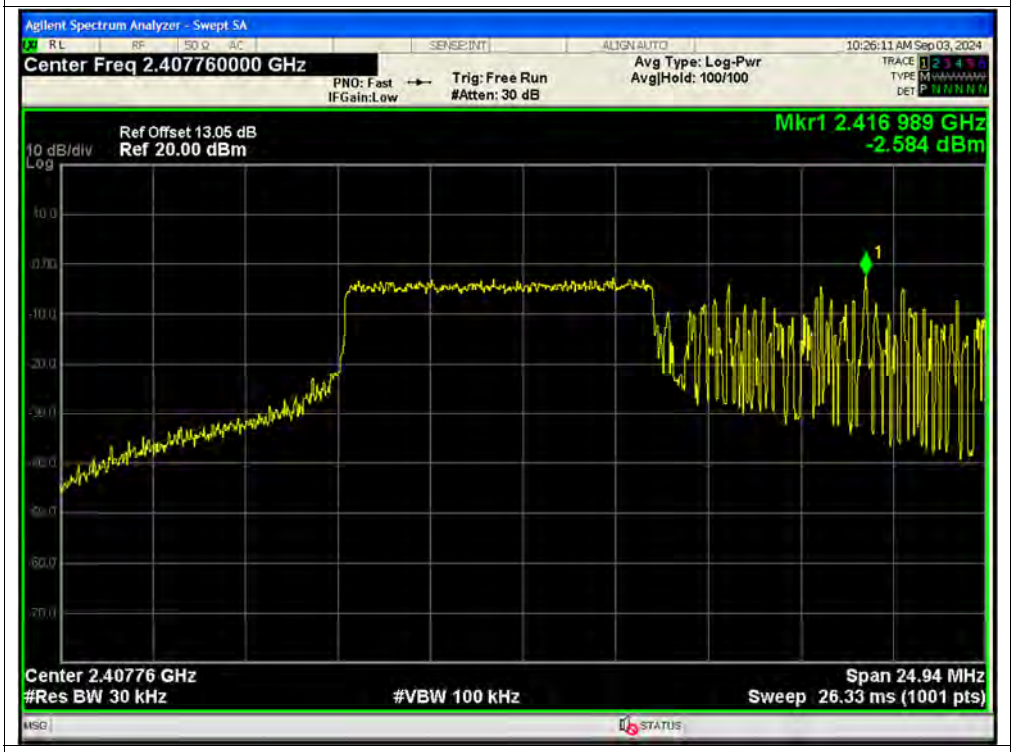
PSD NVNT ax40 52@37 2422MHz Ant2 MIMO



PSD NVNT ax40 106@53 2422MHz Ant1 SISO

PSD NVNT ax40 106@53 2422MHz Ant2 SISO

PSD NVNT ax40 106@53 2422MHz Ant1 MIMO



PSD NVNT ax40 106@53 2422MHz Ant2 MIMO

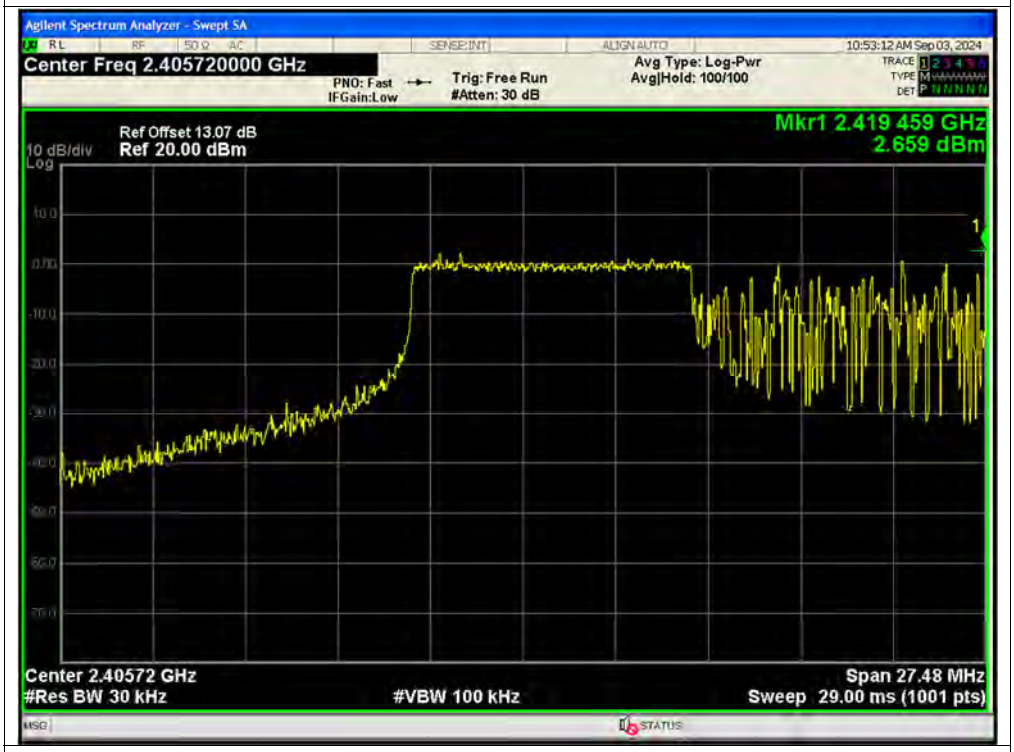
PSD NVNT ax40 242@61 2422MHz Ant1 SISO

PSD NVNT ax40 242@61 2422MHz Ant2 SISO

PSD NVNT ax40 242@61 2422MHz Ant1 MIMO

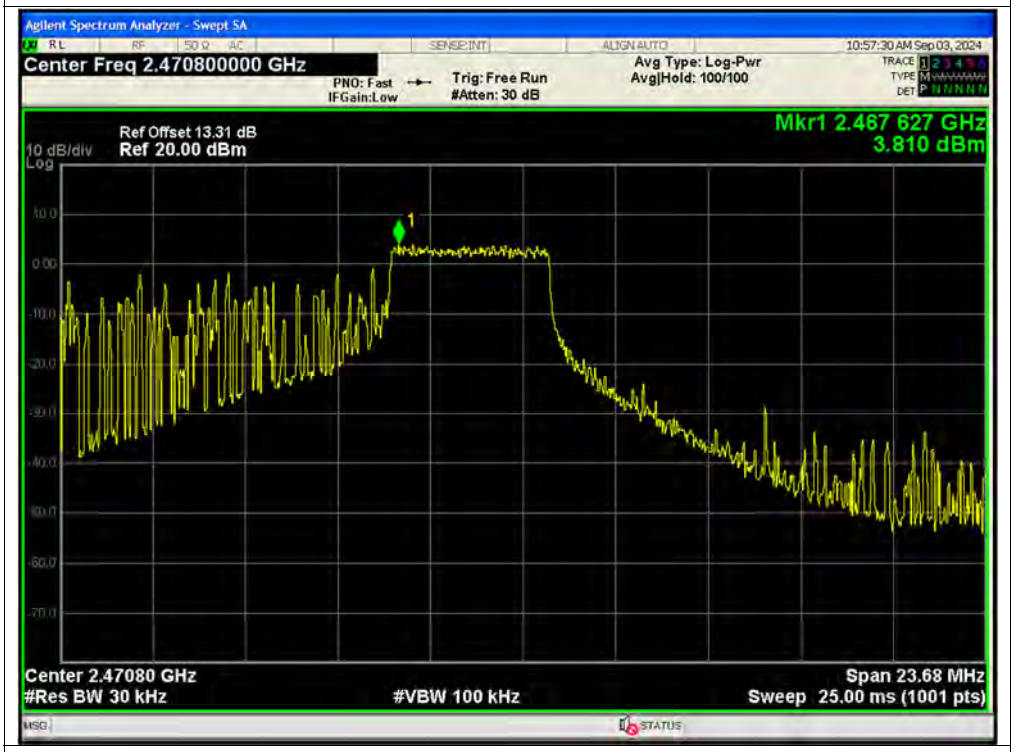
PSD NVNT ax40 242@61 2422MHz Ant2 MIMO

PSD NVNT be20 106@53 2412MHz Ant1 SISO



PSD NVNT be20 106@53 2437MHz Ant1 SISO

PSD NVNT be20 106@53 2462MHz Ant1 SISO

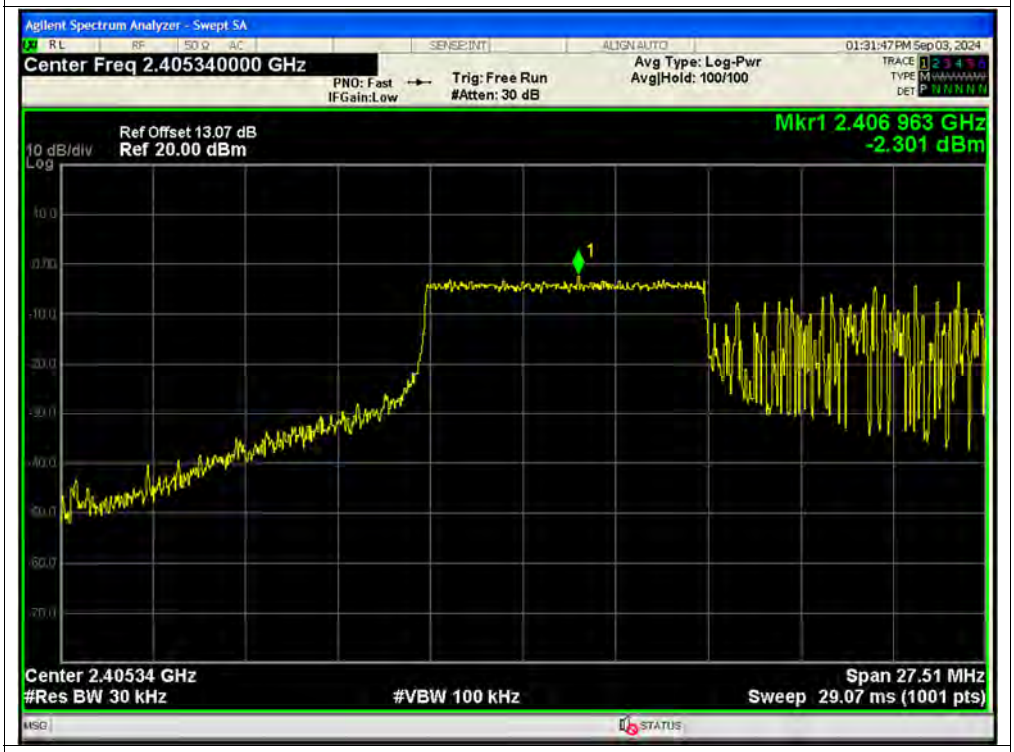


PSD NVNT be20 106@53 2412MHz Ant2 SISO

PSD NVNT be20 106@53 2437MHz Ant2 SISO

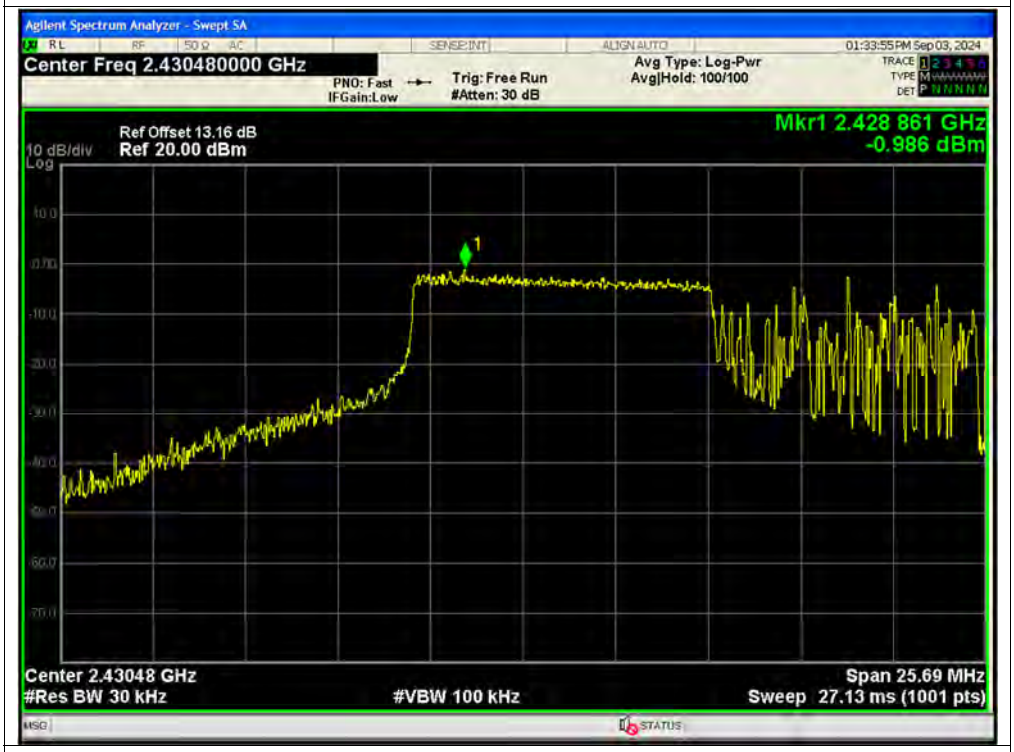
PSD NVNT be20 106@53 2462MHz Ant2 SISO

PSD NVNT be20 106@53 2412MHz Ant1 MIMO



PSD NVNT be20 106@53 2412MHz Ant2 MIMO

PSD NVNT be20 106@53 2437MHz Ant1 MIMO

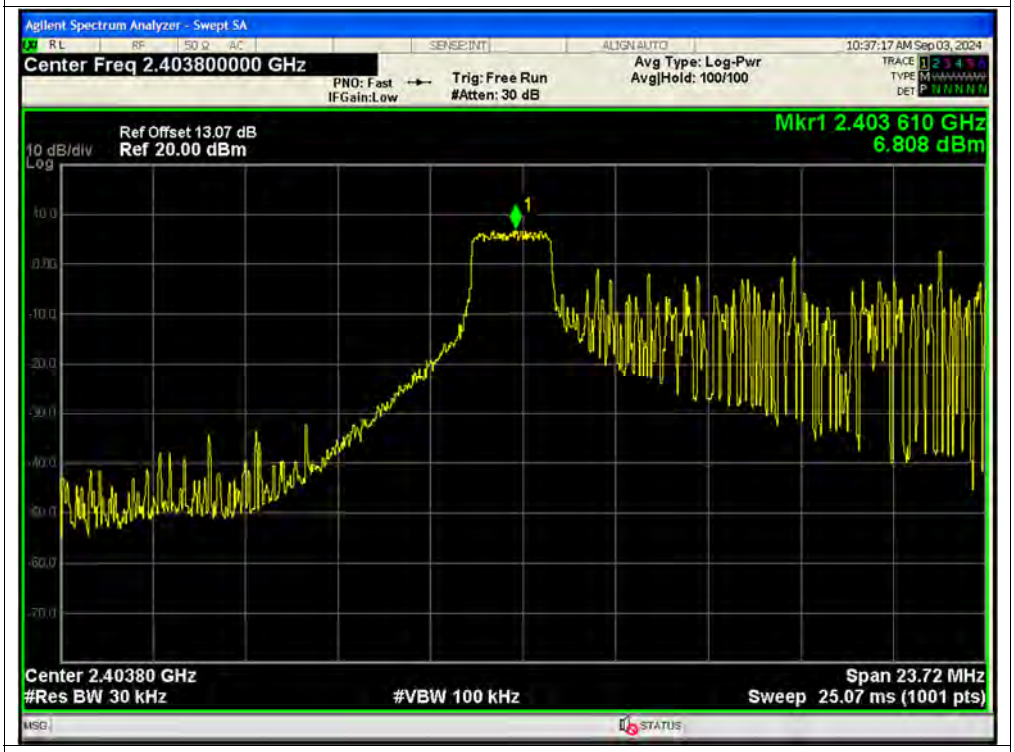


PSD NVNT be20 106@53 2437MHz Ant2 MIMO

PSD NVNT be20 106@53 2462MHz Ant1 MIMO

PSD NVNT be20 106@53 2462MHz Ant2 MIMO

PSD NVNT be20 26@0 2412MHz Ant1 SISO



PSD NVNT be20 26@0 2437MHz Ant1 SISO

PSD NVNT be20 26@0 2462MHz Ant1 SISO

PSD NVNT be20 26@0 2412MHz Ant2 SISO

PSD NVNT be20 26@0 2437MHz Ant2 SISO

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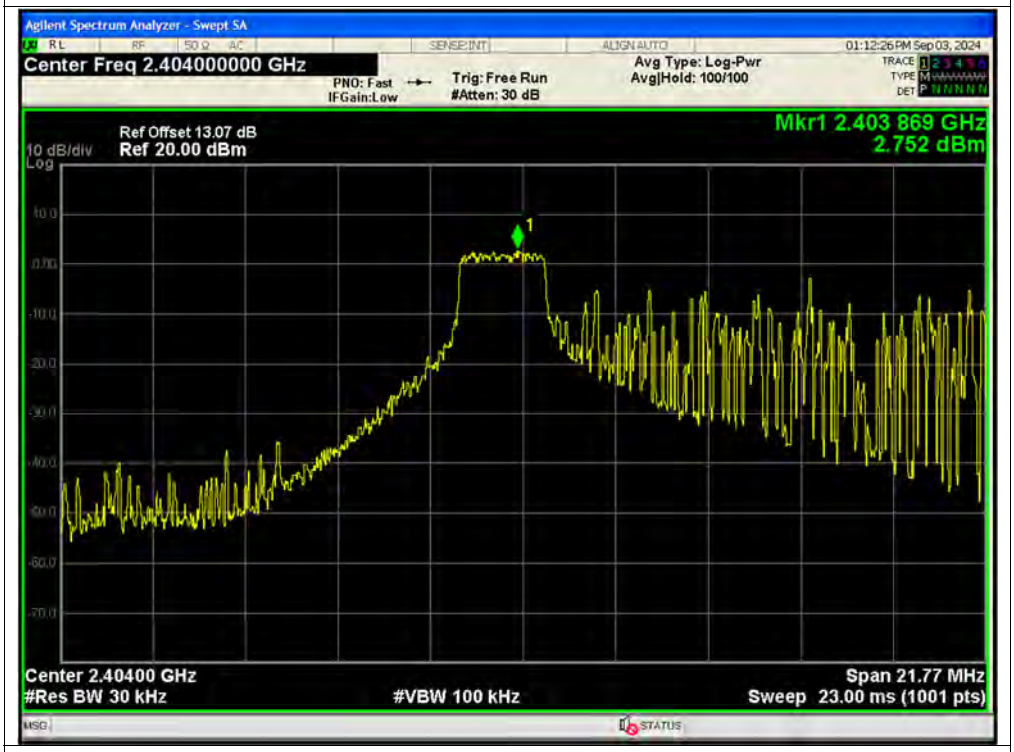
PSD NVNT be20 26@0 2412MHz Ant1 MIMO



