

Appendix A

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Dash camera

Test Model: S5

Environmental Conditions

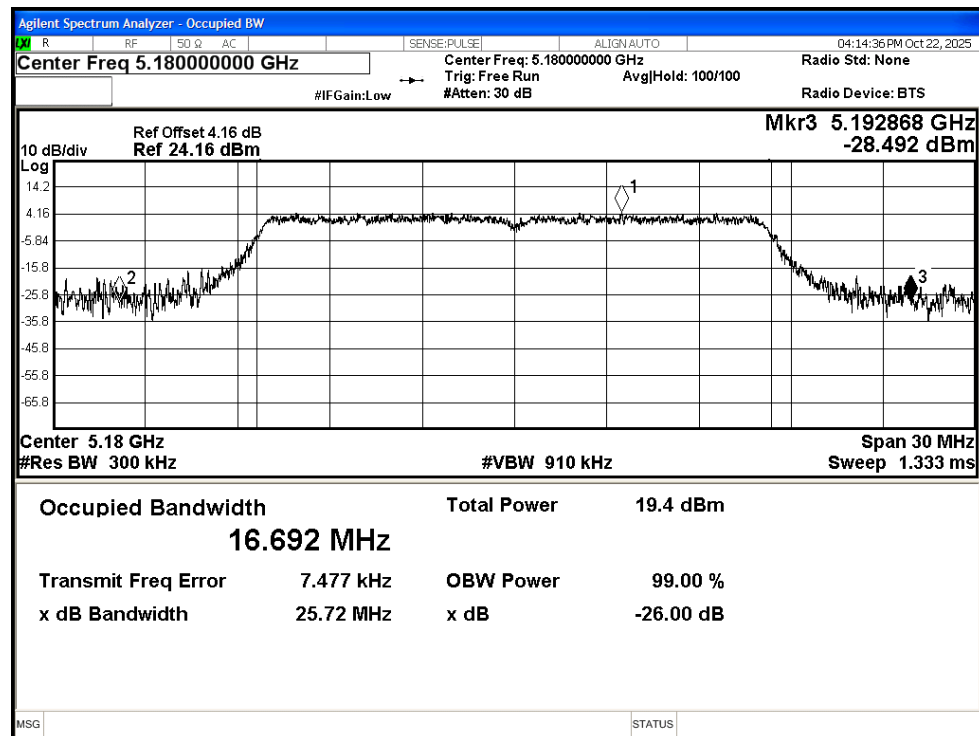
Temperature:	23.2°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

A.1 -26dB Bandwidth

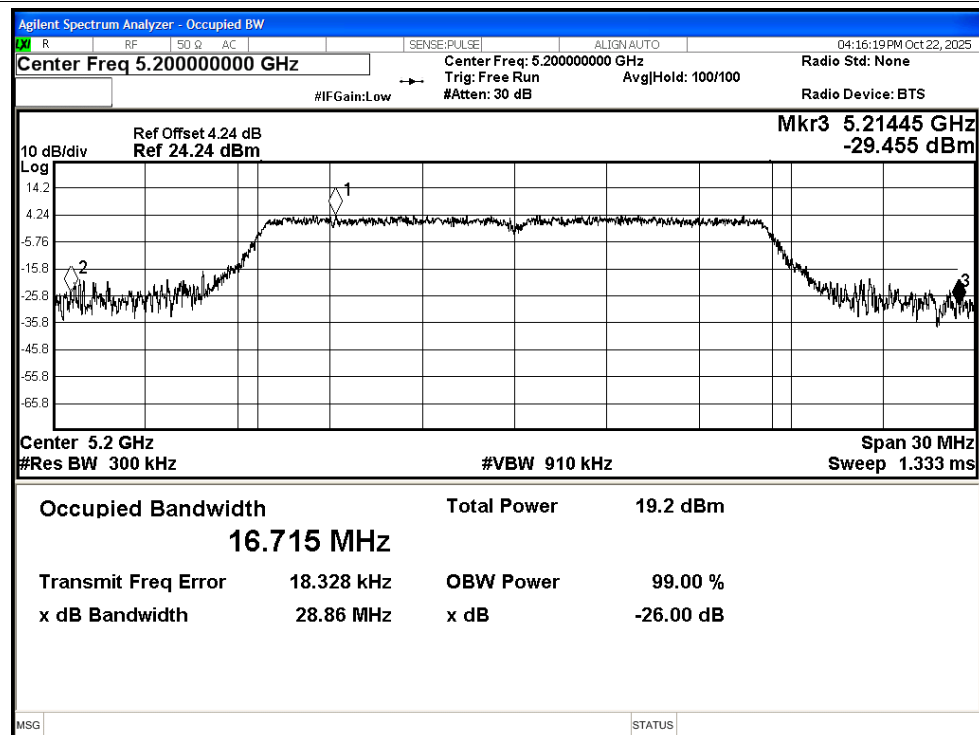
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	25.72	---	Pass
NVNT	a	5200	Ant1	28.863	---	Pass
NVNT	a	5240	Ant1	25.489	---	Pass
NVNT	n20	5180	Ant1	28.714	---	Pass
NVNT	n20	5200	Ant1	28.5	---	Pass
NVNT	n20	5240	Ant1	28.951	---	Pass
NVNT	n40	5190	Ant1	44.974	---	Pass
NVNT	n40	5230	Ant1	45.535	---	Pass

