

Appendix D

RF Test Data for 5.2GWIFI(Conducted Measurement)

Product Name: Projector

Test Model: Q5 Mate

Environmental Conditions

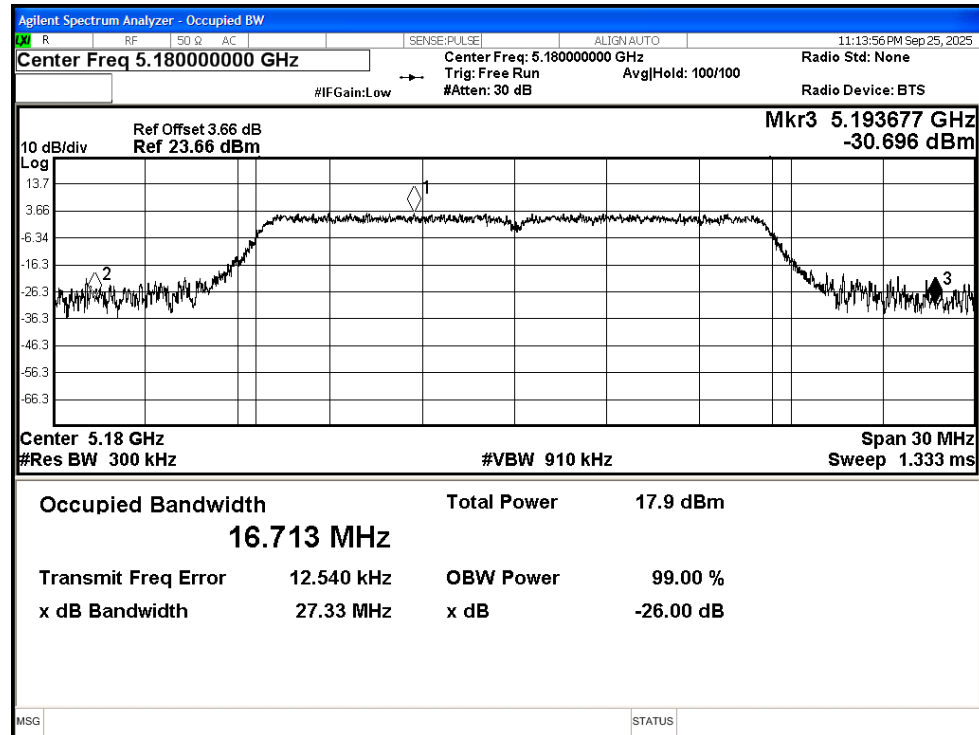
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

D.1 -26dB Bandwidth

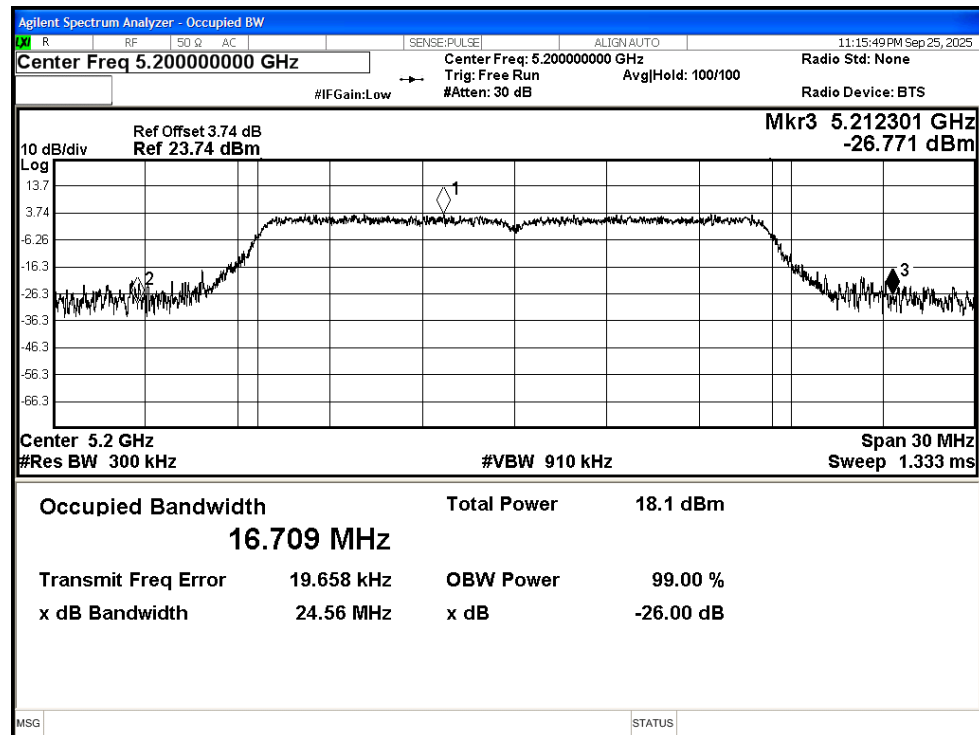
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	27.329	---	Pass
NVNT	a	5200	Ant1	24.562	---	Pass
NVNT	a	5240	Ant1	24.411	---	Pass
NVNT	n20	5180	Ant1	28.847	---	Pass
NVNT	n20	5200	Ant1	28.087	---	Pass
NVNT	n20	5240	Ant1	29.266	---	Pass
NVNT	ac20	5180	Ant1	29.074	---	Pass
NVNT	ac20	5200	Ant1	28.862	---	Pass
NVNT	ac20	5240	Ant1	29.02	---	Pass
NVNT	ax20	5180	Ant1	26.51	---	Pass
NVNT	ax20	5200	Ant1	28.015	---	Pass
NVNT	ax20	5240	Ant1	28.292	---	Pass