PSD NVNT be20 26@0 2412MHz Ant2 MIMO

PSD NVNT be20 26@0 2437MHz Ant1 MIMO

PSD NVNT be20 26@0 2437MHz Ant2 MIMO

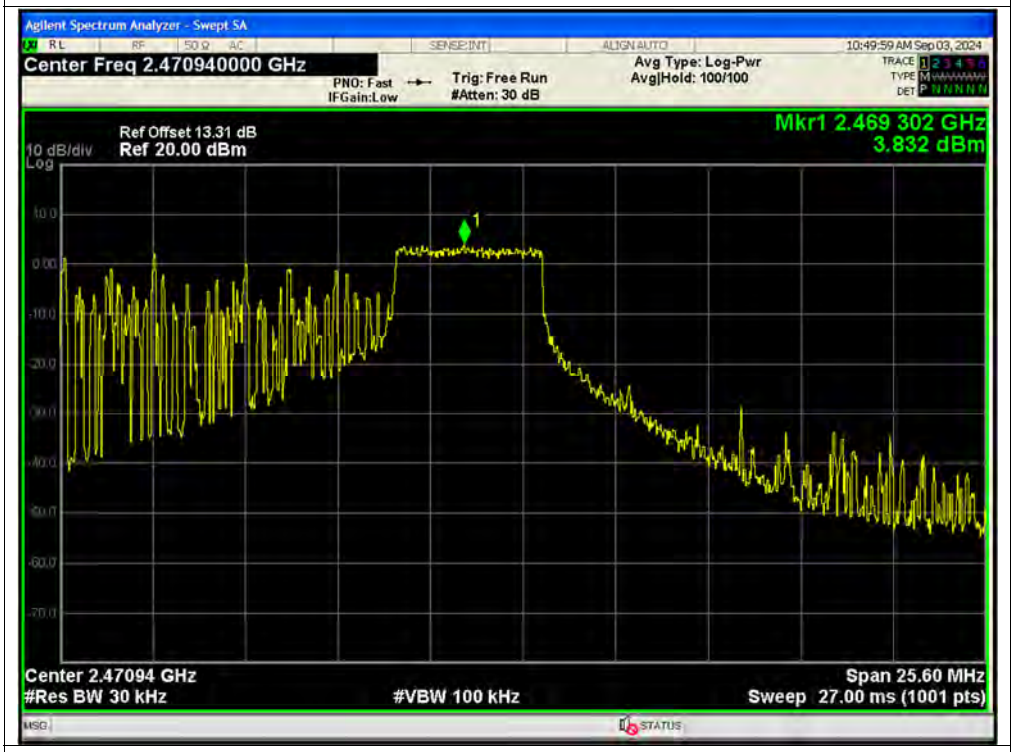
PSD NVNT be20 26@0 2462MHz Ant1 MIMO

PSD NVNT be20 26@0 2462MHz Ant2 MIMO

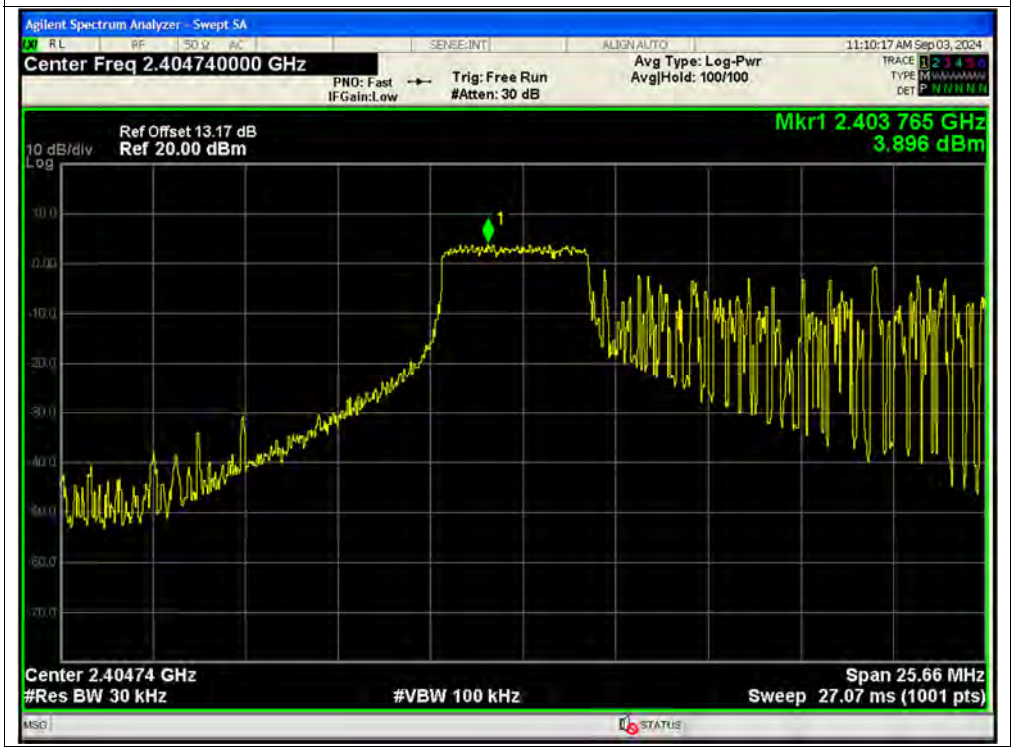
PSD NVNT be20 52@37 2412MHz Ant1 SISO

PSD NVNT be20 52@37 2437MHz Ant1 SISO

PSD NVNT be20 52@37 2462MHz Ant1 SISO



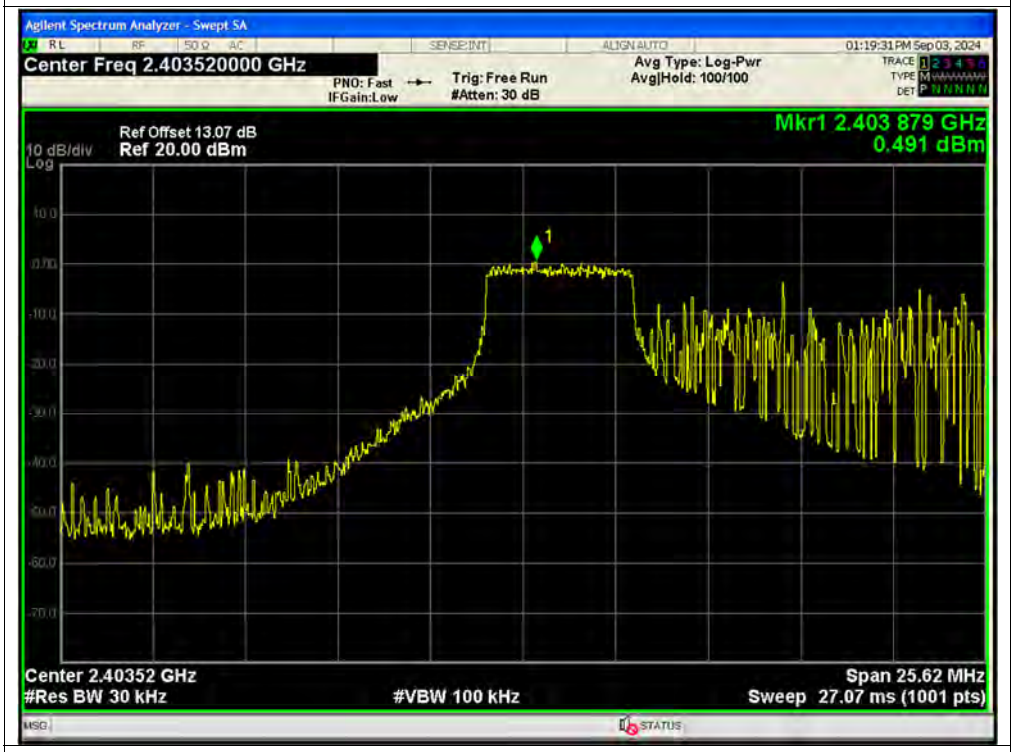
PSD NVNT be20 52@37 2412MHz Ant2 SISO



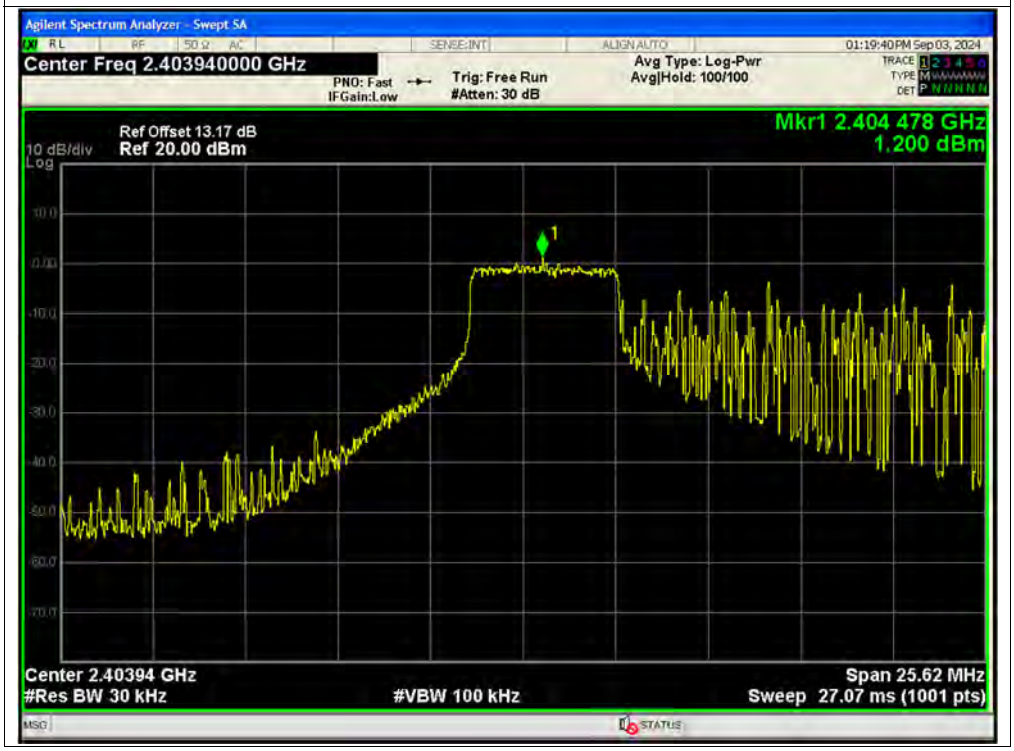
PSD NVNT be20 52@37 2437MHz Ant2 SISO

PSD NVNT be20 52@37 2462MHz Ant2 SISO

PSD NVNT be20 52@37 2412MHz Ant1 MIMO



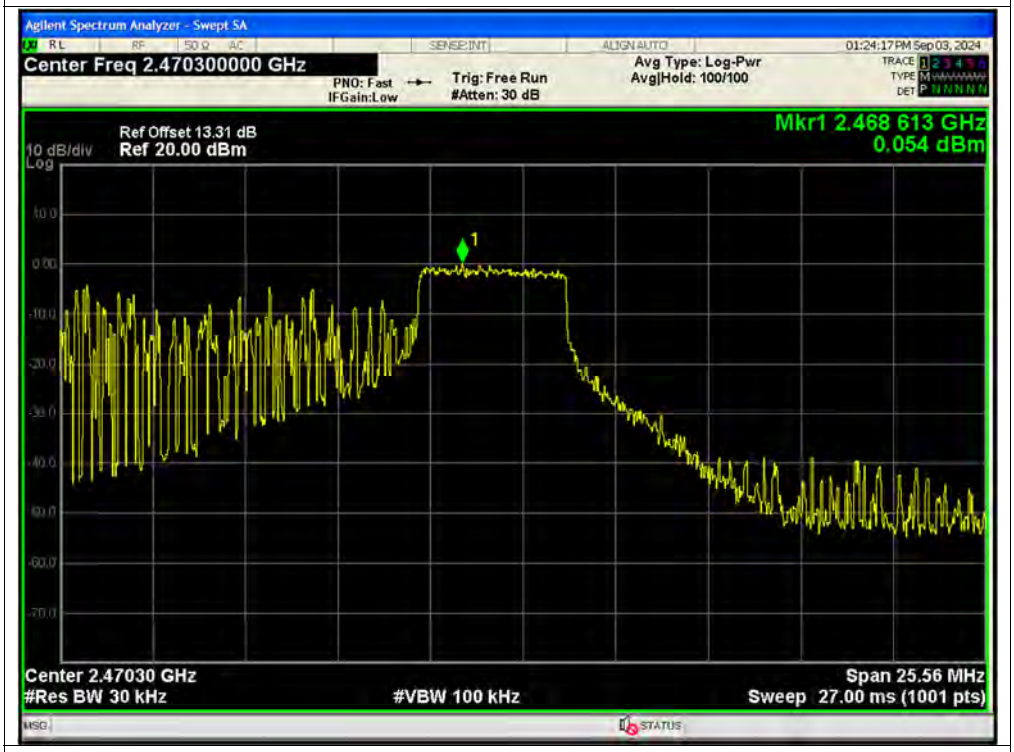
