

Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Thermal Monocular

Test Model: TNV60 PRO

Environmental Conditions

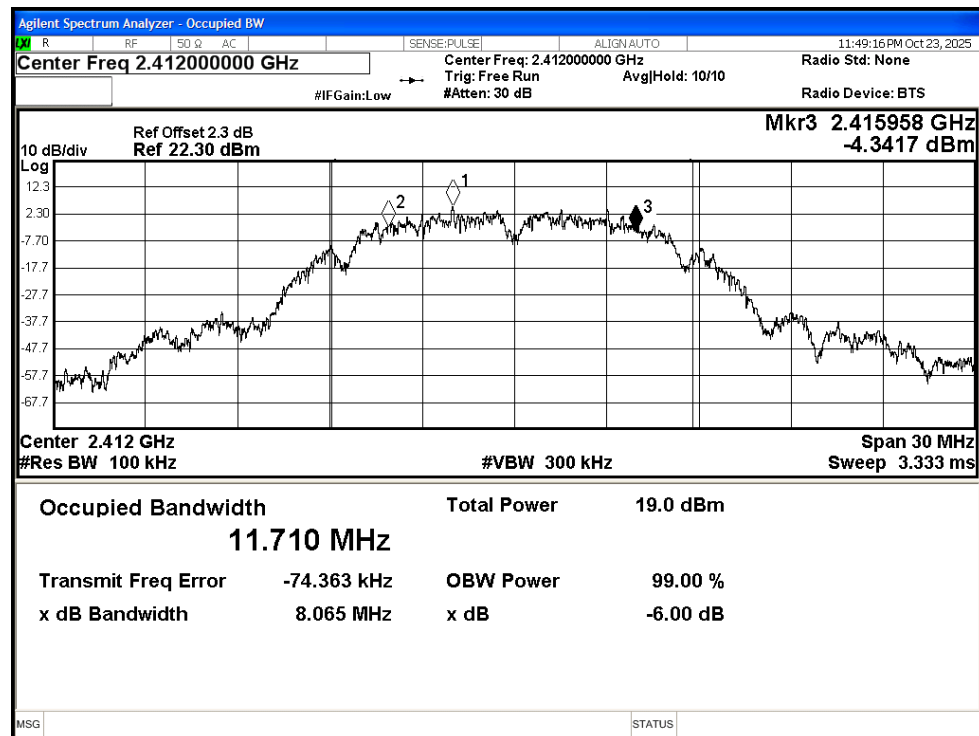
Temperature:	24.2°C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

B.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.065	≥ 0.5	Pass
NVNT	b	2437	Ant1	8.497	≥ 0.5	Pass
NVNT	b	2462	Ant1	8.568	≥ 0.5	Pass
NVNT	g	2412	Ant1	16.386	≥ 0.5	Pass
NVNT	g	2437	Ant1	16.353	≥ 0.5	Pass
NVNT	g	2462	Ant1	15.666	≥ 0.5	Pass
NVNT	n20	2412	Ant1	17.376	≥ 0.5	Pass
NVNT	n20	2437	Ant1	17.011	≥ 0.5	Pass
NVNT	n20	2462	Ant1	16.448	≥ 0.5	Pass
NVNT	n40	2422	Ant1	34.545	≥ 0.5	Pass
NVNT	n40	2437	Ant1	35.036	≥ 0.5	Pass
NVNT	n40	2452	Ant1	32.508	≥ 0.5	Pass
NVNT	ax20	2412	Ant1	16.565	≥ 0.5	Pass
NVNT	ax20	2437	Ant1	16.995	≥ 0.5	Pass
NVNT	ax20	2462	Ant1	16.846	≥ 0.5	Pass
NVNT	ax40	2422	Ant1	35.72	≥ 0.5	Pass
NVNT	ax40	2437	Ant1	35.424	≥ 0.5	Pass
NVNT	ax40	2452	Ant1	35.286	≥ 0.5	Pass