Test Graphs

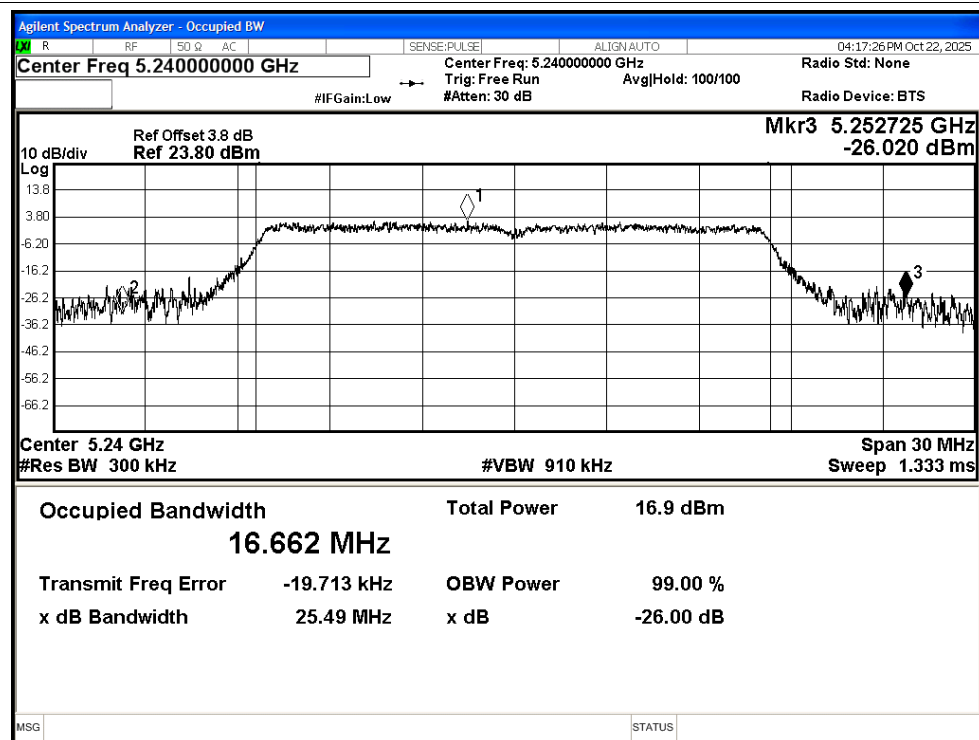
-26dB Bandwidth NVNT a 5180MHz Ant1



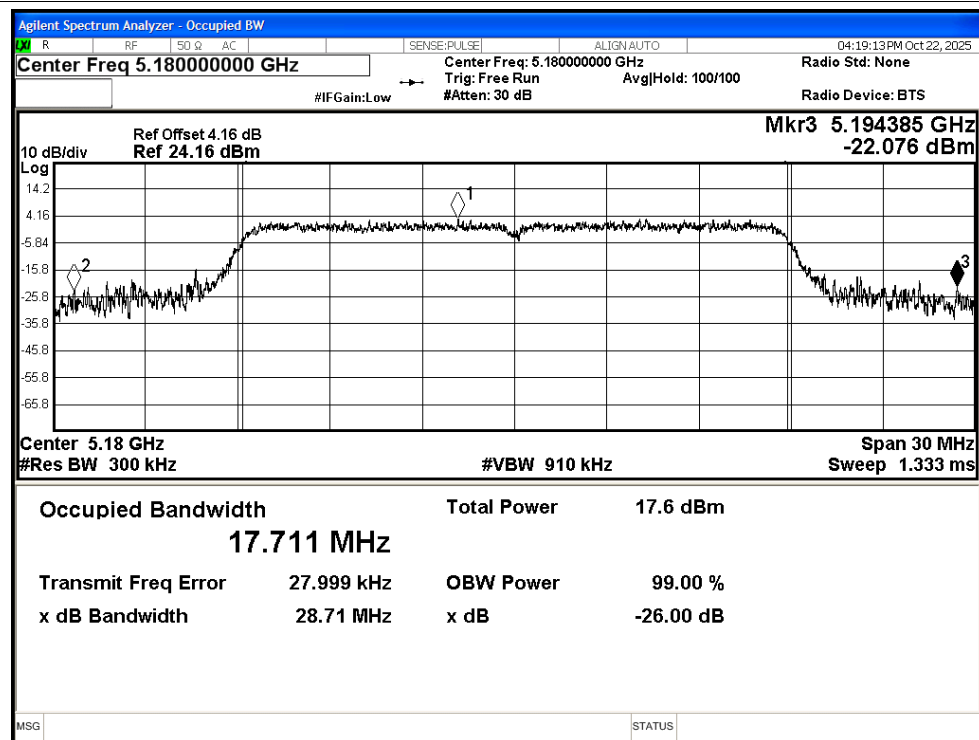
-26dB Bandwidth NVNT a 5200MHz Ant1

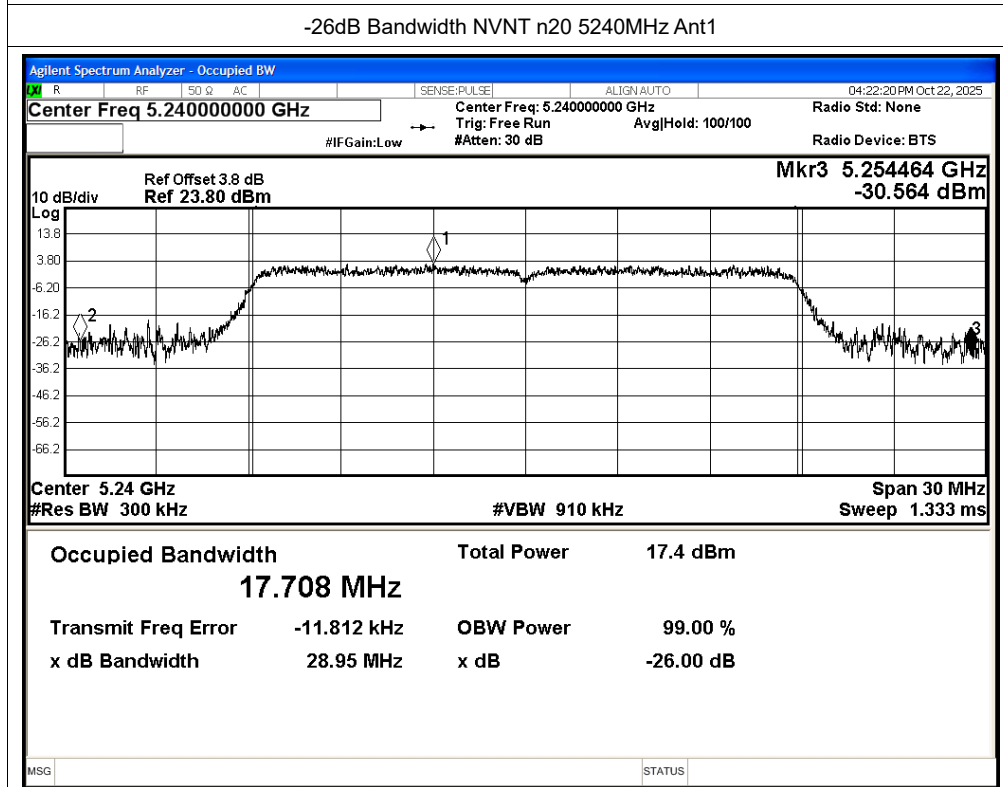
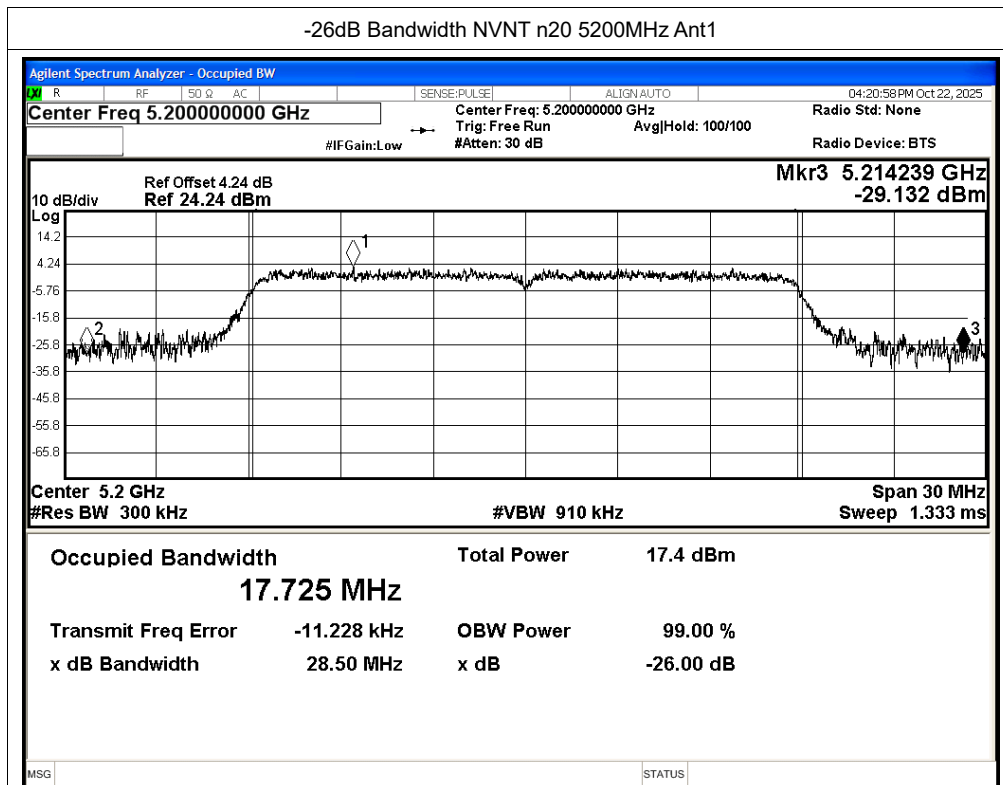


-26dB Bandwidth NVNT a 5240MHz Ant1

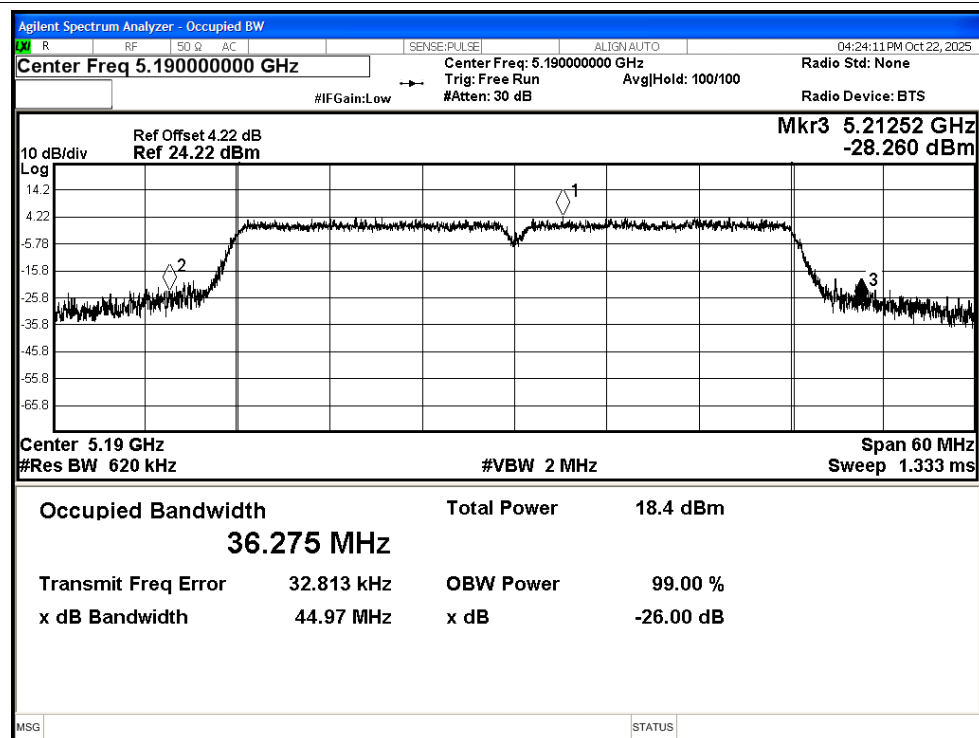


-26dB Bandwidth NVNT n20 5180MHz Ant1

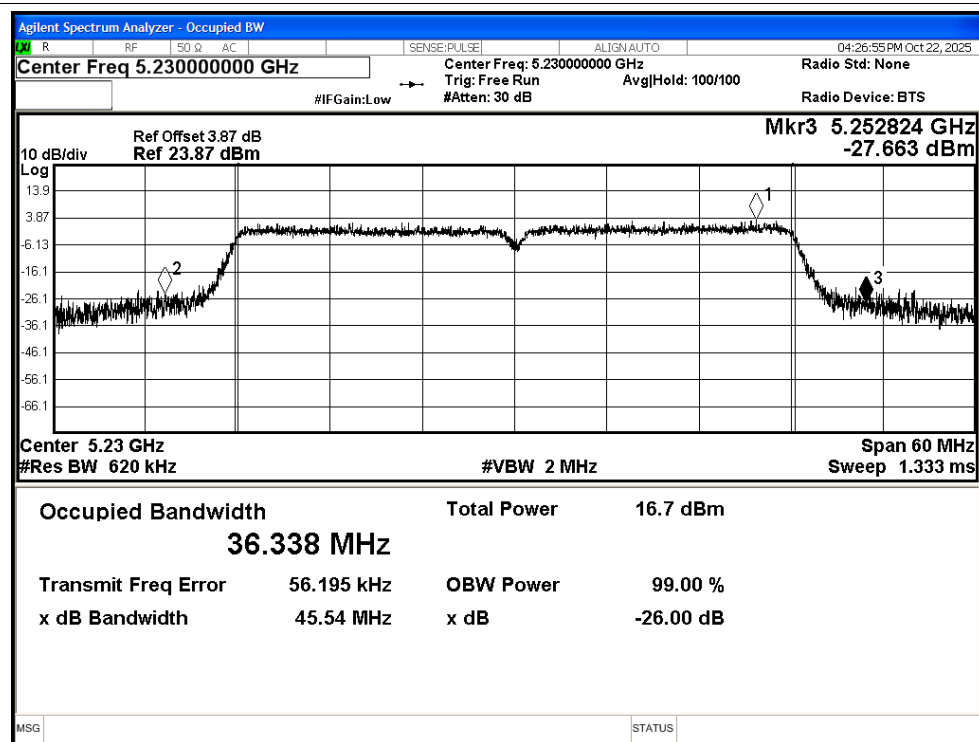




-26dB Bandwidth NVNT n40 5190MHz Ant1



-26dB Bandwidth NVNT n40 5230MHz Ant1



A.2 Maximum Conducted Output Power

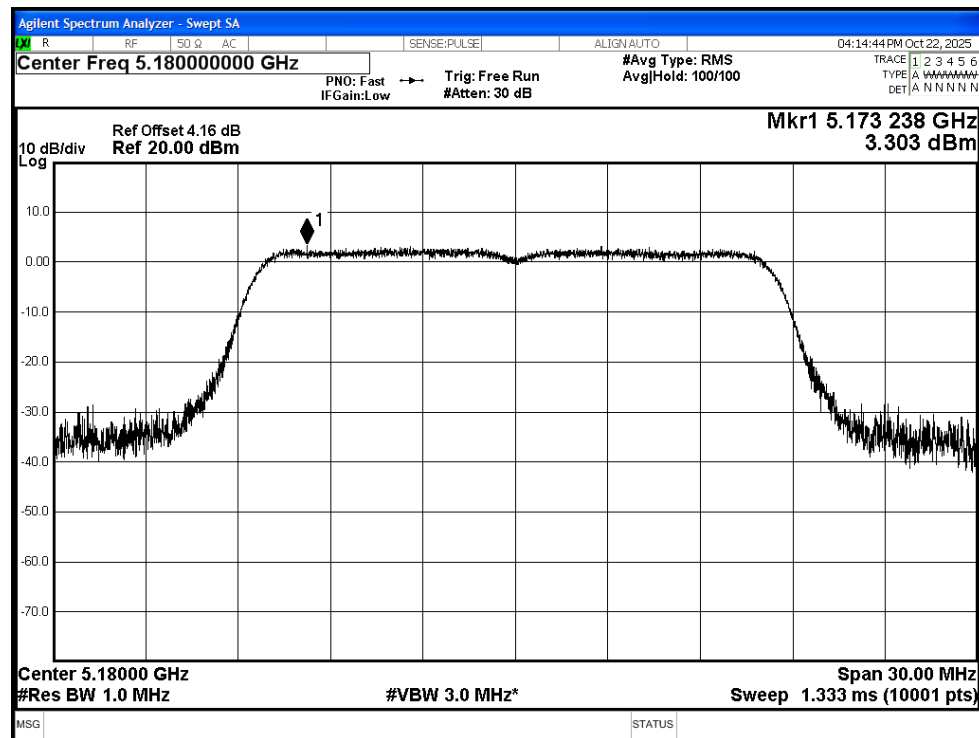
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	13.24	0.24	13.48	24	Pass
NVNT	a	5200	Ant1	13.47	0.24	13.71	24	Pass
NVNT	a	5240	Ant1	11.15	0.24	11.39	24	Pass
NVNT	n20	5180	Ant1	12.05	0.12	12.17	24	Pass
NVNT	n20	5200	Ant1	11.95	0.12	12.07	24	Pass
NVNT	n20	5240	Ant1	11.98	0.12	12.1	24	Pass
NVNT	n40	5190	Ant1	11.89	0.24	12.13	24	Pass
NVNT	n40	5230	Ant1	10.34	0.24	10.58	24	Pass