PSD NVNT be20 52@37 2412MHz Ant2 MIMO



PSD NVNT be20 52@37 2437MHz Ant1 MIMO

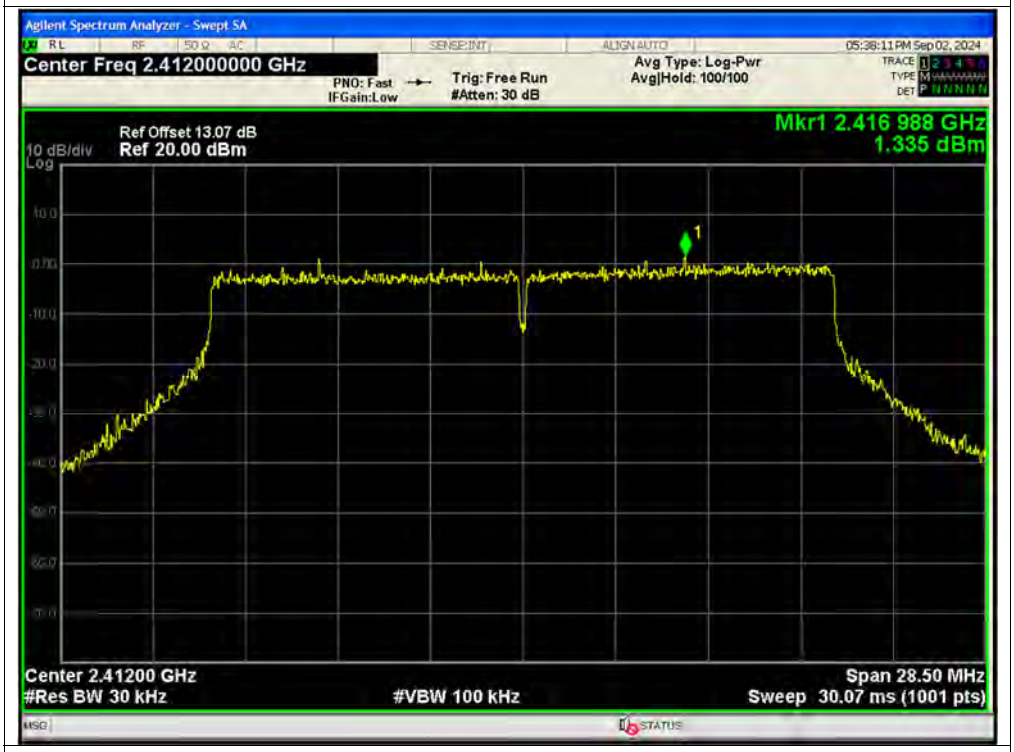
PSD NVNT be20 52@37 2437MHz Ant2 MIMO

PSD NVNT be20 52@37 2462MHz Ant1 MIMO

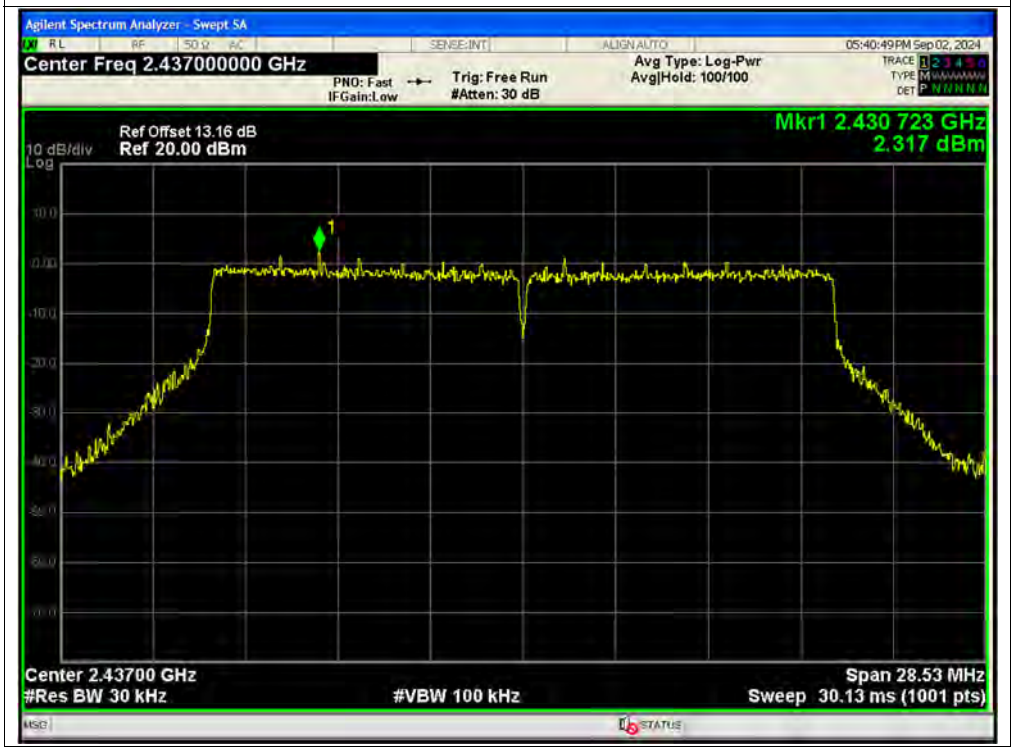


PSD NVNT be20 52@37 2462MHz Ant2 MIMO

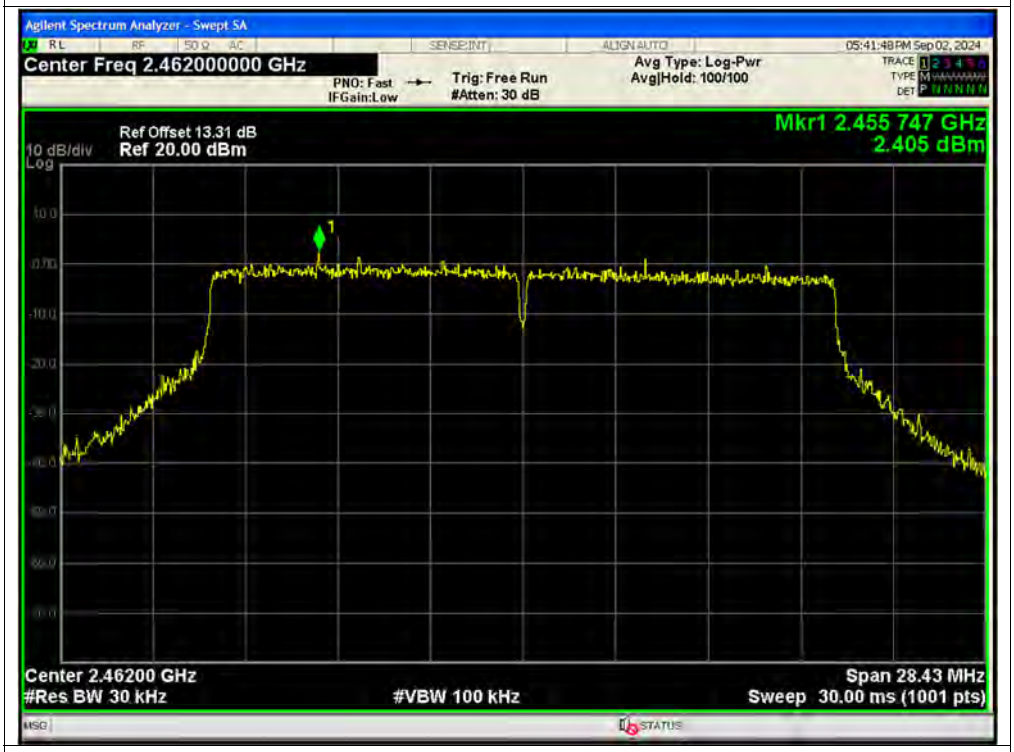
PSD NVNT be20 2412MHz Ant1 SISO



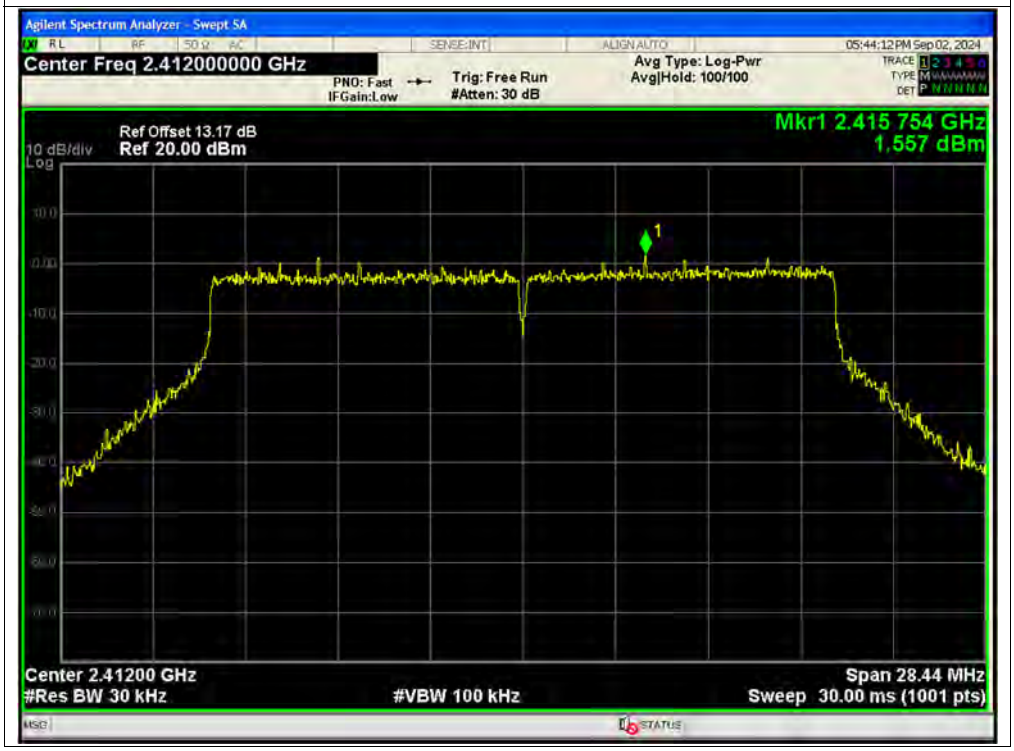
PSD NVNT be20 2437MHz Ant1 SISO



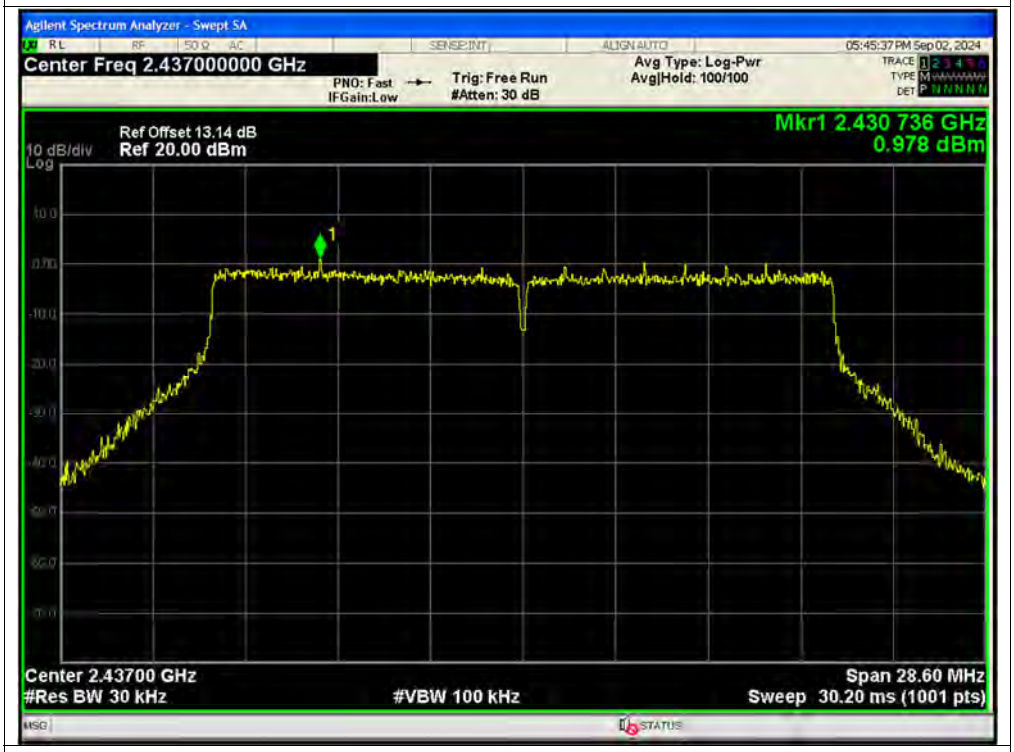
PSD NVNT be20 2462MHz Ant1 SISO



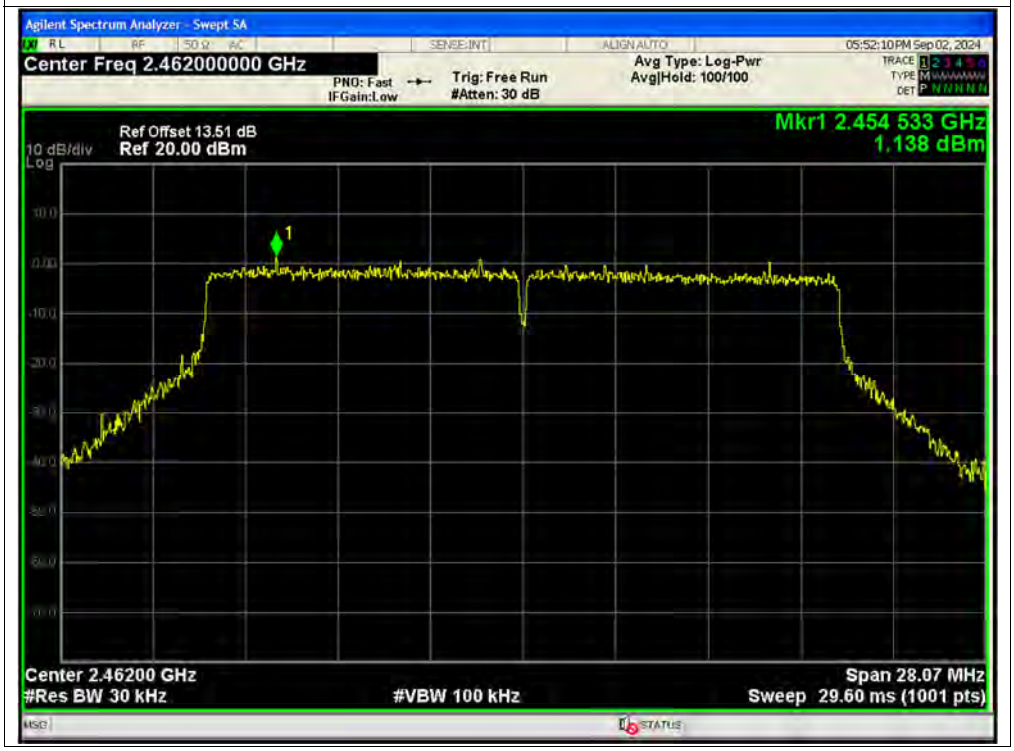
PSD NVNT be20 2412MHz Ant2 SISO



PSD NVNT be20 2437MHz Ant2 SISO

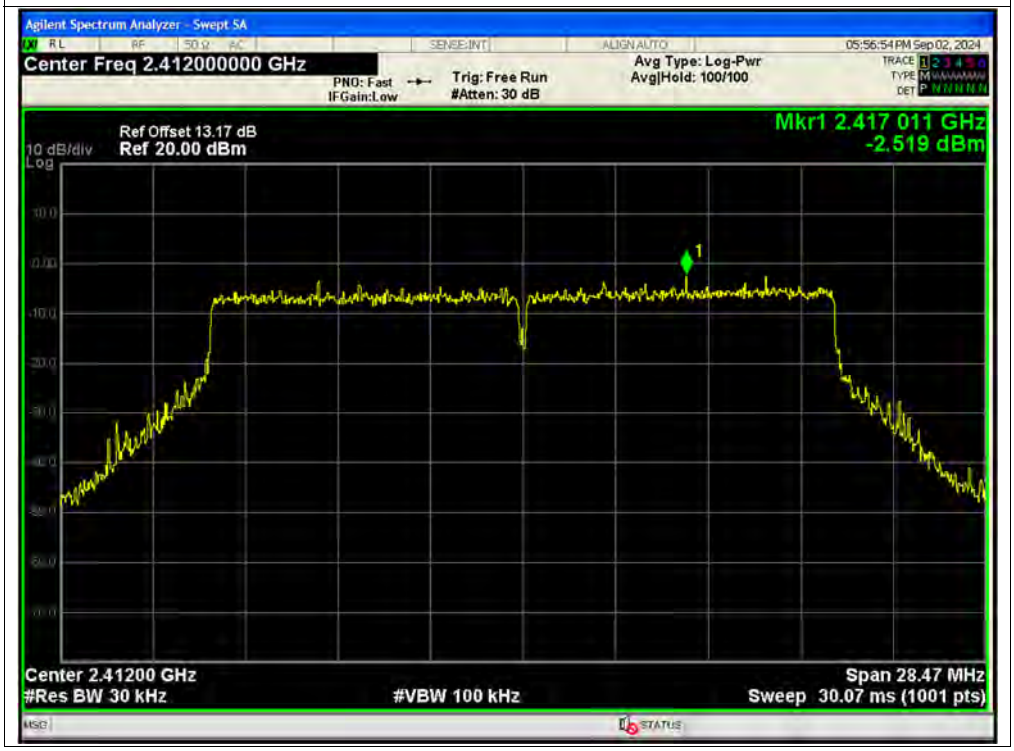