Test Graphs

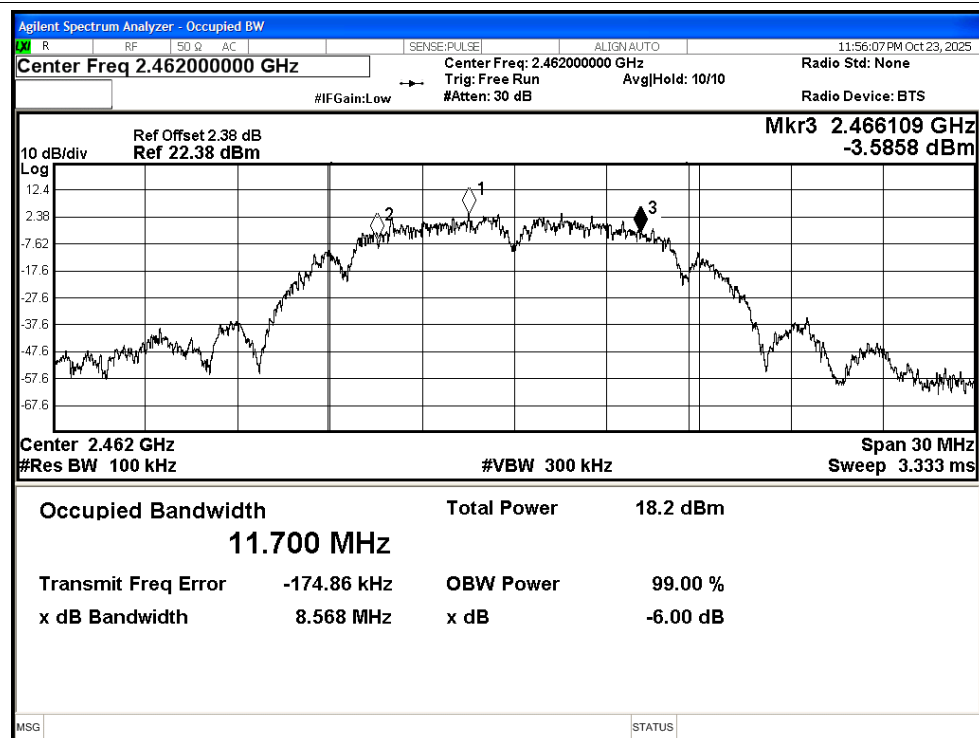
-6dB Bandwidth NVNT b 2412MHz Ant1



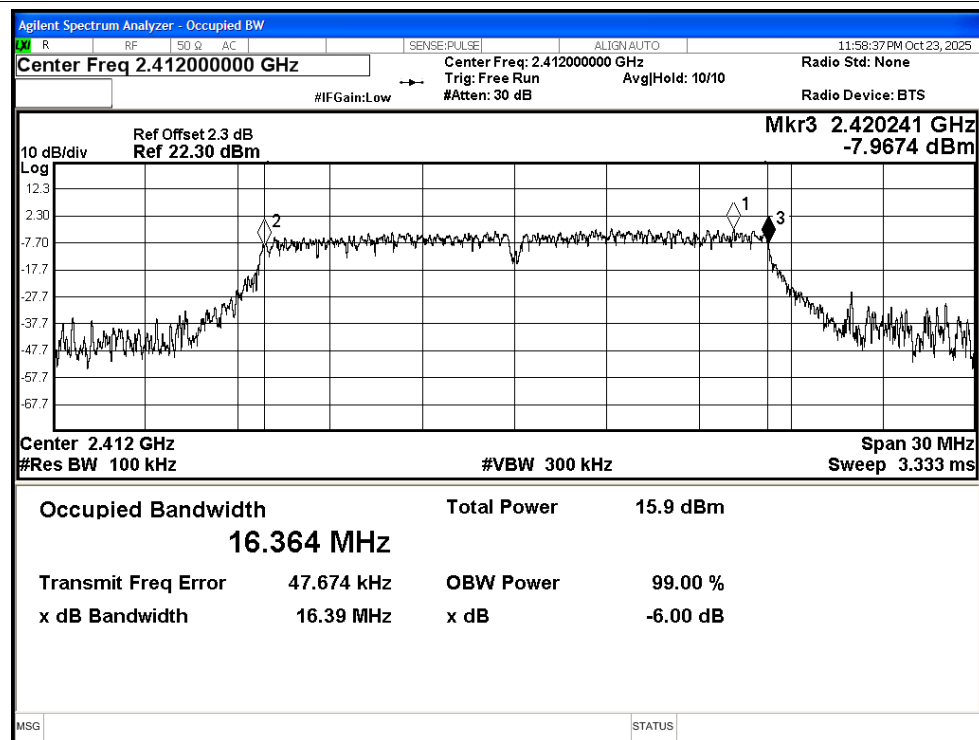
-6dB Bandwidth NVNT b 2437MHz Ant1



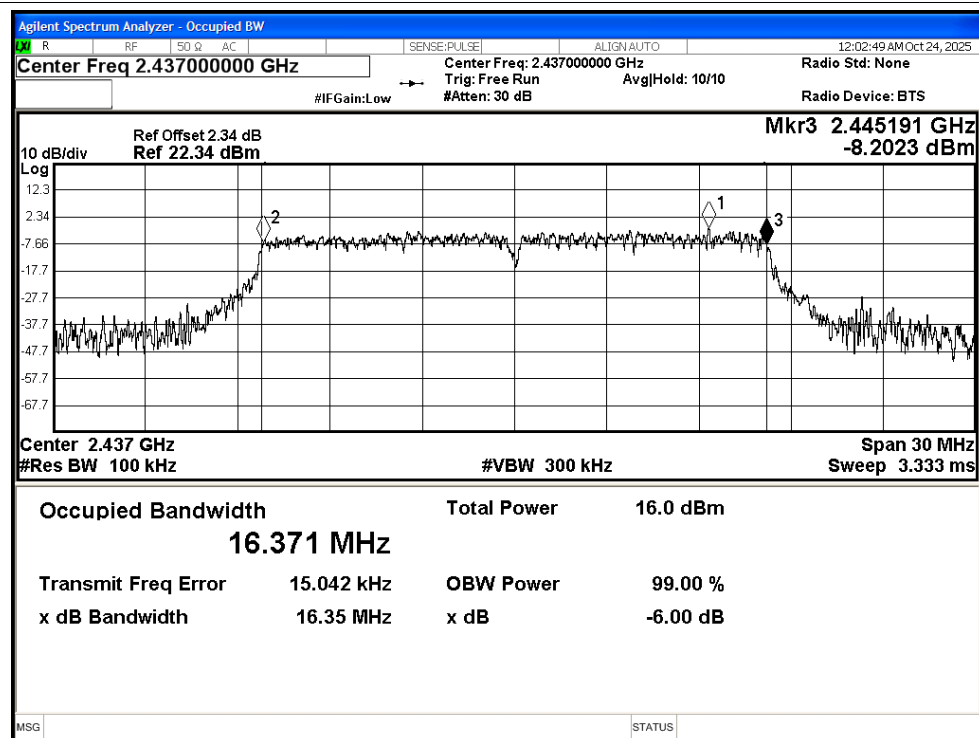
-6dB Bandwidth NVNT b 2462MHz Ant1



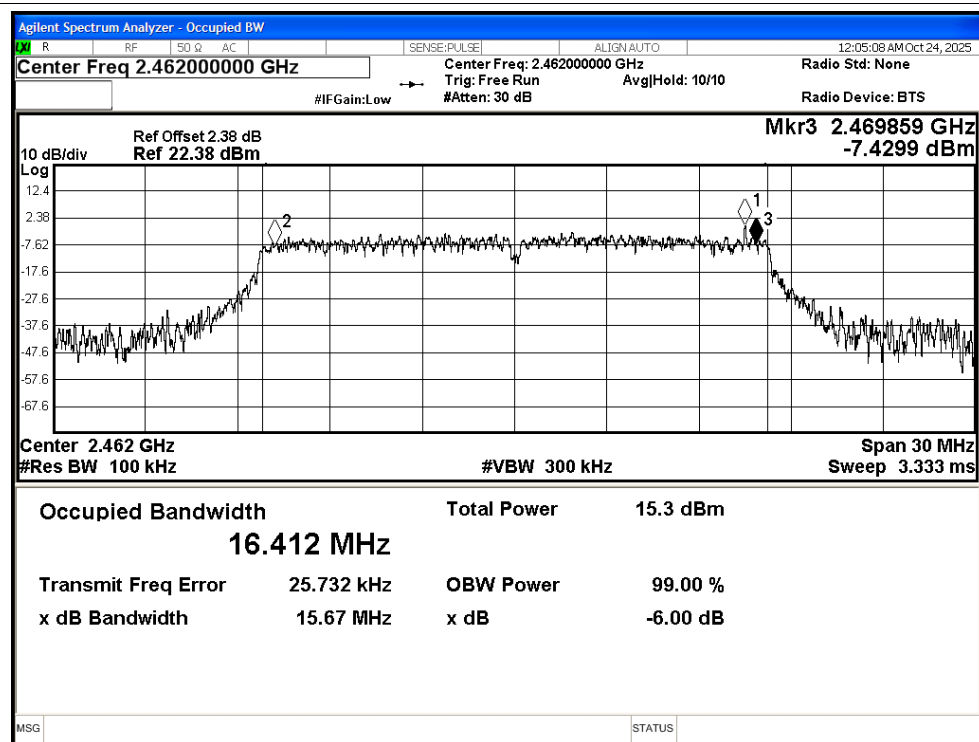
-6dB Bandwidth NVNT g 2412MHz Ant1



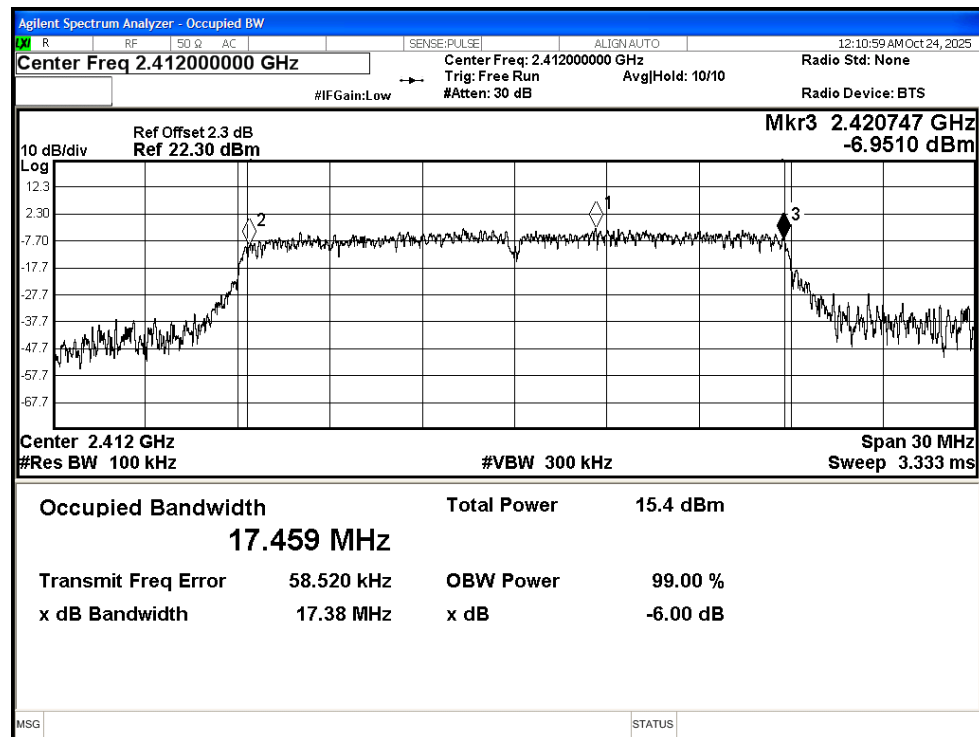
-6dB Bandwidth NVNT g 2437MHz Ant1



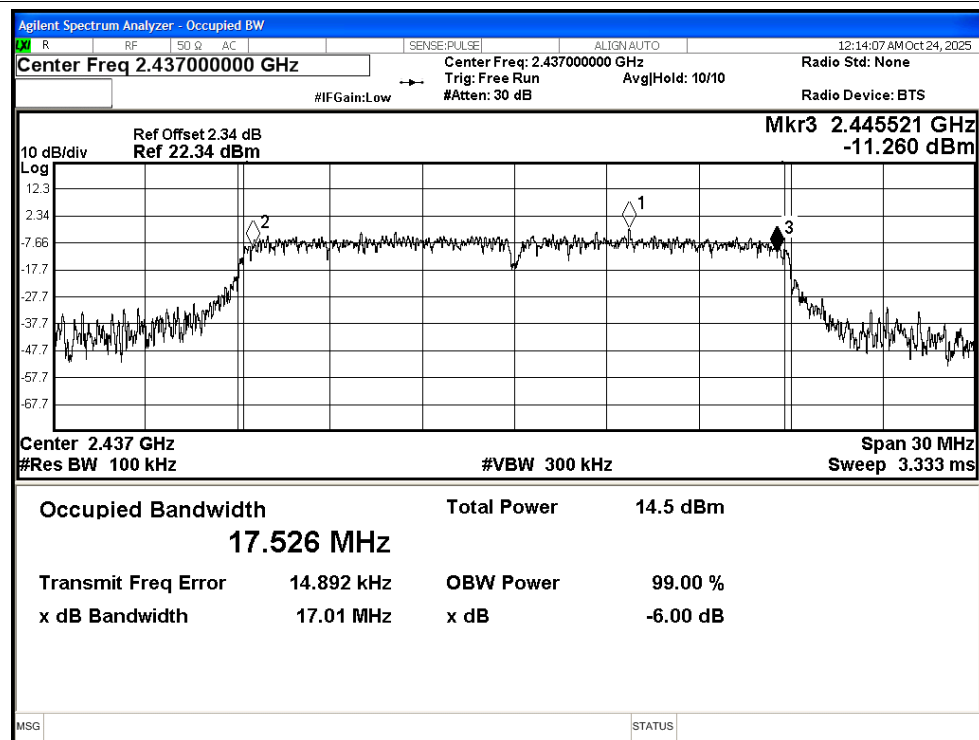
-6dB Bandwidth NVNT g 2462MHz Ant1



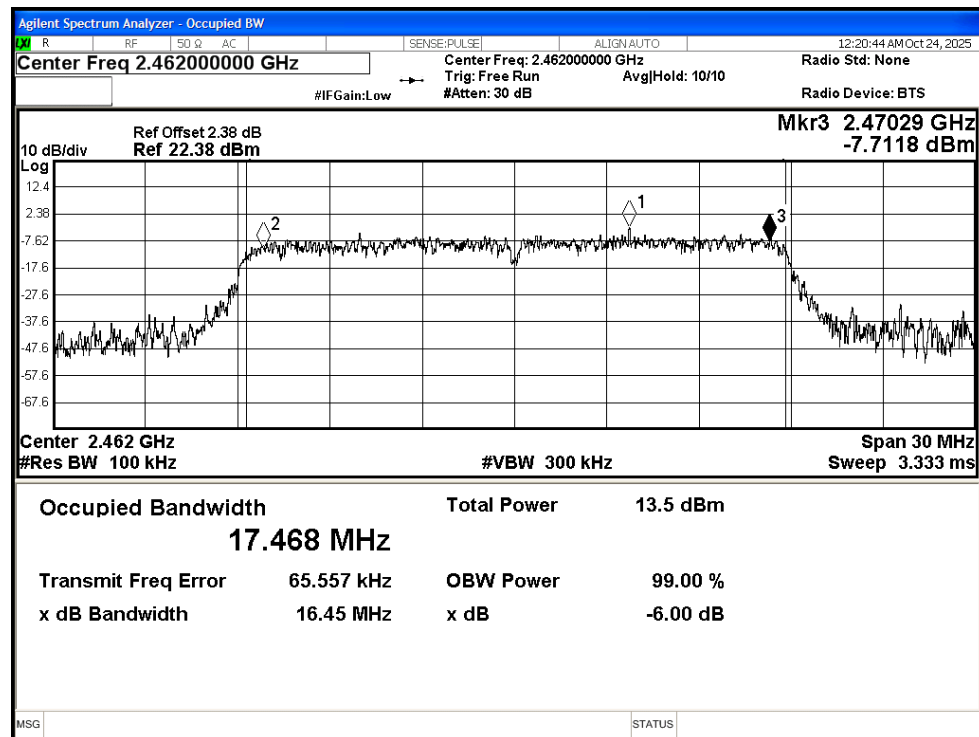
-6dB Bandwidth NVNT n20 2412MHz Ant1



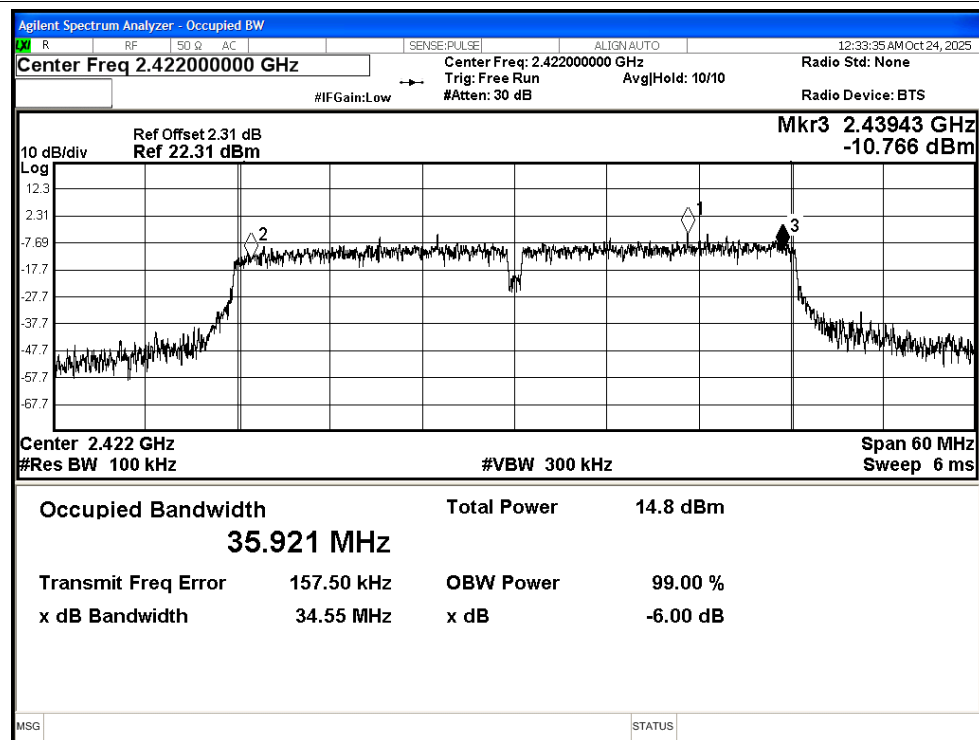
-6dB Bandwidth NVNT n20 2437MHz Ant1



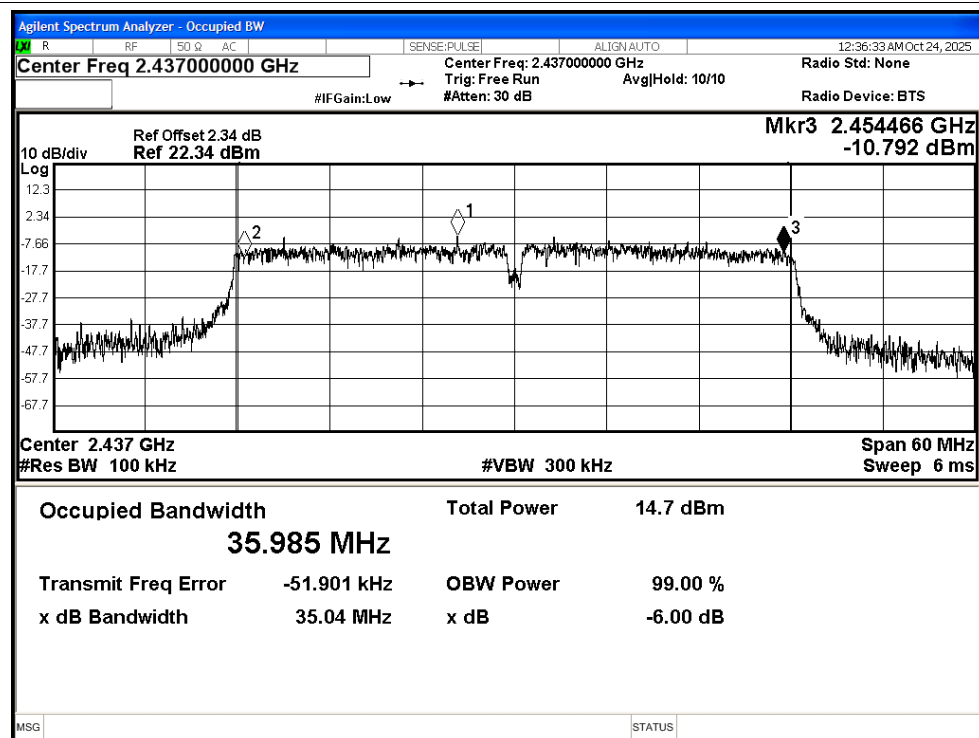
-6dB Bandwidth NVNT n20 2462MHz Ant1



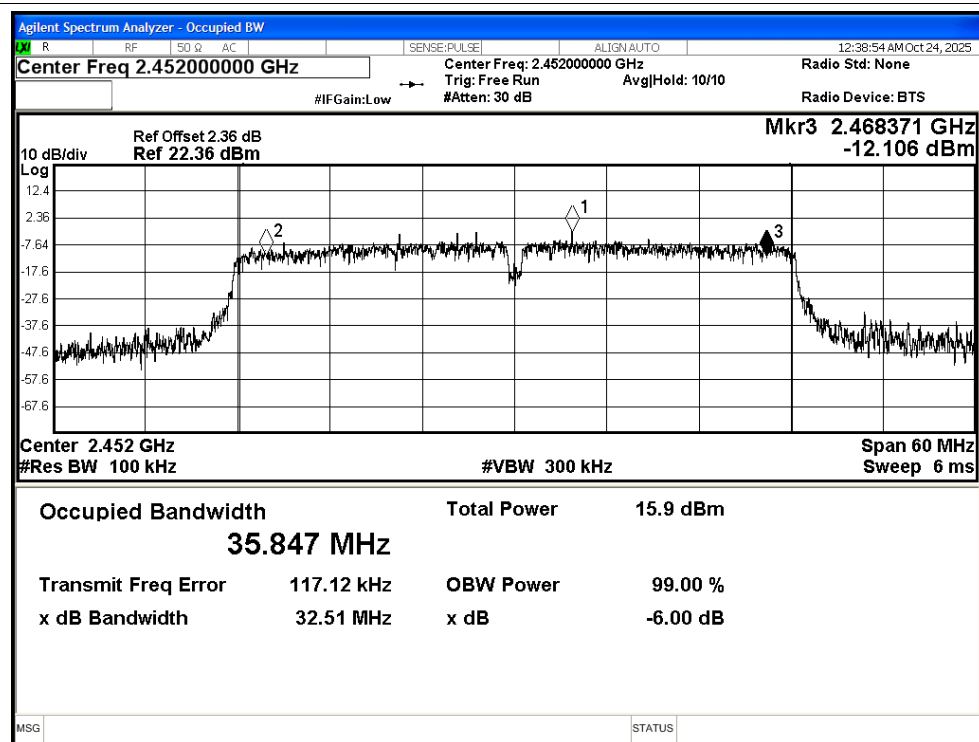
-6dB Bandwidth NVNT n40 2422MHz Ant1



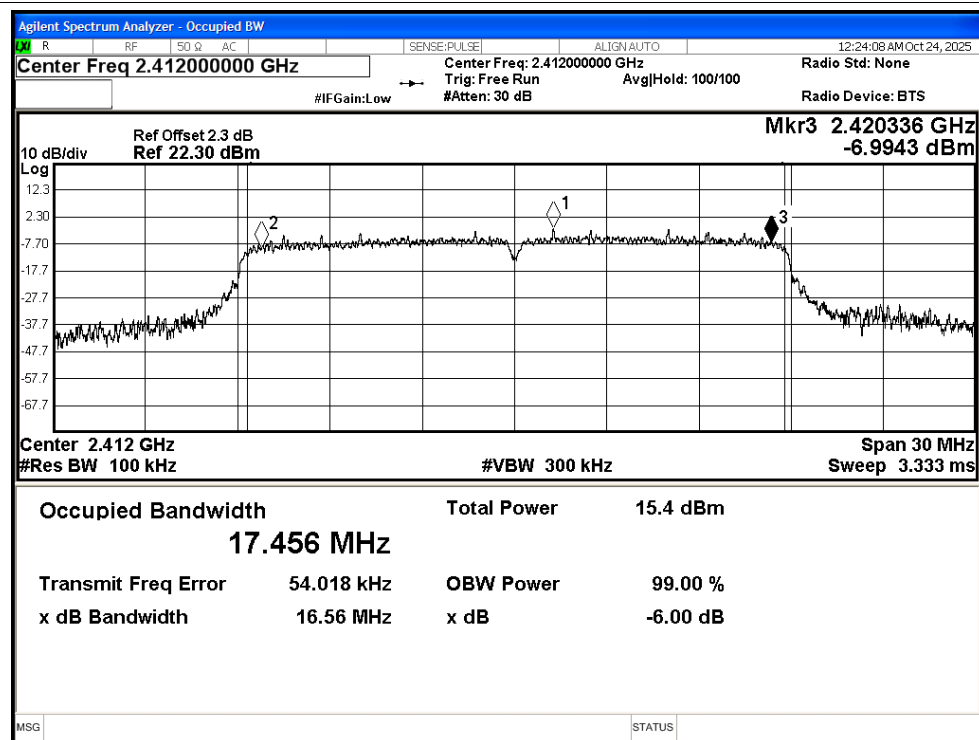
-6dB Bandwidth NVNT n40 2437MHz Ant1



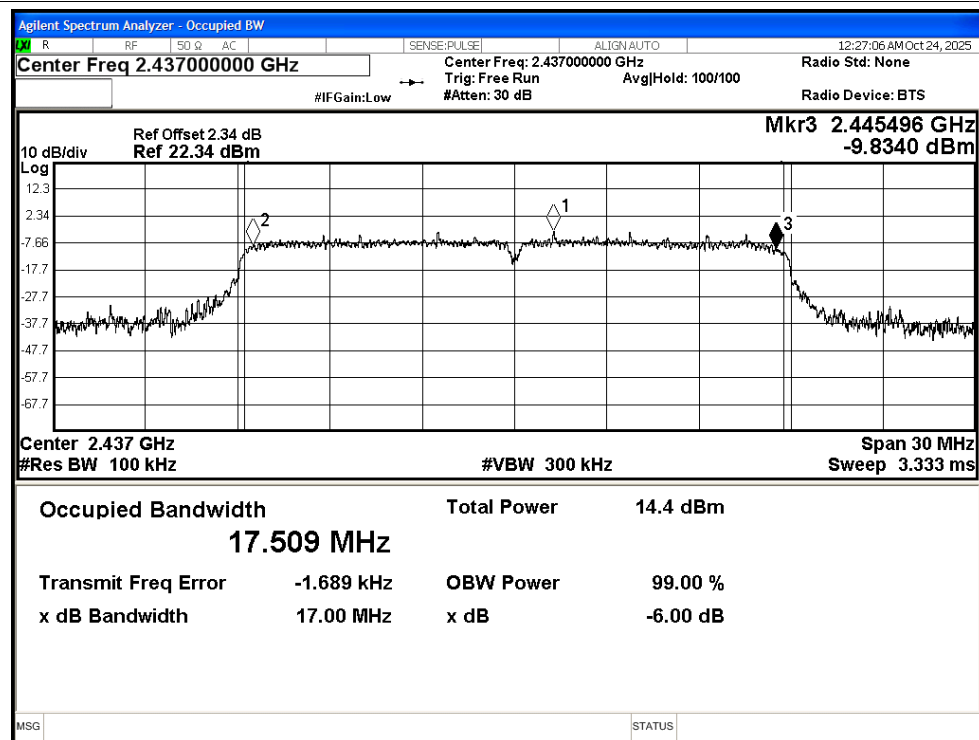
-6dB Bandwidth NVNT n40 2452MHz Ant1

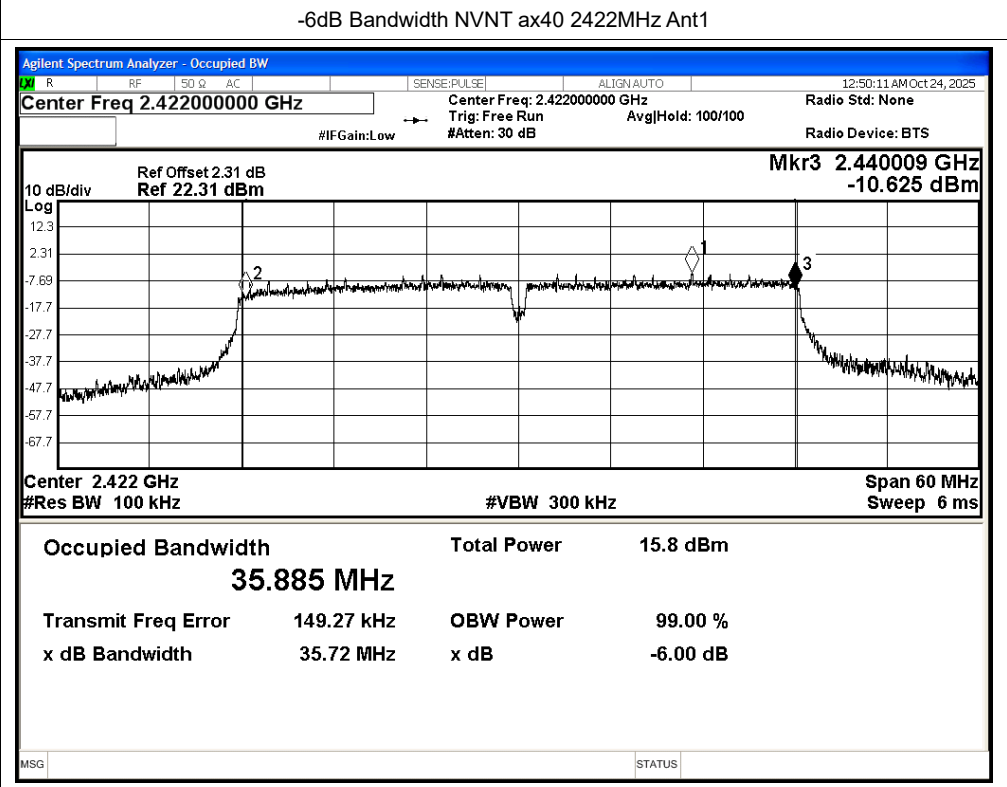
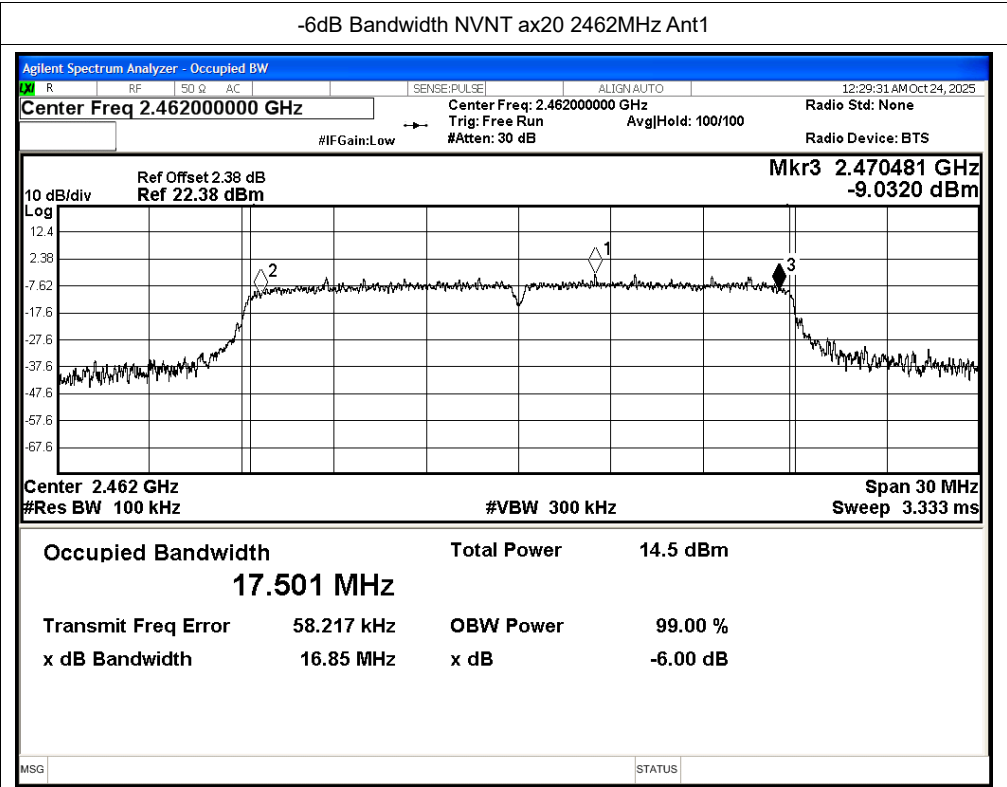


-6dB Bandwidth NVNT ax20 2412MHz Ant1

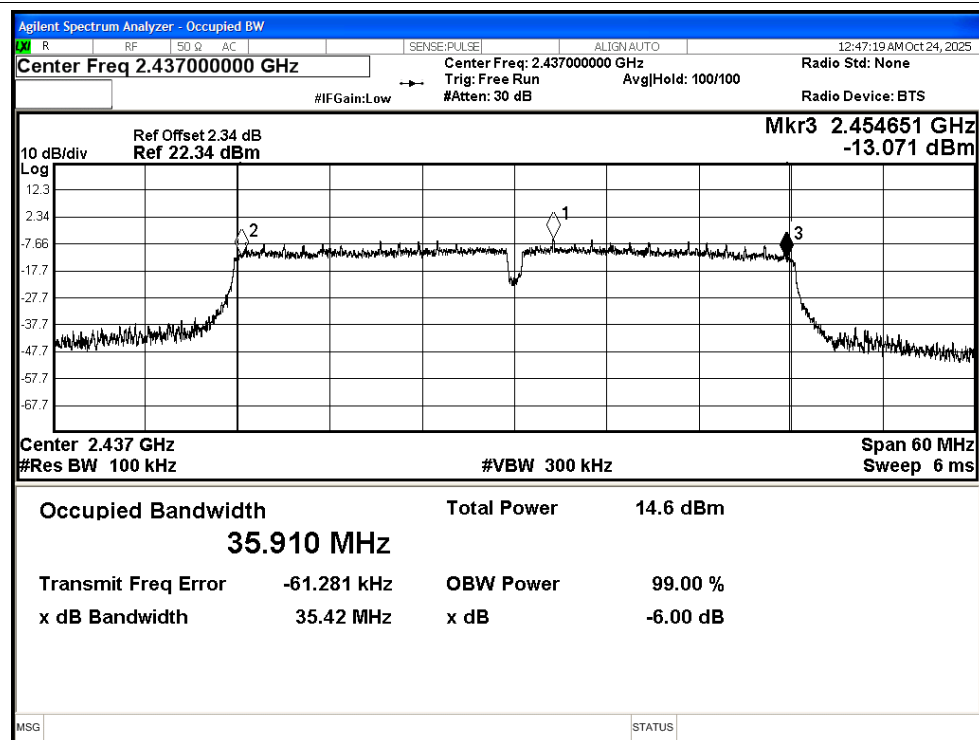