A.3 Maximum Power Spectral Density Level

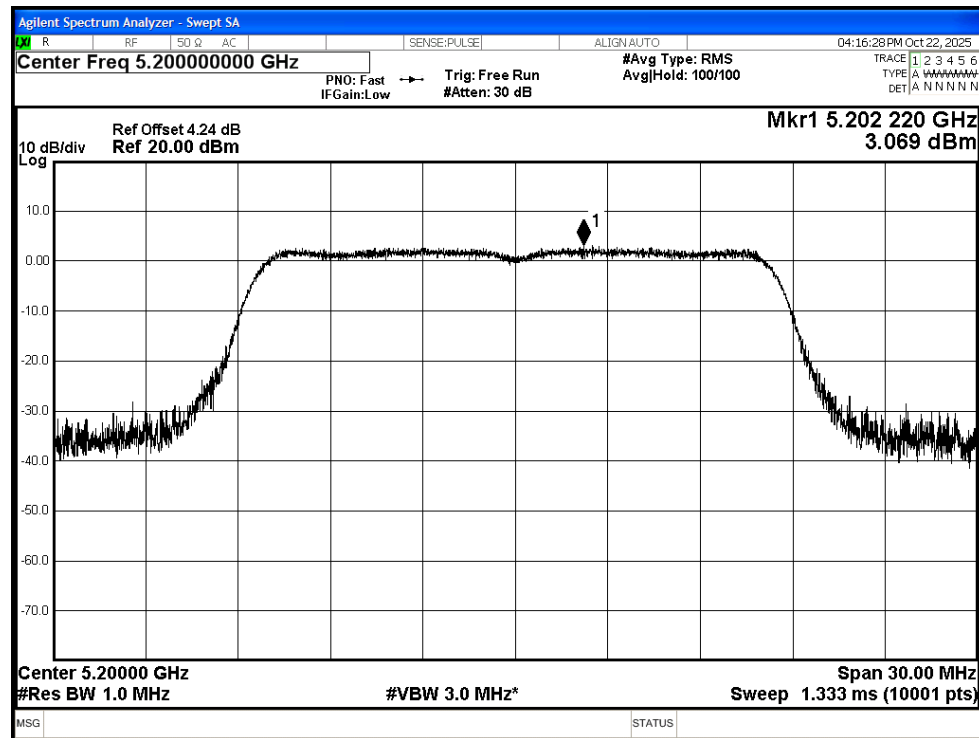
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant1	3.3	0.24	3.54	11	Pass
NVNT	a	5200	Ant1	3.07	0.24	3.31	11	Pass
NVNT	a	5240	Ant1	0.75	0.24	0.99	11	Pass
NVNT	n20	5180	Ant1	1.21	0.12	1.33	11	Pass
NVNT	n20	5200	Ant1	1.31	0.12	1.43	11	Pass
NVNT	n20	5240	Ant1	1.29	0.12	1.41	11	Pass
NVNT	n40	5190	Ant1	-1.81	0.24	-1.57	11	Pass
NVNT	n40	5230	Ant1	-2.96	0.24	-2.72	11	Pass