Test Graphs

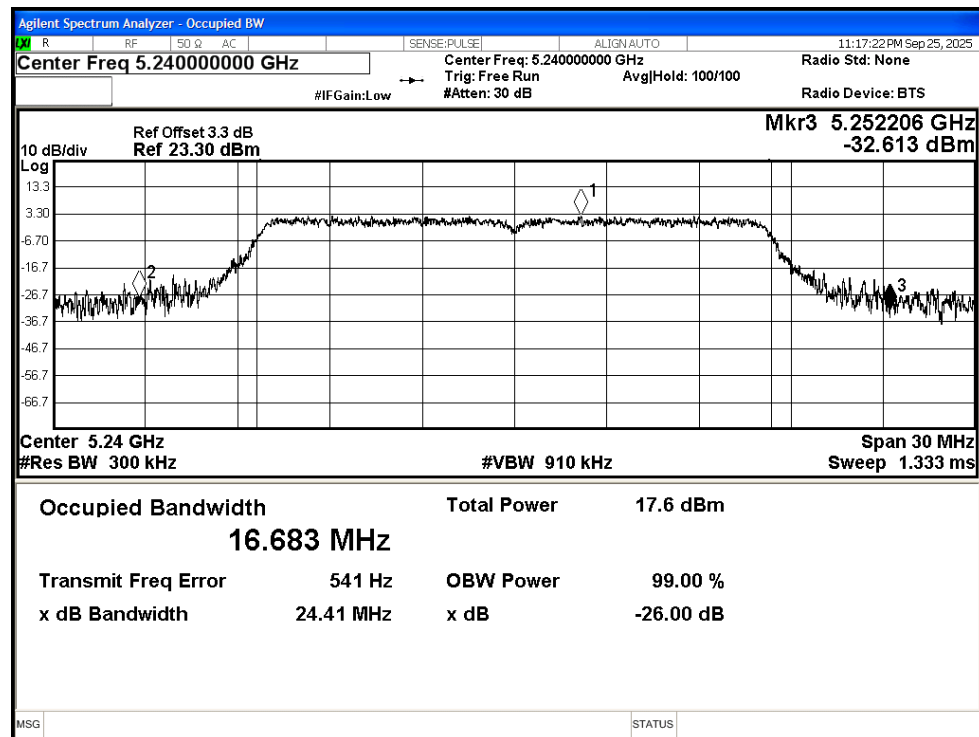
-26dB Bandwidth NVNT a 5180MHz Ant1



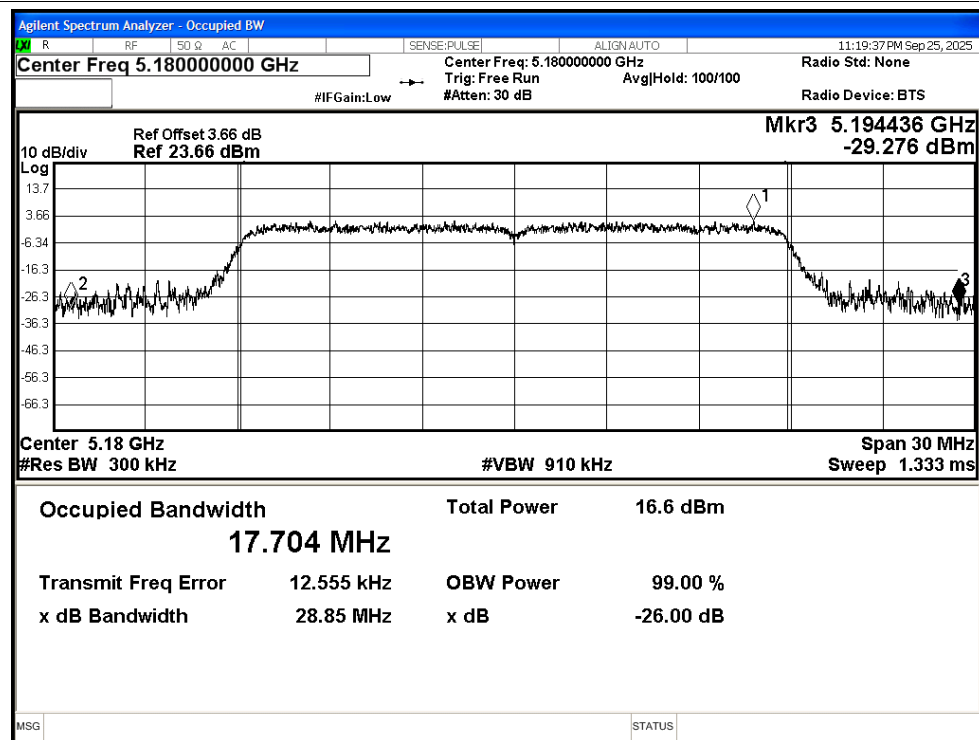
-26dB Bandwidth NVNT a 5200MHz Ant1



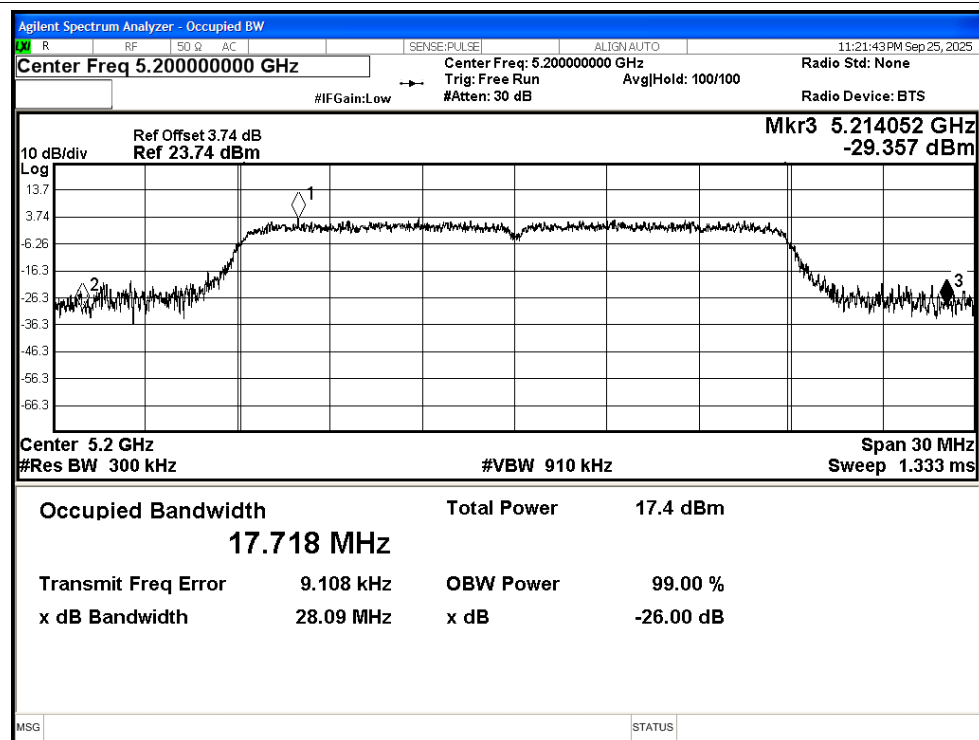
-26dB Bandwidth NVNT a 5240MHz Ant1



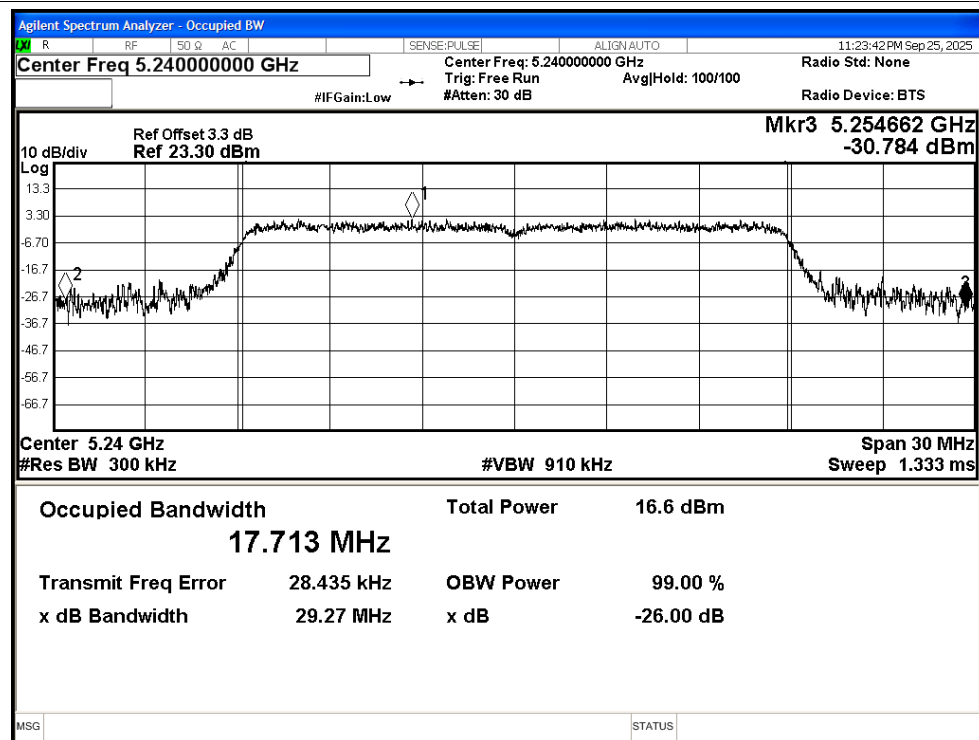
-26dB Bandwidth NVNT n20 5180MHz Ant1



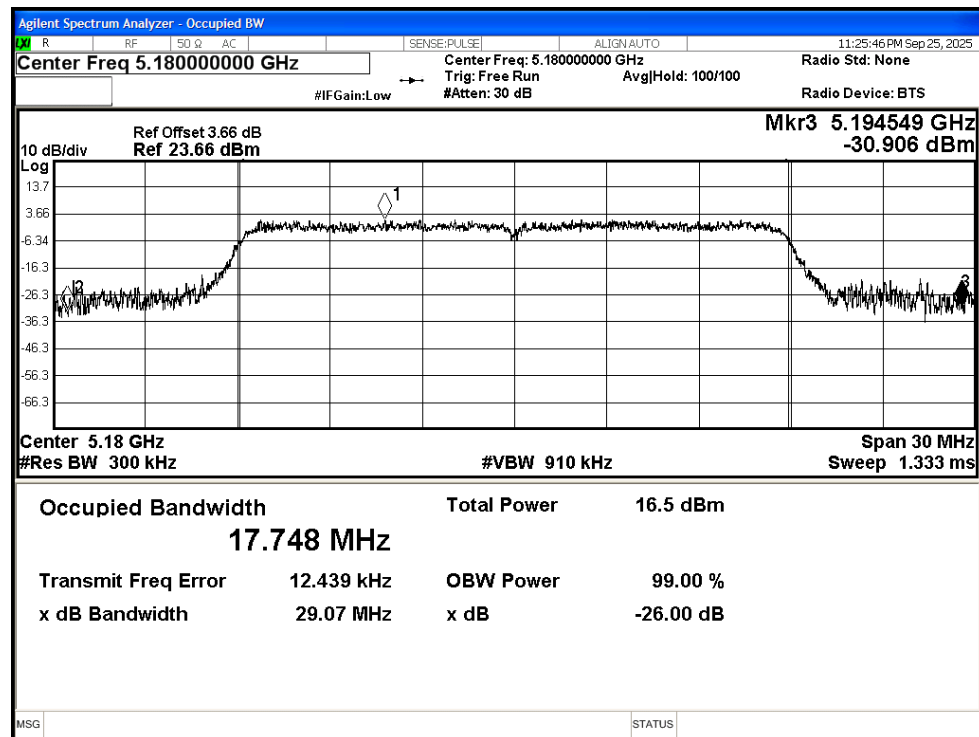
-26dB Bandwidth NVNT n20 5200MHz Ant1



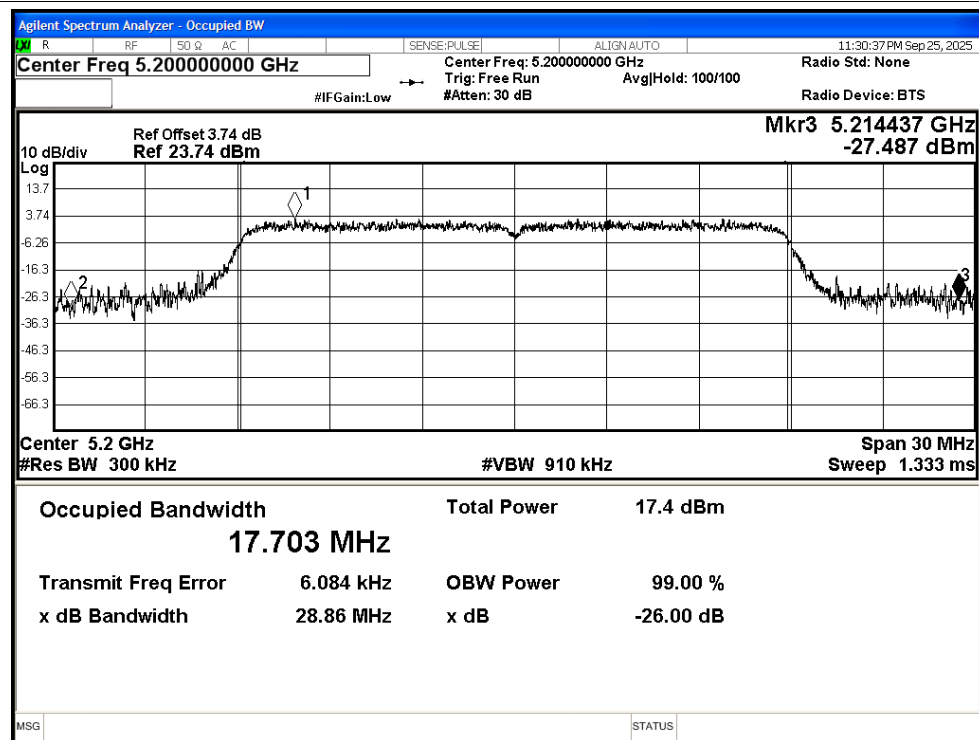
-26dB Bandwidth NVNT n20 5240MHz Ant1



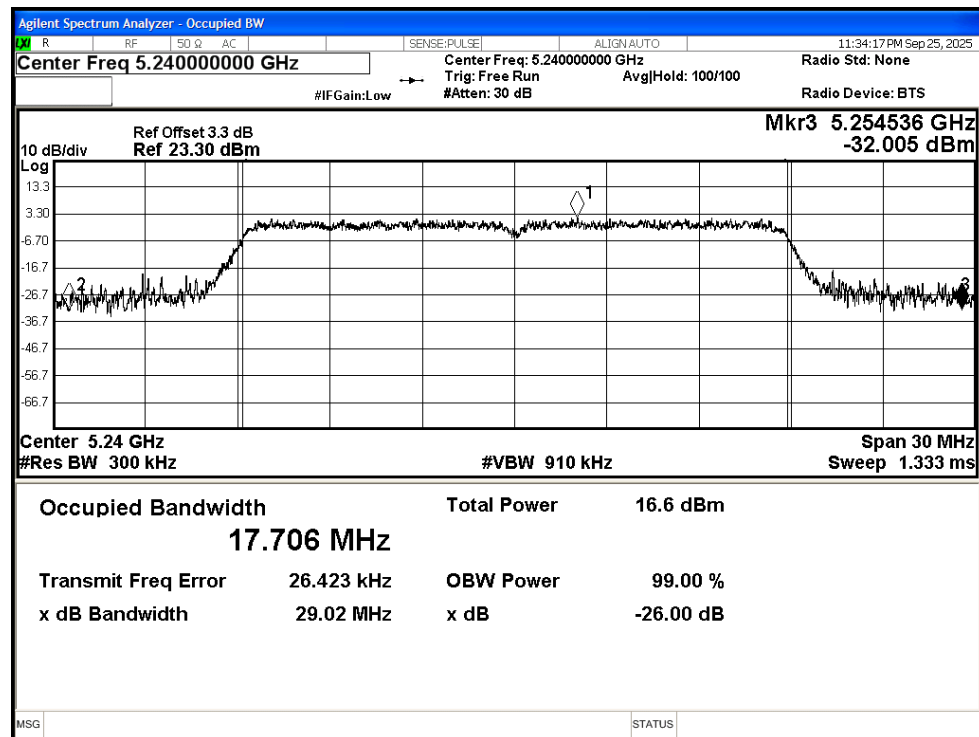
-26dB Bandwidth NVNT ac20 5180MHz Ant1



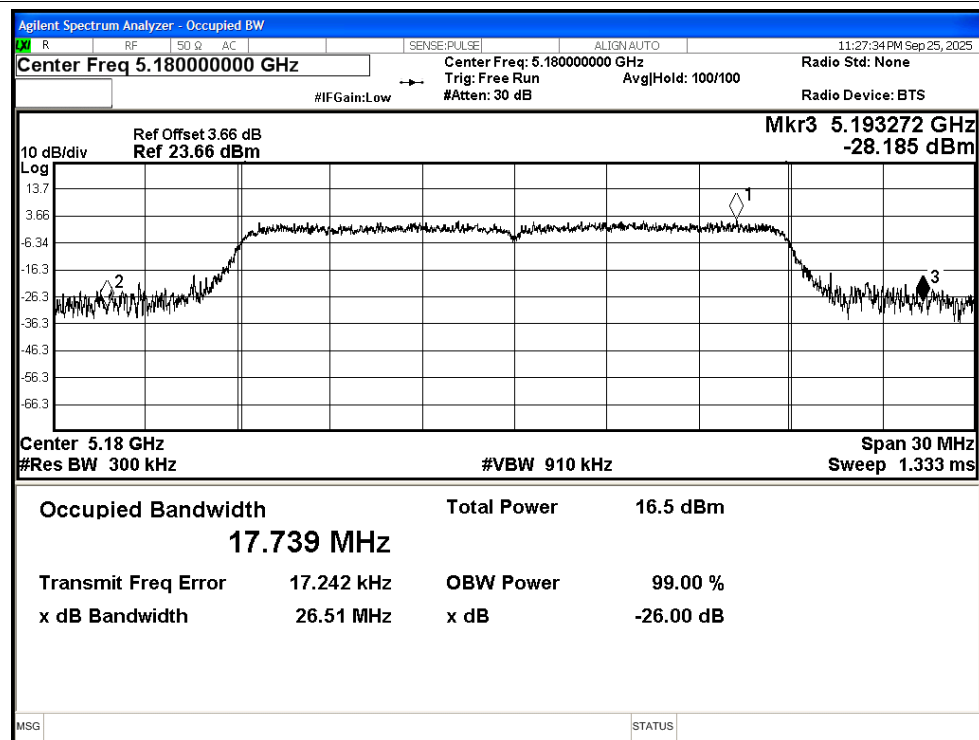
-26dB Bandwidth NVNT ac20 5200MHz Ant1



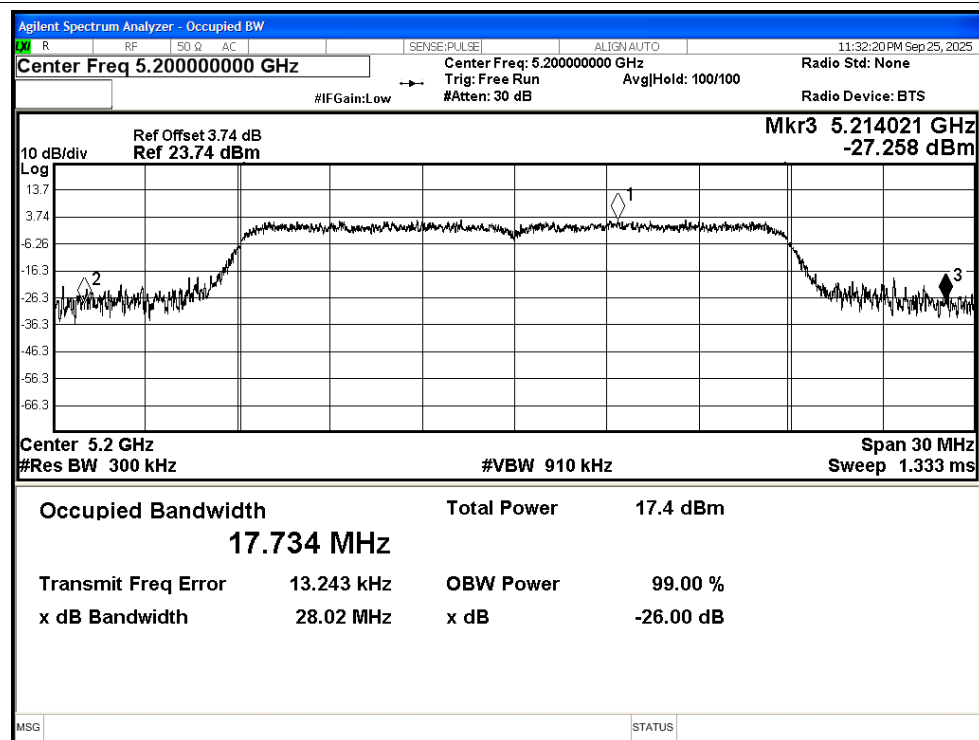
-26dB Bandwidth NVNT ac20 5240MHz Ant1



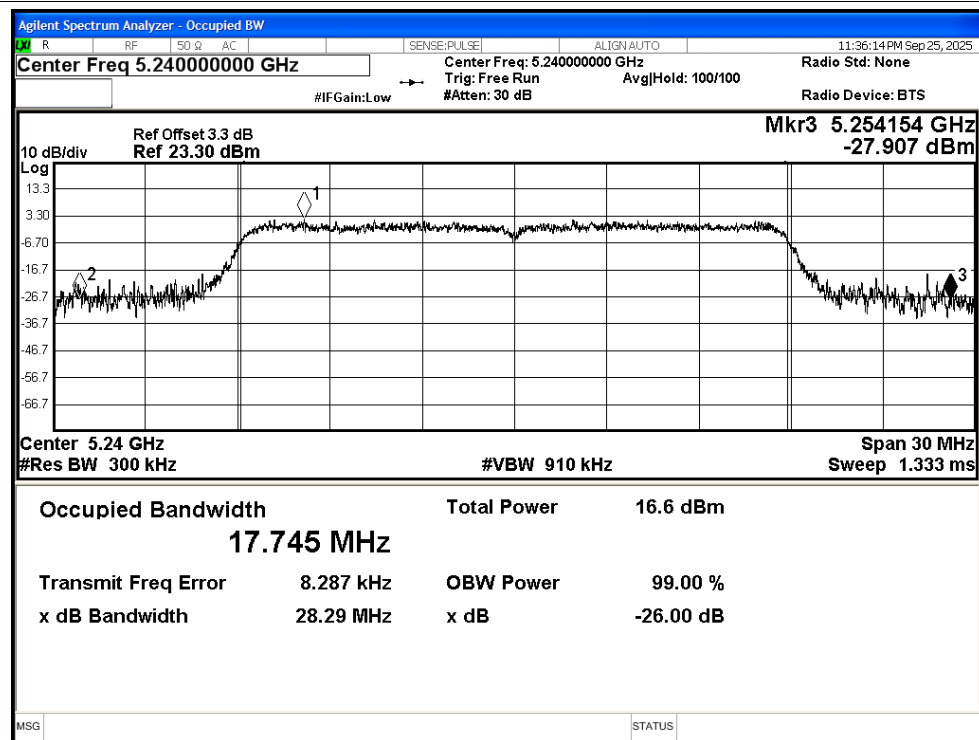
-26dB Bandwidth NVNT ax20 5180MHz Ant1



-26dB Bandwidth NVNT ax20 5200MHz Ant1



-26dB Bandwidth NVNT ax20 5240MHz Ant1



D.2 Maximum Peak Conducted Output Power

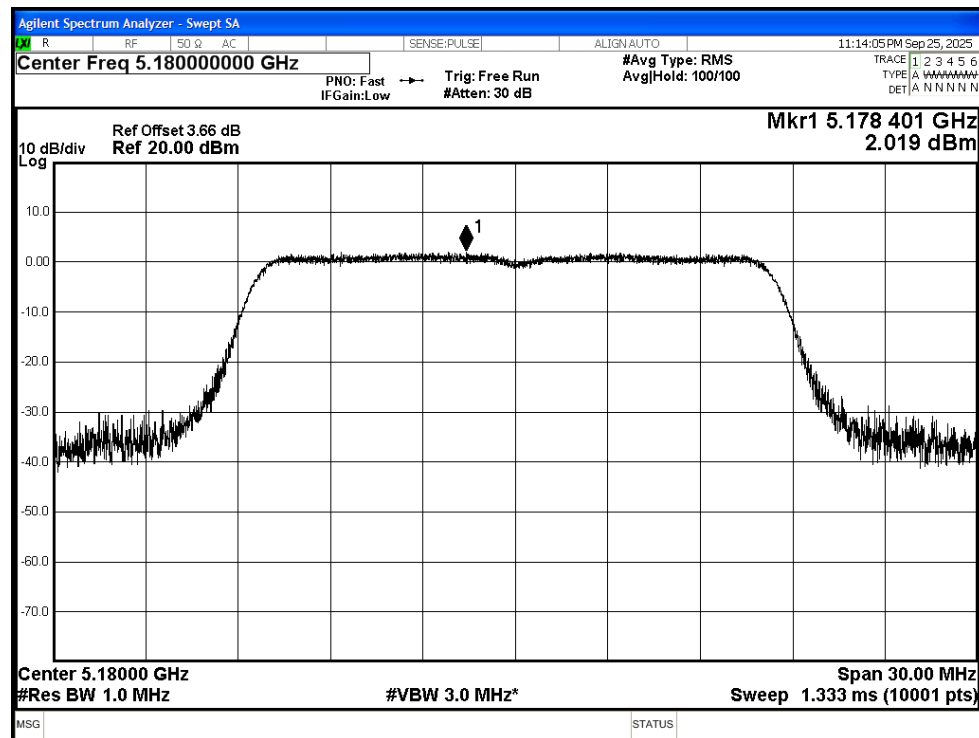
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	12.21	0.24	12.45	24	Pass
NVNT	a	5200	Ant1	12.47	0.24	12.71	24	Pass
NVNT	a	5240	Ant1	11.86	0.24	12.1	24	Pass
NVNT	n20	5180	Ant1	10.98	0.12	11.1	24	Pass
NVNT	n20	5200	Ant1	11.87	0.12	11.99	24	Pass
NVNT	n20	5240	Ant1	11.27	0.12	11.39	24	Pass
NVNT	ac20	5180	Ant1	11.02	0.12	11.14	24	Pass
NVNT	ac20	5200	Ant1	11.82	0.12	11.94	24	Pass
NVNT	ac20	5240	Ant1	11.07	0.12	11.19	24	Pass
NVNT	ax20	5180	Ant1	11.07	0.12	11.19	24	Pass
NVNT	ax20	5200	Ant1	11.84	0.12	11.96	24	Pass
NVNT	ax20	5240	Ant1	11.02	0.12	11.14	24	Pass

D.3 Maximum Power Spectral Density Level

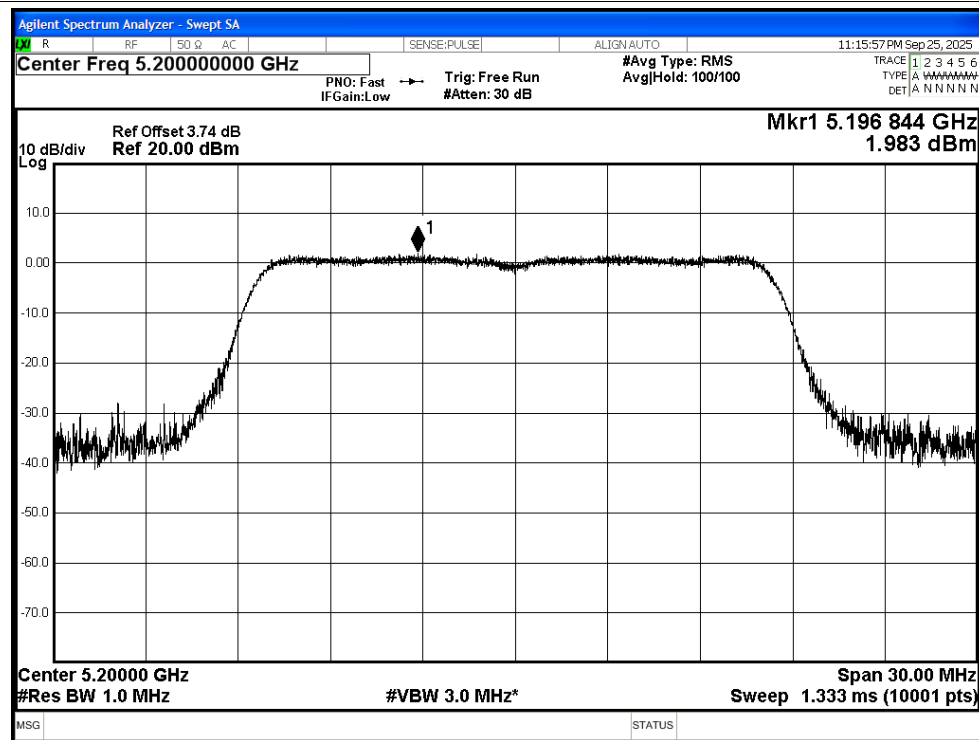
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant1	2.02	0.24	2.26	11	Pass
NVNT	a	5200	Ant1	1.98	0.24	2.22	11	Pass
NVNT	a	5240	Ant1	1.3	0.24	1.54	11	Pass
NVNT	n20	5180	Ant1	0.12	0.12	0.24	11	Pass
NVNT	n20	5200	Ant1	1.06	0.12	1.18	11	Pass
NVNT	n20	5240	Ant1	0.45	0.12	0.57	11	Pass
NVNT	ac20	5180	Ant1	0.38	0.12	0.5	11	Pass
NVNT	ac20	5200	Ant1	1.16	0.12	1.28	11	Pass
NVNT	ac20	5240	Ant1	0.2	0.12	0.32	11	Pass
NVNT	ax20	5180	Ant1	0.44	0.12	0.56	11	Pass
NVNT	ax20	5200	Ant1	1	0.12	1.12	11	Pass
NVNT	ax20	5240	Ant1	0.24	0.12	0.36	11	Pass