-6dB Bandwidth NVNT ax20 2437MHz Ant1

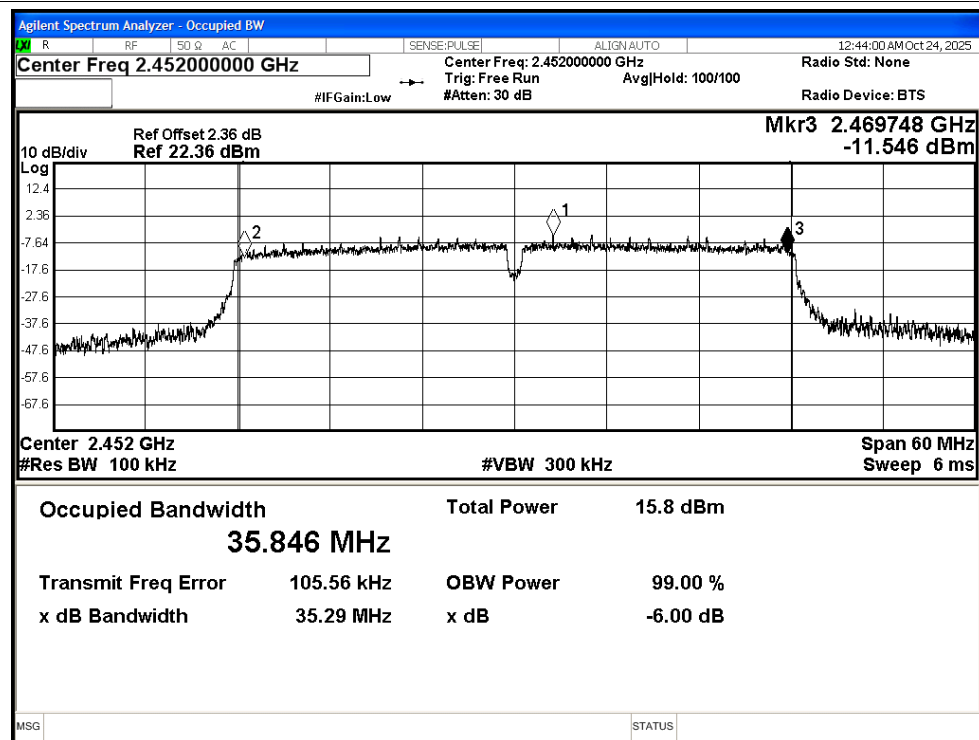




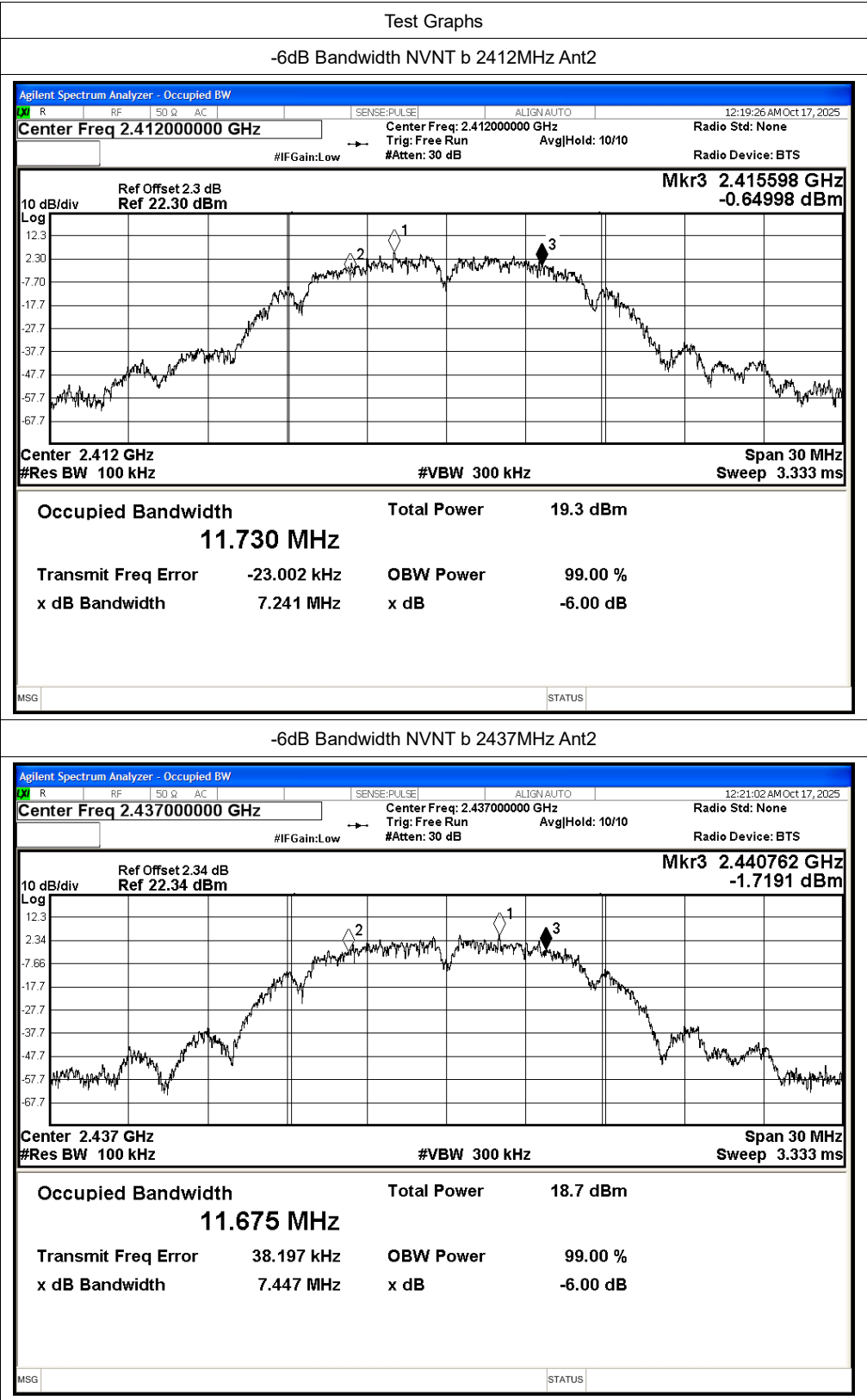
-6dB Bandwidth NVNT ax40 2437MHz Ant1

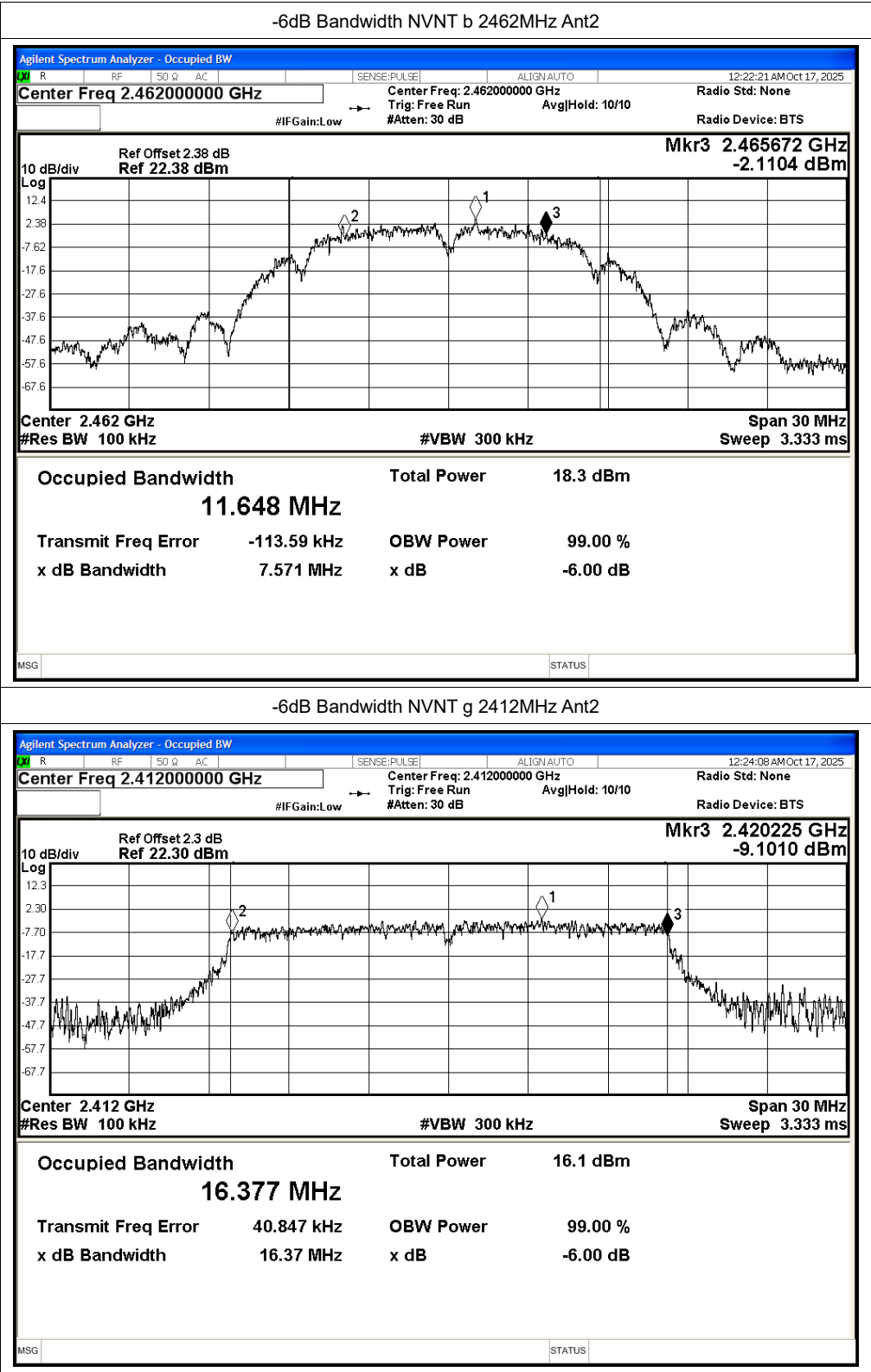


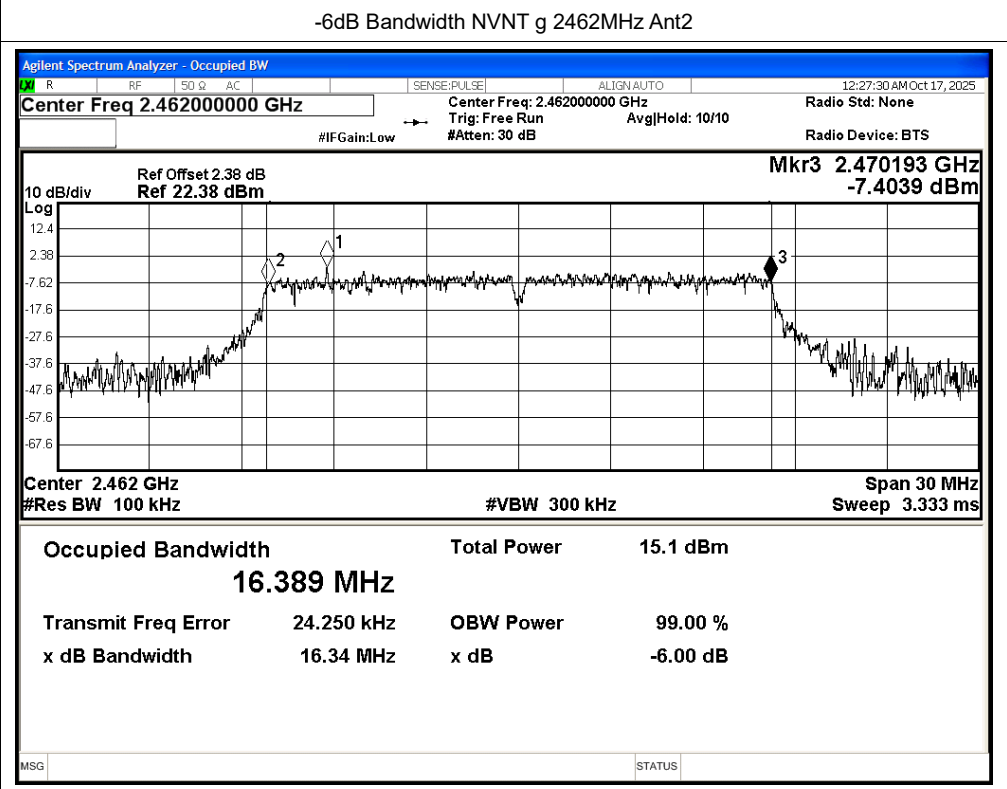
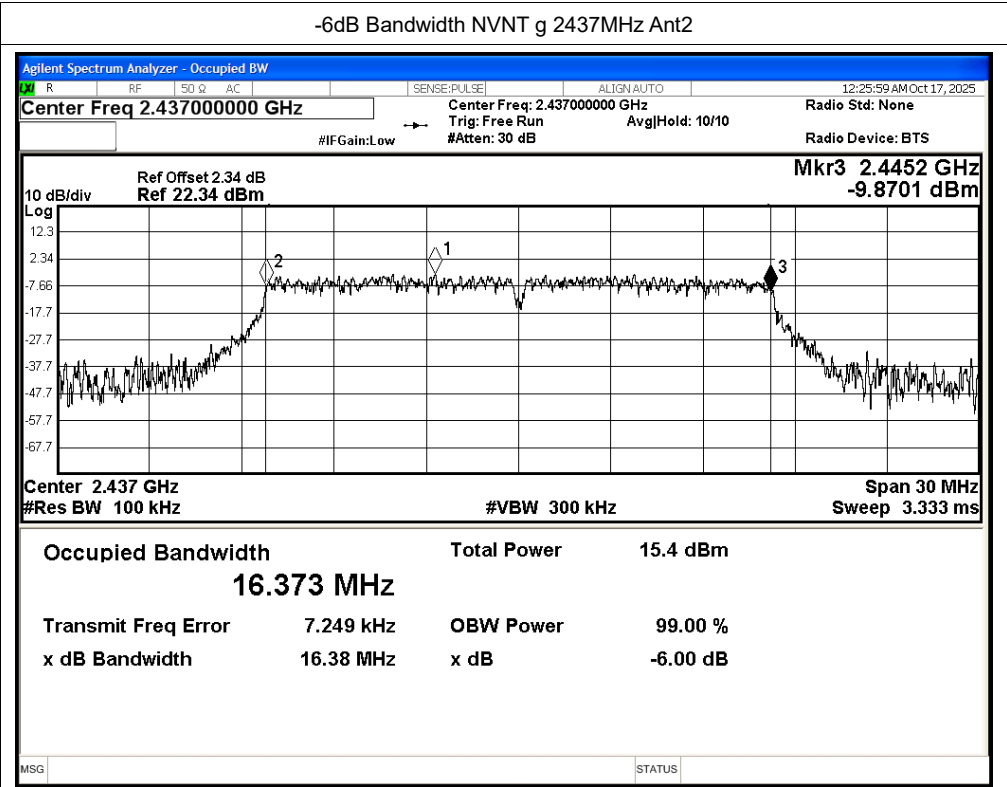
-6dB Bandwidth NVNT ax40 2452MHz Ant1

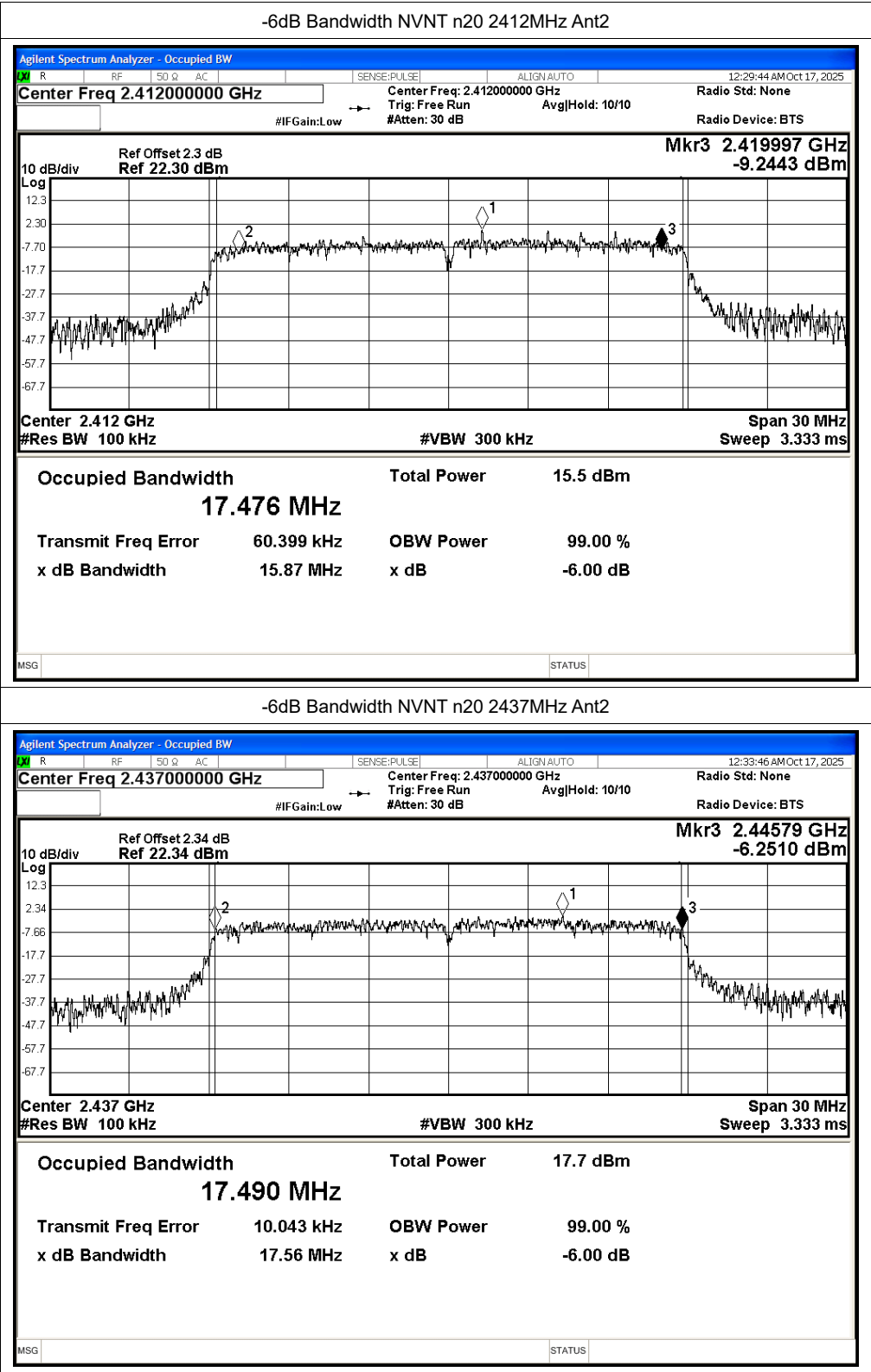


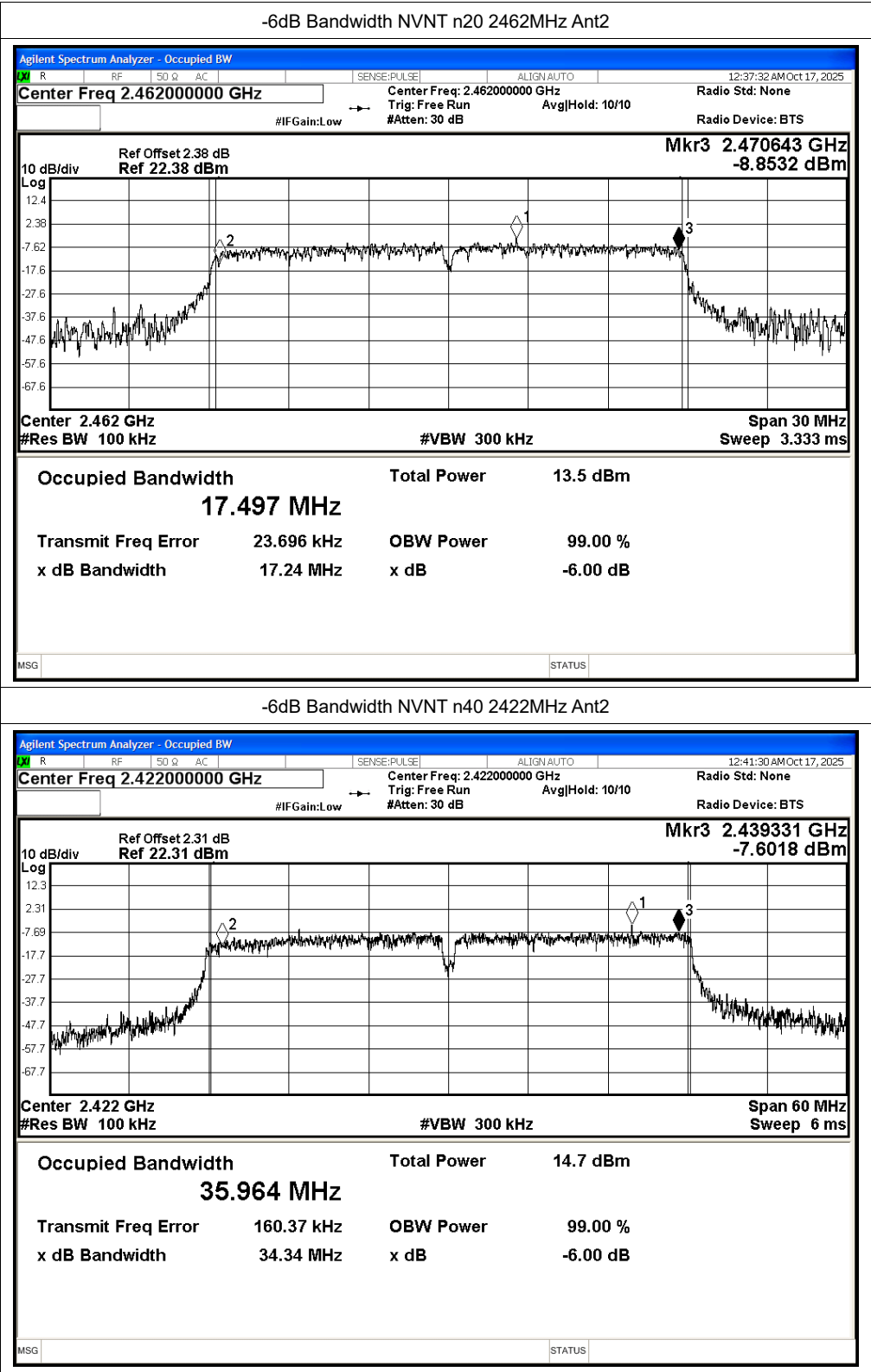
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant2	7.241	≥ 0.5	Pass
NVNT	b	2437	Ant2	7.447	≥ 0.5	Pass
NVNT	b	2462	Ant2	7.571	≥ 0.5	Pass
NVNT	g	2412	Ant2	16.369	≥ 0.5	Pass
NVNT	g	2437	Ant2	16.385	≥ 0.5	Pass
NVNT	g	2462	Ant2	16.338	≥ 0.5	Pass
NVNT	n20	2412	Ant2	15.874	≥ 0.5	Pass
NVNT	n20	2437	Ant2	17.559	≥ 0.5	Pass
NVNT	n20	2462	Ant2	17.239	≥ 0.5	Pass
NVNT	n40	2422	Ant2	34.341	≥ 0.5	Pass
NVNT	n40	2437	Ant2	33.467	≥ 0.5	Pass
NVNT	n40	2452	Ant2	32.48	≥ 0.5	Pass
NVNT	ax20	2412	Ant2	16.58	≥ 0.5	Pass
NVNT	ax20	2437	Ant2	17.281	≥ 0.5	Pass
NVNT	ax20	2462	Ant2	17.401	≥ 0.5	Pass
NVNT	ax40	2422	Ant2	35.554	≥ 0.5	Pass
NVNT	ax40	2437	Ant2	35.36	≥ 0.5	Pass
NVNT	ax40	2452	Ant2	35.613	≥ 0.5	Pass