PSD NVNT be20 2462MHz Ant2 SISO

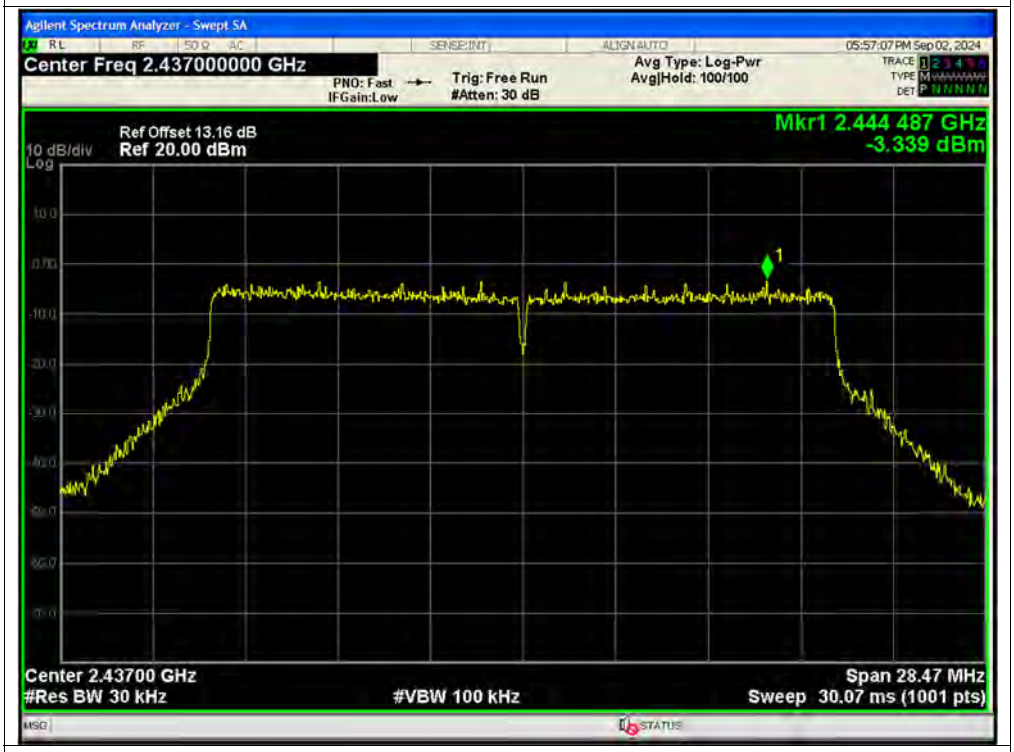


PSD NVNT be20 2412MHz Ant1 MIMO

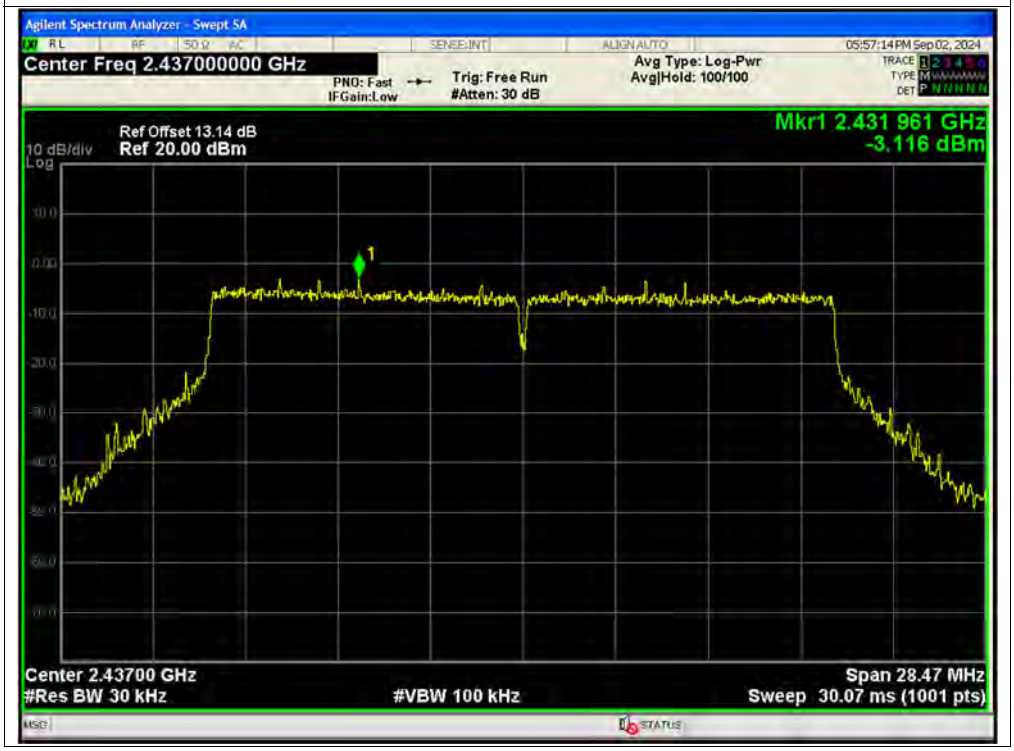
PSD NVNT be20 2412MHz Ant2 MIMO



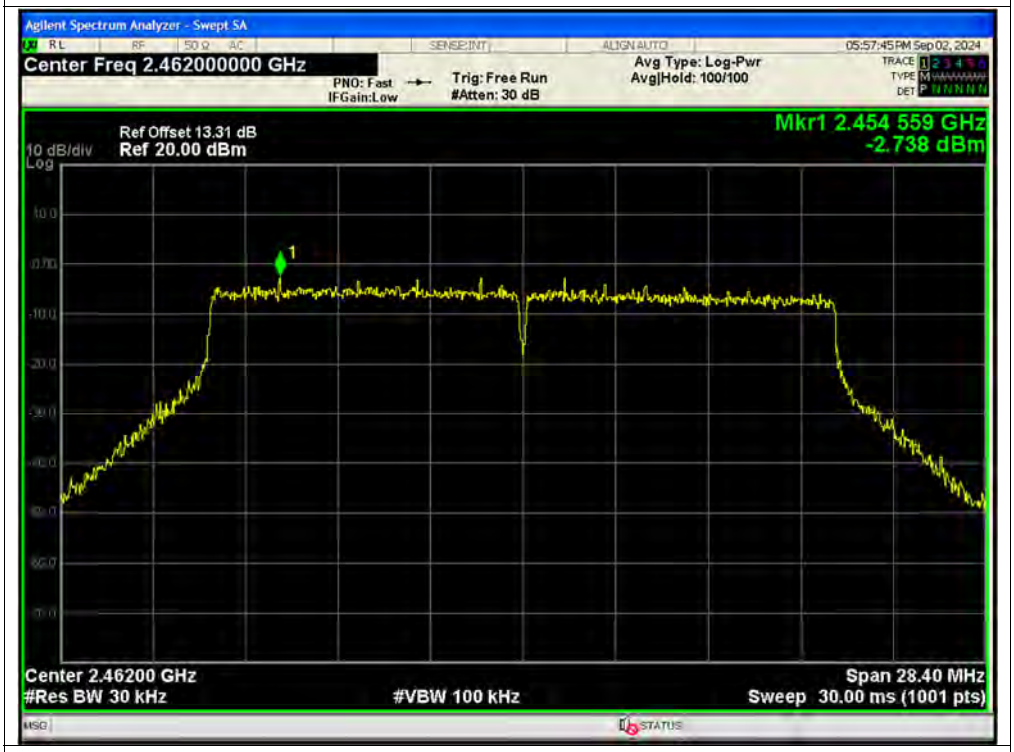
PSD NVNT be20 2437MHz Ant1 MIMO



PSD NVNT be20 2437MHz Ant2 MIMO

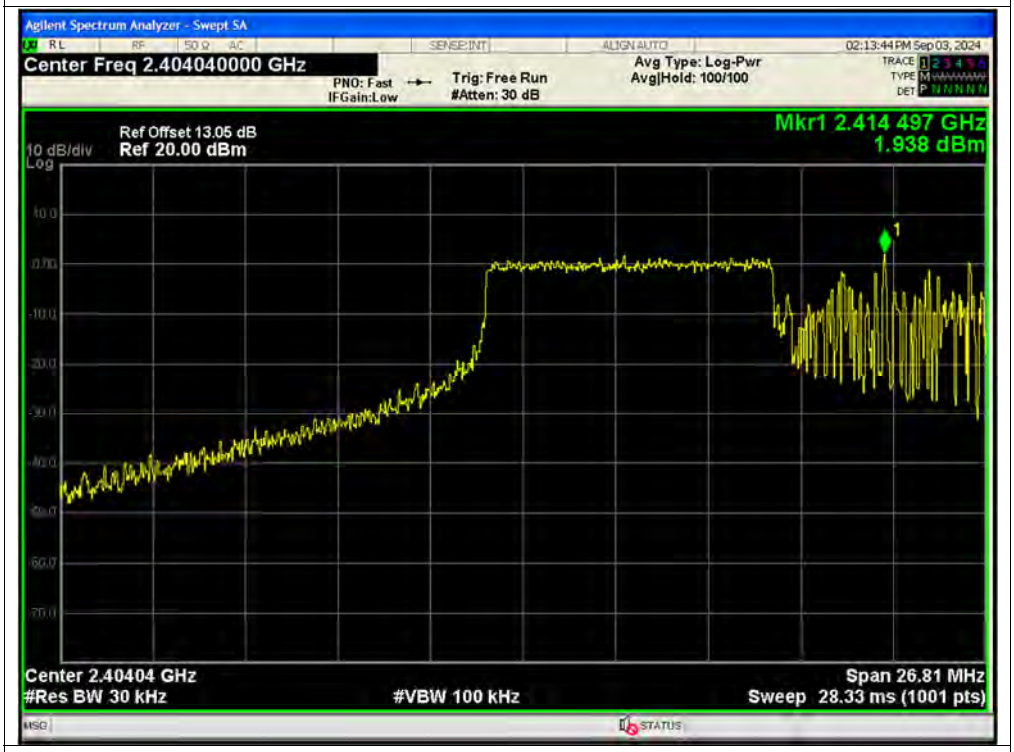


PSD NVNT be20 2462MHz Ant1 MIMO



PSD NVNT be20 2462MHz Ant2 MIMO

PSD NVNT be40 106@53 2422MHz Ant1 SISO



PSD NVNT be40 106@53 2422MHz Ant2 SISO

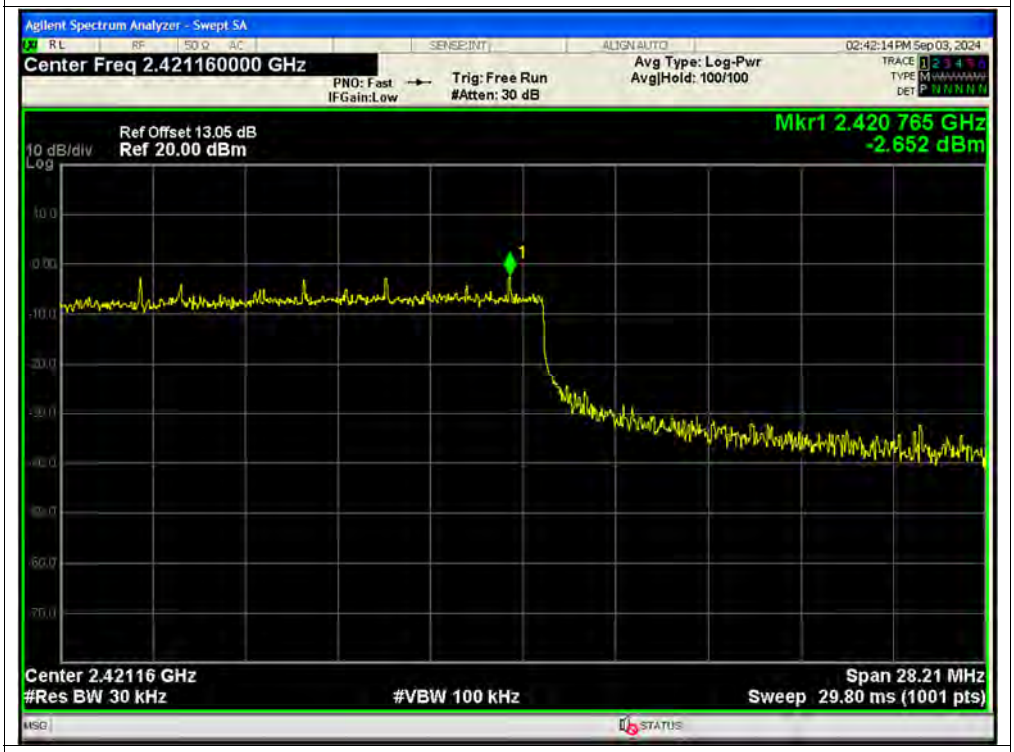
PSD NVNT be40 106@53 2422MHz Ant1 MIMO

PSD NVNT be40 106@53 2422MHz Ant2 MIMO

PSD NVNT be40 242@61 2422MHz Ant1 SISO

PSD NVNT be40 242@61 2422MHz Ant2 SISO