Test Graphs

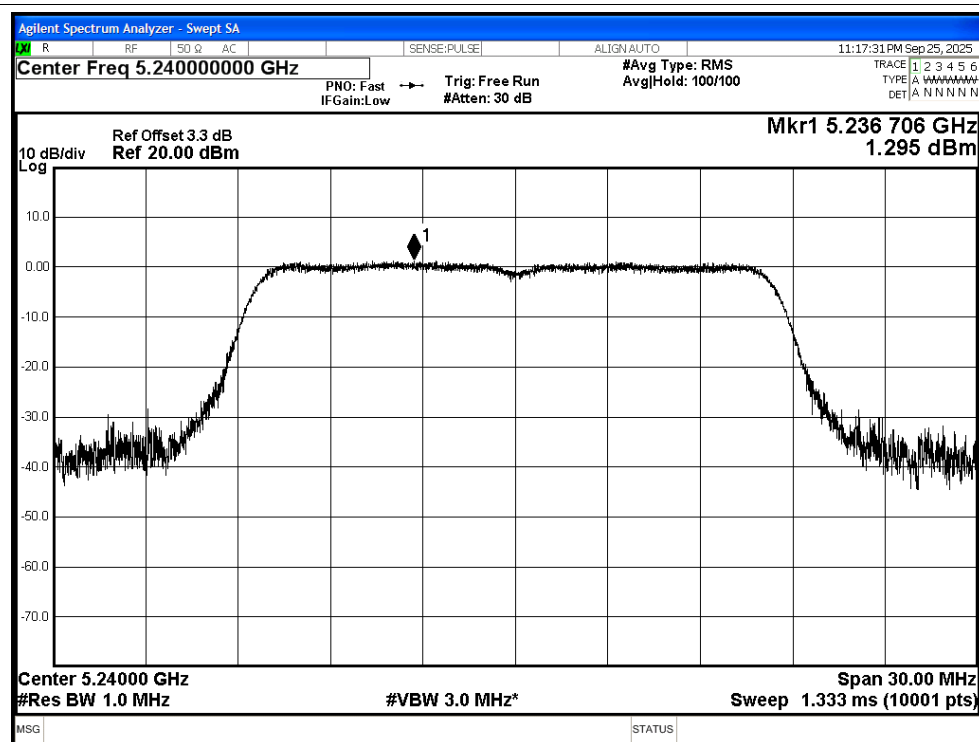
PSD NVNT a 5180MHz Ant1



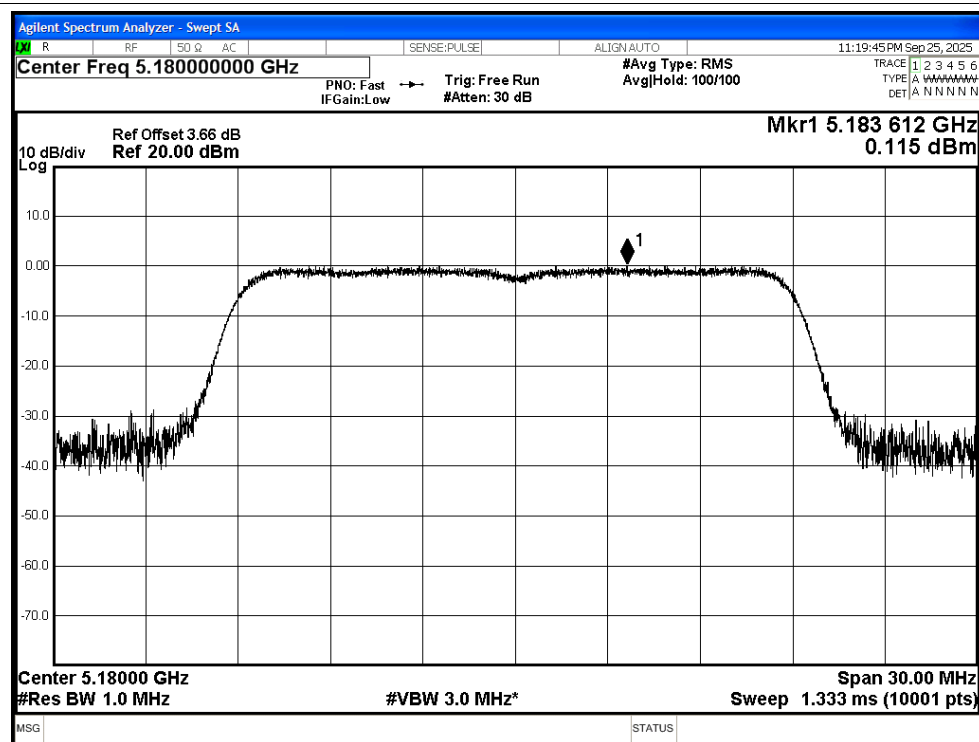
PSD NVNT a 5200MHz Ant1

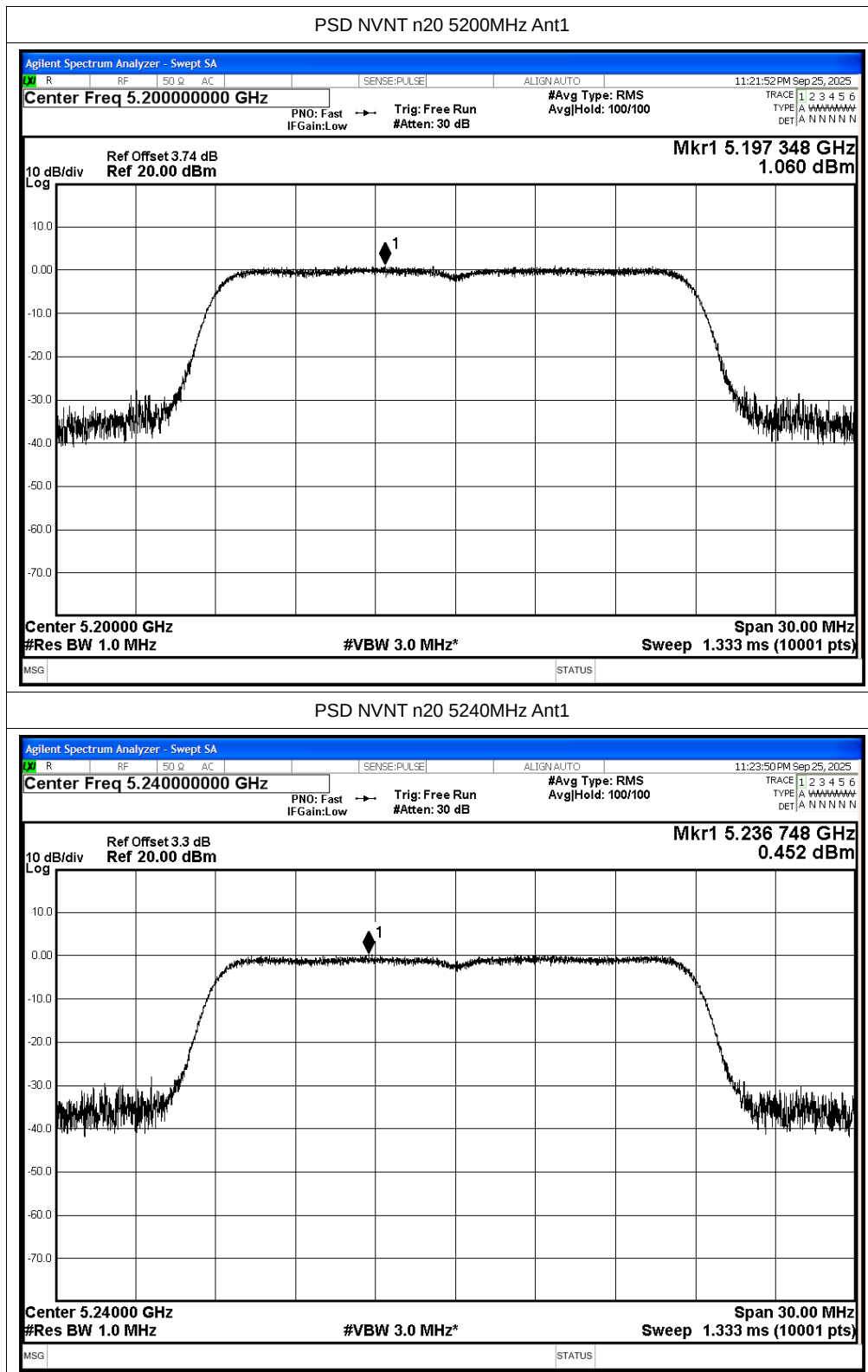


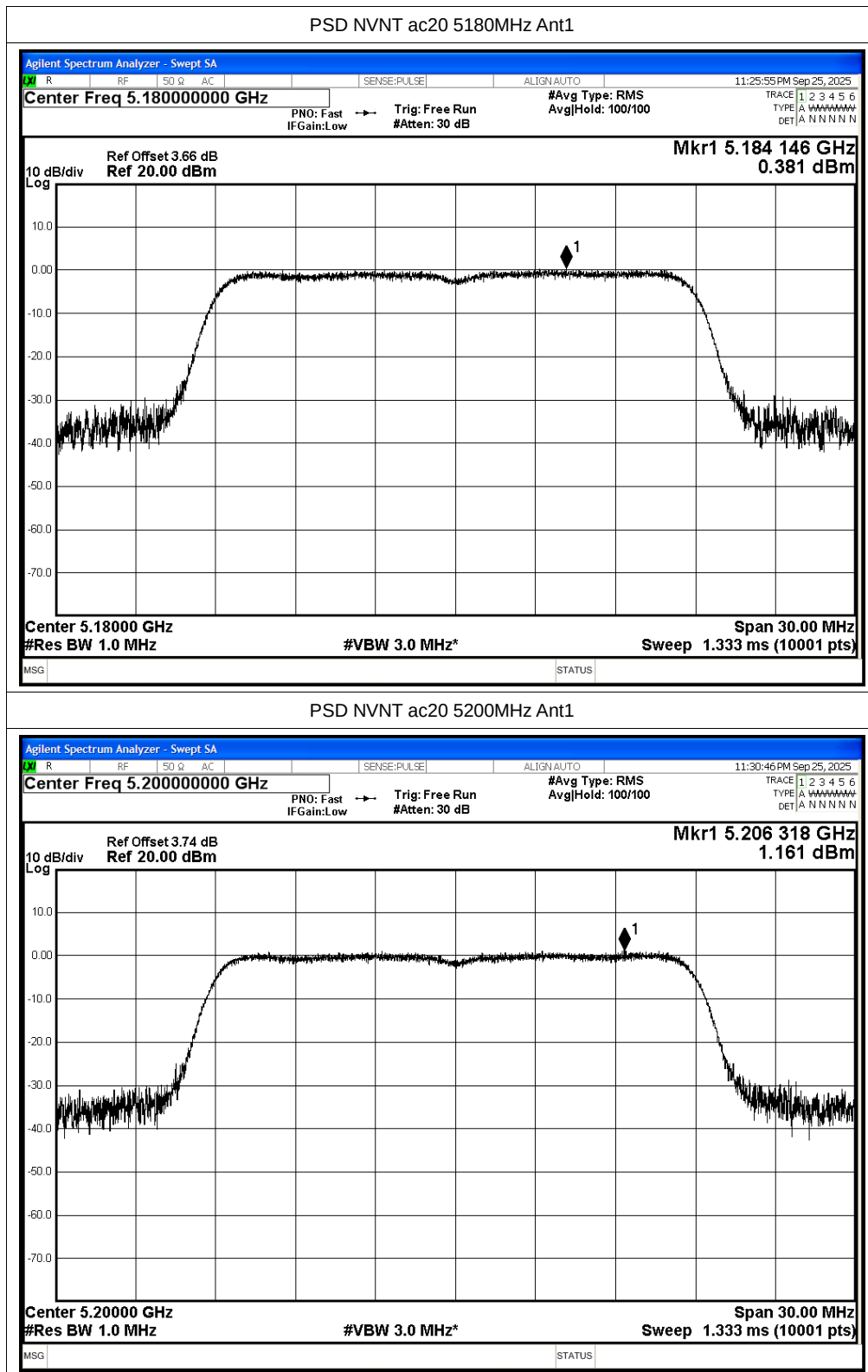
PSD NVNT a 5240MHz Ant1

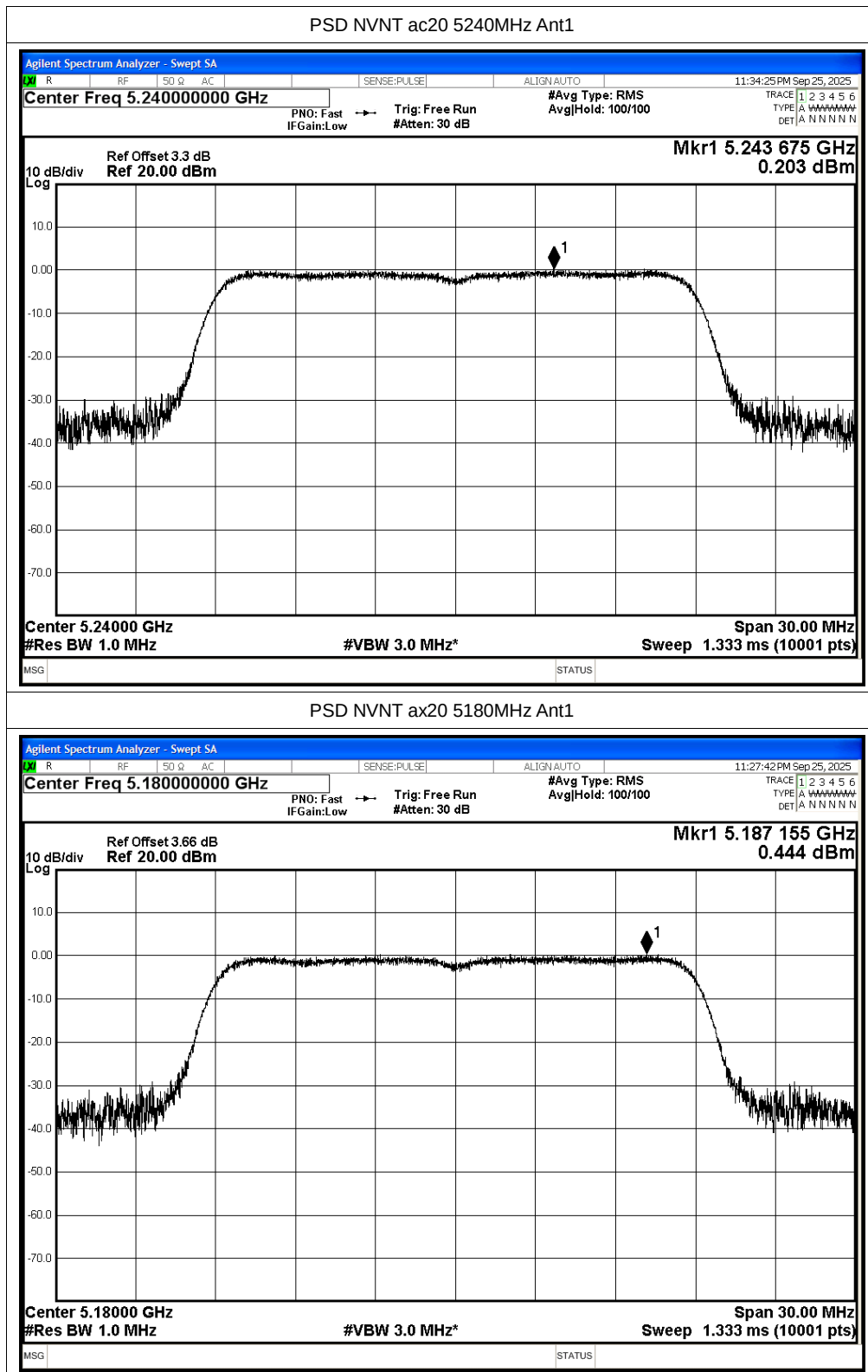


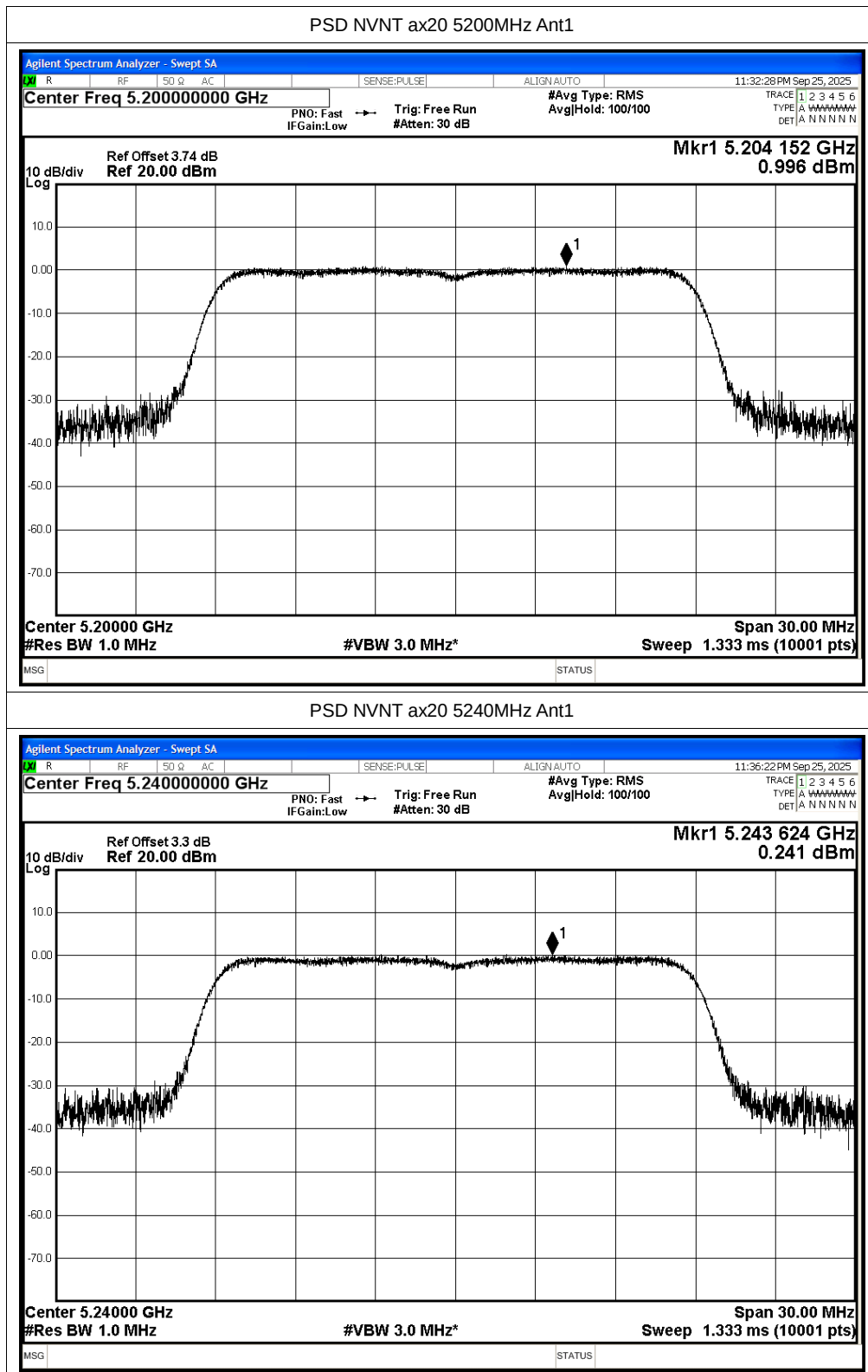
PSD NVNT n20 5180MHz Ant1











D.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	3.8	-	49.03	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-58.2	3.8	0.24	41.07	Average	54	Pass
NVNT	a	5180	Ant1	5002.6	-46.48	3.8	-	52.55	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-55.45	3.8	0.24	43.82	Average	54	Pass
NVNT	a	5180	Ant1	5150	-49.48	3.8	-	49.55	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-54.87	3.8	0.24	44.40	Average	54	Pass
NVNT	a	5240	Ant1	5350	-49.51	3.8	-	49.52	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-57.16	3.8	0.24	42.11	Average	54	Pass
NVNT	a	5240	Ant1	5352.48	-46.77	3.8	-	52.26	Peak	68.2	Pass
NVNT	a	5240	Ant1	5391.12	-57.03	3.8	0.24	42.24	Average	54	Pass
NVNT	a	5240	Ant1	5460	-50	3.8	-	49.03	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-57.44	3.8	0.24	41.83	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-50.9	3.8	-	48.13	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-58.11	3.8	0.12	41.04	Average	54	Pass
NVNT	n20	5180	Ant1	5149.6	-42.75	3.8	-	56.28	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5149.6	-55.14	3.8	0.12	44.01	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-42.64	3.8	-	56.39	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-55.27	3.8	0.12	43.88	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-50.68	3.8	-	48.35	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-58	3.8	0.12	41.15	Average	54	Pass
NVNT	n20	5240	Ant1	5353.92	-47.09	3.8	-	51.94	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5371.2	-56.66	3.8	0.12	42.49	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-51.41	3.8	-	47.62	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-57.01	3.8	0.12	42.14	Average	54	Pass
NVNT	ac20	5180	Ant1	4500	-51.18	3.8	-	47.85	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	4500	-58.33	3.8	0.12	40.82	Average	54	Pass