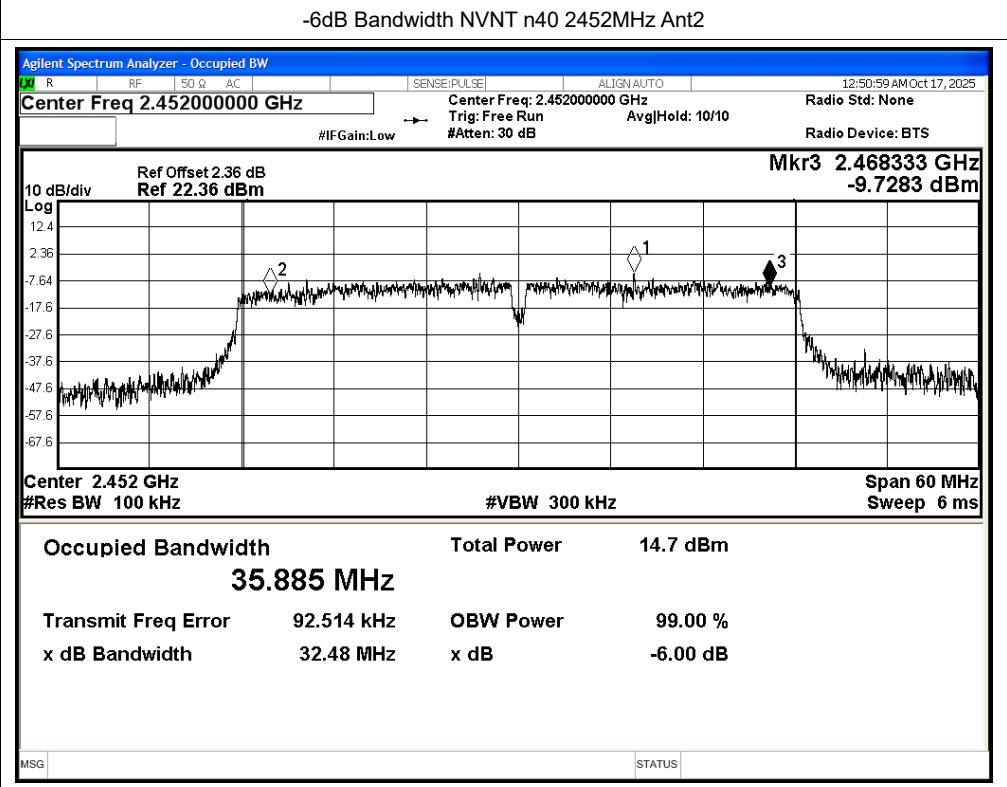
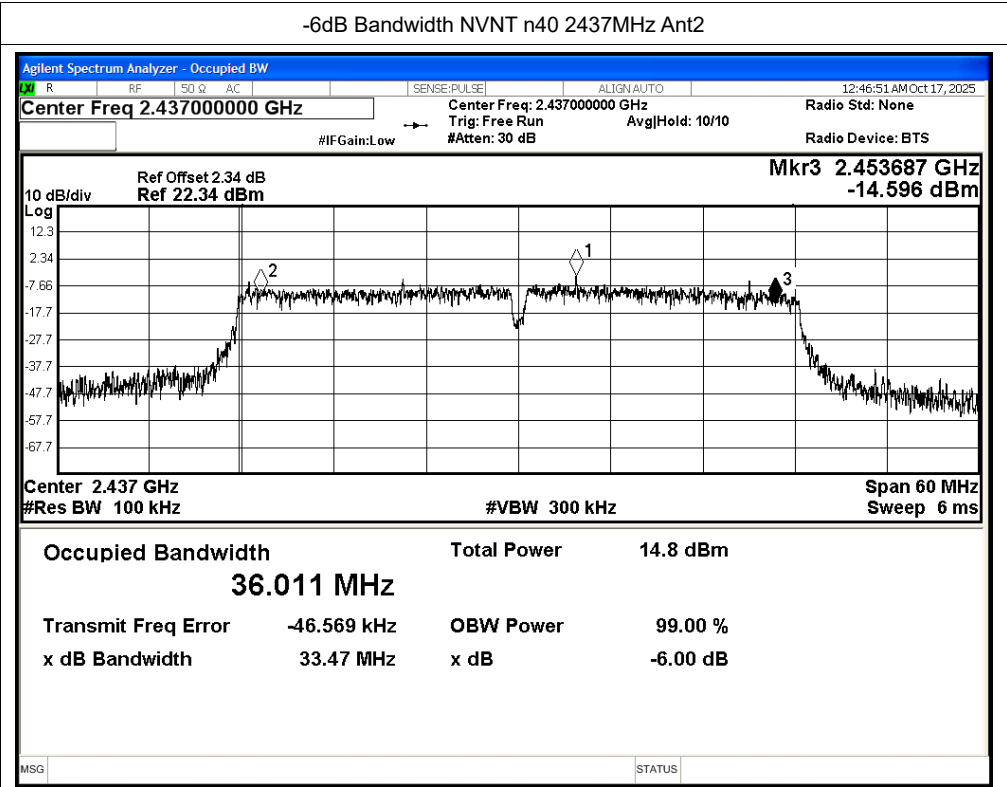


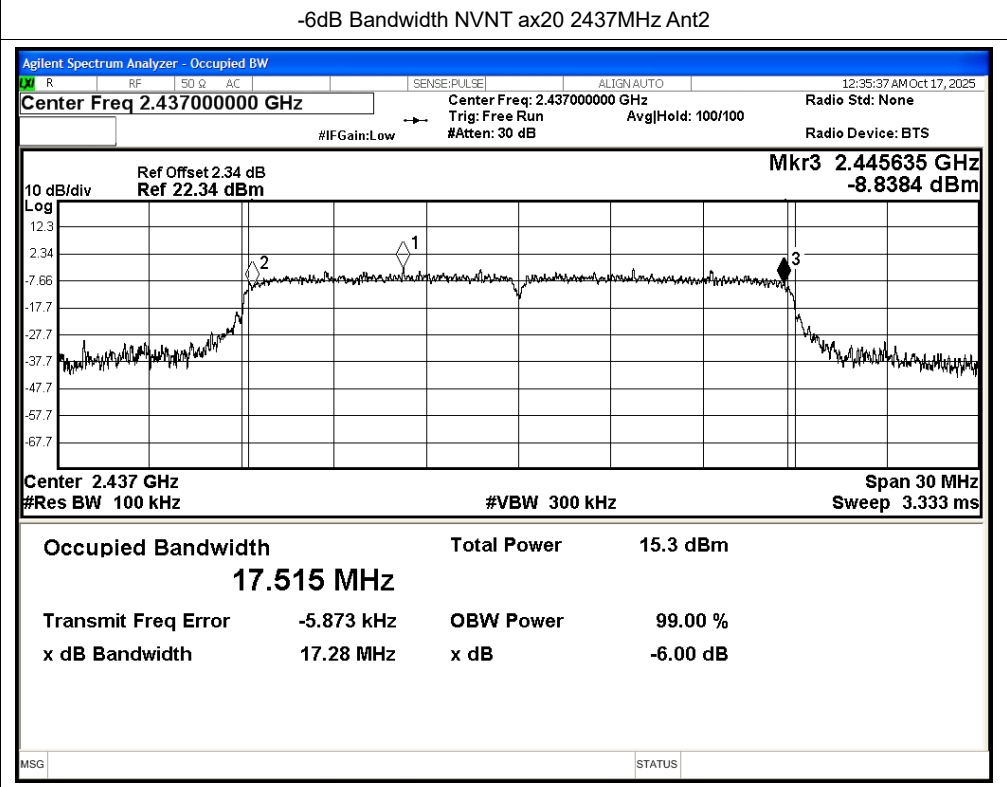
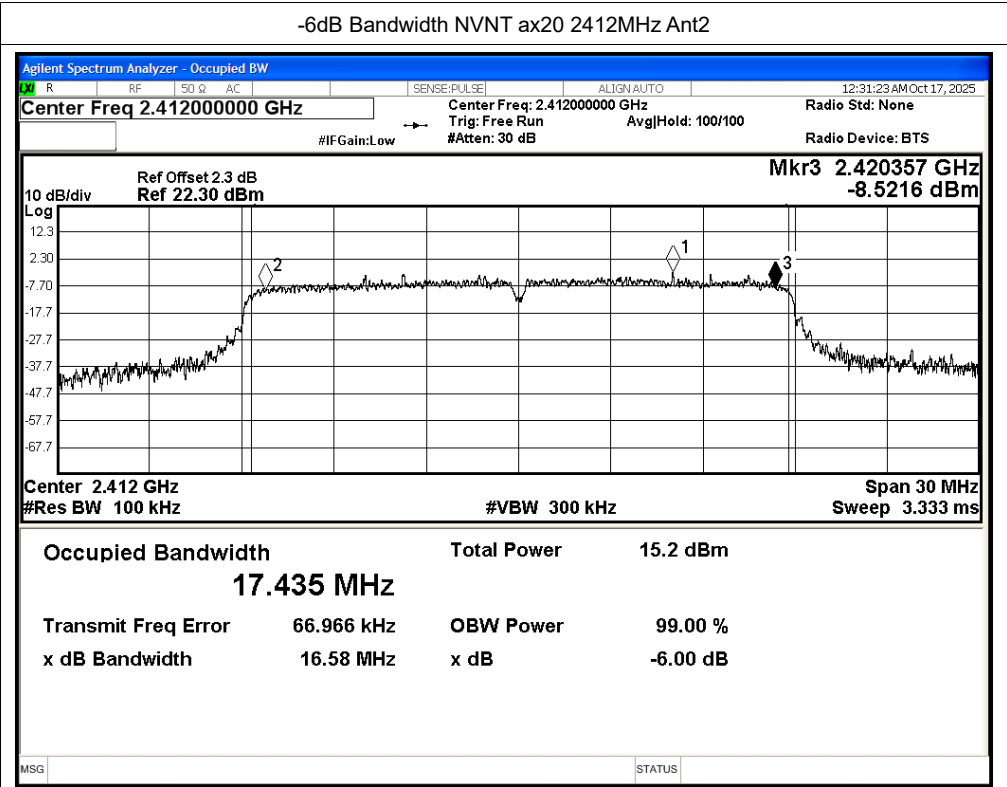


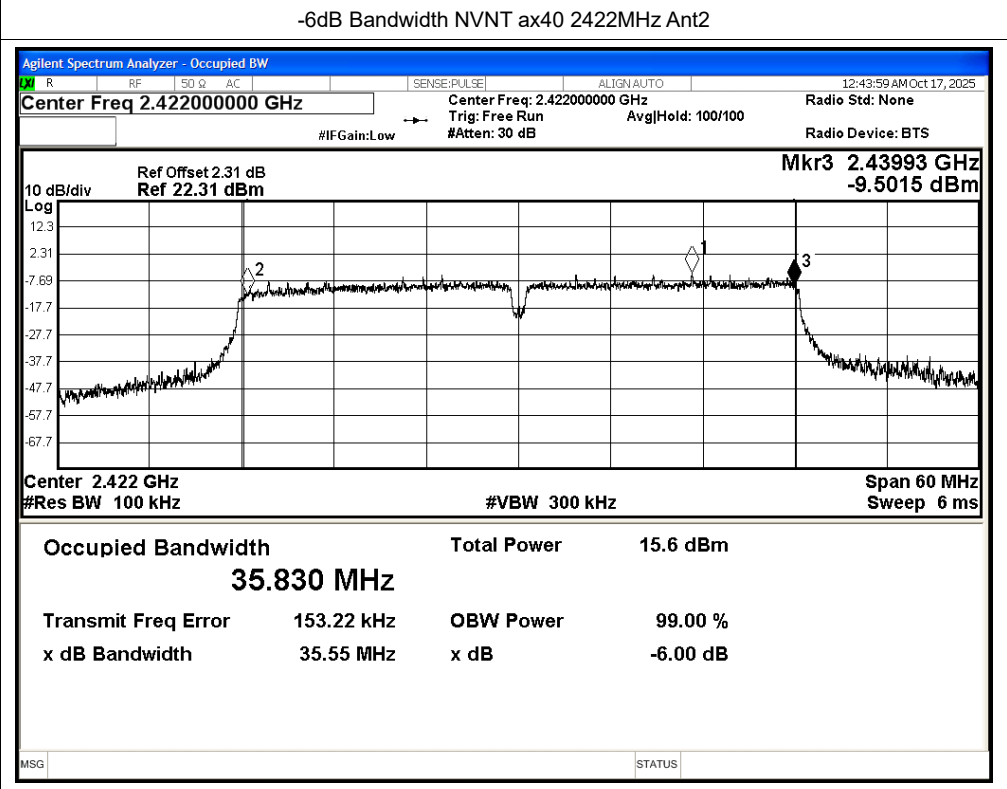
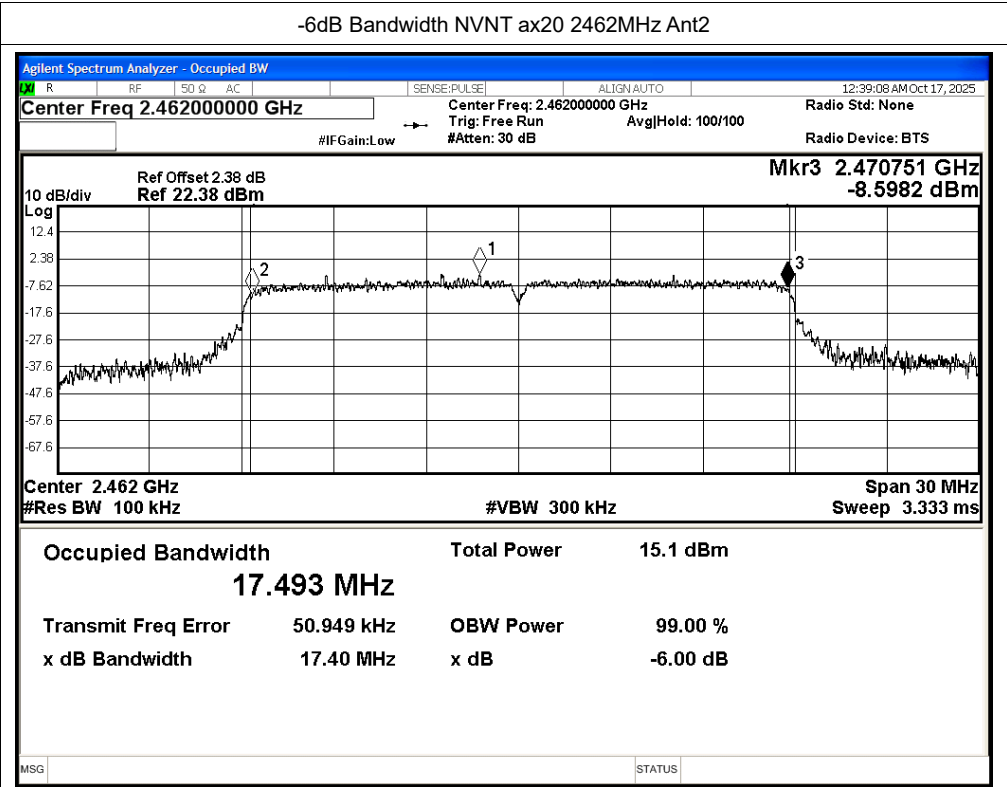


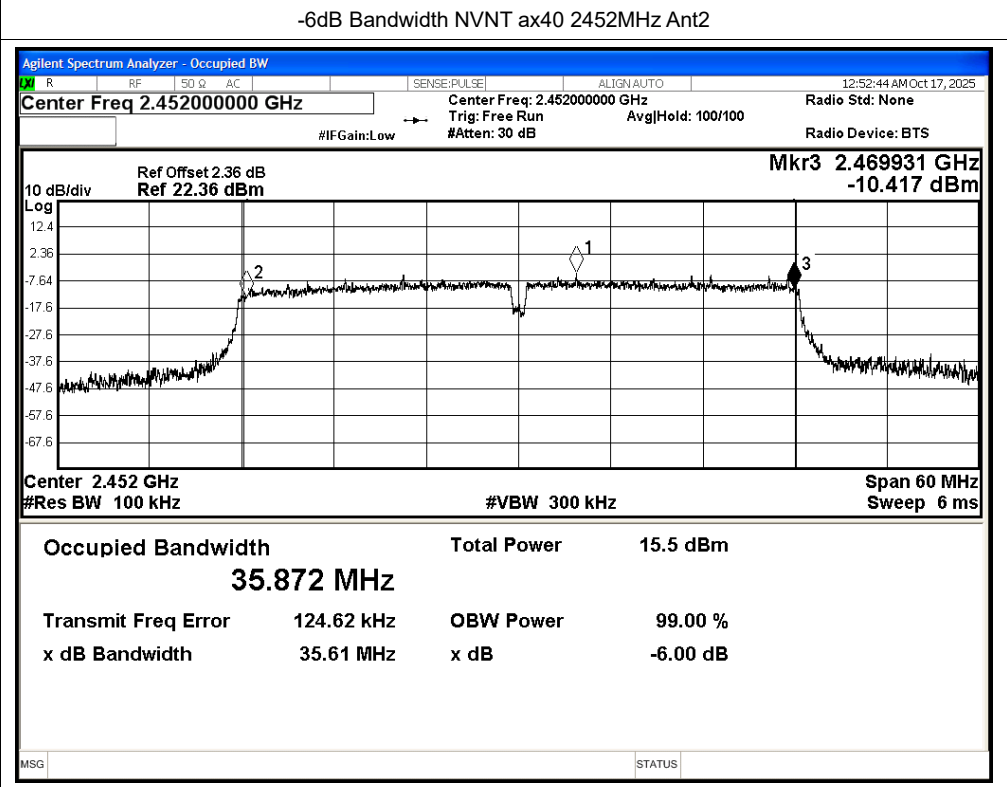
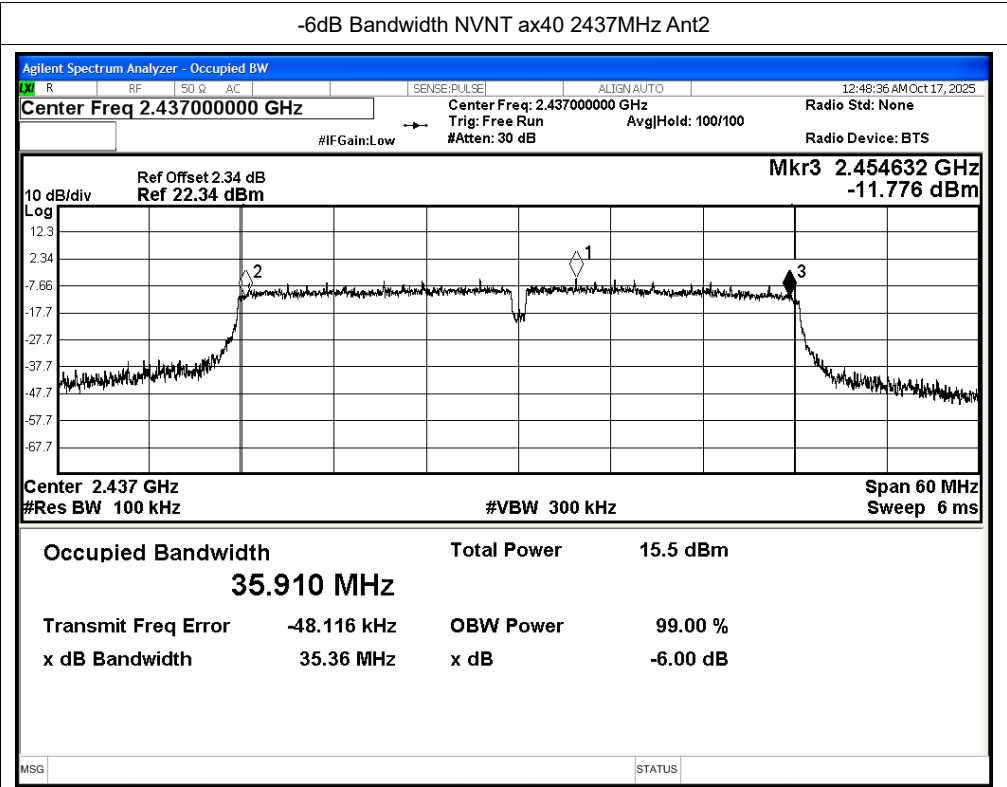












B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.28	30	Pass
NVNT	b	2437	Ant1	15.49	30	Pass
NVNT	b	2462	Ant1	14.85	30	Pass
NVNT	g	2412	Ant1	14.63	30	Pass
NVNT	g	2437	Ant1	14.72	30	Pass
NVNT	g	2462	Ant1	14.06	30	Pass
NVNT	n20	2412	Ant1	13.94	30	Pass
NVNT	n20	2437	Ant1	13.45	30	Pass
NVNT	n20	2462	Ant1	13.92	30	Pass
NVNT	n40	2422	Ant1	13.21	30	Pass
NVNT	n40	2437	Ant1	13.15	30	Pass
NVNT	n40	2452	Ant1	14.01	30	Pass
NVNT	ax20	2412	Ant1	13.98	30	Pass
NVNT	ax20	2437	Ant1	12.87	30	Pass
NVNT	ax20	2462	Ant1	13.02	30	Pass
NVNT	ax40	2422	Ant1	14.14	30	Pass
NVNT	ax40	2437	Ant1	12.99	30	Pass
NVNT	ax40	2452	Ant1	14.15	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant2	15.9	30	Pass
NVNT	b	2437	Ant2	15.14	30	Pass
NVNT	b	2462	Ant2	14.56	30	Pass
NVNT	g	2412	Ant2	14.85	30	Pass
NVNT	g	2437	Ant2	14.07	30	Pass
NVNT	g	2462	Ant2	13.86	30	Pass
NVNT	n20	2412	Ant2	13.74	30	Pass
NVNT	n20	2437	Ant2	13.46	30	Pass
NVNT	n20	2462	Ant2	13.7	30	Pass
NVNT	n40	2422	Ant2	13.04	30	Pass
NVNT	n40	2437	Ant2	13.07	30	Pass
NVNT	n40	2452	Ant2	13.08	30	Pass
NVNT	ax20	2412	Ant2	13.84	30	Pass
NVNT	ax20	2437	Ant2	13.81	30	Pass
NVNT	ax20	2462	Ant2	13.75	30	Pass
NVNT	ax40	2422	Ant2	14.06	30	Pass
NVNT	ax40	2437	Ant2	14.05	30	Pass
NVNT	ax40	2452	Ant2	14	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)			Limit (dBm)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	2412	13.94	13.74	16.85	30	Pass
NVNT	n20	2437	13.45	13.46	16.47	30	Pass
NVNT	n20	2462	13.92	13.7	16.82	30	Pass
NVNT	n40	2422	13.21	13.04	16.14	30	Pass
NVNT	n40	2437	13.15	13.07	16.12	30	Pass
NVNT	n40	2452	14.01	13.08	16.58	30	Pass
NVNT	ax20	2412	13.98	13.84	16.92	30	Pass
NVNT	ax20	2437	12.87	13.81	16.38	30	Pass
NVNT	ax20	2462	13.02	13.75	16.41	30	Pass
NVNT	ax40	2422	14.14	14.06	17.11	30	Pass
NVNT	ax40	2437	12.99	14.05	16.56	30	Pass
NVNT	ax40	2452	14.15	14	17.09	30	Pass

B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-8.6	8	Pass
NVNT	b	2437	Ant1	-9.21	8	Pass
NVNT	b	2462	Ant1	-8.08	8	Pass
NVNT	g	2412	Ant1	-13.91	8	Pass
NVNT	g	2437	Ant1	-14.36	8	Pass
NVNT	g	2462	Ant1	-14.2	8	Pass
NVNT	n20	2412	Ant1	-15.06	8	Pass
NVNT	n20	2437	Ant1	-14.96	8	Pass
NVNT	n20	2462	Ant1	-16.74	8	Pass
NVNT	n40	2422	Ant1	-18.73	8	Pass
NVNT	n40	2437	Ant1	-18.71	8	Pass
NVNT	n40	2452	Ant1	-17.42	8	Pass
NVNT	ax20	2412	Ant1	-14.99	8	Pass
NVNT	ax20	2437	Ant1	-16.93	8	Pass
NVNT	ax20	2462	Ant1	-17.62	8	Pass
NVNT	ax40	2422	Ant1	-17.72	8	Pass
NVNT	ax40	2437	Ant1	-20.66	8	Pass
NVNT	ax40	2452	Ant1	-18.75	8	Pass

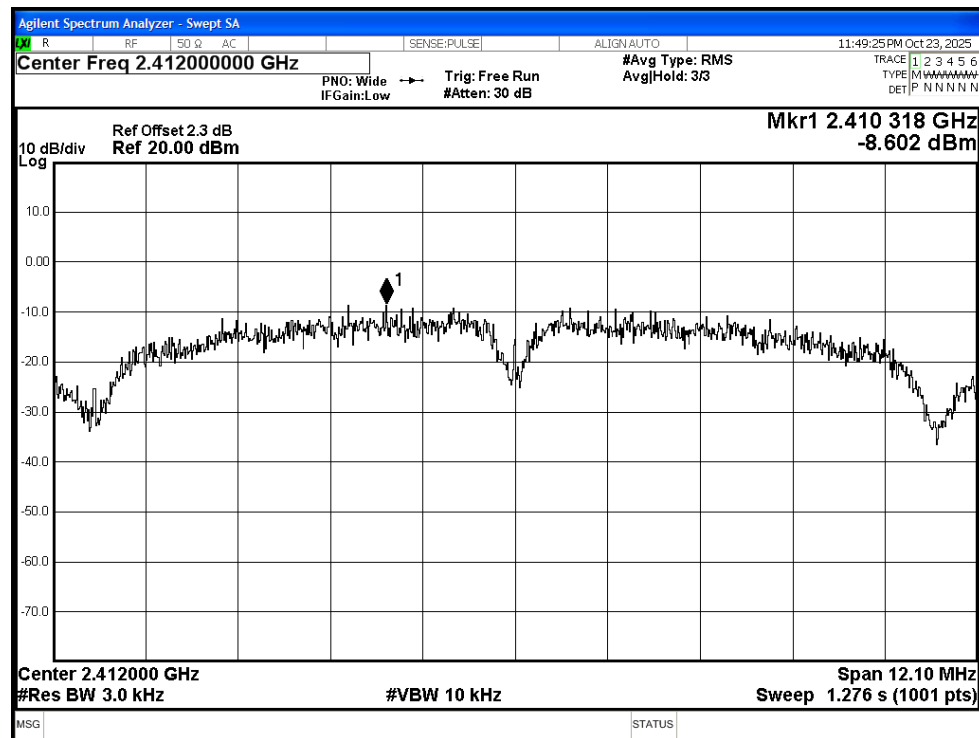
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NVNT	b	2412	Ant2	-4.93	8	Pass
NVNT	b	2437	Ant2	-5.24	8	Pass
NVNT	b	2462	Ant2	-9.95	8	Pass
NVNT	g	2412	Ant2	-13.93	8	Pass
NVNT	g	2437	Ant2	-15.33	8	Pass
NVNT	g	2462	Ant2	-15.28	8	Pass
NVNT	n20	2412	Ant2	-13.67	8	Pass
NVNT	n20	2437	Ant2	-11.77	8	Pass
NVNT	n20	2462	Ant2	-16.79	8	Pass
NVNT	n40	2422	Ant2	-18.94	8	Pass
NVNT	n40	2437	Ant2	-18.66	8	Pass
NVNT	n40	2452	Ant2	-18.88	8	Pass
NVNT	ax20	2412	Ant2	-15.97	8	Pass
NVNT	ax20	2437	Ant2	-15.94	8	Pass
NVNT	ax20	2462	Ant2	-15.8	8	Pass
NVNT	ax40	2422	Ant2	-19.4	8	Pass
NVNT	ax40	2437	Ant2	-19.07	8	Pass
NVNT	ax40	2452	Ant2	-18.69	8	Pass

MIMO

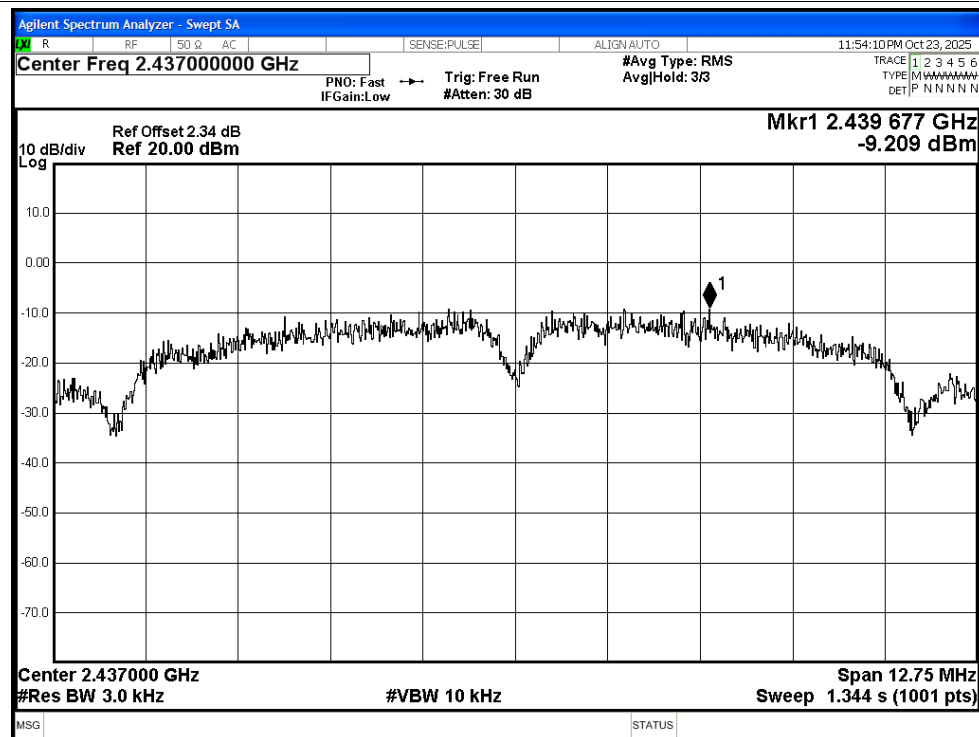
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			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	2412	-15.06	-13.67	-11.30	8	Pass
NVNT	n20	2437	-14.96	-11.77	-10.07	8	Pass
NVNT	n20	2462	-16.74	-16.79	-13.75	8	Pass
NVNT	n40	2422	-18.73	-18.94	-15.82	8	Pass
NVNT	n40	2437	-18.71	-18.66	-15.67	8	Pass
NVNT	n40	2452	-17.42	-18.88	-15.08	8	Pass
NVNT	ax20	2412	-14.99	-15.97	-12.44	8	Pass
NVNT	ax 20	2437	-16.93	-15.94	-13.40	8	Pass
NVNT	ax 20	2462	-17.62	-15.8	-13.61	8	Pass
NVNT	ax 40	2422	-17.72	-19.4	-15.47	8	Pass
NVNT	ax 40	2437	-20.66	-19.07	-16.78	8	Pass
NVNT	ax 40	2452	-18.75	-18.69	-15.71	8	Pass