PSD NVNT be40 242@61 2422MHz Ant1 MIMO



PSD NVNT be40 242@61 2422MHz Ant2 MIMO

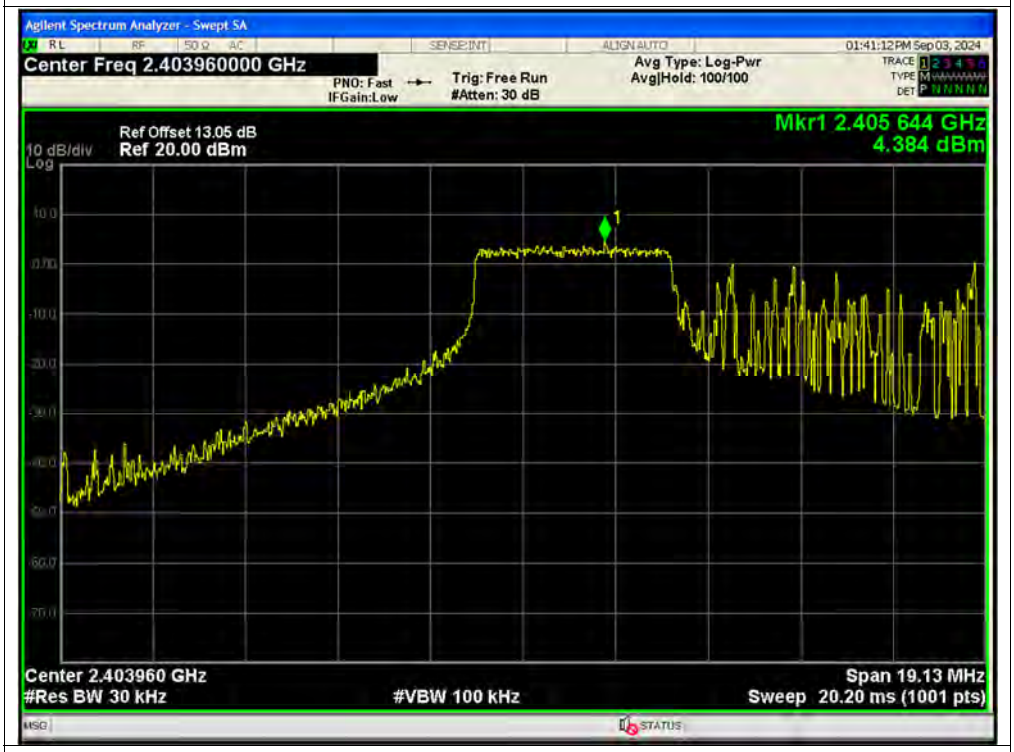
PSD NVNT be40 26@0 2422MHz Ant1 SISO

PSD NVNT be40 26@0 2422MHz Ant2 SISO

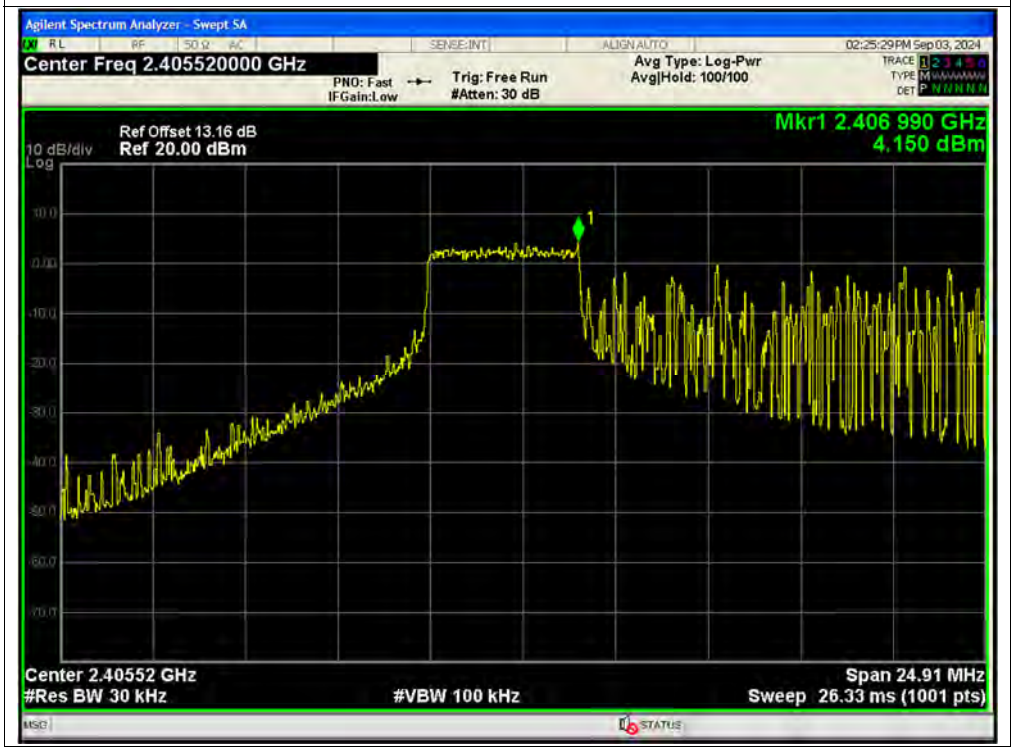
PSD NVNT be40 26@0 2422MHz Ant1 MIMO

PSD NVNT be40 26@0 2422MHz Ant2 MIMO

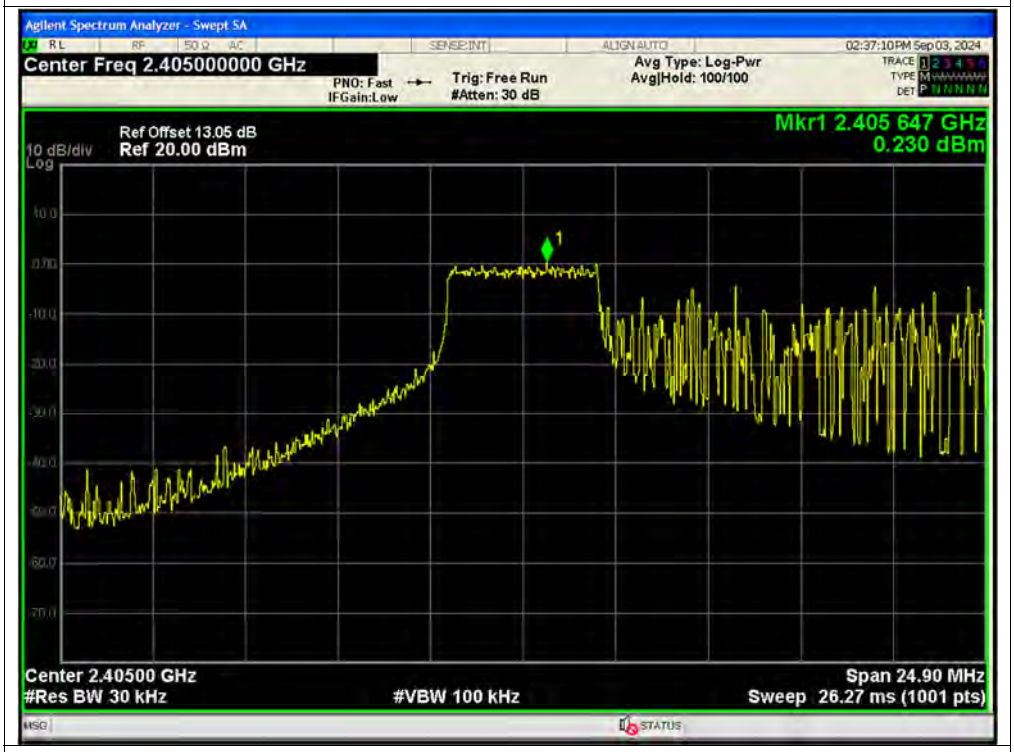
PSD NVNT be40 52@37 2422MHz Ant1 SISO



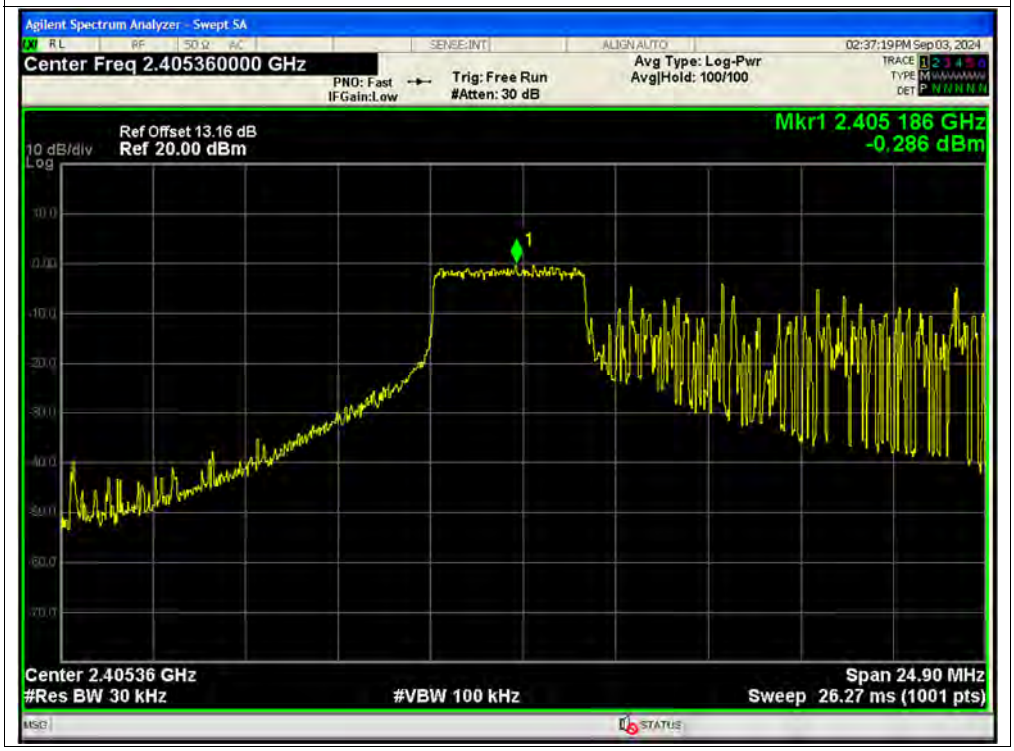
PSD NVNT be40 52@37 2422MHz Ant2 SISO



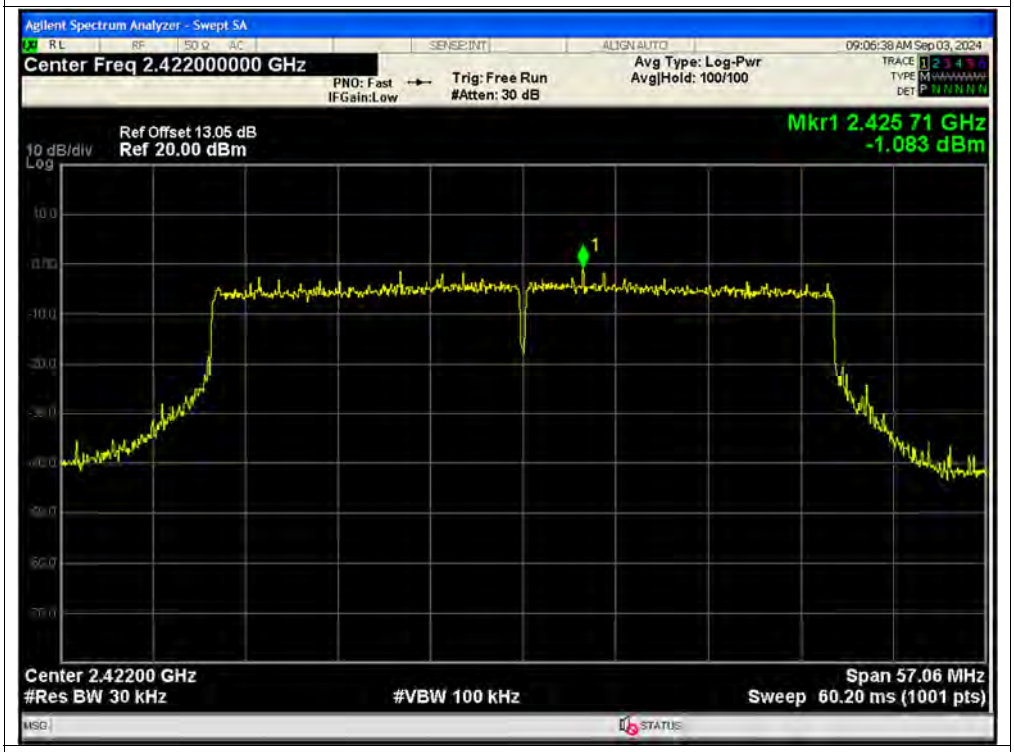
PSD NVNT be40 52@37 2422MHz Ant1 MIMO



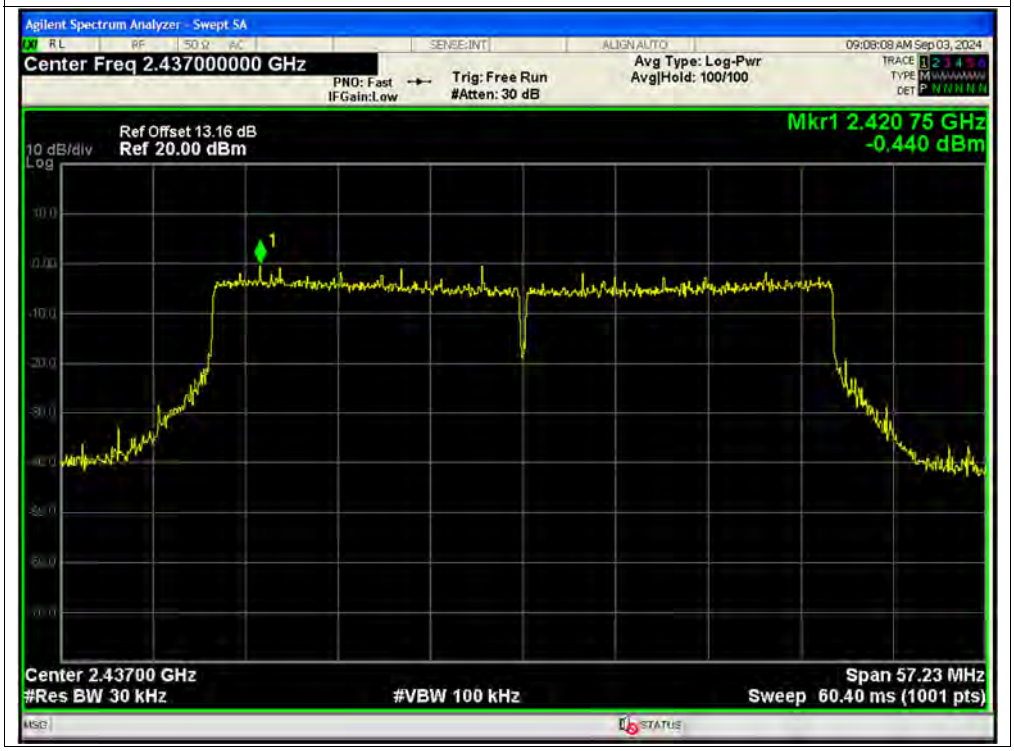
PSD NVNT be40 52@37 2422MHz Ant2 MIMO



PSD NVNT be40 2422MHz Ant1 SISO