NVNT	ac20	5180	Ant1	5148.2	-42.72	3.8	-	56.31	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5149.6	-55.07	3.8	0.12	44.08	Average	54	Pass
NVNT	ac20	5180	Ant1	5150	-44.32	3.8	-	54.71	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5150	-54.99	3.8	0.12	44.16	Average	54	Pass
NVNT	ac20	5240	Ant1	5350	-49.9	3.8	-	49.13	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5350	-57.9	3.8	0.12	41.25	Average	54	Pass
NVNT	ac20	5240	Ant1	5401.44	-47.07	3.8	-	51.96	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5430.24	-56.76	3.8	0.12	42.39	Average	54	Pass
NVNT	ac20	5240	Ant1	5460	-49.56	3.8	-	49.47	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5460	-57.82	3.8	0.12	41.33	Average	54	Pass
NVNT	ax20	5180	Ant1	4500	-49.13	3.8	-	49.90	Peak	68.2	Pass
NVNT	ax20	5180	Ant1	4500	-58.5	3.8	0.12	40.65	Average	54	Pass

Guangzhou LCS Compliance Testing Laboratory Ltd.

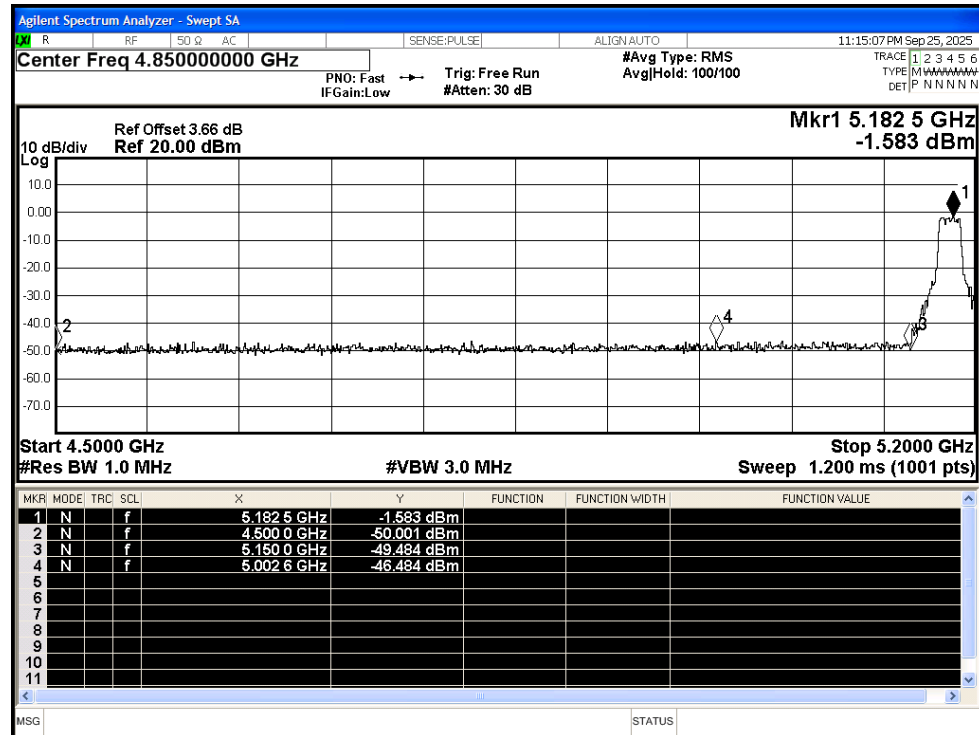
Add: No.44-1,Qianfeng North Road, Shiqi, Panyu District, Guangzhou, City, Guangdong China

Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

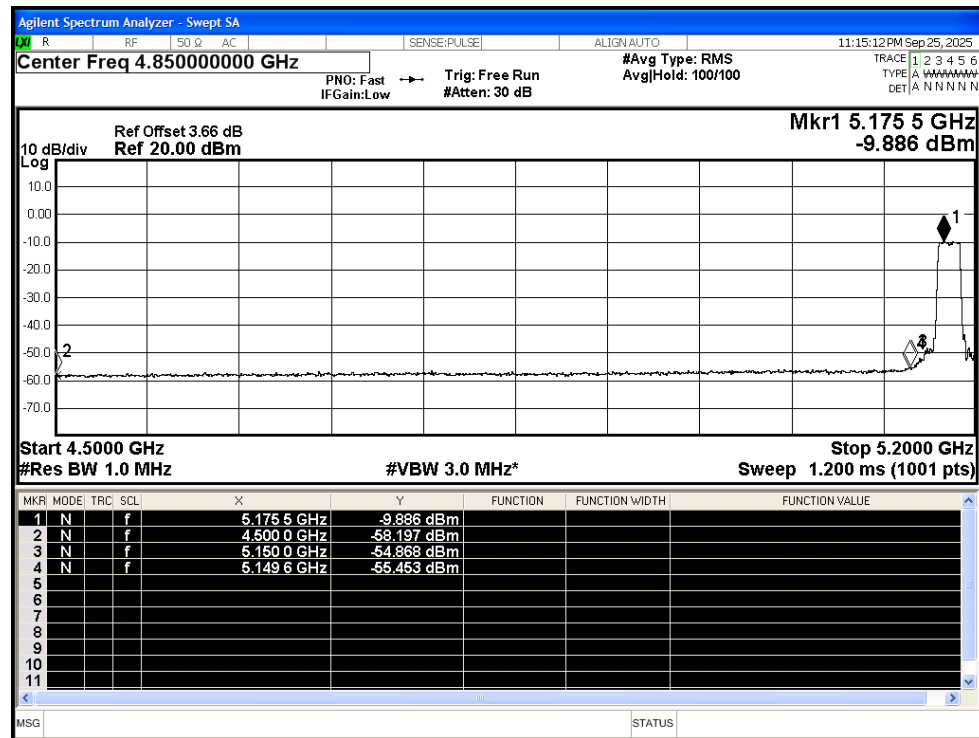
NVNT	ax20	5180	Ant1	5046	-45.25	3.8	-	53.78	Peak	68.2	Pass
NVNT	ax20	5180	Ant1	5149.6	-55.1	3.8	0.12	44.05	Average	54	Pass
NVNT	ax20	5180	Ant1	5150	-42.73	3.8	-	56.30	Peak	68.2	Pass
NVNT	ax20	5180	Ant1	5150	-55.2	3.8	0.12	43.95	Average	54	Pass
NVNT	ax20	5240	Ant1	5350	-50	3.8	-	49.03	Peak	68.2	Pass
NVNT	ax20	5240	Ant1	5350	-57.72	3.8	0.12	41.43	Average	54	Pass
NVNT	ax20	5240	Ant1	5382.72	-46.23	3.8	-	52.80	Peak	68.2	Pass
NVNT	ax20	5240	Ant1	5419.68	-56.97	3.8	0.12	42.18	Average	54	Pass
NVNT	ax20	5240	Ant1	5460	-50.13	3.8	-	48.90	Peak	68.2	Pass
NVNT	ax20	5240	Ant1	5460	-58.05	3.8	0.12	41.10	Average	54	Pass

Test Graphs

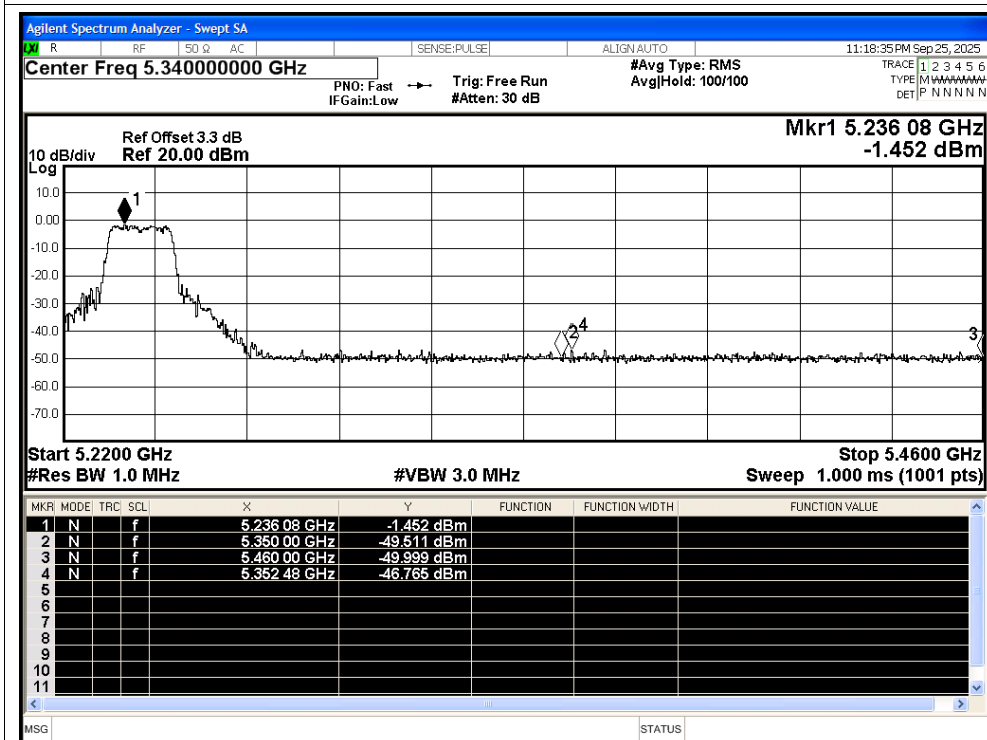
Restrict Band NVNT a 5180MHz Ant1 Peak



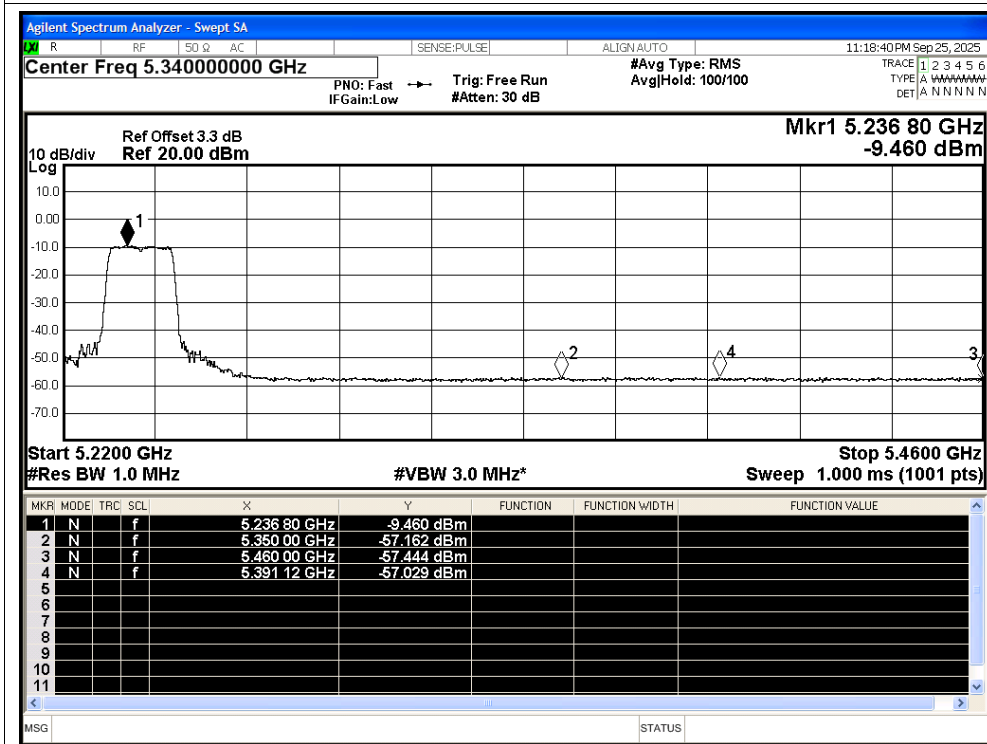
Restrict Band NVNT a 5180MHz Ant1 Average



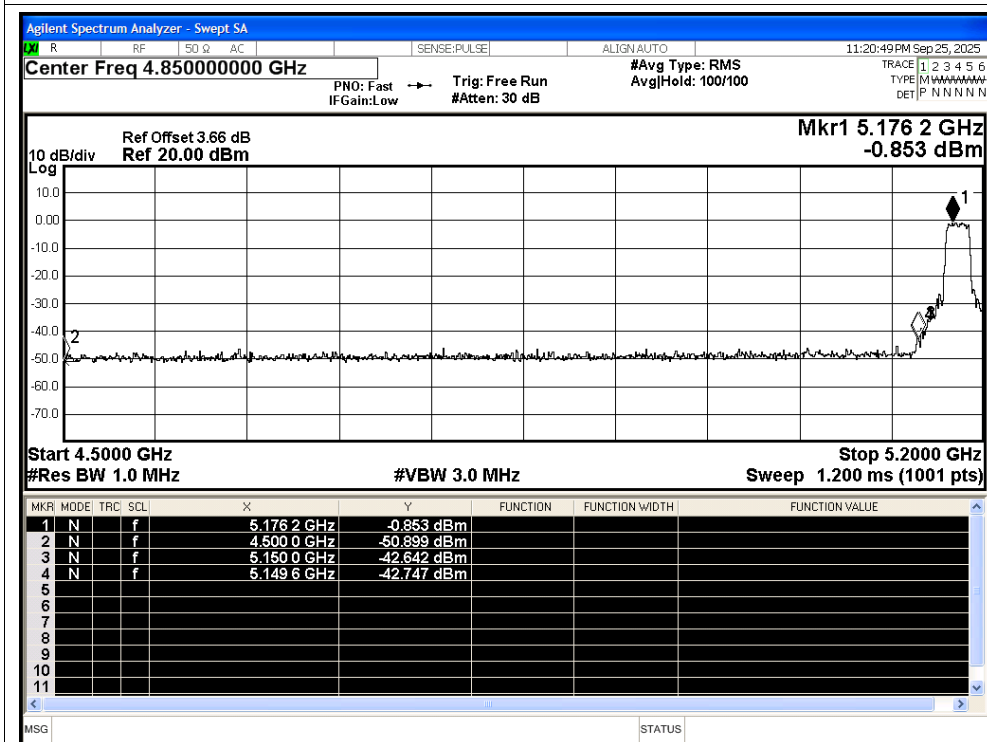
Restrict Band NVNT a 5240MHz Ant1 Peak



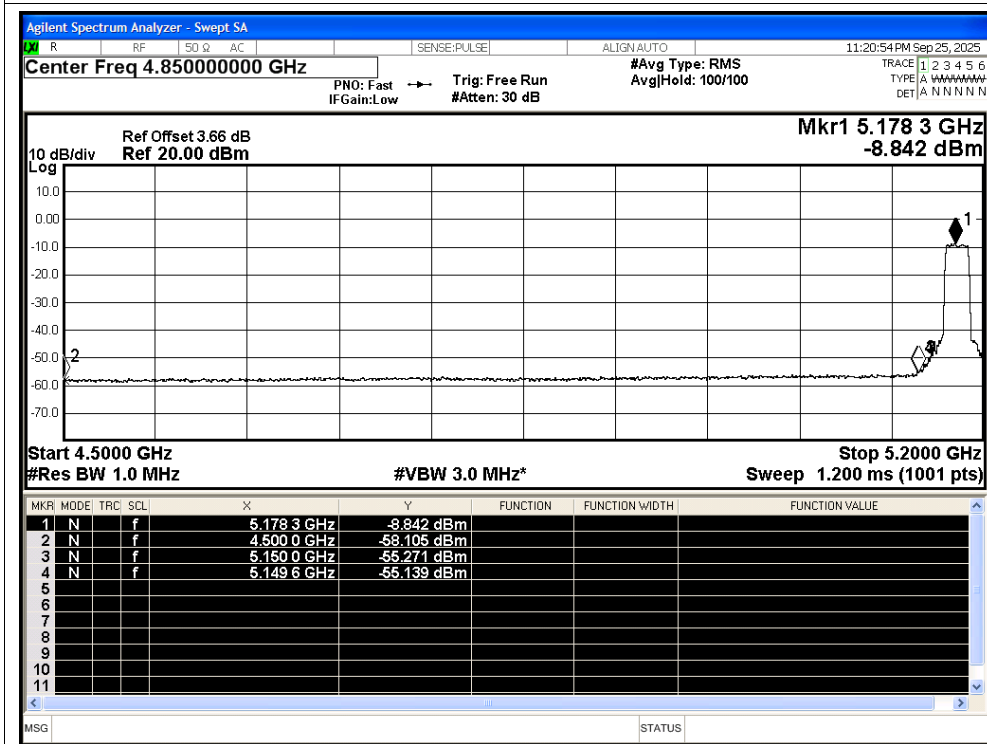
Restrict Band NVNT a 5240MHz Ant1 Average