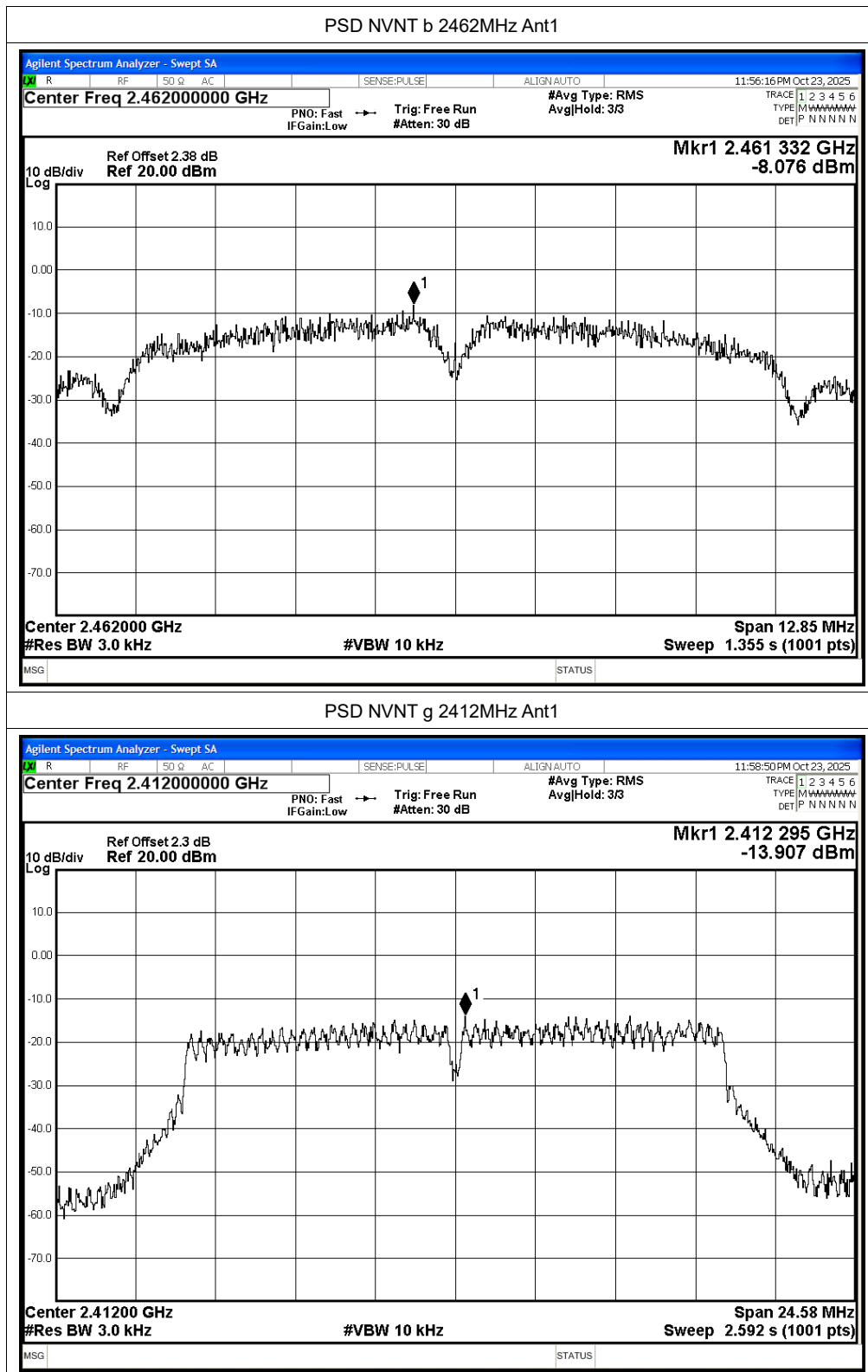
Test Graphs

PSD NVNT b 2412MHz Ant1

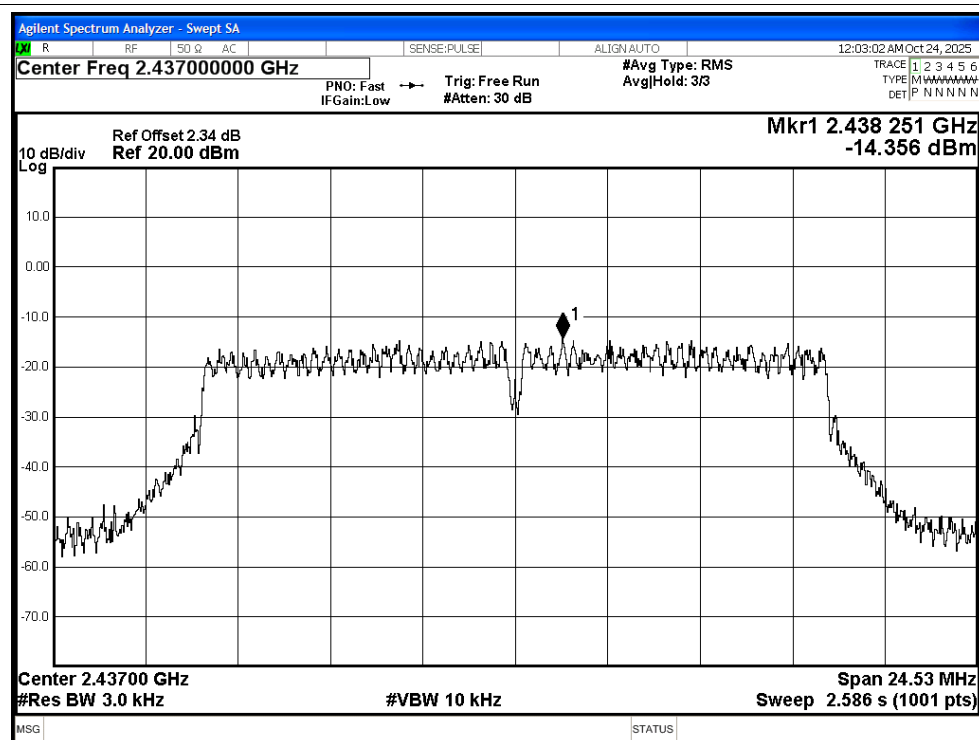


PSD NVNT b 2437MHz Ant1

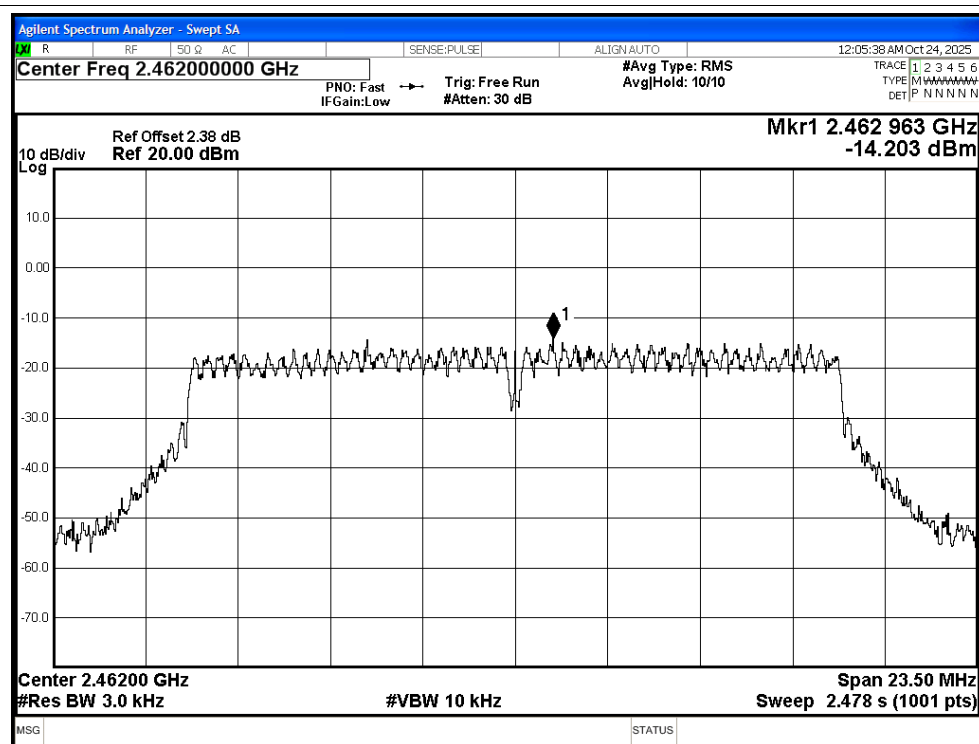


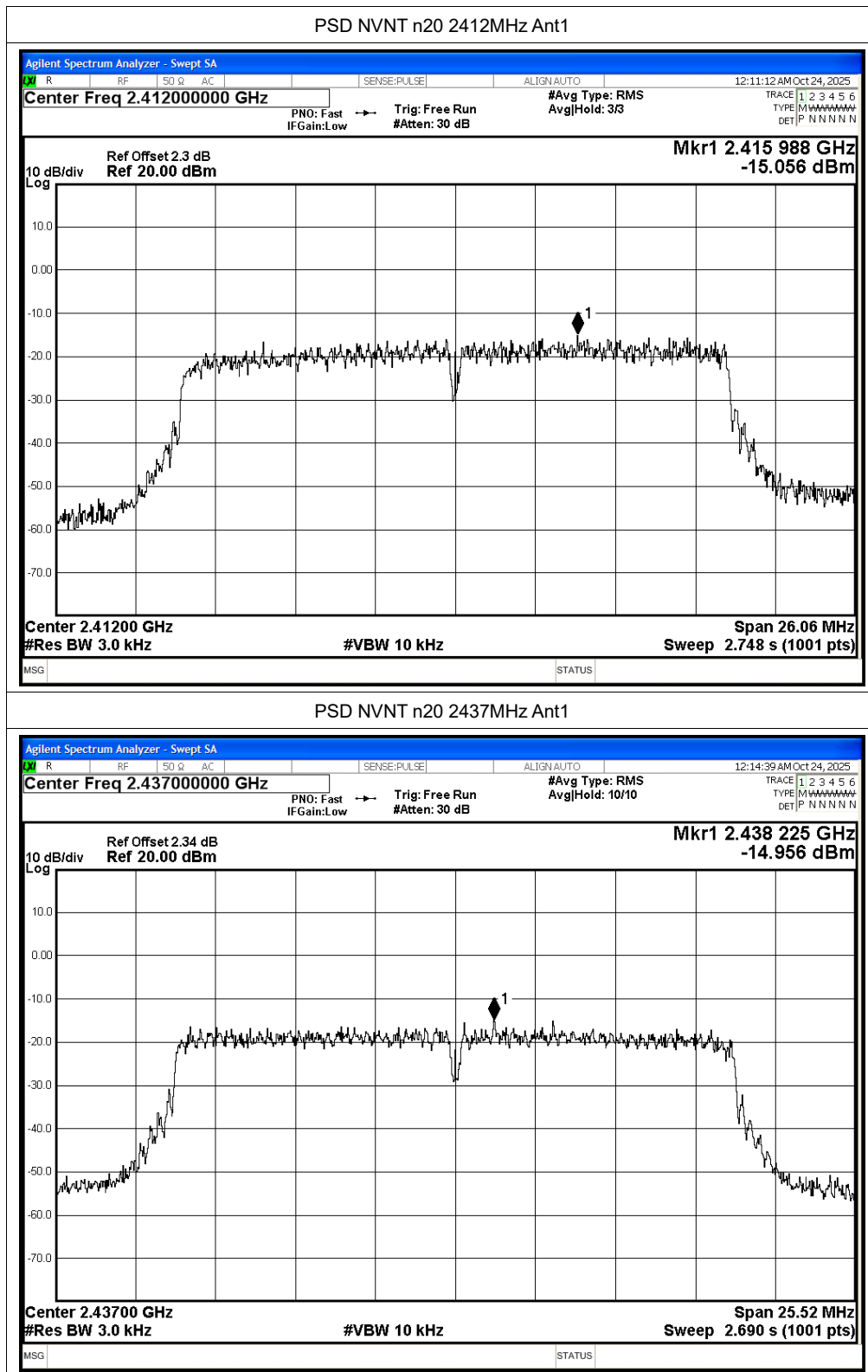


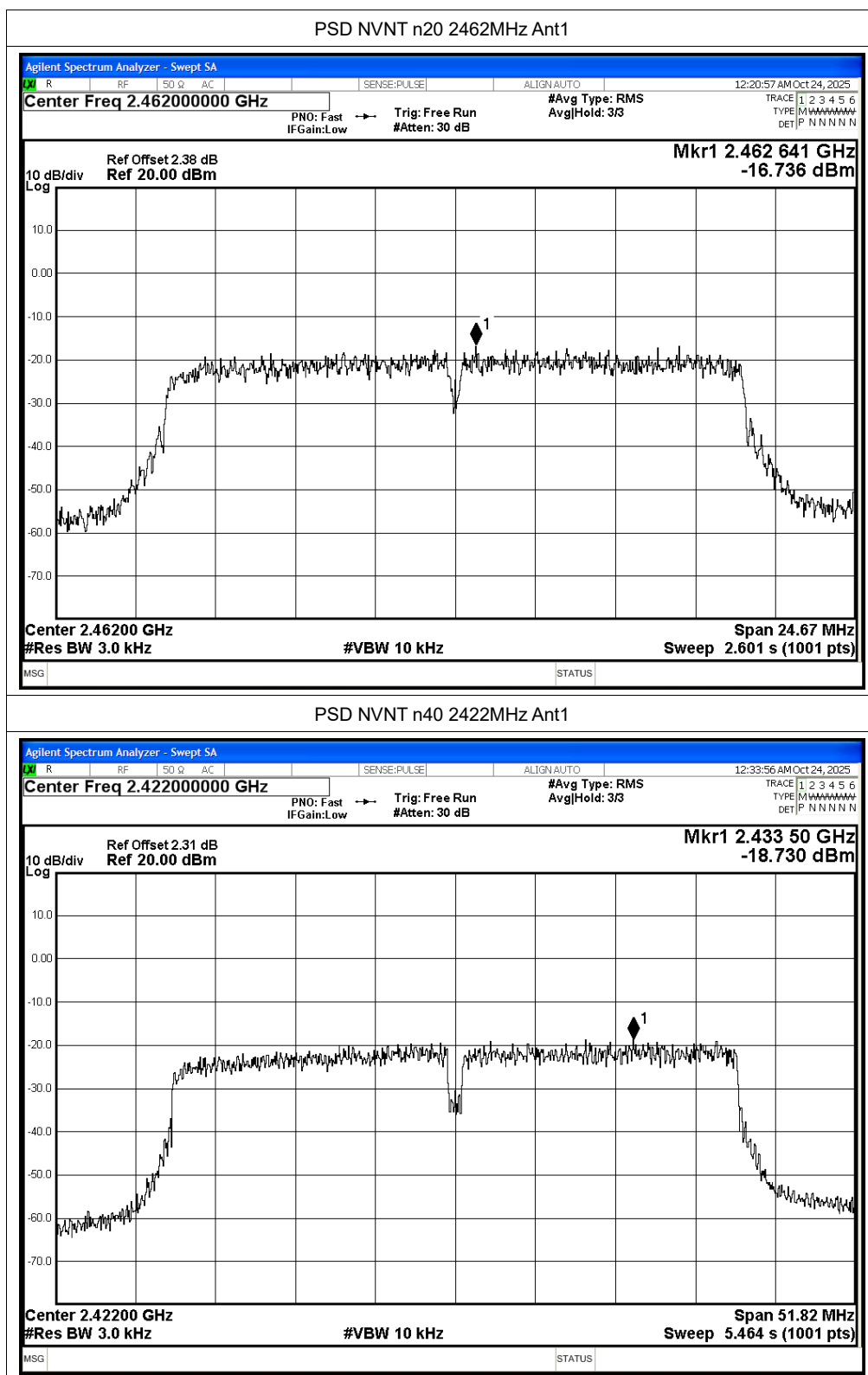
PSD NVNT g 2437MHz Ant1

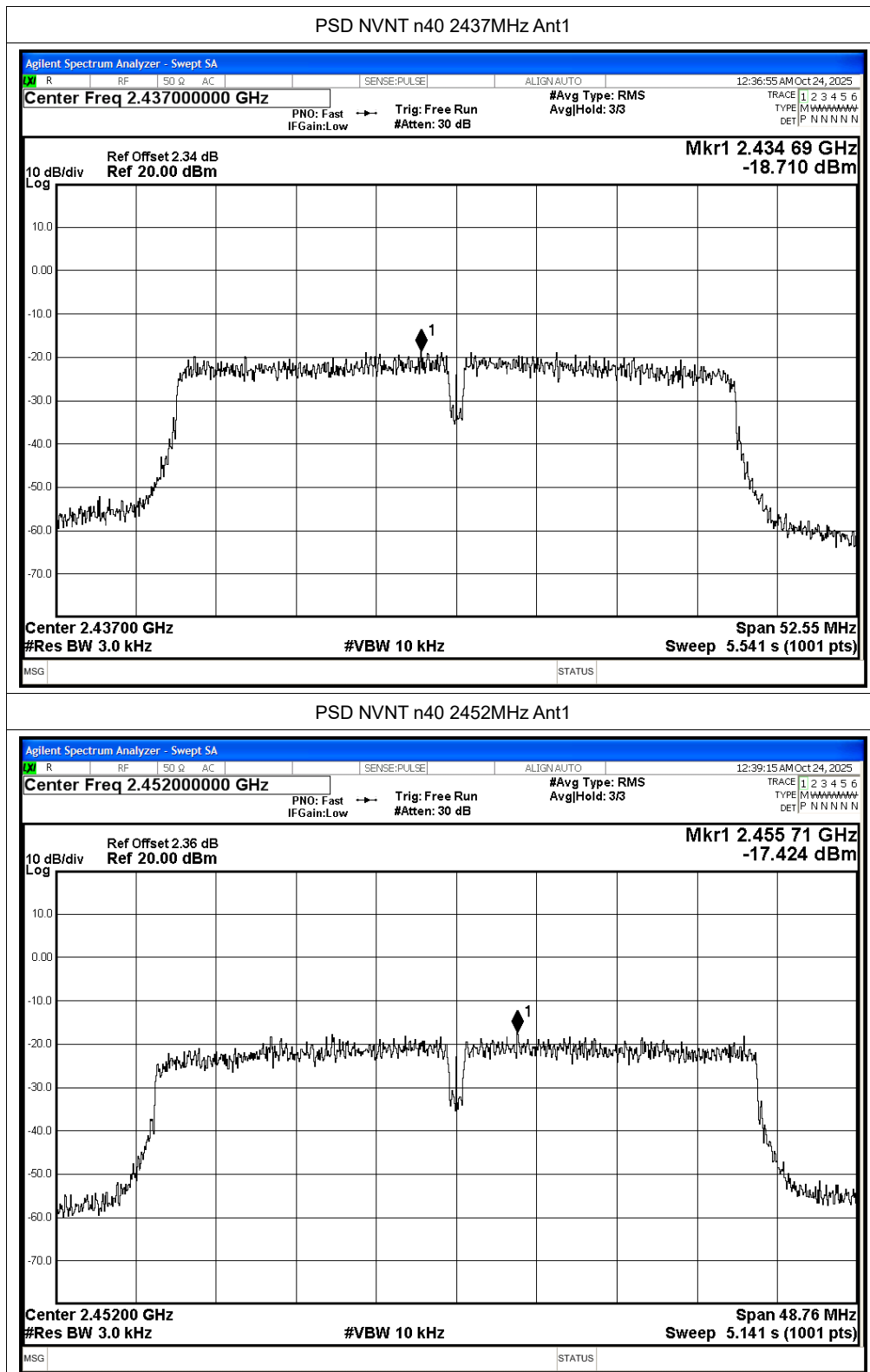


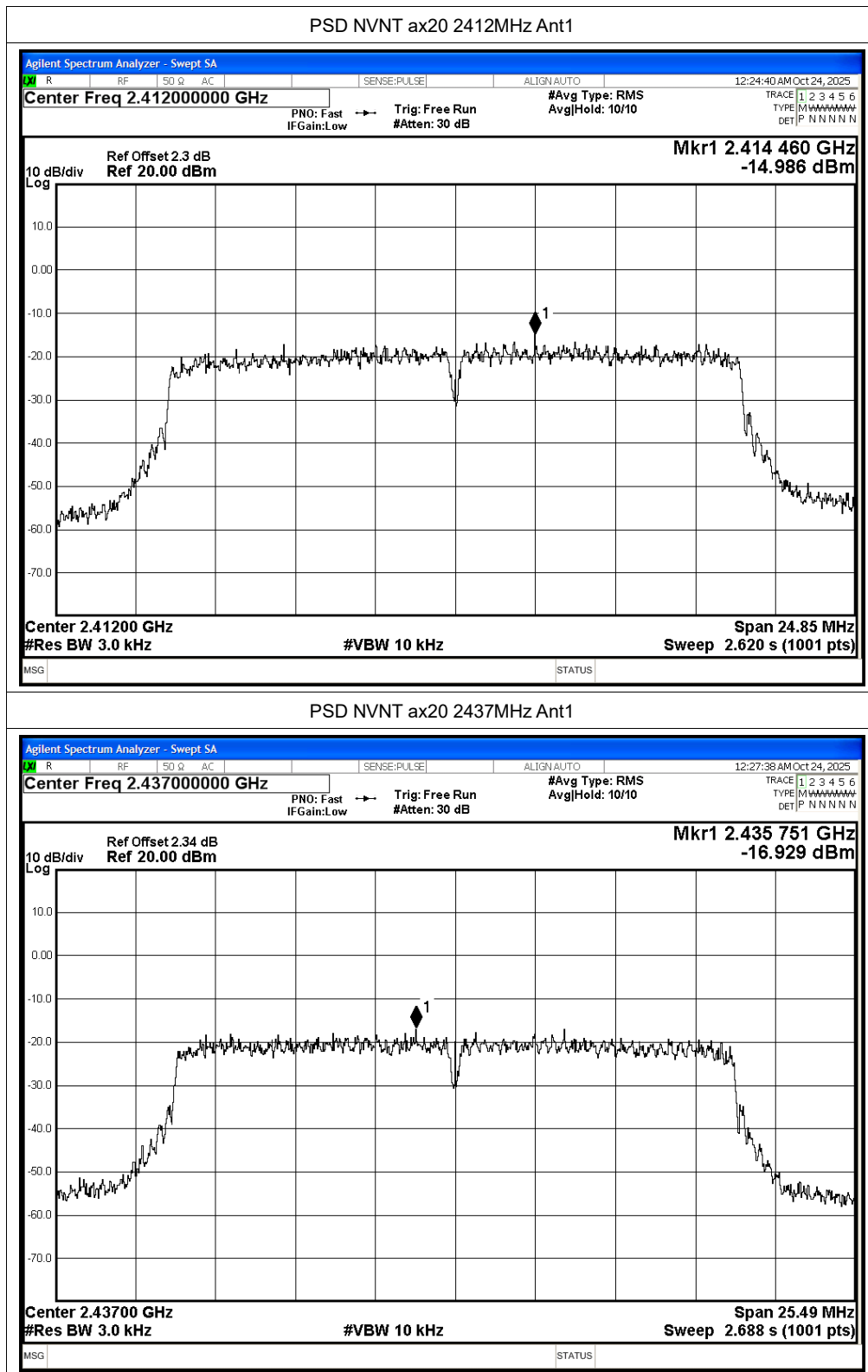
PSD NVNT g 2462MHz Ant1

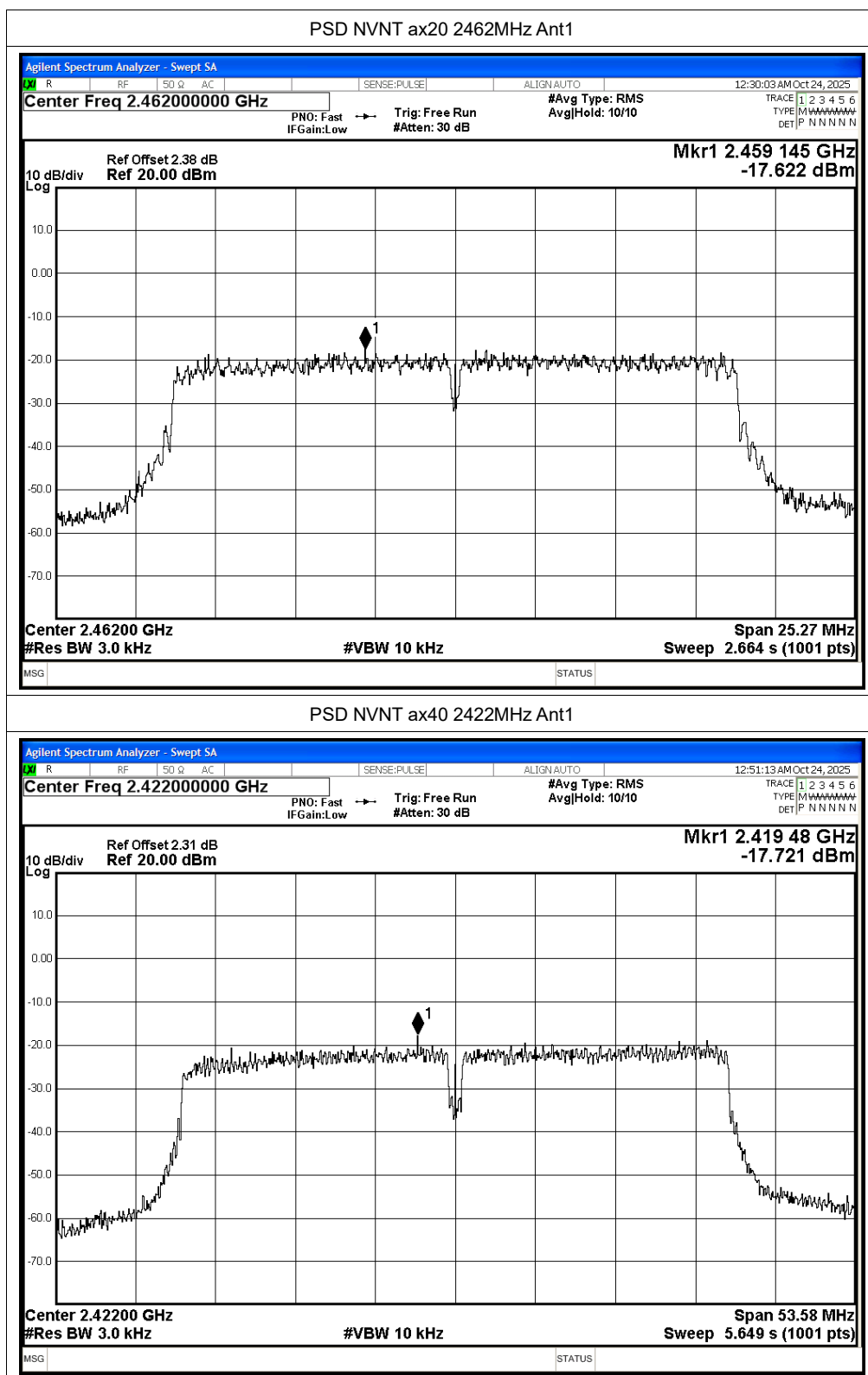


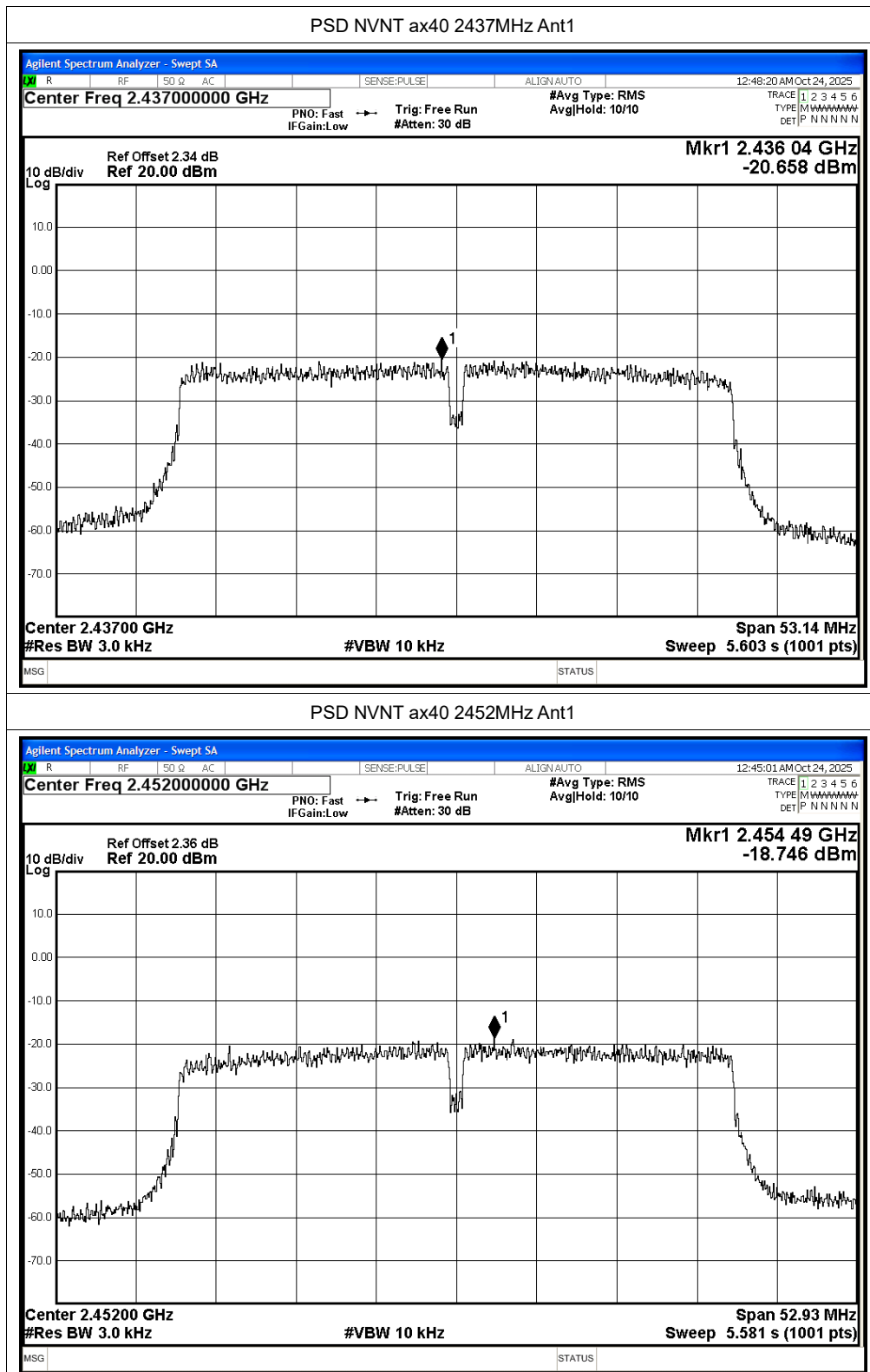






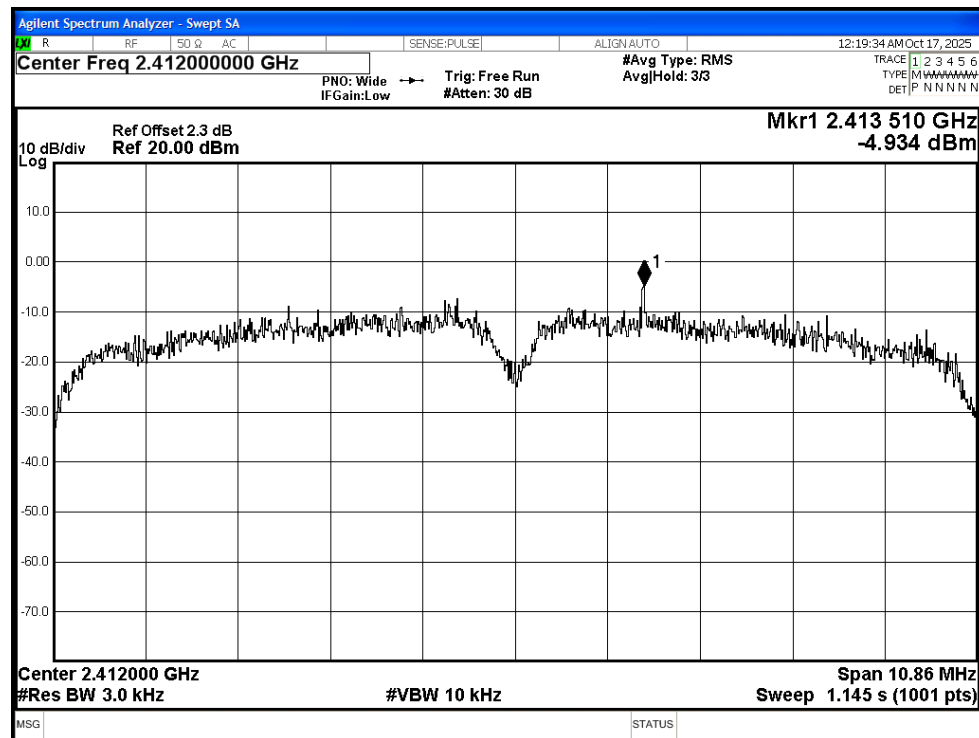




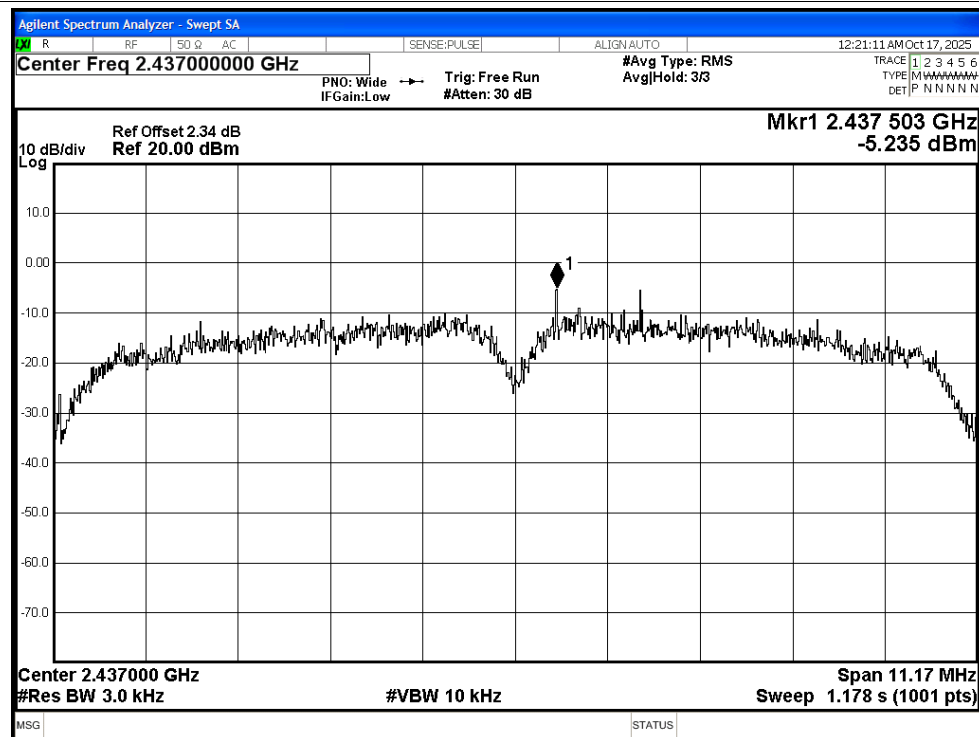


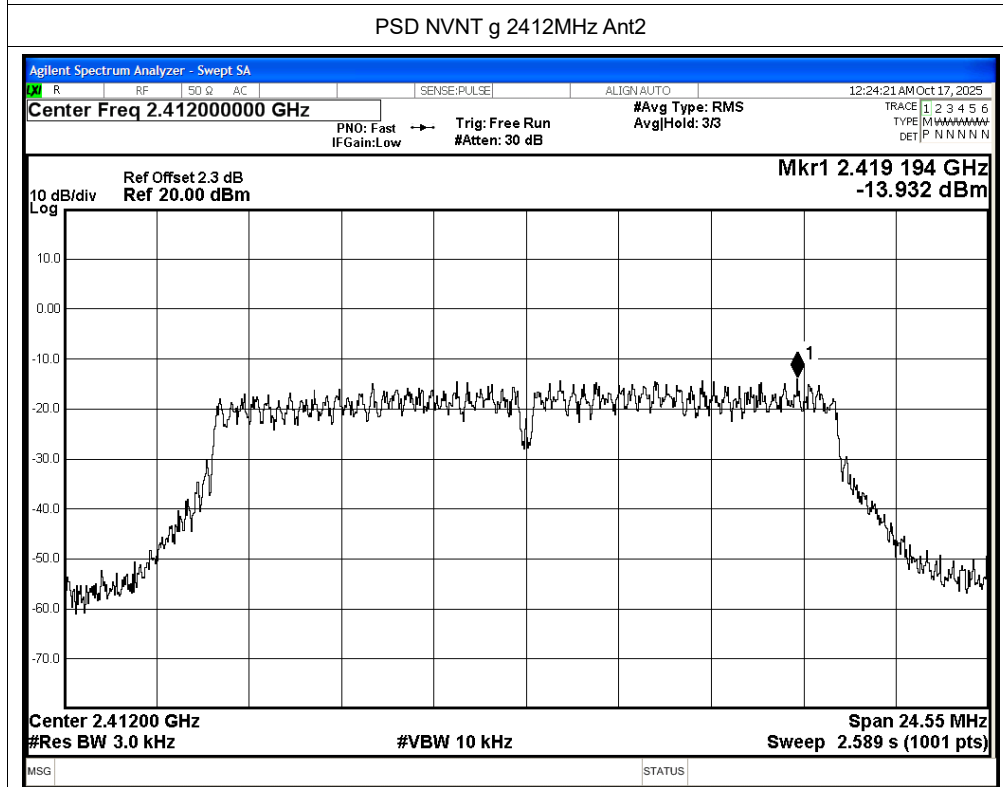
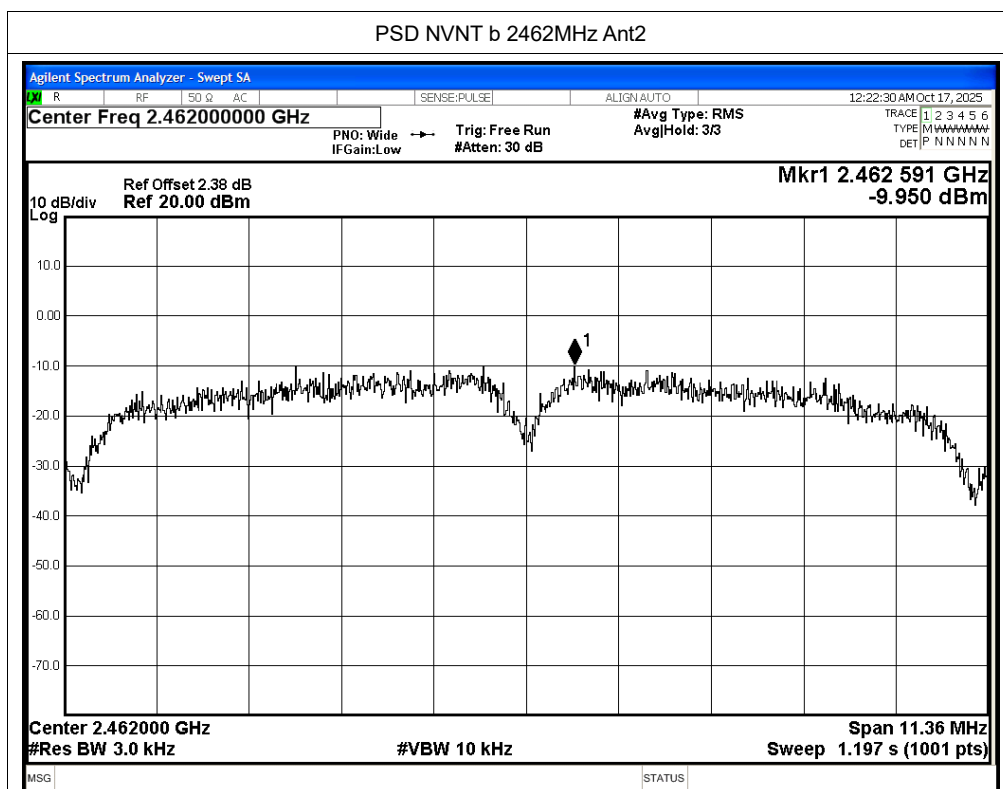
Test Graphs