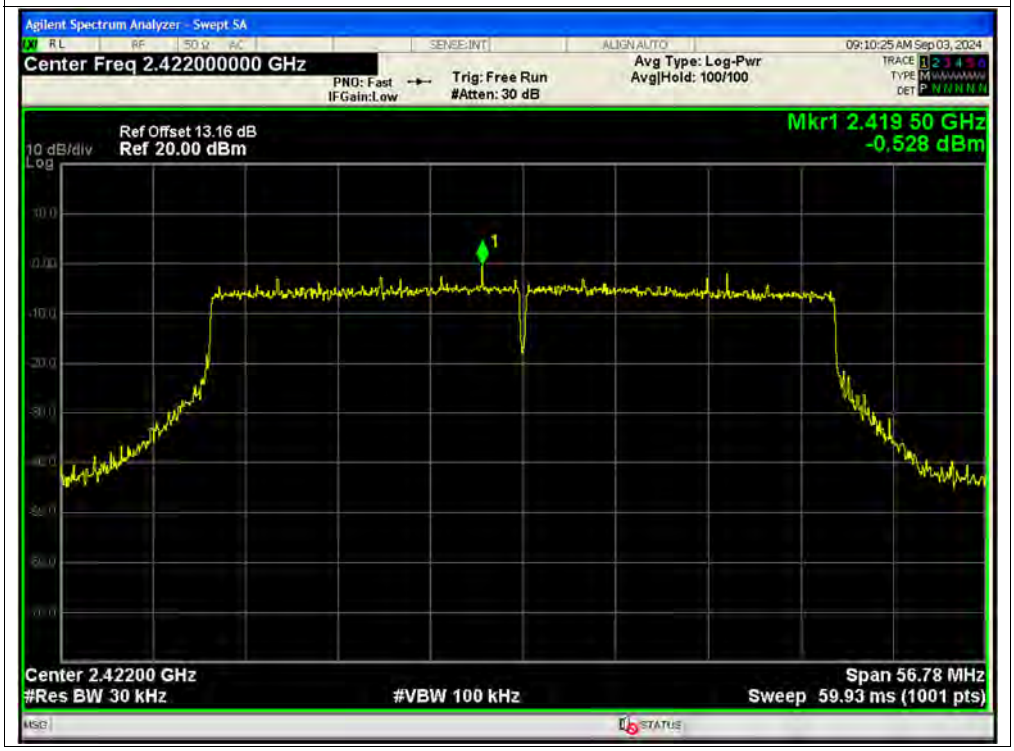


PSD NVNT be40 2437MHz Ant1 SISO

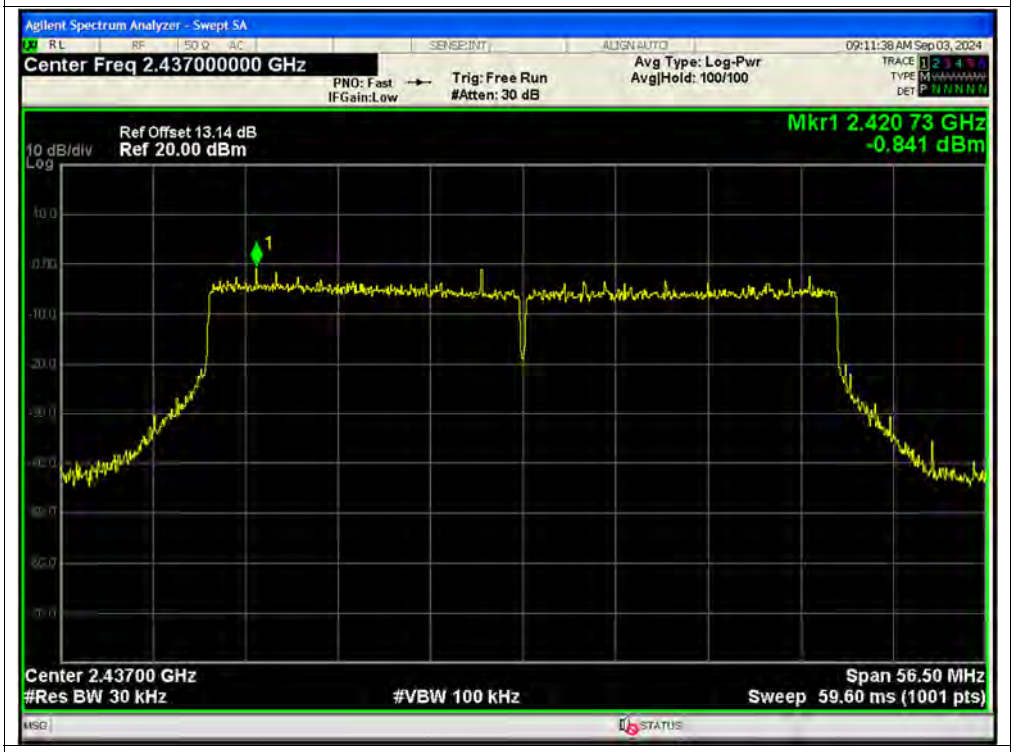


PSD NVNT be40 2452MHz Ant1 SISO

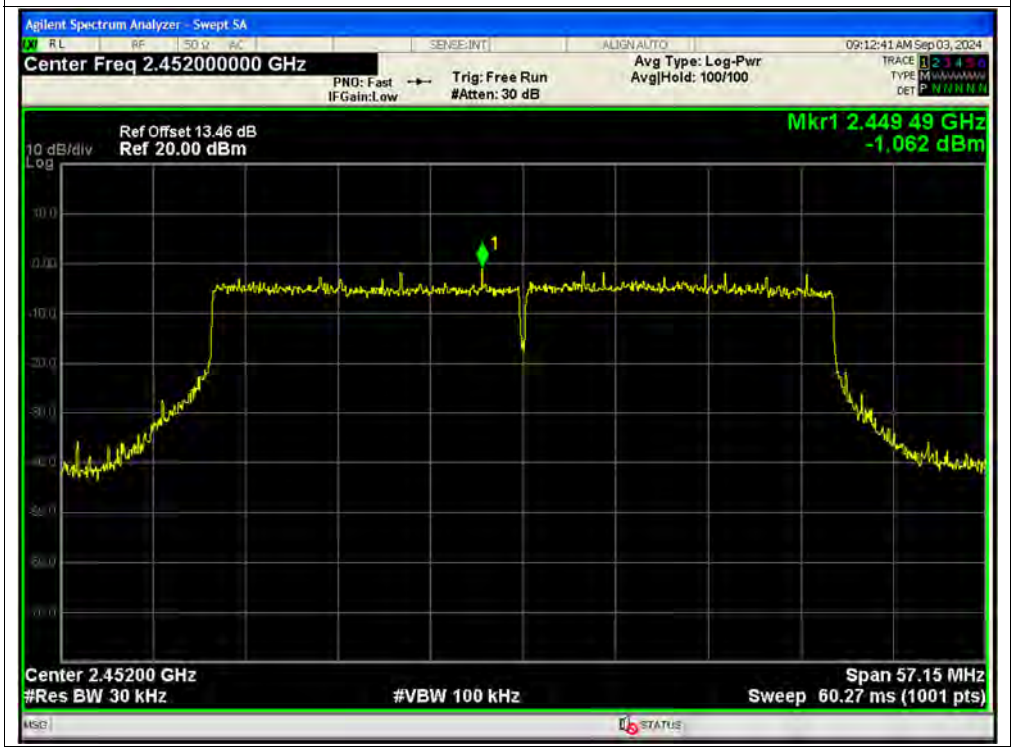
PSD NVNT be40 2422MHz Ant2 SISO



PSD NVNT be40 2437MHz Ant2 SISO

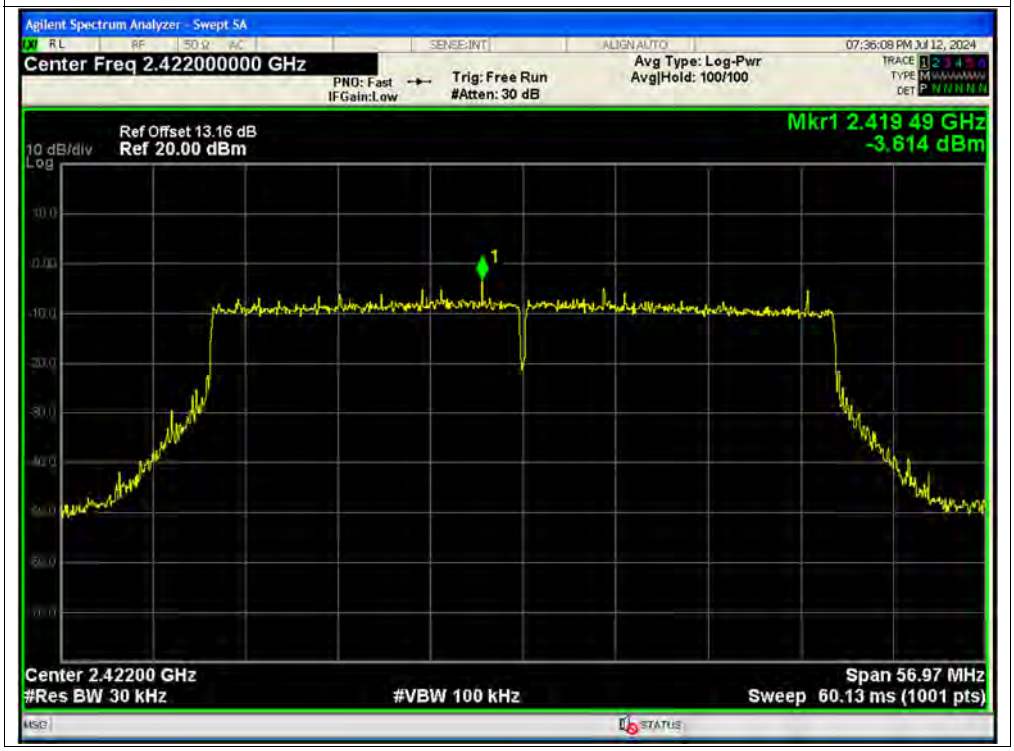


PSD NVNT be40 2452MHz Ant2 SISO



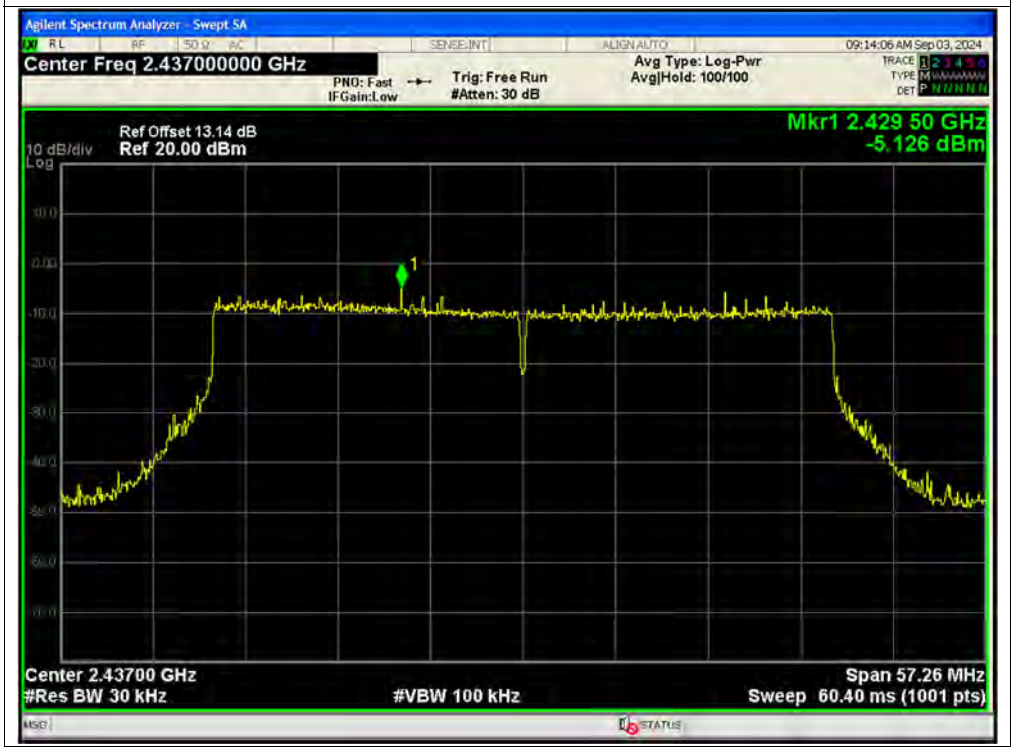
PSD NVNT be40 2422MHz Ant1 MIMO

PSD NVNT be40 2422MHz Ant2 MIMO



PSD NVNT be40 2437MHz Ant1 MIMO

PSD NVNT be40 2437MHz Ant2 MIMO



PSD NVNT be40 2452MHz Ant1 MIMO

PSD NVNT be40 2452MHz Ant2 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 + PC + PC Adapter + WIFI TX