Test Graphs

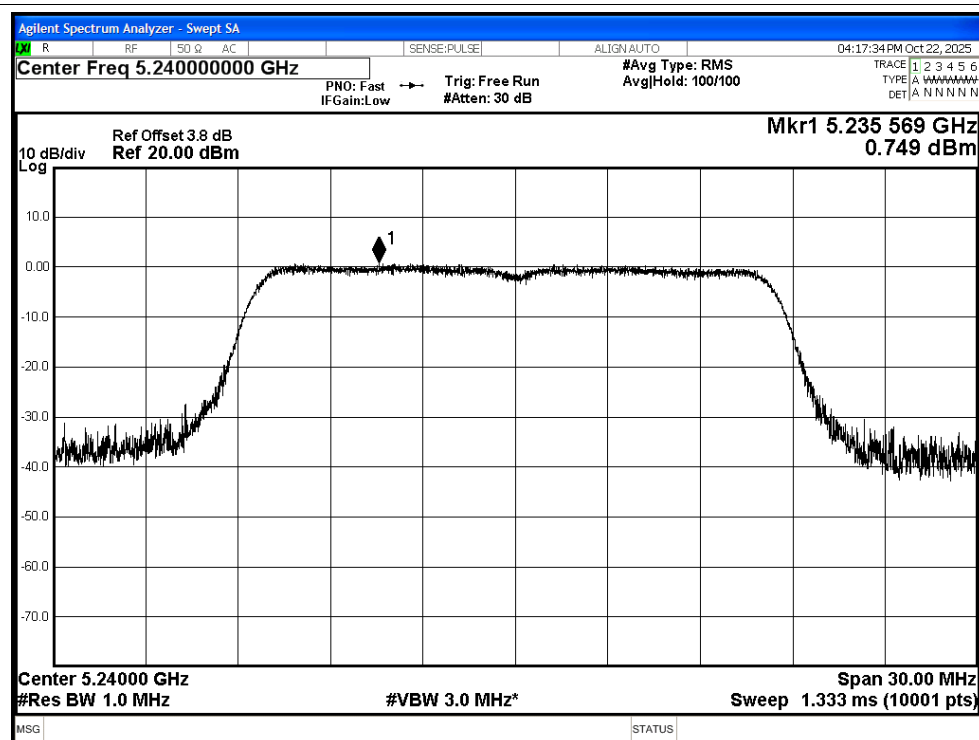
PSD NVNT a 5180MHz Ant1



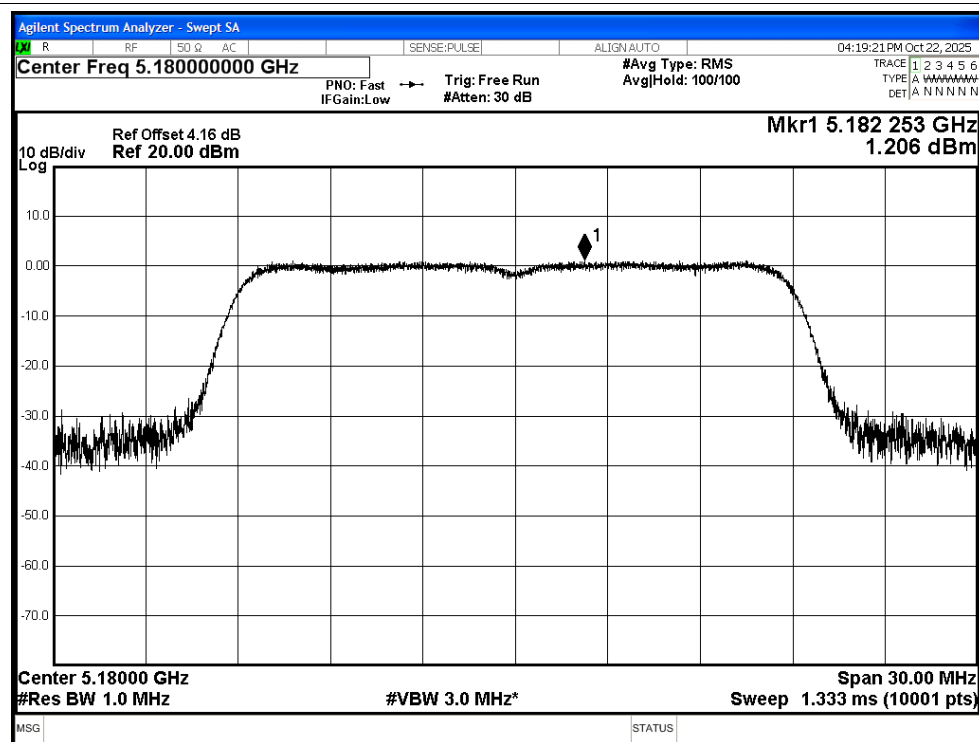
PSD NVNT a 5200MHz Ant1

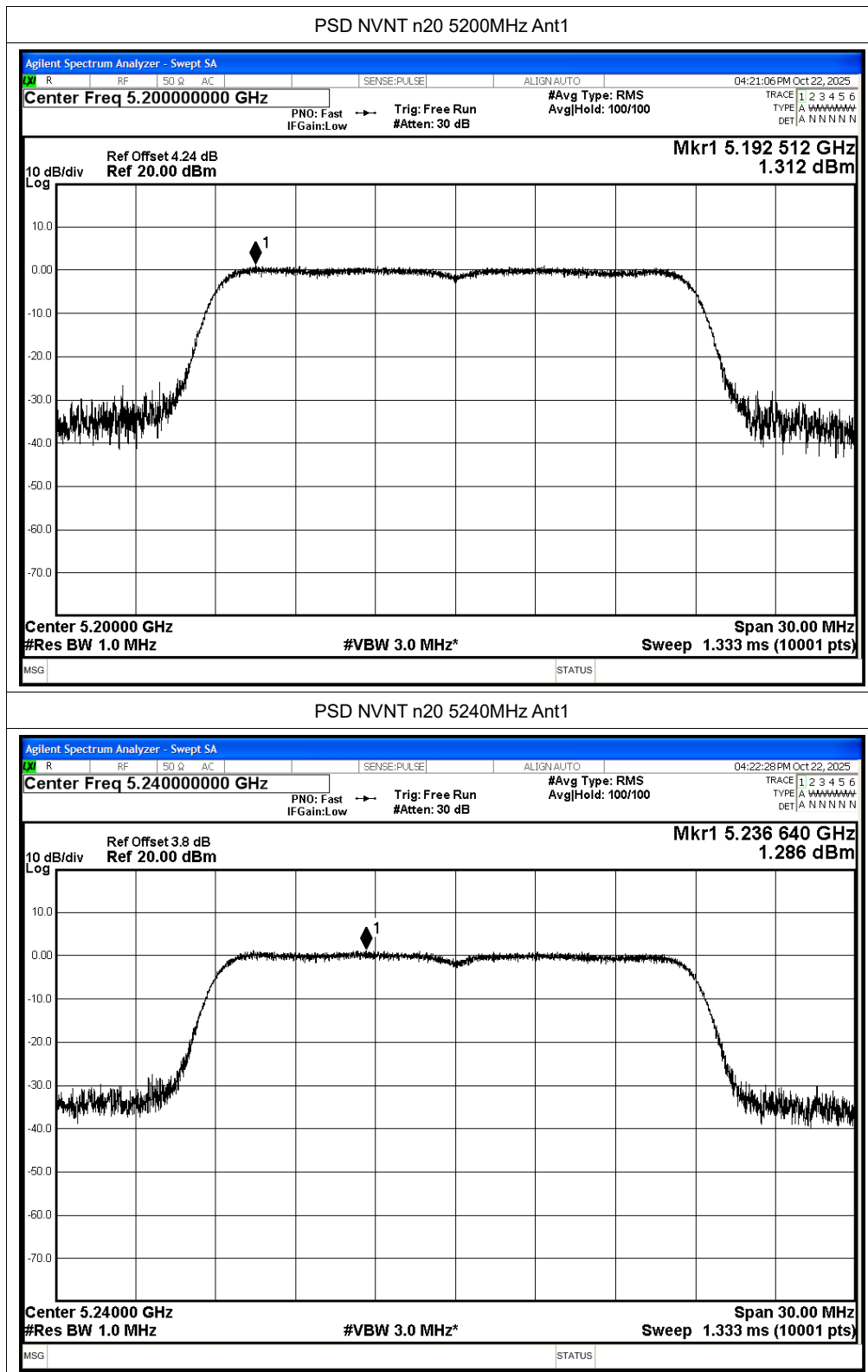


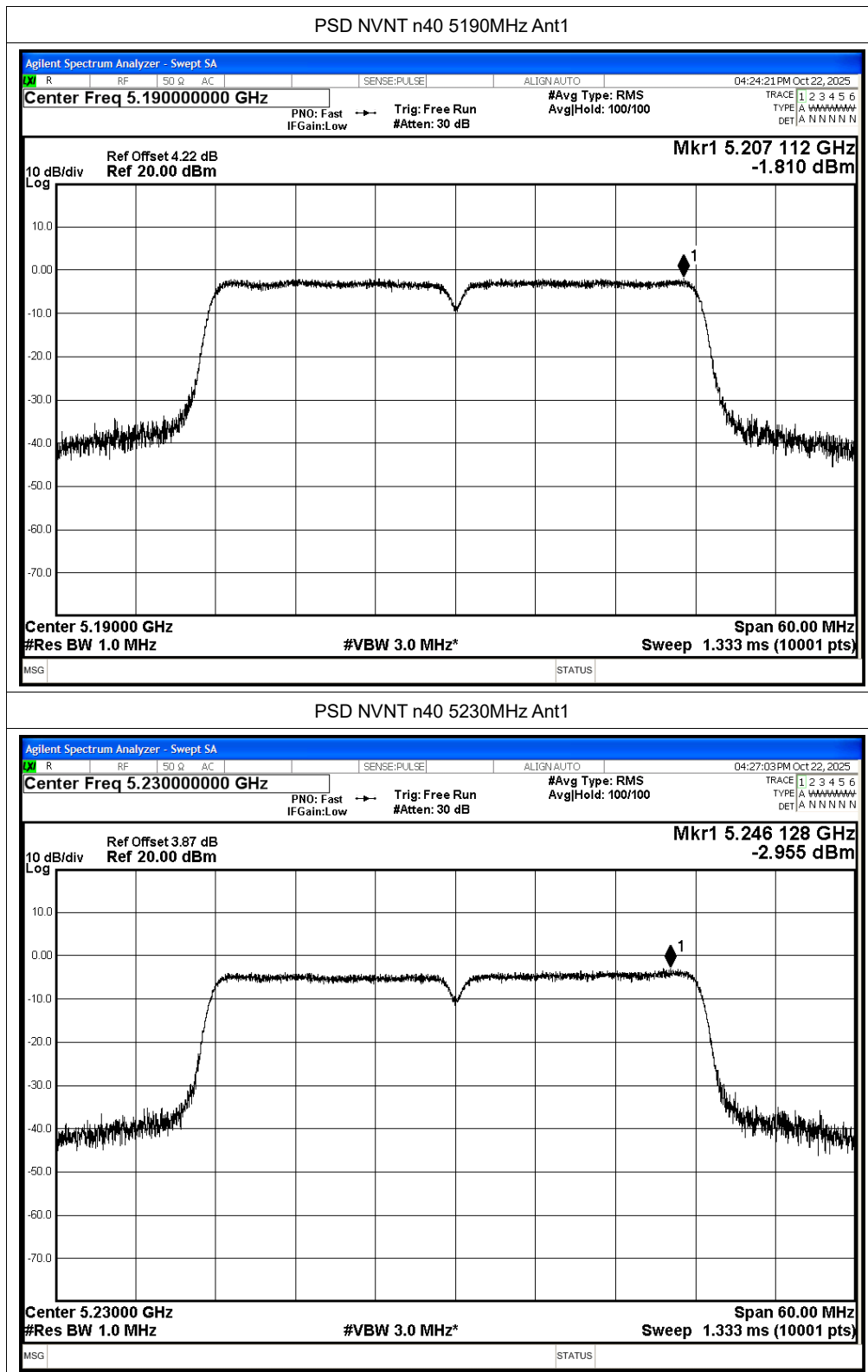
PSD NVNT a 5240MHz Ant1



PSD NVNT n20 5180MHz Ant1

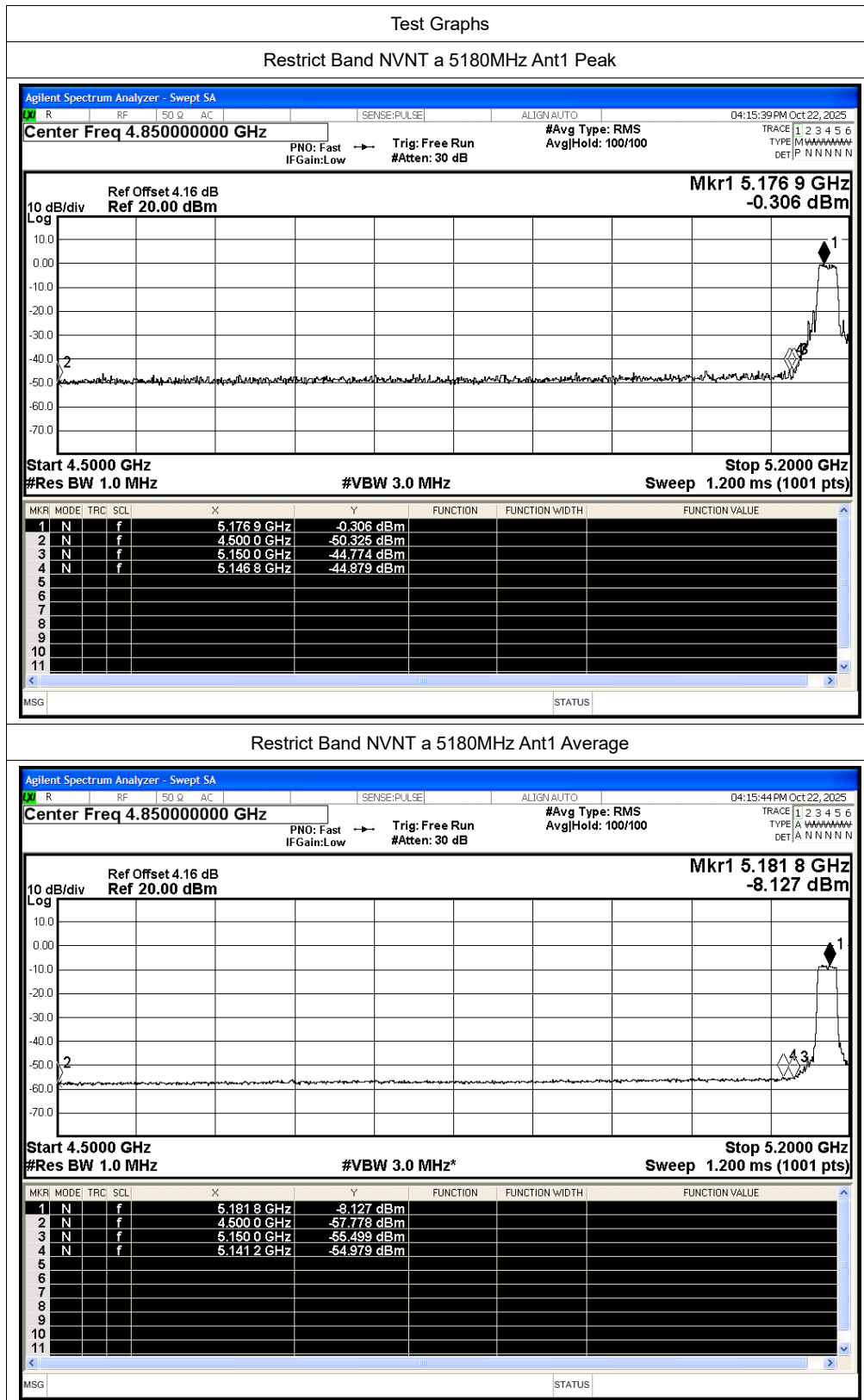




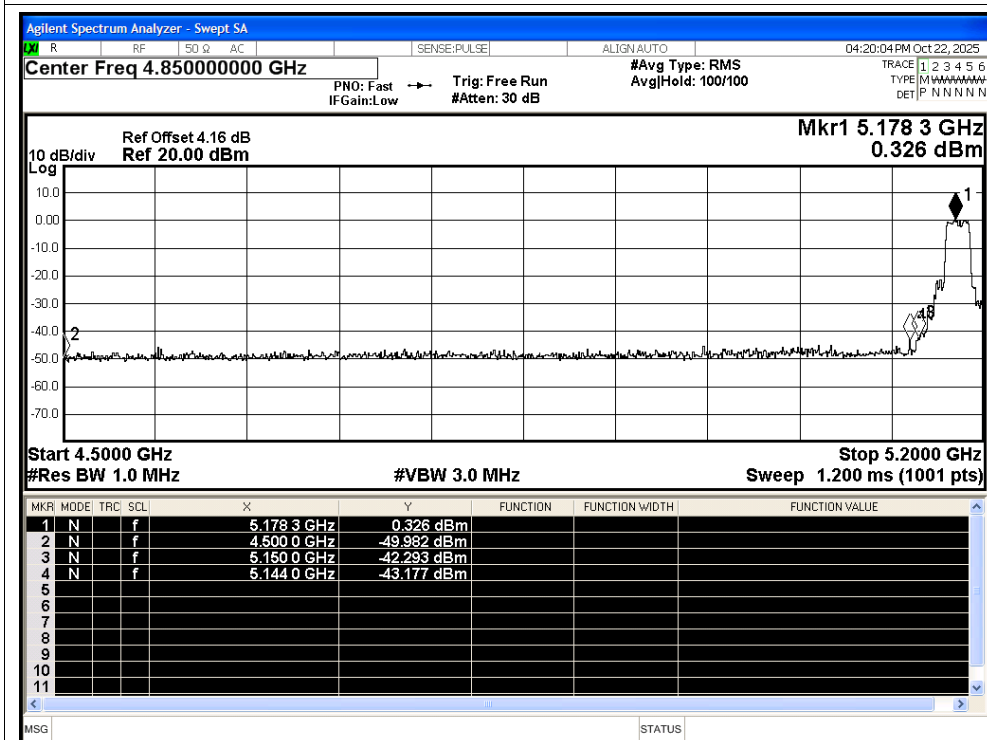


A.4 Restrict Band

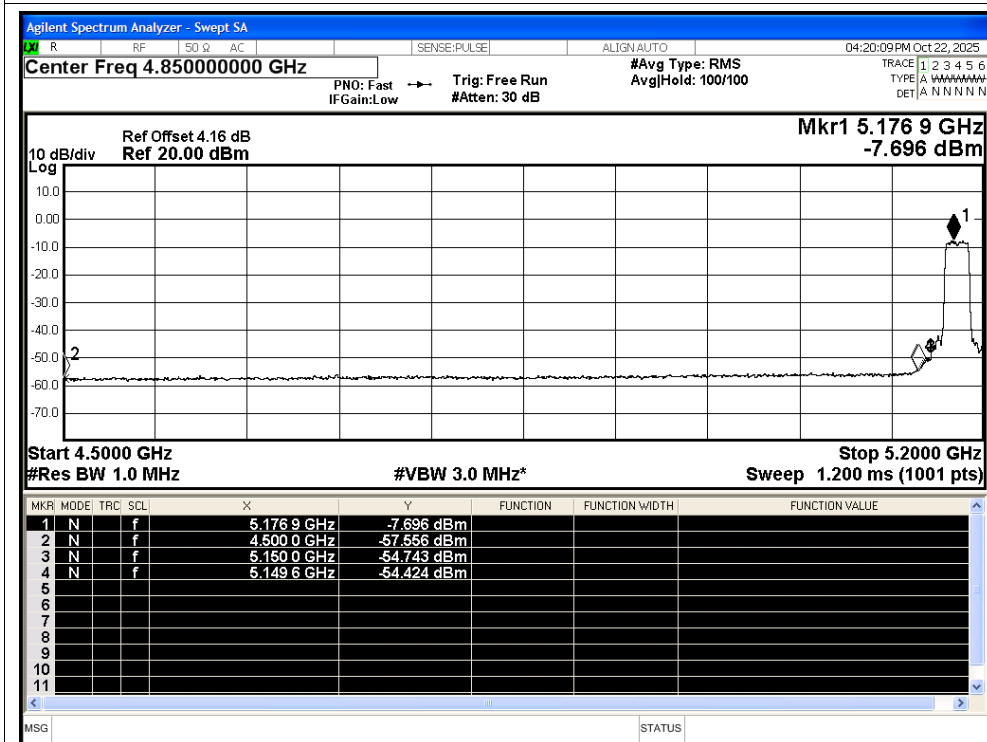
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5180	Ant1	4500	-50.33	2.62	-	47.52	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-57.78	2.62	0.24	40.31	Average	54	Pass
NVNT	a	5180	Ant1	5146.8	-44.88	2.62	-	52.97	Peak	68.2	Pass
NVNT	a	5180	Ant1	5141.2	-54.98	2.62	0.24	43.11	Average	54	Pass
NVNT	a	5180	Ant1	5150	-44.77	2.62	-	53.08	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-55.5	2.62	0.24	42.59	Average	54	Pass
NVNT	a	5240	Ant1	5350	-48.93	2.62	-	48.92	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-57.24	2.62	0.24	40.85	Average	54	Pass
NVNT	a	5240	Ant1	5430.96	-45.4	2.62	-	52.45	Peak	68.2	Pass
NVNT	a	5240	Ant1	5409.12	-56.39	2.62	0.24	41.70	Average	54	Pass
NVNT	a	5240	Ant1	5460	-48.56	2.62	-	49.29	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-56.89	2.62	0.24	41.20	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-49.98	2.62	-	47.87	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-57.56	2.62	0.12	40.41	Average	54	Pass