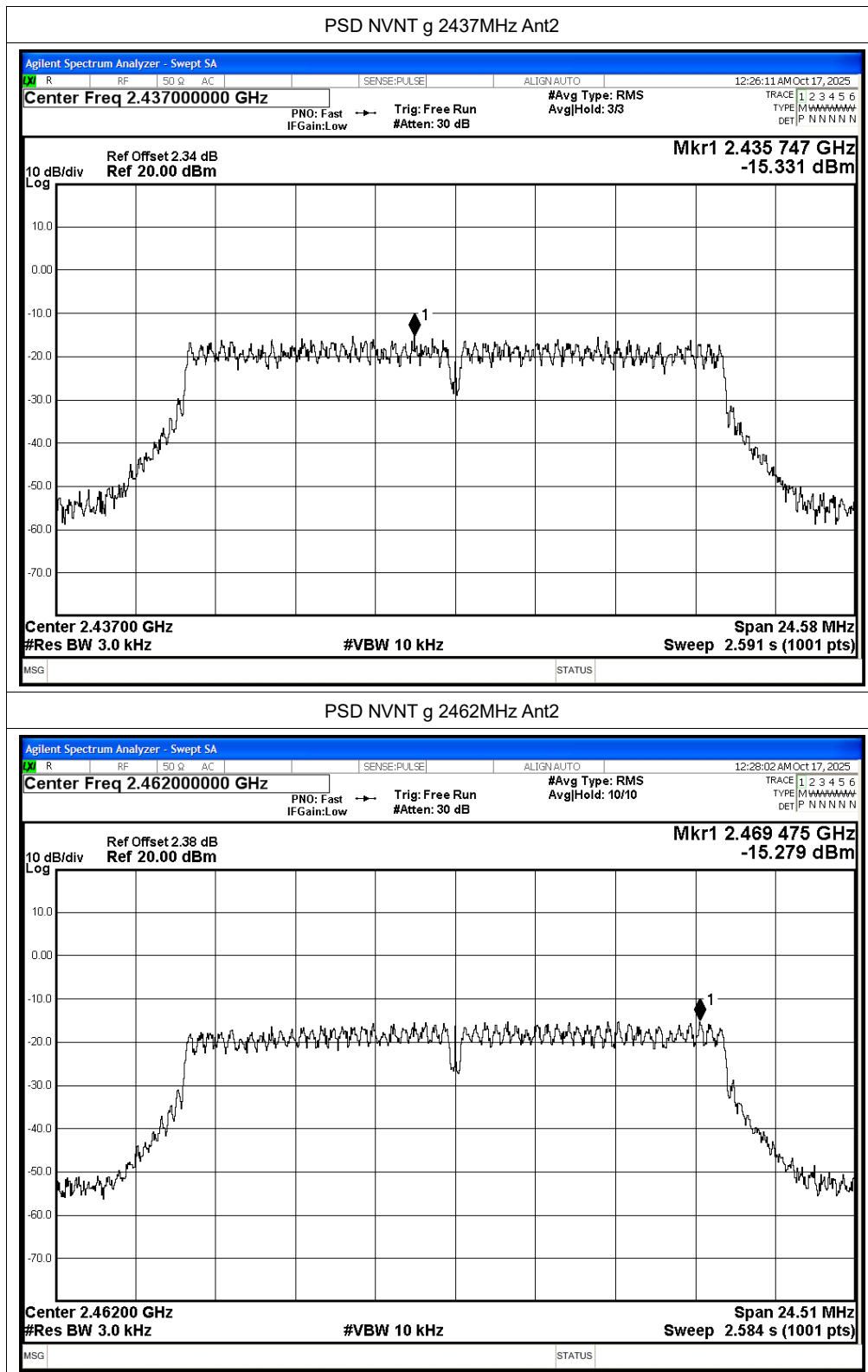
PSD NVNT b 2412MHz Ant2

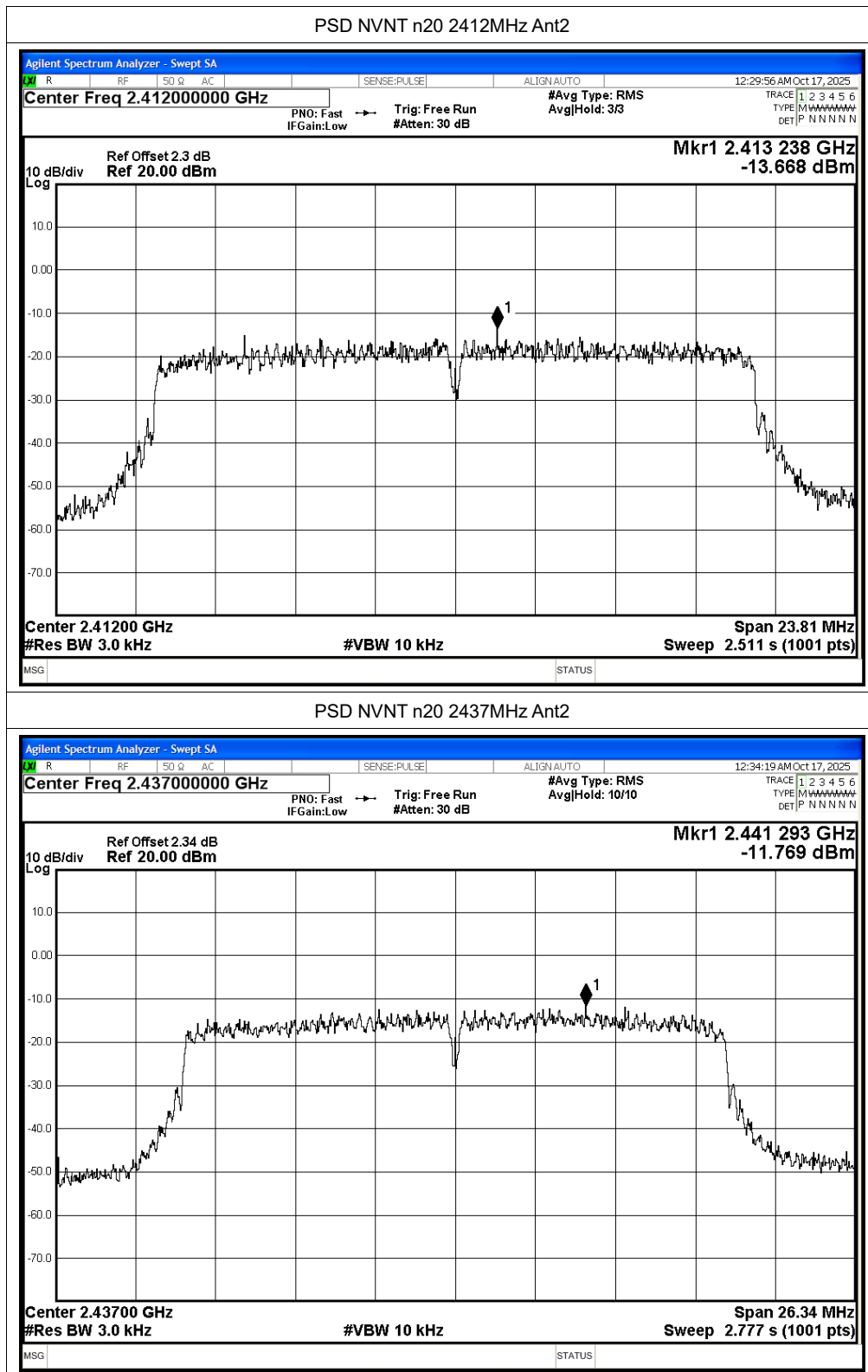


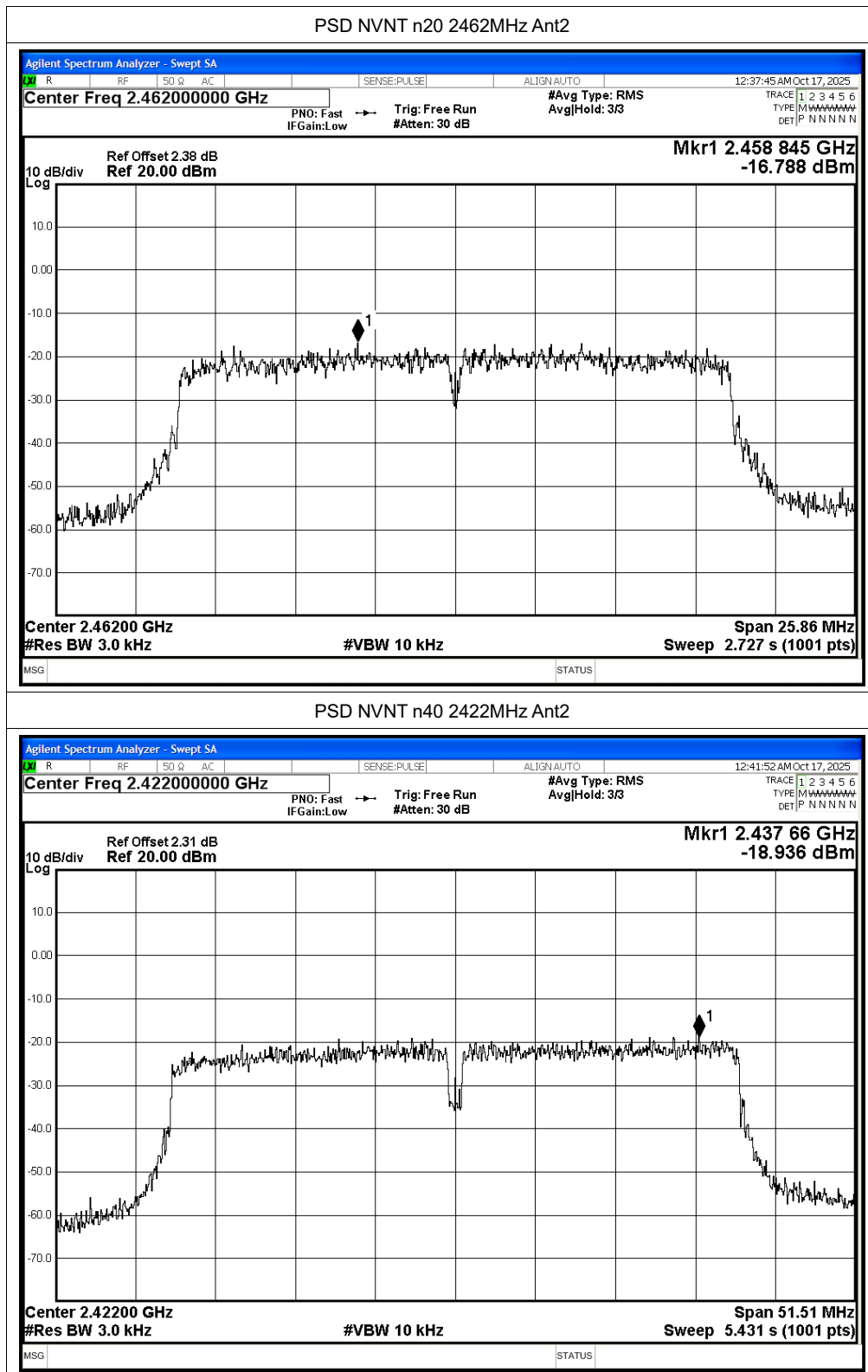
PSD NVNT b 2437MHz Ant2

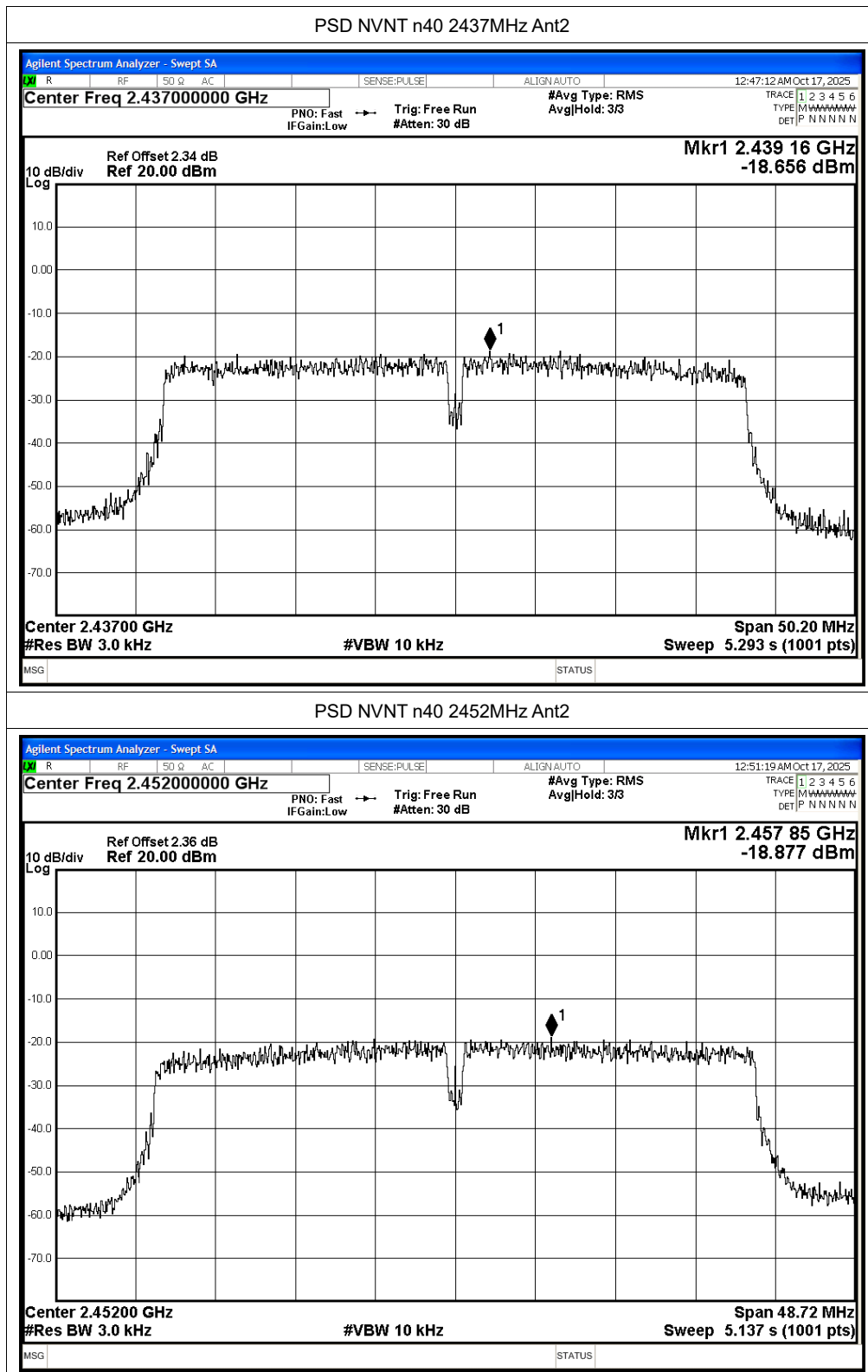


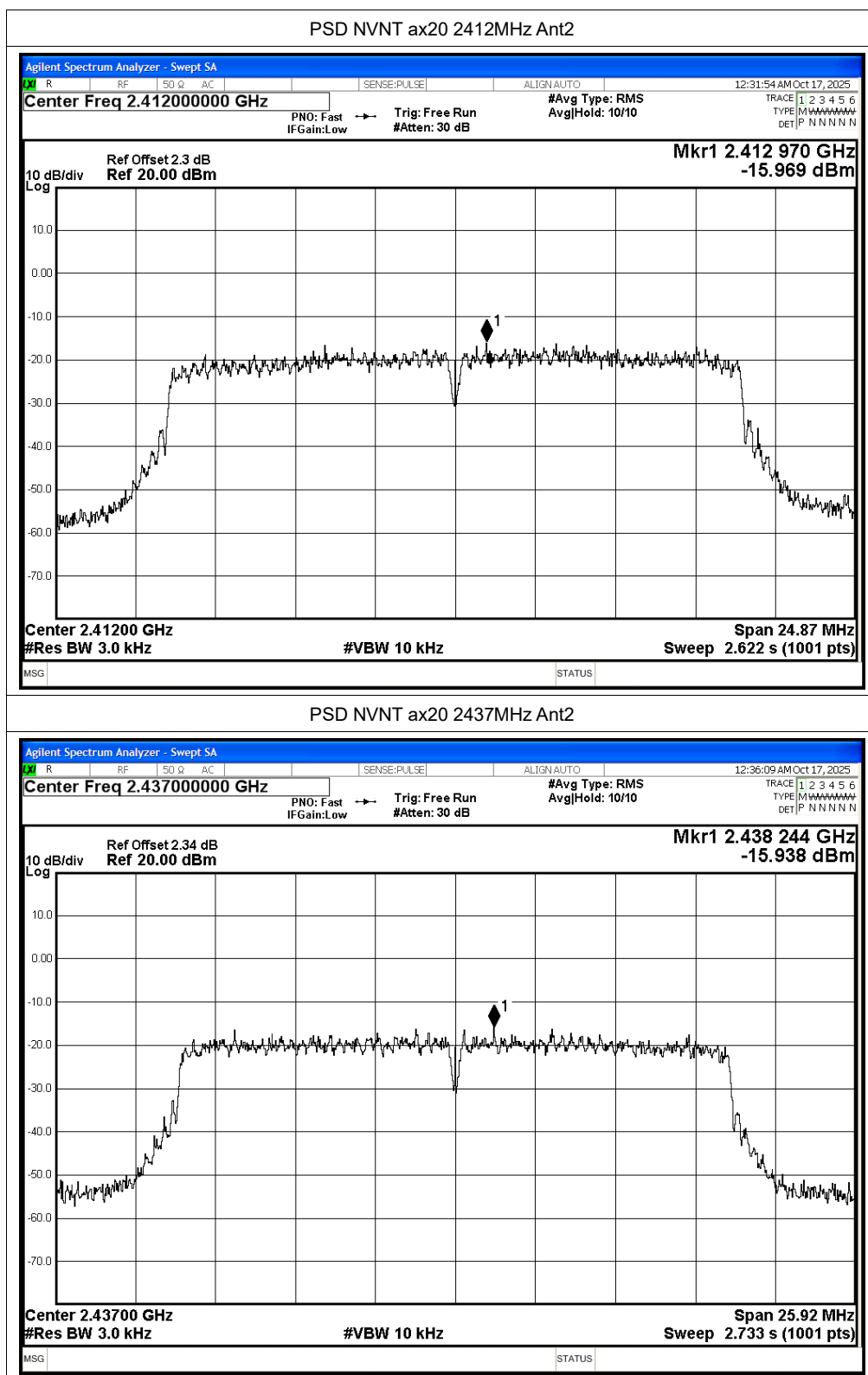




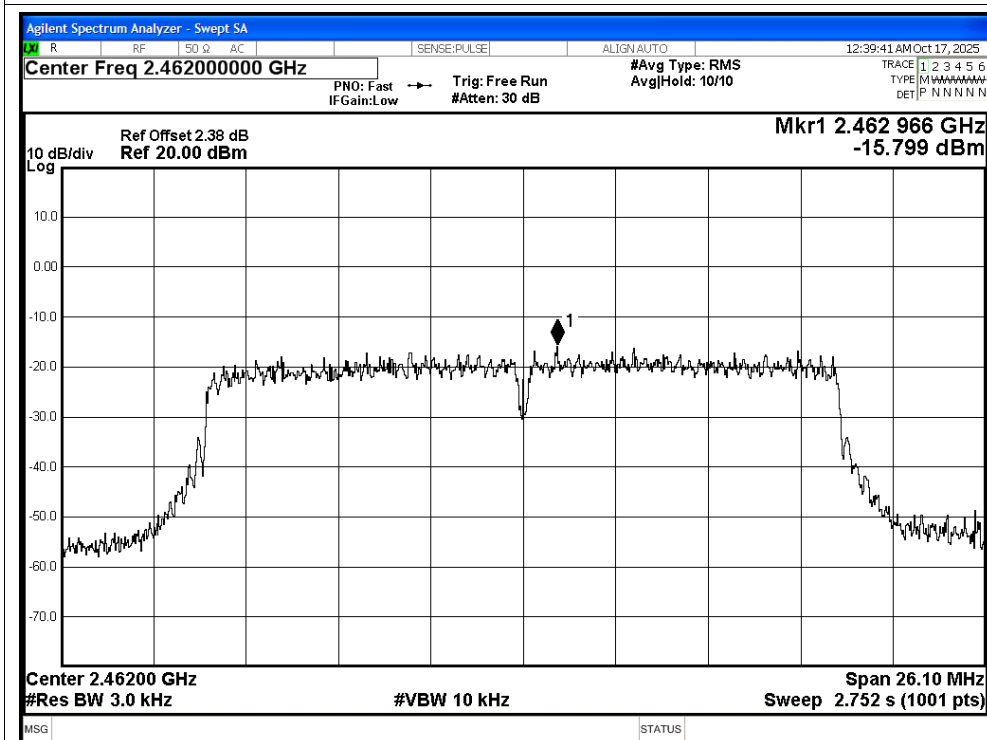




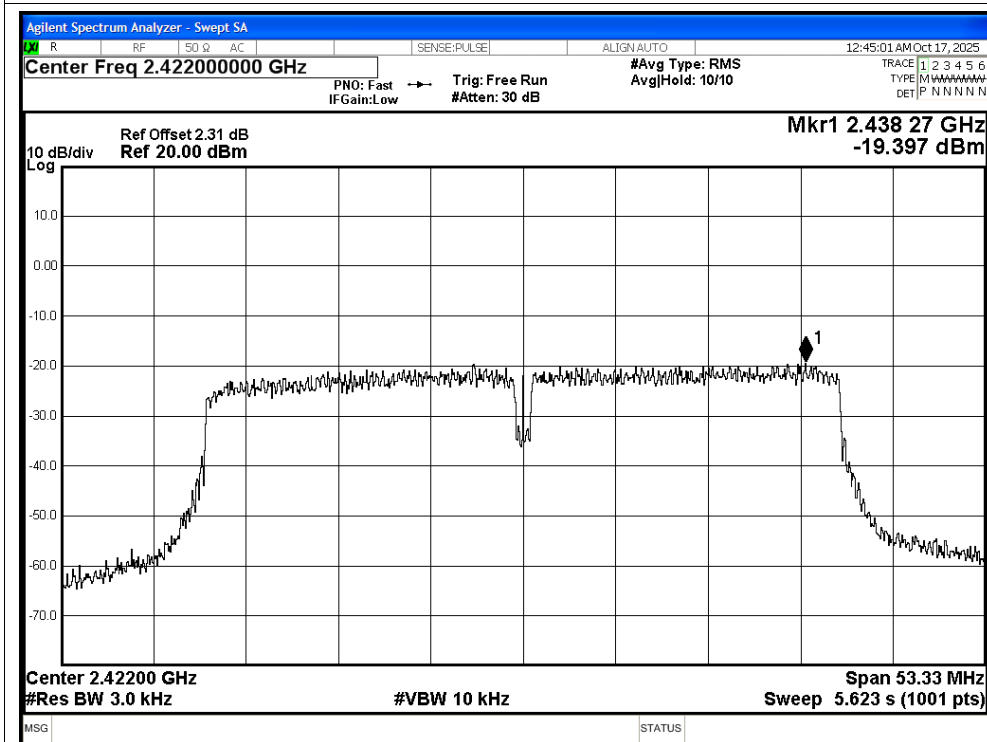


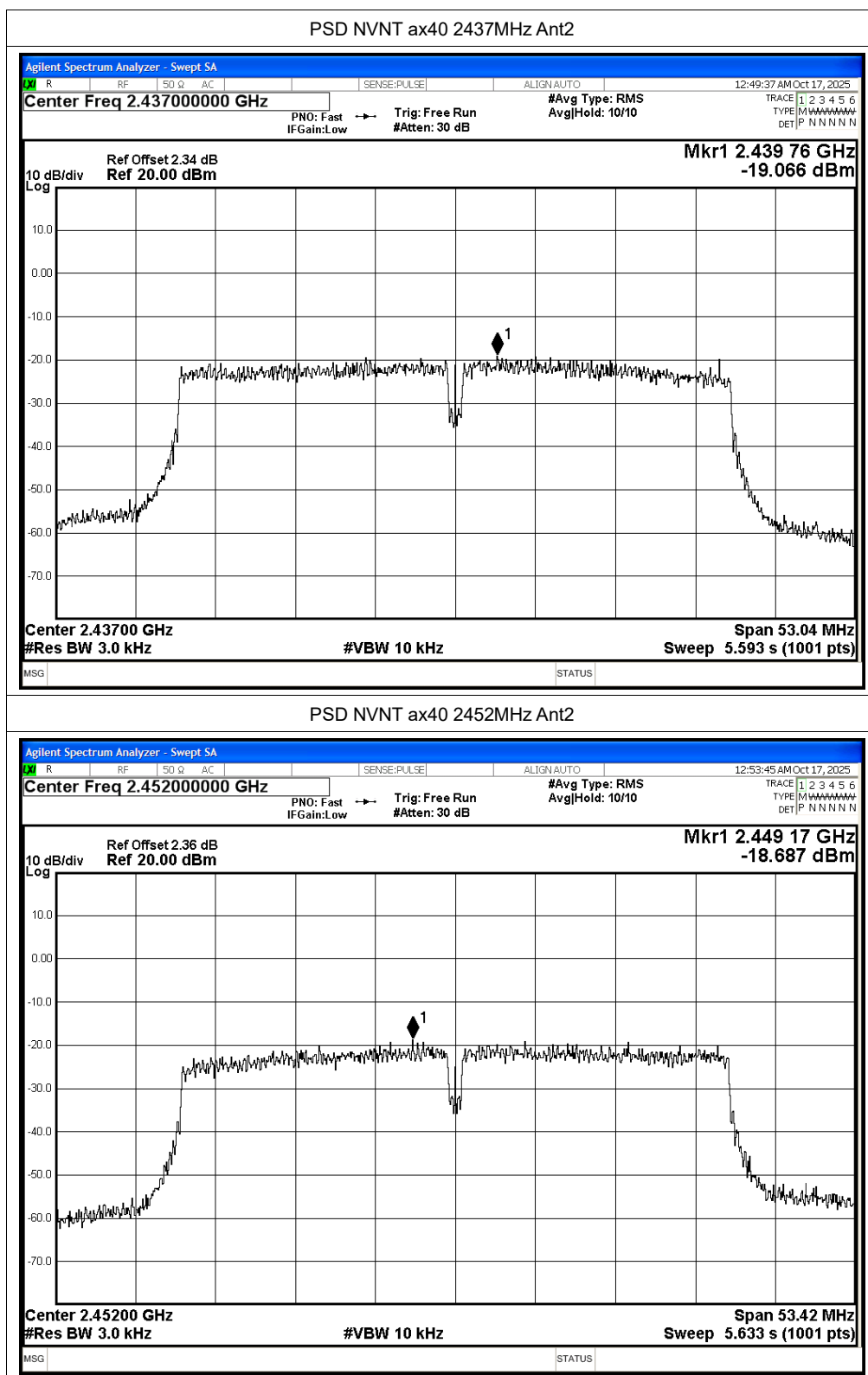


PSD NVNT ax20 2462MHz Ant2



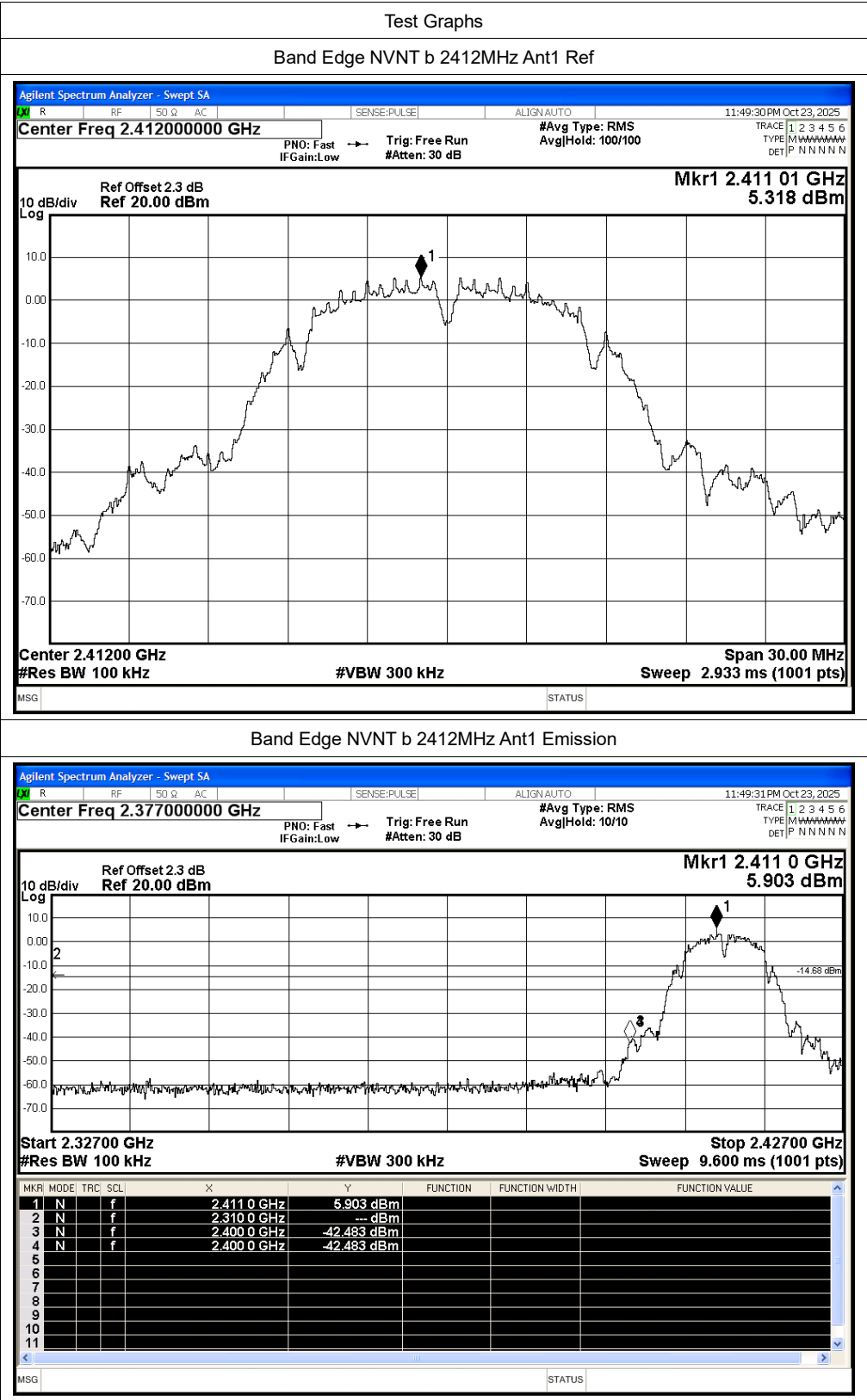
PSD NVNT ax40 2422MHz Ant2

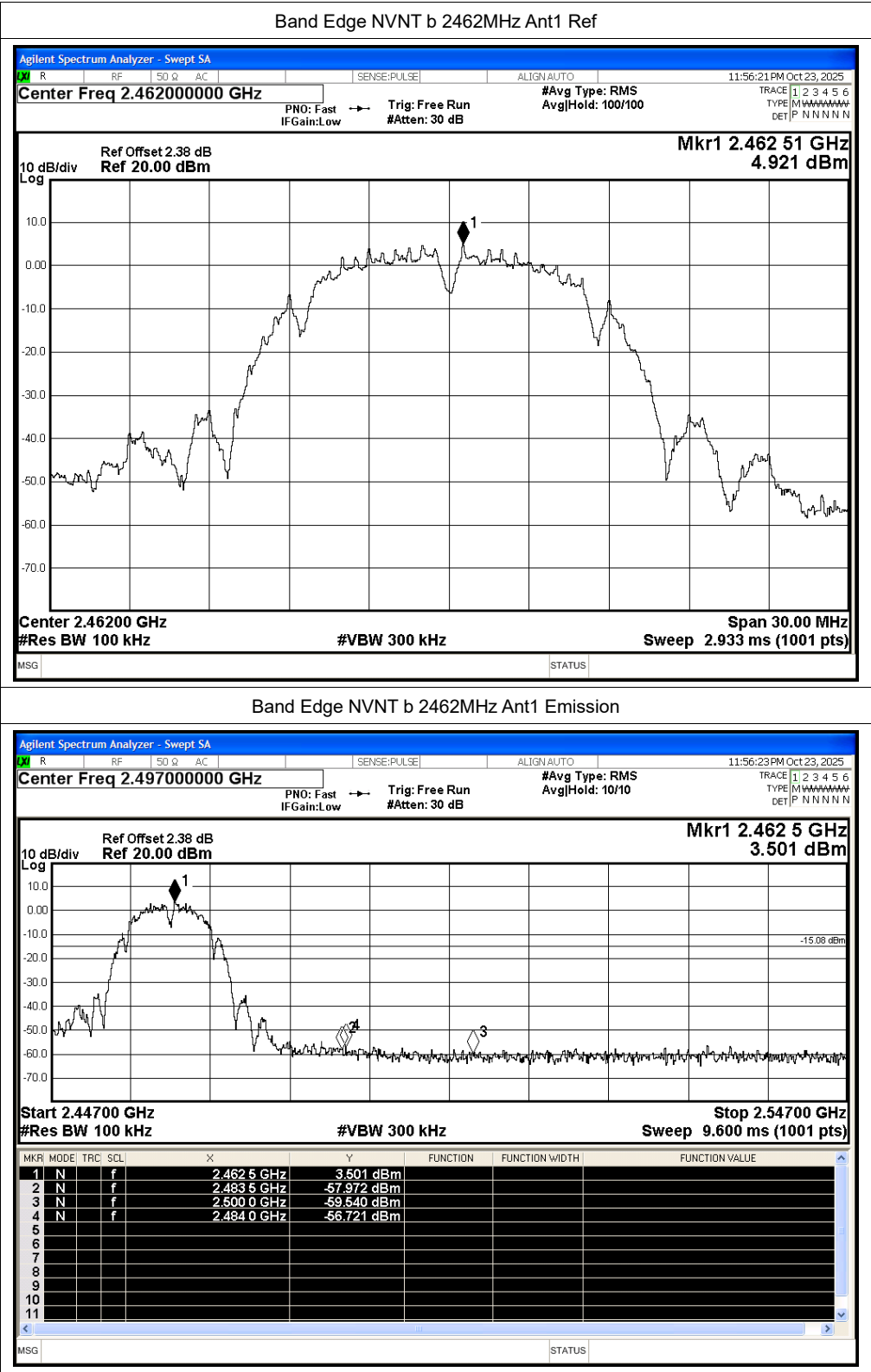


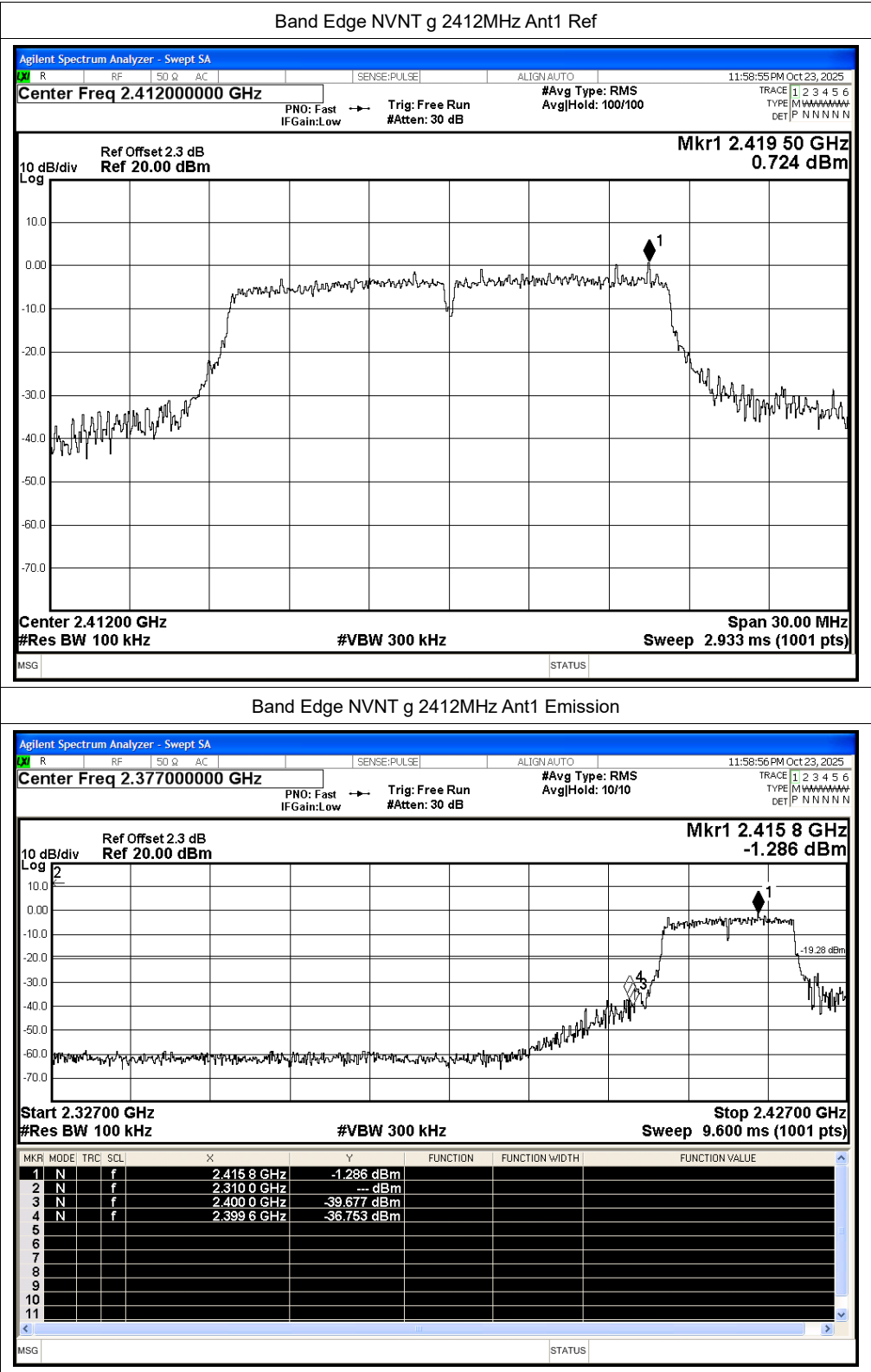


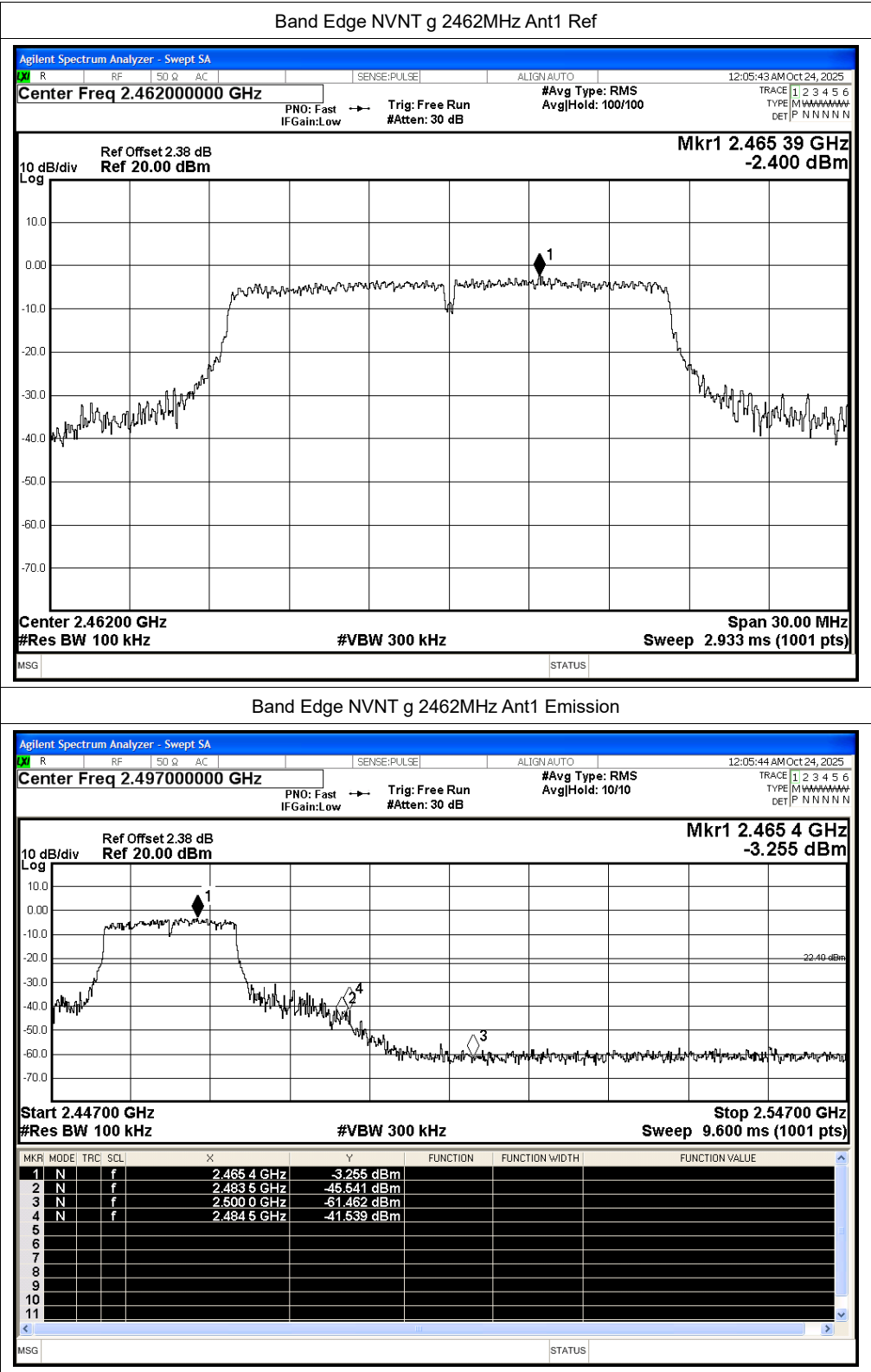
B.4 Band Edge

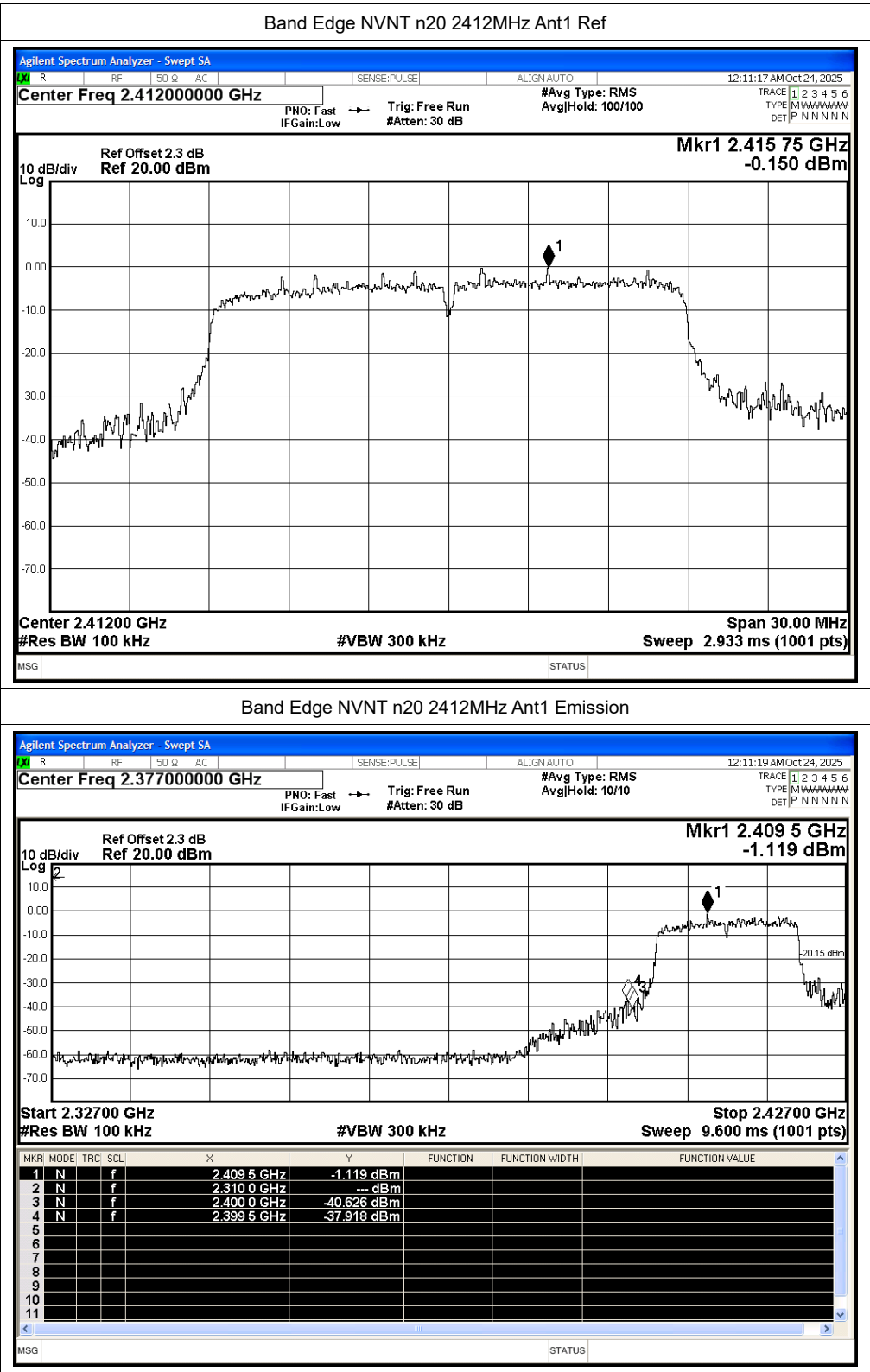
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.8	-20	Pass
NVNT	b	2462	Ant1	-61.64	-20	Pass
NVNT	g	2412	Ant1	-37.48	-20	Pass
NVNT	g	2462	Ant1	-39.14	-20	Pass
NVNT	n20	2412	Ant1	-37.77	-20	Pass
NVNT	n20	2462	Ant1	-41.79	-20	Pass
NVNT	n40	2422	Ant1	-39.22	-20	Pass
NVNT	n40	2452	Ant1	-39.18	-20	Pass
NVNT	ax20	2412	Ant1	-30.74	-20	Pass
NVNT	ax20	2462	Ant1	-40.53	-20	Pass
NVNT	ax40	2422	Ant1	-33.91	-20	Pass
NVNT	ax40	2452	Ant1	-36.68	-20	Pass