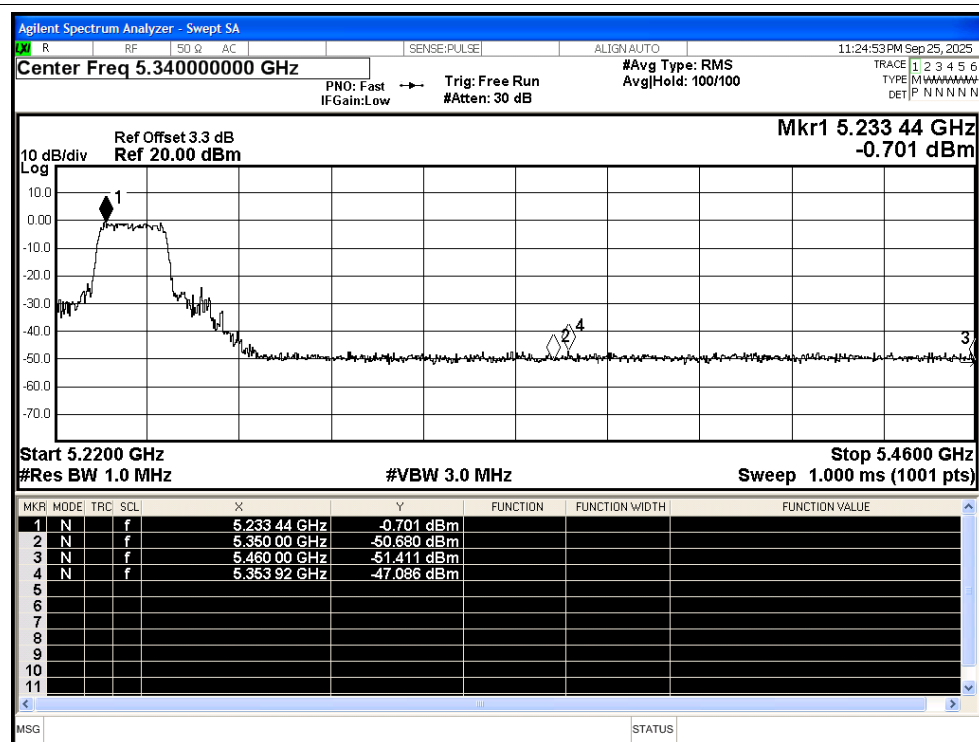
Restrict Band NVNT n20 5180MHz Ant1 Peak



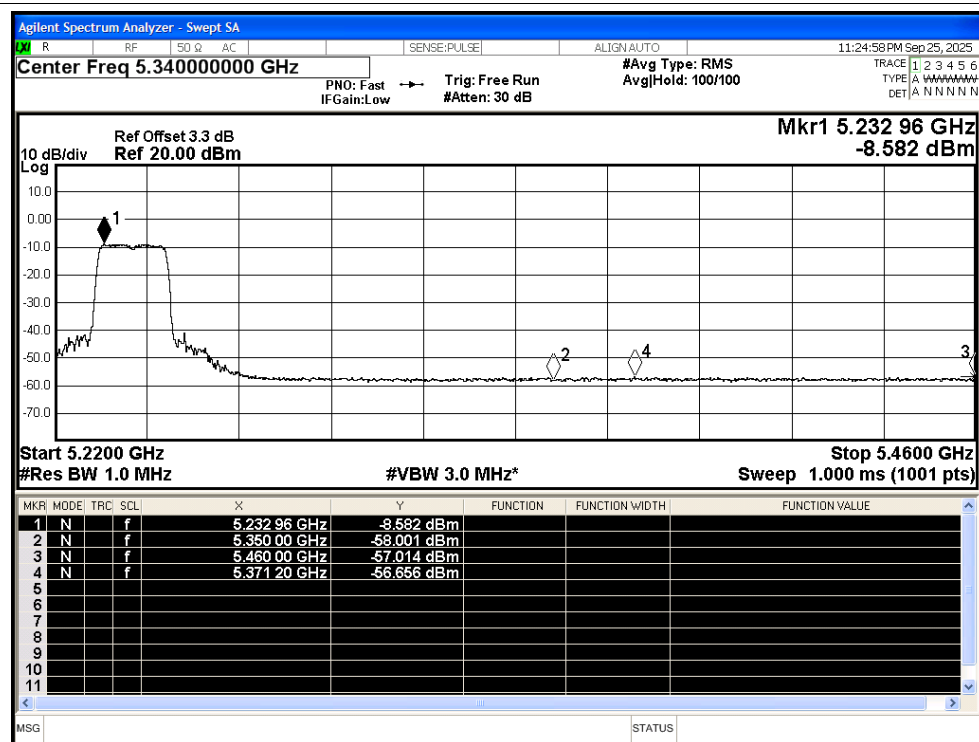
Restrict Band NVNT n20 5180MHz Ant1 Average



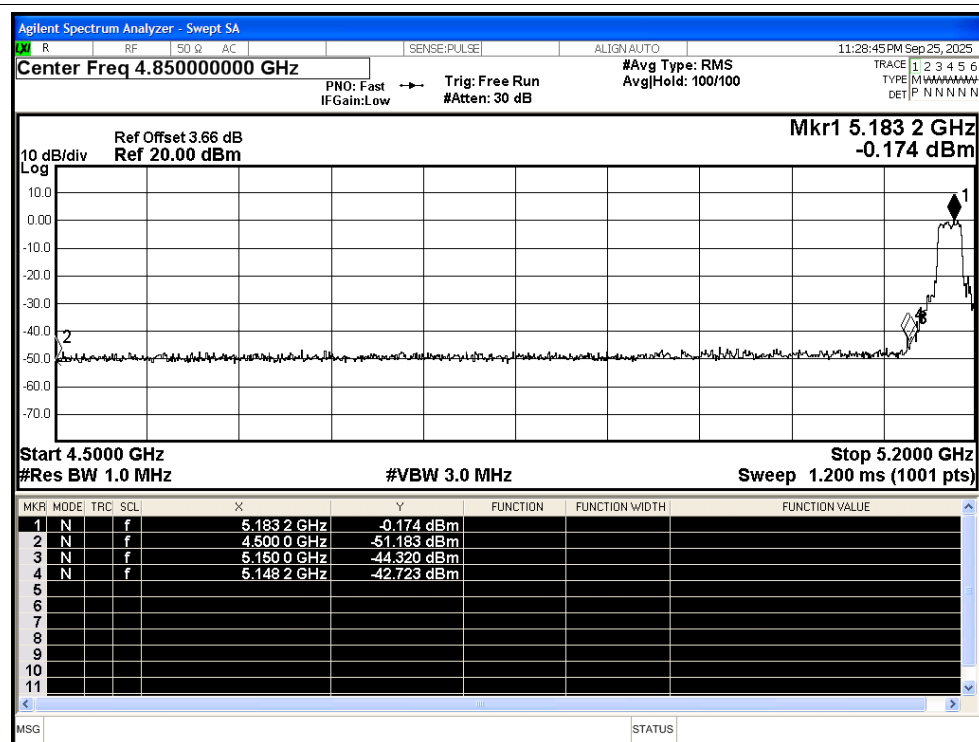
Restrict Band NVNT n20 5240MHz Ant1 Peak



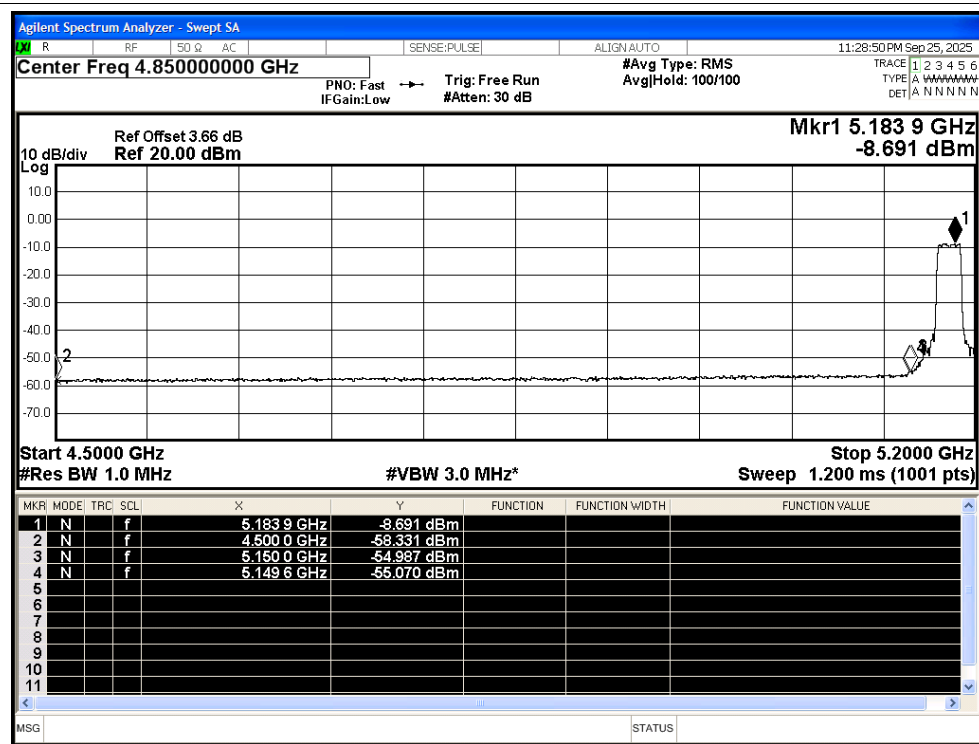
Restrict Band NVNT n20 5240MHz Ant1 Average