Test voltage: AC 120V/60Hz

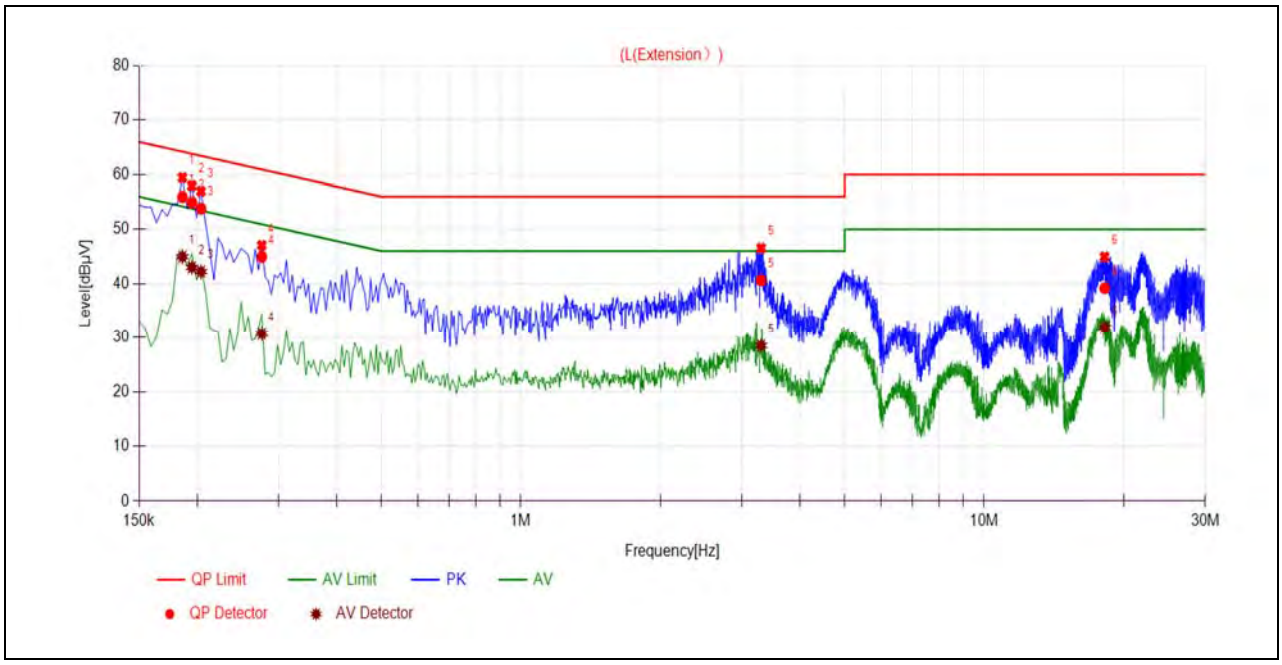
The measurement results are obtained as below:

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

U_R: Receiver Reading

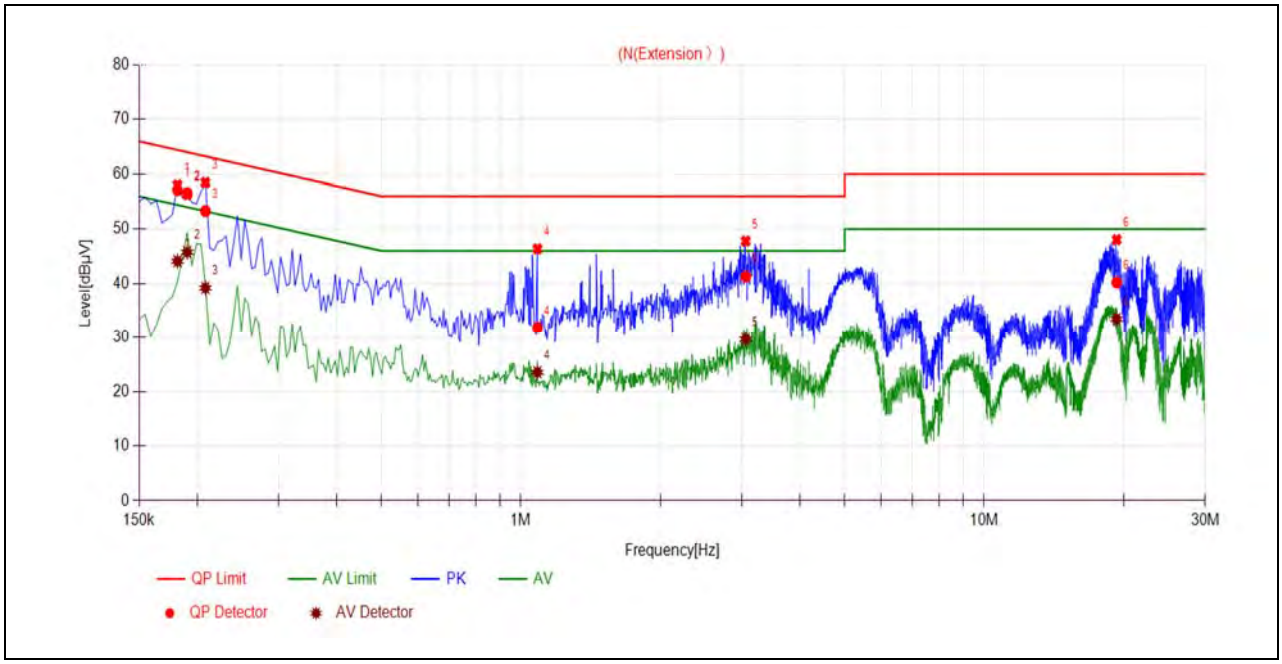
A_{Factor}: Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1860	55.97	44.97	64.21	54.21	Line	PASS
2	0.1950	54.96	43.02	63.82	53.82		PASS
3	0.2040	53.83	42.23	63.45	53.45		PASS
4	0.2760	44.95	30.72	60.93	50.93		PASS
5	3.3002	40.61	28.48	56.00	46.00		PASS
6	18.2007	39.19	31.89	60.00	50.00		PASS



(N Phase)

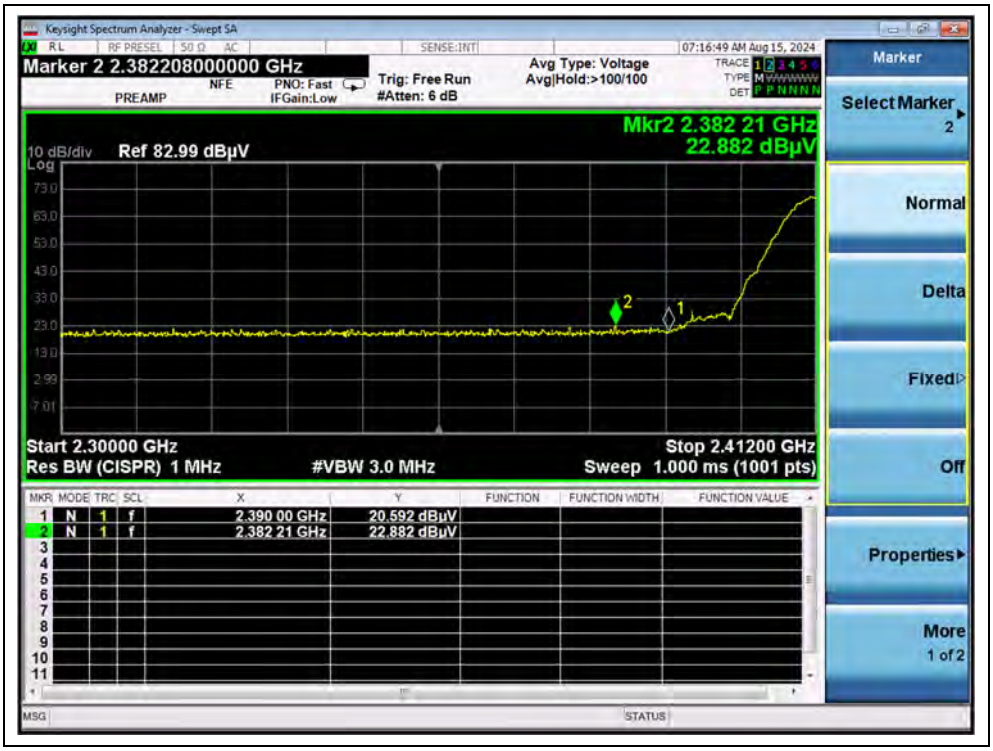
No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1815	57.15	44.12	64.42	54.42	Neutral	PASS
2	0.1905	56.58	45.78	64.02	54.02		PASS
3	0.2085	53.31	39.22	63.26	53.26		PASS
4	1.0859	31.88	23.54	56.00	46.00		PASS
5	3.0570	41.30	29.66	56.00	46.00		PASS
6	19.3140	40.22	33.49	60.00	50.00		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 [dBμV/m] =U_R + A_T + A_{Factor} [dB]; A_T =$L_{Cable\ loss}$ [dB]-G_{preamp} [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 (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
1	2382.21	PK	22.88	6.74	27.20	56.82	74	PASS
1	2386.13	AV	6.82	6.74	27.20	40.76	54	PASS
11	2485.60	PK	21.89	6.74	27.20	55.83	74	PASS
11	2485.79	AV	-0.97	6.74	27.20	32.97	54	PASS



(PEAK, Channel 1, 802.11b)

(AVERAGE, Channel 1, 802.11b)

(PEAK, Channel 11, 802.11b)

(AVERAGE, Channel 11, 802.11b)

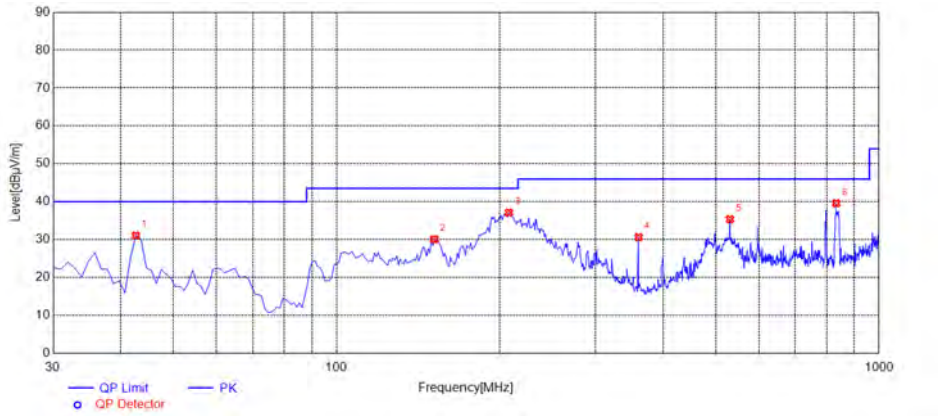
A.10. Radiated Emission

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

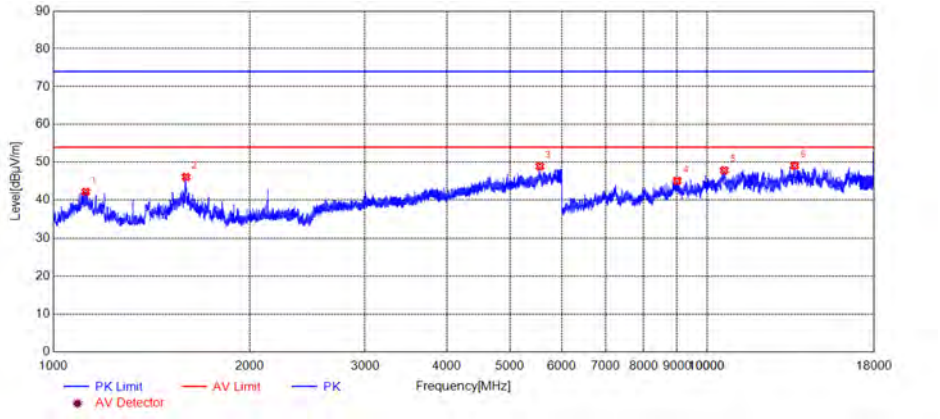
802.11b Mode

Plot for Channel 1



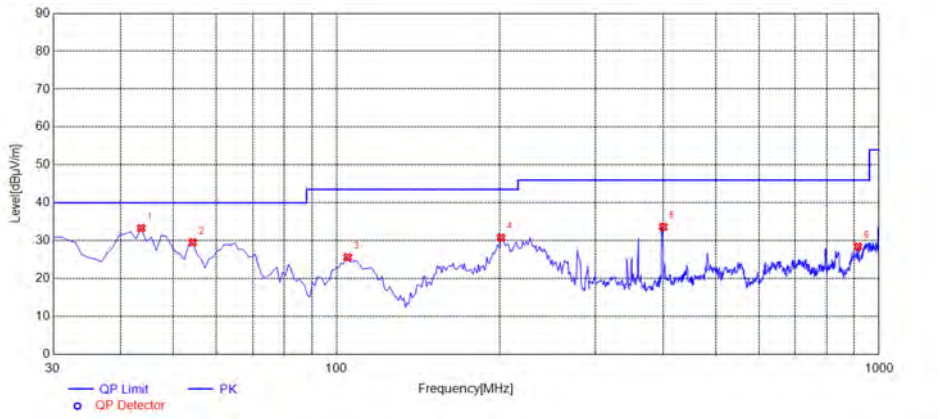
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
42.6226	31.06	-29.25	40.00	Horizontal	PASS
151.3714	30.10	-35.14	43.50	Horizontal	PASS
207.6877	37.13	-31.92	43.50	Horizontal	PASS
360.1301	30.62	-27.24	46.00	Horizontal	PASS
531.0210	35.36	-23.63	46.00	Horizontal	PASS
833.9640	39.59	-19.94	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



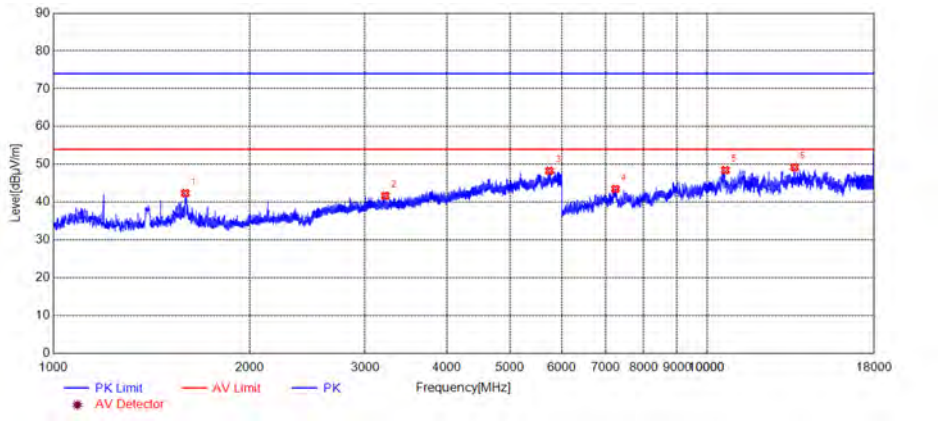
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1121.5122	42.17	-24.04	74.00	Horizontal	PASS
1597.5598	46.11	-23.61	74.00	Horizontal	PASS
5550.9551	48.92	-8.25	74.00	Horizontal	PASS
9002.7003	45.11	-0.84	74.00	Horizontal	PASS
10625.2625	47.89	2.35	74.00	Horizontal	PASS
13608.7609	49.11	7.16	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
43.5936	33.31	-29.09	40.00	Vertical	PASS
54.2743	29.59	-29.36	40.00	Vertical	PASS
104.7648	25.63	-31.03	43.50	Vertical	PASS
200.8909	30.83	-31.66	43.50	Vertical	PASS
399.9399	33.65	-26.29	46.00	Vertical	PASS
914.5546	28.44	-19.08	46.00	Vertical	PASS