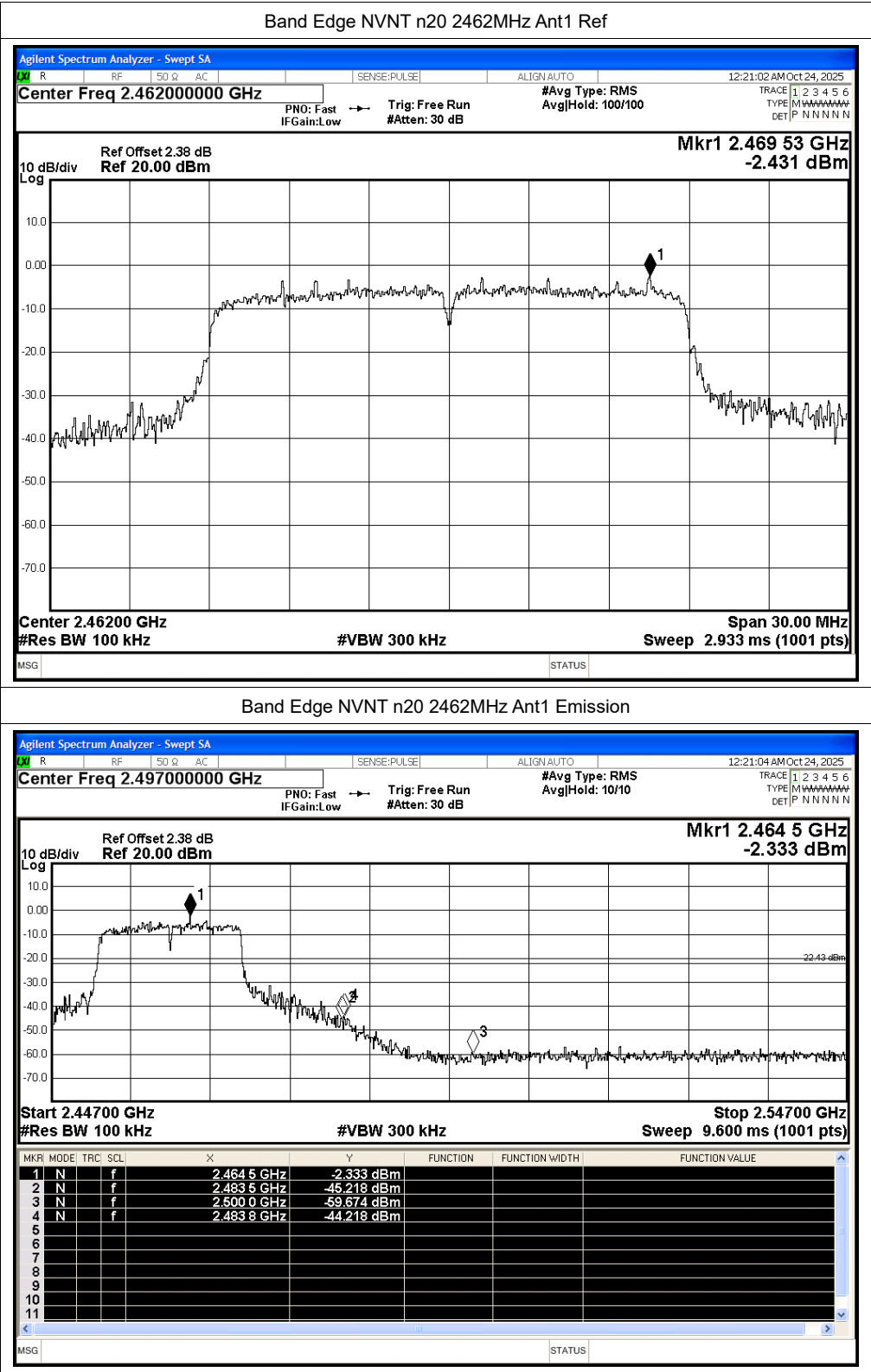


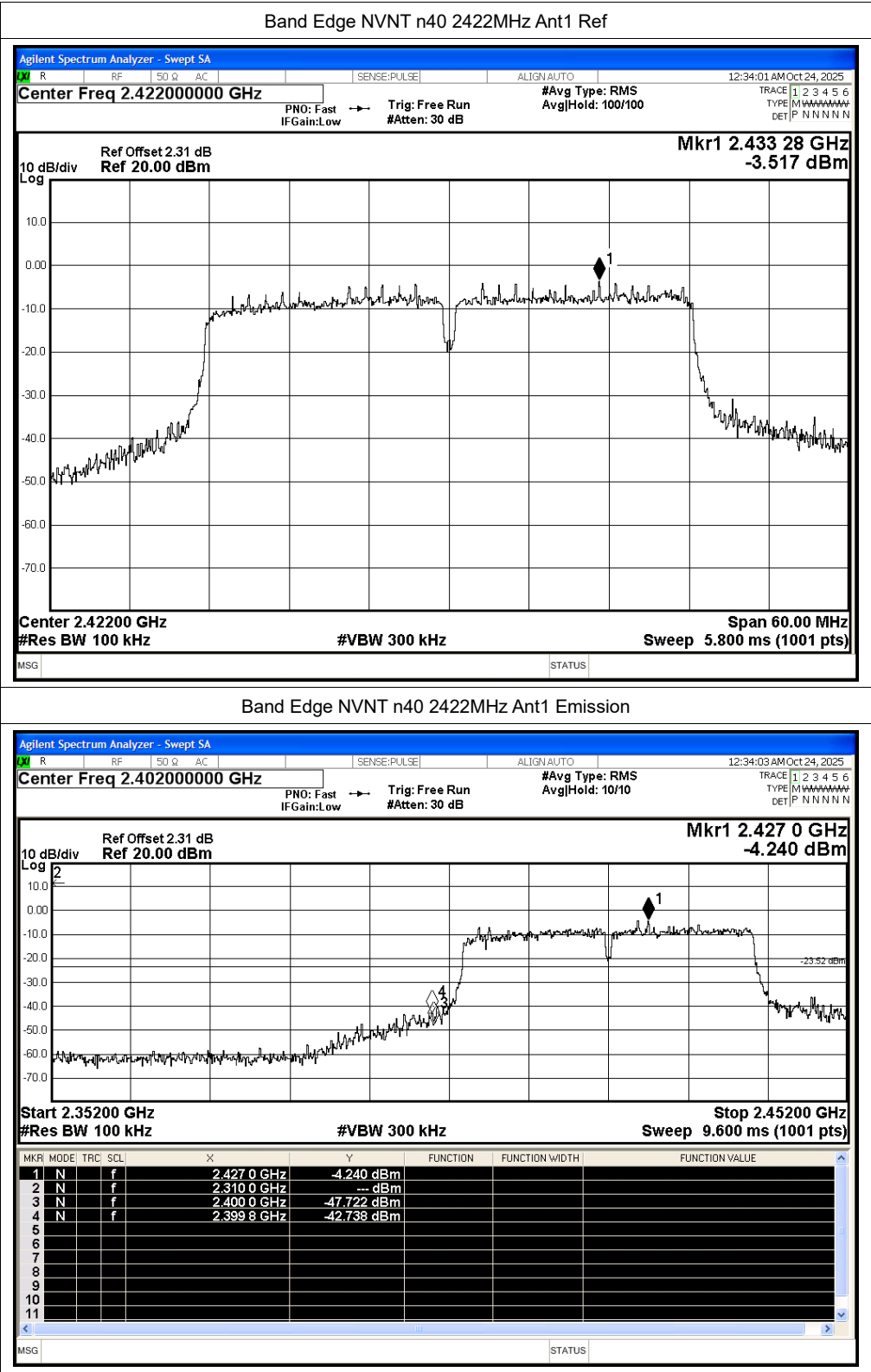


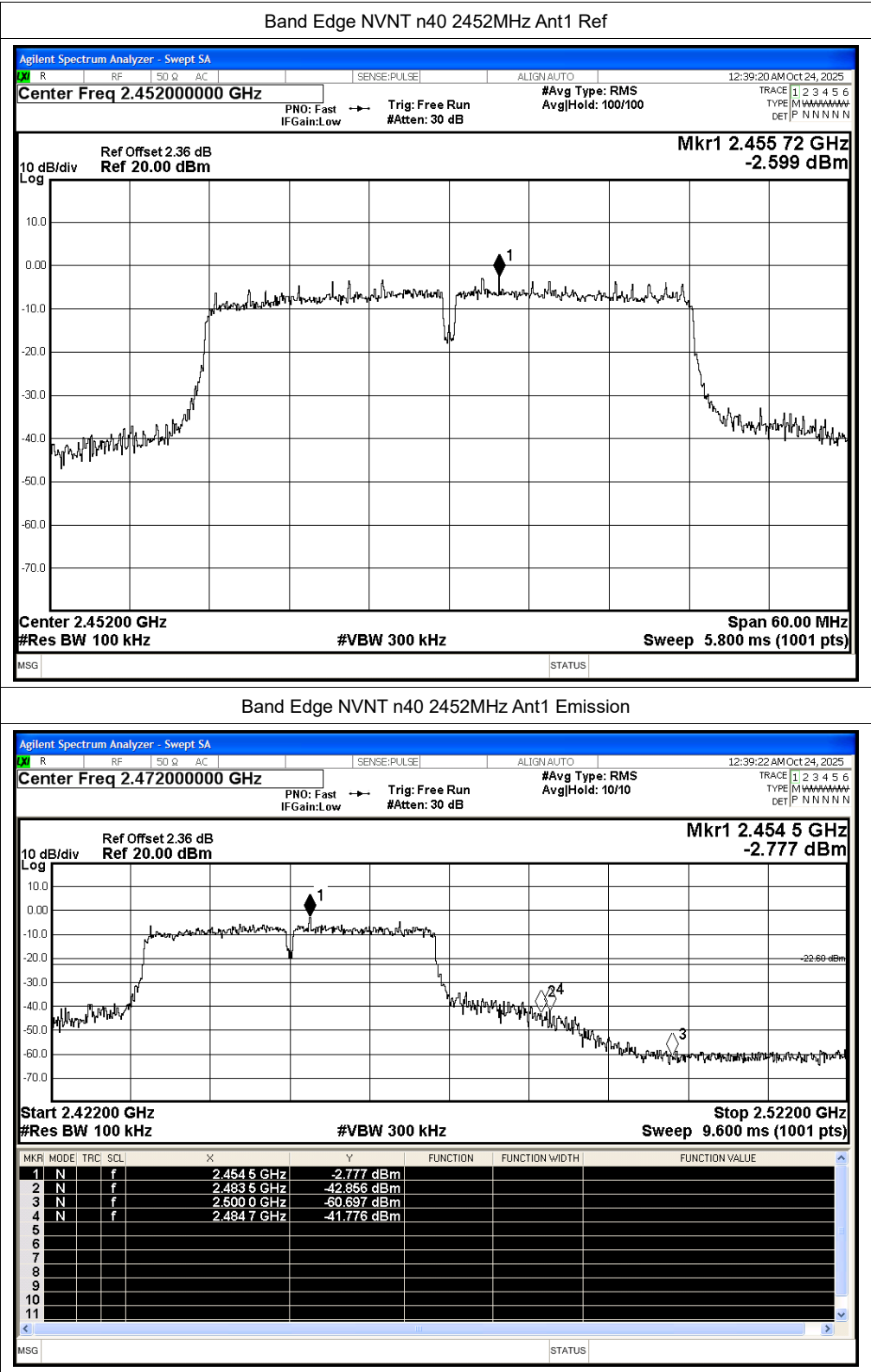


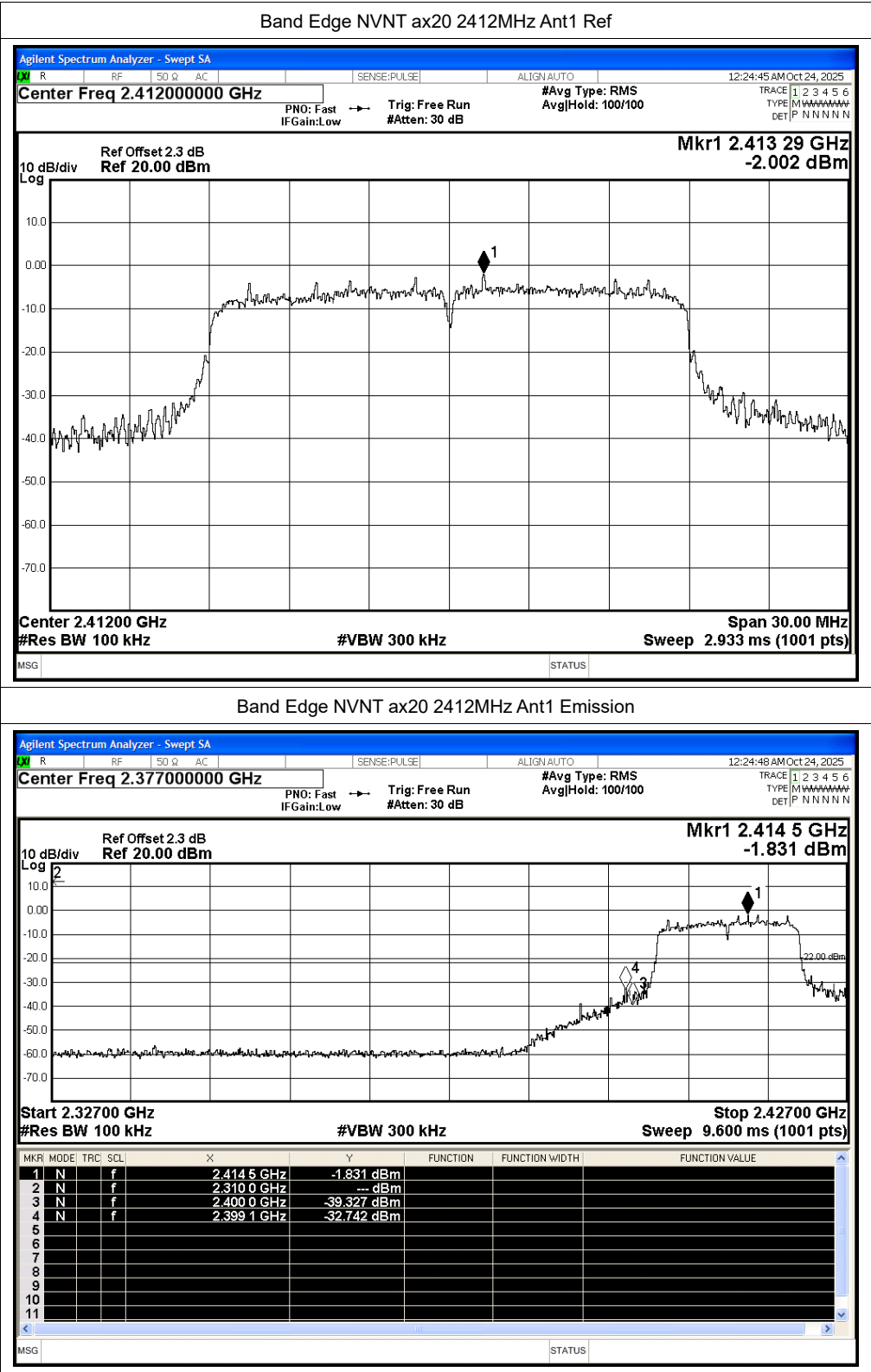


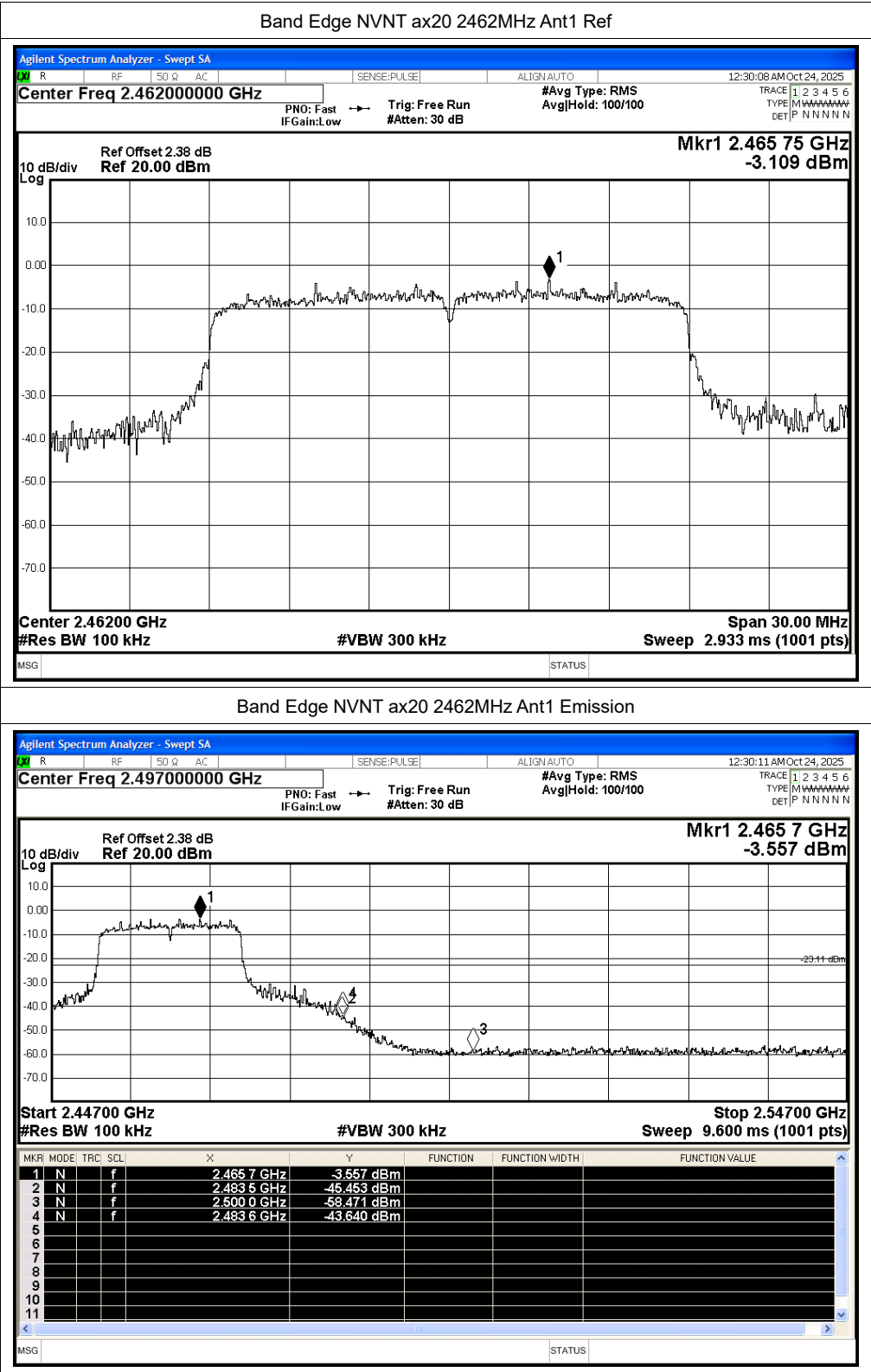


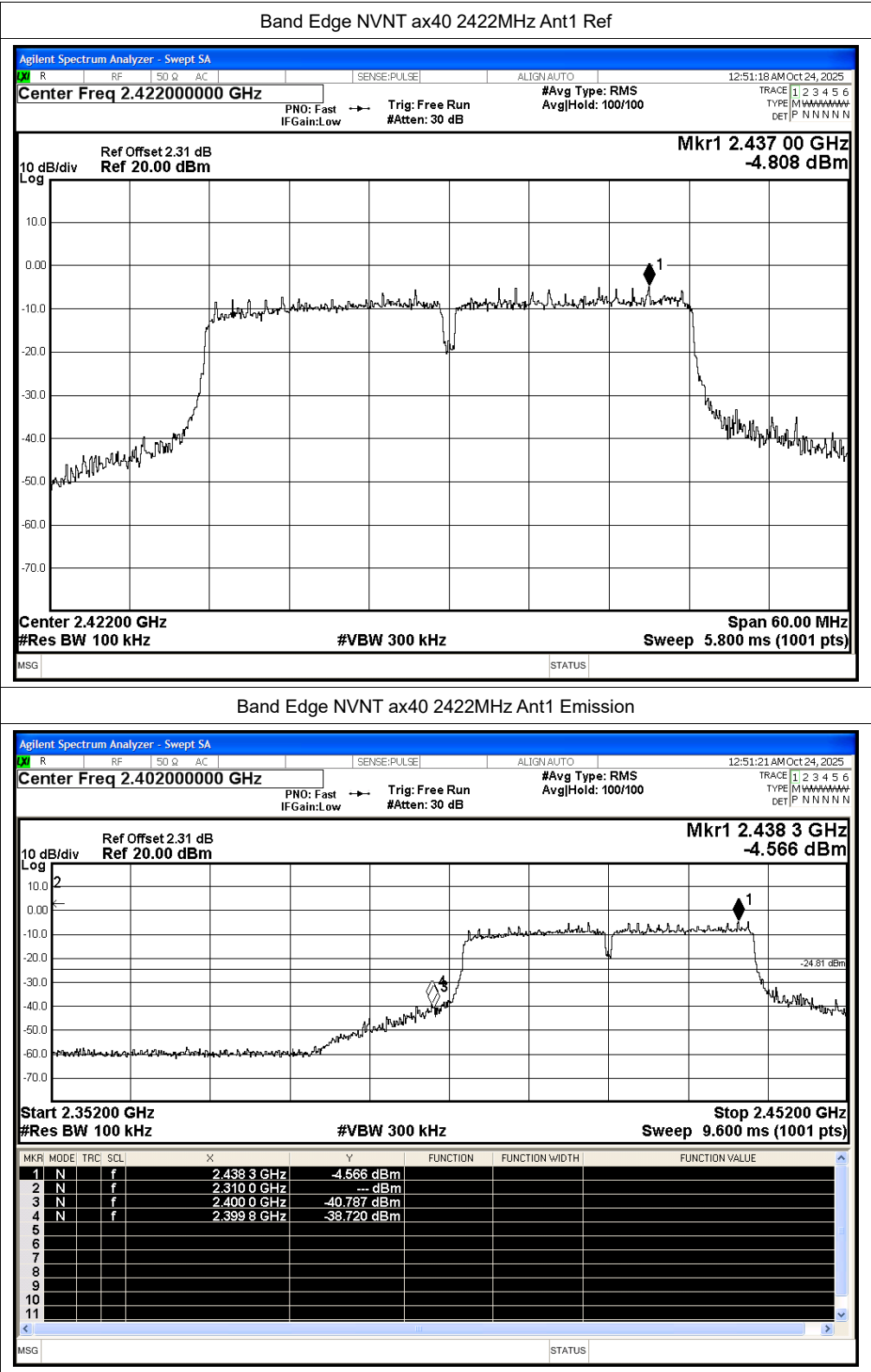


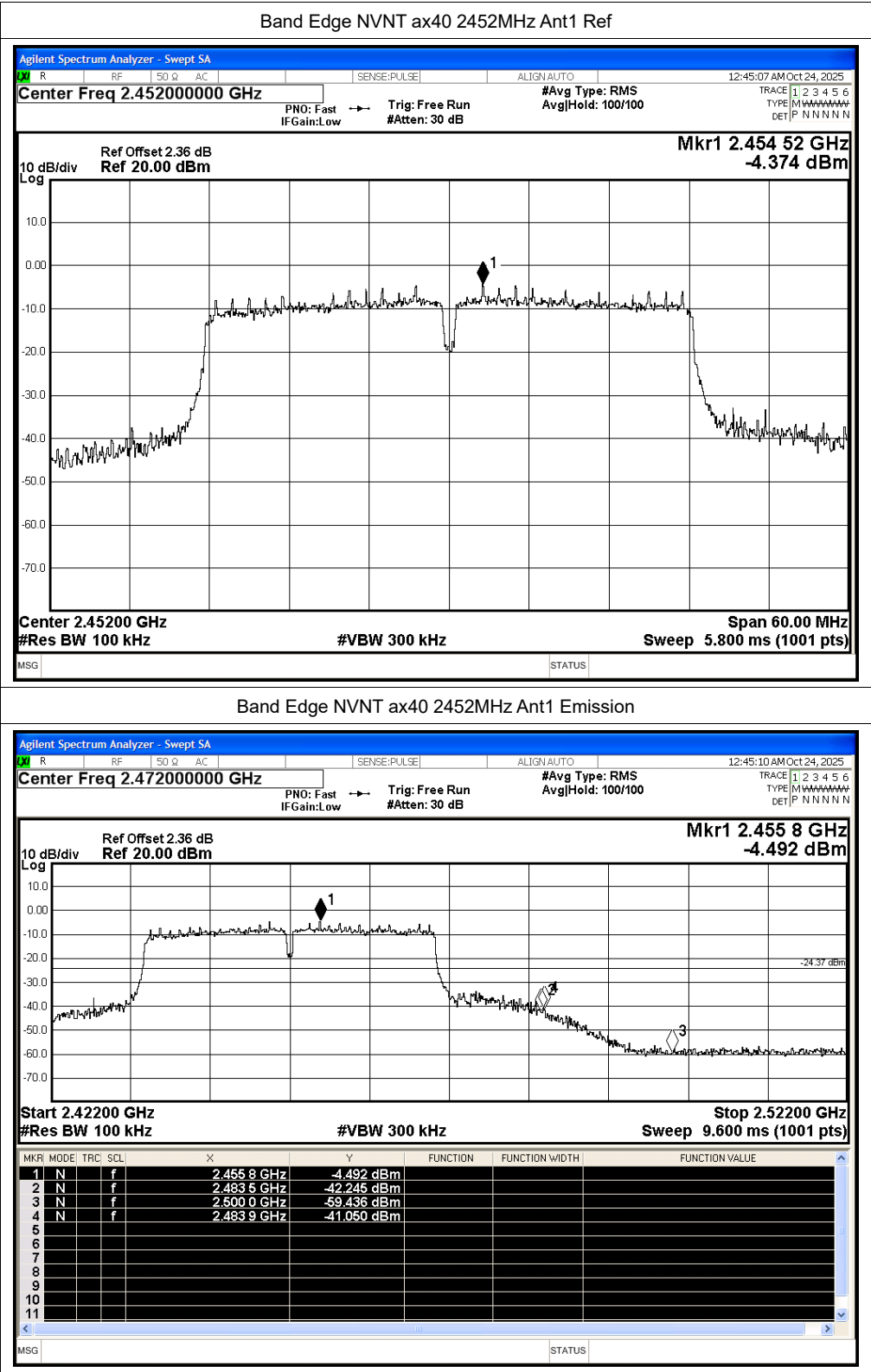




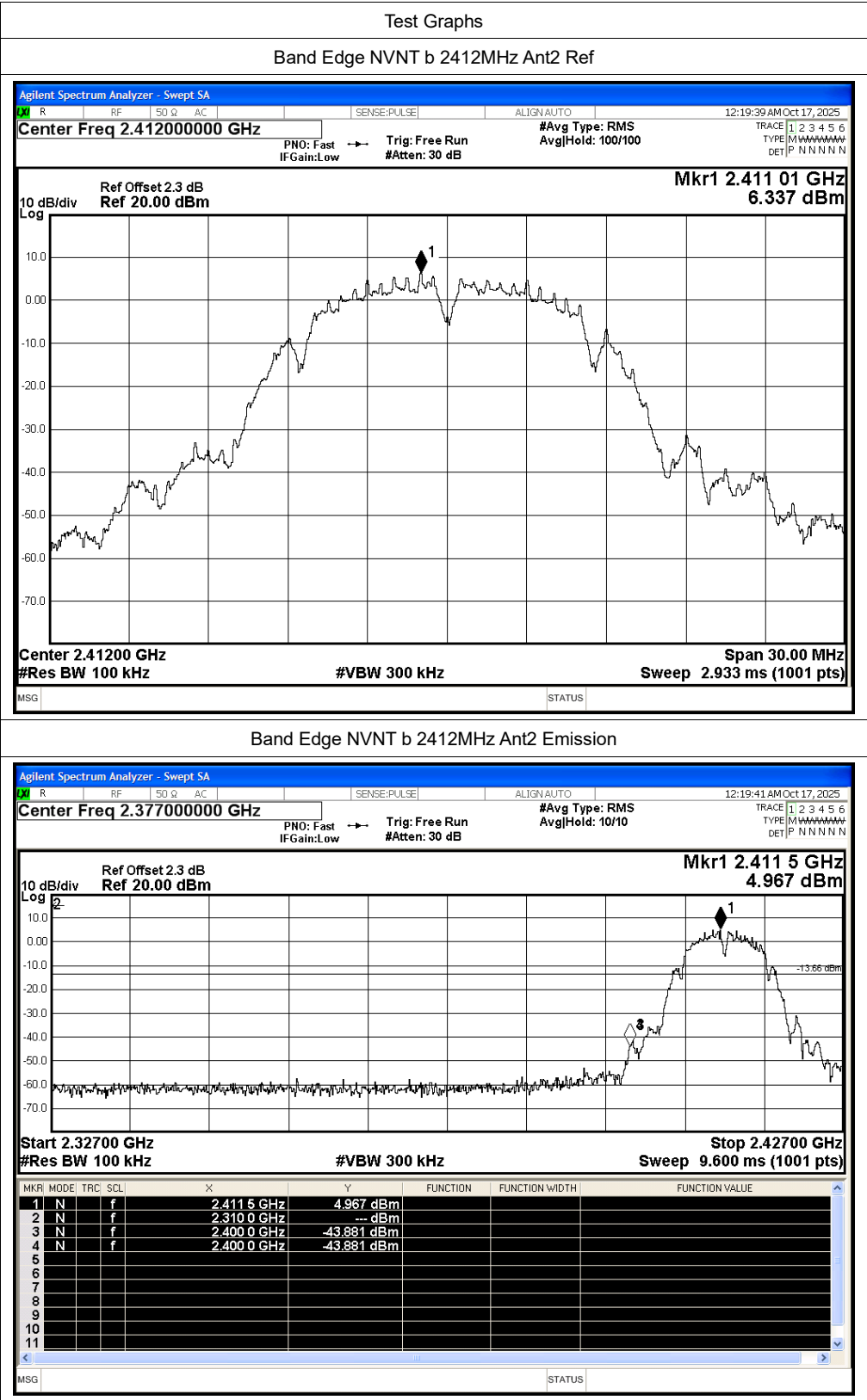


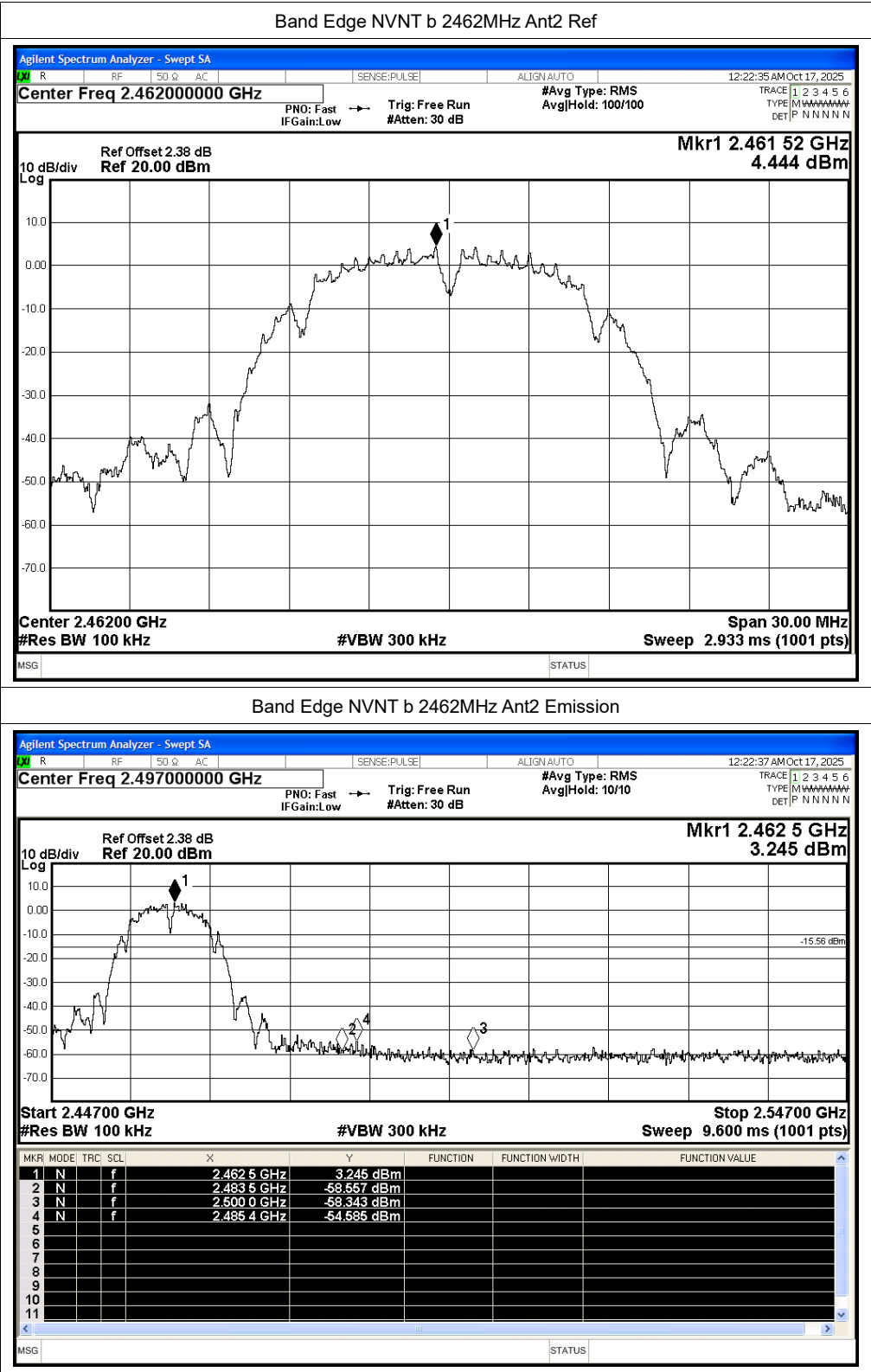


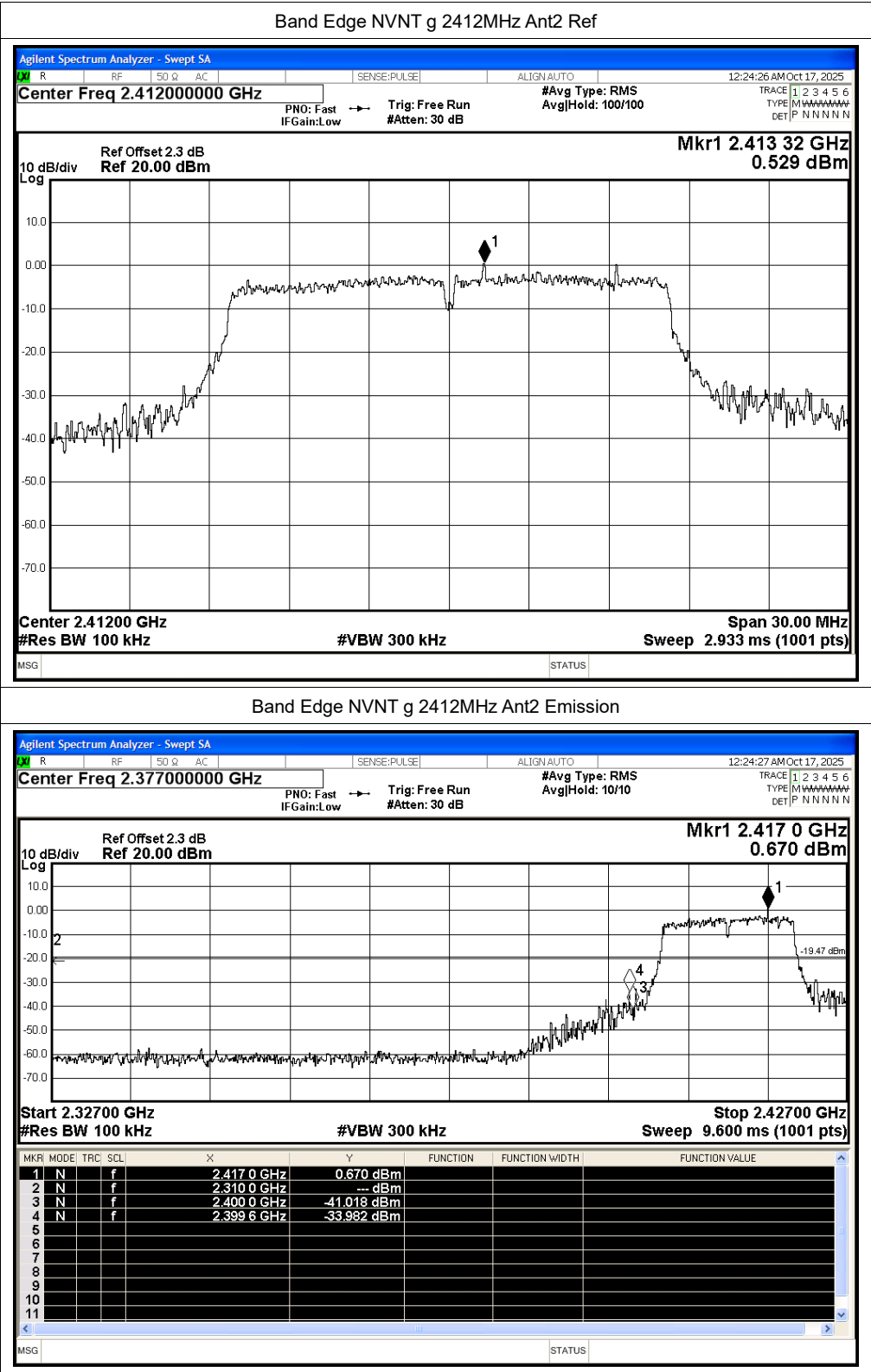


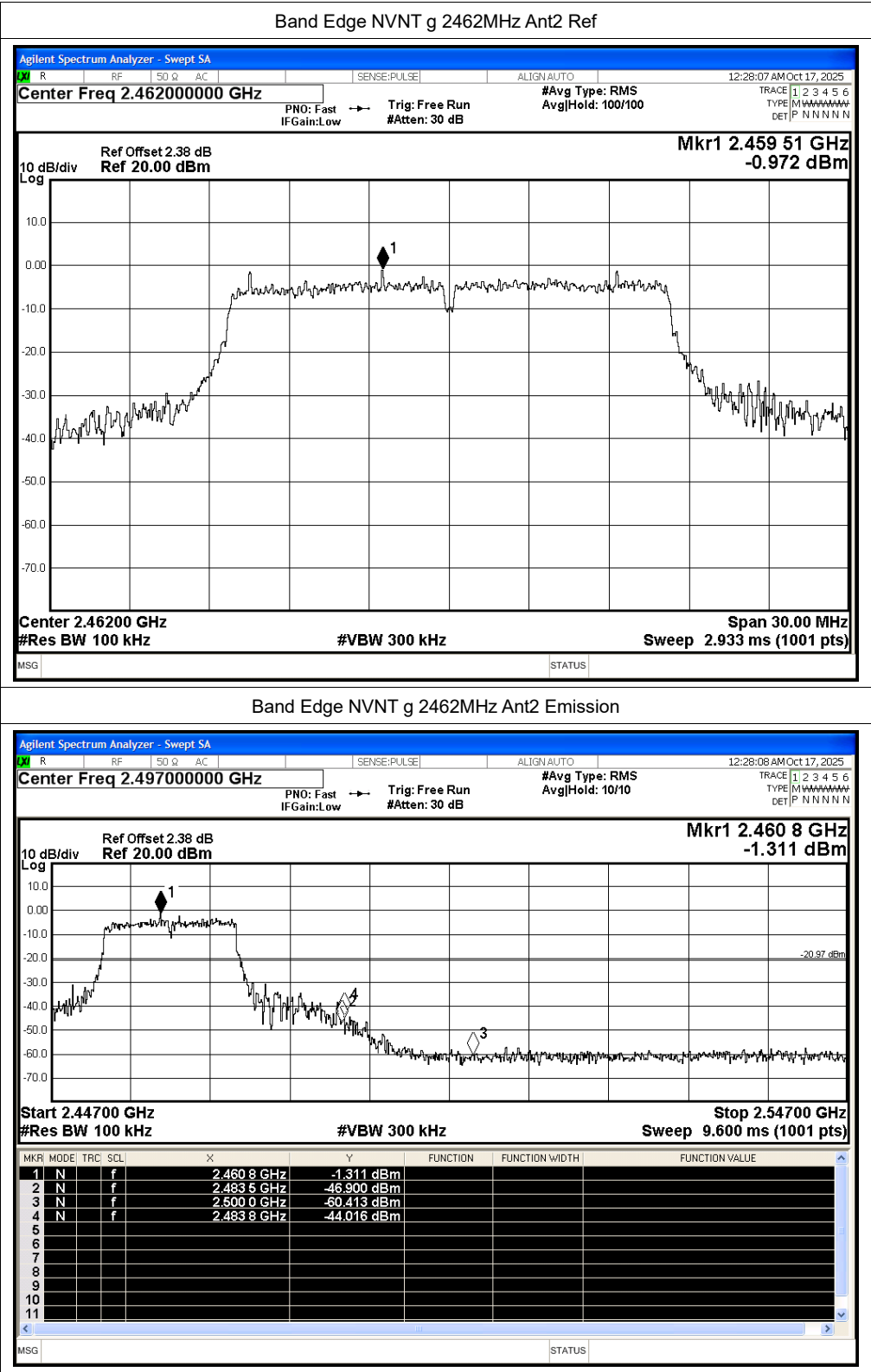


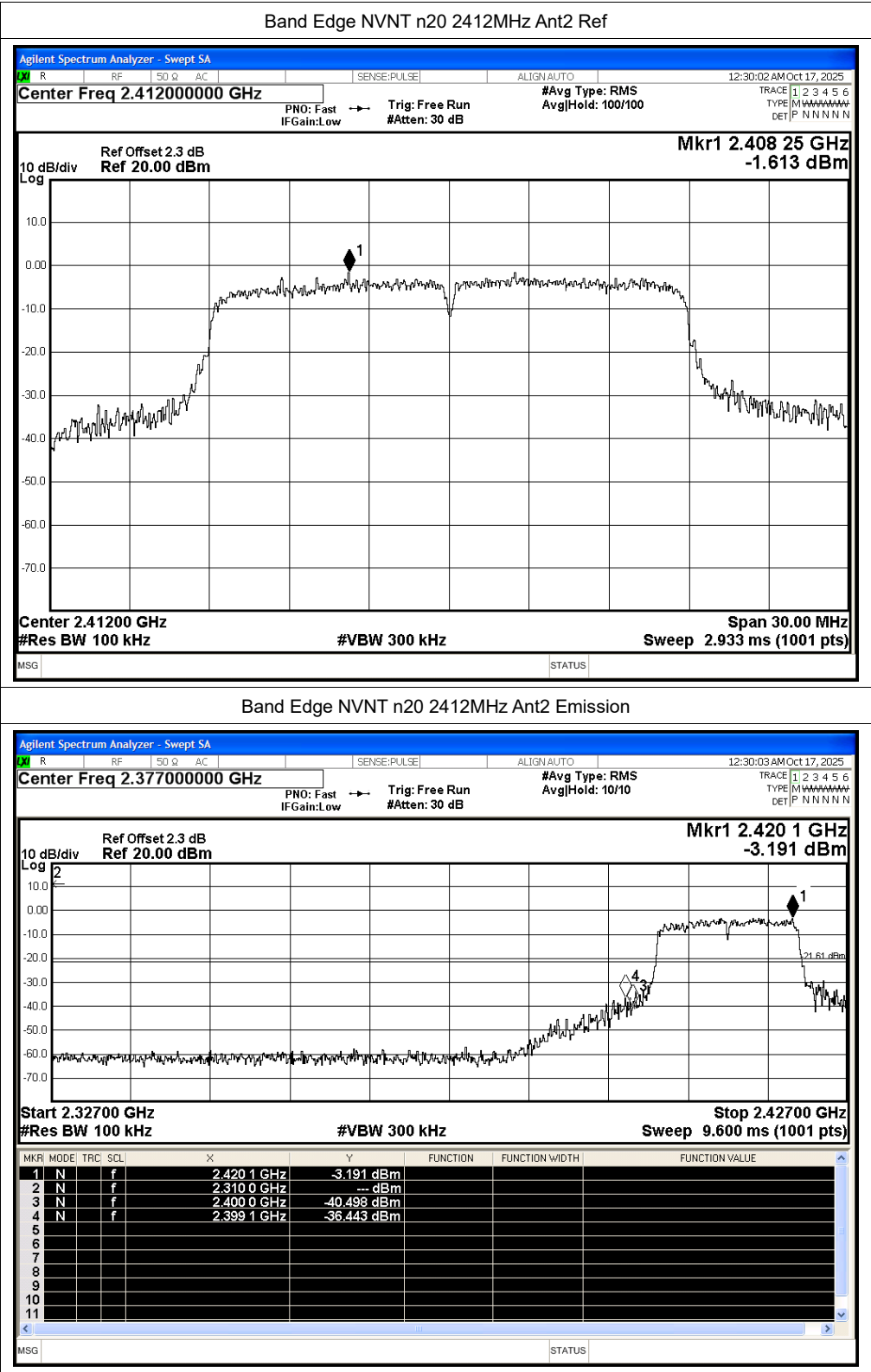
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant2	-50.22	-20	Pass
NVNT	b	2462	Ant2	-59.03	-20	Pass
NVNT	g	2412	Ant2	-34.51	-20	Pass
NVNT	g	2462	Ant2	-43.04	-20	Pass
NVNT	n20	2412	Ant2	-34.83	-20	Pass
NVNT	n20	2462	Ant2	-41.54	-20	Pass
NVNT	n40	2422	Ant2	-39.87	-20	Pass
NVNT	n40	2452	Ant2	-40.35	-20	Pass
NVNT	ax20	2412	Ant2	-30.97	-20	Pass
NVNT	ax20	2462	Ant2	-38.87	-20	Pass
NVNT	ax40	2422	Ant2	-34.38	-20	Pass
NVNT	ax40	2452	Ant2	-36.13	-20	Pass