NVNT	n20	5180	Ant1	5144	-43.18	2.62	-	54.67	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5149.6	-54.42	2.62	0.12	43.55	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-42.29	2.62	-	55.56	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-54.74	2.62	0.12	43.23	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-48.7	2.62	-	49.15	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-57.5	2.62	0.12	40.47	Average	54	Pass
NVNT	n20	5240	Ant1	5357.28	-45.45	2.62	-	52.40	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5383.68	-56.42	2.62	0.12	41.55	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-49.47	2.62	-	48.38	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-56.77	2.62	0.12	41.20	Average	54	Pass
NVNT	n40	5190	Ant1	4500	-49.89	2.62	-	47.96	Peak	68.2	Pass
NVNT	n40	5190	Ant1	4500	-57.35	2.62	0.24	40.74	Average	54	Pass
NVNT	n40	5190	Ant1	5147.51	-43.59	2.62	-	54.26	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5149.7	-54.21	2.62	0.24	43.88	Average	54	Pass
NVNT	n40	5190	Ant1	5150	-44.38	2.62	-	53.47	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5150	-54.21	2.62	0.24	43.88	Average	54	Pass
NVNT	n40	5230	Ant1	5350	-48.66	2.62	-	49.19	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5350	-56.65	2.62	0.24	41.44	Average	54	Pass
NVNT	n40	5230	Ant1	5387.37	-46.26	2.62	-	51.59	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5399.52	-56.36	2.62	0.24	41.73	Average	54	Pass
NVNT	n40	5230	Ant1	5460	-49.26	2.62	-	48.59	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5460	-56.94	2.62	0.24	41.15	Average	54	Pass



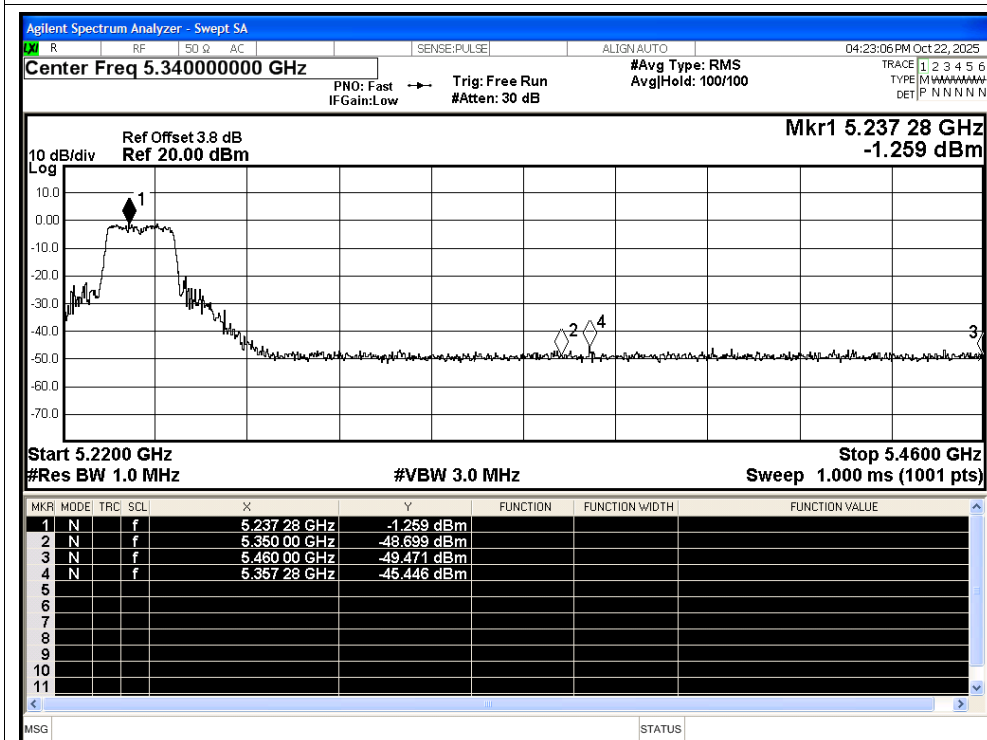
Restrict Band NVNT n20 5180MHz Ant1 Peak



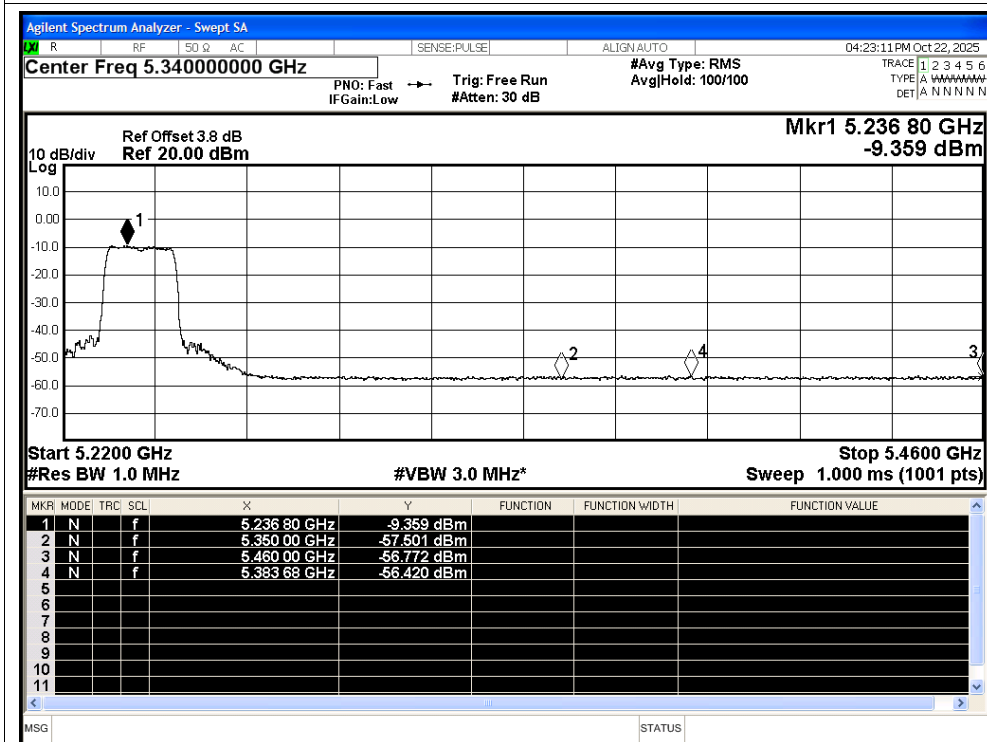
Restrict Band NVNT n20 5180MHz Ant1 Average



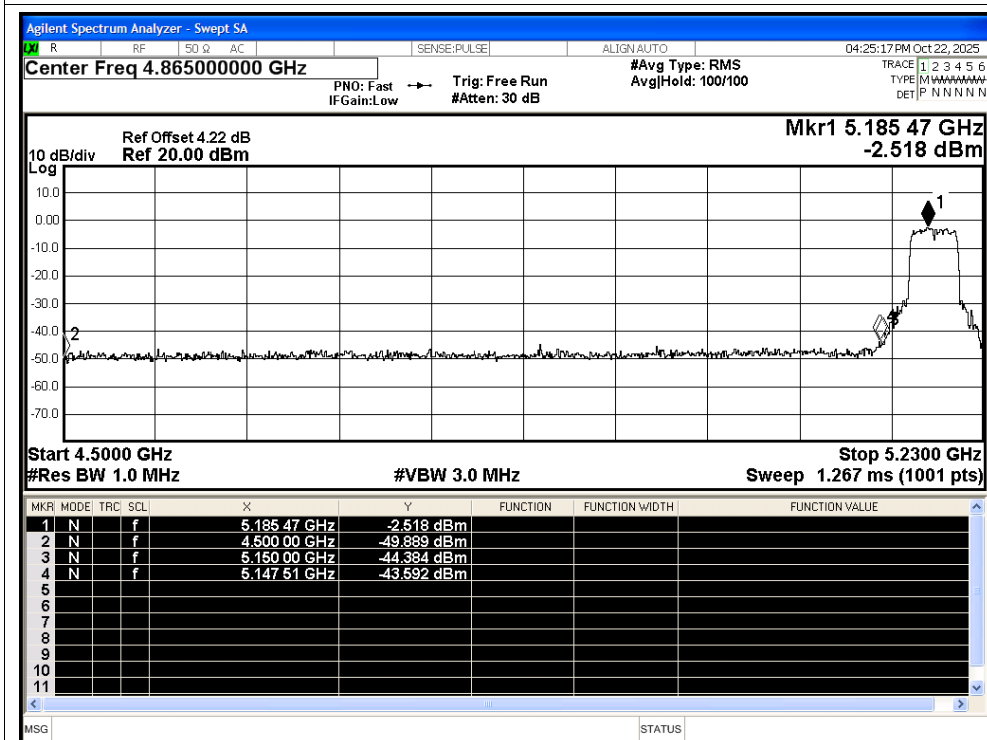
Restrict Band NVNT n20 5240MHz Ant1 Peak