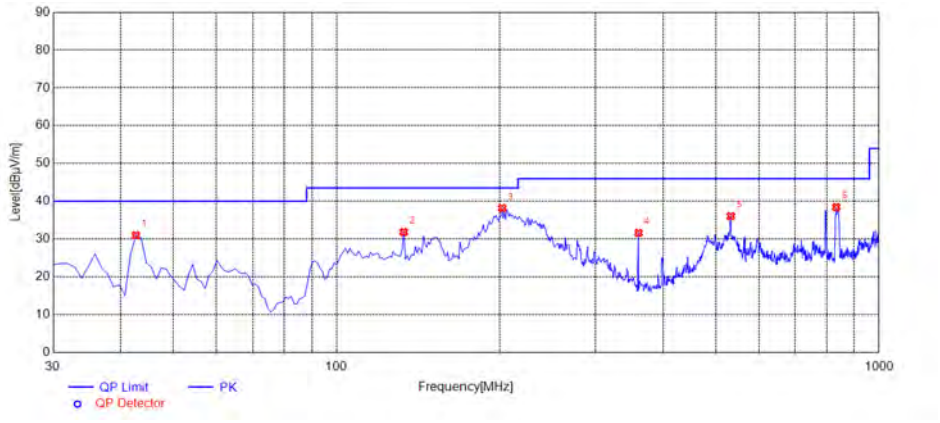
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1593.0593	42.40	-23.65	74.00	Vertical	PASS
3220.7221	41.70	-17.22	74.00	Vertical	PASS
5742.4742	48.28	-8.01	74.00	Vertical	PASS
7240.9241	43.49	-3.08	74.00	Vertical	PASS
10661.2661	48.49	2.70	74.00	Vertical	PASS
13599.1599	49.27	7.62	74.00	Vertical	PASS

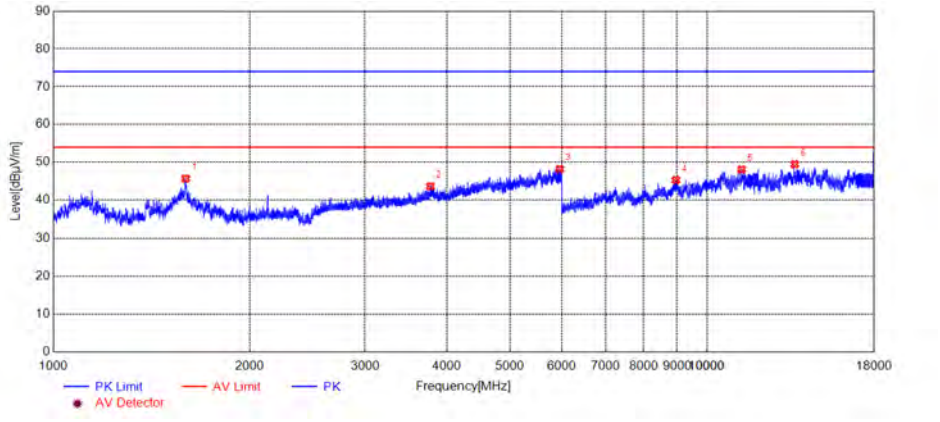
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 6



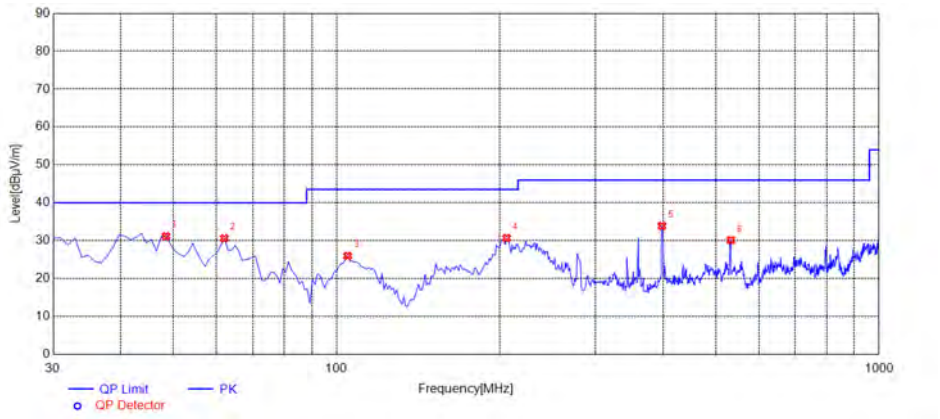
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
42.6226	31.01	-29.25	40.00	Horizontal	PASS
132.9229	31.88	-34.78	43.50	Horizontal	PASS
201.8619	38.18	-31.67	43.50	Horizontal	PASS
360.1301	31.65	-27.24	46.00	Horizontal	PASS
532.9630	36.05	-23.62	46.00	Horizontal	PASS
833.9640	38.47	-19.94	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



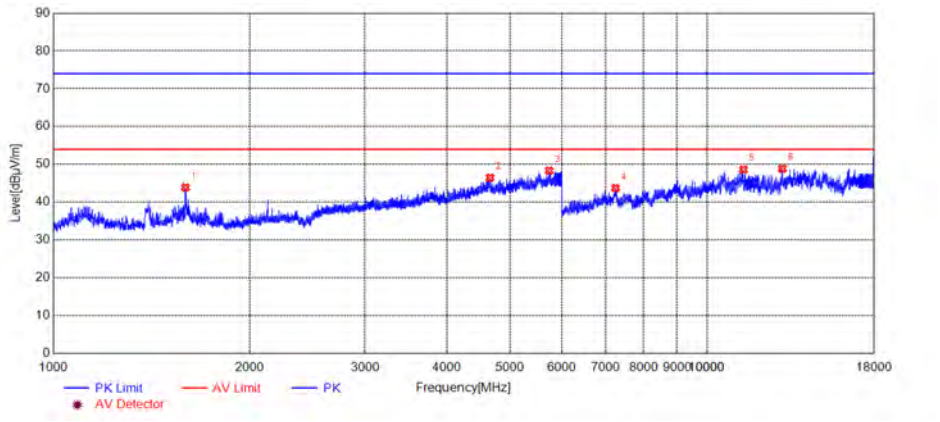
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1594.5595	45.70	-23.63	74.00	Horizontal	PASS
3773.7774	43.65	-15.38	74.00	Horizontal	PASS
5953.9954	48.24	-8.04	74.00	Horizontal	PASS
8961.8962	45.32	-1.17	74.00	Horizontal	PASS
11292.5293	48.11	3.06	74.00	Horizontal	PASS
13612.3612	49.49	6.95	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
48.4484	31.20	-28.90	40.00	Vertical	PASS
62.0420	30.63	-30.58	40.00	Vertical	PASS
104.7648	25.99	-31.03	43.50	Vertical	PASS
205.7457	30.71	-31.77	43.50	Vertical	PASS
397.9980	33.92	-26.37	46.00	Vertical	PASS
532.9630	30.15	-23.62	46.00	Vertical	PASS

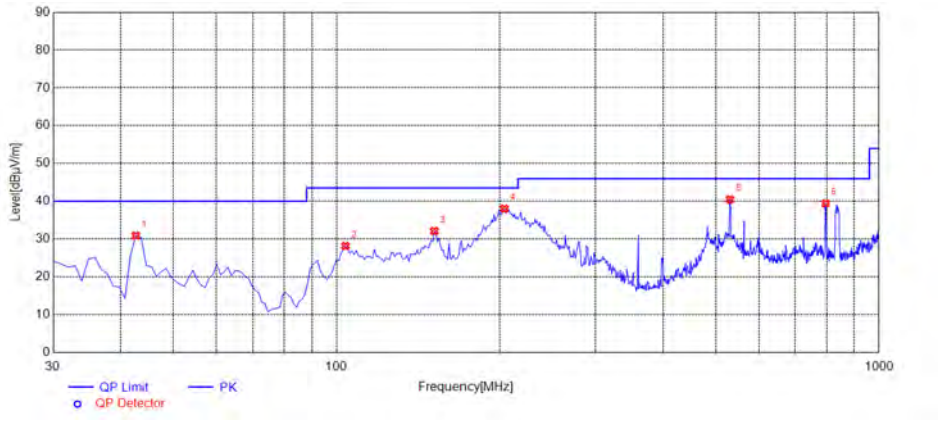
(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1593.5594	43.89	-23.64	74.00	Vertical	PASS
4657.3657	46.48	-11.30	74.00	Vertical	PASS
5736.4736	48.33	-8.16	74.00	Vertical	PASS
7244.5245	43.74	-3.00	74.00	Vertical	PASS
11364.5365	48.62	3.54	74.00	Vertical	PASS
13035.1035	48.87	6.72	74.00	Vertical	PASS

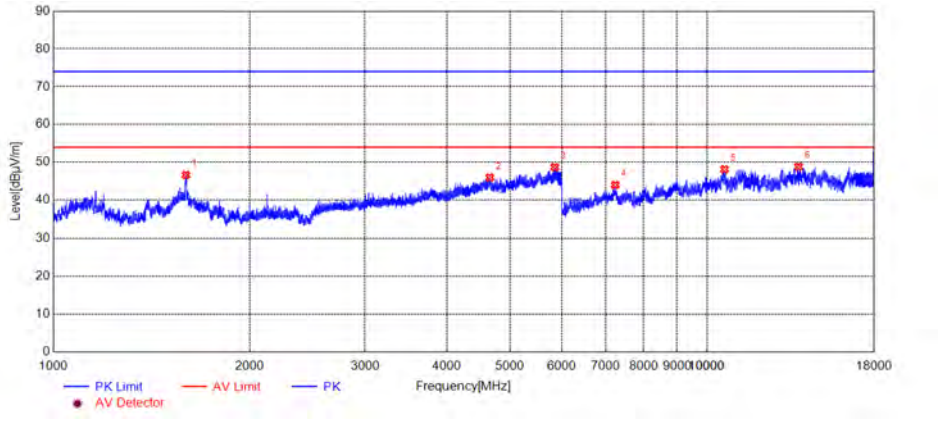
(Antenna Vertical, 1GHz to 18GHz)

Plot for Channel 11



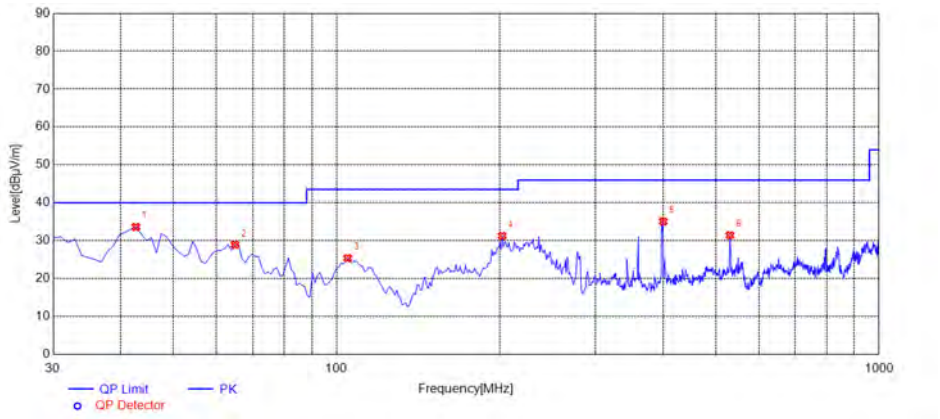
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
42.6226	30.93	-29.25	40.00	Horizontal	PASS
103.7938	28.18	-31.13	43.50	Horizontal	PASS
151.3714	32.14	-35.14	43.50	Horizontal	PASS
203.8038	38.04	-31.70	43.50	Horizontal	PASS
531.0210	40.47	-23.63	46.00	Horizontal	PASS
797.0671	39.44	-20.23	46.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 1GHz)



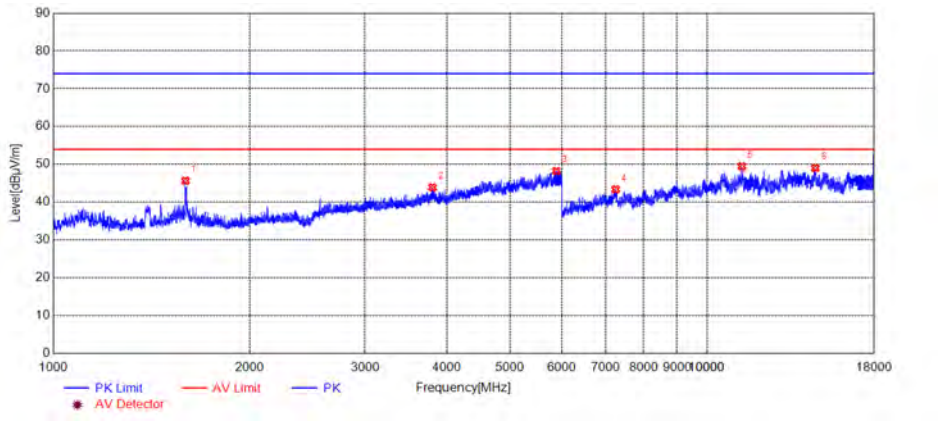
Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1596.0596	46.66	-23.62	74.00	Horizontal	PASS
4653.8654	45.98	-11.24	74.00	Horizontal	PASS
5851.9852	48.72	-7.93	74.00	Horizontal	PASS
7234.9235	44.03	-3.22	74.00	Horizontal	PASS
10631.2631	48.16	2.51	74.00	Horizontal	PASS
13798.3798	48.84	6.27	74.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 18GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
42.6226	33.62	-29.25	40.00	Vertical	PASS
64.9550	28.99	-31.13	40.00	Vertical	PASS
104.7648	25.40	-31.03	43.50	Vertical	PASS
201.8619	31.28	-31.67	43.50	Vertical	PASS
399.9399	35.08	-26.29	46.00	Vertical	PASS
531.0210	31.44	-23.63	46.00	Vertical	PASS

(Antenna Vertical, 30MHz to 1GHz)



Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Antenna	Verdict
1593.5594	45.67	-23.64	74.00	Vertical	PASS
3801.7802	43.93	-14.92	74.00	Vertical	PASS
5881.4881	48.23	-8.11	74.00	Vertical	PASS
7248.1248	43.40	-2.92	74.00	Vertical	PASS
11300.9301	49.49	3.00	74.00	Vertical	PASS
14637.2637	49.05	7.53	74.00	Vertical	PASS

(Antenna Vertical, 1GHz to 18GHz)

END OF REPORT