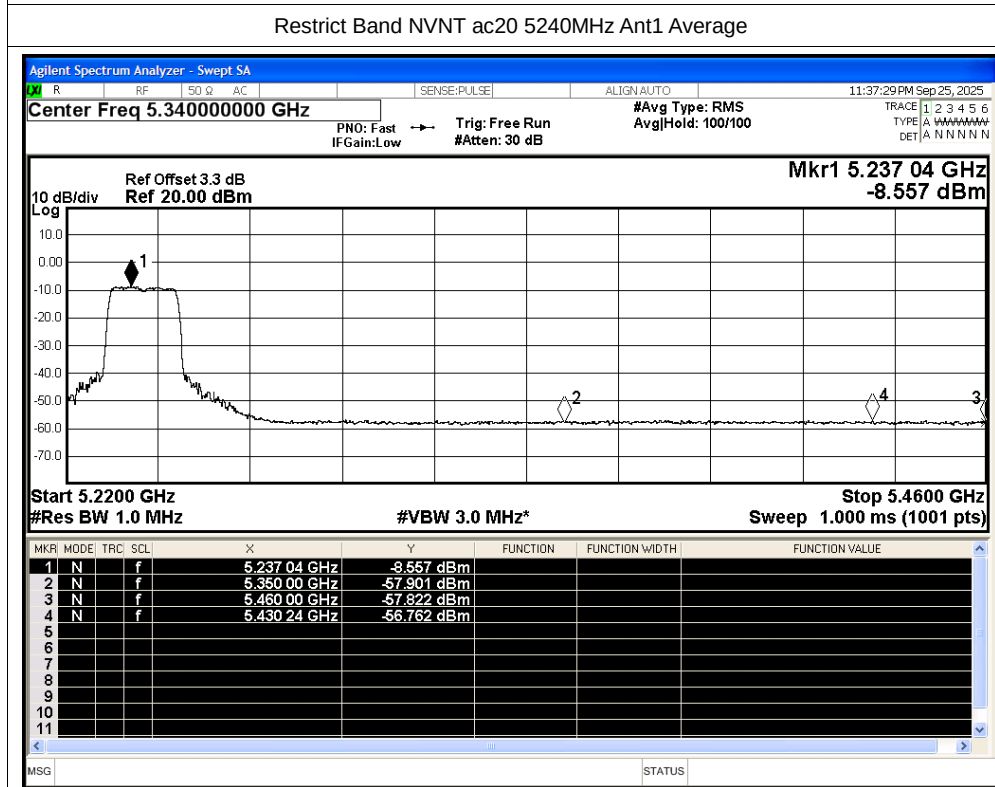


Restrict Band NVNT ac20 5180MHz Ant1 Peak

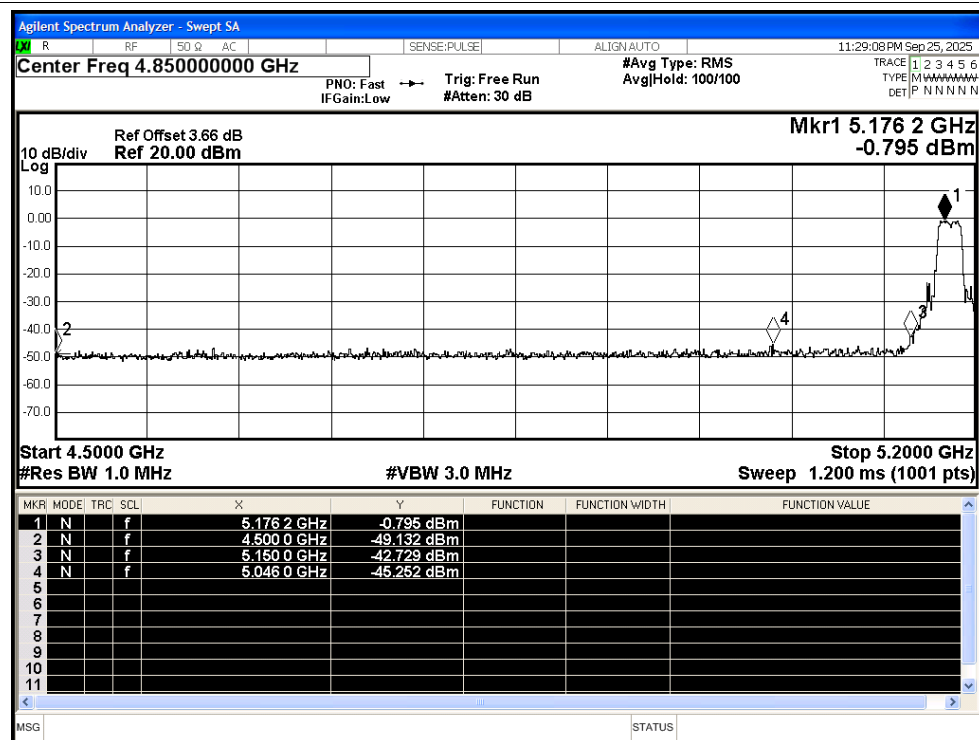


Restrict Band NVNT ac20 5180MHz Ant1 Average

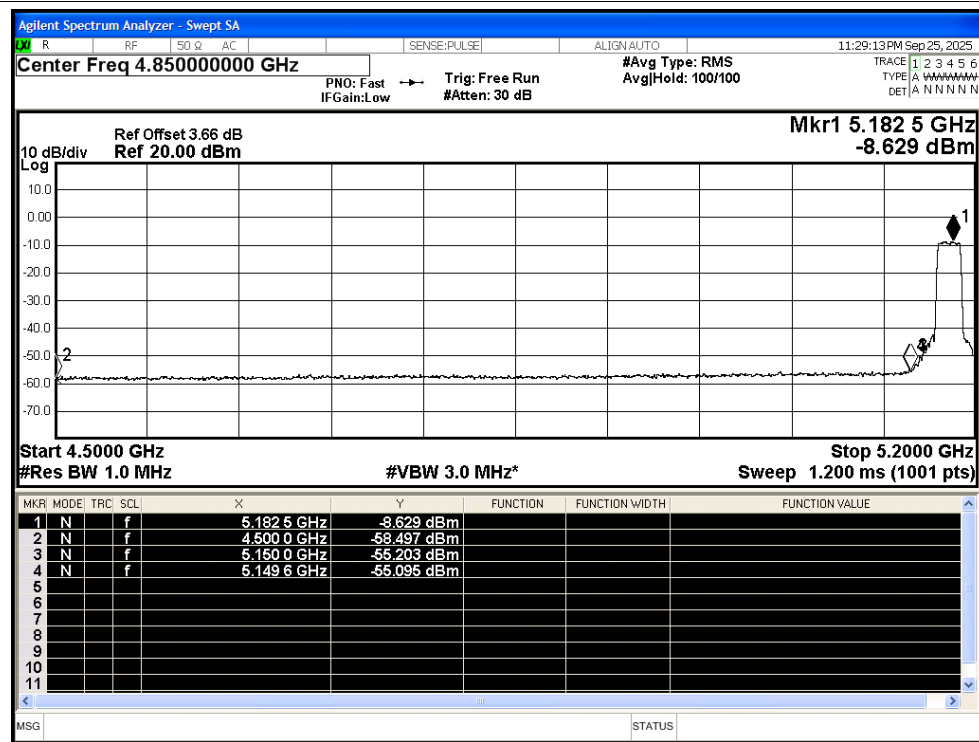


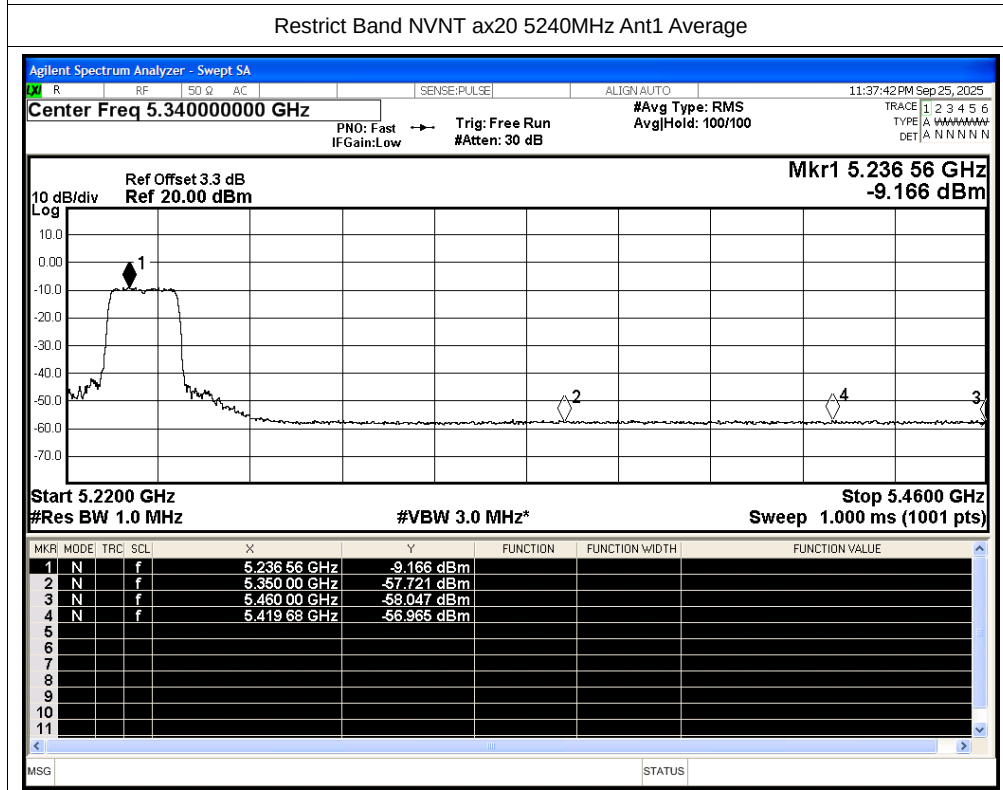


Restrict Band NVNT ax20 5180MHz Ant1 Peak



Restrict Band NVNT ax20 5180MHz Ant1 Average



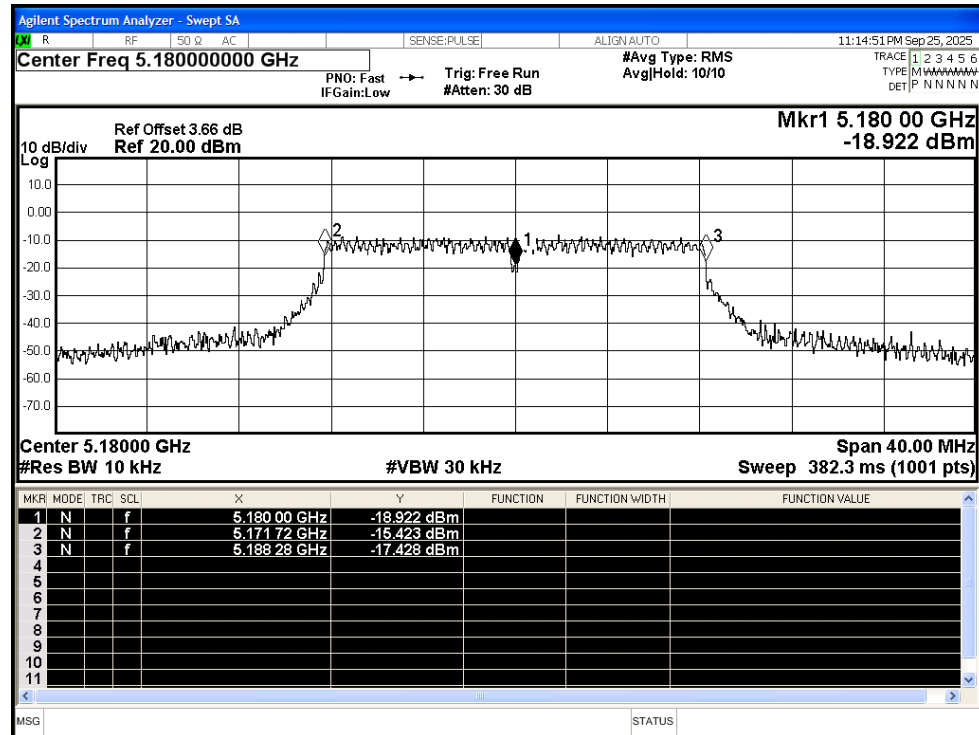


D.5 Frequency Stability

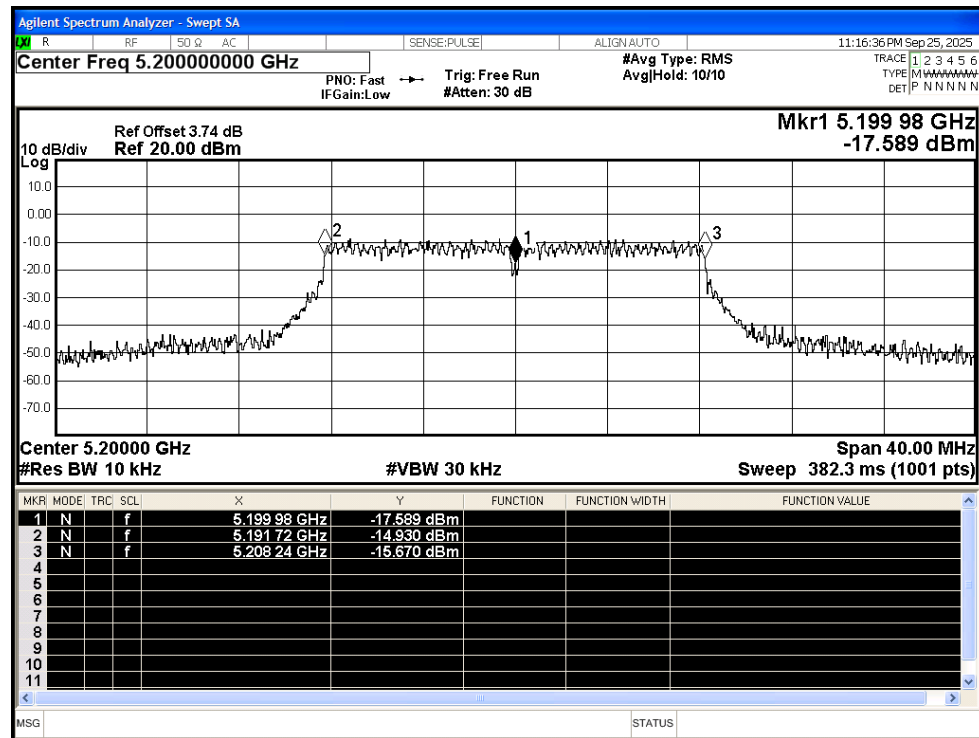
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5180	0	0	25	Pass
NVNT	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	a	5240	Ant1	5240	0	0	25	Pass
NVNT	n20	5180	Ant1	5180.02	20000	3.86	25	Pass
NVNT	n20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	ac20	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	ac20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	ac20	5240	Ant1	5240	0	0	25	Pass
NVNT	ax20	5180	Ant1	5180	0	0	25	Pass
NVNT	ax20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	ax20	5240	Ant1	5239.98	-20000	-3.82	25	Pass