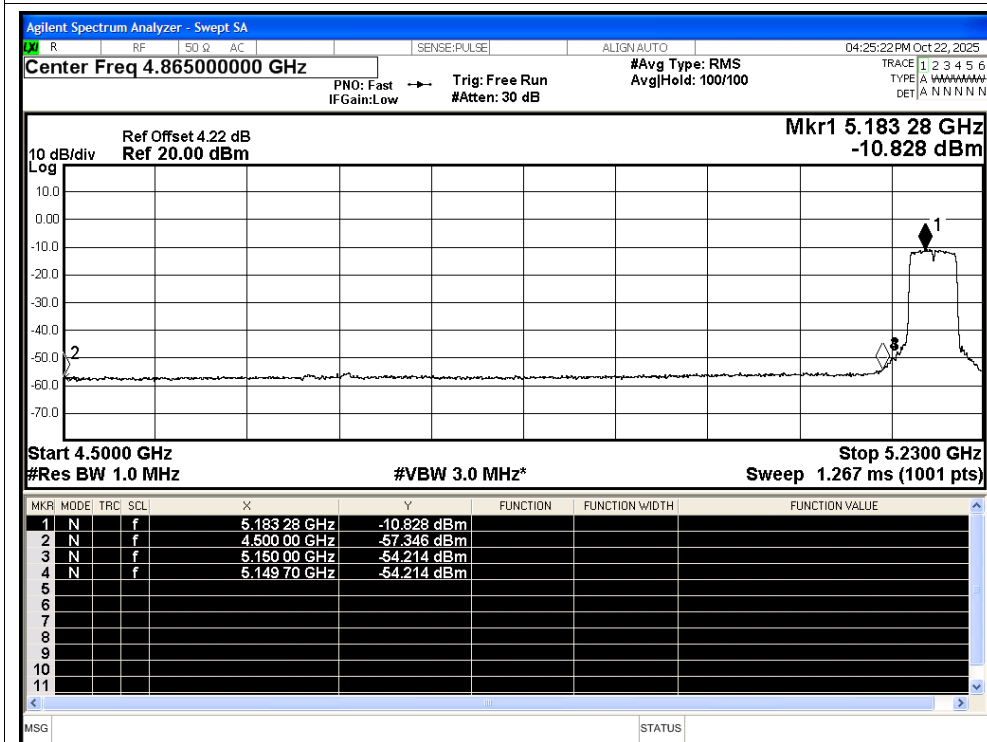
Restrict Band NVNT n20 5240MHz Ant1 Average



Restrict Band NVNT n40 5190MHz Ant1 Peak



Restrict Band NVNT n40 5190MHz Ant1 Average

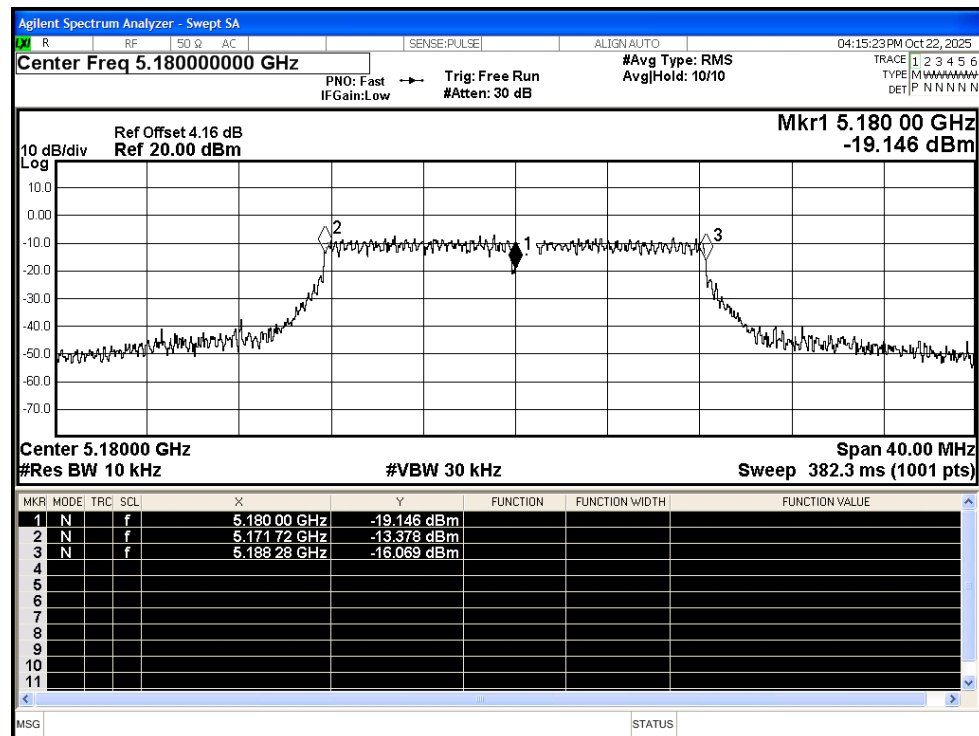


A.5 Frequency Stability

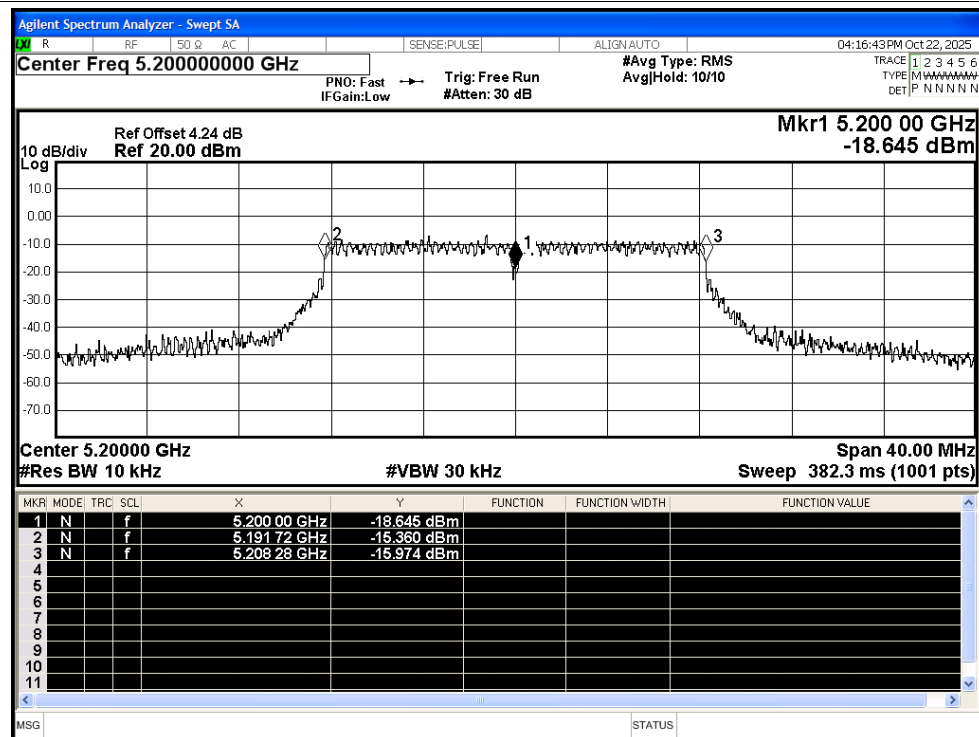
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5180	0	0	25	Pass
NVNT	a	5200	Ant1	5200	0	0	25	Pass
NVNT	a	5240	Ant1	5240	0	0	25	Pass
NVNT	n20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	n20	5200	Ant1	5200	0	0	25	Pass
NVNT	n20	5240	Ant1	5240	0	0	25	Pass
NVNT	n40	5190	Ant1	5190	0	0	25	Pass
NVNT	n40	5230	Ant1	5230	0	0	25	Pass

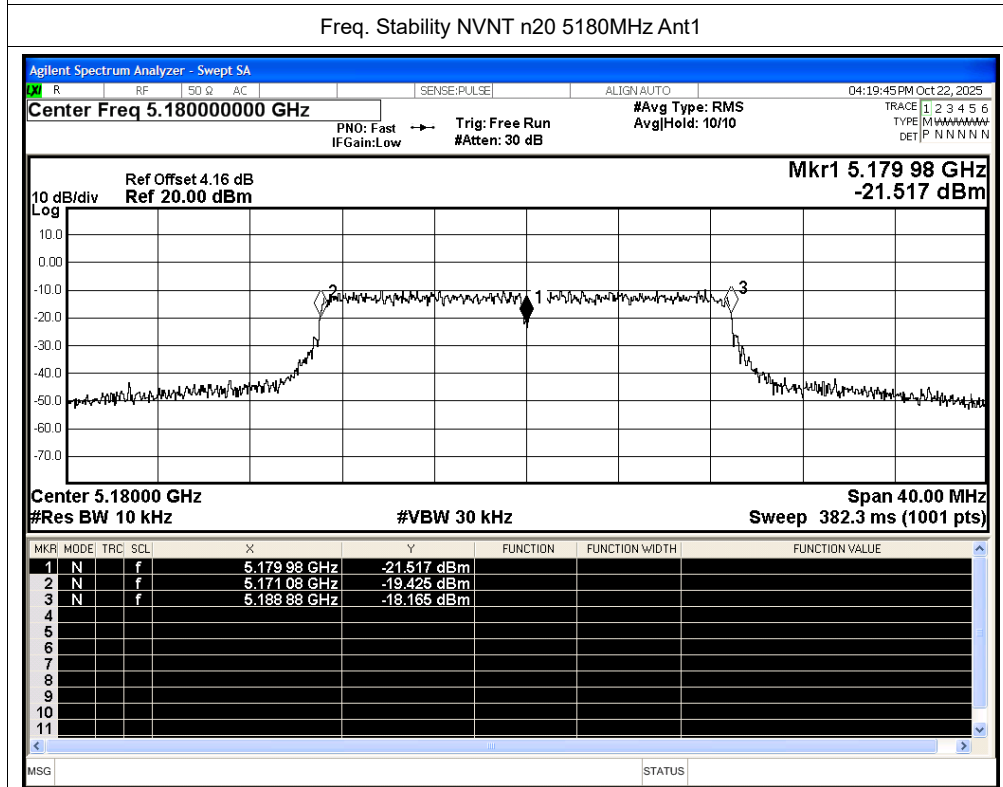
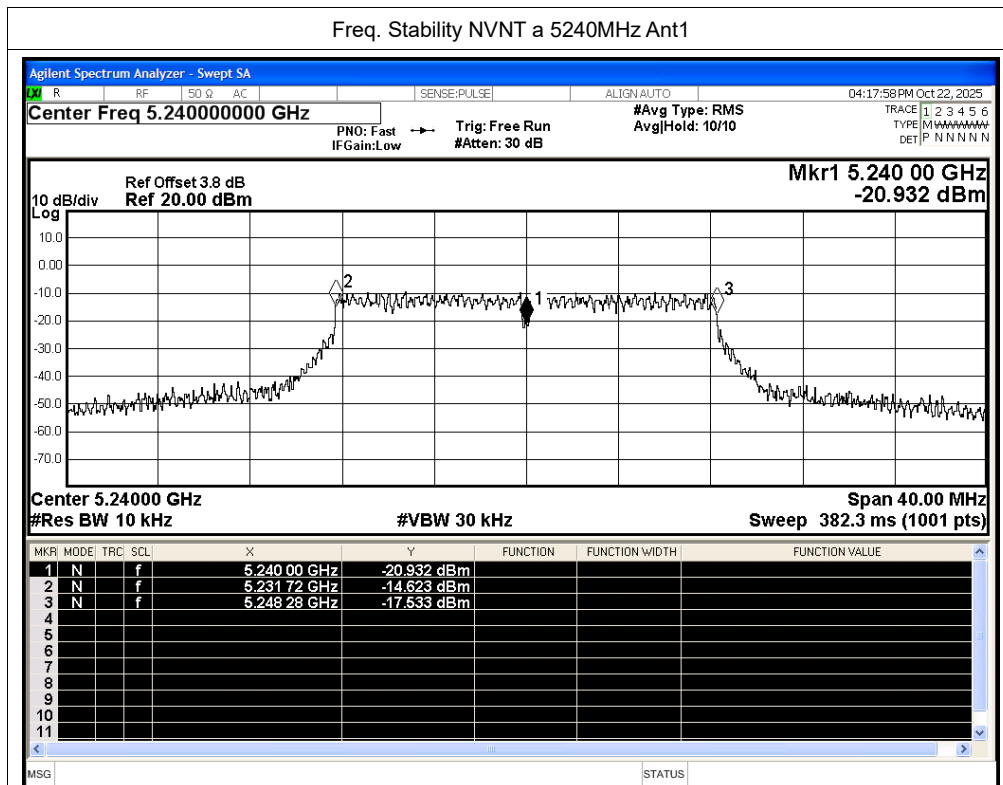
Test Graphs