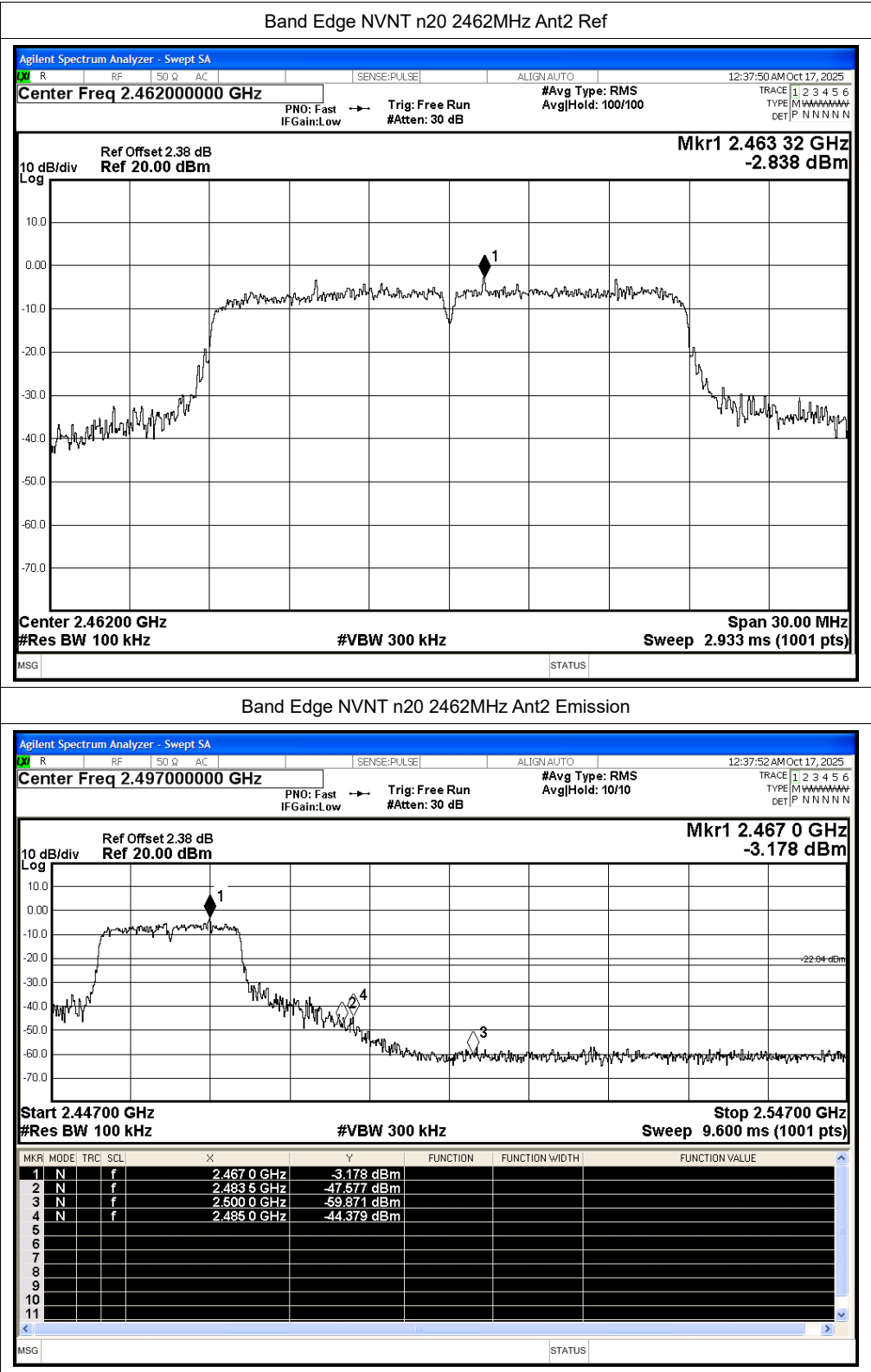


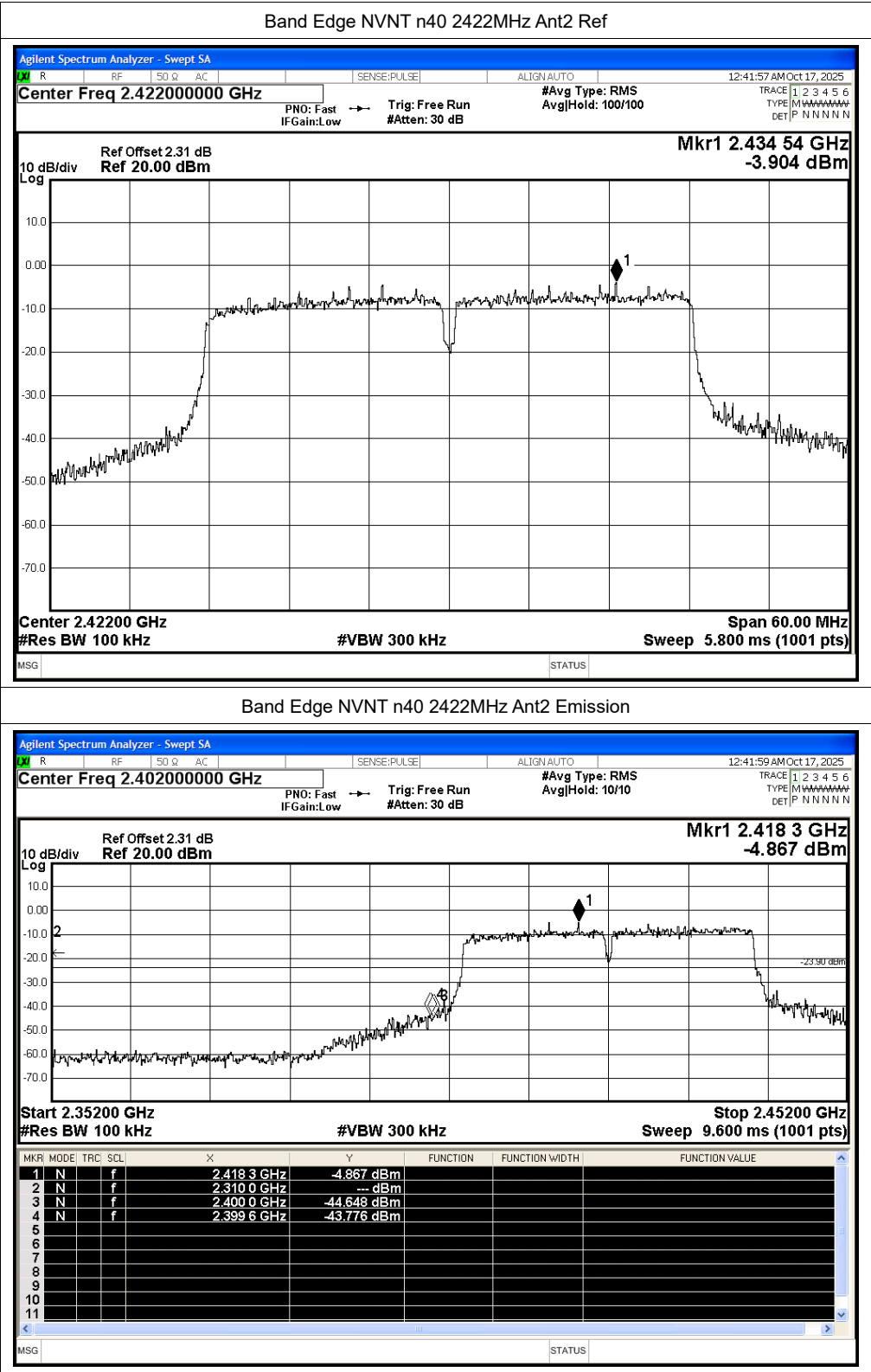


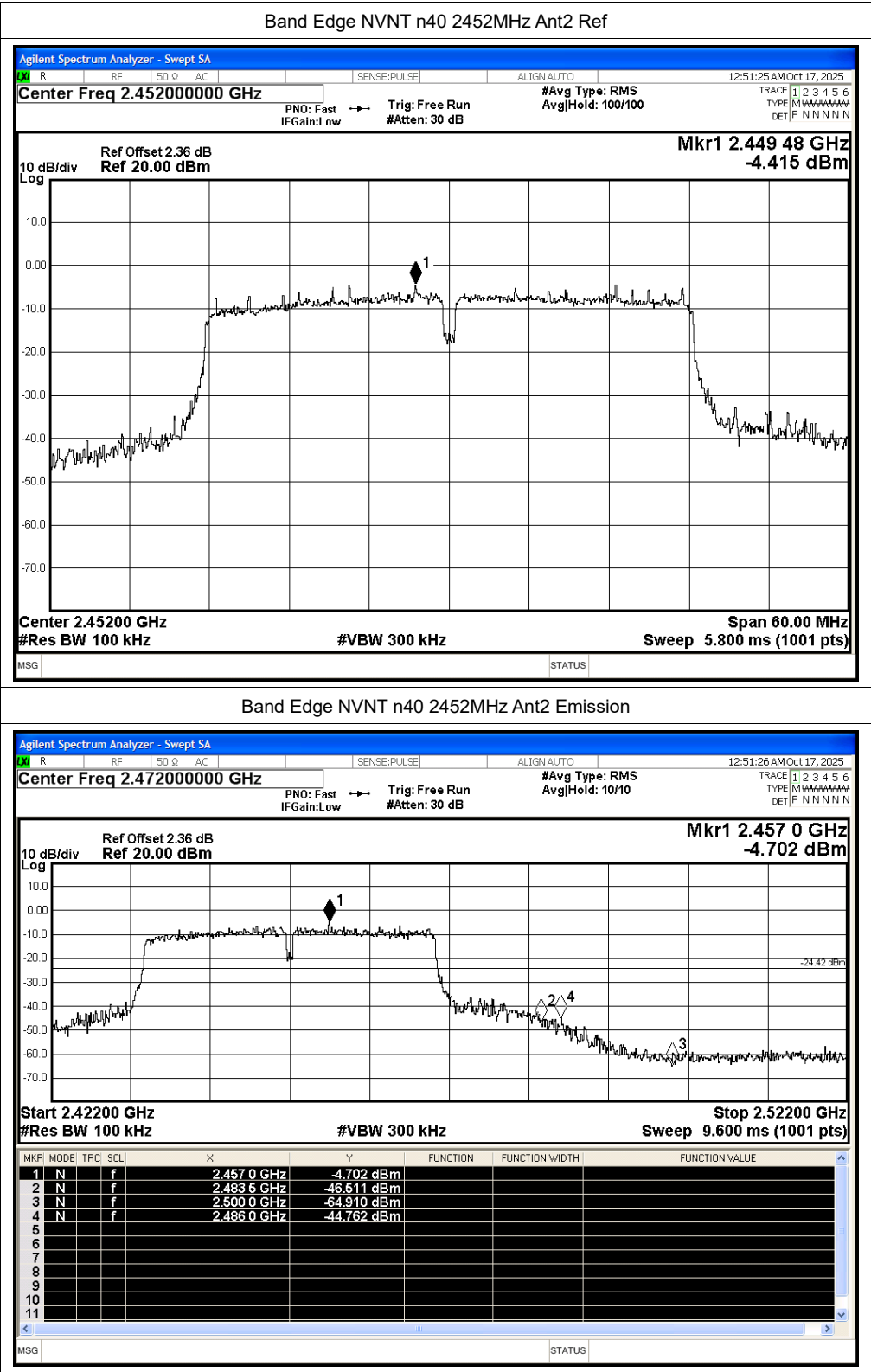


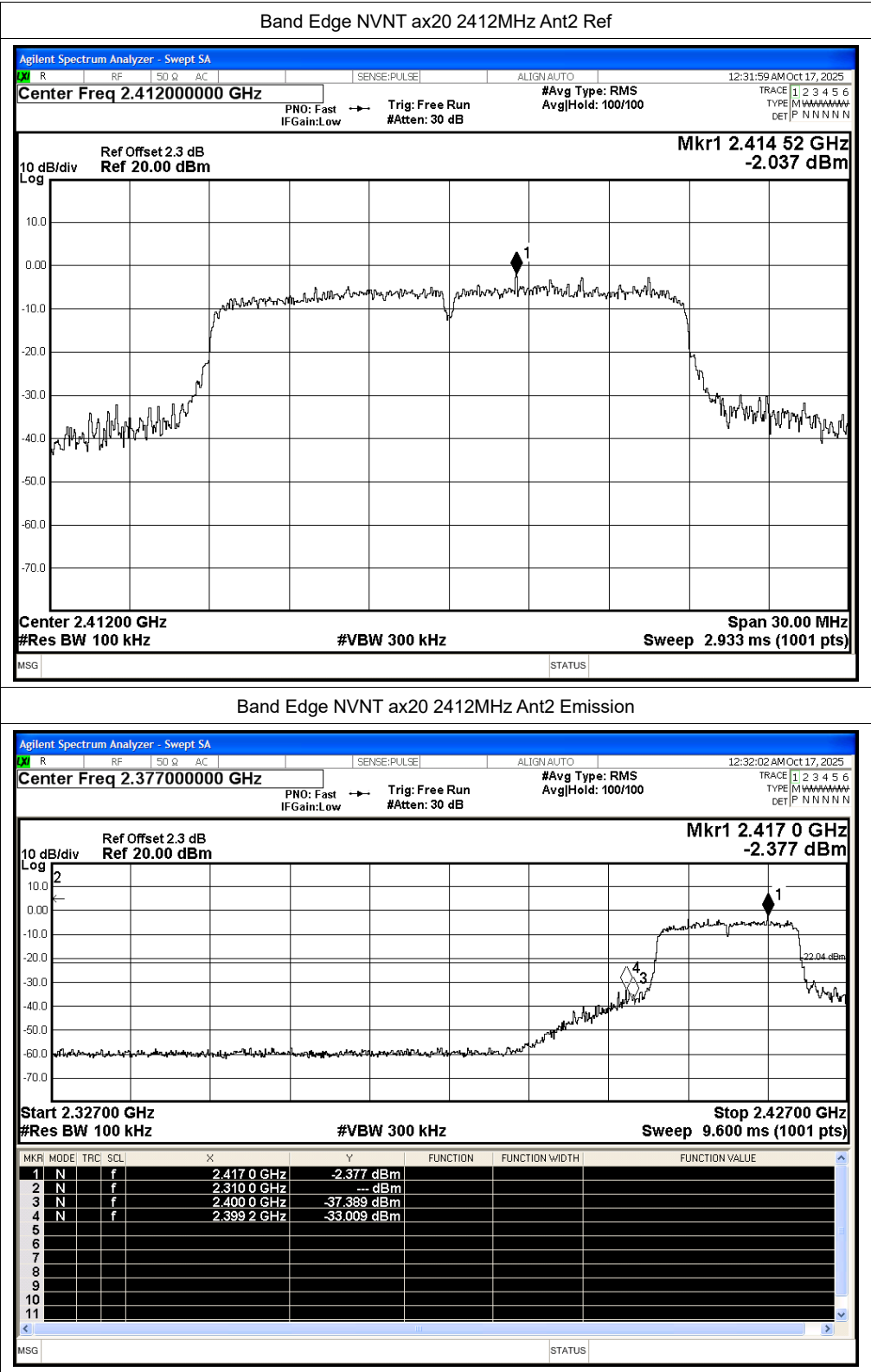


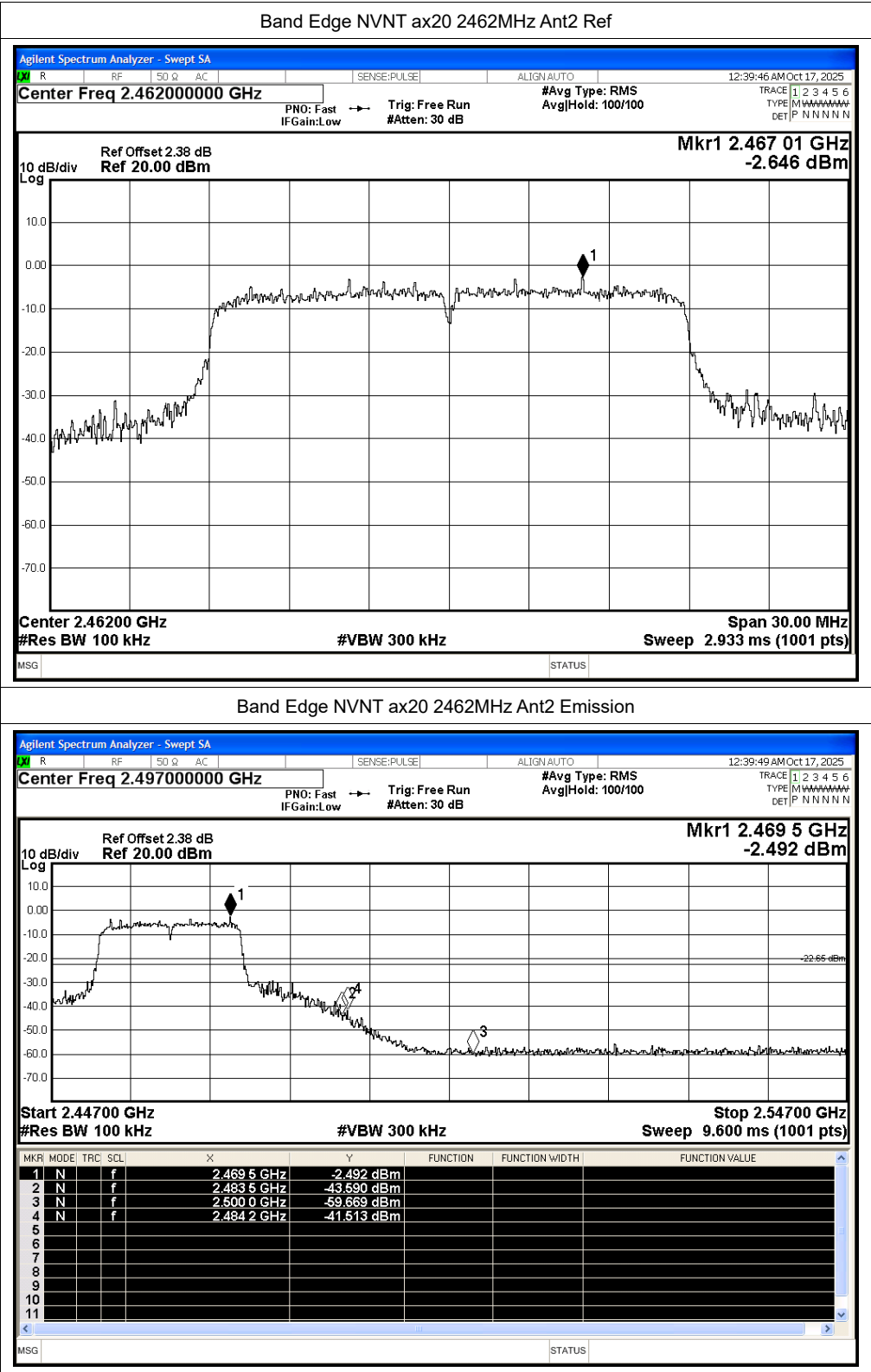


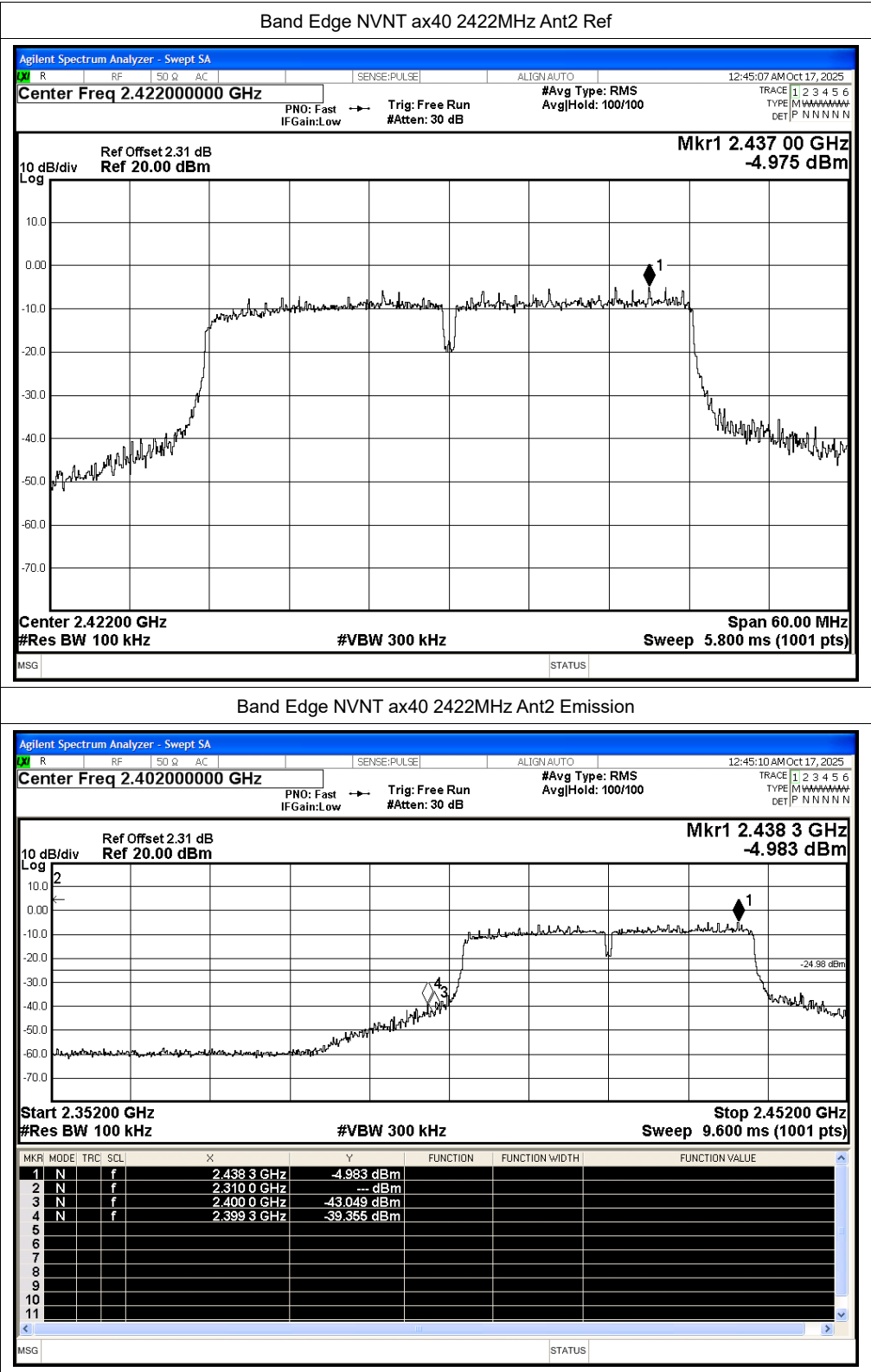


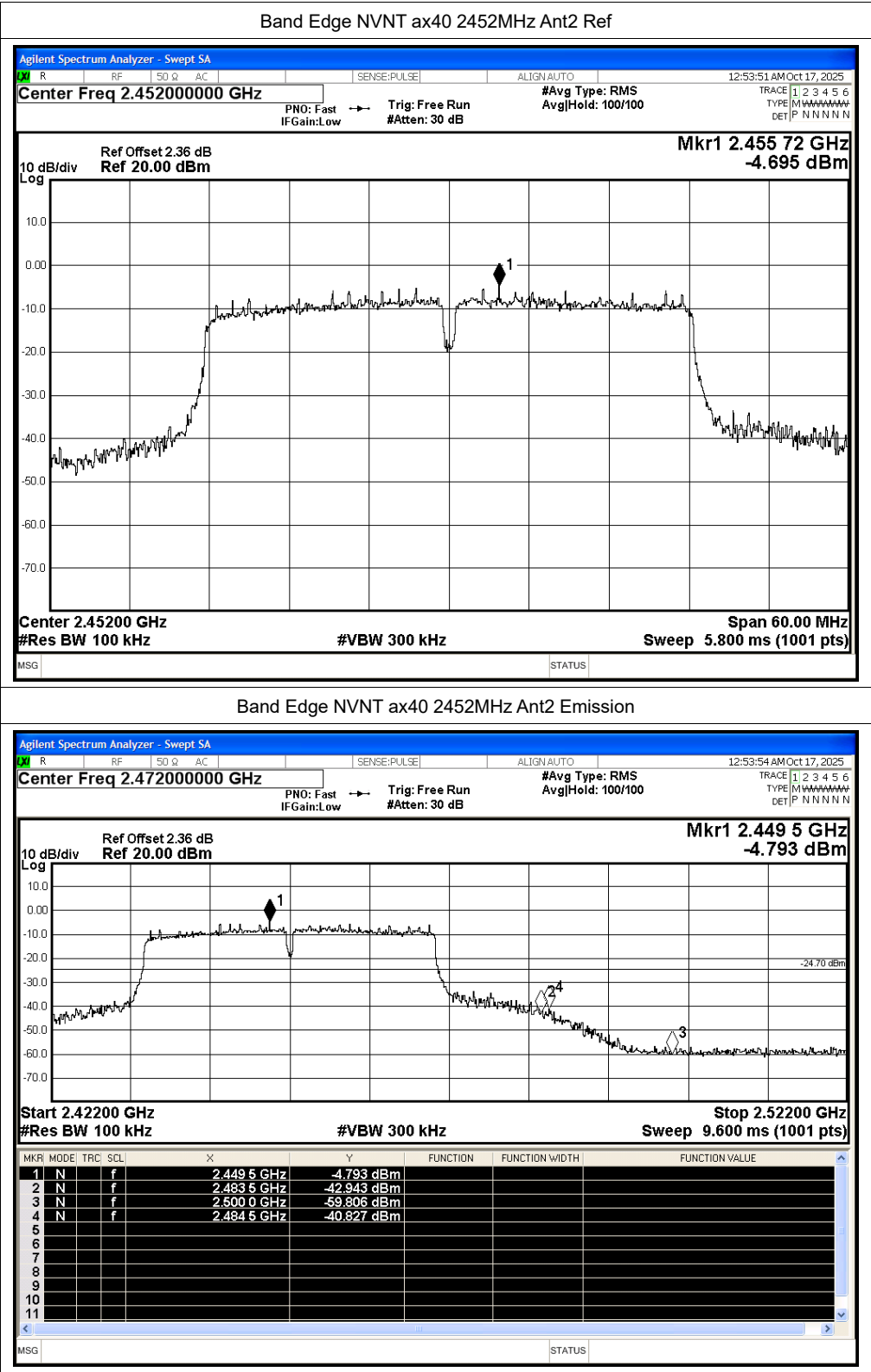












B.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-51.24	-20	Pass
NVNT	b	2437	Ant1	-50.33	-20	Pass
NVNT	b	2462	Ant1	-49.91	-20	Pass
NVNT	g	2412	Ant1	-45.02	-20	Pass
NVNT	g	2437	Ant1	-45.56	-20	Pass
NVNT	g	2462	Ant1	-43.28	-20	Pass
NVNT	n20	2412	Ant1	-43.89	-20	Pass
NVNT	n20	2437	Ant1	-42.89	-20	Pass
NVNT	n20	2462	Ant1	-42.81	-20	Pass
NVNT	n40	2422	Ant1	-41.28	-20	Pass
NVNT	n40	2437	Ant1	-41.37	-20	Pass
NVNT	n40	2452	Ant1	-42.88	-20	Pass
NVNT	ax20	2412	Ant1	-42.68	-20	Pass
NVNT	ax20	2437	Ant1	-41.79	-20	Pass
NVNT	ax20	2462	Ant1	-41.65	-20	Pass
NVNT	ax40	2422	Ant1	-40.32	-20	Pass
NVNT	ax40	2437	Ant1	-39.28	-20	Pass
NVNT	ax40	2452	Ant1	-40.7	-20	Pass