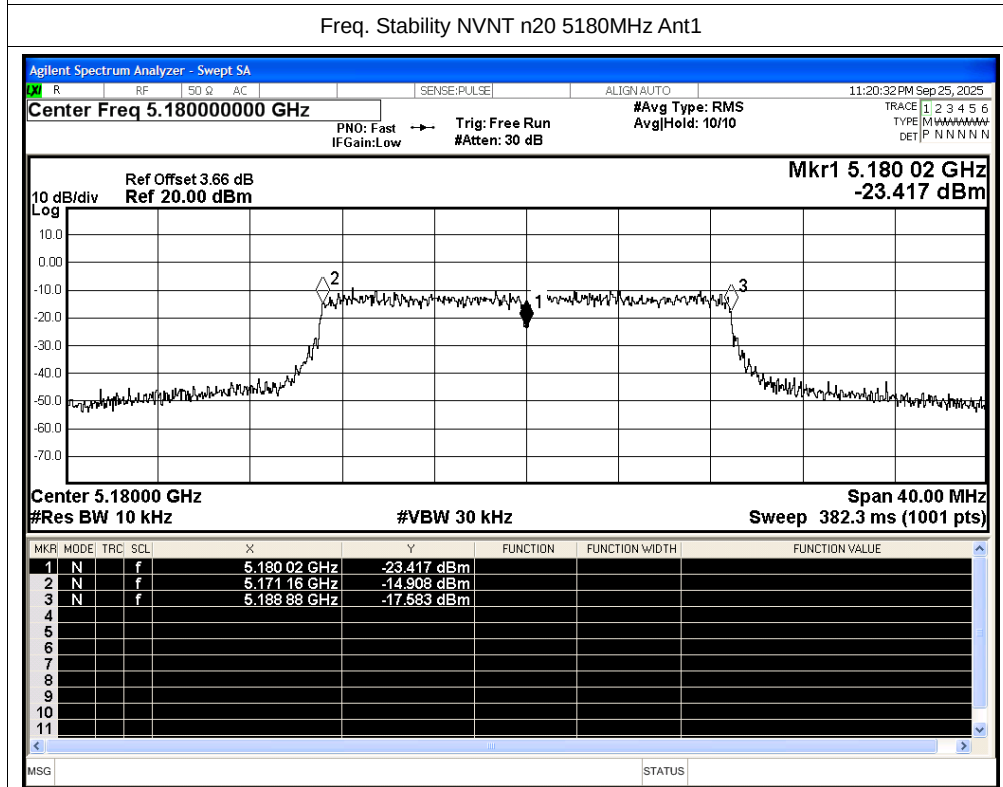
Test Graphs

Freq. Stability NVNT a 5180MHz Ant1

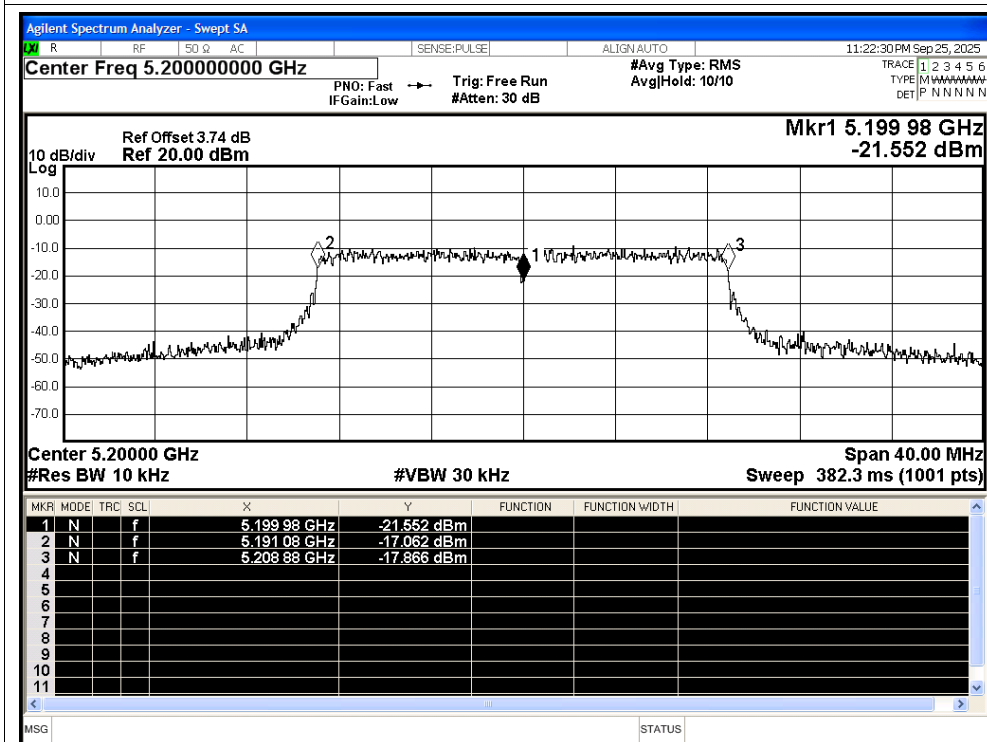


Freq. Stability NVNT a 5200MHz Ant1

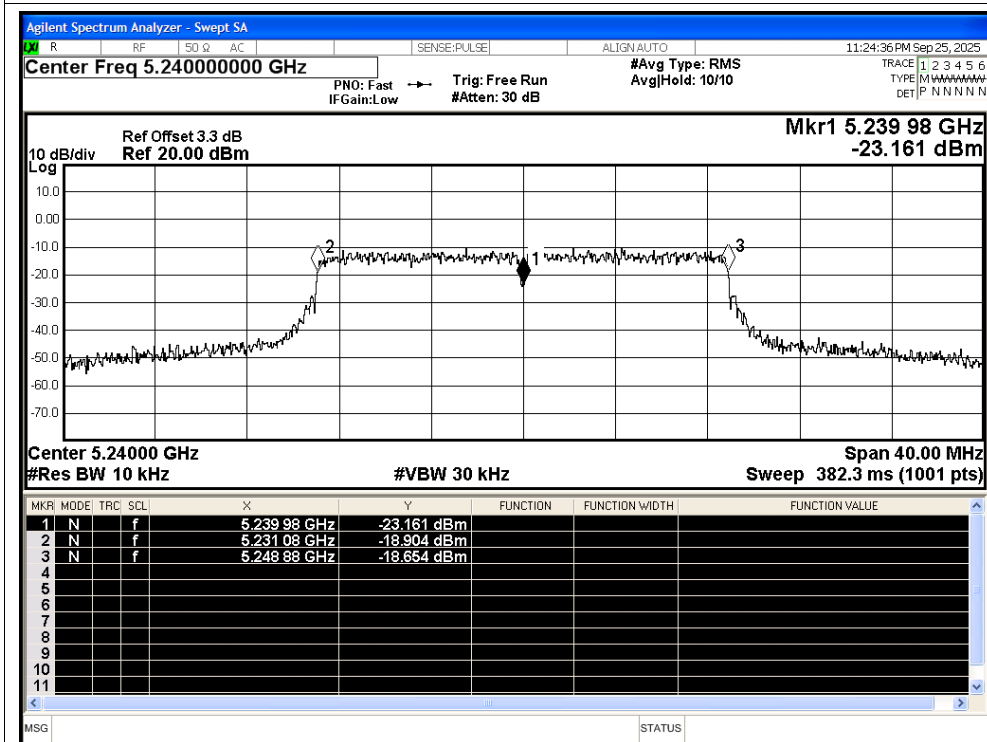




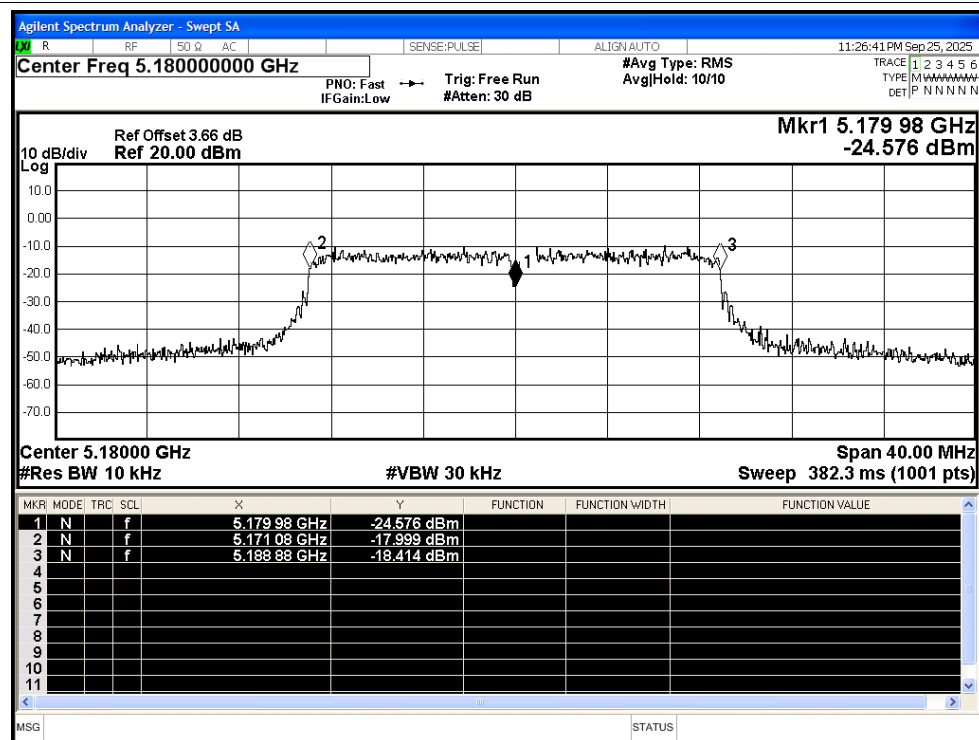
Freq. Stability NVNT n20 5200MHz Ant1



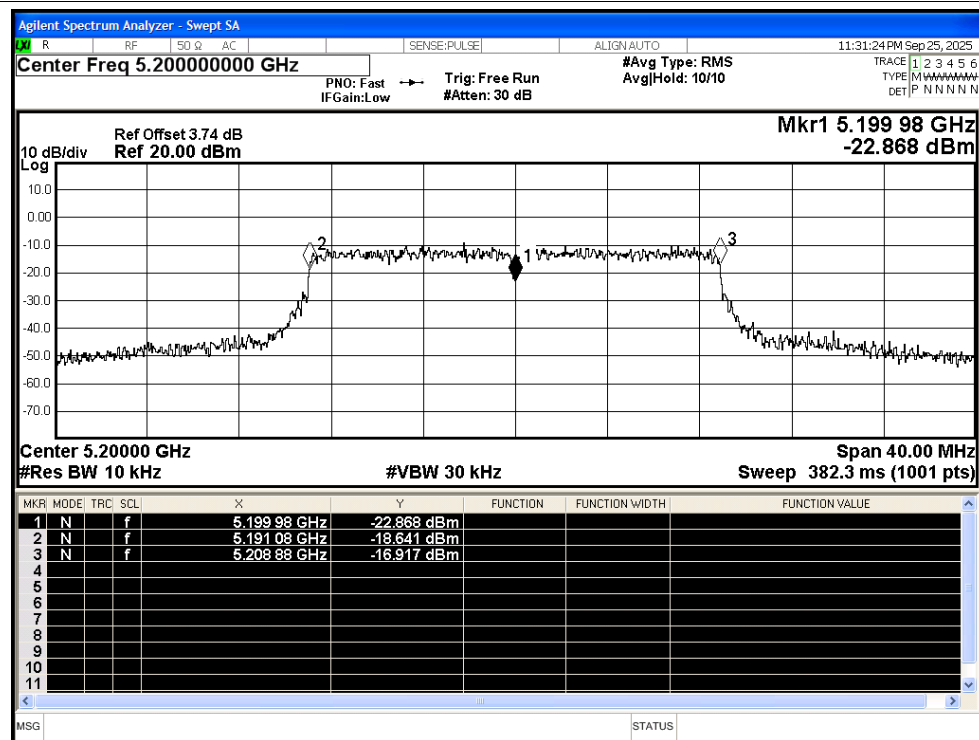
Freq. Stability NVNT n20 5240MHz Ant1



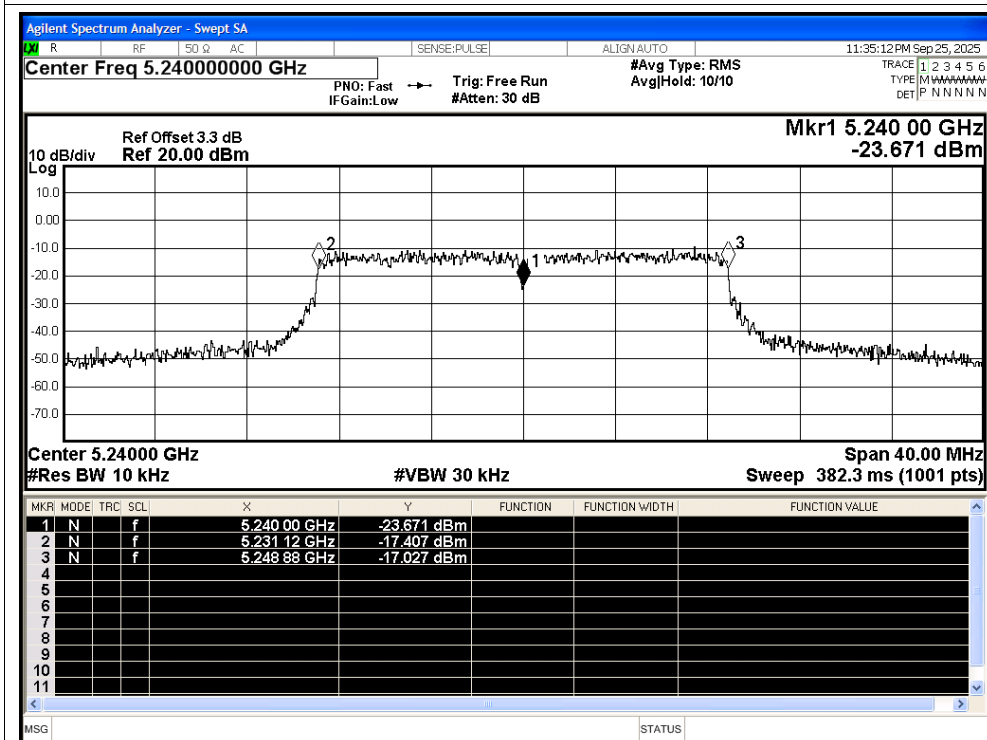
Freq. Stability NVNT ac20 5180MHz Ant1



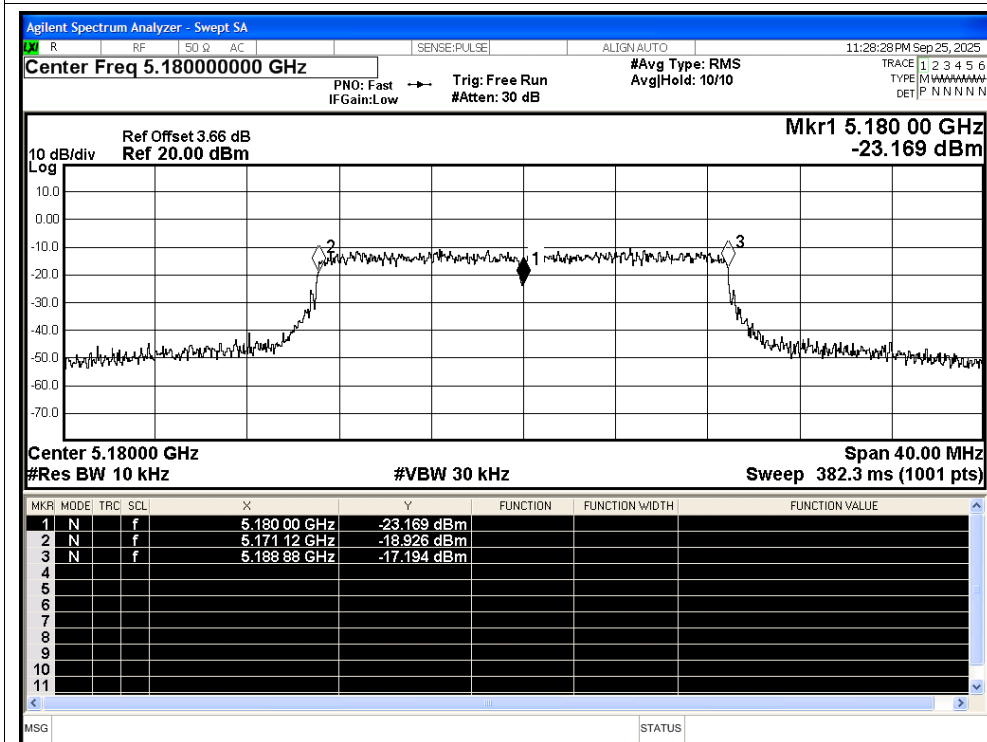
Freq. Stability NVNT ac20 5200MHz Ant1



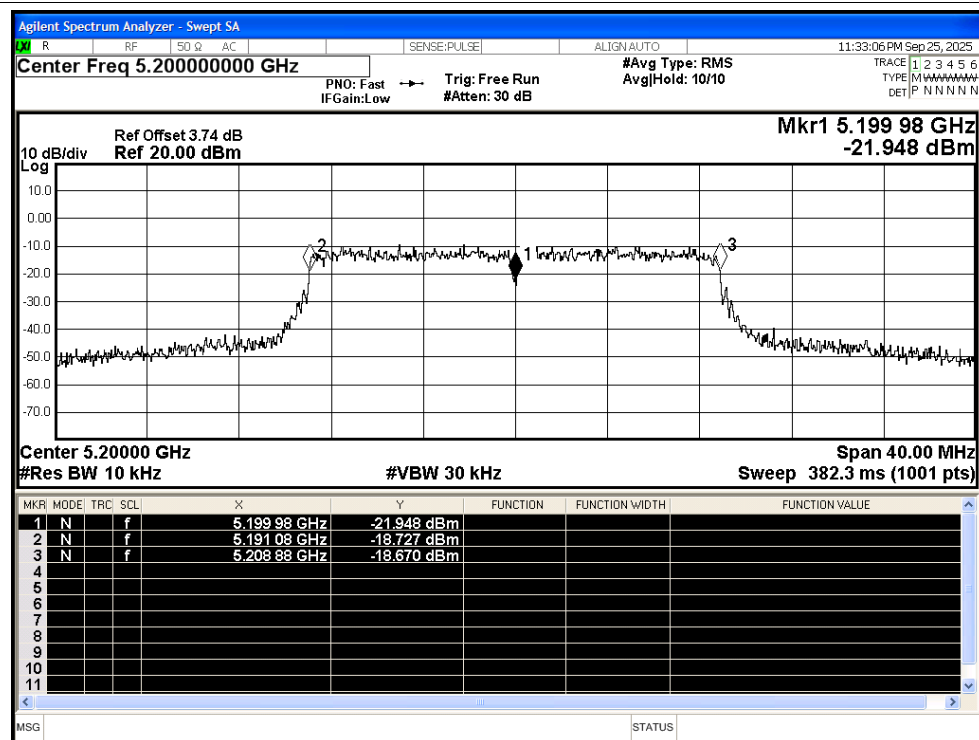
Freq. Stability NVNT ac20 5240MHz Ant1



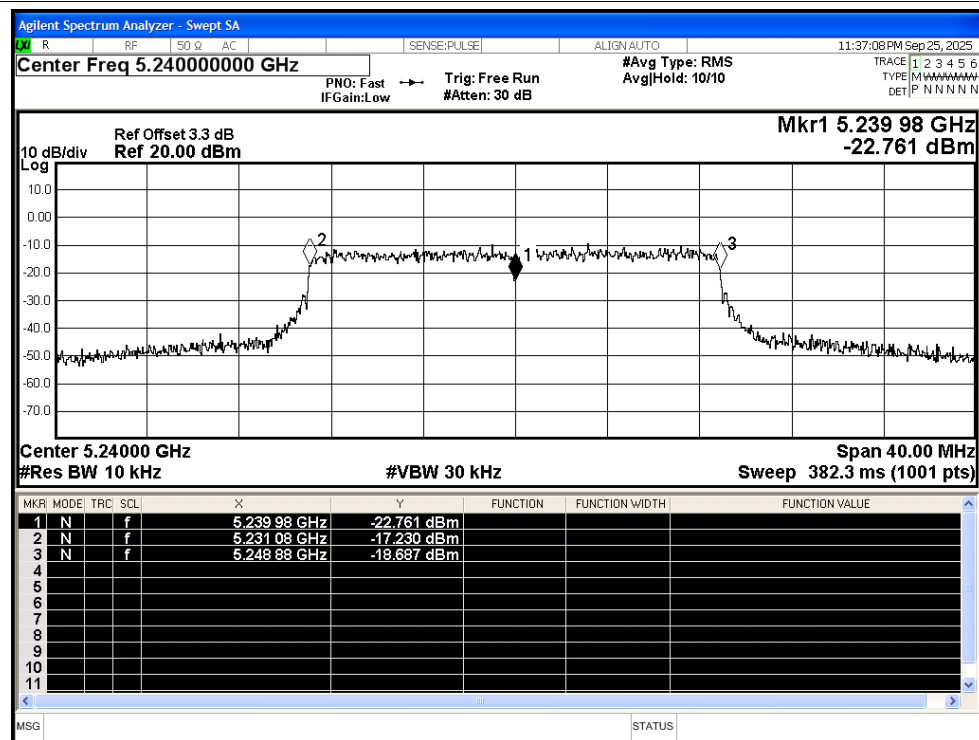
Freq. Stability NVNT ax20 5180MHz Ant1



Freq. Stability NVNT ax20 5200MHz Ant1



Freq. Stability NVNT ax20 5240MHz Ant1

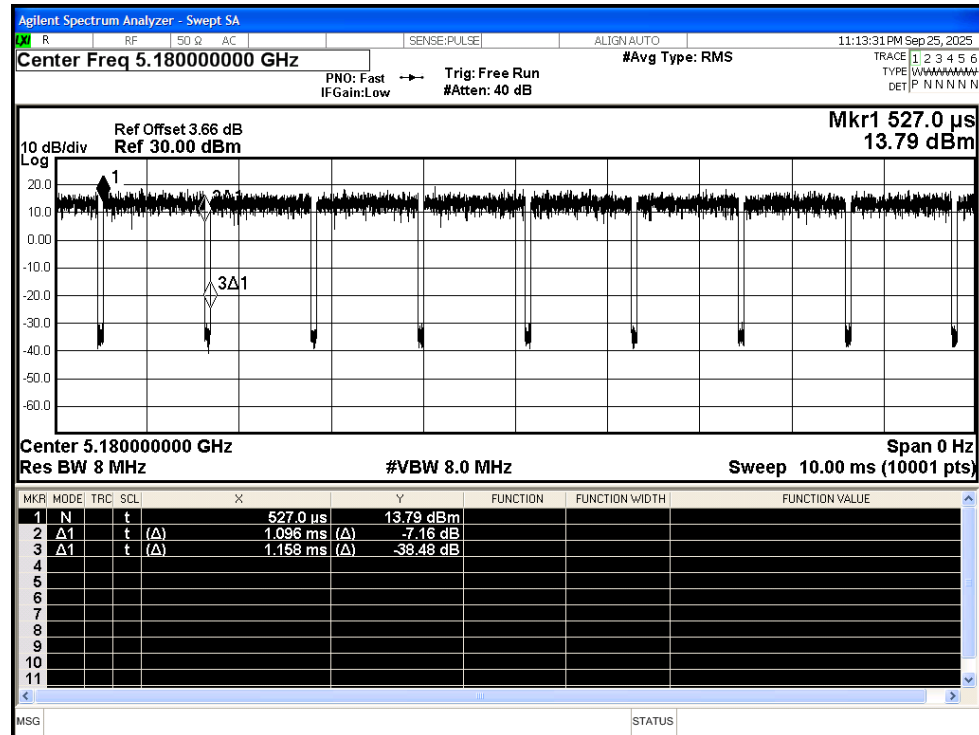


D.6 Duty Cycle

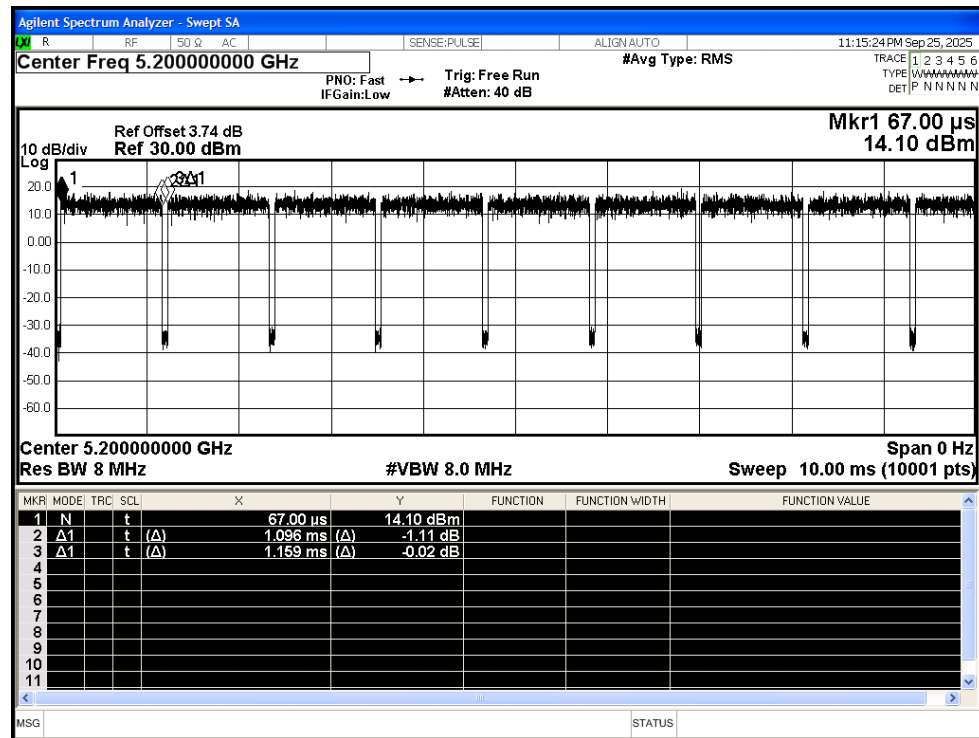
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	94.65	0.24	0.91
NVNT	a	5200	Ant1	94.56	0.24	0.91
NVNT	a	5240	Ant1	94.65	0.24	0.91
NVNT	n20	5180	Ant1	97.29	0.12	0.44
NVNT	n20	5200	Ant1	97.33	0.12	0.44
NVNT	n20	5240	Ant1	97.29	0.12	0.44
NVNT	ac20	5180	Ant1	97.34	0.12	0.44
NVNT	ac20	5200	Ant1	97.34	0.12	0.44
NVNT	ac20	5240	Ant1	97.3	0.12	0.44
NVNT	ax20	5180	Ant1	97.34	0.12	0.44
NVNT	ax20	5200	Ant1	97.3	0.12	0.44
NVNT	ax20	5240	Ant1	97.3	0.12	0.44