Freq. Stability NVNT a 5180MHz Ant1

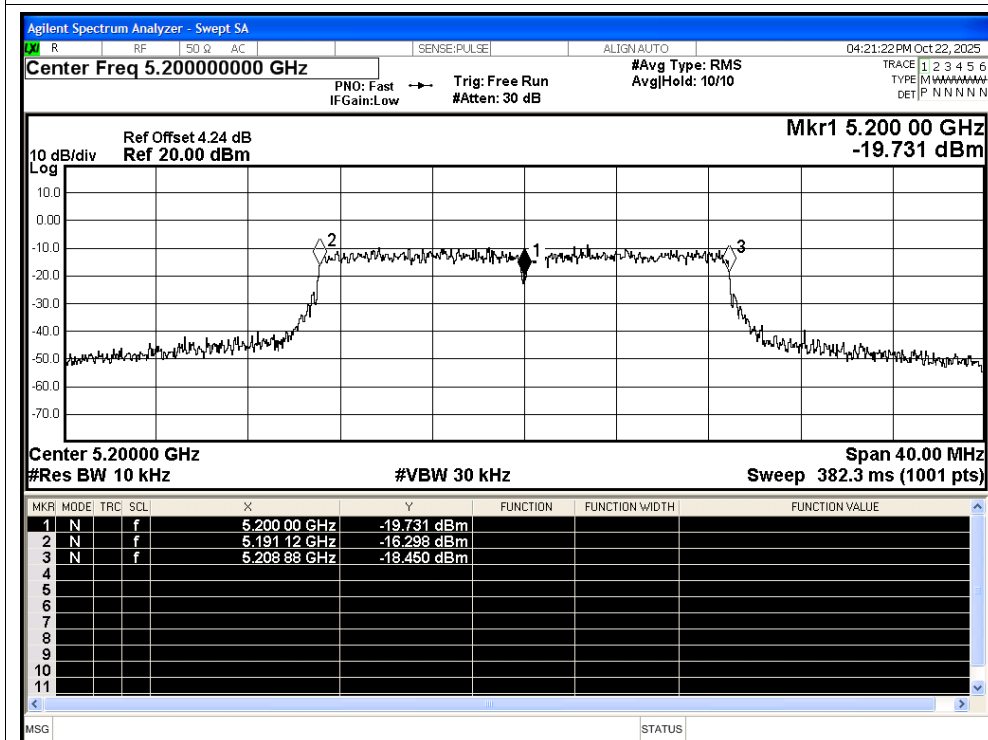


Freq. Stability NVNT a 5200MHz Ant1

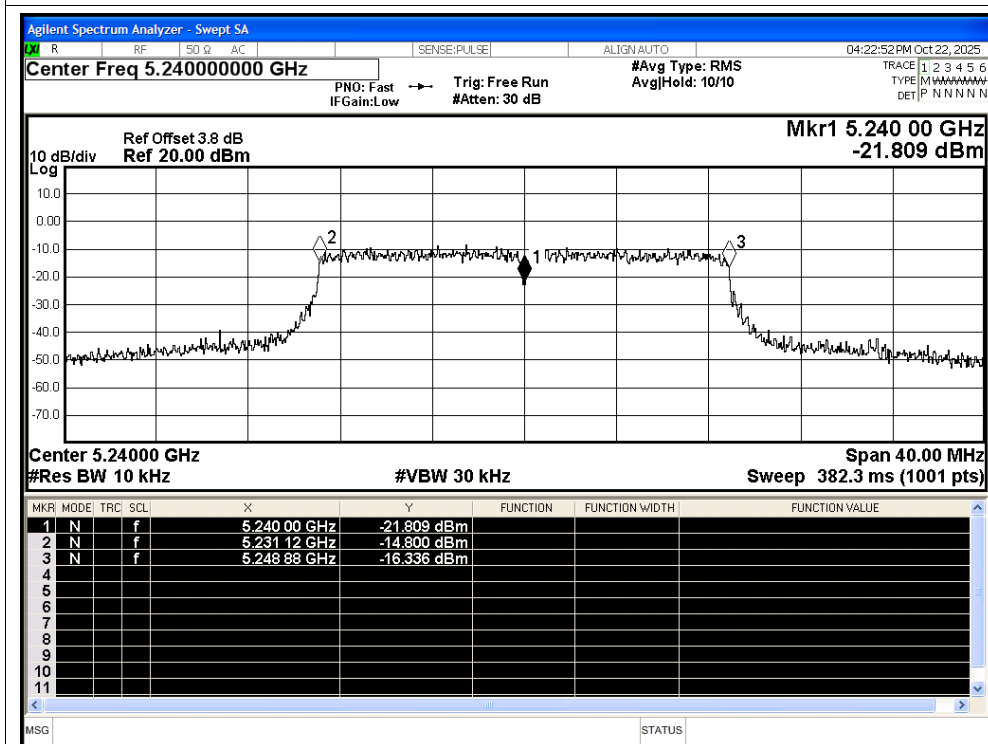




Freq. Stability NVNT n20 5200MHz Ant1



Freq. Stability NVNT n20 5240MHz Ant1

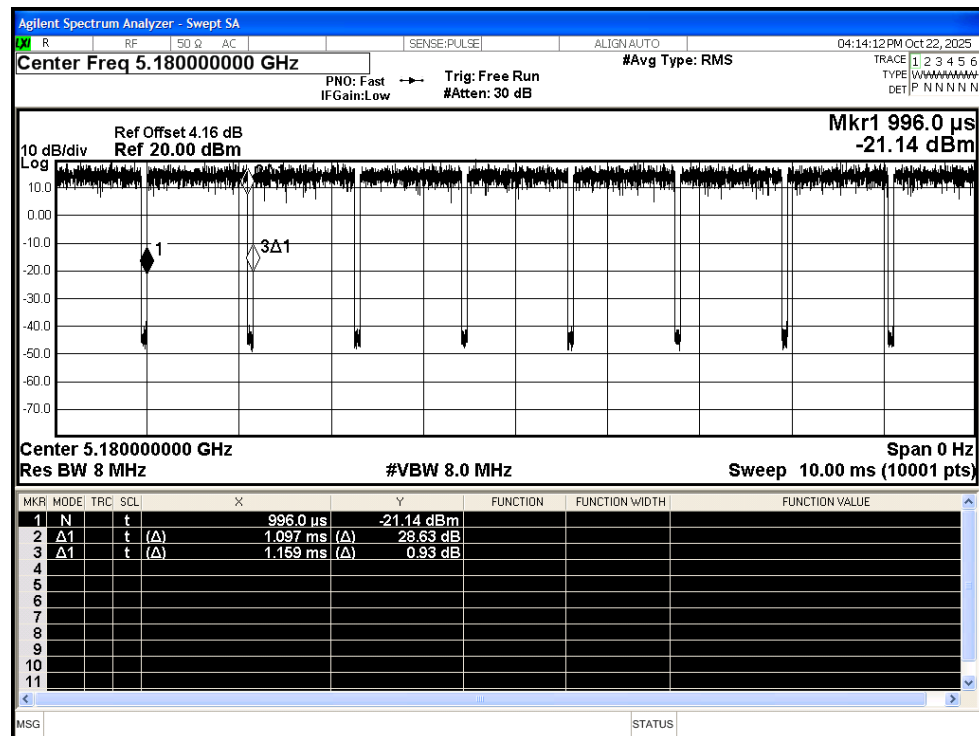


A.6 Duty Cycle

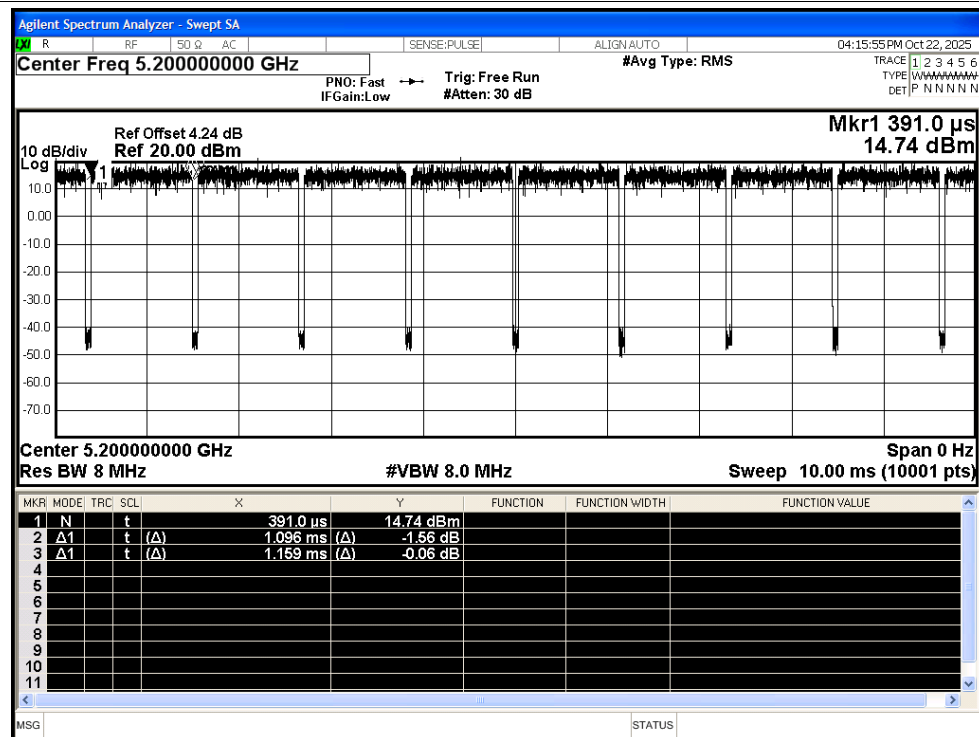
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	94.65	0.24	0.91
NVNT	a	5200	Ant1	94.56	0.24	0.91
NVNT	a	5240	Ant1	94.65	0.24	0.91
NVNT	n20	5180	Ant1	97.33	0.12	0.44
NVNT	n20	5200	Ant1	97.29	0.12	0.44
NVNT	n20	5240	Ant1	97.29	0.12	0.44
NVNT	n40	5190	Ant1	94.71	0.24	0.9
NVNT	n40	5230	Ant1	94.71	0.24	0.9