Test Graphs

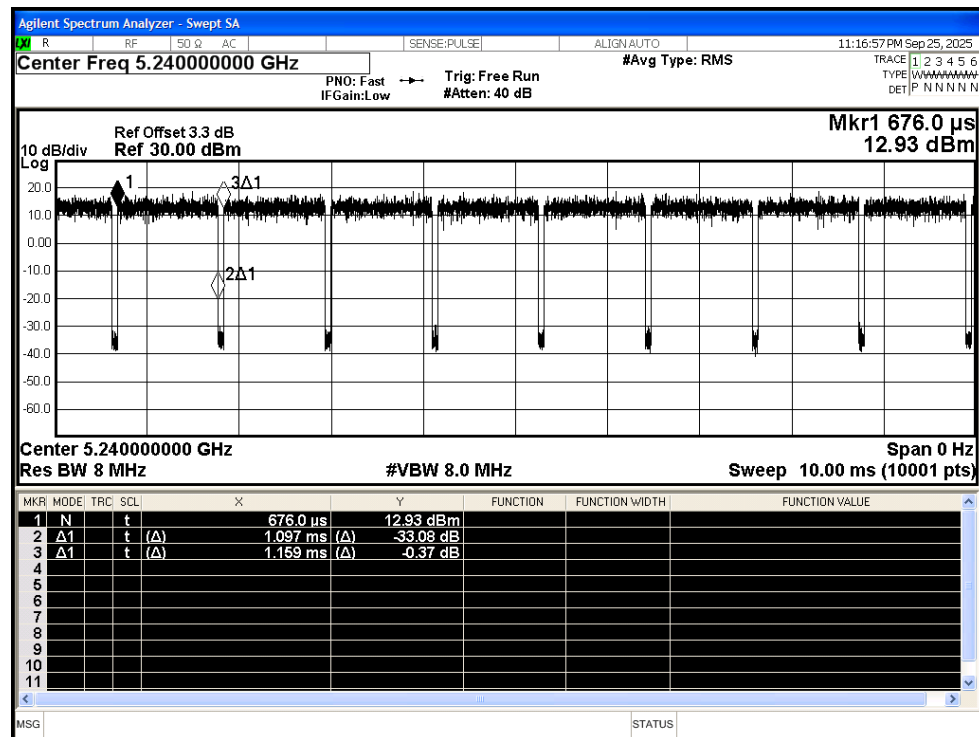
Duty Cycle NVNT a 5180MHz Ant1



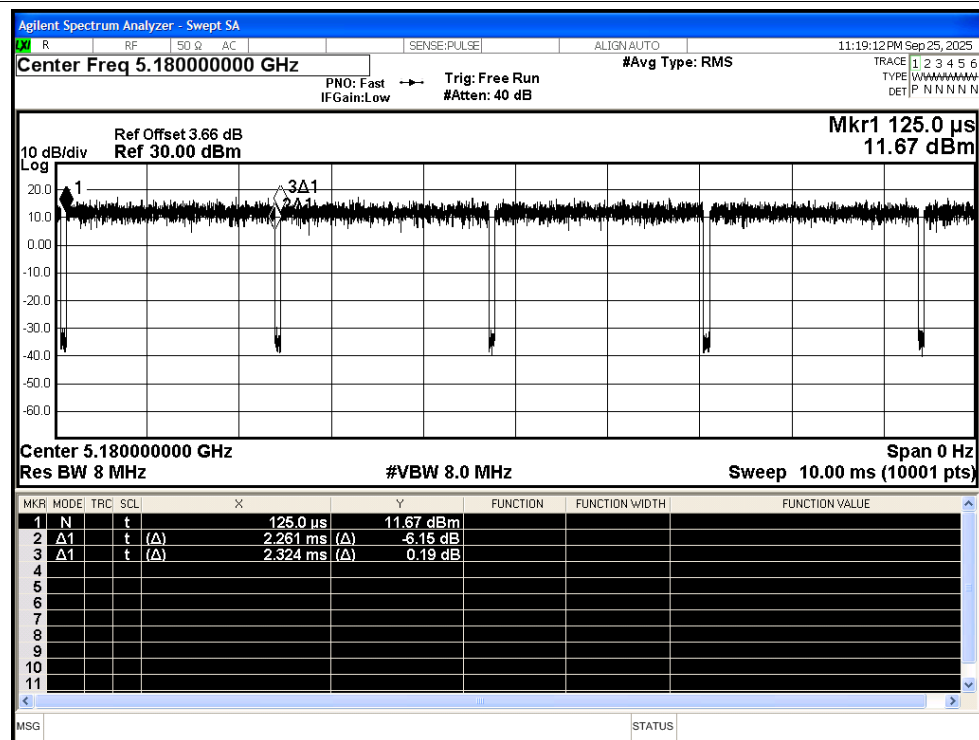
Duty Cycle NVNT a 5200MHz Ant1

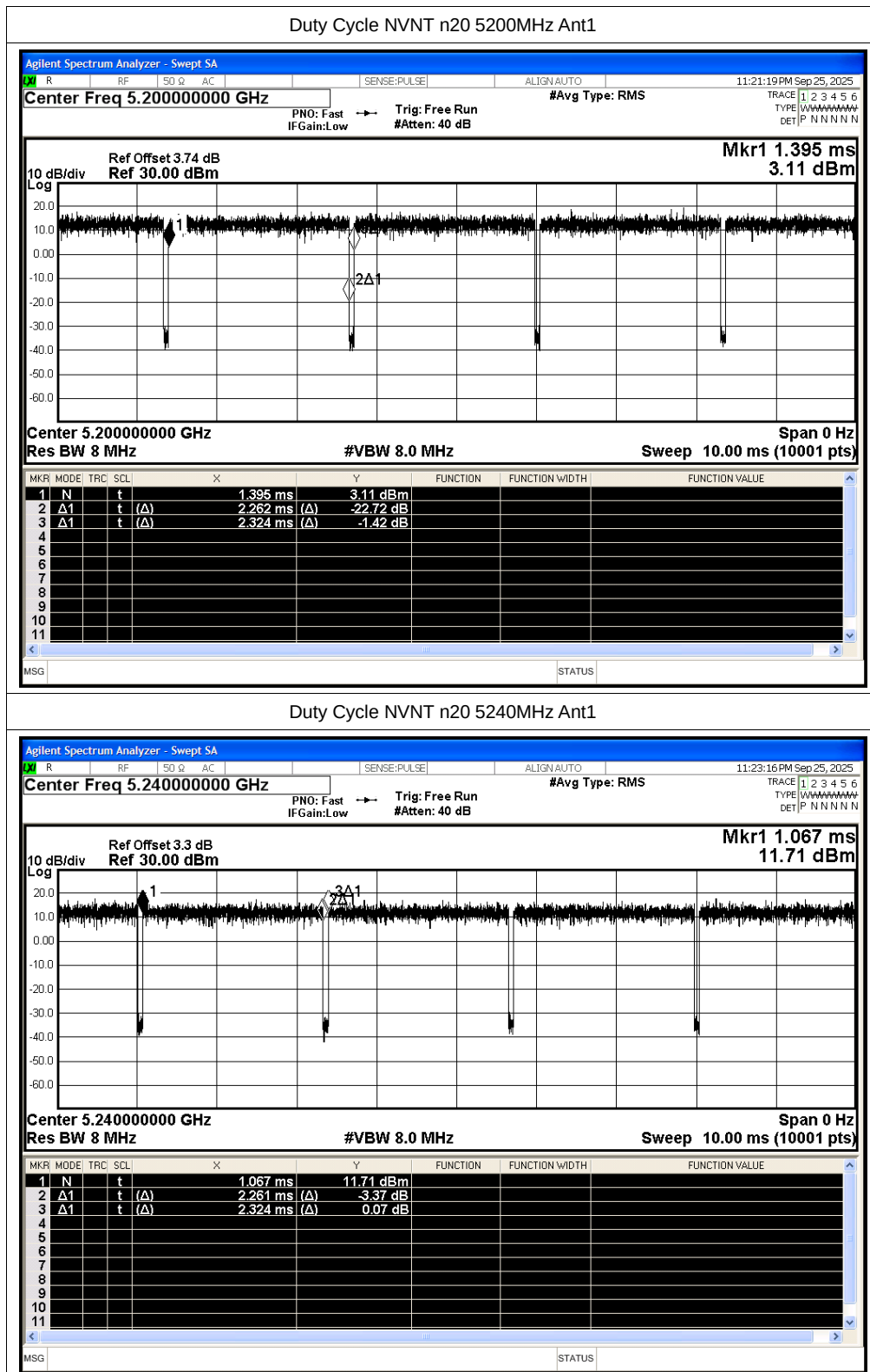


Duty Cycle NVNT a 5240MHz Ant1

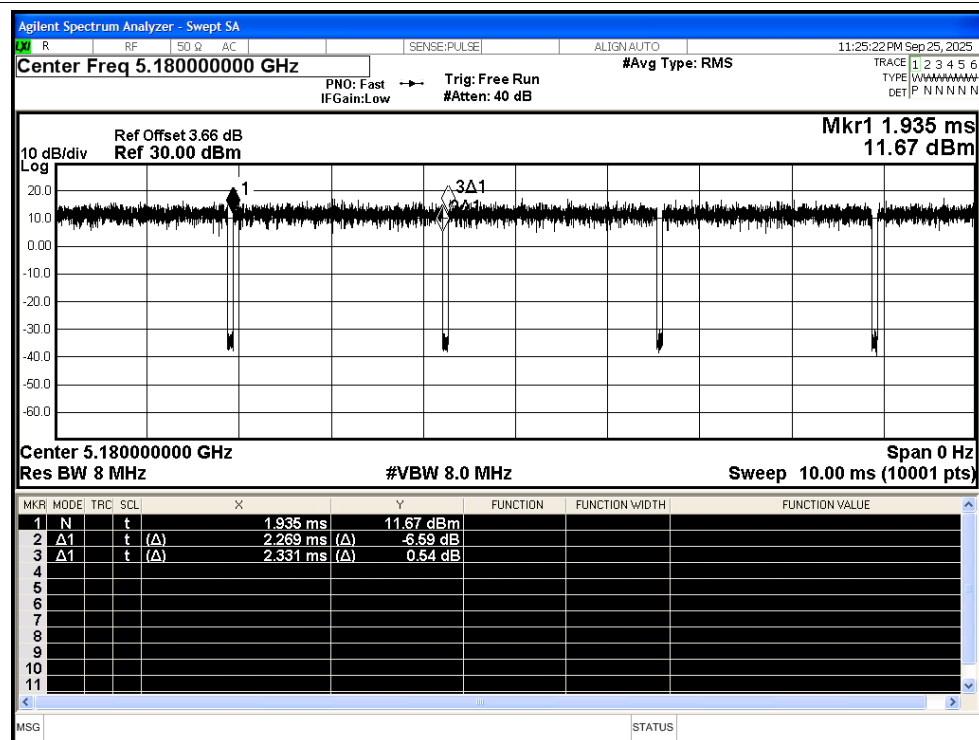


Duty Cycle NVNT n20 5180MHz Ant1

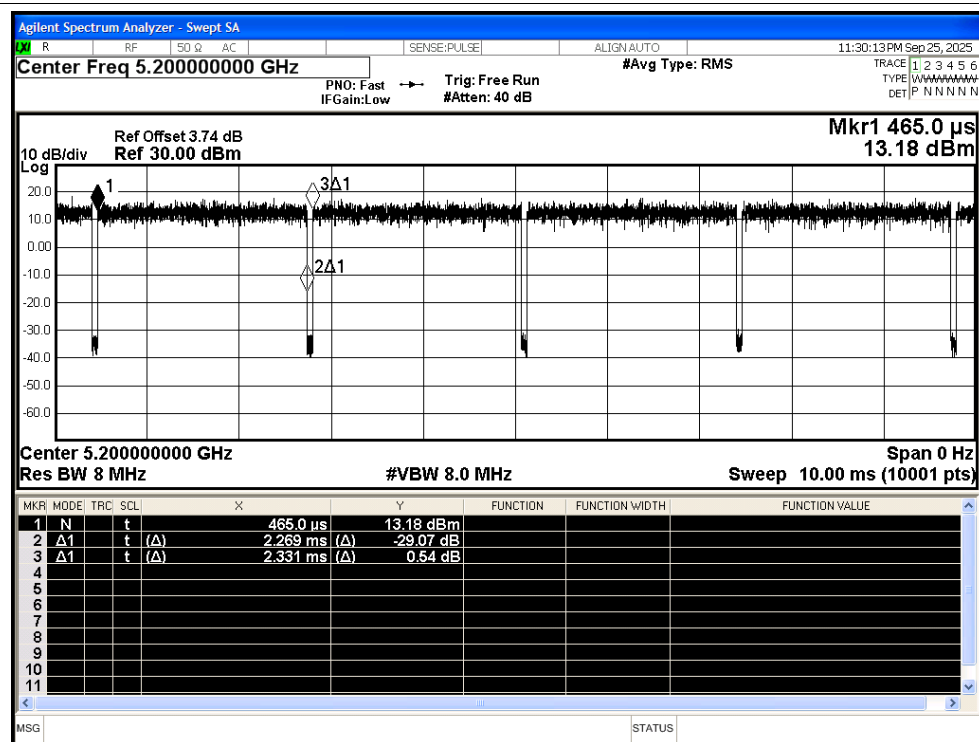




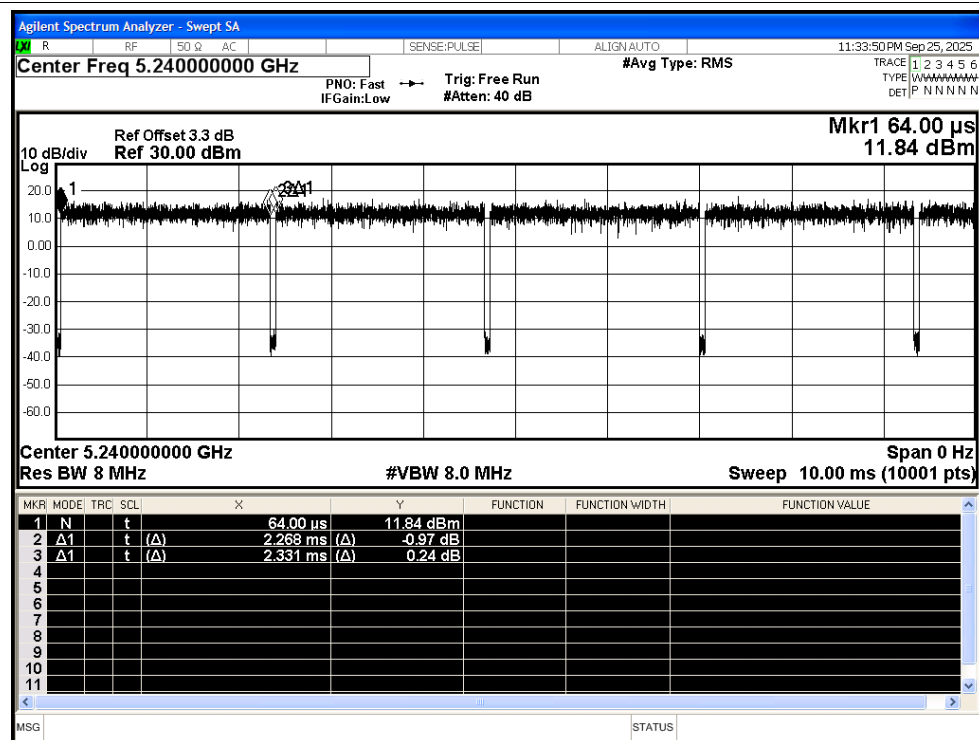
Duty Cycle NVNT ac20 5180MHz Ant1



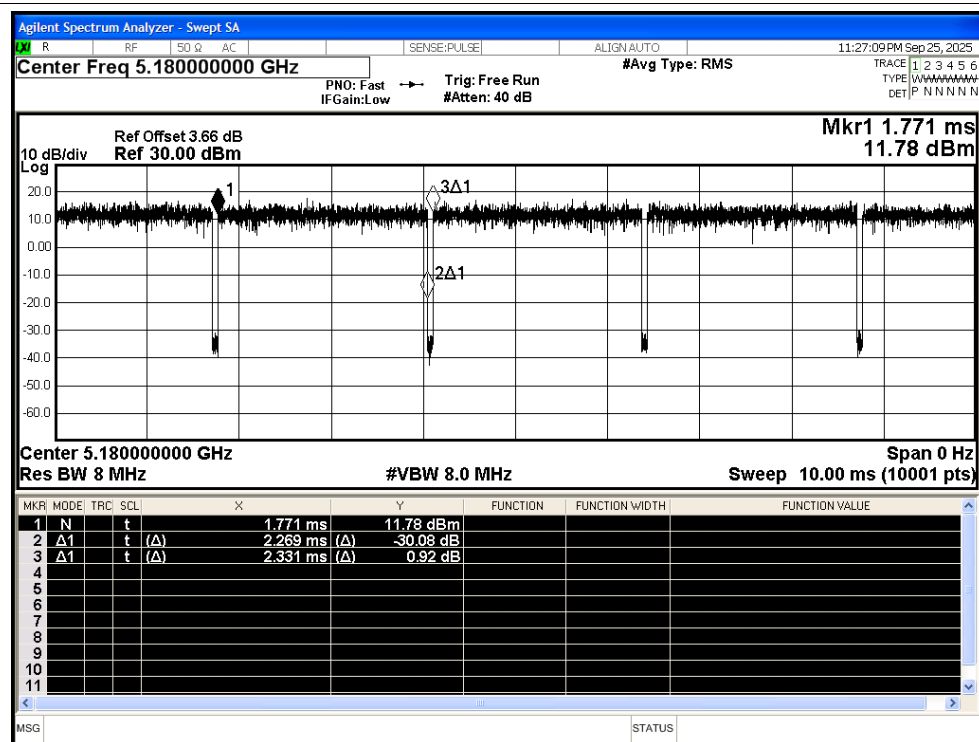
Duty Cycle NVNT ac20 5200MHz Ant1



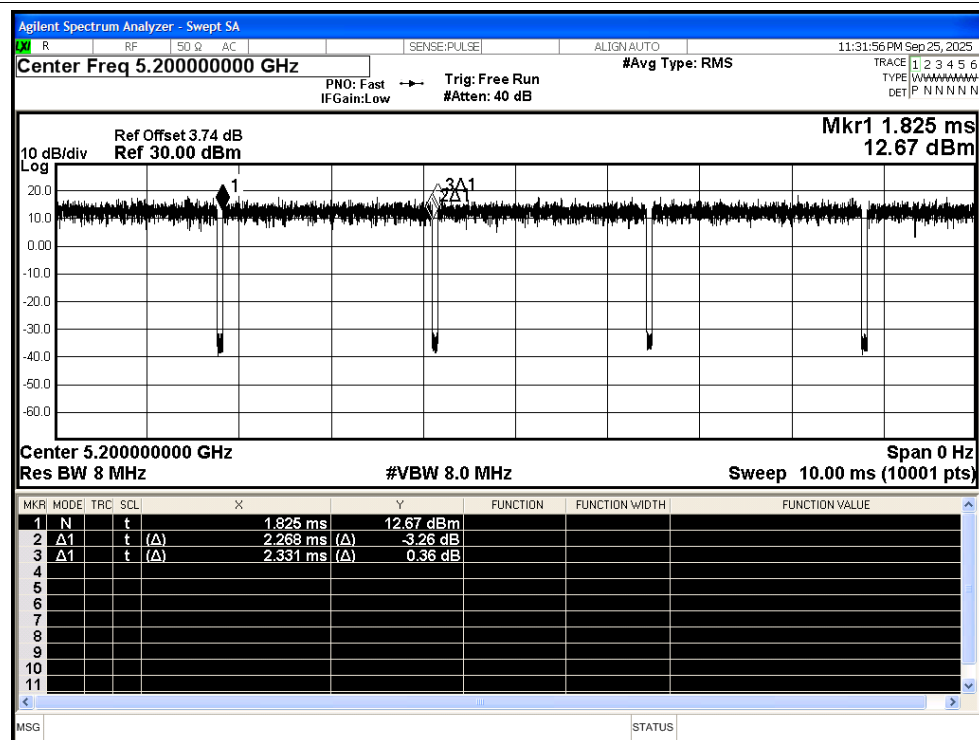
Duty Cycle NVNT ac20 5240MHz Ant1



Duty Cycle NVNT ax20 5180MHz Ant1



Duty Cycle NVNT ax20 5200MHz Ant1



Duty Cycle NVNT ax20 5240MHz Ant1