Test Graphs

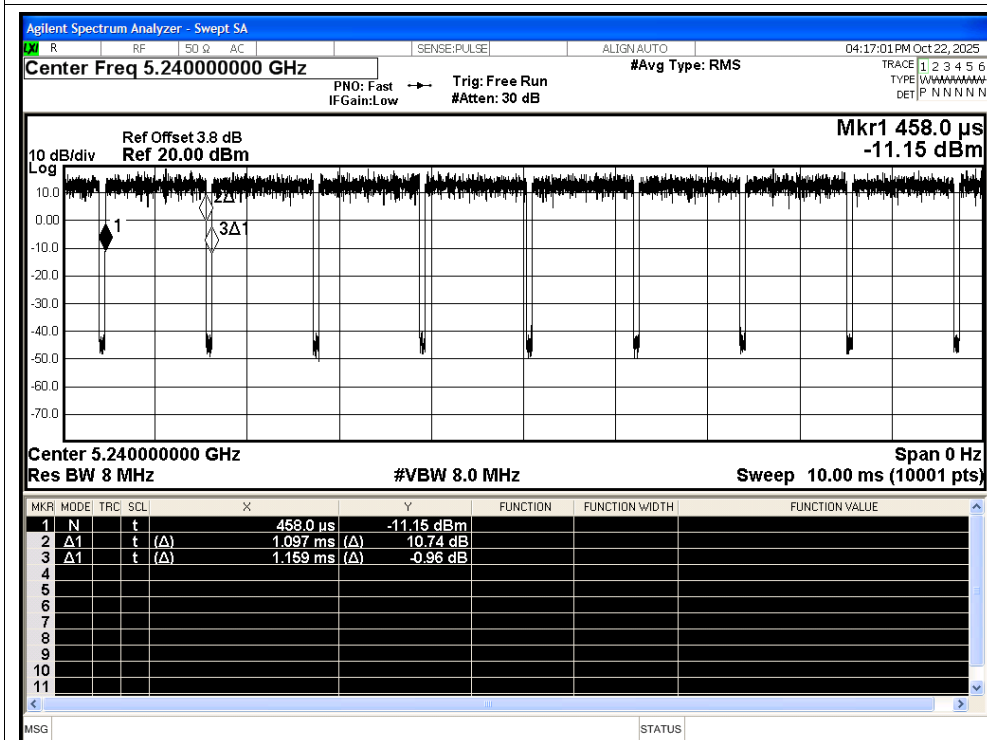
Duty Cycle NVNT a 5180MHz Ant1



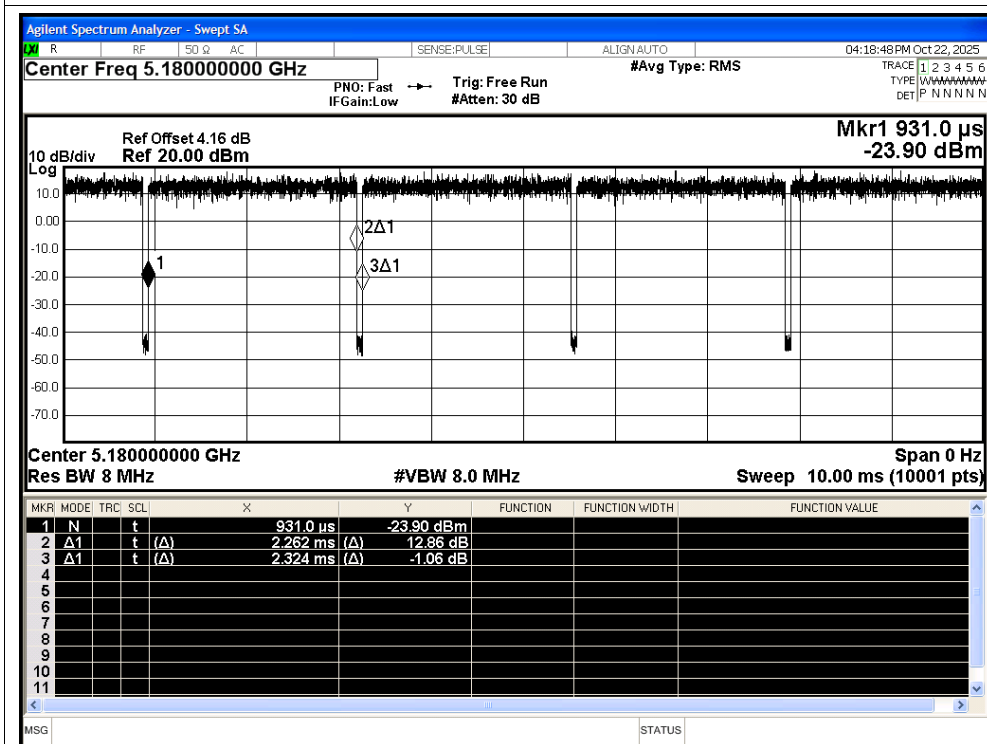
Duty Cycle NVNT a 5200MHz Ant1

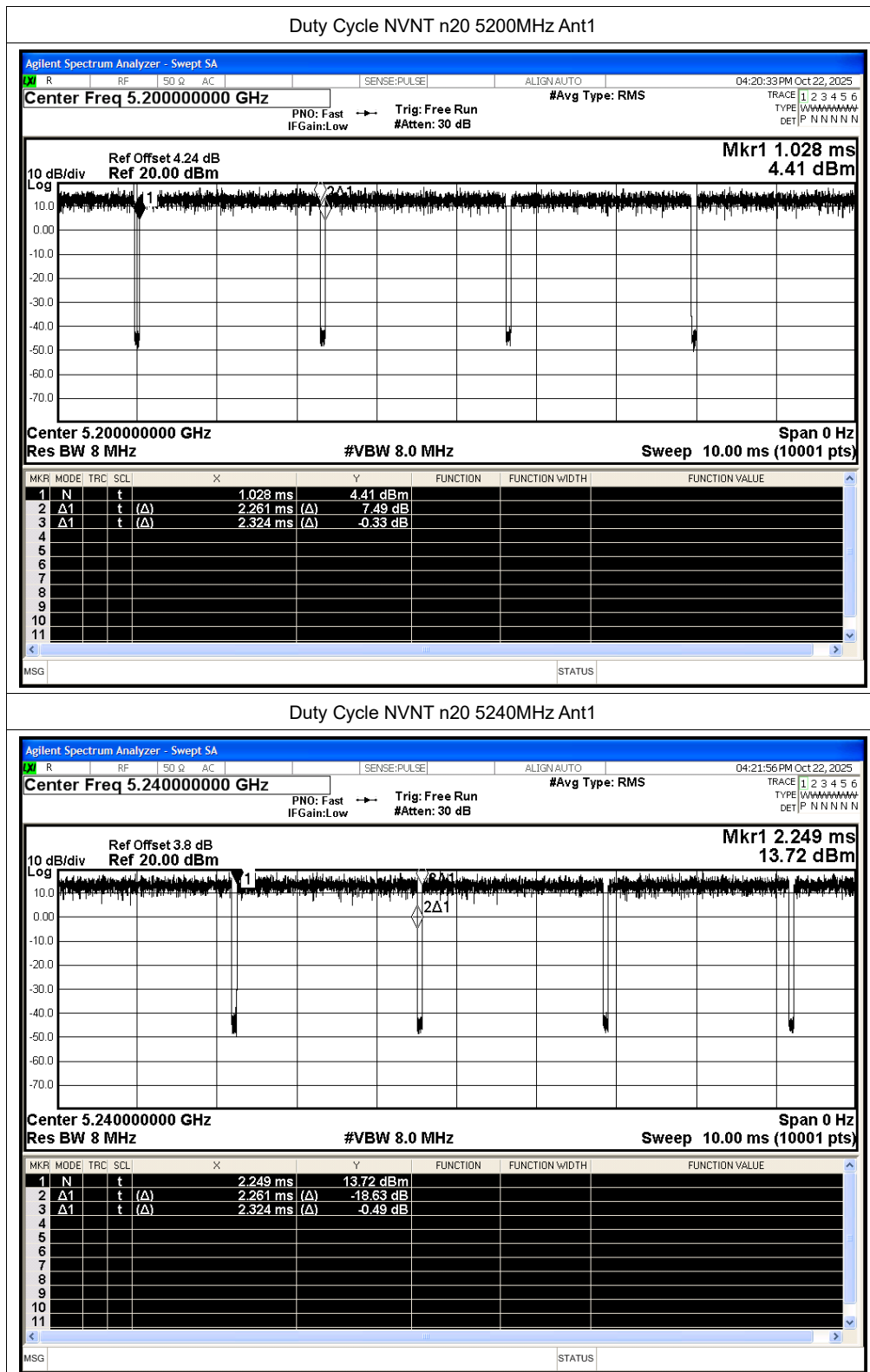


Duty Cycle NVNT a 5240MHz Ant1

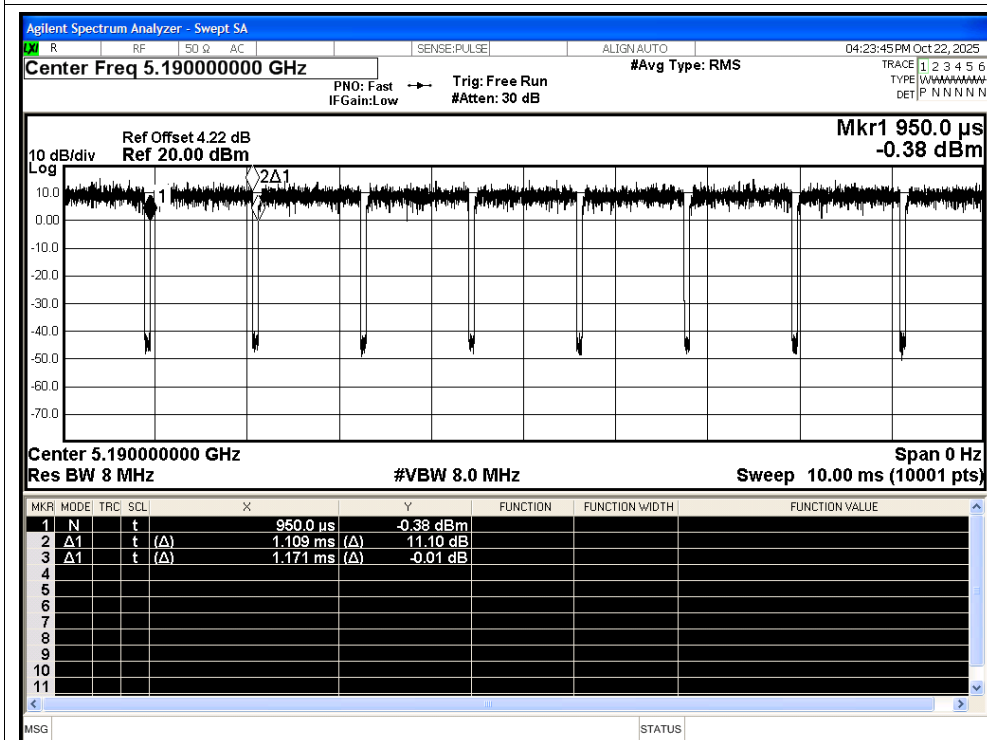


Duty Cycle NVNT n20 5180MHz Ant1





Duty Cycle NVNT n40 5190MHz Ant1



Duty Cycle NVNT n40 5230MHz Ant1

